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**PREPAREDNESS FOR AND MANAGEMENT OF  
ORGANISATIONAL DISRUPTION IN NEW ZEALAND: A  
DESCRIPTIVE EXPLORATION FROM THE HUMAN  
RESOURCE MANAGEMENT PERSPECTIVE**

A thesis submitted in partial  
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for the degree of

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Simon Antony Ewing-Jarvie

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## Abstract

# **PREPAREDNESS FOR AND MANAGEMENT OF ORGANISATIONAL DISRUPTION IN NEW ZEALAND: A DESCRIPTIVE EXPLORATION FROM THE HUMAN RESOURCE MANAGEMENT PERSPECTIVE**

by Simon Antony Ewing-Jarvie

Chairperson of the Supervisory Committee: Doctor Ian Laird  
Department of Human Resource Management

Business continuity planning and crisis management are the main terms used to describe the processes that organisations undertake when faced with disruption. Despite the economic and social importance of maintaining effective commercial activity most related research has been focussed on civil emergency and natural disaster or accident. There are a limited number of studies into organisational preparedness and no large studies in New Zealand. In particular, no studies have been found that focus on the human resource elements of organisational disruption.

This research has sought to answer these questions through mail surveys, interviews and subsequent analysis. It has utilised the general style of an established questionnaire from researchers at the University of Southern California's Centre for Crisis Management to survey 1000 New Zealand organisations over two consecutive years. In addition, techniques developed in the field of knowledge engineering have been applied to the transcripts of the interviews conducted with senior executives and these have been developed into the domain layer of a knowledge model.

The findings highlight that New Zealand organisations are poorly prepared for the complexities of the hazardscape, which is the term applied to a full spectrum approach to crisis management. In addition, the attitudes that prevail are similar to those found in the United States study of 1992. However, some unique findings have also been established. In particular, the influence of the Polynesian cultures has influenced some organisational cultures in a fatalistic manner. There are clear divisions of performance between the public and private sector and also within the public sector. New Zealand executives appear to be very compliance focussed. These and other findings now require the confirmation that will result from a continuation of a longitudinal study.

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# *Chapter 1*

## **Introduction**

### **1.1 Overview**

Struggle, triumph and disaster have always been features of human existence. As society has become more complex, so too has the nature, scope and frequency of crises increased. However, it has only been in the last 80 years, beginning with Prince's (1920) study of the Halifax ammunition ship explosion, that the social issues arising from crisis have been explored in a systematic manner.

With this increase in complexity has come a move away from subsistence lifestyles to the production of surpluses and increased specialisation of work. New Zealand, like most countries in the world, is experiencing a rapid urbanisation of its population (Statistics New Zealand, 2001). This has many implications including a growing reliance on urban infrastructures and a dependence on organisations for employment and revenue. Despite this, little is known about the actual ability of the New Zealand business community to withstand disruption.

With unemployment currently at 5.6%, it is clear that the majority of New Zealanders of working age are employed or self-employed (Statistics New Zealand, 2001). Therefore, in order to ensure a viable society and infrastructure, it is important that businesses and community organisations function effectively. Any disruption to the functioning of organisations can have immediate and serious consequences for individuals and community groups.

Organisational disruption, which has been variously described as crisis, disaster or emergency, has been the subject of much study over the last 40 years (Dynes,

1970, 1983; Mileti, Drabek & Haas, 1975; Turner, 1978; Britton, 1998; Quarantelli, 1998). The published research has ranged from surviving physical crises to purely human concerns such as executive succession.

While there are descriptive studies covering the full range of disaster events that have befallen New Zealanders (Grayland, 1957, 1978), there are few empirical studies (McLean, 1997). These have largely focussed on natural disasters or accidents and, except for emergency services studies, there is a very limited amount of research on the organisational aspect of crisis (Patton, 1996, McLean, 1997). Large-scale empirical data on attitudes and behaviour of New Zealand organisations toward disruption and crisis are rare.

The New Zealand Government is currently considering the Civil Defence and Emergency Management Bill, 2000, which is intended to streamline national civil defence and emergency management. This will represent the first significant re-shaping of the emergency services in this country since World War II and comprehensive current data on the state of New Zealand organisations will assist in this restructuring.

## **1.2 Statement of the Problem**

There is no comprehensive database of organisational preparedness for disruption in New Zealand. Consequently, it is difficult for executives to benchmark their organisations against agreed standards or gauge progress in the area. Human resource management practitioners can only conjecture as to the implications of a crisis in their organisation as there is little current literature on the New Zealand situation and no evidence of cross-culturally valid international studies regarding staffing issues.

## **1.3 Aims and Objectives of the Study**

The primary aim of this research was to establish the extent of business continuity planning and crisis management practices, as well as the human resource management implications for New Zealand organisations. In particular, it sought to establish the extent to which New Zealand organisations



are aware of and prepared for the range of crises that could befall them. While there are several proven descriptive and prescriptive theories for planning for specific types of continuity situations (Adams & Curtis, 1988; Barton, 1993; Bland, 1998), little is known about the link between senior executive attitudes and their effectiveness in identifying, planning for and dealing with the vast range of potential disruptions to their organisations. Therefore, a secondary aim of this study was to determine the reasons for organisational awareness or preparedness.

Finally, the research sought to develop an insight into the human resource implications of current organisational practice in regard to preparing for or dealing with disruption.

#### **1.4 Scope and Limitations of the Study**

This study aimed to establish a benchmark for New Zealand organisations and researchers. The study was conducted in 1998 and 1999, with postal questionnaires used in both years. A subset of these participants who volunteered for further involvement were interviewed in order to establish what factors influenced their thinking on the subject. The researchers drew implications of the findings for human resource management from both the questionnaire data and the interviews.

An existing questionnaire developed by Mitroff and Pearson (1993) was chosen as a data collection tool rather than constructing a new one. While this simplified the task of gathering data, it restricted the ability to extend the data set through the predominance of closed, dichotomous questions. These reveal whether an organisation is using or considering a factor but not to what extent that use or consideration is applied.

In defining the aim of determining the rationale behind the current state of preparedness, there was no intention to seek a prescriptive theoretical result. Such an approach was not found in the literature, however, it may be possible in the future to develop multiple regression models, which demonstrate the relationship between preparedness and survival for organisations. The scope is

therefore limited to eliciting the knowledge, opinions and attitudes of executives without seeking to determine any relationship with the preparedness of their specific organisations.

It is acknowledged that some organisations may have ceased to operate between data collection phases and that the respondent within an organisation may also have changed during that time. Every effort was made to ensure that the survey sample was representative of the New Zealand business environment.

While the survey contains many questions, the literature specifically mentions the limited nature of events that have been studied. It is accepted that there had to be a tradeoff between addressing, in full, all the issues that concern organisations, with a potentially low response rate due to over- complexity. The introduction of the survey for small organisations in 1999 has created some limitations in comparing data between years. However, the individual data sets are more important than the inter-year comparisons. Also the one-off effect of preparation for the year 2000 (Y2K) bug in 1999 must be acknowledged as a possible source of bias in the latter year's data.

## **1.5 Assumptions**

Several assumptions are made as part of this study. These are that:

- a. it is assumed that the organisations, and the respondents within them, are a representative sample of NZ organisations and that changes in respondents between 1998 and 1999 will not introduce any cause for error,
- b. it is assumed that the survey questionnaire is internally valid and reliable. While only limited data for this is available, the lead researcher (Mitroff) is a distinguished academic in the field and the results, as published, have not been challenged in the literature as far as can be established,
- c. it is assumed that interview volunteers have responded truthfully throughout the interviews, and

d. it is assumed that the demographic data provided by survey respondents is sufficiently free of error to use as a basis for other interpretation.

## **1.6 Definition of Terms**

The main focus of this study is the measures that organisations take to prepare for and respond to organisational disruption. The literature reveals a multitude of definitions for this activity and the variance tends to be indicative of the disciplinary background of the researcher, the context for the study and the period when the study was conducted. This causes some confusion and, while a more detailed review of definitions is provided in the literature chapters, it is important to identify the most common terms used. For the purposes of this study, the term business continuity planning (BCP) is defined as being those processes that enable organisations to keep functioning during times of significant change and is therefore normally oriented to reasonably foreseeable contingencies. Crisis management on the other hand, is the set of activities and procedures that an organisation employs when confronting an unforeseen dilemma or when disruption has moved outside the parameters of the business continuity plan. In describing events that may challenge an organisation's ability to maintain continuity for any reason, the term that has been selected for this study is organisational disruption. Organisational disruption is the inability of an organisation to function normally. It can result from a range of events and the level of disruption will be a function of its severity and nature, as well as the degree to which the organisation has prepared for and can deal with the disruption.

## **1.7 Structure of the Thesis**

An initial examination of the literature revealed that, in order to address the wide range of the research questions, a multidisciplinary perspective would need to be applied. In the next three chapters, a review of the literature is provided. This is structured from macro to micro level from the concepts of crisis management through to organisational and executive behaviour and then

finally linking these two chapters to the remainder of the thesis through a review of business continuity planning concepts.

In the second chapter, the literature on organisational crisis and business continuity planning is reviewed and definitions are offered for the main terms and ideas implicit in the research. This review seeks to bring together the major historical and conceptual threads of disaster research and to demonstrate the limited scope of this work in New Zealand. However, the field of crisis studies is vast and includes work from the disciplines of sociology, psychology, ecology, law and economics. Consequently, this review concentrates on the main theoretical strands that have some application to the research being undertaken without a full development of each theory set. This approach is indirectly supported by many of the researchers in the field (Barton, 1969; Drabek, 1986; Quarantelli, 1998; Mileti, 1999) who separately observe the limiting effect of the dispersal of crisis knowledge, the need for the development of taxonomies and the desirability of databases on disasters to facilitate research. Quarantelli (1998) goes further in stating that the field of disaster studies has 'run dry' and sees the need for a completely new paradigm. This perhaps accounts for the apparent age of some of the important literature and the highly repetitious nature of some studies.

The bulk of the literature revealed in Chapter Two is focussed on the community as a form of society. This study was oriented toward the business or similar organisation and while some links are obvious, it was necessary for completeness to overview the literature relating to organisational theory and behaviour in Chapter Three. Even though there are accepted methods of dealing with certain crisis situations, the choice to implement these processes often rests with the senior executives. Their attitudes, personalities and related behaviours will have a great impact on the analysis, planning and implementation of business continuity. Organisational theory, which is presented in the first part of the chapter, deals with the structures and processes of the group. Organisational behaviour, which is addressed in the latter half, is concerned with the 'inhabitants' of the entity. This chapter again takes a macro to micro perspective with subject matter linkage to crisis research through the

work of Mitroff, Pearson and Harrington (1996). Mitroff et al (1996) believes that there are usually five organisational factors present in any crisis. These are used in Chapter Three as the underpinning structure in the sequence of culture, organisational structure, technology, human factors and executive psychology.

The intersection between crisis or disaster planning and organisational life is business continuity planning (BCP). Although, crisis management and BCP are often used interchangeably in the literature and by laypersons, a closer examination shows that there are clear differences. First, there is the organisational context. While organisations cannot be entirely separated from community and family, they are communities in their own right. Chapter Four provides a review of the literature on BCP and, in seeking to remain consistent with the structure of the two preceding chapters, begins at the macro level of phases and variables. A categorisation and description of disruptive events, which sets the scene for the wide ranging survey used in this study, leads to a systemic examination of the principles of diagnosis, design, implementation and evaluation of BCP. The latter part of Chapter Four deals with current organisational continuity practices and considers some overseas studies. This is followed by an overview of New Zealand studies. Arguably, many of these could have been included in Chapter Two since they are civil defence based studies of organisations. However, there are so few local works on organisational preparedness, it was considered useful to link them with BCP to further highlight the need for this research.

Chapter Five details the methodological processes employed in the research. It introduces the four-phase approach, which included an 86-item initial questionnaire (sample of 1000 organisations) that was employed based on a similar United States study. The questionnaire was redesigned into a separate version for small organisations for its second application in 1999. This chapter also sets out the structured interviewing technique applied to 21 senior executive volunteers and the method of discourse analysis and modelling employed in the 18 usable transcripts, in order to answer research questions regarding attitudes and implications.

Ethics and confidentiality issues are also described in Chapter Five. University guidelines clearly describe the requirements for this study and these have been complied with. In particular, the potential for commercially sensitive information to fall into the hands of competitors or the media has been addressed through anonymous data entry, destruction of all written records and confidentiality agreements prior to commencement of work.

Analysis of the 1998 survey (Appendix 1) is carried out in Chapter Six. This 86-item questionnaire was adapted from similar work done by Mitroff and Pearson (1993) and covered a wide range of business continuity issues. These included preventive actions, recognition and allocation of resources to generally accepted phases of crisis handling, preparation for different types of crises as well as recognition of severity, preparation for and recency of events. It also provided the opportunity for respondents to make any other comments about their organisation and its crisis preparedness. Chapter Six also identifies response rates and important demographic data about respondents that would normally be included in the methodology chapter. This is due to the longitudinal nature of the study and the alternative questionnaire style between 1998 and 1999 to reflect large and small organisations separately.

The modified questionnaires were sent out in 1999 to 928 organisations of which 528 were large organisations from the earlier survey database. The total sample group was still geographically representative of the 1996 census figures, as it had been the previous year. This survey generated a higher response rate of 20% and provided much needed confirmation of the results from the earlier survey as well as important new insights into small New Zealand organisations. Chapter Seven also describes the question items that are common to both the large and small organisation questionnaires.

While trends cannot be established from a two-year survey, it is interesting and useful to make a raw comparison between 1998 and 1999 results. Chapter Eight provides these comparisons through two methods. First, the 1998 data is compared with the 1999 data for large organisations. Second, the same groupings applied to certain question categories in the previous chapter are

used against the 1998 results for the purpose of comparing them against the 1999 small organisation responses.

During 1999, a selected group of volunteer executives from the original survey group were interviewed. The transcripts of these interviews were analysed using a discourse analysis technique (Kuipers and Kassirer, 1987) designed for expert system modelling purposes. These models, which are presented in Chapter Nine, are used as the basis for discussing perceptions, attitudes and further insights into preparedness in New Zealand organisations regarding BCP. However, the models that have been created will have far greater utility than this research and can be applied for the development of training programmes, benchmarking, quality programmes and software construction.

Chapter Ten begins the discussion of the findings of this research. It is divided into three parts that reflect the research questions and specific objectives. The first research question deals with the current state of preparedness in NZ organisations. This discussion is presented first from the perspective of the two postal cross sectional surveys and findings are compared to those from the interviews where appropriate. Further discussion then moves to the second research question, which seeks to determine the reasons for the current state of preparedness (or lack thereof). This is conducted using the same framework as applied in Chapter Three of organisational culture, structure, technology, attitudes and behaviour. In this discussion, the results of the interviews become pre-eminent and the findings are supported by data from the surveys and also other literature. The chapter then moves to the final question of the human resource management (HRM) issues arising from all the findings. This latter section is based around a component view of the discipline of HRM and examines implications for personnel administration, human resource development, organisational development and change, employee relations and organisational communications.

Chapter Eleven offers conclusions arising from this research project. In particular it notes the reconfirmation of many well-reported aspects of crisis management and BCP. This chapter also summarises the value of the data and findings against the backdrop of the methodological strengths and weaknesses.

In emphasising the exploratory nature of this research, some future directions are proposed for both organisational developments in the BCP and related areas, as well as necessary future research in the field.

## **1.8 Summary**

New Zealanders are largely dependent on the continuity of the business community for their welfare. In order to ensure that this occurs, senior executives must take active measures to prepare for disruption in all its forms. However, international research reveals that this is not occurring and small-scale surveys in New Zealand suggest a similar situation. There is no wide ranging research on this subject available in New Zealand and this study has set out to explore the area using postal surveys and research interviews. The result will provide executives, academics, unions and other researchers with a long overdue start point to an understanding of the relationship between executive performance and organisational continuity. This study begins in Chapter Two with a review of the main threads of the literature on crisis management.



## Chapter 2

### The Literature on Organisational Crises

#### 2.1 Introduction

The interaction of the environment and organisational life in general makes disruption a routine risk to continuity. To a large extent, the degree of preparedness and the quality of executive response will influence how an organisation copes with cases of disruption. However, an accurate view of crises as they relate to the organisation, is best developed through a multi-disciplinary approach to the problems and stakeholders. The complexity of such a comprehensive approach is too great for a single researcher in a relatively short period of time. Simply examining business continuity planning is considered too limited. This study takes a human resource management (HRM) perspective. In doing this it is appropriate to divide the literature into three parts. In this chapter, the literature relating specifically to crisis will be reviewed. In Chapter 3 the literature on organisational behaviour, which underpins the interpretation of the research data, will be examined. Chapter 4 examines business continuity planning. This approach is supported by Drabek (1986) who noted:

*"Hazard perceptions among organizational executives parallel those of the general public, both in content and in pattern variations" (p332).*

This statement, as an underlying assumption, enables us to draw parallels between crisis literature and organisational behaviour literature.

Crises come in many forms and this chapter will briefly introduce and review major conceptual approaches to their study. This will include various categorisations of all the major types of crises i.e. physical, legal/financial and social. In addition, the literature on business continuity planning, the process by which organisations plan for and deal with crises will be reviewed. An overview of crises recently experienced overseas and in New Zealand sets the

scene for a review of local studies into crisis and business continuity. The chapter ends with a summary of current critical issues arising for the New Zealand business community.

## **2.2 Conceptual Models of Crisis**

One of the inherent difficulties in reviewing a wide range of literature is the inconsistent and in some cases ill defined use of terms. In the field of crisis study, crossovers between emergency management, social science and management disciplines result in the same words applied with different meanings. There is no common vocabulary to assist the reader and this contributes to the lack of clarity evident in some of the models that are reviewed here.

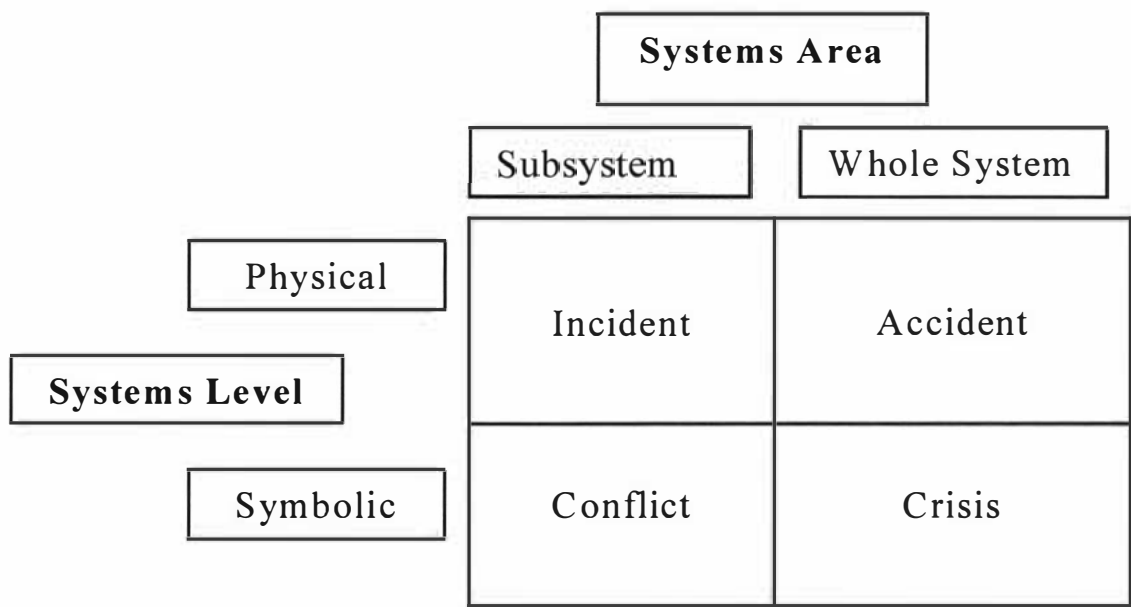
Drabek (1991) notes that, even within the field of emergency management, there are research efforts being undertaken by scientists from the physical and natural sciences, sociology, psychology, anthropology, geography, economics, political science and public administration. Hoetmer (1991), writing in the context of emergency management, differentiates between emergencies and disasters by describing the former as routine adverse events that can be dealt with from within normal resources or procedures. Disasters are generally accepted as those that take response agencies beyond the normal and the term catastrophic disaster is applied to those that affect an entire nation. However, Turner (1978) places a cognitive rather than physical emphasis on the subject in stating that disasters arise only from a lack of some kind of specific knowledge at some specific point.

A review of disaster literature would not be complete without examining Prince's (1920) classic study of a Halifax munitions ship explosion. In this work he defines disaster as social change, which may be caused by intra-social or extra-social stimuli. Specifically he mentions:

*“rapid mutations which accompany sudden interferences with the equilibrium of society, break up the status quo, dissipate*

*mental inertia and overturn other tendencies resistant to structural modification". (p 15).*

A clear differentiation in terms was offered diagrammatically by Pauchant and Mitroff (1992) as shown in Figure 2.1.



**FIGURE 2.1 - Definition in Terms of Crisis Management**

While numerous definitions of crisis and disaster are offered in the literature (Prince, 1920; Britton, 1986; Hoetmer, 1991; Quarantelli, 1998), little would be gained by seeking clarity of definition due to the HRM perspective of this study. Key variations in meaning are discussed within this study however, and for the purpose of this thesis, the definition of an organisational crisis will be any event, whether foreseeable or not, which seriously disrupts the normal daily functioning of that organisation.

Dynes (1987) noted that much of the sociological literature on disaster, spanning both empirical and theoretical approaches originated from America. An important early study was that of Sorokin (1942) who set out to describe the typical (rather than detailed) effects of calamity. Although limiting himself to the topics of war, revolution, famine and pestilence he conjectured that

establishing principal uniformities among mental processes and human behaviour would enable methods of coping to be developed.

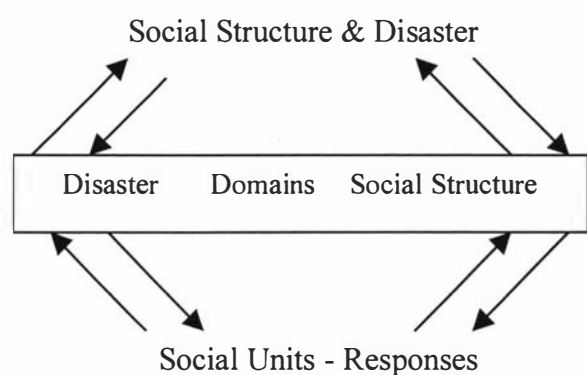
Several writers (Mileti, Drabek & Haas, 1975; Hewitt, 1983; Morren, 1983; Susman, O'Keefe & Wisner, 1983; Drabek, 1986) have observed the link between the environment and society. While traditional observations of crisis were measured in terms of magnitude and frequency, the hazard or crisis agent only exists because of the presence of vulnerable humans. Thus, a cluster of high rise office blocks built on an earthquake faultline is inherently vulnerable but if the area were unoccupied, the hazard would be irrelevant. Drabek (1986) believes this to be an underlying factor in the growing danger and complexity of the hazardscape, not only because of increased human settlement in areas that are prone to disaster but also because of society's increased use of technologies that are vulnerable to disruption.

This is reaffirmed by Albala-Bertrand (1993) although he claims that vulnerability is primarily a socio-political issue rather than an engineering one, due to the common requirement for the basics of life. However, it is an engineering approach to human lifeline protection in Christchurch, New Zealand by Hendtlass and O'Grady (1997) that provides an important conceptual link between crisis management and business continuity. This study defines risk as the sum of the hazard plus the degree of vulnerability. A possible interpretation of this formula approach is that risk can be managed to an acceptable level by 'hardening' the organisation to a certain hazard (i.e. reducing its vulnerability) in the same way a bridge is strengthened to offset against an earthquake. Hewitt (1983) summarises the general tenor of vulnerability and hazard research by stating that:

*"Most natural disasters are characteristic features of their location and can be expected to be ordinary life if one chooses to live there. The likely disasters are better able to be predicted than many everyday social occurrences" (p25).*

Extending this concept to the 'natural' environment of organisational life involves consideration of human fallibility, financial risk and technological

failure. All these events should be relatively easy to predict and plan for and so this is a natural conceptual intersection between crisis management and business continuity planning theories. In support of this logic, Jovanovic (1988) notes that some natural disasters are not necessarily powerful enough to cause major crisis in themselves but can make other human endeavours potentially dangerous. As a result he advocates that natural and man-made disaster studies should be coupled rather than kept separate. It is suggested therefore that the same logic could be extended to organisational preparation for physical crisis versus the wide range of other events requiring business continuity planning. Kreps (1989) also supports this view in his work on organising and structure within disaster and sees the events, structures and responses as antecedents of each other, as shown in Figure 2.2.



**FIGURE 2.2 - Relationship between Social Structure and Disaster (Kreps, 1989).**

Taylor (1996) developed a two-dimensional matrix (Figure 2.3), which is useful in the way it categorises disasters. However, it does not give any weighting of importance or impact and therefore is of little assistance to executive decision making other than in providing a checklist. The scenario of a piece of space junk landing on a main production plant illustrates this. While the organisation will be severely affected by this event it is extremely unlikely that it will occur and very difficult to plan for so little time or money would be spent planning for it. Although this model provides a detailed examination of the externally induced events that could impact on an organisation, it does not address self-induced crisis. Self-induced or internally generated crises are those which are caused by specific actions or negligence (Mitroff & Pauchant, 1990; Albrecht,

1996) and, in the organisational sense, they can only be brought on or protected against by the group with the decision making authority.

	NATURAL	INDUSTRIAL	HUMAN
EARTH	Avalanches, Earthquakes, Erosions, Eruptions, Toxic mineral deposits	Dam Failures, Ecological neglect, Landslides, Outerspace debris fallout, Radioactive subsidences, Toxic Waste Disposal	Ecological irresponsibility, Road and Train accidents
AIR	Blizzards, Cyclones, Dust Storms, Meteorite and planetary shifts, Thermal shifts, Tornadoes	Acid rain, Chemical pollution, Explosions over and under the ground, Radioactive cloud and soot, Urban smog	Aircraft accidents, Hijackings, Spacecraft accidents
FIRE	Lightning	Boiling liquid/expanding vapour, Electrical fires, Hazardous chemicals, Spontaneous combustion	Fire-setting
WATER	Drought, Floods, Storms, Tsunamis	Effluent contamination, Oil spills, Waste disposal	Maritime accidents
PEOPLE	Endemic disease, Epidemics, Famine, Overpopulation, Plague	Construction accidents, Design Flaws, Equipment problems, Illicit manufacture and use of explosives and poisons, Plant accidents	Civil Strife, Criminal extortion, Guerrilla warfare, Hostage-taking, Sports crowd violence, Terrorism, Warfare

FIGURE 2.3 - A Matrix of Disasters (Taylor, 1996)

This category of self-induced crisis includes:

- a. lack of executive continuity planning
- b. poor internal control of people, systems, physical and intellectual assets
- c. insufficient competitive intelligence
- d. weak or non-existent disaster recovery plans

These could be positioned in Figure 2.3 in the ‘Human/People’ quadrant. Taylor (1996) went on to integrate phases of response and victim classification in a

three dimensional conceptual model (Figure 2.4). This is a more useful model for a scenario orientation to crisis but ignores Dynes (1970) introduction of time and space as classification measures.

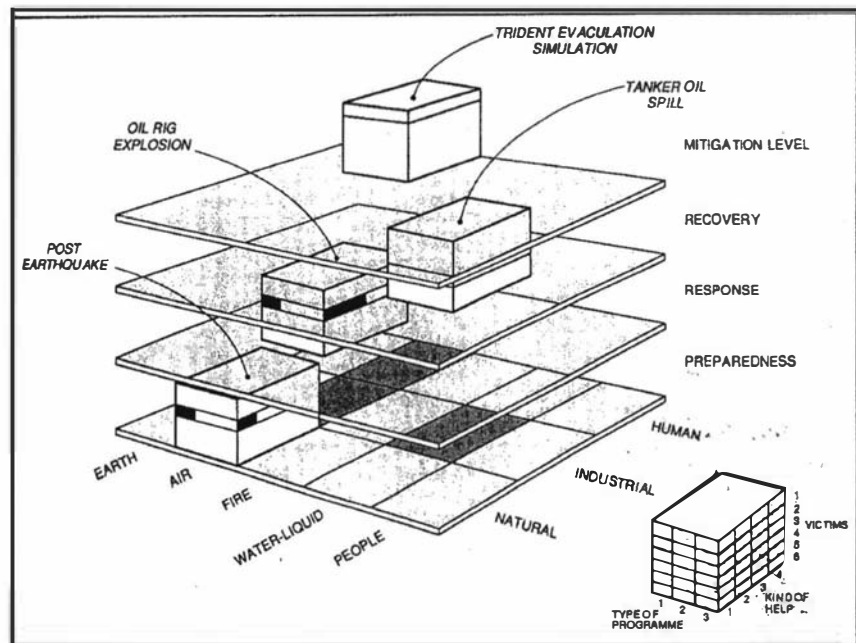


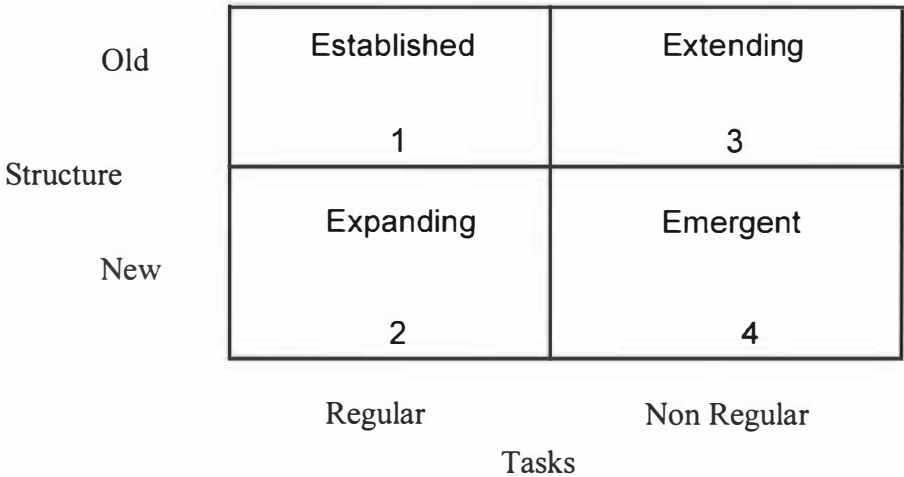
FIGURE 2.4 - Conceptual Model to Integrate Disaster Studies, (Taylor, 1996)

### 2.3 Organisational and Structural Concepts

The greater part of the organisational literature in the area of crisis has focussed on studies of those organisations that provide relief and recovery services during a disaster (Dynes and Quarantelli, 1968; Dynes, 1970; Stallings, 1978; Kartez, 1984). This is clearly different to the study of organisations experiencing a disaster and, while some groups may find themselves in both categories, it is important, given the goals of this research, to consider organisational concepts in a discrete section. Turner (1979) notes that the emergency service orientation is largely focussed on the commencement of the event. However, he notes that during the preceding period of apparent normality, crisis preconditions exist and the calm is nothing more than an incubation period for the hazard. He advocates spending this time in monitoring, prediction and preparation activities.

Wenger (1978) found that internal and external bonds and communication efforts intensify and strengthen, particularly across departments within the

organisation, during the pre-impact phase of a crisis. This could be interpreted as part of the human adaptation that is necessary to cope with change and is described by Dynes and Quarantelli (1968), Dynes (1970) and subsequently by Stallings (1978) as a two dimensional relationship between structures and tasks. This is shown diagrammatically in Figure 2.5.



**FIGURE 2.5 - Relationship between Structure and Tasks in Crisis Situations (Dynes, 1970).**

In this model, existing organisations operating in their normal range of tasks, such as a fire brigade at a single appliance fire, undergo little stress. However, as Stallings (1978) points out, all types of organisations involved in a crisis will become involved in change, as described by the four quadrants, and the extent of internal change is inversely related to the degree to which the organisation retains or enhances its basic capability. He notes that the greatest challenges are faced by the established organisations, which often have to make radical internal changes resulting in personnel being less effective in their new and unfamiliar crisis role. This concept is also explored in the work of Schneider (1995) who set out to explain why there was variability in the effectiveness of US Government responses to disasters. She believes this to be relative to the size of the gap between the bureaucratic norms of the agencies involved and the emergent norms that appear in the affected groups during a disaster. When there is convergence between rules and regulations with informal behavioural standards, response is deemed to be effective. She claims the opposite to be true of diverging norms and both possible outcomes are said to be a function of the degree and type of preparedness of the Government agency.



Since the late 1980s, this process of organisational learning has become an emerging feature of development programmes in the corporate sector but its observation and application had been noted by crisis researchers such as Ross (1978) some ten years earlier. Senge (1990), arguably the leading writer in the field, notes that humans are taught from a young age to break up complex problems and subjects into pieces in order to make them more manageable. However, he believes that in doing so it is easy to lose sight of the consequences of problem solving actions and finally lose the context of the big picture completely. Consequently, it could be argued that organisations finding themselves forced to operate in the emergent task set (Quadrant 4) in particular and possibly Quadrants 1&3 as well, might make internal adjustments to structure or process in order to cope with the new circumstance. This might render them unfit for returning to earlier states or create new downstream problems that were not anticipated in the piecemeal problem solving undertaken. Organisational learning is discussed more fully in Chapter 3.

Turner (1978) had a fundamentally different approach to the general structural approach espoused by Mitroff & Pearson (1993) in that he applies his belief in the lack of knowledge by an individual or group leading to a predisposition for experiencing crisis. His sequence is therefore a sociological and cultural perspective but is useful in terms of the discussion of organisational culture that will follow in later chapters. This sequence is:

- a. Notionally normal starting point
  - initial culturally accepted beliefs
  - associated precautionary norms
- b. Incubation period - the accumulation of an unnoticed set of events
- c. Precipitating event
- d. Onset
- e. Rescue & salvage - first stage adjustment

f. Full cultural readjustment. (p 85)

Mileti, Drabek & Haas (1975) believed that the magnitude of an event could be altered through mitigating actions to the extent that it could be reduced or even eliminated. This depends on the existence, in terms of both quantity and quality of emergency relevant resources. While communities (and therefore organisations) can be viewed as problem solving entities, their ability to mitigate against or respond to any number of emergencies will dictate the outcome, in the absence of outside assistance (Wenger, 1978). This point is reinforced more recently by Albala-Bertrand (1993) who claims that larger, wealthier countries suffer smaller relative losses in a disaster than smaller nations. This is due to their more effective response mechanisms and larger resource bases. Can this same deduction be drawn of large versus small organisations? If so, then it could be argued that educational and legislative initiatives should be targeted at smaller organisations where the majority of New Zealanders are employed.

At the national level, Albala-Bertrand (1993) claims that disasters result in an economic stimulus and, at the macroeconomic level, performance often improves in the two years after the disaster. It is difficult to see this effect flowing through into smaller businesses. Bent (1995) reflects this in observing that there are four fundamental issues that organisations need to address and they are downtime, the customer base, cash flow and production. This is not to say that economic outcomes in the long term will not be good but rather that a fundamental assumption is that executives would not willingly put their organisations into crisis simply to gain a downstream stimulus without any accompanying short term goal. Myers (1999) supports the position taken by Bent in stating that BCP should emphasise retention of market share, servicing customers and maintenance of cash flow.

## **2.4 Human and Cultural Factors**

From the 1950s, when early methodological research foundations on disasters were initiated, there has been a steady shift away from definitions relating to the cause / response relationship toward an effect perspective. This is oriented

toward the identification of outcomes for humans and groups as a result of a crisis event. This shift has many roots but does seek to recognise the conditions made by humankind which cause the crisis as well as the importance of cross-cultural validity to any research in this area (Watts, 1983; Trebilco, 1995). The consequence is that any discussion of crisis should include a consideration of culture (Dake, 1991, 1992; Clausen, 1994) and cultural perceptions are examined in subsequent parts of this chapter. Since organisations have been shown to develop their own cultures over time, it logically extends that organisational cultures will, in some way, effect and be affected by crises. This concept is more fully developed in the next chapter.

Although the research by Cannon (1994) was oriented toward natural disasters, the concept of vulnerability has clear connections in the organisational context. This work described the components of vulnerability, such as income opportunities, quality of housing and location as showing that more wealthy people are less likely to fare badly in time of crisis due to choice. The implication is that poorer people have less to lose. Were this true in the organisational sense, large companies would be less able to cope with crisis than small ones and this research sets out to provide an answer to that question. Crises result in a wide range of effects on the people involved. These effects can range from victim status to those responsible for repairing the damage. The first part of this section examines the effects on victims. On the other hand, humans are often the cause, either directly or indirectly, of the crisis situation and this is addressed in a later section. Coleman (1966), who notes that to understand community disorganisation, one must examine both the vital processes of the community and also the conditions that interrupt those processes, offers a sociological perspective on this. The community of business is the focus of this study.

#### 2.4.1 Perceptions of Risk

Internal and external factors affect our personal world-view and in turn our perceptions of risk and individual or group vulnerability. This has a consequential effect on planning behaviour, warning compliance and decision making and recovery behaviour (Johnston, 1995). All of these are key processes in preparing for, preventing, mitigating or recovering from risk. Although a comprehensive study of all cultures, personality types and views is too large to achieve, some progress has been made in identifying links between the orienting dispositions of cultural theory and individual psychology (Dake, 1991; Kleinhesselink and Rosa, 1991). In the future, this may enable progress toward the development of cross-culturally valid theories on risk perception. A comprehensive assessment of the literature regarding ethnic influence on risk perception was undertaken at the University of California (Vaughan & Nordenstam, 1991). The researchers noted the generally homogeneous samples of previous works as a case for investigating ethnicity as a specific contributing factor. They summarised by stating that "currently, there is no extensive evidence to conclude that the empirical and conceptual relationships described in the literature could be generalised across all groups" (Cvetkovich & Earle, 1985 cited in Vaughan et al, 1991, p. 51).

However, that is not to say that the factor of ethnicity lacks relevance to risk perception. As an example, a local study claimed that Maori have fundamentally different views on the causes of illness that are not just the result of different knowledge (Sachdev, 1990 cited in Vaughan et al, 1991). Durie (1985) affirms this view by linking the Maori view of health with different views on broader concerns such as pollution. Some research has focussed purely on the individual psychology of risk perception and certain key principles can be drawn out which will assist in a subsequent analysis of organisational culture. MacGill and Berkhout (1986, cited in Trebilco, 1995) offer six possible factors for determining attitude to risk. They are:

- a. information on the risk itself
- b. compensation or benefit in accepting the risk
- c. culpability or control in exposure to the risk
- d. familiarity with the specific risk,
- e. comparisons with other risks
- f. mental ability to visualise cause and effect

However, this list does not identify the cultural factors mentioned earlier such as economic and social circumstances, norms, values and beliefs. In an earlier review, Covello (1983) observed perceptions of technological risk based around a case study of nuclear power generation. Although dated, this is an important review since it is one of the few published works that does not deal with natural disaster risk perception. He noted that, to be useful, risk perception studies needed to take an approach that integrated personal, technical and organisational perspectives and that at that time few researchers had employed an organisational or social structural stance that acknowledged the influence of group norms on behaviour.

Mileti (1999) also surveyed influences on the implementation of mitigation strategies and noted that these decisions can be influenced at the personal, organisational or governmental levels. He suggested that while many of these influences were not unique to crisis i.e. they are simply a part of decision theory, some are directly linked to personal and collective experiences. In a departure from the line taken by most other writers, Mileti claims that much is known about how formal organisations respond or fail to respond to perceived threats. This review has revealed that much has been written but there is little general agreement on how organisations make decisions before, during and after a crisis. The literature contains ample evidence of empirical research but little inter-disciplinary theory. Covello (1983) supports

this view in observing that few researchers have made any attempt to relate the substantial body of literature on perceived risks of natural disasters to perceptions of technological hazards. This view is also shared by Drabek (1986) who, in listing priorities for the future, included the need for more integration of theoretical viewpoints and increased practitioner-researcher interaction.

Mileti, Drabek & Haas (1975) reviewed several key works on the subject of risk perception and stated that the perception, by any person, of a hazard would be relative to its relevance to themselves and their community. They summarise the findings of previous writers as follows:

- a. people have a consistent tendency to underestimate a hazard (White et al, 1958; Burton et al, 1965; Heathcote, 1969 cited in Mileti, Drabek & Haas, 1975),
- b. more previous experience with the specific hazard provides more accurate perception of it (Burton & Kates, 1964; Roder, 1961; Saarinen, 1966 and Kates, 1971 cited in Mileti, Drabek & Haas, 1975),
- c. those having a direct economic relationship to the hazard perceive it more accurately (Burton, 1962; Saarinen, 1966 cited in Mileti, Drabek & Haas, 1975),
- d. risk taking propensity in normal life is not substantially related to hazard perception (Kates, 1971 cited in Mileti, Drabek & Haas, 1975), and
- e. there is evidence to suggest that belief in eventual impact increases as the number of warnings received increases (Fritz, 1961; Drabek & Boggs, 1968; Drabek, 1969 cited in Mileti, Drabek & Haas, 1975).

They also note that education, gender, income and age are not factors in risk perception. Covello (1983) cites research by Combs and Slovic (1979), that shows that people consistently underestimate the cause of death from unspectacular, undramatic and non-newsworthy causes. They also overestimate the lethality of sensational and newsworthy events. Trust in the credibility of the source has been shown to affect mitigation actions (Drottz-Sjoberg, 2000) and when there have been previous negative experiences of an information source, individuals are less likely to trust risk information from that source.

Perceptual studies in Europe show that experts and lay-people have trouble interpreting statistical information and that accurate conclusions are more easily drawn when information is presented in the form of natural frequencies (Hoffrage, 2001). This and earlier points highlight the complex interplay of factors affecting risk perception and reinforces Dake's (1991) point that 'individuals are not socially isolated in a psychological or cultural vacuum' (p 62). He noted political context and the controversies surrounding them, the socio-cultural environment and a person's satisfaction with their place in society and their worldviews all came together. The individual was seen as integrating all these factors in a relatively structured way despite the difficulty in being able to define or measure this structure. Of particular importance to this research is Dake's finding that the worldview labelled individualism can be differentiated by examining attitudes to market issues. Individualists will be more fearful of market failures than those with other dominant worldviews.

Work by Mack & Baker (1961 cited in Mileti, Drabek & Haas, 1975) shows a tendency for people of middle socio-economic status to more likely accept signals of impending or actual disaster. It is felt that the same reduced likelihood attributed by them to richer and poorer groups can be contrasted later to very large and very small organisations as a result of this study. In an earlier work, Drabek (1986) reinforced the point on populations generally underestimating the hazard risk but

provided two important insights that will assist in the examination of New Zealand organisational practice. First, he noted that despite experience of an event normally increasing a person's accuracy of perception, some people mistakenly believe that it could not happen to them twice (the 'lightning strike' principle). Second, he stated (as noted in the introduction):

*"Hazard perceptions among organizational executives parallel those of the general public, both in content and in pattern variations" (p332).*

This statement, as an underlying assumption, enables us to draw parallels between crisis and organisational literature. McLean (1995) supports this assumption in his work on business recovery planning. He notes that preparation to recover from a major disaster should enable an organisation to deal with localised minor incidents without stress. The implication of this is that benchmarking an organisation's crisis preparedness will, over time, enable the development of a regression model in order to predict ability to deal with all sorts of change.

Much of the commentary on risk perception relates to the availability and source of hazard information. In a small scale pilot study on earthquake risk at the University of Canterbury, NZ, Britton (1978) found that the usefulness of an accurate disaster prediction system, notwithstanding other factors, was only likely to be as useful as the extent to which the organisation had prepared, rehearsed and was willing to implement crisis plans. However, in a later work he noted New Zealander's laissez faire attitude was a significant block to disaster planning and observed that there was an unjustified faith in what assistance public authorities would render (Britton, 1981). The question of whether it was useful to provide the public with hazardous incident information was examined in a recent German study. Schutz & Wiedemann (2000) found that informing the public about accident risks and appropriate behaviour can have a positive effect on their knowledge of the situation and trust in the organisation concerned. However, they



note that this does not necessarily translate into improved preparedness and local experts felt that rehearsals were still needed to avoid knowledge decay over time.

A study conducted at the same time attributed perception of risk, again earthquake hazard, to certain personality variables (Simpson-Housley & Bradshaw, 1978). These researchers established that respondents who scored as 'internals' (they believe that the consequences of their life will result from their own actions) would be more likely to take hazards seriously and take action to mitigate the threat. On a second personality scale labelled repression-sensitisation, they hypothesised that 'moderates' (those who are relatively free of denial mechanisms or ruminative behaviours) would be more likely to take effective preventive actions. This latter position was also established. The balancing of risk against perception of personal vulnerability is also noted by Drottz-Sjoberg (2000) however she acknowledges that it is not yet clear what factors make up the extent of perceived personal safety. Clearly there is potential for much more work between personality psychologists and crisis researchers in determining the predisposition of decision makers to treating a hazard accurately.

The laissez faire attitude alluded to by Britton (1981) is identifiable even within the context of managing the NZ economy during a natural disaster. A previous Deputy Governor of the Reserve Bank claimed that few of the obvious problems that will have to be dealt with could be addressed before the disaster occurred (Knight and Ledingham, 1990).

#### 2.4.2 Effects of Disruption on People and Organisations

This is a study within the context of human resource management and so it is important to identify the generic issues facing people in crisis. Prince (1920) noted that the more a shock is limited in extent the more its analysis grows in complexity. The complexity of individual and organisational behaviour makes it unsurprising that little has been

examined in detail on the subject of human resource management implications.

In setting out to study effects, it is intended to remain within organisations as much as possible and not dwell on the vast range of societal issues that could and would affect the organisations within them. However, organisations are groupings of people and their examination cannot always be separated from that of the inhabitants or inter-group processes. Therefore, there is the twofold problem of interpreting the functioning of specific organisations and interpreting the functioning of organisations in interaction (Form and Nosow, 1958). Relationships of the organisations to the community are as important as their manifest structures and there is clearly a convergence of community and organisational roles for both organisations and people.

Barton's (1969) work in summarising and codifying existing sociological knowledge in the area sets the impact of a disaster in the broader context of collective stress situations. He describes this as:

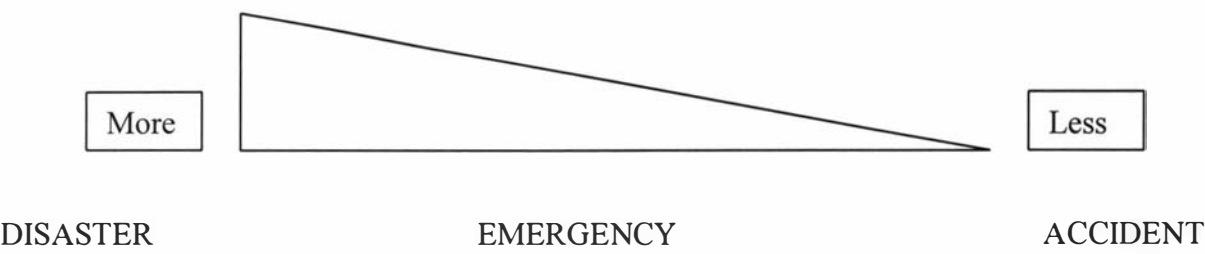
*"when many members of a social system fail to receive expected conditions of life from the system" (p 38)*

The conditions of life that Barton referred to included guidance and information necessary to carry on normal activities and he described the basic dimensions of a collective stress situation as the scope of impact, speed of onset, duration of the impact and social preparedness. Although the points that he raises are intuitively valid, it should be noted that his case studies were limited in this instance to a tornado (1952), the Irish famine (1845-49) and Hiroshima (1945). Britton (1986) in reviewing definitions determined that there were three delineating criteria, which were:

- a. the number of people involved,
- b. the degree of involvement of population within the 'affected' social system, and

c. the amount of disruption by the collective stress agent on the social system. (p 227).

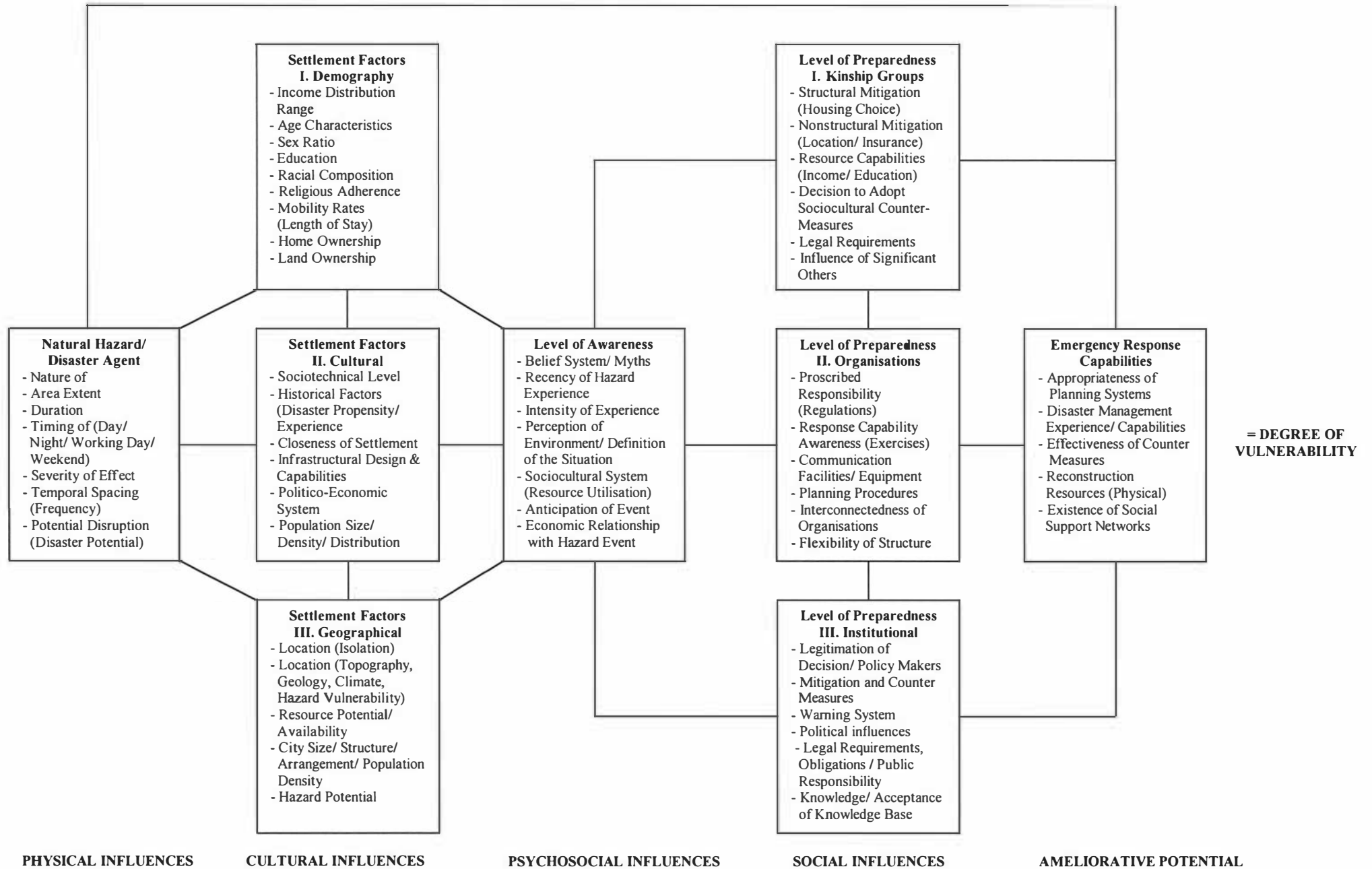
He combined these criteria with the definitions to develop the continuum of collective stress shown below at Figure 2.6.



**FIGURE 2.6 - Continuum of Collective Stress (Britton, 1986)**

While Britton's model works well for disaster, it does not appear to have been written with the broader spectrum of business continuity during other forms of disruption in mind. Collective stress has many facets such as when an organisation cannot provide work for its staff and they are forced to look elsewhere. This results in frictional unemployment and in the case of small communities, where job opportunities are limited, voluntary and compulsory migration from town to town will increase. After recovering from a disaster, an organisation may find it has no available labour force, including temporary staff and sub-contractors, and consequently descend back into a new crisis (Sorokin, 1942).

There are many perspectives on vulnerability but that which provides a transition theory between studies of communities and organisations is the work by Britton (1986, 1987). While this work has utility in offering further analysis of definitions of accident, emergency and disaster it has far greater importance in modelling the interaction between the disaster event and the social conditions of the human organisation affected. This model is shown at Figure 2.7.



**FIGURE 2.7 – The Process of Disaster Vulnerability in Terms of the Interaction between the Physical Event and the Social Conditions of Human Organisation (Britton, 1986).**

## 2.5 Trends

There have been several previous attempts to examine the literature in order to identify trends. Quarantelli (1998) reviewed one of the most debated issues seeking to gain clarity regarding the term 'disaster'. He found that 11 publications over 28 years produced significant differences in viewpoint on the question.

The main body of literature defines crisis events in descriptive terms. Drabek (1986) takes a somewhat different view from most writers in seeking to codify key sociological findings from 1000 published disaster studies between 1920 and 1985. His work is therefore inclusive of previously omitted topics such as mitigation, perception and adjustment. In commenting on this work, Britton (1999) asserts that, apart from this codification, the other major contribution of this work is the development of an organising framework comprising eight phases of disaster time and six systemic levels within society. This framework, it is claimed, will assist the emergency manager to coordinate risk reduction and response through a better understanding of how communities organise themselves to cope with uncertainty and risk.

In a later work, Drabek (1991) cites research that he carried out in 1988 in which he identifies four major influences on the field of emergency management. These are the events themselves, intervention by interest groups, policy adjustment at the national or local level and long term development of the profession. While these areas will shape the practitioners, the researchers are working in an increasingly interdisciplinary environment and in a more international context as well (Anderson & Mattingly, 1991).

Despite the growth of interdisciplinary study, little attention is paid in the literature to the effects on humans in their everyday lives. Dynes (1983) noted the general trend toward the inclusion of social disruption as a definition of disaster. He believes that typically segmented planning, employing an artificial emergency response structure directed toward a specific disaster agent distorts the emergency response potential. He further states that an emergent human resources model that adapts principle-based plans to the people should replace the usual approach of a 'command and control hierarchy'. He is supported in

this view by Myers (1999) who believes that it is not cost effective or realistic to prepare fully for all types of crises and that staff will, if guided by the right principles, do their utmost to help the organisation survive under adverse conditions.

One exception to the lack of consideration of human effect is in the area of trauma and Post-Traumatic Stress (American Psychiatric Association, 1994) however these studies are outside the scope of normal organisational existence, which is the focus of this research. Morren (1983) noted that even though everyday problems may be recognised they were not the subject of systematic study in the way that the environment or emergency service structures were examined. Flaherty (1993 cited in Quarantelli, 1998) extends early work on time and space by Dynes (1970) in noting that few researchers have expressed a situational analysis in terms of 'social time' as opposed to chronological or disaster time. He describes the former as *"how time is experienced and visualized by individuals and groups"* (p 255). The study of impact on human resources in this research is closely linked to the concept.

Barton (1969, cited in Mileti, Drabek & Haas, 1975) took a new direction in his assessment of 'collective stress'. External sources such as the environment or internal sources like social disorganisation can bring about this impact on people and groups. Because stress is evaluated against expected conditions of life it can be postulated that rising expectations, such as in customer groups, could trigger a crisis even though the reality has not changed.

Research into the human phenomenon of disaster is still lacking in focus. In particular, crisis studies require far greater integration with other, more established, disciplines and this has been known for at least 25 years as Mileti, Drabek & Haas (1975) point out:

*"Research into this component of human behavior must not continue to segregate the unique disaster event from other social processes and then seek explanations for behavior. A perspective must be adopted which provides a view of disaster and its consequent behaviors as only one point on a time continuum"* (p 146)

Turner (1978) reinforces this point in observing that 50 years of research in disasters had focussed largely on the impact of the event along with the rescue and recovery efforts. He noted that more than ever before there was a need to examine the social and technical circumstances which precede a disaster. Coupling this with his cognitive view of disaster he suggests in a later work (Turner, 1979) that there may be a pre-disposition of certain groups or communities to becoming a victim of a disaster. This is an important point to bear in mind as the study of New Zealand organisations unfolds. Not only do wealthier countries have greater resources to defend against hazards but they also have the ability to establish organisations to identify, study and mitigate against hazards as well. Erickson (1990) operationalises this concept in proposing interactive models to enable the measurement of impact in terms of human responses to hazard effects. Turner's (1979) aetiological work suggests that the world could be mapped in order to consider disaster proneness. This would involve an overlay of all natural and man-made energy sources as well as a political economy map showing population density, prosperity resources and disaster relevant skills.

A recent review of trends by Britton (1998) represents a 'forcefield' analysis of positive and negative trends. While he believes that the field is evolving, he notes that it will be many more years before it is away from the current crossroads and that formalisation of the role of emergency manager through knowledge based programmes would be a vital component of that. The factors he lists are shown in Table 2.1 below.

<b>POSITIVE DEVELOPMENTS IN EMERGENCY MANAGEMENT</b>	<b>RESTRAINING FACTORS IN EMERGENCY MANAGEMENT</b>
1. A more realistic context for emergency management	1. Response orientation
2. Knowledge-based education programmes	2. Focused recruitment
3. Effective links between research and practice	3. Open season on the all-hazards approach

4. Heightened interest in uncertainty	4. Information sensitivity
5. Systematization	5. Lack of accepted terms
6. Multi-disciplinary orientation	6. Quality control

**TABLE 2.1 - Energising and Restraining Factors in Emergency Management (Britton, 1998).**

### **2.6 Worldwide Crises**

The main goal in this chapter is to examine the literature on events that have relevance to the study of disruption to the New Zealand organisational scene. For that purpose, a summary of recent worldwide crises demonstrates the breadth of the field and underpins the importance of the scope of the survey used in this research.

Glickman, Golding, and Silverman, (1992) present the work of the organisation called 'Resources for the Future' (RFF). RFF has set out to create a database from two dozen other public disaster sources. Spanning the years 1945-1986, it details worldwide every natural disaster with 25 or more fatalities and major industrial accidents involving 5 or more fatalities and the presence of hazardous substances. RFF does not set out to explain why things happen but simply to show what happened. In the period of the study, the database showed 1,200 natural disasters accounting for over 2.3 million lives. It reveals that natural disasters occur four times more frequently than major industrial accidents, that they take 150 times as many lives each year and more than 30 times as many lives per event. While New Zealand is shown in the high-risk zone it is not listed as suffering any specific events that fall within the criteria of the database.

Barton (1993) has also compiled lists of recent crises for examination. He notes that since 1983, prevalent disasters include product failure and recalls, product spiking by commercial terrorists, bombings, structural collapses, rumours regarding satanic links by corporates, fires, spillage, fraud, random workplace shootings, commercial espionage, strikes, hostile takeovers, robbery, riots, floods, and coups leading to collapse of economic confidence in the country of occurrence. The list of names associated with these events are indicative that no



one can expect to remain unaffected and includes NASA, IBM, Union Carbide, Exxon and the Japanese Stock Market.

The broad content of even an abbreviated list such as that above demonstrates that studies based on natural disasters in the community setting are far too limited in scope and the field needs to be expanded by research projects such as this one. This obvious diversity of crisis reinforces the point made by Prince (1920) that the complexity of the study into a disaster is inversely proportional to the scale of the event. In effect, most of the research has been conducted into small, straightforward or readily available types of crises and those of immense complexity have received little attention due to the difficulty of the research task.

#### 2.6.1 New Zealand Crises

Despite the popular myths that have been espoused regarding New Zealand's temperate climate and safe, easy going lifestyle, this country has experienced a significant number of disasters. Beetham (1994), for instance, in examining earthquakes that have caused significant landsliding, identified 22 events between 1848 and 1994. Grayland (1957, 1978) described 62 events that have shaped this country's history between 1840 and 1976. These range from floods and earthquakes on the natural end of the spectrum to influenza epidemics, fires, explosions and transport accidents. Some of these, such as the Hawke's Bay earthquake, Tangiwai rail crash and sinking of the ferry *Wahine*, have become placeholders in the national memory. The Ministry of Civil Defence has published an annotated bibliography of social science and disaster research that provides a detailed resource for further examination of New Zealand crises and the studies that have been conducted into them (Searle, 1994). Despite this, some national crises fall between the definitions of crisis and business failure. One important example of this is the deaths of climbers Rob Hall and Scott Fischer on Mount Everest in May 1996. The study of this accident by Elmes and Barry (1999) is an important contribution to the understanding of the point where crisis and continuity studies meet. Some of these findings are discussed in Chapter 3.

## 2.7 Conclusion

Improvements to the quality of life are a major aim of social science studies. Therefore, drawing lessons from history and also from the literature should be a priority. Many authors (Barton, 1969; Drabek, 1986; Quarantelli, 1998) believe that a clear taxonomy of disaster events and response systems will improve understanding of the field. The dispersed effort evident in this literature tends to support that view. While Mileti (1999) proposes a national database on actual disasters, to be accessible to the public, as a means of pursuing this aim, Drabek (1986) believes that a dispersed automated information retrieval system and cross-national databases are priorities for the future. New Zealand has partial sources of this type of information, however an organisational version was not discovered and clearly this is a necessary step to building predictive computer models for use in the corporate sector.

Arguably the leading researcher in the field of disaster studies, Quarantelli (1998) believes that the field has 'run dry' and sees the need to identify a completely new paradigm on which to continue. He notes that most researchers are *"reformers rather than revolutionaries"* (p 266). The findings of this review tend to support this position, as it is evident that increasingly more complex studies are being conducted into the same sorts of events without any significant new breakthroughs.

## *Chapter 3*

### **Organisational Theory and Behaviour**

#### **3.1 Introduction**

Organisations are discrete communities however, as a composite, their success or failure may result in a similar outcome for the larger community within which they operate. In terms of academic study, organisational theory deals with the structures and processes whereas organisational behaviour addresses the 'inhabitants' of the entity. This review examines the intersection of both these areas as they relate to crisis management and business continuity.

In the human resource management perspective of crisis, there are at least two views of the organisation. First, what happens to the people within the organisation that has been disrupted? Second, what happens to people outside but in some way connected to the organisation as a result of it being unable to function correctly? In order to later discuss the findings of this study from a human resource management perspective, a focussed examination of selected sociological and psychological aspects of organisations is included in this chapter.

There is an extensive body of literature supporting the contention that strategy, structure and culture are strongly influenced by the personality of the CEO of an organisation (Jacques, 1951; Maccoby, 1976; Kernberg, 1979; Miller, Kets de Vries and Toulouse, 1982; Payne and Pugh, 1976; Zaleznik and Kets de Vries, 1980; Kets de Vries and Miller, 1987). This influence ranges from positive to pathologically negative and while it is not the only determinant, organisational style and success must be considered in relation to the CEO's own style.

The literature on organisational and executive behaviour is large and diverse. In order to keep a perspective on the review, the behaviour of executives will remain the prime focus. A systemic view of this behaviour, based on the lifecycle of the executive's tenure in an organisation, could be said to be a function of the following factors:

- a. recruitment and selection,
- b. their development and the experiences they have during their working life,
- c. the knowledge, skills and personality that they bring to the job, and
- d. the culture of the organisation in which they work.

In addition to the normal behaviour of the individual, their reactions to stress will reveal much about their willingness to acknowledge and deal effectively with organisational crises. This is important in seeking to understand how organisations can cope with disruption. In a study of over 120 organisational crisis cases from 1984-1990, Barton (1993) noted that the situations that generally developed could be termed organisational behaviour crises because the executives involved exacerbated the outcome through inappropriate actions or inaction. These executive interventions included speaking without authorisation, acting or presenting incorrect information or taking actions that further complicated the crisis.

This chapter will be based around models that are presented in Chapter Two, or which lead into those described in Chapter Four. The inner two layers of the Onion Model of Crisis Management (Figure 4.3) show organisational culture and the character of the individuals working within the organisation as being key to understanding executive behaviours. Further analysis of these two broad categories will be structured around the five factors described as being present in any crisis (Mitroff, Pearson and Harrington, 1996). These five factors are:

- a. psychology of executives
- b. culture
- c. organisational structure
- d. human factors
- e. technology.

The approach to be taken is from macro to micro perspective and so this chapter will begin by examining organisational culture and conclude with an examination of certain aspects of executive psychology.

### **3.2 Culture**

Culture is the shared set of beliefs and values that are attributable to most members of an organisation (Schein, 1985 cited in Baron and Greenberg, 1990). Culture is a pervasive influence on behaviour in an organisation and is relatively stable unless exposed to sudden, dramatic events. There is a strong connection between leadership and culture. In start-up organisations, the mental models of the leader are imprinted on subordinates (Schein, 1990) and these are perpetuated as the organisation grows. This perpetuation occurs because *"the executives will generally only hire and keep subordinates who think and feel the way they do, they will indoctrinate and socialise subordinates to their way of thinking and their own behaviour will act as a role model to others"* (p61).

While much has been written on the shaping of cultures by individuals and vice versa, little definitive work has been conducted on the relationship between an individual's personality and their likelihood to join an organisation based on their perception of its culture. One recent work in this area is that of Judge and Cable (1997) who have found that the 'Big Five' personality traits of neuroticism, extraversion, openness to experience, agreeableness and conscientiousness definitely shape an applicant's choice of organisation. This is important to the study of continuity as it means that an organisation that is perceived to be laissez-faire will attract mostly that type of job applicant and subsequently reinforce its own vulnerability. Workforce diversity is essential to a healthy culture.

#### **3.2.1 The Creation of Inappropriate Cultures**

Just as products follow a lifecycle, so too do organisational cultures. However, the type of culture suitable for a new venture will not necessarily be appropriate for an organisation operating in a mature market and if the same executive behaviours are still in place shaping the culture, the organisation may find itself in difficulty. In effect, identifying the right type of leader for an organisation is the result of a

balanced consideration of many factors, including executive personality, organisational culture and marketplace. If a leader possesses or develops inappropriate personality traits these may flow through into the culture (Kets de Vries, 1991).

In his psychoanalytic approach to evaluating organizations Kets de Vries (1991) related well-established personal fantasies and styles to pathological organisational states (Miller and Friesen, 1984). The results are summarized in Table 3.1.

<i>Fantasy</i>	<i>Style</i>	<i>Culture</i>	<i>Organization</i>
Persecution Helpless Ness	Suspicious Depressive	Paranoid Avoidant	Paranoid Depressive
Grandiosity	Dependent Dramatic Histrionic/ narcissistic	Charismatic	Dramatic
Control Detachment	Compulsive Detached Schizoid/ avoidant	Bureaucratic Politicised	Compulsive Schizoid

**TABLE 3.1 - Summary of the Five Constellations (Kets de Vries, 1991).**

This approach shows links to the effect of self-defeating behaviours (Curtis, 1989) on an individual and can reasonably be extrapolated to apply to the organisation, in the case of an executive engaging in these behaviours. Without becoming classified as abnormal they can range from self-fulfilling prophecies, inaccurate expectations about self and others, excuses and protection of self-esteem through to fear of success, recurring intrusive thoughts and self-blame.

3.2.2 Organisational Learning Disabilities

While not necessarily pathological, Senge's (1990) work on organisational learning disabilities reflects on culture although he does not differentiate between executives, staff or other contributing factors as the main cause. These disabilities are described as:

- a. "I am my position" - an inability to identify with the overall purpose but just with the task that the individual performs,
- b. "The enemy is out there" - the propensity to attribute blame away from oneself,
- c. "The illusion of taking charge" - doing something, regardless of how ill-considered it is, being seen as the antidote to reactivity and as a desirable leader action,
- d. "The fixation on events" - attributing a single cause to any event without recognising that primary organisational threats frequently come from slow, gradual processes rather than sudden events,
- e. "Parable of the boiled frog" - inappropriate adaptation to threats that build over time,
- f. "The delusion of learning from experience" - each of us (and therefore each culture) has a learning horizon and the dilemma is that even though we learn best from experience, we frequently never directly experience the consequences of many of our most important decisions.
- g. "The myth of the management team" - internal politics or efforts at maintaining the appearance of a cohesive team defeat excellence in decision making. Argyris (1990) calls this 'skilled incompetence'.

In a survey of Fortune 500 companies from the 1970 list, de Geus (1988 cited in Senge, 1990) found that one third of those firms had ceased to exist and that the average lifetime of a large corporation was about 40 years. In most cases there was plenty of early evidence of organisational decline but this went unactioned, even though some executives were aware of it. Senge (1990) argues that this high failure

rate might reflect a symptom of problems that affect all companies rather than just those that failed.

### **3.3 Organisational Structure**

Even though organisations are nothing more than clusters of people, the way in which they are structured will have an effect on the staff within. This can occur for many reasons including division of tasks and responsibilities, communication, and the distribution of power. Since executives who lead organisations are responsible for structuring them, the organisation's ability to deal with issues is shaped in the first instance by those executives.

Since the formal study of organisations began early last century, structures have been defined in the main by boundaries of status or role hierarchies (vertical boundaries), function or geography (horizontal boundaries) or external divisions such as suppliers and customers. However, the fast pace of environmental change has meant that these approaches to structure are too static to be able to cope. In addition, organisational restructuring, which is based on the premise of a move from stability to stability, is also flawed since it does not take into account the dynamism of the external environment (Ashkenas, Ulrich, Jick & Kerr, 1995). In the continuity context, it is possible to consider structure from two angles. First, does the structure of the organisation offer protection from or susceptibility to organisational disruption? Second, does the organisation contain any totally or partly dedicated resource for handling such events?

Chandler (1966) states that structure follows strategy. However, if this were completely true, emergent strategies, which evolved in response to other factors, would require continually changing organisational structures. Saunders & Kreps (1989) add weight to this view, from the opposite perspective, in stating that the traditional, enduring view of organisation prematurely dismisses the emergent structures that occur during a crisis. Ashkenas et al (1995) believe that the answer to this conundrum lies in the creation of a boundaryless organisation, which is designed to pass ideas and important communication across groups without the drawback of 'turf protection'. This appears to be



based on similar assumptions as Chandler in that stability is purported to be the desirable state. Hurst (1995) takes a different view in claiming that instability and crisis have an equally important role in organisational evolution. While not advocating anarchy or a total disregard for structure, Hurst believes that it is essential for executives to create crises from time to time in order to stimulate organisational learning and adaptation.

### 3.3.1 Organisational Change

Studies of stability and change have appeared throughout ancient and modern philosophy (Morgan & Sturdy, 2000). While there are various theoretical approaches to the consideration of change, it is the managerialist approach that has most relevance to this study. Huczynski (1987) reviewed 350 methods of change management that, in the main, take an engineering approach to organisations of changing from one stable state to another as described by Lewin (1951) in his classic model of unfreezing, changing and refreezing. Morgan & Sturdy (2000) categorise these varied approaches into two broad groups. One of these categories emphasises leadership and culture whereas the other examines change from the perspective of organisational structure and processes. Both approaches have relevance to the study of organisational disruption.

Change is a constant theme within organisations and many writers (Huczynski, 1987; Senge, 1990; Argyris, 1990; Ashkenas et al, 1995; Hurst, 1995) have commented on or reviewed the characteristics of those organisations that cope best with the disruption that occurs during these periods. Stallings (1987) notes that disaster, as a time-compressed change event, is a natural laboratory for the study of change. This raises the question of whether it is possible to draw inferences from an organisation's current state of disaster preparedness to their ability to cope with change in general. If so, this provides a powerful predictor of viability in a dynamic environment. Stallings, in discussing this reverse deductive approach, notes that studies of organisational disaster will only offer useful contributions to theories that are designed specifically

for the study of that environment. His rationale for this claim was based on issues of comparative scales relating to theories of change like population ecology (Hannam & Freeman, 1977 & 1984).

### 3.3.2 Executive Succession

Continuity of an organisation of any size is heavily influenced by the stability of leadership. In particular, the Chief Executive Officer (CEO) or leading figure in the organisation must plan to ensure a seamless transition from themselves to their successor in order to avoid disruption during the transition. In addition to natural succession, contingency plans are also necessary for sudden events such as death or incapacitation of the organisational leader. Vancil (1987) describes two main approaches to CEO succession. These are:

- a. the relay process – where two executives work together until one (the incumbent CEO) passes control to their teammate and steps aside, or
- b. the horse race – where several contenders, perhaps including some outsiders, vie for the role of leader.

The former approach can result in an almost unnoticed transition of leadership while providing contingent cover. The latter produces several ‘losers’ and creates the dilemma of what to do with them, in addition to the distraction caused by the competitive excitement of this method. Small organisations, especially where the leader is the owner, have a unique challenge in that transition for the leader normally means the sale of the business as a going concern.

## 3.4 Technology

All organisations have some means to convert inputs such as materials or information into products or services. This conversion process is the technology of that organisation and it interacts with the structure and culture to shape the

organisation. While external factors such as the marketplace will help to shape technology choices, the executives within the organisation once again make the final selection and so their ability and personal views will set this key aspect of performance in place.

#### 3.4.1 Technology and Interdependence

One important aspect of research into technology is interdependence (Thompson, 1967 cited in Baron & Greenberg, 1990). Thompson developed three forms of interdependence within parts of an organisation that are all created by the technology in use. These three models are:

- a. pooled interdependence: where one part of an organisation does not rely on another for inputs to its process,
- b. sequential interdependence: where the output of one part of the organisation provides the input for another, and
- c. reciprocal interdependence: where functional parts of an organisation such as finance and marketing each provide outputs for the other.

The implications for continuity planning are evident in that a failure to perform when framed against the pooled interdependence model will be limited in impact whereas against the other two models it will be serious for the entire organisation. This could suggest the need to consider structural and technological issues as being at the very core of continuity planning.

### 3.5 Human Factors

The most fundamental principle underpinning the study of human factors was represented by the shift from the scientific management school of thought (Taylor, 1911 cited in Baron et al, 1990) to the human relations approach (McGregor, 1960 cited in Baron et al, 1990). This latter approach emphasised

the philosophy that organisational outputs could not just be controlled through improving the means of production but also through paying attention to human attitudes, motives and relationships. This section of the review describes the most important of these concepts in terms of all organisational members while aspects specific to executives are examined in the next section.

### 3.5.1 Personality and Perception

Sperry and Mosak (1996) define personality as:

*“enduring patterns of thinking, feeling and behaving and relating to the environment and oneself in a consistent manner and in various social contexts. When specific traits such as orderliness, rigidity, thriftiness and emotional construction cluster together they can be referred to as a personality style.”* (p279).

There are a limited number of studies into employee perceptions and the implications of these for organisations. The importance of accurate perceptions for organisational health has been established earlier and it is therefore important to determine how inaccuracies develop and how they can be offset or avoided. Mezias and Starbuck (2000) set out to establish through small-scale research in the sales industry, the accuracy of earlier studies into this area. They concluded as follows:

- a. there was no meaningful difference in accuracy of perception between subjects with experience in the test area and those without. This was considered likely to be due to the very narrow focus that people place on their work, consequently ignoring some relevant but peripheral factors,
- b. many people greatly underestimate the importance of incremental change (the parable of the boiled frog) and

incorrectly ascribe it to inter-period fluctuations. They note Microsoft's late adoption of the Internet as an example.

c. even when personal remuneration was linked to a specific issue and all training and support provided, inaccurate perception was still the dominant result.

### 3.5.2 Dysfunctional Behaviour and Personality Disorders

When personality styles begin to impact on normal work or social functioning they are considered personality disorders (Sperry and Mosak, 1996). These disorders are categorised in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (American Psychiatric Association, 1994). However, even when executives have an understanding of the energising influences behind their behaviour, they can be unable to comprehend and use it (Zaleznik, 1989).

### 3.5.3 Individual and Organisational Learning

The contribution of individual personality to organisational culture has been discussed earlier. A major component of this work is that on learning as a personal psychological phenomenon, leading to the development of a culture that supports individual learning. The leading writers in this field (Senge, 1990; Argyris, 1990) believe that any invention is only considered an innovation when it has been replicated at an affordable level throughout society and, on this basis, Senge claims the concept of the Learning Organisation to be at the invention stage. This is based on the assumption that a basic innovation requires an incubation period and the premise of all, rather than some, of its component technologies being applied. The technologies in this case are referred to as disciplines and are:

a. systems thinking,

b. personal mastery,

- c. mental models,
- d. building a shared vision, and
- e. team learning.

He claims that systems thinking, referred to as the fifth discipline, is the overarching one as it binds together the parts into a whole process of thinking and acting rather than the context removing activity of breaking complex problems into small manageable parts. The other important concept for this research is that of building shared vision, which rather than meaning the development and communication of vision statements, focuses on creating an energising force for united effort. Senge notes this as being common in crisis, which has the effect of galvanising an organisation into action. In this, he gains agreement from crisis researcher Dynes (1970) who argues that disasters create unity rather than disorganisation because they create an emergent consensus on priority of values and therefore problem solving approaches. He believes that crisis underpins the development of altruistic norms. Senge (1990) notes, however, that this unity of purpose is often transient and the organisation frequently lacks the means of translating it into everyday business.

#### 3.5.4 Ethical Issues

There are many reasons why ethics and values should be considered in formulating business policy. The most compelling of these centre on increased corporate constraints and higher social expectations (McCoy, 1985). As a result, traditional measures of corporate performance, which focussed on the financial bottom line, are being modified to incorporate such intangibles as ethics. Although ethical considerations are difficult to quantify they do have a direct bearing on staff behaviour, company reputation and therefore public perception and market value. However, ethical issues must be considered at both the organisational and individual level. On the one hand, strong

organisational values, good or bad, can force an executive to compromise their own personal values. Alternatively, a lack of clarity of corporate values can give executives the freedom to apply their own personal values, once again for better or for worse (Frost, Mitchell & Nord, 1990).

Regardless of the rational economic reasons for organisational crisis management, it is claimed that there is also an ethical requirement for the activity. Pauchant and Mitroff (1992) step aside from universal ethical principles to highlight the need for executives to engage in an ongoing dialogue with themselves regarding what is appropriate behaviour. Whereas the unemotional view of management might allow for an approach to preparedness based on risk and probability, these researchers claim that from a moral perspective, ignoring all potential crises that fall below a pre-determined and theoretical threshold is morally indefensible. They cite the Exxon Corporation as having discounted preparing for a large oil spill only a few weeks before the Exxon Valdez sank, because the probability of occurrence was estimated at one in a million. Clearly, the implications of corporate failure through poor continuity planning affect every stakeholder group and individual executives must at least plan to a level at which they can reconcile with their personal concerns regarding those implications.

### **3.6 Executive Psychology**

The factors that make up the psychological profile of an executive are many and varied. They are a composite of internal traits and external influences and can be broadly grouped into the categories of intellectual, motor and social abilities (Collins, 1993). In addition to personality and perception, which has been addressed earlier, executive performance is also affected by their intelligence (both cognitive and emotional), values, purpose for working (described by Schein, 1990 as career anchors), life stage and motivation. Two important factors that impact on executive behaviour in the context of this study are the use of power and conflict.

### 3.6.1 Power

Used in the social context, power is the ability to change the behaviour or attitudes of another person to a desired manner (Cobb, 1984). Since the ability to plan for, or induce organisational crisis rests with those in power, some consideration must be given to this subject for which the classic theoretical framework is provided by French & Raven (1959). Their work describes five bases of individual power within an organisation, which are:

- a. reward power: the ability to reward desired behaviour,
- b. coercive power: the ability to punish undesirable behaviour,
- c. legitimate power: where the individual has recognised rank,
- d. referent power: which derives from others liking the power-holder, and
- e. expert power: when the individual has valuable knowledge or skills.

The basis on which an executive applies his or her personal power in a normally functioning organisation may be unsuitable during times of crisis. For instance, when a new skill set is required to cope, a new previously unknown leader may be found. Emergent power in the context of disaster is underpinned by disaster-relevant skills and knowledge (Wenger, 1978) and this further reinforces the concept of expert bases of social influence. Kets de Vries (1991) noted the importance of inner balance with regard to leader power given that power inevitably affects thought processes and this is discussed in later sections.



### 3.6.2 Conflict

Difficulties can occur when the traditional leader does not wish to yield power to the emergent leader or when there are insufficient resources for the organisation to function properly. This will create conflict, which, even if dealt with effectively at the time, can leave lingering resentments in relationships and therefore disrupt organisational functioning long after the primary event.

Zaleznik (1989) notes that the major source of difficulty is more frequently the internal conflict within the person rather than any external cause. He attributes the omnipotent fantasies of the immature executive to many organisational failures.

## 3.7 Leadership

Leadership is the subject of extensive study (Fiedler, 1978; Bass, 1981, 1985b; Covey, 1996) but, despite the proliferation of articles and books on the subject, there is still little agreement on the training and development of leaders. However, it is organisational leaders that must accept responsibility for dealing with organisational disruption and an understanding of the fundamentals of leadership is therefore essential. Any definition of leadership will inevitably be oversimplified. Also, there are many differing perspectives through which to define the subject. For instance, the psychoanalytical view proposes that leadership is the result of an individual's desire and ability to project their inner life, personal vision, deep-rooted beliefs, imagination and fantasies on their outside world (Kets de Vries, 1991). This should not be taken as disregard for the importance of being able to develop a relationship with others or deal with external forces. Many executives are very effective simply because of their ability in these two latter areas. Regardless of the driving force behind it, leadership is the process of exerting personal influence on followers (Bass, 1985a) while management is the achievement of objectives through planning, organising, directing, evaluating and controlling time and resources (Fayol, 1916 cited in Baron et al, 1990).

There are conflicting opinions on the degree of separation between leadership and management. Zaleznik (1989) believes that the two are totally separate and that the study of management has seriously damaged the link between form and creativity. He writes that leadership moves beyond what we know about management. Kets de Vries (1993) makes the point that the issues of leadership and motivation are more important to corporate survival than ever before. This gap between supply and demand of knowledge on leadership is of concern to many sectors of society including business, government and the armed forces as well as most ethnic groups. While not based on a rigorous study, there is an intuitive logic to Berne's (1964) description of all social intercourse as transactional with humans adopting different ego states, which in turn drive behaviour depending on the situation.

As part of a 50 country study into leadership behaviour, Kennedy (cited in Tapsell, 1998) has led a team of New Zealanders researching cultural differences in leaders. The findings are, at this stage, limited to three professions common to all countries in the study but preliminary findings show that New Zealanders seem to prefer leaders who are inspirational, decisive, fair and lead by example. Conversely, there is a lack of appreciation of leaders who are aloof, autocratic, status conscious, face saving or attribute blame to others. If subsequent studies are conducted that identify the types of leaders present in New Zealand organisations a useful comparison with Kennedy's findings can be made. Only then is it likely that accurate recruitment and development requirements for leaders will become apparent.

The simple presence of strong leadership is not a panacea for organisational problems. Imbalanced or misdirected leadership is of equal concern and there are numerous examples in the media, ranging from domestic violence to corporate fraud and gang warfare, where strong leadership without appropriate underpinning moral values leads to undesirable outcomes. Ability as a leader can be viewed as separable from the individual's morality or mental health. The power that comes with leadership can easily be abused. The quality of the individual's interpersonal relationships, sense of a secure self, acceptance of limitations and capacity for reality testing will indicate to some extent the

likelihood of power being abused or engagement in pathological behaviour (Kets de Vries, 1993). Sankowsky (1995), who described leaders that hide behind seemingly liberating concepts such as empowerment, further defined this potential imbalance. Narcissistic leaders who are charismatic are likely to successfully abuse the symbolic status of their position. This type of 'anti-organisational' behaviour is of concern and more work is needed in the area of predicting an applicant's likelihood of engaging in counter productive behaviour at work.

Whether this counter-productive executive behaviour is pathological remains unclear. However, the increase in the use of upward and peer feedback programmes combined with self-assessment has shown distinct gaps in perception between executive perceptions and reality. Of Yammarino and Atwater's (1997) four categories of perception gap analysis, three are reported by the researchers to have a mixed or negative effect on organisational effectiveness. In summary, leaders should be examined from the perspective of their personality, ethics and values if the organisation selecting them wishes to eliminate this potential source of crisis.

### **3.8 Decision Making**

Nigg (1987) cites Simon's (1956, 1959) work on the theory of bounded rationality (satisficing) as the generally accepted approach to decision making in complex situations. This method strives for some level of satisfaction that is less than maximal, in reconciling source credibility, message content and warning confirmation.

Decision making in the context of this study needs to be examined at two levels of proximity. First, there is the long term impact of organisational policy. What causes executives to choose to write, update and enforce appropriate policy? Second, there is the issue of decision making immediately in relation to a crisis event. Mileti (1999) discussed the former in examining influences on the adoption and implementation of hazard mitigation. For the purpose of his work, he defined adoption as the initial commitment of resources as a precaution and implementation as a continuing allocation of resources over time. While

acknowledging the usefulness of classical decision theories such as Simon, he observes that such an approach will lead to underestimation of the risk. Mileti sees heuristics as a more likely set of decision processes for people in complex situations. However, there are many of these 'rules of thumb' and they are prone to flawed cognitive processes. As an example, Mileti cites the 'availability' heuristic, which proposes that judgements about event frequency depend on ease of recall of similar events. Another problematic heuristic relevant to this research is that of 'anchoring and adjustment' where the initial information, being too large to process, is used simply to make an initial estimate and is then revised as more information comes to hand. The pitfall in this approach is if the most important information comes later, then the chance of making too small an adjustment is high.

Prospect Theory suggests a model of decision making by phases where the decision maker converts a problem into sets of alternative actions and consequences and allocates subjective scores to each (Hogarth & Kunreuther, 1993 cited in Mileti, 1999). While complex subjective calculations are difficult enough, studies in the field of earthquake insurance have shown that some decision makers tend to consider a low probability as a zero probability. This is clearly a departure from rational decision making. Moreover, if the person has a strong personal commitment to a certain state of affairs (such as operating their business in a certain area) then they will be selective about the risk information they receive and process.

Form and Nosow (1958) note that role conflict affects decision making and that this tends to be brought about under the following circumstances:

- a. Individuals are limited in their knowledge about significant elements in the situation confronting them and can't choose between alternatives for fear of being wrong,
- b. They are confronted with a situation where they wish to act but do not know what is appropriate behaviour under the conditions,

c. Individuals who normally do not perform roles that demand independent decision-making find themselves incapable of easily deciding appropriate courses of action.

3.8.1 Policy Making

Jauch & Glueck (1988) describe policies as “*guides to action. They indicate how resources are to be allocated and how tasks assigned to the organisation might be accomplished so that functional level managers execute the strategy properly*” (p6). This definition is useful in highlighting a critical area of organisational behaviour in that the importance of activities is signalled by the allocation of resources. Policy relating to continuity planning may therefore be signalled in two ways. Either a specific person or team will be assigned the responsibility for developing, integrating and implementing continuity processes. Alternatively, the broader business strategy may include policy direction for all functional managers to include continuity in their outputs. Policies should be implemented with a view to maximising the amount of information that can be gleaned for decision making purposes. Consequently, those responsible for policy development must be aware of the need to actively gather and process information in order to produce effective policy. Continuity planning highlights the need for functional integration of risk analysis.

3.8.2 Decision Making Under Stress

In discussing decision making under stress in the military context, Wallace (1999) states that the major effect is that decision-makers become over focussed on minor issues. He summarises the major effects as follows (Table 3.2):

<i>Positive Effects</i>	<i>Negative Effects</i>
Increased responsiveness	Narrowing of options
Enhanced innovation	Over-reliance on 'experts'

Enhanced flexibility

Refuge in value judgement

Poor mental performance

Overloaded communications

Meddling in lower levels

Reduced team performance

Lack of long term view

**TABLE 3.2 - The Major Effects of Decision-Making in Crisis (Wallace, 1999, p15)**

### **3.9 Approaches to Measurement of Executive Behaviour**

Many approaches to the evaluation of executive behaviour in organisations are based on rational analytical models. However, it has been shown (Kets de Vries, 1991) that the inevitability of human error leads to the advisability of focusing also on irrational individual behaviours. One approach has been to apply psychoanalytic theory and technique either separately or alongside other procedures. While the detailed types of psychoanalytic methods are outside the scope of this work the richness of 45 years of study in this area does suggest the worth of addressing executive behaviour that is dysfunctional or abnormal so far as organisational performance is concerned.

### **3.10 Conclusions**

The field of organisational behaviour has, as its goal, the enhancement of organisational effectiveness and individual well being. There are, therefore, clear links between organisational behaviour and business continuity planning since the latter is also oriented toward ensuring continuing organisational effectiveness. This review has examined the major clusters of knowledge from the behavioural sciences that have relevance to this research. In particular, the theories relating to the nature of the organisational culture and the degree to which an executive is attracted to or shapes an organisational culture due to his or her personality have special relevance to this research. Decision making

theories also have an important role in the way executives prepare for or deal with problems and this body of theory is also significant to this study.

To date, there has been little academic consideration of executive behaviour in the crisis context. The few studies that have been made are case specific or considered by many crisis theorists to be 'not mainstream' (Britton, 1997, Personal Communication).

If the goal of enhancing individual well being in organisations is to be achieved, then a better understanding of executive behaviour and a clear comprehension of the human resource implications arising from crisis events is essential.

## **Business Continuity**

### **4.1 Introduction**

The term in common organisational use to describe measures taken before, during and after crisis is business continuity planning (BCP). Although there has always been some awareness of the need for BCP, a few recent events have made the practice a specific management discipline. Bland (1998) believes that the 1980s were the initial period of onset awareness and that the Tylenol poisoning scare for Johnson and Johnson in 1982 largely brought this about. BCP has also become significant since the widespread inclusion of computer technology in the business world. At no time has this been more apparent than during the recent change of millennium, referred to as the Year 2000 or Y2K Bug. Regardless of the type of crisis, it must be remembered that the ever-widening scope of impact of large organisations means that society is more and more reliant upon correct decisions from a relatively small number of executive decision-makers.

BCP and crisis management are frequently used interchangeably in the literature and within the field of BCP it is difficult to get agreement on the vocabulary associated.

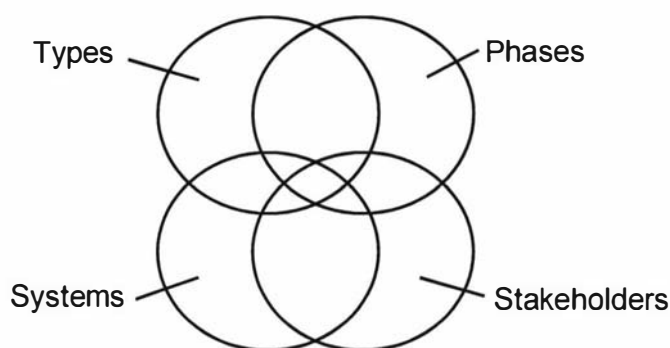
### **4.2 Theoretical Views of Business Continuity Planning**

Numerous authors (Turner, 1978, 1979; Drabek, 1986; Mitroff & Pearson, 1993) have set out to describe the meta-variables that make up the BCP dynamic. This has generally been in order to set out a basis for their own or others' research. Trebilco (1995) notes that the increased levels of research underpinning hazards and disasters are largely led by the increasing cost and incidence of these events worldwide. While the model by Taylor (1996), shown earlier at Figure 2.4, brings together causes, victim groups and phases of response, it does not provide the executive with an effective conceptual framework on which to base their actions. In particular, it lacks an analysis of the stakeholders that exist outside of the causal and victim groups. Such



stakeholders might include customers, shareholders, suppliers and buyers of product and the media. While all might claim to be the most important during the period of disruption, the reality is that all must be dealt with concurrently (Bent, 1995).

Taylor's model also lacks definition in the area of organisation systems, another key component of the executive's planning response. These major variables have been brought together in a much-simplified model by Mitroff and Pearson (1993), which is shown in Figure 4.1



**FIGURE 4.1 - Four Major Variables In An Integrated Crisis Management Programme (Mitroff and Pearson, 1993)**

Most BCP meta-approaches have been oriented toward the definition and identification of phases. In the main, these take a systems approach to the problem of keeping an organisation operating, with phases targeted at the before, during and after period of an event. Mitroff and Pearson's (1993) phases are typical of the genre and are shown below:

- a. signal detection
- b. preparation and prevention
- c. damage containment
- d. recovery, and
- e. learning.

The New Zealand Civil Defence and Emergency Management model recognises only four phases (ESTRF Report, 1995):

- a. mitigation
- b. preparedness
- c. response, and
- d. recovery.

Learning from a crisis provides vital feedback to the preceding four phases of the BCP process and therefore, in systems terms, enables BCP to be either a feedback or feedforward model. Drabek (1986) extends this logic by proposing that academic study is a form of mitigation in that improved knowledge can assist in better policy making. He further extended the application and interpretation of the widely used phases of preparedness, response, recovery and mitigation by codifying these against the systemic level of involvement. Thus, each event can be categorised against individual, group, organisational, community, society and international levels of impact.

#### **4.3 Categorisation of Disruptive Events**

A wide range of potentially disruptive events can be grouped for study purposes (Mitroff and Pearson, 1993). The groupings used below are not generally agreed upon divisions but do provide a link from this review to the survey employed as part of this research. However, other descriptors provide useful differentiation. For example, Glendon and Waring (1997) use the two broad categories of pure and speculative risks to group hazards. They define a pure risk as one where the best possible outcome is no loss e.g. an earthquake. A speculative risk, much like a financial investment may result in loss or gain or a combination. They place human resources, for instance, in the speculative risk category given the imprecise techniques available for selection and management of people.

#### 4.3.1 External Economic Attacks

The use of the term 'external' in this context means from outside the organisation. It includes events such as extortion, bribery, boycotts and hostile takeovers. However, it should be acknowledged that the increased amount of cross-border trade, which is colloquially referred to as the 'global marketplace', will give rise to a range of threats not previously attributed to business life in New Zealand. As an example, there has been an increase in reported attempts at extortion over the last decade often involving Asian business groups or alleged triad members (NZ Herald, 1993; 1997a; 1997b). Quin (1998) in discussing the legal position on bribery and corruption in this country pointed to a July 1997 report of an international watchdog group known as Transparency International. In this third iteration of its "Corruption Perception Index", the group had moved NZ from first to fourth place out of the 52 countries surveyed. No doubt extensive media coverage of fraud allegations at the Audit Office and the Accident Compensation Corporation, as well as the "Winebox Inquiry" has fuelled this slip in rating. Within organisations, there is also the ongoing prospect of staff bribery in order to achieve special treatment such as on housing waiting lists (Taylor, 1992).

#### 4.3.2 External Information Attacks

Competitors or those who bear a grudge against an organisation may choose to attack it via the information medium. This can take many forms including copyright infringement, loss of information, counterfeiting and damaging rumours.

The Copyright Act (1994) along with other related acts and case law governs intellectual property rights in NZ. However, it is limited in its application and duration of protection and recently the NZ Government has indicated that it believes the Act to be contrary to the free trade principles espoused in the Commerce Act (1986). As a consequence, a law change in 1998 amended the Copyright Act by providing for the

parallel importation of proprietary products. Patterson (cited in Yarwood, 1995) believes that, although the law in New Zealand adequately reflects the full range of copyright issues, the punishments available are too light and this makes the theft of intellectual property worthwhile to many.

Loss of information is usually thought of as a deliberate act of theft or espionage. However, open source information (OSINF), which is derived from publicly available sources, can provide a very comprehensive advantage to the collector. Bowen (1999) claimed that over 80% of CIA intelligence products were gained from open sources. Even if not in itself advantageous, it can provide a good contextual tool for targetting or interpreting other information.

Hacking and cracking of computer systems (Ingles-le Noble, 1999) involves either loss of information, psychopathological behaviour such as terrorism or sabotage, or both. In the main, an external attack on an organisation's computer system has no specific objective and frequently the hacker does no damage (Higgins, 1997). However, there is no method of pre-empting these probes on the system and therefore no way of knowing what the purpose of the intrusion is. Constant alertness and review of computer security is essential to system security. In a recent United States information security survey, it was revealed that instances of cybercrime were outpacing security spending (Briney, 2000 cited in Enos, 2000). However, Enos noted that despite extensive media coverage of the 'glamorous cyber attacks', most electronic crimes were committed by insiders. In earlier days, it has been argued that New Zealand business was less competitive than elsewhere and therefore not likely to be the target of an information attack (Lobb, 1991). However, attack and failure must be considered side by side in preparing for IT continuity and Lobb (1991) notes that a comprehensive risk management analysis is also needed to justify the cost of protecting business systems.

Whereas traditional notions of business backup were oriented around access to commercial data, the increasing amount of activity directed through call-centres has given rise to the study of telecontinuity (McCarthy, 1999). Many companies believe wrongly that dispersing their inbound calls across more than one call centre gives them automatic protection in the event that one call centre becomes unavailable. However, McCarthy claims that this type of plan might simply cause the problem to snowball as the increased volumes might swamp subsequent centres, which would also go offline. He advocates a multi-provider, multi-channel architecture with automatic filtering of calls to various response mechanisms the moment that there is a problem. In a departure from much of the literature, Myers (1999) believes that a good continuity plan should not focus primarily on keeping technology running but on keeping the business running. He advocates that the current focus on information technology disaster recovery planning has undermined the overall progress of organisations toward preparedness and ability to recover from a crisis and that only a few types of organisations, such as banks, need a high percentage of redundancy in their technology.

A form of counterfeiting that is endemic in New Zealand is software piracy. Miller (1997) quotes an unsourced report valuing the local loss at \$37 million annually. While there have been a few successful prosecutions for this type of crime, organisations are still a major source of the original code and improved security in this area is required.

#### 4.3.3 Breaks

Breaks in the normal operation of an organisation include recalls, product and plant defects, computer breakdowns, operator errors, poor security and loss of essential services such as power or water. While these might not be catastrophic in effect, they have the potential to be so.

Numerous writers (Beatson, 1988; McManus, 1991; Tree, 1997; Higgins, 1999) have commented on the need for effective security in organisations. Top management awareness and interest in the subject, supported by written policies, underpin good security. Continuous re-evaluation of the threat and protection mechanisms is required for any organisation to be able to protect its assets.

Computer breakdowns are prevalent. Because of this, most organisations tend to have back-up data and alternate hardware arrangement but, nonetheless, a detailed plan is required to ensure business continuity. As an example, Telecom was forced to examine compensation for lost revenue after a data fault at an exchange deprived thousands of customers of service (AAP, 2000a). Several detailed works (Brookes, Grouse, Jeffery and Lawrence, 1982; Behan and Holmes, 1990; Ceriello and Freeman, 1991) have been produced on the importance of backing up organisational and business data. Levels of preparedness for this type of disaster are slowly increasing but have hindered in the past by a lack of knowledge or tight budgets. Lyons (1996) notes that many disaster recovery plans are ineffective because of the time that the back up was taken. He proposes tailoring the timing of the back up to coincide with the risk assessment rather than arbitrarily running them on a set day or time which has most likely been chosen for convenience.

Still vivid in many corporate memories is the Auckland power crisis of early 1998 (Smith, 1998; Standby Computing Services Ltd, 1999). This break of approximately 7 weeks in normal operations was a significant reminder of the reliance of organisations on basic utilities and many organisations found themselves unprepared for the event. Cowperthwaite (1998) noted that the camaraderie brought out by the uniqueness of the experience wore off in a week and that significant occupational safety and health issues surfaced in affected organisations. She cites one unnamed executive as noting that many supposedly cool headed managers lost their composure during this time and it was the IT

professionals who calmly loaded offsite solutions for transition arrangements to be enacted. While this type of break is often characterised by the loss in revenue to those affected by the outage, another perspective is the litigation brought against Mercury Energy Ltd by angry consumers (McNabb and Martin, 1998). There are implications in this for other organisations that fail to supply their service to customers.

Product recalls can be a double-edged sword for the manufacturer. On the one hand, they are undoubtedly the appropriate measure if there is doubt about a product. However, the fact that the recall occurs can possibly lead to a general loss of confidence by consumers. Post recall analysis, such as in the cases of Wyeth, Kiwi Brands and Heinz baby food, reveals that most companies are convinced that it is the right approach, provided that it is planned for and correctly implemented (Supermarketing, 1992).

#### 4.3.4 Psychopathology

This category of hazards addresses abnormal or criminal behaviour by an individual or group that has a detrimental effect on an organisation. It includes terrorism (both political and consumer), copycat behaviour, on and off-site sabotage or tampering, executive kidnapping and sexual harassment. With the possible exception of sexual harassment, which is legislated, this is a poorly understood group of risks.

Albrecht (1996) observes that society is increasingly unstable and that not only do problems spill over into the workplace but that they can affect the organisation's viability. Mentally unstable, aggrieved or jealous employees have, amongst other actions, tampered with products, deliberately misapplied quality testing procedures and have leaked sensitive corporate information to competitors, politicians or the media.

Direct human factors are not limited to employees. A disgruntled customer filing a nuisance lawsuit or starting a petition might just as

easily cause a crisis. Activists such as anti-vivisectionists or anti-abortionists have a single purpose in their campaigning and that is to modify or terminate the operation of an organisation. Politicians utilising parliamentary privilege can attack a company or pass legislation that can have the same effect. The whale watching industry in Kaikoura is one New Zealand example where jealousy and intrigue over a successful start-up business has led to equipment sabotage, arson and breakdown of social relationships in a small rural town (Ansley, 1991).

In an Australian survey (Alex Gottshall Communications cited in Chipperfield, 1991) only 9% of that country's top companies thought themselves likely to become the target of a consumer terrorist. In this country, consumer terrorism occurs on a regular basis although, depending on the policy implemented to deal with it, the media does not report all occurrences. Dennis (1994), in discussing the need for preparedness in food retailing, cites the example of simultaneous bomb scares and extortion attempts at Foodtown's Manukau and Takapuna stores on 17 December, 1993. Although not a high profile subject for executives, consumers seem to have a good understanding of the issues. Tree (1997) reported that a survey commissioned by his packaging company placed the reduction of tampering before and after purchase amongst their top four expectations.

In one of the most recent acts of corporate sabotage in New Zealand, saboteurs destroyed a telecommunications tower north of Wellington depriving Police, three radio stations and Vodafone service for a substantial period of time (AAP, 2000b).

While it has proven difficult to get an accurate picture of the New Zealand situation on workplace violence, Steemson (1997) reports that 350,000 violent assaults occur in the United Kingdom each year. She further notes that the United States experiences 20 occupational homicides per week. Within the context of New Zealand's occupational



safety and health legislation, it seems clear that executives must take some precautions to protect their staff from this growing phenomenon.

#### 4.3.5 Health Factors

Health factors in the workplace include the effects of accidents but also work-related health problems. The Health and Safety in Employment Act (1992) is the main means of control and guidance for these issues in New Zealand. However, there are varying views on its appropriateness. Campbell (1991) believes that worker participation in safety committees in the workplace will assist in improving safety. The Business Roundtable, on the other hand, states that the information disclosure required to make this work "is not always feasible or desirable" (1988, p 17).

Notwithstanding these differing views, it is difficult to argue against the economic merits of keeping staff well and uninjured. In describing the components and advantages of a positive workplace in OSH terms, Owen (1996) noted that the existence of an appropriate culture that is led by the executive team is the best indicator and most important feature of safety. Notably, this same characteristic is described in the literature on crisis preparedness.

#### 4.3.6 Human Resource Factors

Human Resource Factors that relate to BCP include executive succession planning, poor morale and industrial disputes. All these items can cause significant disruption to an organisation if not managed effectively.

Executive succession is of increasing concern to all organisations. In an era of a tightening labour market and perceived skills deficit it is important to try and develop existing staff within an organisations. A recent survey in the United States (Globalcontinuity.com, 2000b) found that intangible factors such as autonomy, work environment and advancement opportunities are more important (90.8%) than

remuneration in terms of an executive's decision to remain with a company or not.

Employee morale is closely linked to job satisfaction (Baron and Greenberg, 1990), and low staff morale appears to be related to poor organisational performance. Various writers (Mobley, Horner & Hollingsworth, 1978; Dunphy, 1981) have commented on the effects of low morale, which include:

- a. increased absenteeism,
- b. increased staff turnover,
- c. low quality work,
- d. discipline problems,
- e. increase in industrial disputes,
- f. lateness, and
- g. low productivity.

These effects are clearly disadvantageous to organisations and, in the extreme, could result in disruption leading to crisis.

Industrial disputes are listed above as a subset of employee morale but also stand alone as a human factor. New Zealand has a long tradition of active unionism. When addressed with moderation, grievances and disputes are quickly dealt with, however, a lingering strike or lockout can quickly become a crisis for both employee and organisation.

#### **4.4 Effects on Organisations**

Most environmental change is relatively predictable and benign. However, when the organisational environment is altered, the secondary and tertiary effects can vary greatly and may include negative implications for members of the organisation, logistics, lifelines or subsequent insurance (McLean, 1995).

While staff shortages might be limited to an organisation's own employees, McLean (1995) also highlights the likelihood of shortages in contractors, suppliers and public utilities staff. Perhaps most devastating is the potential absence of customers. However, there are other perspectives to the staffing problem. McIlraith (1998) points out that the staff may be available and willing to work but the workplace may be inoperable. Other than the expensive option of keeping staff at home on full pay, an employer will be forced to declare the employment relationship inoperable and therefore at an end. He recommends the inclusion of express provisions in employment contracts to enable relocation or laying off in the event of a crisis.

Special skills are required of leaders to enable them to cope during a major crisis. Normal management procedures will be rendered ineffective due to the urgency and danger of most crisis situations and strong leadership is required to guide and inspire staff through to the re-establishment of normal operations (Moore, 1997). While adequate preparation is considered important, historical examples, especially from the military, have shown that strong leadership can largely offset a poor plan. The specific impact of inappropriate leadership has been examined in Chapter 3.

Another aspect of human activity in crisis that has implications for BCP in general and human resource planning in particular is convergence behaviour (Fritz, 1957). This universal phenomenon is the informal movement of people, information and supplies toward a disaster area. While Fritz's study reflected five main motivations for convergence i.e. the returnees, the anxious, the helpers, the curious and the exploiters, it is important to reflect on the likelihood of these groups appearing at a micro level in a disrupted organisation. The behaviours will need to be managed by the affected organisation and Fritz notes that past techniques of control have been based more upon judgements within the situation rather than pre-planned responses. The Human Resource Management staff of any organisation has a role to play in managing this phenomenon.

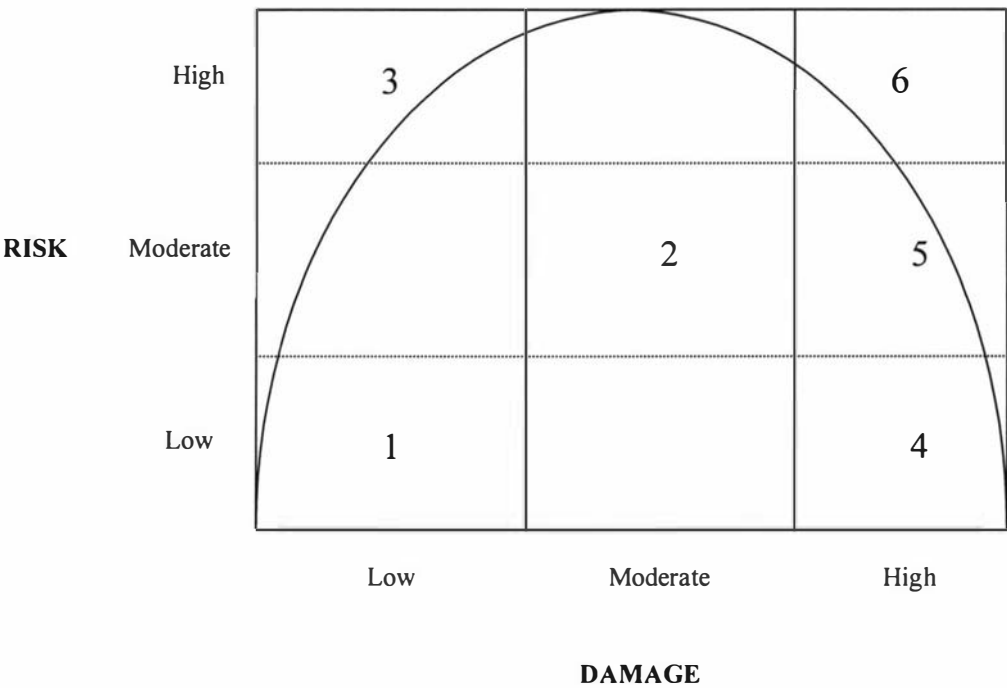
## 4.5 Diagnostic Tools

Another framework that has been extensively used in the practice of BCP is the risk management approach. This has recently been applied in New Zealand and Australia by a combined standard (AS/NZS 4360:1999). There are several functional approaches to diagnosing the risk management needs of an organization. In the main, these commence with a Business Impact Analysis (BIA) which is designed to gather and analyse information from which to develop a plan (Bates, 1992; Fisher, 1996; Myers, 1999). Sample group surveys and face-to-face interviews are analysed to identify potential problems and solutions. Wold (1996) has developed a structured approach to BIA that addresses:

- a. project initiation
- b. risk assessment
- c. disaster mitigation
- d. insurance considerations
- e. identification of mission critical functions
- f. outage impact analysis
- g. establishment of priorities
- h. costing of contingency plans, and
- i. reporting.

Many authors (Wold, 1996; Redmond, Luongo and Tietz, 1996) have noted the importance of this structured approach but have observed the difficulty of getting management to commit to the project. Lister (1996) believes that BCP is largely undervalued as an asset with executive reticence over financial investment in the process but a prevalent willingness to spend on extensive insurance premiums. He argues that the replacement of buildings and equipment does not guarantee the long-term survival of an organisation following a disaster and that BCP must be a top down business solution. Bates (1992) provides a risk / potential damage model to demonstrate the way that he sees executives determining their BCP funding (Figure 4.2)

- 1. If damage and risk are low, limited funds and time will be spent
- 2. If damage and risk are moderate, more funds will be spent
- 3. If damage is low and risk is high, moderate funds will be spent
- 4. If damage is high and risk is low, moderate funds will be spent
- 5. If damage is high and risk is moderate, more funds will be spent
- 6. If damage and risk are high, more funds will be spent



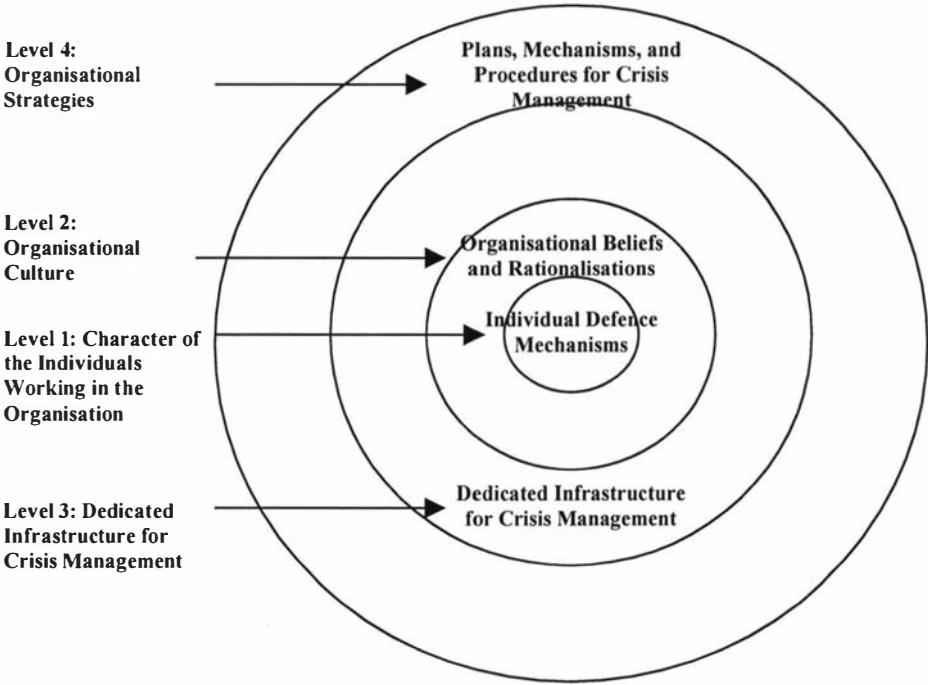
**FIGURE 4.2 - Risks versus Potential Damages as a Factor in Preparedness Funding (Bates, 1992)**

Turner (1979) noted the danger of erroneous assumptions leading to a lack of preparedness. In particular, he observed the problem of executives becoming preoccupied with current matters or disregarding warnings from staff because of their lower status. However, Bland (1998) believes that the greatest single barrier to getting management commitment and action on BCP is the general lack of incentive or reward attached to the activity. Whereas increases in sales or reduction of costs will bring promotion or reward, BCP rarely features as part of performance management he claims.

In the United Kingdom, governance responsibilities have been addressed through recently issued guidelines for Directors of publicly listed companies. These guidelines from the Institute of Chartered Accountants and referred to as the Turnbull Report, specifically require identification of sound business practice, internal controls and risk management (Lack, 1999). The report details

market, technology, reputation and business probity issues as being the concern of Directors. Kingsmill (1999, cited in Rassam, 1999) affirms that regulation is a key factor in the development of risk management practices, as are loss prevention, the improvement of business processes and protection of reputation. She further notes the development of Alternative Risk Transfer (ART) arrangements in the United Kingdom, which are means of financing risk exposures without conventional insurance. Companies such as Lloyd's are now offering policies that insure against supplier failure or assure a guaranteed income. Johnston (1997), in making recommendations for pharmacy continuity in NZ also advocates the use of this type of business interruption policy.

Pauchant and Mitroff (1992), in attempting to evaluate the degree to which an organisation was crisis-prone or crisis prepared, described four factors, which are uncovered sequentially. This model, shown at Figure 4.3, is called the ‘Onion Skin Model of Crisis Management.’



**FIGURE 4.3 - The Onion Model of Crisis Management (Pauchant and Mitroff, 1992)**

This model extends the view of diagnosis well beyond the obvious organisational strategies that can be observed at the fourth layer. The

researchers contend that, even when crisis management practices are overtly in place, the less visible structural issues and the largely invisible culture and personal aspects of the organisation may still leave it in a precarious, crisis prone state. This has clear implications for human resource practitioners in terms of recruitment, training, performance management, and internal communications. The inner layers, as defined in this model, have been discussed in Chapter 3.

#### **4.6 Business Continuity Plans**

In designing a business continuity plan, the accurate anticipation by management of crises or hazardous events is an essential component for the plan's ultimate success. While planning, in itself, is not a means of ensuring that the organisation will cope with a disaster, it is a necessary step in developing an emergency management culture and setting out likely responses (Gagnon, 1997). Regardless of how well prepared an organisation is though, there is always an element of risk associated with any system due to the human factor, which can override any safeguard (Bates, 1992). In addition, the hazardscape is multi-dimensional and there is a fundamental difference in planning for natural, as opposed to man-made, events. This difference in approach is found in game theory (Von Neumann & Morgenstern, 1947) where it can be seen that nature is not an opponent that attempts to optimise its position, unlike the terrorist, hacker or psychopathic worker.

While not proceeding as far as suggesting an all-hazards approach, Adams and Curtis (1988) suggest that similarities between apparently diverse hazards can improve planning design and save on BCP resources. They all point out that, while traditional models for mitigation of hazards appear credible in textbooks, the reality is that these models start from an assumption of perfect communications. In order to enact any plan it is first necessary for executives to verify what is happening and continue to do so frequently to assure the appropriate response. One means of achieving this is to structure the normal operations of the organisation around the model required during a disaster. Gaudes (1998) suggests that this approach is far cheaper than funding contingencies and can include such innovations as continuous virtual officing.

Barton (1993) reviewed more than 40 BCP from a variety of organisation sizes and types and believes that all should develop a 'Crisis Kit'. This can be as large or as small as the organisation requires and held at every level. As a result of his review he suggests the following sections for a plan:

- a. Cover page and introductory letter from CEO,
- b. Plan Acknowledgement Form,
- c. List of Crisis team Leaders and Crisis Team Contact details,
- d. Event Contact Details Sheet (for recording inward contacts),
- e. Secondary Contact Details Sheet,
- f. Media Inquiry Record Sheet, and
- g. Post-Crisis Evaluation Sheet.

Bland (1998) is dismissive of the detailed planning advocated by many other authors. He refers to the production of large numbers of detailed plans and manuals as the 'King Kong' approach. His argument is that elaborate procedures do not work because the organisation generally does not have the time or resources to develop the manuals in the first instance, they date quickly and they generate a degree of complacency (i.e. it's in the manual). Nonetheless, the planning process is becoming a business in its own right. Despite the obvious vulnerability and access issues, a US based company, [emergencyplan.com](http://emergencyplan.com), has launched a website that offers to host organisational contingency plans ([Globalcontinuity.com](http://Globalcontinuity.com), 2000c).

Woodworth (1996) proposed a different approach in suggesting a small-scale test scenario as the best way to both gain management commitment and also to identify priority areas for BCP. Regardless of the approach taken, it seems that there is general agreement that all functions of the organisation need to be involved. From the human resource management perspective, Bates (1992) suggests that the Human Resources department compile *“a list of people issues during planning which notes physical needs (medical, emotional, spiritual)*



*logistical needs (space and basic human needs) emotional problems and limitations (caused by stress etc) accessibility and commitment” (p 9).*

#### 4.6.1 Training

Most writers consider training in BCP essential for staff and it is difficult to imagine an organisation being able to create a continuity culture or capability without investing in training for its staff. Although considered in the context of occupational safety and health, a study of a United States petrochemical facility (Kochan, Smith, Wells & Rebitzer, 1994) exposed some useful issues for application to all facets of BCP training. This study found that the general trend toward the use of contingent workers, i.e. part-time, temporary, contract or independent consultants, was resulting in significant variations to the demographics and management practices of the organisation. In particular, Kochan et al (1994) noted that, due to the short periods of employment and perception of 'co-employment' with the sourcing agency, lower levels of training in occupational safety and health was provided to contingent workers relative to the permanent staff.

In a departure from the generally held philosophy of training staff in preparation for a contingency, Dynes (1983) promotes instead an emergent human resources model that employs existing structures and current skills. Those skills and behaviours that come out during the event augment these.

#### 4.6.2 Communications

Recovery from an organisational crisis requires the active involvement of all stakeholders, including shareholders and customers. Perceptions matter greatly because preparedness and recovery from crisis, much like share values, is as much in the eyes of the stakeholders as it is founded in reality (Bland, 1998). An effective internal and external communications network will provide early warning of a potential crisis and it has been noted (Fitzpatrick & Miletic, 1994; Bland, 1998) that

such a programme will typically need to involve multiple communications and many variables. Constant communications planning is considered vital to remaining in business following a crisis (Albrecht, 1996; Drapeau, 1997). Even after the crisis has physically passed, ongoing damage to the organisation's image can seriously affect its viability (Shields, 1996).

One of the inherent difficulties is that people are even more reticent than normal about speaking to the media during a crisis. (Barton, 1993). This is despite the obvious connection between organisational value and public opinion that exists in the market. Whether that fear is brought about by lack of personal training or confidence, fear of litigation or the unknown, a lack of comment to reporters can result in a one-sided story being printed or broadcast. Bland (1998) believes that crises related to reputation are more often about what people think has happened than what has actually happened. He believes that an effective crisis communication team ensures that each audience receives the specific message that they need to hear and that management of these situations is more a psychological discipline than a procedural one.

#### 4.6.3 Evaluation of Business Continuity Plans

Some writers (Bates, 1992; Gagnon, 1997) believe that a well-developed plan that has never been tested may well bring about a false sense of security that will impact negatively later on. BCP need to be continuously tested and updated to ensure that they will be relevant when required. One method of conducting evaluation is to rehearse scenarios and in particular, have executives role play their actions throughout a specified event (Albrighton, 1993). In doing this type of testing, Bent (1995) believes that it is essential to promote the idea of reversing existing notions in business from operating at a loss through a disaster and recovering back to profitability to one of adjusting to operate at a profit while in disaster. While acknowledging that respondents were all specialist business continuity managers, a recent

Globalcontinuity.com survey (2000a) found that the most common practice worldwide at the moment is to test plans twice a year.

#### **4.7 Current Overseas Business Continuity Practices**

There is very little available literature on the state of organisational preparedness or executive attitudes toward crisis management. Watts (1983) was particularly critical of early cross-cultural studies into crises labelling them *"ahistoric, insensitive to culturally varied indigenous adaptive strategies and trivial in many of their findings"* (p240). Since the survey on which this research was based was developed in the United States, Watts' comment was an important warning in designing this study of the New Zealand organisational context.

Geographically and culturally, the closest international study to this research was carried out in Australia (Musson & Jordan, 2000). The first iteration of this research in 1997 was repeated in 1999 and focussed on four key areas:

- a. the nature of crises experienced,
- b. the extent of planning for such crises,
- c. the degree to which these plans are implemented, and
- d. the back-up and data storage practices of respondents.

From 94 respondents of whom 28 were councils and 66 business organisations, this study, like its predecessor found a generally low level of planning and testing for crisis. This is interesting given the Y2K being in the forefront of executive minds and while the researchers observe that Y2K did help to make preparedness an issue of corporate governance, they indicate their belief in a lack of ongoing consideration of continuity. Because this is close to a parallel study to this research in a country that is culturally similar, the key findings are listed below in detail.

- a. over two thirds of organisations believed that they could not afford to be out of action longer than 24 hours and for 30% it was less than 8 hours,
- b. 18% of councils had fully documented and authorised BCP for all parts of their operation however half of these plans had never been tested. 39% had no BCP for any part of their operation,
- c. 13.6% of business had fully documented and authorised BCP for all parts of their operation although 36% of these had never been tested. 12% had no BCP for any part of their operation,
- d. 40% of councils and nearly a quarter of businesses had no short term IT facility plan. 4.5% of businesses and 29% of councils had no long-term arrangement for IT loss either.
- e. While 2% is the generally accepted minimum spend of IT budget on continuity measures, 55% of businesses and 64% of councils fell below this (p 8).

In a survey of 166 US companies, Wisenbilt (1989, cited in Barton, 1993) found that larger organisations (defined as greater than 50 employees) were, not surprisingly, the most prepared. This study cited 92% of organizations with sales in excess of \$10 billion as having a BCP. However, those between \$100 million and \$1 billion in sales only recorded a 35% implementation of BCP in place. While it could be argued that there is a tenuous link between sales volume and BCP, the research does not provide any other measures on which to establish validity of the claim. Wisenbilt noted that small firms, those that have the greatest need for BCP, often lack the resources to develop and sustain one.

One of the larger empirical studies was carried out at the Centre for Crisis Management at the University of Southern California (Pauchant & Mitroff, 1992). This study revealed several intriguing paradoxes.

- a. nearly half the respondents believed that their organizations were not prepared to deal with the crisis scenario they had identified was most threatening to them,
- b. most had detailed plans for containment of specific disasters but less than half had plans for resuming business afterward. Less than one quarter had any methodical detection mechanisms for identifying crises as they developed,
- c. most top managers support crisis management planning in principle but the actual development of response mechanisms is largely disjointed. Despite this, over half of the executives surveyed thought that their companies could handle any crisis that occurred.

McConney (1996) notes that even when a BCP has been developed there is often little further emphasis on it and internal operating procedures frequently do not reinforce disaster recovery awareness. He recommends practices such as making disaster recovery awareness part of the regular employee review process and ensuring that managers feature disaster recovery planning for their departments in annual plans and budgets.

Concern has been expressed recently that technology, and in particular information technology, is dominating the continuity planning of organisations. The largest online source for business continuity information conducted a survey in late 2000 (globalcontinuity.com, 2001) asking subscribers to indicate their views on this subject. From 299 responses, 68.7% agreed that business continuity was becoming more focussed on technology. Leather (2001) noted that he was not surprised by this result and expressed concern that many organisational executives were losing sight of the main purpose of BCP. He observed that in his work with major multinational corporations, he frequently encountered situations where IT backup was resourced at the expense of clean drinking water for staff, medical facilities, physical security and escape plans in strife torn regions.

## 4.8 Current New Zealand Situation

Consistent with research efforts around the world, there are a limited number of recent studies from a New Zealand perspective. This is somewhat intriguing when one considers the large number of actual disasters that have befallen this country, ranging from the Napier earthquake of 1931 to the water and power shortages in Auckland in the 1990s.

The New Zealand Government has undertaken some studies of crisis and disaster. One of the most far-reaching pieces of legislation arising from these is The Resource Management Act (1991). This Act repealed and replaced 59 separate resource laws and its purpose was to achieve sustainable management of natural and physical resources. Therefore, it is not unreasonable to include the prevention of disasters as being consistent with this aim. (Blakeley, 1994).

### 4.8.1 Exercise Ru Whenua.

Exercise Ru Whenua was a New Zealand Ministry of Civil Defence Exercise designed to assess general levels of preparedness for a major earthquake in the Wellington area (New Zealand Ministry of Civil Defence, 1987). The study team conducted surveying of various groups as follows:

- a. householders (n=1000),
- b. organisations (non-governmental = 130, government = 90)
- c. central business district staff with emergency duties e.g. floor wardens (n=181)
- d. staff in the buildings administered by the emergency staff referred to in c. above (n=1000)
- e. schools (secondary = 25 and primary = 300)

In addition, the exercise conducted a practice evacuation of 1600 staff from four major office buildings and analysed 26 building emergency plans from an earlier survey carried out by the Wellington City Council.

This comprehensive report highlighted the deficiencies of the capital city's preparedness for just one type of disaster. In particular, it cited the following conclusions:

- a. there was a need to establish what minimum capability the Government needs to continue functioning after a major earthquake,
- b. the Wellington earthquake scenario is so complex that it warrants a specific national contingency plan,
- c. the National Civil Defence Plan contained serious flaws such as the location of important disaster-related resources,
- d. less than half of the government departments surveyed met their legal obligations under the Civil Defence Act with regard to business continuity planning,
- e. very few private sector organisations had any real understanding of the likely impact of such a crisis and little planning had been conducted,
- f. little thought had gone into the financial and economic effects on this country of a major disaster, and
- g. public understanding of the likely effects of a disaster and the ability (or lack thereof) of Civil Defence to ameliorate the situation quickly was low.

#### 4.8.2 Project-P.

A survey of Wellington businesses, entitled Project-P was conducted to establish the level of awareness and preparedness for a disaster (Hughes

and Broad, 1990). The results were limited in a variety of ways. Only 23.1% of the 1650 surveys were returned to the researchers and the report points out that apathy is high. The questions related only to earthquake, fire, flood, storm, hazardous chemicals and computer (EDP) failure. Bearing these limitations in mind, the report noted that:

- a. 80% of respondents had a survival plan of some sort, and
- b. the three greatest concerns in decreasing order of severity were fire, earthquake and EDP failure.

#### 4.8.3 Specific Reviews of New Zealand's Emergency Services

Various aspects of New Zealand's national emergency services scene have been studied in the last decade. The major outputs from these were:

- a. Law Commission Report No 22 "Final Report on Emergencies",
- b. Civil Defence Review Panel Report, April 1992,
- c. Fire Service Independent Review, December 1993,
- d. Fire Service Report of the Internal Review Team, March 1994,
- e. NZ Fire Service Commission, Chief Executive's Review of the NZ Fire Service and the National Rural Fire Authority, February 1994,
- f. Final Report of the Fire Service Levy Working Party, June 1994, and
- g. The Arahina Accord (cited in ESRTF, 1995, p 1).



#### 4.8.4 Emergency Services Review Task Force

On 4 December 1995, the Emergency Services Review Task Force reported to the Government their findings based on these Terms of Reference:

- a. “examine the emergency service preparation and response phases for both major and routine events, to identify whether there are gaps or overlaps between the requirement and capacity for these events, and to determine whether there is sufficient co-ordination and integration between and within these capabilities, and
- b. provide options, for the Government’s consideration, on a strategic direction, for the co-ordination and integration of emergency services.”

(ESRTF Report, 1995, p5)

This substantial review set out initially to examine the four phases of mitigation, preparedness, response and recovery but later changed its focus to preparedness and response only. This decision seems in conflict with the Task Force’s acknowledgement that an ‘all hazards approach’ is axiomatic to their work. In dismissing two phases of the four it seems unlikely that all hazards can be effectively considered. However, the report defends the decision by arguing that “exploring a range of scenarios posed the danger of designing a system for an event that would never occur...the Task Force chose to identify as that point the existence of a state of civil emergency” (pii).

Notwithstanding that, the report raises several useful points which, though focussed on the national level, can be extrapolated to the organisational scene. For instance, the Task Force states:

- a. “there has been no recent experience of a major emergency affecting an urban area in New Zealand and this may have led

to a degree of complacency regarding the adequacy of current arrangements” (pii)

b. “is the need to ensure that emergency management is firmly vested in the hands of competent and practised managers who bring an appropriate expertise and professional approach whether their appointment is full-time or not.” (p iii)

c. “emergency management should follow a continuum and not...bring into play radically different (and often less well practised), mechanisms as an emergency situation deteriorates.” (p iii)

d. “the market will clearly be unable to respond in a timely manner so a decision must be made on whether or not contingency arrangements are entered into” (p viii)

The report goes on to note that the vast amount of work that has been done in New Zealand has identified more questions than answers and that there is an over-riding need for a Ministry of Public Safety that could, amongst other things, define the hazardscape.

During the period of the Task Force Review, other related work was in progress including:

a. The Review of Disaster Recovery Preparedness by Mr Ian McLean, (described below),

b. The Cave Creek Commission of Inquiry, and

c. The Audit New Zealand Review entitled “Funding the restoration of essential community services following natural disasters”

#### 4.8.5 The McLean Report.

A more recent review of disaster recovery preparedness was commissioned by the Treasury on behalf of the Minister of Finance, and carried out by a private consultant in 1996 and 1997 (McLean, 1997). This report, while talking of any severe social distress, disruption or dislocation, focuses mainly on a catastrophic earthquake. While McLean notes that New Zealand is generally well prepared at the organisational, regional and national level, he notes that recovery preparedness and planning is largely oriented toward physical damage and has neglected social recovery. He limits his praise of business preparedness to information technology, buildings and insurance, and points to weaknesses in logistics, staff training and testing of disaster plans. Only 20% of the businesses that responded to the written survey had a formal plan to cope with disasters in every respect of their business. The report refers to the need for a comprehensive approach to emergency management and current restructuring in the Ministry of Civil Defence suggests that this report may have been adopted at least in part by Government. At the time of writing, the Ministry has been renamed the Ministry of Civil Defence and Emergency Management and the Civil Defence Emergency Management Bill, intended to supercede the Civil Defence Act 1983, is before the Select Committee having been introduced into Parliament in late 2000.

#### 4.8.6 Student Projects

There have been a few projects completed by students in New Zealand universities however accessing them all is problematic as many do not show up on bibliographic search systems. The Massey University Diploma in Civil Defence is one source of these works by post-graduate students. Taitoko (1993) studied the implications of the all-hazard approach for civil defence planning in Northland. While the research was largely a literature review, it did raise several points that are relevant to the human resource questions posed in this study. These include loss of goods and services, containment of pests or diseases,

loss of employment or business premises, lack of law and order and poor communications. Patton (1996) conducted a small-scale survey (n = 29 of which 15 replied) on the state of contingency planning in Auckland based pharmaceutical manufacturers and distributors. Of the 15 responses, only 8 had contingency plans and only 2 of those were in writing, had been tested, were known to staff and the company expected to be 91-100% operational within 1 day at an alternative site.

#### 4.8.7 Summary of the New Zealand Situation

The few studies that have been conducted in New Zealand are clearly oriented toward national or regional emergency service responses. Even where there has been organisational input into the data, it is still largely oriented toward dealing with natural hazards or accidents such as fire. This review has found no comprehensive studies of the full spectrum of organisational crisis in New Zealand. Consequently, this research is considered timely as it will contribute to our understanding of crisis in an organisational context in New Zealand.

### 4.9 Conclusions

Business continuity planning is the practice of preparing for and coping with disruption in organisations. Researchers have examined the topic from the perspective of academic models (Turner, 1978, 1979; Drabek, 1986; Mitroff & Pearson, 1993) as well as from the angle of analysing risk (Bates, 1992; Fisher, 1996; Myers, 1999) and implementing structured approaches to continuity threats (Wold, 1996; Redmond et al, 1996).

The threats to organisational continuity are wide-ranging and it is only really from a broad examination of the literature and, in particular, the media, that it is possible to establish the true extent of possible causes of disruption as have been described in this chapter. While New Zealand newspapers and some magazines offer many examples of disruption in day to day organisational life, the studies that have been conducted in this country, with the exception of some minor student works, have been mostly focussed on civil defence and

emergency management matters. Within the scope of this research, they are useful however they do not demonstrate the state of preparedness in New Zealand organisations for the total hazardscape. This gap in the literature requires examination in order to provide benchmarks for performance and to better inform the executive decision making process.

## *Chapter 5*

### **The Research Methodology**

#### **5.1 Introduction**

From the review of the literature on crisis management and BCP in the preceding three chapters, it can be seen that the traditional methodological approaches to studies of this kind generally fall into one of the following categories:

- a. surveys of readiness, resource commitment, experience of and recovery from crises,
- b. interviews with various stakeholder groups,
- c. reviews of compliance levels, rehearsals, drills and other scenario based tests

In considering the objectives of this research, it was felt that there were many compelling aspects of New Zealand's unique situation that warranted a clearer understanding of organisational preparedness. New Zealand's geography, in particular, makes issues such as natural disaster preparedness vital. In addition, the New Zealand economy is not sufficiently robust or diversified to be unaffected by the loss of a large corporation, let alone an entire region or industry sector group, through any form of crisis. Little is known about levels of organisational preparedness in New Zealand organisations and without these benchmarks, executives have little to measure the robustness of their organisations against. From a HRM perspective there have been few studies in New Zealand that have sought to identify the reasons for levels of observance of BCP processes and no detailed consideration of the HRM implications of this situation. Overseas studies have not at this time, provided cross-cultural validity results that would give New Zealand executives the confidence to draw deductions from their work for application here. On the contrary, some studies clearly show difference in decision making based on culture.

When the foregoing points are considered together, the case develops for an exploratory study that will describe New Zealand organisational preparedness as well as provide a better understanding of the factors underpinning this situation. The method therefore needed to utilise surveys for the former and include personal interviewing with a range of organisational decision makers in order to address the latter. By drawing out the implications for HRM from these findings, the case can be developed for organisations to invest further in this area of development.

## **5.2 Research Goal and Questions**

The goal of this descriptive exploration is to establish the extent of, rationale behind and human resource implications of the degree to which New Zealand organisations prepare for and deal with organisational disruption. The specific research questions are as follows:

- a. to what extent are New Zealand organisations aware of and prepared for the range of crises that could befall them?
- b. what are the main reasons for this level of awareness or preparedness?
- c. what are the human resource implications of the current situation in regard to New Zealand's organisational approach to preparing for and dealing with disruption?

## **5.3 Research Phases**

These research questions were explored via a four-phase approach as follows:

- a. cross sectional survey using a postal questionnaire for data collection and analysis on the current state of organisational crisis preparedness,
- b. interviews with selected executives to identify the reasoning behind the current state of crisis preparedness within their organisation,
- c. a second postal survey one year after the first in which the sample was divided and different questionnaires were sent to smaller versus larger organisations, and

- d. analysis and discussion on the human resource implications for New Zealand organisations of the current state of business continuity planning based on the results of both the surveys and interviews.

## **5.4 Outline Methodology**

First, data needed to be gathered on the New Zealand business situation. Data was gathered through a questionnaire, which is shown at Appendix 1.

From the data analysis, the intent was twofold. In the first instance, the data would provide an accurate estimate of the actual level of crisis preparedness of New Zealand organisations and assist in the identification of a subsequent research sample. Second, these findings would provide benchmarks, which would enable future research or audit of crisis management issues, either by outsiders or the organisations themselves. A wide cross-section of industries in the public and private sector was included in the sample group in order to provide for broad applicability of the findings for New Zealand executives.

From the respondents a smaller group was identified for individual interviews in order to explore and describe why the state of preparedness was as revealed in the initial survey. The structured interview focussed on the interviewees' attitudes toward business continuity planning as well as the manner in which their organisation would cope with two hypothetical scenarios.

## **5.5 Ethical Considerations**

The ethical considerations for this research are largely generic. They are directed by the requirements of the Massey University Human Ethics Committee and detailed in the Code of Ethical Conduct for Teaching and Research involving Human Participants. These considerations are described under the two main headings of generic to all study and specific to this study.

### **5.5.1 Generic Issues**

- a. Informed Consent. All subjects for this study were volunteers. They were told in advance what the nature of the study was, what was



required of them and that they may withdraw at any time without penalty,

b. Confidentiality. The source of all data collected from subjects remained confidential to the researcher. No individual or organisation could be identified to any other party due to the original survey data sheets, interview tapes and transcripts being destroyed upon submission of this thesis. Collated data and anonymous transcripts remain for others to conduct secondary research in the future,

c. Unrelated Trauma. While there was no traumatic or stressful activity planned within this research, it was acknowledged that it was possible that the types of questions asked could trigger unpleasant memories, which in themselves could be traumatic. Consequently, all interview volunteers were screened in advance to ensure that those who had experienced a traumatic crisis situation e.g. an armed hold-up, were excluded from further participation, and

d. Debriefing and Feedback. All interviewees were debriefed individually by the researcher on the results of that phase. All subjects received a copy of the survey data if they so requested.

#### 5.5.2 Specific Issues

a. Phase 1 and 3 Surveys. During the data collection phase, survey respondents were told that they were able to complete any part of the questions without invalidating the result. However, they were also advised that failing to complete the demographic data sheet, which enables analysis of key individual and organisational factors, would have the effect of invalidating the entire survey. These instructions are shown at Appendix 1,

b. Phase 2 Interviews. The general purpose of the study was explained in advance of meeting, and again immediately prior to beginning each interview. Interviewees were given a written instruction sheet and asked

to sign a consent form prior to commencement (Appendix 3). Typists employed to transcribe the interview tapes signed confidentiality agreements prior to commencement.

## **5.6 Detailed methodology**

The detailed design of the research phases was as follows:

### **5.6.1 Questionnaire Design**

The survey methodology employed in this research replicated the general questionnaire style of the only significant, broad-spectrum organisational research revealed in the literature (Mitroff and Pearson, 1993). This was then modified to suit the New Zealand situation with the inclusion of some additional questions and the deletion of some sections that were deemed to be inappropriate to this study resulting in an 86 question, 7 part questionnaire. These parts reflected preventive actions, recognition and allocation of resources to generally accepted phases of crisis handling, preparation for different types of crises as well as recognition of severity, preparation for and recency of events. Respondents were also given the opportunity to make any other comments about their organisation and its crisis preparedness.

Since the questionnaire was based on one already in use, the reliability and validity of that instrument must be considered in the first instance. Reliability is the degree to which repeated measurements on the same questionnaire give approximately the same result. In the case of Mitroff and Pearson (1993), a full set of reliability and validity data was not discovered. However, the following items were established:

- a. the basis of designing the questionnaire was 500 interviews in the United States, Canada and France from 1987 to 1991, involving a pre-tested structured interview,
- b. At least 3 interviews, at different hierarchical levels, were conducted in each organisation,

c. orthogonal factor analysis of the variables was conducted to identify six factors for crises and five factors for preventive actions. Both reduced to four through further analysis.

In the case of the 1998 and 1999 questionnaires, the results are largely the same and any observed differences are explainable, for example, removal of small organisations and the impact of Y2K in 1999. This provides a solid foundation for the reliability of the questionnaire. No alternate form reliability test was done however this is intended for the post-doctoral phase research using the final version of the questionnaire. Internal consistency reliability tests were not considered relevant to this questionnaire, as each datapoint is a discrete item.

Validity is the lack of bias of a questionnaire. The revised questionnaire used in this research was trialled on a small pilot group of New Zealand managers who all agreed that the survey could be understood and appeared to test their perceptions of BCP effectively. More importantly, Mitroff and Pearson (1993) have published extensively based on their use of this survey and no challenge to their method has been discovered in the literature. Selected Human Resource managers and research supervisors established the face validity of the questionnaire prior to use. Content validity was also established initially by supervisors, who suggested several changes. The final test of validity was in the interview phase where managers were questioned on their reactions to the questionnaire, which are shown in Chapter 9. No interviewee felt that the questionnaire did not accurately examine his or her perceptions of BCP. Since the questionnaire is descriptive in nature, tests of predictive validity are not relevant and construct validity, a gestalt of the questionnaires accepted usefulness over time, can only be able to be established as the longitudinal study continues.

5.6.2 Survey Sample

A sample of 1000 organisations, which was drawn from public records, received the survey. The composition of the survey sample included the top 200 organisations as listed in the Deloitte’s 1997 list published in Management magazine, all Government departments, all local government authorities and all major health providers. The remainder of the sample was made up of small and medium sized organisations drawn at random from the phone books around the country to bring the sample group up to a geographical balance that approximated the population distribution by region in the 1996 census figures. Due to the number of Government departments in Wellington, this region was slightly over-represented and other regions were proportionally reduced to cater for this. The regional breakdown of the sample is as shown below in Table 5.1. The middle column shows the percentage of the total New Zealand population that the region(s) represented in the 1996 census. The right-hand column shows the number of questionnaires that were sent to each region.

REGION	% OF NZ	# OF SURVEYS
Northland	3.9	39
Auckland	29.3	256
Bay of Plenty	6.3	63
Waikato	9.7	97
Taranaki	2.9	29
Gisborne / Hawke's Bay	5.2	52
Manawatu / Wanganui	6.2	62
Wellington	11.3	150*
Tasman/Nelson/ Marlborough	3.3	33
West Coast	1	10
Canterbury	13	130
Otago	5.2	52
Southland	2.7	27

\* This figure is slightly higher than the required percentage due to Government departments being clustered in the Wellington area. The difference has been taken from Auckland area

TABLE 5.1 - Breakdown of Questionnaires sent by Region based on 1996 Census

### 5.6.3 Statistical Treatment of Survey Data

Descriptive, rather than inferential statistics, was considered to be most appropriate for the type of data gathered in the survey. This was due to the nature of the research, the research questions that were posed, the lack of prior data on the NZ scene for comparison and the forced choice dichotomous nature of the majority of questions in the survey. All data was coded on the survey sheet and analysed using Microsoft Excel 1997.

In 72 of the 86 questions in the survey, respondent results were coded to produce frequency data. This method of statistical simplification produces information on the numbers falling into each response category and can be presented graphically or numerically as either a pie chart, bar chart, frequency table or frequency histogram (Ott & Mendenhall, 1985). This type of presentation has also been used for presenting a description of the survey sample and respondents.

Summary statistics have also been employed to provide a quick overview of the nature of the responses. Summary methods used include measures of central tendency including mean and median, measures of dispersion such as standard deviation. Confidence intervals are estimates of population parameters and have been applied in this research against the percentage of respondents that have identified themselves as using a particular measure or planning for a specific type of crisis. Presented in tabular form, these results provide executives with the ability to compare their organisations against the current New Zealand benchmark. Since a 'YES' result is coded as 1 and a 'NO' result coded as 0, the mean also represents the proportion of respondents applying any particular technique or preparation plan. Linked to this proportionate usage, a 95% confidence interval calculation for each bi-polar question assures the reader only that 5% of observations fall outside the stated interval.

Questions 45-48 in the survey ask the respondent to rank their organisations resource allocation by phase. The result of these questions is presented as a simple frequency in bar chart format.

The responses to questions 1.5-1.7 have been analysed in two ways. First, the survey responses provided frequency data showing the total number of occasions that a certain type of disruptive event is named in either priority 1, 2 or 3. These frequency tables are presented in three forms to show the result for the questions relating to potential severity of the event, preparedness for it and also recent experience of the event. Second, the major cross-tabulations between events in the pairs of severe/prepared and experienced/prepared were graphed. This was achieved through a scatterplot that related the mean incidence of response for every disruptive event, regardless of its assigned ranking. This was intended to reflect the degree to which respondents were consciously aware of events and the impact they might have. The only multi-score question in the survey was Question 86. This question employed a Likert scale with behavioural anchors, which required respondents to identify the level to which they felt that they were prepared for the last disruptive event that their organisation experienced. This result was summarised as a mean and standard deviation. As in earlier questions, the sample mean and standard deviation was compared with those of selected sub elements from the demographic data.

#### 5.6.4 Semi-Structured Interview

Semi-Structured interviews were carried out in mid-1999. Prior to the interviews each volunteer was sent out a letter reminding them of the purpose of the study and giving them the option to withdraw if they wished to. An example letter is shown at Appendix 2. The dispatch of these letters was followed up one week later with a phone call in order to arrange an interview.

At the start of each interview, the volunteer was provided with a detailed information sheet and consent form. The interview was recorded manually on a pro-forma response sheet by the interviewer as well as being audiotaped. These documents are all shown at Appendix 3.

The phase 2 interview was based on 23 questions of which all but two were either dichotomous or open-ended responses. The remaining two required the interviewee to describe how they would respond to a crisis scenario given to them in writing by the interviewer. An example of the phase 2, interview questions is attached at Appendix 3.

Following the completion of interviews, the audiotapes were transcribed and returned to the interviewer in both hard copy and file format. After checking of the transcripts, the tapes were erased for privacy reasons. The transcripts were initially analysed using a discourse analysis technique based on the work of Kuipers & Kassirer (1987). This is described in detail in sections 5.6.5 to 5.6.7.

While it must be acknowledged that the best result would have been achieved through the use of two or more analysts, in order to establish inter-rater reliability. Resource limitations put that option beyond the scope of this research.

#### 5.6.5 Identification of Factual Excerpts

The transcripts were initially analysed to identify excerpts where the interviewee appeared to be focussing on factual explanation rather than expressing opinion about unrelated matters. At this point, line numbering was introduced in order to facilitate reference to the excerpts in subsequent analysis. An example of the excerpt process is shown at Figure 5.1 to 5.3.

SEJ	So is there, in there an assumption that some of those managers don't make it for whatever reason, are there designated deputies or delegations for signing or is that not an issue in your organisation?
MGR6	We have got deputies for - There are 19 tier three managers, we could still run a very much skeleton if only ten of those arrive at work.
SEJ	... see some training or mentoring people to be able to step up in the event of a gap in your organisation.
MGR6	We have a training programme as such and people within the organisation ... that process.
.	.

**FIGURE 5.1 - Example of full transcript page prior to analysis**

1.	SEJ	So is there, in there an assumption that some of those
2.		managers don't make it for whatever reason, are there designated
3.		deputies or delegations for signing or is that not an issue in your
4.		organisation?
5.		
6.		... 19 tier three managers, we could still run a very much skeleton
7.		if only ten of those arrive at work.
8.		
9.	SEJ	... see some training or mentoring people to be able to step
10.		up in the event of a gap in your organisation.
11.		
12.		... training programme as such and people within the organisation

**FIGURE 5.2 - Example of Factual Excerpt following Initial Analysis**

5.6.6 Further Analysis

In the next stage of analysis the researcher divided the reduced excerpts into short lines that corresponded more or less to a meaningful phrase or action. This greatly simplified further consideration by revealing, in



most cases, only one concept or relationship per line (Kuipers & Kassirer, 1987). An example of the state of the transcript after this exercise is shown in Figure 5.3.

1. SEJ	So is there, in there an assumption that some of
2.	those managers don't make it for whatever reason, are
3.	there designated deputies or delegations for signing or
4.	is that not an issue in your organisation?
5.	...19 tier three managers,
6.	we could still run a very much skeleton
7.	if only ten of those arrive at work.
8. SEJ	...see some training or mentoring people to be able to
9.	step up in the event of a gap in your organisation.
10.	...training programme as such
11.	and people within the organisation

**FIGURE 5.3 - Example of Excerpt Broken into Meaningful Phrases**

Further analysis of these transcripts took place in two parts. The first involved identification of the objects or major concepts in the domain that the interviewee was referring to. Concepts are the basic building blocks of a knowledge base and represent prototypical items or their associated properties (Jackson, 1990). Examples of the concepts derived from this research are:

- a. reactions to the survey, and
- b. perceptions of business continuity planning.

The second part of the analysis process involved reviewing the interviews again and identifying the properties within each concept. These were initially recorded as a list, noting the places that they occur. In subsequent analysis, they are sorted into attributes and relationships between the objects. Examples of properties are:

**BROADENED AWARENESS [(5:16,388,390) (6:6,10,394)...]**

and

**NEGATIVE INTERNAL PERCEPTION OF BCP [(1L:249)  
(3S:161)...]**

In these examples the model for recording is:

**PHRASE [(INTERVIEW NUMBER / SIZE OF  
ORGANISATION: LINE NUMBER)**

#### 5.6.7 Construction of the Domain Model

The initial product from the discourse analysis reveals content without any structure. It is necessary to build the structure in an intuitive manner, starting with the identification of top-level objects. From this upper most point, the objects, concepts, attributes and relationships are linked together in a nested graphical model.

The aim of the modelling phase of a knowledge domain construction is to create a utility model that can be used for any purpose. There are several ways of dealing with modelling and since the primary focus of this research was to elicit factors underpinning the state of organisational preparedness, it was deemed appropriate to use only the top level approach of a straight forward and well proven methodology (Kuipers & Kassirer, 1987; Wielinga, Schreiber & Breuker, 1991) in order to construct just a domain model.

The purpose of the domain model is viewed in slightly different ways. Kuipers & Kassirer (1987) describe it as "having the purpose of making explicit information that is logically necessary to answer questions about the domain, but may not have been stated in the explanation." KADS is a methodology for building knowledge-based systems initiated in 1983 by the ESPRIT Programme of the Commission of the European Communities. The KADS four layer model methodology views the domain model as "the static knowledge of the domain; domain concepts, relations and complex structures, such as models of processes

or devices" (Schreiber, Breuker, Bredeweg & Wielinga, 1988). The separation into four layers reflects the different ways that knowledge can be viewed, especially in terms of content versus controlling knowledge. In the KADS domain layer there are four ontological primitives, which are the basic components of the knowledge in its simplest form. These are concepts, properties, relations between concepts and property expressions (Wielinga, Schreiber & Breuker, 1991). These primitives enable the specification of a domain schema. The domain schema diagrams in Chapter 9 show the hierarchical relationships between concepts in a more pictorial form.

#### 5.6.8 Longitudinal Data Collection

A second data survey was conducted in late 1999. This was included for several reasons, which were:

- a. low overall return rate on the phase one survey,
- b. the low return rate of the phase one survey by smaller organisations,
- c. perceived over-complexity of the phase one survey by smaller organisations, and
- d. the impact of the Year 2000 computer program bug on organisational preparedness.

The Phase Three questionnaires were sent to a sample of 928 organisations. However, for this phase there were two questionnaires employed. After purging the original database of addressees to remove those that did not wish to participate or were not at the address supplied, the original questionnaire was mailed out to 528 large organisations. A new, simplified questionnaire considered more suited to the smaller New Zealand organisation (an example of which is shown at Appendix 4), was designed and mailed to 400 organisations. The total sample size remained close to the original 1000 and was still

proportionally based on the geographic spread shown in the 1996 Census.

#### 5.6.9 Statistical Treatment of Inter Year Comparisons

It is acknowledged that the onset of the Y2K computer bug during the research may have created a localised effect on the 1999 data. The statistical differences between 1998 and 1999 are therefore useful in relation to the aims of this research but, when followed up in subsequent years, will form part of a purposeful longitudinal study.

For the summary of dichotomous questions, the means of the respective years are shown in terms of the percentage change. This difference is also presented in tabular form for the sub-elements analysed in the individual years showing percentage change for specific respondent groups.

Comparisons of perceptions of preparedness and severity versus actual occurrence for types of crises are compared in tabular form from the mean annual responses.

### 5.7 Strengths and Weaknesses of the Method

The method employed had obvious strengths and weaknesses. While the questionnaire could be said to be over-complex, the literature specifically mentions the limited nature of potential or actual crises that have been studied. In order to acquire a comprehensive picture of the state of New Zealand organisational preparedness it was considered important to examine all aspects. The effect of this was a relatively low response rate and this was initially believed to be largely the result of many small businesses electing not to participate. However, similar studies have experienced the same low response rate. For instance, Pauchant & Mitroff (1992) on whose work the questionnaire was adapted achieved an 11.4% response rate in the United States. This, they ascribed to the sensitivity of the subject area. Musson & Jordan (1999) in a similar Australian study gained a 16% response rate and believed it to be partly because of the high number of Y2K surveys underway at that time. In New

Zealand, studies have also experienced low response rates such as Project-P (Hughes & Broad, 1990) at 23.1%

A potential concern in the case of a low response rate is whether or not the data is representative. While a formal non-response analysis of organisations was not conducted, the questionnaires that were returned unusable as well as letters and phone calls declining participation were analysed. In 1998, this result showed returns and declinations covered all industry groups and the reasons given are shown in detail in Chapters 6 and 7.

In addition, interviewees were also questioned on their reactions to the survey and its difficulty. Their demographic was considered against those that did not respond. There were no obvious biases toward any industry group or region in these responses.

It could be argued that employing a cross-sectional questionnaire that generates mostly frequency data did not provide a basis for advanced statistical analysis. This is accepted but it must be contrasted against the nature of the research. First, the research was exploratory and descriptive. It sought to generate preparedness data in order to enable questioning of senior managers and also to determine implications for human resource managers. With 86 data points in the questionnaire, it was very possible that a Likert or similar style questionnaire would have worked against the response rate through increased complexity and time commitment for its completion. The dichotomous option has given a firm base on which to base future research.

In restructuring the questionnaire for use the subsequent year (1999), the response rate problem posed through low participation levels by small organisations was improved. However, it presented the new problem of inter-year comparison of 1998 and 1999 data while maintaining internal data integrity. This was done through grouping of questions from the large organisation survey into simple, one-line statements for small organisations. By averaging the group items for large organisations a rudimentary comparison with small organisations was possible and future research will be able to build from the two divisions of the database.

In a two-year study, comparisons but no trend can be established. Unfortunately, there was no time within the constraints of the allocated span for the degree to conduct a third survey, which would have enabled a trend to be developed. This work is planned for the post-doctoral period.

## **5.8 Summary**

The literature shows a need for executives to understand continuity planning and there is little research in New Zealand in this field. The case has therefore been established for an exploration of BCP and this must logically begin with the establishment of performance and attitudinal benchmarks. These benchmarks should describe the current state of New Zealand continuity practices to enable organisations to monitor their own performance, in keeping with the concepts of organisational learning (Senge, 1990). This study has set out to provide this through postal surveys. Some description is required also of the qualitative data regarding BCP practices and executive attitudes. The individual interviews that form part of this research will assist in meeting this requirement. Through the use of methodologies developed in the field of knowledge engineering, a robust domain model of concepts and relationships can be mapped which will have broad utility within and beyond this study. Finally, the human issues of organisations come to the fore as only through a better understanding of these can the New Zealand economy thrive. This study sought to identify the main implications of its findings in terms of human resource management. In summary, this study is one of breadth. While this can introduce contrary issues of depth, the case for a baseline is taken as the most compelling argument and is the philosophy underpinning the method described.

## Chapter 6

### Analysis of the 1998 Survey

#### 6.1 Overview

The questionnaire was large and, although designed to provide for the collection of qualitative data, primarily gathered quantitative data. There are three main clusters of quantitative data, representing the year of collection, the type of questionnaire employed and comparisons between these clusters. Analysis of these data will provide the basis for addressing the first research question: *“To what extent are New Zealand organisations aware of and prepared for the range of crises that could befall them?”* This is presented in the next three chapters as follows:

- a. 1998 survey data - this chapter,
- b. 1999 survey data - Chapter 7, and
- c. 1998 / 1999 survey data comparisons - Chapter 8.

Within this chapter, the 1998 survey is analysed as both a single data set and also by organisational type and size. The presentation of results follows the structure of the survey i.e. description of the respondents, preventive actions, planning by phase, resourcing by phase, planning for specific events, perception of certain risks and preparedness for last event. As a matter of style, no interpretation of results is attempted in Chapters 6 to 8, with analysis and conclusions contained entirely within the last two chapters.

After examining the returned questionnaires, it was found that some demographic categories were too small to provide a significant result. Consequently, the analysis of the data by demographic subset is limited to the following groups:

- a. public sector (comprising central and local government and the health sector),

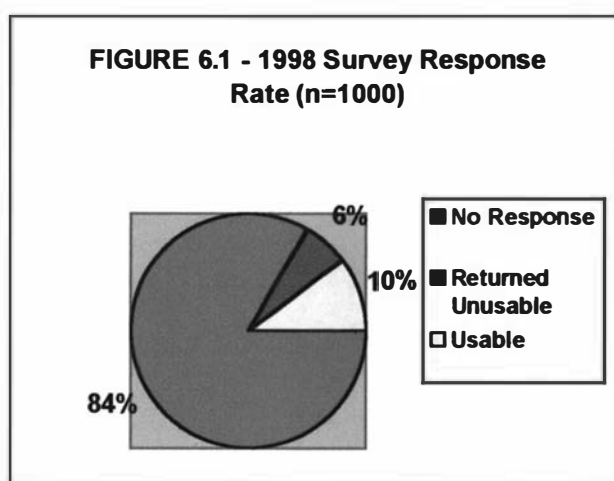
- b. private sector,
- c. central government,
- d. local government,
- e. health sector,
- f. organisations with less than 100 staff,
- g. organisations with between 100 and 500 staff, and
- h. organisations with more than 500 staff.

Since answering the first research question relies on findings from the four main parts of the questionnaire, (preventive management actions, planning by crisis, comparisons of perceptions and ability to cope), the presentation of data for the subsets listed above is focussed on these categories only. The complete data set for the survey is available if required.

## 6.2 Analysis of the Survey Respondents

### 6.2.1 Response Rate

The initial response rate to the 1998 survey is depicted in Figure 6.1



60 questionnaires were returned unusable largely due to the respondent no longer being at the address. This gives an adjusted sample size of



940 and therefore an adjusted response rate of 11.06%. Although the response rate is low when considered against some types of postal survey, (which has been discussed in Chapter 5), the 1998 survey provided an initial benchmark for the conduct of interviews and highlighted organisational size issues. The latter led to the subsequent division of the sample group into large and smaller organisations. The matter of response bias has also been outlined in Chapter 5. The detailed result of the analysis of those questionnaires returned to the researcher was as follows:

- a. gone without a forwarding address (27.8%)
- b. undergoing restructure or otherwise too busy at present (26.2%)
- c. not suitable or not organisational policy to complete surveys (14.8%)
- d. no longer trading (3.3%)
- e. referred researcher to another part of organisation (6.6%)
- f. not interested or no reason given (21.3%)

This range of reasons supported the assumption that the remaining non-responses would be broadly distributed amongst the same groups and therefore that the respondents to the survey were not simply those from one demographic group or those that had an interest in BCP already. The numerical results also supported the latter assumption.

### 6.2.2 Industries Represented

The questionnaire identified a range of 20 industry groups for respondents to select from. These categories were identical to those used in the 1997 Deloitte's Management Magazine Top 200 Companies Survey, as this was the original source for large respondent

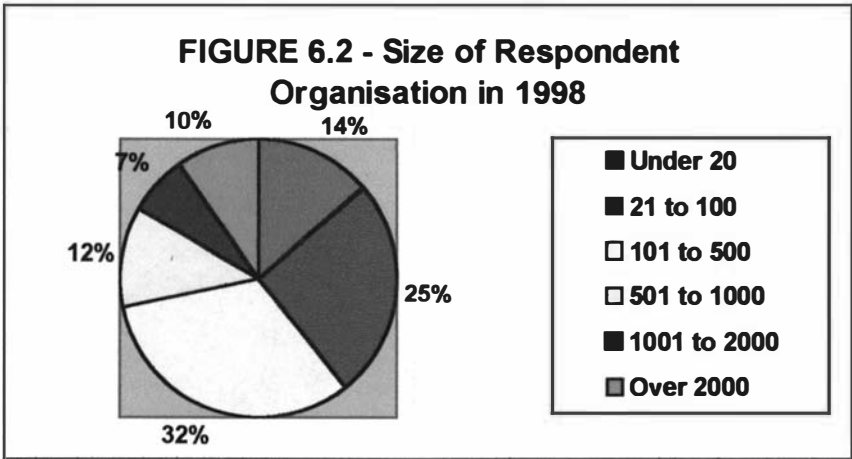
organisations. Responses were received from industry groups as follows (Table 6.1):

INDUSTRY	NUMBER (n=102)	PERCENTAGE
Automotive	0	0.00
Investment (Property)	1	0.98
Computers, Office Equipment	1	0.98
Industry & Community Service	3	2.94
Oil, Gas, Minerals, Electricity	5	4.90
Chemicals, Pharmaceuticals	2	1.96
Communications, Media	2	1.96
Diversified Corporate	0	0.00
Research	0	0.00
Transport, Ports, Tourism	6	5.88
Manufacturing	3	2.94
Retail, Wholesale, Distribution	9	8.83
Primary Production	2	1.96
Food (Processed), Beverages	5	4.90
Banking, Finance	2	1.96
Insurance, Superannuation	5	4.90
Health	15	14.71
Central Government	16	15.69
Local Government	18	17.65
Other / Not Stated	7	6.86

**TABLE 6.1 – Breakdown of Respondents by Industry Group 1998**

6.2.3            Size of Respondent Organisation

Of the 102 respondents that identified their organisational size 60.1% were larger organisations of more than 100 staff (Figure 6.2):



#### 6.2.4 Geographic Origin of Respondent Organisations

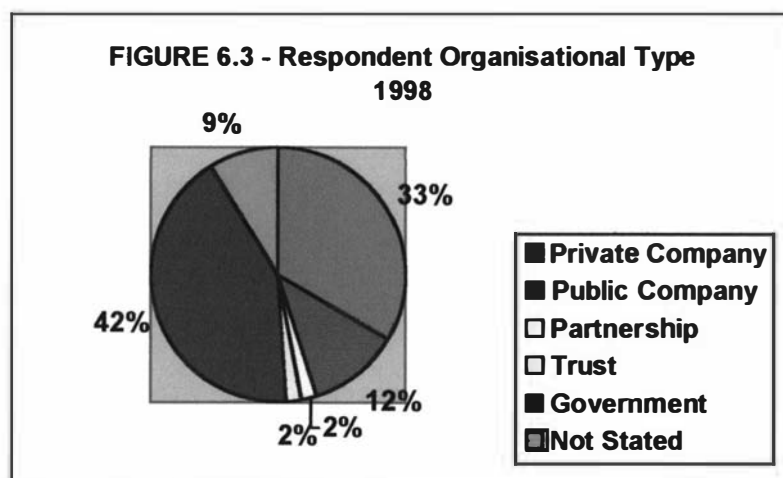
Respondents were asked to indicate in what geographic region their primary facility was located and in what other regions their organisation had facilities. These results (n = 101) are shown below (Table 6.2):

REGION	MAIN AREA	SECONDARY AREA	OTHER AREA
Northland	3	0	0
Auckland	24	9	1
Bay of Plenty	4	3	0
Waikato	9	1	0
Taranaki	2	2	0
Gisborne	1	2	0
Hawke's Bay	6	1	1
Manawatu	4	4	2
Wanganui	1	2	0
Wellington	25	8	3
Nelson	2	0	0
Marlborough	0	0	0
West Coast	2	0	0
Canterbury	12	5	5
Otago	4	3	4
Southland	1	1	3
Not Stated	1	1	2

**TABLE 6.2 - Geographic Location of Respondent Organisations 1998**

#### 6.2.5 Respondents' Organisational Type

Each respondent was asked to indicate the type of organisation or incorporation that they represented. The results of this question are shown in Figure 6.3 (n= 102):



### 6.2.6 Respondent Financial Statistics

Question 9 on the demographics data sheet asked respondents to note their last reported annual turnover. The results of this question were to be used to explore the relationship between the organisation's financial characteristics and preparedness for disruption. However, only 45 responses ranging widely from \$890,000 to \$1 billion meant this criterion could not be applied.

## 6.3 Preventive Management Actions

The first 40 questions of the questionnaire asked the respondent to indicate whether their organisation had adopted any of the listed crisis management preventive actions. Table 6.3 shows the number of responses to these questions in the columns marked 'YES' and 'NO' and a percentage of use ('% USE') column to the right that is based on each 'YES' scoring 1 and each 'NO' scoring 0. Thus, a '% USE' close to 1 indicates a high level of application of the preventive action and, if close to 0, indicates little use of that preventive action. The final column shows the 95% confidence interval. This means the reader can assume that 95% of the population will lie within this range, which is relative to the proportion shown in the fourth column

	YES	NO	% USE	CONF INT
<b><i>Category A: Strategic Activities</i></b>				
Corporate philosophy supports CM	78	24	0.76	.677,.843
Integration of CM in statements and notions of corporate excellence	38	57	0.40	.301,.499
Integration of CM in strategic planning processes	62	38	0.62	.524,.716
Inclusion of outsiders on board, CM unit team	29	67	0.30	.208,.392
Training and workshops in CM	52	50	0.51	.413,.607
Crisis simulations	52	50	0.51	.413,.607
Diversification and portfolio strategies for CM	39	51	0.43	.327,.533
<b><i>Category B: Technical and structural activities</i></b>				
Creation of a CM unit or team	55	47	0.54	.443,.637
Creation of dedicated budget for CM	28	72	0.28	.192,.368
Continual development and changing of emergency policies and manuals	78	24	0.76	.677,.843

Computerised inventories of plant's employees, products and capabilities	70	30	0.70	.610,.709
Creation of a strategic emergency room or facilities	62	41	0.60	.505,.695
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	59	22	0.73	.633,.827
Improved overall design and safety of product and production	44	28	0.61	.497,.723
Technological redundancy (such as computer back-up)	90	8	0.92	.866,.974
Use of outside expert and services in CM	63	35	0.64	.545,.735
<b>Category C: Evaluation and Diagnostic Activities</b>				
Legal and financial audit of threats and liabilities	72	26	0.73	.642,.818
Modifications in insurance of coverage	79	16	0.83	.754,.906
Environmental-impact audits	42	45	0.48	.374,.586
Ranking of most critical activities necessary for daily operations	62	33	0.65	.554,.746
Early warning signal detection, scanning, issues management	46	43	0.52	.416,.624
Dedicated research on potential hidden dangers	24	63	0.28	.186,.374
Critical follow-up of past crises	61	30	0.67	.573,.767
Stringent maintenance and inspection schedule	57	32	0.64	.540,.740
<b>Category D: Communication Activities</b>				
Media training for CM	38	57	0.40	.301,.499
Major efforts in public relations	52	41	0.56	.459,.661
Increased information to local communities	43	48	0.47	.367,.573
Increased relationships with intervening stakeholder groups (e.g. police, media)	58	37	0.61	.511,.709
Increased collaboration or lobbying among stakeholders	28	54	0.34	.237,.433
Use of new communication technologies and channels	64	30	0.68	.585,.775
Dedicated phone numbers for recall and consumers	48	38	0.56	.454,.666
<b>Category E: Psychological and Cultural Activities</b>				
Strong top management commitment to CM	70	29	0.71	.620,.800
Increased relationships with activist group	17	62	0.22	.129,.311
Improved acceptance of whistleblowers	28	49	0.36	.252,.468
Increased knowledge of criminal behaviour	31	47	0.40	.291,.509
Increased visibility of the human and emotional impacts of crisis	51	39	0.57	.467,.673
Psychological support to employees	63	28	0.69	.595,.785
Stress management and management of anxiety	62	29	0.68	.584,.776
Symbolic recall and corporate memory of past crises	31	53	0.37	.266,.474
Monitoring of cultural perceptions across employee groups	32	51	0.39	.285,.495

**TABLE 6.3 – Global Responses to Preventive Management Action Questions 1998**

### 6.3.1 Preventive Management Actions by Industry Groups

In addressing the preventive management actions undertaken by various sector, the data has been presented as means. The key to the column

headings in this table is Private Sector (PTE), Public Sector, which combines central and local government and the health sector (PUB), central government (CG), local government (LG) and the health sector (H). The results are shown on the next page (Table 6.4)

	SAMPLE MEAN	PTE	PUB	CG	LG	H
<b><i>Category A: Strategic Activities</i></b>						
Corporate philosophy supports CM	0.76	0.72	0.81	0.75	0.83	0.86
Integration of CM in statements and notions of corporate excellence	0.40	0.42	0.38	0.21	0.36	0.57
Integration of CM in strategic planning processes	0.62	0.57	0.68	0.53	0.65	0.86
Inclusion of outsiders on board, CM unit team	0.30	0.18	0.43	0.27	0.50	0.53
Training and workshops in CM	0.51	0.49	0.53	0.53	0.65	0.40
Crisis simulations	0.51	0.43	0.59	0.50	0.83	0.43
Diversification and portfolio strategies for CM	0.43	0.40	0.47	0.38	0.50	0.54
<b><i>Category B: Technical and structural activities</i></b>						
Creation of a CM unit or team	0.54	0.44	0.64	0.69	0.76	0.47
Creation of dedicated budget for CM	0.28	0.17	0.39	0.19	0.65	0.33
Continual development and changing of emergency policies and manuals	0.76	0.77	0.75	0.56	0.89	0.80
Computerised inventories of plant's employees, products and capabilities	0.70	0.65	0.76	0.87	0.69	0.73
Creation of a strategic emergency room or facilities	0.60	0.44	0.77	0.69	0.94	0.67
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	0.73	0.66	0.79	0.64	0.73	1.00
Improved overall design and safety of product and production	0.61	0.65	0.49	0.50	0.14	0.83
Technological redundancy (such as computer back-up)	0.92	0.93	0.91	0.88	0.93	0.93
Use of outside expert and services in CM	0.64	0.58	0.71	0.75	0.67	0.71
<b><i>Category C: Evaluation and Diagnostic Activities</i></b>						
Legal and financial audit of threats and liabilities	0.73	0.75	0.72	0.81	0.60	0.73
Modifications in insurance of coverage	0.83	0.83	0.84	0.80	0.80	0.92
Environmental-impact audits	0.48	0.53	0.42	0.33	0.57	0.36
Ranking of most critical activities necessary for daily operations	0.65	0.65	0.67	0.53	0.93	0.53
Early warning signal detection, scanning, issues management	0.52	0.55	0.48	0.36	0.50	0.57
Dedicated research on potential hidden dangers	0.28	0.27	0.29	0.21	0.33	0.33
Critical follow-up of past crises	0.67	0.56	0.79	0.60	0.93	0.85
Stringent maintenance and inspection schedule	0.64	0.69	0.58	0.40	0.58	0.77

<b><i>Category D: Communication Activities</i></b>						
Media training for CM	0.40	0.31	0.50	0.53	0.56	0.42
Major efforts in public relations	0.56	0.44	0.70	0.57	0.80	0.71
Increased information to local communities	0.47	0.42	0.52	0.14	0.88	0.54
Increased relationships with intervening stakeholder groups (e.g. police, media)	0.61	0.55	0.67	0.43	0.88	0.71
Increased collaboration or lobbying among stakeholders	0.34	0.28	0.43	0.21	0.50	0.58
Use of new communication technologies and channels	0.68	0.69	0.68	0.56	0.77	0.71
Dedicated phone numbers for recall and consumers	0.56	0.61	0.49	0.25	0.67	0.54
<b><i>Category E: Psychological and Cultural Activities</i></b>						
Strong top management commitment to CM	0.71	0.72	0.68	0.63	0.88	0.54
Increased relationships with activist group	0.22	0.13	0.33	0.17	0.50	0.33
Improved acceptance of whistleblowers	0.36	0.30	0.44	0.33	0.50	0.50
Increased knowledge of criminal behaviour	0.40	0.39	0.40	0.30	0.27	0.62
Increased visibility of the human and emotional impacts of crisis	0.57	0.48	0.68	0.53	0.73	0.79
Psychological support to employees	0.69	0.63	0.77	0.71	0.75	0.86
Stress management and management of anxiety	0.68	0.63	0.75	0.64	0.77	0.85
Symbolic recall and corporate memory of past crises	0.37	0.31	0.45	0.33	0.55	0.46
Monitoring of cultural perceptions across employee groups	0.39	0.26	0.53	0.64	0.33	0.62

**TABLE 6.4 – Comparative Responses by Industry Sector to Preventive Management Action Questions 1998.**

### 6.3.2 Preventive Management Actions by Staff Size

This view of the preventive management data compares the global mean with three categories of organisational staff size as shown in Table 6.5:

	<b>SAMPLE MEAN</b>	<b>&lt;100 STAFF</b>	<b>100– 500 STAFF</b>	<b>&gt;500 STAFF</b>
<b><i>Category A: Strategic Activities</i></b>				
Corporate philosophy supports CM	0.76	0.72	0.75	0.84
Integration of CM in statements and notions of corporate excellence	0.40	0.36	0.32	0.52
Integration of CM in strategic planning processes	0.62	0.58	0.63	0.67
Inclusion of outsiders on board, CM unit team	0.30	0.28	0.26	0.38

Training and workshops in CM	0.51	0.46	0.56	0.52
Crisis simulations	0.51	0.36	0.59	0.61
Diversification and portfolio strategies for CM	0.43	0.39	0.42	0.50
<b><i>Category B: Technical and structural activities</i></b>				
Creation of a CM unit or team	0.54	0.33	0.63	0.71
Creation of dedicated budget for CM	0.28	0.24	0.31	0.30
Continual development and changing of emergency policies and manuals	0.76	0.70	0.81	0.81
Computerised inventories of plant's employees, products and capabilities	0.70	0.65	0.84	0.61
Creation of a strategic emergency room or facilities	0.60	0.44	0.76	0.65
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	0.73	0.71	0.67	0.81
Improved overall design and safety of product and production	0.61	0.58	0.48	0.78
Technological redundancy (such as computer back-up)	0.92	0.92	0.94	0.90
Use of outside expert and services in CM	0.64	0.58	0.63	0.73
<b><i>Category C: Evaluation and Diagnostic Activities</i></b>				
Legal and financial audit of threats and liabilities	0.73	0.75	0.72	0.73
Modifications in insurance of coverage	0.83	0.86	0.84	0.79
Environmental-impact audits	0.48	0.30	0.52	0.63
Ranking of most critical activities necessary for daily operations	0.65	0.62	0.72	0.62
Early warning signal detection, scanning, issues management	0.52	0.50	0.56	0.50
Dedicated research on potential hidden dangers	0.28	0.27	0.36	0.21
Critical follow-up of past crises	0.67	0.65	0.67	0.70
Stringent maintenance and inspection schedule	0.64	0.50	0.73	0.71
<b><i>Category D: Communication Activities</i></b>				
Media training for CM	0.40	0.27	0.41	0.55
Major efforts in public relations	0.56	0.51	0.53	0.64
Increased information to local communities	0.47	0.44	0.46	0.52
Increased relationships with intervening stakeholder groups (e.g. police, media)	0.61	0.51	0.64	0.70
Increased collaboration or lobbying among stakeholders	0.34	0.27	0.20	0.56
Use of new communication technologies and channels	0.68	0.67	0.63	0.75
Dedicated phone numbers for recall and consumers	0.56	0.50	0.64	0.54
<b><i>Category E: Psychological and Cultural Activities</i></b>				
Strong top management commitment to CM	0.71	0.68	0.77	0.67



Increased relationships with activist group	0.22	0.14	0.16	0.36
Improved acceptance of whistleblowers	0.36	0.28	0.31	0.55
Increased knowledge of criminal behaviour	0.40	0.45	0.26	0.46
Increased visibility of the human and emotional impacts of crisis	0.57	0.63	0.48	0.58
Psychological support to employees	0.69	0.64	0.72	0.72
Stress management and management of anxiety	0.68	0.69	0.70	0.66
Symbolic recall and corporate memory of past crises	0.37	0.38	0.41	0.32
Monitoring of cultural perceptions across employee groups	0.39	0.37	0.36	0.43

**TABLE 6.5 – Comparative Responses by Staff Size to Preventive Management Action Questions 1998**

## 6.4 Crisis Planning Efforts by Phase

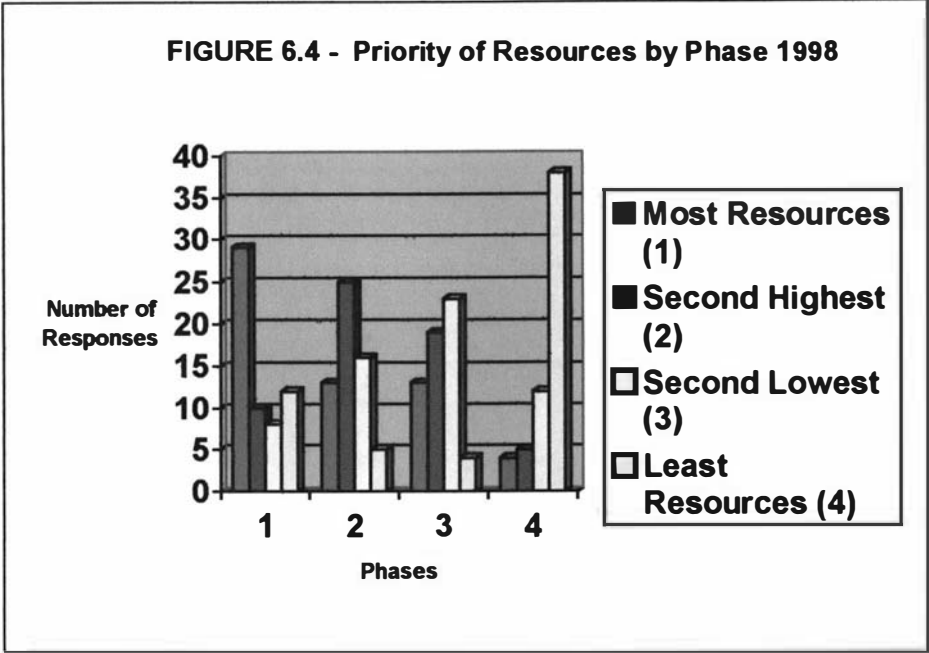
In questions 41-44 of the questionnaire, respondents were asked whether their organisation's crisis plans covered the four recognised phases of crisis management. The results, which are to be interpreted in the same manner as Table 6.3 above, are as follows:

	YES	NO	% USE	CONF INT
<b><i>Do your organisation's general crisis plans cover:</i></b>				
The Hazard Identification and Risk Reduction Phase	82	15	0.85	.778,.922
The Planning and Readiness Phase	72	26	0.73	.642,.818
The Emergency Response Phase	83	16	0.84	.767,.913
The Recovery Phase	63	33	0.66	.564,.756

**TABLE 6.6 - Crisis Planning by Phase 1998**

## 6.5 Allocation of Resources by Phase

Using the same four crisis management phases mentioned in Table 6.6 above, the respondents were asked to indicate with a 1-4 ranking scale the extent to which their organisation allocated resources (Figure 6.4).



A score of 1 indicated the most resources and 4 the least. Many respondents misinterpreted the requirements of this question, with the most common error being the allocation of a top ranking to all four phases. As a result, only 59 questionnaires were useable in regard to this question.

### 6.6 Planning for Specific Crises

The next major section of the questionnaire (questions 49 – 76) asked the respondent to indicate whether their organisation planned for a range of crisis contingencies shown in Table 6.7. As described earlier, the responses are listed in the columns marked ‘YES’ and ‘NO’ and the % USE column to the right is based on each ‘YES’ scoring 1 and each ‘NO’ scoring 0. Thus, a percentage close to 1 indicates a high level of planning for that particular crisis event and, if close to 0, indicates little planning for that event. The confidence interval shown in the right hand column is 95% above or below the proportion of respondents indicating a ‘YES’.

	YES	NO	% USE	CONF INT
<i>Category A: External Economic Attacks</i>				
Extortion	9	86	0.09	.031,.149
Bribery	11	84	0.12	.055,.185
Boycotts	10	85	0.11	.048,.172
Hostile take-overs	11	80	0.12	.053,.187
<i>Category B: External Information Attacks</i>				

Copyright infringement	32	60	0.35	.252,.448
Loss of information	73	26	0.74	.653,.827
Counterfeiting	17	72	0.19	.108,.272
Damaging rumours	46	52	0.47	.371,.569
<b>Category C: Breaks</b>				
Recalls	25	42	0.37	.253,.487
Product defects	37	35	0.51	.394,.626
Plant defects	41	33	0.55	.436,.664
Computer breakdowns	95	3	0.97	.936,1.00
Operator errors	62	28	0.69	.594,.786
Poor security	70	22	0.76	.672,.848
Loss of essential services (power, water etc)	82	14	0.85	.779,.921
<b>Category D: Megadamage</b>				
Environmental damage	65	27	0.71	.616,.804
Major accidents	68	24	0.74	.650,.830
<b>Category E: Psychopathology</b>				
Terrorism	25	64	0.28	.186,.374
Copycats	17	68	0.20	.114,.286
On-site sabotage/tampering	44	47	0.48	.377,.583
Off-site sabotage/tampering	25	64	0.28	.186,.374
Executive kidnapping	10	79	0.11	.044,.176
Sexual harassment	76	24	0.76	.676,.844
<b>Category F: Health Factors</b>				
Work-related health problems	85	15	0.85	.780,.920
<b>Category G: Perceptual Factors</b>				
Damage to reputation	56	38	0.60	.500,.700
<b>Category H: Human Resource Factors</b>				
Executive succession	57	37	0.61	.511,.709
Poor morale	55	39	0.59	.490,.690
Industrial disputes	55	34	0.62	.518,.722

**TABLE 6.7 – Global Extent of Organisational Planning For Specific Crises 1998**

#### 6.6.1 Planning for Specific Crises by Industry Groups

For the presentation of data reflecting planning by specific industry groups, the same approach has been taken as for preventive management actions (described in paragraph 6.3.1 and 6.3.2). In summary, this shows comparisons of means only for private sector, public sector and the health, central and local government data sets, which comprise the public sector result. The comparative data is shown in Table 6.8 over the page:

	SAMPLE MEAN	PTE	PUB	CG	LG	H
<b><i>Category A: External Economic Attacks</i></b>						
Extortion	0.09	0.16	0.02	0.06	0.00	0.00
Bribery	0.12	0.20	0.02	0.06	0.00	0.00
Boycotts	0.11	0.14	0.07	0.00	0.06	0.15
Hostile take-overs	0.12	0.19	0.05	0.00	0.00	0.15
<b><i>Category B: External Information Attacks</i></b>						
Copyright infringement	0.35	0.46	0.23	0.20	0.07	0.42
Loss of information	0.74	0.74	0.75	0.75	0.56	0.93
Counterfeiting	0.19	0.33	0.02	0.07	0.00	0.00
Damaging rumours	0.47	0.50	0.44	0.27	0.31	0.73
<b><i>Category C: Breaks</i></b>						
Recalls	0.37	0.54	0.15	0.00	0.08	0.38
Product defects	0.51	0.67	0.26	0.00	0.27	0.50
Plant defects	0.55	0.59	0.51	0.20	0.50	0.82
Computer breakdowns	0.97	0.96	0.98	1.00	0.94	1.00
Operator errors	0.69	0.71	0.66	0.62	0.53	0.85
Poor security	0.76	0.73	0.79	0.58	0.88	0.92
Loss of essential services (power, water etc)	0.85	0.82	0.88	0.71	1.00	0.93
<b><i>Category D: Megadamage</i></b>						
Environmental damage	0.71	0.71	0.68	0.46	0.94	0.64
Major accidents	0.74	0.75	0.72	0.50	0.87	0.80
<b><i>Category E: Psychopathology</i></b>						
Terrorism	0.28	0.23	0.35	0.42	0.13	0.50
Copycats	0.20	0.30	0.08	0.00	0.00	0.25
On-site sabotage/tampering	0.48	0.52	0.46	0.38	0.29	0.69
Off-site sabotage/tampering	0.28	0.34	0.22	0.17	0.18	0.31
Executive kidnapping	0.11	0.17	0.05	0.08	0.00	0.07
Sexual harassment	0.76	0.74	0.78	0.60	0.75	1.00
<b><i>Category F: Health Factors</i></b>						
Work-related health problems	0.85	0.89	0.80	0.67	0.81	0.93
<b><i>Category G: Perceptual Factors</i></b>						
Damage to reputation	0.60	0.65	0.54	0.53	0.31	0.79
<b><i>Category H: Human Resource Factors</i></b>						
Executive succession	0.61	0.81	0.40	0.67	0.19	0.33
Poor morale	0.59	0.67	0.49	0.50	0.31	0.67
Industrial disputes	0.62	0.70	0.53	0.36	0.43	0.80

**TABLE 6.8 – Comparative Responses by Industry Sector to Planning for Specific Crises  
1998**

## 6.6.2 Planning for Specific Crises by Staff Size

The responses to questions shown below (Table 6.9) regarding organisational planning for specific crises are also presented as comparative means by staff size.

	<b>SAMPLE MEAN</b>	<b>&lt;100 STAFF</b>	<b>100-500 STAFF</b>	<b>&gt;500 STAFF</b>
<i>Category A: External Economic Attacks</i>				
Extortion	0.09	0.06	0.06	0.18
Bribery	0.12	0.08	0.06	0.21
Boycotts	0.11	0.08	0.03	0.21
Hostile take-overs	0.12	0.11	0.03	0.23
<i>Category B: External Information Attacks</i>				
Copyright infringement	0.35	0.33	0.39	0.32
Loss of information	0.74	0.78	0.67	0.77
Counterfeiting	0.19	0.19	0.27	0.11
Damaging rumours	0.47	0.56	0.47	0.37
<i>Category C: Breaks</i>				
Recalls	0.37	0.23	0.39	0.56
Product defects	0.51	0.47	0.45	0.65
Plant defects	0.55	0.44	0.43	0.79
Computer breakdowns	0.97	0.97	0.94	1.00
Operator errors	0.69	0.74	0.62	0.69
Poor security	0.76	0.71	0.83	0.75
Loss of essential services (power, water etc)	0.85	0.78	0.90	0.90
<i>Category D: Megadamage</i>				
Environmental damage	0.71	0.59	0.83	0.71
Major accidents	0.74	0.66	0.81	0.77
<i>Category E: Psychopathology</i>				
Terrorism	0.28	0.09	0.21	0.55
Copycats	0.20	0.16	0.18	0.28
On-site sabotage/tampering	0.48	0.48	0.38	0.59
Off-site sabotage/tampering	0.28	0.25	0.21	0.38
Executive kidnapping	0.11	0.00	0.10	0.24
Sexual harassment	0.76	0.62	0.79	0.90
<i>Category F: Health Factors</i>				
Work-related health problems	0.85	0.87	0.84	0.83
<i>Category G: Perceptual Factors</i>				
Damage to reputation	0.60	0.71	0.55	0.50
<i>Category H: Human Resource Factors</i>				
Executive succession	0.61	0.55	0.56	0.72
Poor morale	0.59	0.62	0.66	0.46
Industrial disputes	0.62	0.47	0.63	0.76

**TABLE 6.9 – Comparative Responses by Staff Size to Planning for Specific Crises 1998**

## 6.7 Extent of Perceived and Actual Impact

Utilising the same crises listed in Table 6.9, the respondents were asked, in three separate questions, to list certain events in descending order of priority. These events, taken from the list offered in the survey, would be the most serious for the organisation, those for which the organisation was most prepared and those that the organisation has actually experienced. The results are shown below in Tables 6.10, 6.11 and 6.12 ranked from highest to lowest mean score (right hand column). Crises shown in the questionnaire that received no responses are not listed. The mean score shows the average result for all three columns i.e. it reflects the instances of mention across all organisations without any priority. This is believed to be a simple but useful measure of the degree to which the respondent is consciously aware of the event.

	PRI. 1 SERIOUS	PRI. 2 SERIOUS	PRI.3 SERIOUS	MEAN
Computer Breakdowns	14	23	15	17.3
Loss of Essential Services	19	11	11	13.7
Environmental Damage	18	10	5	11
Major Accidents	8	12	7	9
Loss of Information	7	8	3	6
Damage to Reputation	7	4	7	6
Work Related Health Problems	3	3	9	5
Product Defects	4	3	3	3.3
Poor Morale	4	3	3	3.3
Executive Succession	2	3	5	3.3
Industrial Disputes	2	2	5	3
Poor Security	1	4	4	3
Plant Defects	2	2	2	2
Recalls	1	2	2	1.7
On Site Sabotage	1	1	3	1.7
Operator Errors	2	1	1	1.3
Off Site Sabotage	1	1	0	0.7
Counterfeiting	0	1	1	0.7
Damaging Rumours	0	0	2	0.7
Terrorism	1	0	0	0.3
Hostile Takeovers	0	1	0	0.3
Executive Kidnapping	0	1	0	0.3
Sexual Harassment	0	0	1	0.3

**TABLE 6.10 - Perceived Seriousness of Certain Crisis Events 1998**

	PRI. 1 PREPARED	PRI. 2 PREPARED	PRI.3 PREPARED	MEAN
Computer Breakdowns	24	17	10	17
Loss of Essential Services	11	11	8	10
Environmental Damage	16	10	2	9.3
Major Accidents	8	15	2	8.3
Work Related Health Problems	3	6	15	8
Loss of Information	3	7	2	4
Industrial Disputes	3	3	5	3.7
Product Defects	5	3	2	3.3
Damage to Reputation	2	0	8	3.3
Executive Succession	3	3	3	3
Plant Defects	3	4	1	2.7
Poor Security	2	1	2	1.7
Operator Errors	2	0	3	1.7
Poor Morale	0	4	1	1.7
Terrorism	3	0	1	1.3
Recalls	2	1	1	1.3
Sexual Harassment	1	1	1	1
On Site Sabotage	0	1	2	1
Copyright Infringement	1	1	0	0.7
Counterfeiting	1	0	1	0.7
Off Site Sabotage	0	1	1	0.7
Damaging Rumours	0	1	1	0.7
Bribery	1	0	0	0.3
Executive Kidnapping	1	0	0	0.3
Hostile Takeovers	0	1	0	0.3
Copycats	0	0	1	0.3

**TABLE 6.11 - Perceived Level of Preparation For Certain Crisis Events 1998**

	PRI. 1 OCCURRED	PRI. 2 OCCURRED	PRI.3 OCCURRED	MEAN
Computer Breakdowns	11	13	4	9.3
Loss of Essential Services	15	7	4	8.7
Environmental Damage	11	4	1	5.3
Major Accidents	9	6	0	5
Work Related Health Problems	6	5	4	5
Product Defects	6	3	1	3.3
Operator Errors	4	2	2	2.7

Poor Morale	2	6	0	2.7
Loss of Information	3	2	2	2.3
Industrial Disputes	3	0	4	2.3
Damage to Reputation	2	3	2	2.3
Poor Security	1	2	4	2.3
Recalls	2	2	1	1.7
Damaging Rumours	0	1	3	1.3
Plant Defects	0	3	0	1
On Site Sabotage	0	0	3	1
Hostile Takeovers	2	0	0	0.7
Executive Succession	1	0	1	0.7
Copyright Infringement	1	0	1	0.7
Counterfeiting	0	1	1	0.7
Copycats	1	0	0	0.3
Executive Kidnapping	1	0	0	0.3
Terrorism	0	1	0	0.3
Extortion	0	0	1	0.3

**TABLE 6.12 - Actual Occurrence Of Crisis Events In Last 5 Years 1998**

The preceding tables provide a useful basis for further analysis but are not, in themselves, intuitively revealing. Consequently, the data (restricted to events with means above 1) is shown in scatterplot format to graphically display the relationship between perceptions and actions. Figure 6.5 shows the mean relationship between perception of seriousness of a disruptive event and the degree to which the respondents believe themselves to be prepared for that event. Figure 6.6 shows the relationship between the organisation having experienced a particular disruptive event and the level of preparation for it now.



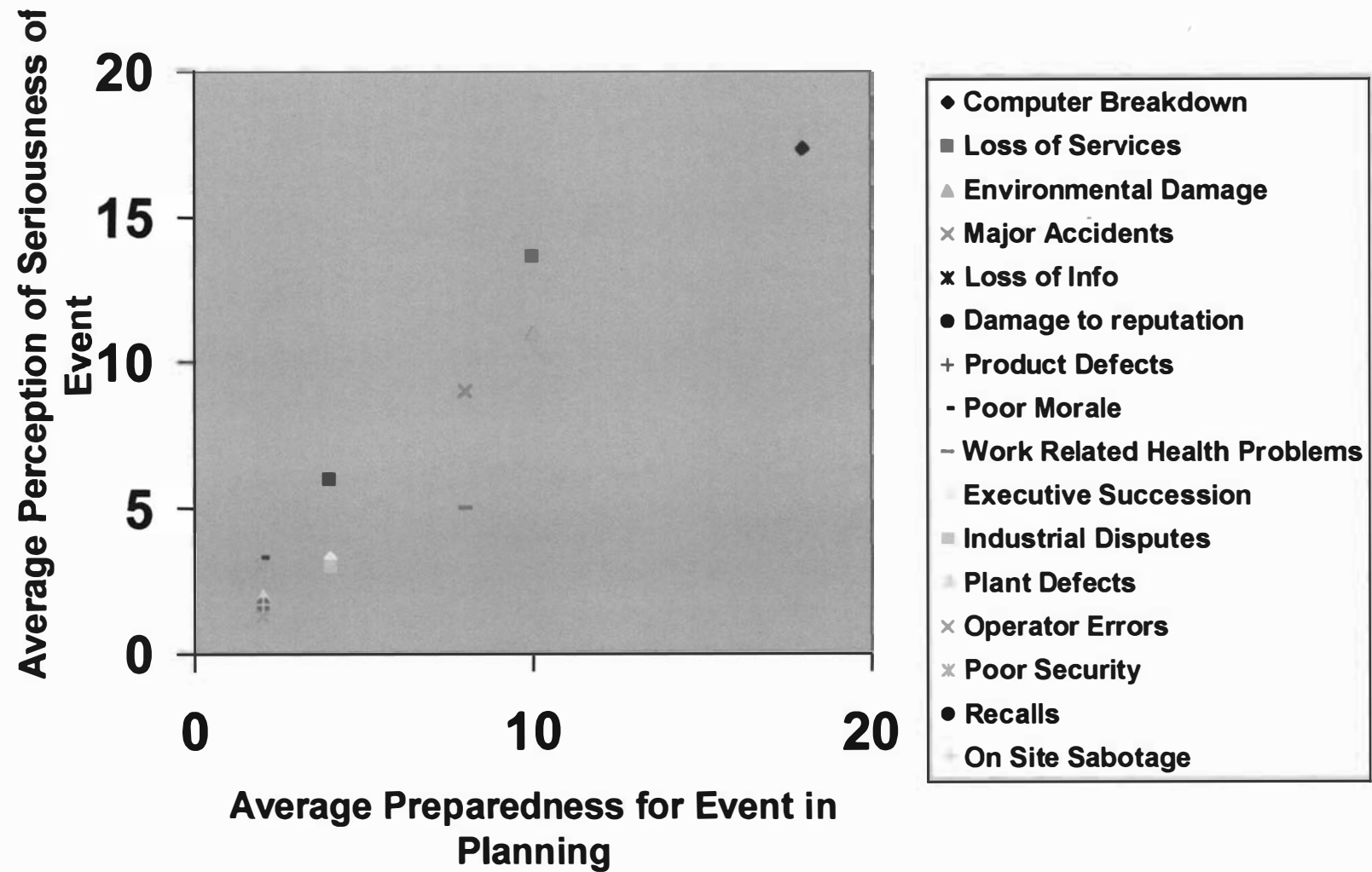
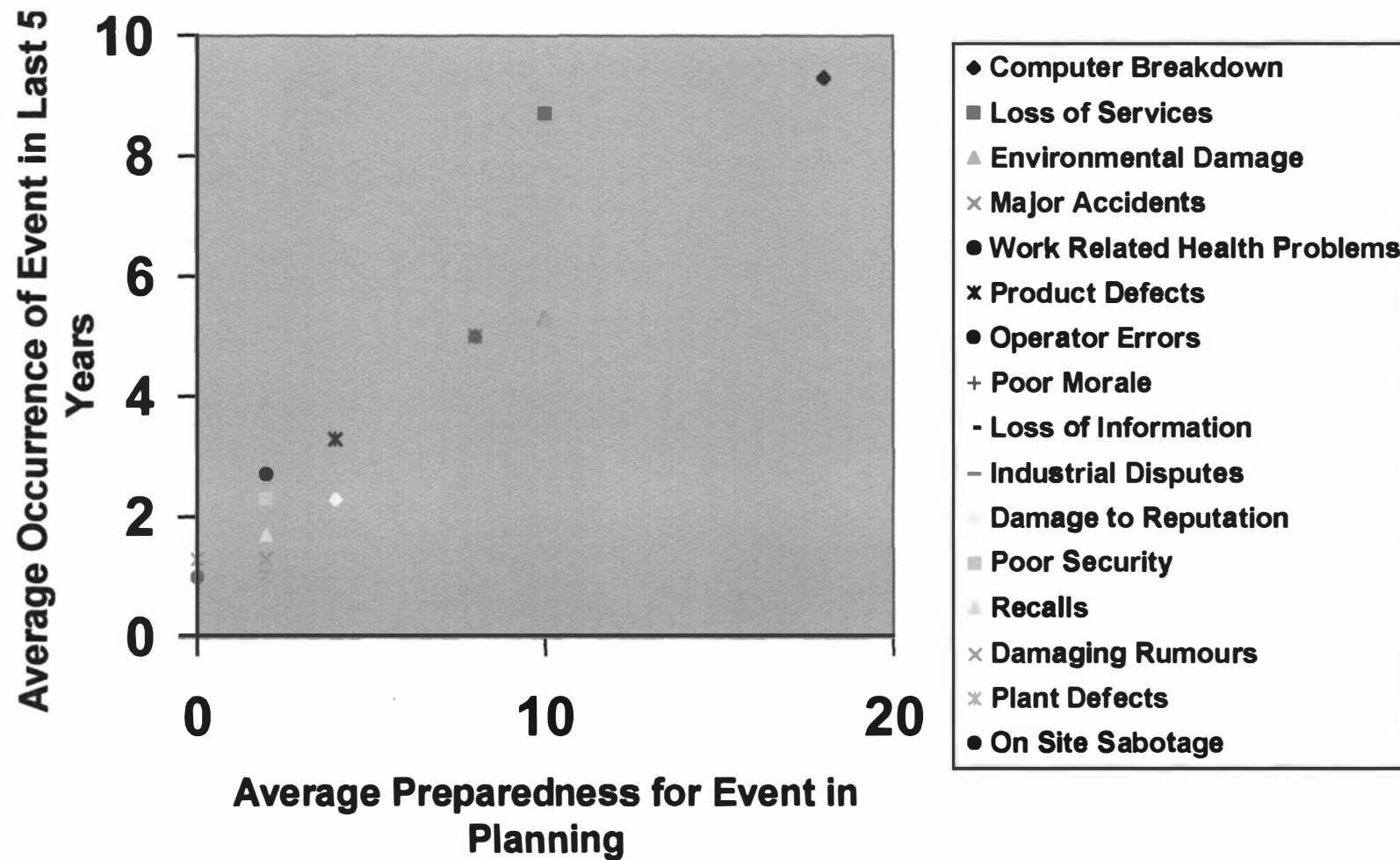


FIGURE 6.5 - Relationship between Perception of Seriousness of Particular Disruptive Events and Level of Preparedness



**FIGURE 6.6 - Relationship between Recent Occurrence of Particular Disruptive Events and Level of Preparedness**

**6.8 Preparedness for Last Event**

The final question in the questionnaire asked the respondent to indicate how well their organisation had been prepared for the crises it had experienced recently. A seven point Likert scale with behavioural anchors ranging from 1 (totally unprepared) to 7 (totally prepared) was used to gather responses. The mean response was 4.86 and the standard deviation was 1.472. This is closest to the anchor on the scale entitled ‘Some areas prepared’. This will be considered further in Chapter 10. The comparison between this result and that for the subsets of industry group and staff size are shown below (Table 6.13):

DATA GROUP	MEAN LEVEL OF PERCEIVED PREPAREDNESS	STANDARD DEVIATION
SAMPLE SUMMARY	4.86	1.472
Private Sector	5.02	1.438
Public Sector	4.69	1.480
Central Government	4.50	1.446
Local Government	4.40	1.549
Health Sector	5.13	1.506
Less than 100 Staff	4.74	1.437
100 – 500 Staff	4.90	1.543
More than 500 Staff	4.96	1.480

**Table 6.13 – Comparison of Sector Results for Perception of Preparation for Last Crisis.**

**6.9 Summary**

The 1998 survey of 1000 New Zealand organisations has provided an overview for describing of the current state of corporate crisis preparedness in this country. The range of data revealed is vast despite the relatively low response rate of 11.06% and offers useful comparisons between public and private sector outcomes with the sample summary result. Comparisons can also be drawn between staff size and the sample summary result, however due to an apparent reticence to provide turnover data, no analysis by financial size was possible.

The composition of the respondent group shows a dominance of large organisations and this was a cause for caution given the large number of New Zealanders employed in small organisations. However, the geographic spread is broadly representative of national population distribution.

In presenting the data relating to perceptions of severity and preparedness as well as recent experience of disruptive events, two different methods have been employed. First, the full data set of each of the three questions provides a complete presentation of the questionnaire result. However, it is felt that the more useful is the cross-tabular scatterplot showing mean bilateral relationships between severity versus preparedness and experience versus preparedness. Finally, a sample and sector tabular analysis of preparedness for the last event shows little variation between sector groups.

This initial questionnaire and analysis requires some modification to better incorporate the needs of smaller organisations. In addition, it is acknowledged that this result, in isolation, was simply a snapshot and a longitudinal study of preparedness will add significant value to the field.

## **Analysis of the 1999 Survey**

### **7.1 Introduction**

The 1999 survey assisted this research in two important ways. First, it was conducted in response to the low return rate from small organisations. The reticence of these respondents due to the complexity of the 1998 questionnaire was confirmed during the interviews. As a result, the overall response rate in 1999 was nearly double that of the previous year. While this did not enable a trend to be developed, it did enable some inter-year comparison and formed a basis for future longitudinal studies.

### **7.2 Structure of the Analysis**

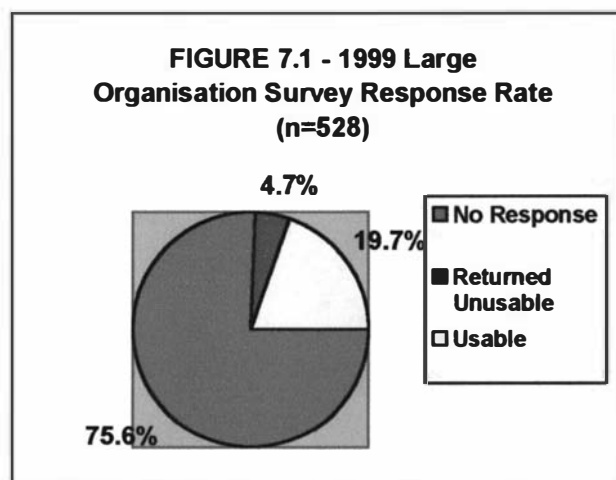
The approach taken to the analysis of this data reflects the fact that two types of questionnaire were distributed. The first, to large organisations, was identical to that used in the previous year. The second, to smaller organisations was a much simplified and abbreviated form however the questions still represent groups of key factors from the larger survey. Consequently, the structure of this chapter is in three parts:

- a. large organisation survey data,
- b. small organisation survey data, and
- c. combined 1999 data where possible.

### **7.3 Analysis of the Large Organisations Survey Respondents**

#### **7.3.1 Response Rate**

The response rate to the 1999 questionnaire for large organisations is shown in Figure 7.1.



26 questionnaires were returned unusable largely due to the respondent no longer being at the address. This gives an adjusted sample size for large organisations of 502 and an adjusted response rate of 20.7%

### 7.3.2 Industries Represented

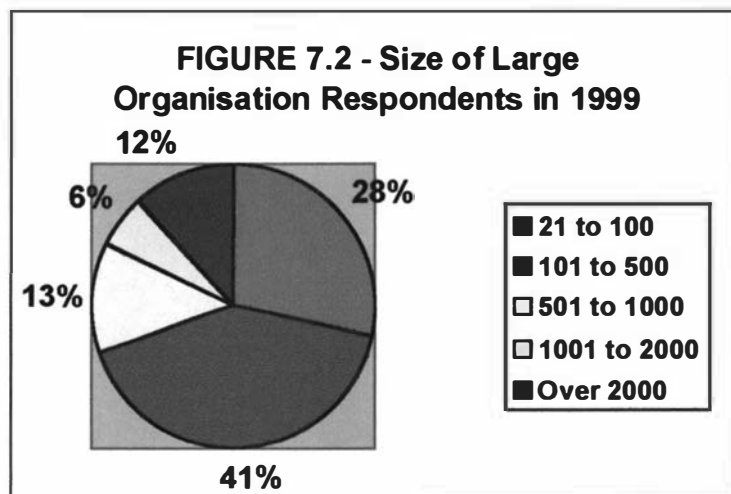
The survey offered the same range of 20 industry groups as in 1998 and responses were received as shown below (Table 7.1):

INDUSTRY	NUMBER (n=104)	PERCENTAGE
Automotive	0	0.00
Investment (Property)	1	0.96
Computers, Office Equipment	0	0.00
Industry & Community Service	0	0.00
Oil, Gas, Minerals, Electricity	4	3.85
Chemicals, Pharmaceuticals	2	1.93
Communications, Media	1	0.96
Diversified Corporate	2	1.93
Research	0	0.00
Transport, Ports, Tourism	3	2.88
Manufacturing	4	3.85
Retail, Wholesale, Distribution	6	5.77
Primary Production	1	0.96
Food (Processed), Beverages	1	0.96
Banking, Finance	1	0.96
Insurance, Superannuation	2	1.93
Health	21	20.19
Central Government	21	20.19
Local Government	25	24.04
Other / Not Stated	9	8.65

**TABLE 7.1 – Analysis of Large Organisation Respondents by Industry Group in 1999**

### 7.3.3 Size of Respondent Organisation

Of the 104 respondents that identified their organisational size the results were as follows (Figure 7.2):



### 7.3.4 Geographic Origin of Respondent Organisations

Respondents identified the geographic region that their primary and other facilities were located as shown below (Table 7.2):

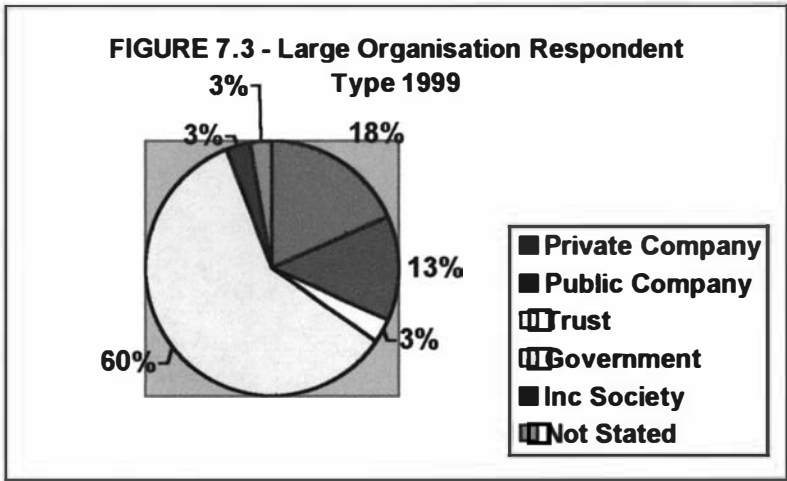
REGION	MAIN AREA	SECONDARY AREA	OTHER AREA
Northland	3	1	0
Auckland	17	10	2
Bay of Plenty	2	1	0
Waikato	5	3	1
Taranaki	4	0	1
Gisborne	1	0	0
Hawke's Bay	7	1	0
Manawatu	3	1	1
Wanganui	1	1	0
Wellington	34	3	0
Nelson	1	0	0
Marlborough	1	1	0
West Coast	4	0	0
Canterbury	12	0	10
Otago	3	0	0
Southland	4	2	0
Nationwide*	1	16	0
Not Stated	1	0	0

\* New category in 1999

**TABLE 7.2 - Geographic Location of Large Respondent Organisations 1999**

7.3.5 Respondent’s Organisational Type

The organisational type of the respondents is shown below (Figure 7.3):



7.3.6 Respondent Financial Statistics

As in 1998, there was insufficient response to the question regarding financial turnover for this criterion to be applied.

7.4 Preventive Management Actions

As in 1998, the first 40 questions asked the respondent to indicate whether their organisation had adopted any of the listed crisis management preventive actions. Table 7.3 shows the response to these questions in terms of raw score responses in the columns marked ‘YES’ and ‘NO’. The ‘% USE’ column shows the proportion of respondents that have indicated their use of the preventive action. It is based on each ‘YES’ scoring 1 and each ‘NO’ scoring 0. Thus, a percentage close to 1 indicates a high level of application of the preventive action and, if close to 0 indicates little use of that preventive action. The final column shows the 95% confidence interval. This means the reader can assume that 95% of the population will lie within this range, which is relative to the ‘% use’ shown in the fourth column



	YES	NO	% USE	CONF INT
<b><i>Category A: Strategic Activities</i></b>				
Corporate philosophy supports CM	85	16	0.84	.72,.91
Integration of CM in statements and notions of corporate excellence	38	60	0.39	.29,.49
Integration of CM in strategic planning processes	68	32	0.68	.59,.77
Inclusion of outsiders on board, CM unit team	39	59	0.40	.30,.50
Training and workshops in CM	69	34	0.67	.58,.76
Crisis simulations	69	34	0.67	.27,.47
Diversification and portfolio strategies for CM	33	56	0.37	.27,.47
<b><i>Category B: Technical and structural activities</i></b>				
Creation of a CM unit or team	76	26	0.75	.66,.84
Creation of dedicated budget for CM	29	69	0.30	.21,.39
Continual development and changing of emergency policies and manuals	88	15	0.85	.78,.92
Computerised inventories of plant's employees, products and capabilities	67	32	0.68	.59,.77
Creation of a strategic emergency room or facilities	69	32	0.68	.59,.77
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	44	32	0.58	.47,.69
Improved overall design and safety of product and production	44	30	0.59	.48,.70
Technological redundancy (such as computer back-up)	93	6	0.94	.89,.99
Use of outside expert and services in CM	73	30	0.71	.62,.80
<b><i>Category C: Evaluation and Diagnostic Activities</i></b>				
Legal and financial audit of threats and liabilities	69	33	0.68	.59,.77
Modifications in insurance of coverage	74	20	0.79	.71,.87
Environmental-impact audits	52	42	0.55	.45,.65
Ranking of most critical activities necessary for daily operations	78	23	0.77	.69,.85
Early warning signal detection, scanning, issues management	66	30	0.69	.60,.78
Dedicated research on potential hidden dangers	38	57	0.40	.30,.50
Critical follow-up of past crises	65	33	0.66	.57,.75
Stringent maintenance and inspection schedule	70	26	0.73	.64,.82
<b><i>Category D: Communication Activities</i></b>				
Media training for CM	48	53	0.48	.38,.58
Major efforts in public relations	58	42	0.58	.48,.68
Increased information to local communities	54	42	0.56	.46,.66
Increased relationships with intervening stakeholder groups (e.g. police, media)	69	31	0.69	.60,.78
Increased collaboration or lobbying among stakeholders	30	56	0.35	.25,.45
Use of new communication technologies and channels	65	28	0.70	.61,.79
Dedicated phone numbers for recall and consumers	54	30	0.64	.54,.74
<b><i>Category E: Psychological and Cultural Activities</i></b>				
Strong top management commitment to CM	81	17	0.83	.75,.91
Increased relationships with activist group	12	70	0.15	.07,.23

Improved acceptance of whistleblowers	28	54	0.34	.24,.44
Increased knowledge of criminal behaviour	30	52	0.37	.27,.47
Increased visibility of the human and emotional impacts of crisis	53	36	0.60	.50,.70
Psychological support to employees	76	20	0.79	.71,.85
Stress management and management of anxiety	60	36	0.63	.53,.73
Symbolic recall and corporate memory of past crises	39	45	0.46	.35,.57
Monitoring of cultural perceptions across employee groups	33	55	0.38	.28,.48

**TABLE 7.3 –Large Organisation Responses to Preventive Management Action Questions 1999**

#### 7.4.1 Preventive Management Actions by Industry Groups for Large Organisations 1999

In addressing the preventive management actions undertaken by various sectors, the data has been presented as means. The key to the column headings in this table is Private Sector (PTE), Public Sector, which combines central and local government and the health sector (PUB), central government (CG), local government (LG) and the health sector (H). The results are shown below (Table 7.4)

	<b>SAMPLE MEAN</b>	<b>PTE</b>	<b>PUB</b>	<b>CG</b>	<b>LG</b>	<b>H</b>
<b><i>Category A: Strategic Activities</i></b>						
Corporate philosophy supports CM	0.84	0.81	0.87	0.9	0.76	0.95
Integration of CM in statements and notions of corporate excellence	0.39	0.33	0.42	0.48	0.32	0.47
Integration of CM in strategic planning processes	0.68	0.64	0.71	0.71	0.63	0.79
Inclusion of outsiders on board, CM unit team	0.4	0.41	0.39	0.29	0.42	0.47
Training and workshops in CM	0.67	0.51	0.77	0.86	0.6	0.85
Crisis simulations	0.67	0.49	0.78	0.71	0.68	0.95
Diversification and portfolio strategies for CM	0.37	0.39	0.36	0.37	0.37	0.33
<b><i>Category B: Technical and structural activities</i></b>						
Creation of a CM unit or team	0.75	0.67	0.79	0.9	0.67	0.81
Creation of dedicated budget for CM	0.3	0.2	0.35	0.25	0.36	0.43
Continual development and changing of emergency policies and manuals	0.85	0.72	0.93	0.9	0.92	0.95
Computerised inventories of plant's employees, products and capabilities	0.68	0.67	0.68	0.71	0.71	0.62
Creation of a strategic emergency room or facilities	0.68	0.43	0.82	0.67	0.96	0.83
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	0.58	0.72	0.45	0.47	0.15	0.74

Improved overall design and safety of product and production	0.59	0.77	0.48	0.4	0.27	0.78
Technological redundancy (such as computer back-up)	0.94	0.91	0.95	0.95	0.96	0.95
Use of outside expert and services in CM	0.71	0.59	0.77	0.76	0.79	0.76
<b>Category C: Evaluation and Diagnostic Activities</b>						
Legal and financial audit of threats and liabilities	0.68	0.64	0.69	0.62	0.75	0.71
Modifications in insurance of coverage	0.79	0.64	0.87	0.72	0.88	1
Environmental-impact audits	0.55	0.55	0.54	0.33	0.77	0.52
Ranking of most critical activities necessary for daily operations	0.77	0.75	0.79	0.9	0.65	0.81
Early warning signal detection, scanning, issues management	0.69	0.6	0.74	0.8	0.67	0.75
Dedicated research on potential hidden dangers	0.4	0.32	0.44	0.52	0.32	0.48
Critical follow-up of past crises	0.66	0.54	0.73	0.7	0.65	0.85
Stringent maintenance and inspection schedule	0.73	0.68	0.76	0.68	0.73	0.86
<b>Category D: Communication Activities</b>						
Media training for CM	0.48	0.39	0.52	0.6	0.54	0.43
Major efforts in public relations	0.58	0.41	0.67	0.7	0.6	0.71
Increased information to local communities	0.56	0.42	0.61	0.35	0.72	0.76
Increased relationships with intervening stakeholder groups (e.g. police, media)	0.69	0.49	0.79	0.63	0.88	0.86
Increased collaboration or lobbying among stakeholders	0.35	0.16	0.45	0.47	0.33	0.55
Use of new communication technologies and channels	0.7	0.55	0.79	0.81	0.83	0.71
Dedicated phone numbers for recall and consumers	0.64	0.55	0.7	0.69	0.71	0.7
<b>Category E: Psychological and Cultural Activities</b>						
Strong top management commitment to CM	0.83	0.7	0.89	0.86	0.91	0.9
Increased relationships with activist group	0.15	0.07	0.18	0.22	0.07	0.24
Improved acceptance of whistleblowers	0.34	0.19	0.39	0.6	0.13	0.43
Increased knowledge of criminal behaviour	0.37	0.35	0.36	0.38	0.2	0.5
Increased visibility of the human and emotional impacts of crisis	0.6	0.47	0.66	0.57	0.61	0.8
Psychological support to employees	0.79	0.73	0.83	0.81	0.67	1
Stress management and management of anxiety	0.63	0.63	0.63	0.65	0.61	0.62
Symbolic recall and corporate memory of past crises	0.46	0.36	0.51	0.58	0.38	0.57
Monitoring of cultural perceptions across employee groups	0.38	0.27	0.42	0.52	0.29	0.45

**TABLE 7.4 – Comparison of Large Organisation Responses by Industry Sector to Preventive Management Action Questions 1999**

#### 7.4.2 Preventive Management Actions by Staff Size

This view of the preventive management data compares the global mean with three categories of organisational staff size (Table 7.5).

	<b>SAMPLE MEAN</b>	<b>&lt;100 STAFF</b>	<b>100– 500 STAFF</b>	<b>&gt;500 STAFF</b>
<b><i>Category A: Strategic Activities</i></b>				
Corporate philosophy supports CM	0.84	0.73	0.9	0.87
Integration of CM in statements and notions of corporate excellence	0.39	0.42	0.35	0.4
Integration of CM in strategic planning processes	0.68	0.66	0.71	0.67
Inclusion of outsiders on board, CM unit team	0.4	0.28	0.49	0.4
Training and workshops in CM	0.67	0.45	0.78	0.74
Crisis simulations	0.67	0.58	0.71	0.71
Diversification and portfolio strategies for CM	0.37	0.19	0.44	0.45
<b><i>Category B: Technical and structural activities</i></b>				
Creation of a CM unit or team	0.75	0.66	0.71	0.87
Creation of dedicated budget for CM	0.3	0.31	0.26	0.3
Continual development and changing of emergency policies and manuals	0.85	0.77	0.88	0.9
Computerised inventories of plant's employees, products and capabilities	0.68	0.56	0.8	0.65
Creation of a strategic emergency room or facilities	0.68	0.68	0.64	0.77
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	0.58	0.5	0.62	0.59
Improved overall design and safety of product and production	0.59	0.32	0.63	0.74
Technological redundancy (such as computer back-up)	0.94	0.9	0.95	0.97
Use of outside expert and services in CM	0.71	0.7	0.71	0.71
<b><i>Category C: Evaluation and Diagnostic Activities</i></b>				
Legal and financial audit of threats and liabilities	0.68	0.45	0.78	0.77
Modifications in insurance of coverage	0.79	0.67	0.84	0.83
Environmental-impact audits	0.55	0.44	0.63	0.58
Ranking of most critical activities necessary for daily operations	0.77	0.62	0.8	0.87
Early warning signal detection, scanning, issues management	0.69	0.68	0.68	0.7
Dedicated research on potential hidden dangers	0.4	0.3	0.46	0.4
Critical follow-up of past crises	0.66	0.55	0.71	0.7
Stringent maintenance and inspection schedule	0.73	0.68	0.78	0.7

<b><i>Category D: Communication Activities</i></b>				
Media training for CM	0.48	0.33	0.51	0.58
Major efforts in public relations	0.58	0.33	0.68	0.68
Increased information to local communities	0.56	0.54	0.58	0.55
Increased relationships with intervening stakeholder groups (e.g. police, media)	0.69	0.62	0.72	0.71
Increased collaboration or lobbying among stakeholders	0.35	0.13	0.46	0.41
Use of new communication technologies and channels	0.7	0.63	0.81	0.61
Dedicated phone numbers for recall and consumers	0.64	0.61	0.68	0.62
<b><i>Category E: Psychological and Cultural Activities</i></b>				
Strong top management commitment to CM	0.83	0.79	0.9	0.77
Increased relationships with activist group	0.15	0.12	0.13	0.2
Improved acceptance of whistleblowers	0.34	0.3	0.29	0.41
Increased knowledge of criminal behaviour	0.37	0.25	0.4	0.41
Increased visibility of the human and emotional impacts of crisis	0.6	0.56	0.65	0.55
Psychological support to employees	0.79	0.62	0.85	0.87
Stress management and management of anxiety	0.63	0.48	0.79	0.53
Symbolic recall and corporate memory of past crises	0.46	0.39	0.55	0.41
Monitoring of cultural perceptions across employee groups	0.38	0.29	0.38	0.42

**TABLE 7.5 – Comparison of Large Organisation Responses by Staff Size to Preventive Management Action Questions 1999**

### **7.5 Crisis Planning Efforts by Phase in Large Organisations 1999**

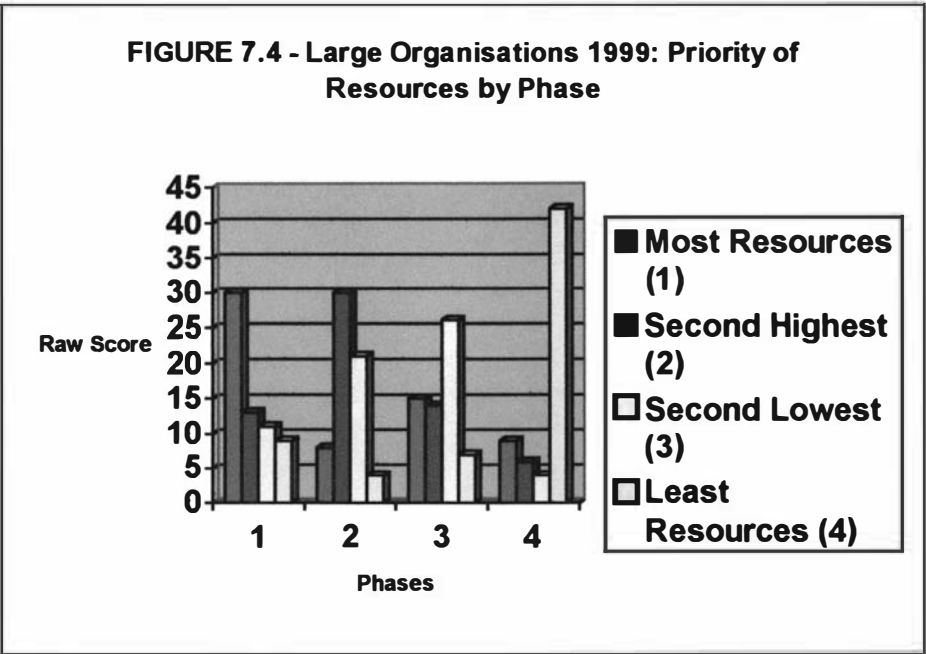
Questions 41-44 asked respondents whether their organisation's plans covered the four phases of crisis management. The results, which are interpreted in the same way as Table 7.3, are shown below (Table 7.6).

	YES	NO	% USE	CONF INT
<i>Do your organisation's general crisis plans cover:</i>				
The Hazard Identification and Risk Reduction Phase	92	8	0.92	.87,.97
The Planning and Readiness Phase	87	13	0.87	.81,.93
The Emergency Response Phase	91	9	0.91	.85,.97
The Recovery Phase	81	18	0.91	.83,.99

**TABLE 7.6 - Crisis Planning by Phase in Large Organisations 1999**

**7.6 Allocation of Resources by Phase in Large Organisations 1999**

Using the same four crisis management phases described in Table 7.6 above, the respondents were asked to indicate with a 1-4 ranking scale the extent to which their organisation allocated resources (Figure 7.4). A score of 1 indicated the most resources and 4 the least.



**7.7 Planning for Specific Crises in Large Organisations 1999**

The next major section of the questionnaire (questions 49 – 76) asked the respondent to indicate whether their organisation planned for a range of crisis contingencies shown below in Table 7.7. As described earlier, the number of responses is listed in the columns marked ‘YES’ and ‘NO’ and the ‘% USE’ column to the right is based on each ‘YES’ scoring 1 and each ‘NO’ scoring 0. Thus, a percentage score close to 1 indicates a high level of planning for that particular crisis event and, if to 0, indicates little planning for that event. The 95% confidence interval is shown in the right hand column.

	YES	NO	% USE	CONF INT
<b><i>Category A: External Economic Attacks</i></b>				
Extortion	14	82	0.15	.08,.22
Bribery	15	84	0.15	.08,.22
Boycotts	16	81	0.16	.09,.23
Hostile takeovers	14	79	0.15	.08,.22
<b><i>Category B: External Information Attacks</i></b>				
Copyright infringement	19	78	0.20	.12,.28
Loss of information	65	37	0.64	.55,.73
Counterfeiting	12	82	0.13	.06,.20
Damaging rumours	43	57	0.43	.33,.53
<b><i>Category C: Breaks</i></b>				
Recalls	19	57	0.25	.15,.35
Product defects	30	48	0.38	.27,.49
Plant defects	49	37	0.57	.46,.68
Computer breakdowns	92	10	0.90	.84,.96
Operator errors	63	32	0.66	.55,.76
Poor security	70	27	0.72	.63,.81
Loss of essential services (power, water etc)	95	8	0.92	.87,.97
<b><i>Category D: Megadamage</i></b>				
Environmental damage	62	38	0.62	.52,.72
Major accidents	76	26	0.75	.66,.84
<b><i>Category E: Psychopathology</i></b>				
Terrorism	24	76	0.24	.16,.32
Copycats	5	89	0.05	.00,.10
On-site sabotage/tampering	37	62	0.37	.27,.47
Off-site sabotage/tampering	21	75	0.22	.14,.30
Executive kidnapping	7	91	0.07	.02,.12
Sexual harassment	81	21	0.79	.71,.87
<b><i>Category F: Health Factors</i></b>				
Work-related health problems	88	14	0.86	.79,.93
<b><i>Category G: Perceptual Factors</i></b>				
Damage to reputation	57	43	0.57	.47,.67
<b><i>Category H: Human Resource Factors</i></b>				
Executive succession	50	49	0.51	.41,.61
Poor morale	61	41	0.60	.50,.70
Industrial disputes	68	32	0.68	.59,.77

**TABLE 7.7 –Extent of Large Organisation Planning for Specific Crises 1999**

### 7.7.1 Planning for Specific Crises by Industry Group for Large Organisations 1999

For the presentation of data (Table 7.8) reflecting planning by specific industry groups amongst large organisations, the same approach has been taken as for preventive management action described in paragraph 7.3.8. In summary, this shows comparisons of means only for private sector, public sector and the health, central and local government data sets, which comprise the public sector result.

	SAMPLE MEAN	PTE	PUB	CG	LG	H
<b><i>Category A: External Economic Attacks</i></b>						
Extortion	0.15	0.24	0.10	0.16	0.00	0.14
Bribery	0.15	0.29	0.08	0.15	0.04	0.05
Boycotts	0.16	0.23	0.13	0.06	0.04	0.29
Hostile take-overs	0.15	0.28	0.08	0.06	0.00	0.19
<b><i>Category B: External Information Attacks</i></b>						
Copyright infringement	0.20	0.40	0.08	0.06	0.09	0.10
Loss of information	0.64	0.69	0.61	0.67	0.54	0.62
Counterfeiting	0.13	0.19	0.10	0.11	0.04	0.14
Damaging rumours	0.43	0.46	0.42	0.40	0.29	0.57
<b><i>Category C: Breaks</i></b>						
Recalls	0.25	0.46	0.12	0.00	0.05	0.32
Product defects	0.38	0.59	0.26	0.17	0.10	0.53
Plant defects	0.57	0.64	0.48	0.15	0.50	0.80
Computer breakdowns	0.90	0.92	0.89	0.85	0.88	0.95
Operator errors	0.66	0.72	0.60	0.31	0.59	0.90
Poor security	0.72	0.69	0.75	0.79	0.59	0.86
Loss of essential services (power, water etc)	0.92	0.89	0.94	0.95	0.88	1.00
<b><i>Category D: Megadamage</i></b>						
Environmental damage	0.62	0.63	0.62	0.65	0.63	0.57
Major accidents	0.75	0.75	0.75	0.70	0.68	0.86
<b><i>Category E: Psychopathology</i></b>						
Terrorism	0.24	0.24	0.26	0.44	0.08	0.24
Copycats	0.05	0.12	0.02	0.00	0.00	0.05
On-site sabotage/tampering	0.37	0.43	0.35	0.44	0.13	0.48
Off-site sabotage/tampering	0.22	0.31	0.17	0.28	0.09	0.15
Executive kidnapping	0.07	0.14	0.04	0.06	0.00	0.05
Sexual harassment	0.79	0.69	0.85	0.81	0.83	0.90
<b><i>Category F: Health Factors</i></b>						
Work-related health problems	0.86	0.80	0.90	1.00	0.76	0.95



<b>Category G: Perceptual Factors</b>						
Damage to reputation	0.57	0.53	0.60	0.75	0.39	0.67
<b>Category H: Human Resource Factors</b>						
Executive succession	0.51	0.60	0.46	0.55	0.35	0.48
Poor morale	0.60	0.50	0.65	0.67	0.63	0.67
Industrial disputes	0.68	0.60	0.73	0.81	0.48	0.90

**TABLE 7.8 – Comparison of Responses by Large Organisation Industry Sector to Planning for Specific Crises 1999**

### 7.7.2 Planning for Specific Crises by Staff Size in Large Organisations 1999

The responses to questions shown below (Table 7.9) regarding organisational planning for specific crises are also presented as comparative means by staff size.

	<b>SAMPLE MEAN</b>	<b>&lt;100 STAFF</b>	<b>100-500 STAFF</b>	<b>&gt;500 STAFF</b>
<b>Category A: External Economic Attacks</b>				
Extortion	0.15	0.04	0.08	0.30
Bribery	0.15	0.03	0.11	0.30
Boycotts	0.16	0.10	0.08	0.30
Hostile take-overs	0.15	0.11	0.14	0.21
<b>Category B: External Information Attacks</b>				
Copyright infringement	0.20	0.20	0.19	0.21
Loss of information	0.64	0.61	0.68	0.63
Counterfeiting	0.13	0.11	0.08	0.21
Damaging rumours	0.43	0.39	0.42	0.47
<b>Category C: Breaks</b>				
Recalls	0.25	0.09	0.30	0.32
Product defects	0.38	0.21	0.46	0.44
Plant defects	0.57	0.48	0.58	0.62
Computer breakdowns	0.90	0.83	0.90	0.97
Operator errors	0.66	0.57	0.69	0.70
Poor security	0.72	0.66	0.78	0.70
Loss of essential services (power, water etc)	0.92	0.87	0.93	0.97
<b>Category D: Megadamage</b>				
Environmental damage	0.62	0.52	0.74	0.60
Major accidents	0.75	0.63	0.78	0.81
<b>Category E: Psychopathology</b>				
Terrorism	0.24	0.10	0.26	0.37
Copycats	0.05	0.00	0.11	0.04
On-site sabotage/tampering	0.37	0.19	0.45	0.45

Off-site sabotage/tampering	0.22	0.03	0.32	0.30
Executive kidnapping	0.07	0.07	0.05	0.10
Sexual harassment	0.79	0.71	0.83	0.83
<b>Category F: Health Factors</b>				
Work-related health problems	0.86	0.70	0.93	0.93
<b>Category G: Perceptual Factors</b>				
Damage to reputation	0.57	0.39	0.67	0.62
<b>Category H: Human Resource Factors</b>				
Executive succession	0.51	0.4	0.64	0.41
Poor morale	0.6	0.55	0.71	0.48
Industrial disputes	0.68	0.47	0.75	0.79

**TABLE 7.9 – Comparison of Responses by Large Organisation Staff Size to Planning for Specific Crises 1999**

## 7.8 Extent of Perceived and Actual Impact in Large Organisations 1999

Utilising the same crises listed in Table 7.9 above, the respondents were asked, in three separate questions, to list certain events in descending order of priority. These events, taken from the list offered in the questionnaire, indicated those that the respondent thought had the most serious potential consequences for the organisation, those for which the organisation was most prepared and those that the organisation had actually experienced. The results are shown below in Tables 7.10, 7.11 and 7.12 ranked from highest to lowest mean score (right hand column). Crises included in the questionnaire that received no responses are not listed. The mean score shows the average result for all three columns i.e. it reflects the instances of mention across all organisations without any priority. This is believed to be a simple but useful measure of the degree to which the respondent is consciously aware of the event.

	PRI. 1 SERIOUS	PRI. 2 SERIOUS	PRI.3 SERIOUS	MEAN
Environmental Damage	20	9	15	14.7
Loss of Essential Services	18	12	12	14
Computer Breakdowns	8	22	11	13.7
Major Accidents	7	13	7	9
Damage to Reputation	8	6	10	8
Loss of Information	8	6	3	5.7
Industrial Disputes	3	2	11	5.3
Work Related Health Problems	5	2	8	5
Plant Defects	3	6	6	5

Product Defects	8	3	1	4
Poor Morale	2	4	5	3.7
Poor Security	2	3	4	3
Executive Succession	1	0	4	1.7
Operator Errors	0	4	1	1.7
On Site Sabotage	0	2	2	1.3
Terrorism	2	1	0	1
Counterfeiting	0	1	2	1
Hostile Takeovers	2	0	0	0.7
Recalls	0	0	2	0.7
Copyright Infringement	0	2	0	0.7
Extortion	1	0	0	0.3
Boycotts	0	0	1	0.3

**TABLE 7.10 - Perceived Seriousness Of Certain Crisis Events By Large Organisations In 1999**

	PRI. 1 PREPARED	PRI. 2 PREPARED	PRI.3 PREPARED	MEAN
Loss of Essential Services	22	11	9	14
Computer Breakdowns	18	15	7	13.3
Environmental Damage	14	14	2	10
Major Accidents	8	10	9	9
Work Related Health Problems	3	8	9	7
Product Defects	8	4	2	4.7
Plant Defects	5	3	6	4.7
Damage to Reputation	3	2	8	4.3
Loss of Information	3	4	4	3.7
Industrial Disputes	0	5	6	3.7
Poor Morale	0	3	6	3
Poor Security	1	5	1	2.3
Sexual Harassment	1	2	2	1.7
Terrorism	2	0	2	1.3
Operator Errors	0	2	1	1
Counterfeiting	0	1	2	1
Recalls	1	0	1	0.7
Hostile Takeovers	1	0	1	0.7
Copyright Infringement	1	0	0	0.3
Damaging Rumours	1	0	0	0.3
Executive Kidnapping	0	0	1	0.3
On Site Sabotage	0	1	0	0.3

**TABLE 7.11 - Perceived Level of Preparation by Large Organisations for Certain Crisis Events 1999**

	PRI. 1 OCCURRED	PRI. 2 OCCURRED	PRI.3 OCCURRED	MEAN
Computer Breakdowns	12	10	6	9.3
Work Related Health Problems	11	4	6	7
Loss of Essential Services	12	4	3	6.3
Environmental Damage	11	4	4	6.3
Major Accidents	7	8	2	5.7
Damage to Reputation	3	6	5	4.3
Industrial Disputes	3	2	6	3.7
Poor Morale	1	4	4	3
Product Defects	4	4	0	2.7
Poor Security	4	3	1	2.7
Plant Defects	3	1	2	2
Recalls	3	2	0	1.7
Sexual Harassment	1	3	1	1.7
Operator Errors	1	0	2	1
Loss of Information	0	2	1	1
Copyright Infringement	2	0	0	0.7
Counterfeiting	2	0	0	0.7
Executive Succession	0	1	1	0.7
On Site Sabotage	0	2	0	0.7
Hostile Takeovers	1	0	0	0.3
Damaging Rumours	1	0	0	0.3
Executive Kidnapping	0	0	1	0.3
Terrorism	0	0	1	0.3
Boycotts	0	0	1	0.3

**TABLE 7.12 - Actual Occurrence of Crisis Events in Last 5 Years from 1999 for Large Organisations**

The relationship between respondent perceptions and actions is shown in scatterplot form (Figures 7.5 and 7.6) for mean scores above 1. Figure 7.5 shows the mean relationship between perception of seriousness of a disruptive event and the degree to which the respondents believe that their organisations are prepared for that event. Figure 7.6 shows the relationship between the organisation having experienced a particular disruptive event and the current level of preparation for it.

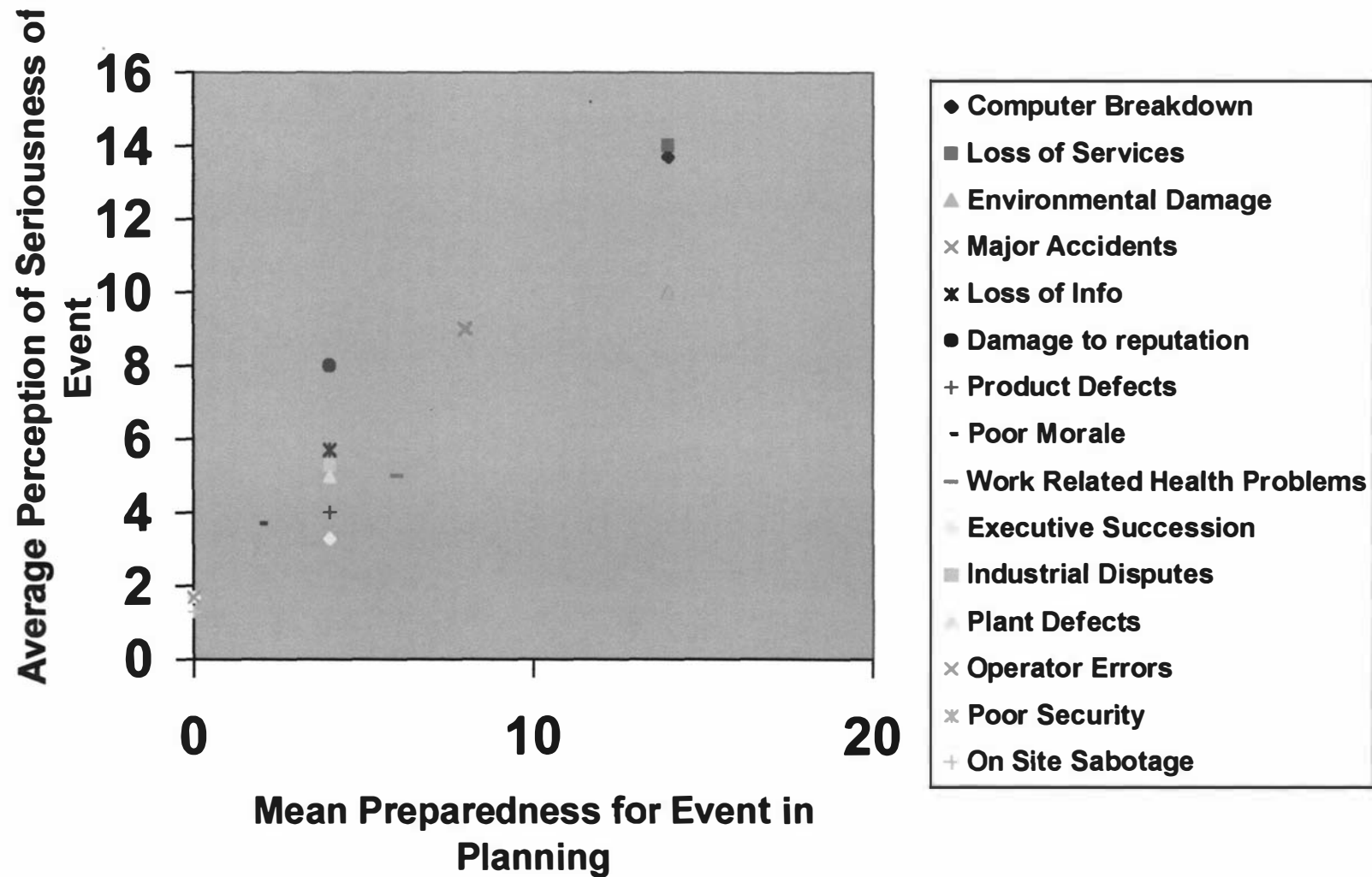


FIGURE 7.5 - Relationship between Perception of Seriousness of Particular Disruptive Events and Level of Preparedness in Large Organisations

1999

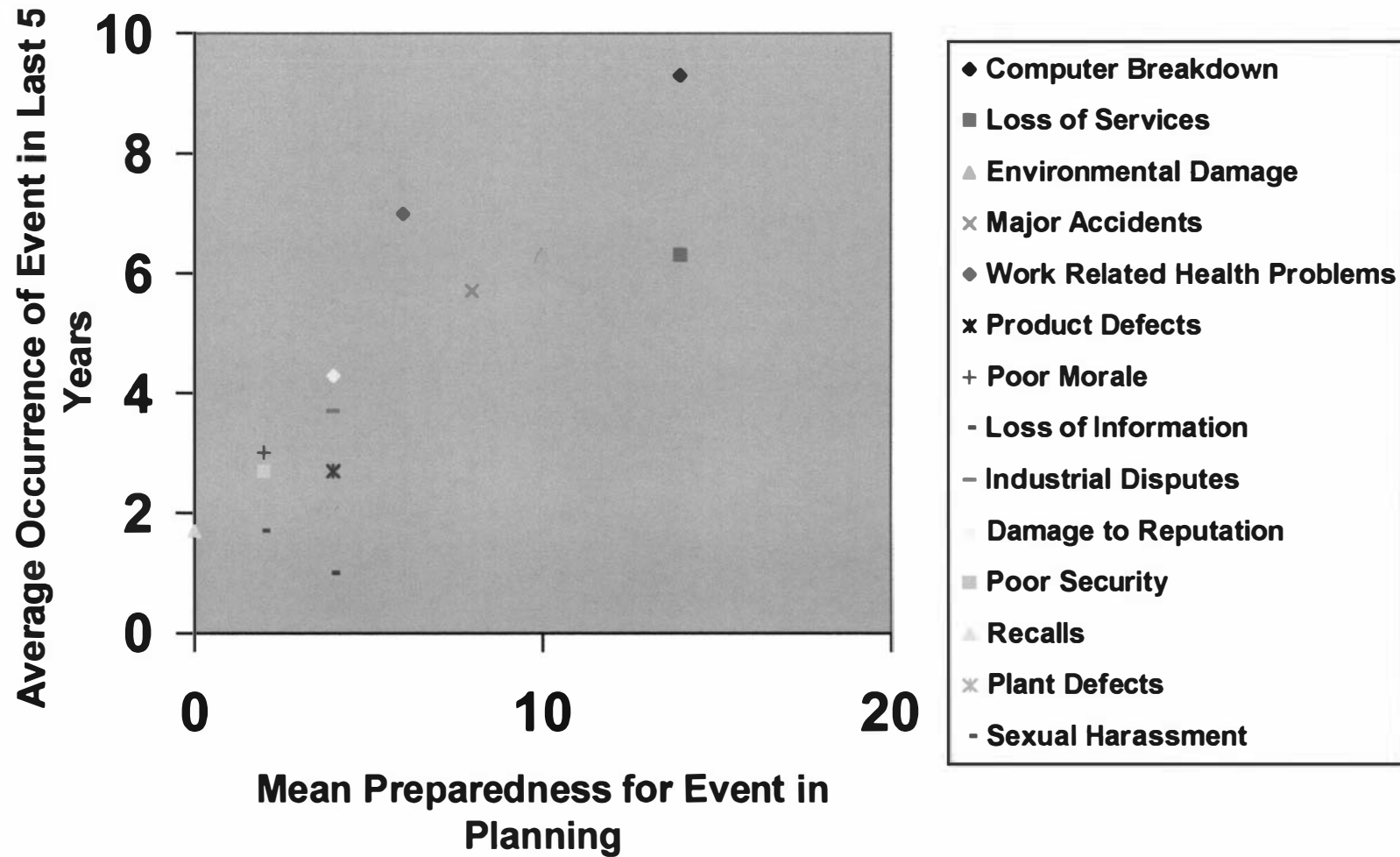


FIGURE 7.6 - Relationship between Recent Occurrence of Particular Disruptive Events and Level of Preparedness in Large Organisations 1999

**7.9 Preparedness for Last Event in Large Organisations 1999**

The final question asked the respondent to indicate how well their organisation had been prepared for the crises it had experienced recently. A seven point Likert scale with behavioural anchors ranging from 1 (totally unprepared) to 7 (totally prepared) was used to gather responses. The mean level of response was 5.04 and the standard deviation was 1.35. This is closest to the anchor on the scale entitled ‘Some areas prepared’ and the result will be considered further in Chapter 10. The comparison between this result and that for the subsets of industry group and staff size are shown below (Table 7.13):

DATA GROUP	MEAN LEVEL OF PERCEIVED PREPAREDNESS	STANDARD DEVIATION
Sample Result	5.04	1.350
Private Sector	4.81	1.355
Public Sector	5.17	1.340
Central Government	5.47	1.073
Local Government	5.06	1.474
Health Sector	5	1.449
Less than 100 Staff	4.74	1.678
100 – 500 Staff	5.37	1.087
More than 500 Staff	4.96	1.255

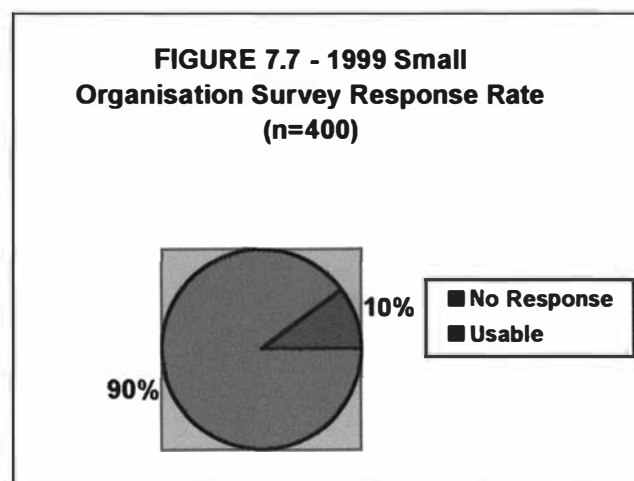
**TABLE 7.13 – Comparison of Sector Results for Perception of Preparation for Last Crisis in Large Organisations 1999.**

**Small Organisations in 1999**

**7.10 Analysis of the Small Organisation Survey Respondents**

**7.10.1 Response Rate**

The response rate to the 1999 survey for small organisations is depicted in Figure 7.7.



#### 7.10.2 Industries Represented

The data concerning demographics for this questionnaire was constructed on the same basis as that for large organisations. Industry group responses were received as shown below (Table 7.14):

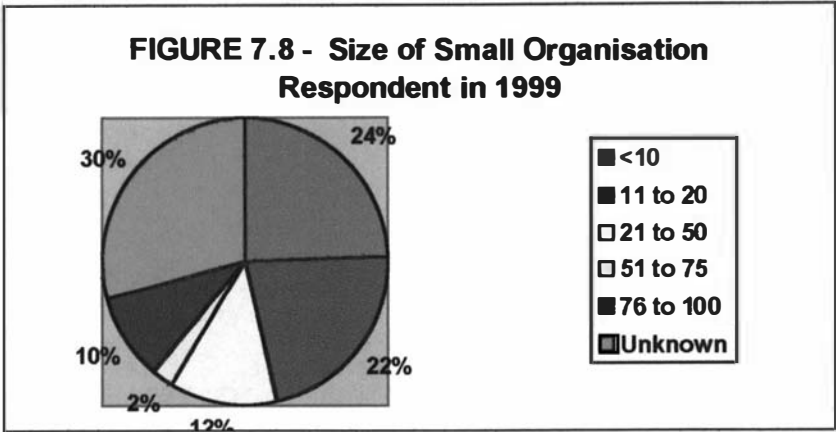
INDUSTRY	NUMBER (n=41)	PERCENTAGE
Automotive	1	2.44
Investment (Property)	0	0.00
Computers, Office Equipment	0	0.00
Industry & Community Service	0	0.00
Oil, Gas, Minerals, Electricity	0	0.00
Chemicals, Pharmaceuticals	2	4.88
Communications, Media	1	2.44
Diversified Corporate	0	0.00
Research	1	2.44
Transport, Ports, Tourism	6	14.63
Manufacturing	1	2.44
Retail, Wholesale, Distribution	6	14.63
Primary Production	1	2.44
Food (Processed), Beverages	0	0.00
Banking, Finance	1	2.44
Insurance, Superannuation	0	0.00
Health	4	9.76
Central Government	0	0.00
Local Government	0	0.00
Other / Not Stated	17	41.63

**TABLE 7.14 – Analysis of Small Organisation Respondents by Industry Group 1999**



7.10.3 Size of Respondent Organisation

Organisational size results of respondents were as follows (Figure 7.8):



7.10.4 Geographic Origin of Respondent Organisations

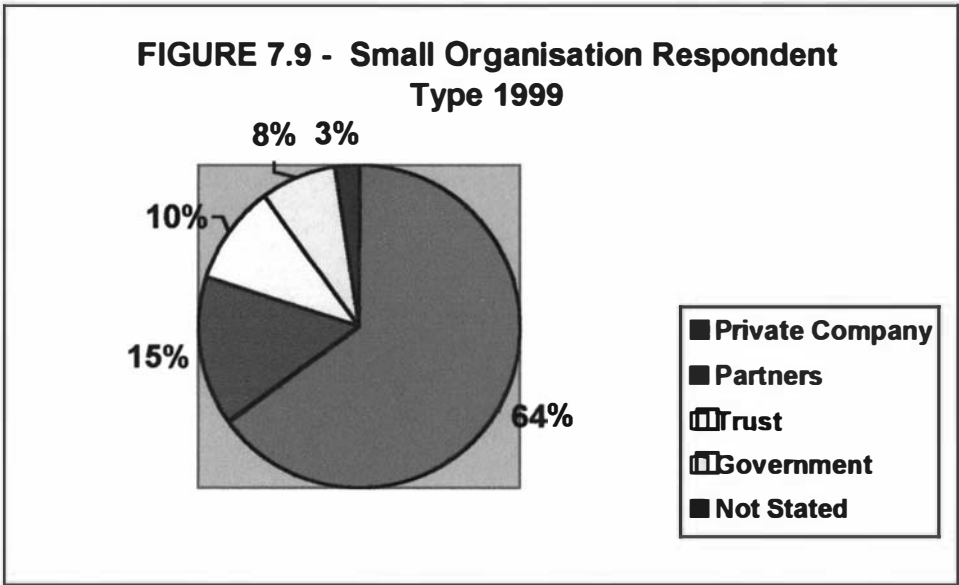
Respondents identified the geographic region that their primary and other facilities were located as shown in Table 7.15. The new category labelled ‘Nationwide’ was introduced in 1999 to allow respondents to indicate if they had branches in most areas of New Zealand. This was an optional response and primary or head office location was still provided in all cases.

REGION	MAIN AREA	SECONDARY AREA	OTHER AREA
Northland	3	0	0
Auckland	8	3	0
Bay of Plenty	2	4	0
Waikato	6	2	0
Taranaki	2	0	0
Gisborne	0	0	0
Hawke’s Bay	1	0	1
Manawatu	3	0	0
Wanganui	1	0	0
Wellington	0	1	4
Nelson	2	0	0
Marlborough	1	0	0
West Coast	0	0	0
Canterbury	6	1	1
Otago	4	0	0
Southland	1	0	1
Nationwide	0	7	0
Not Stated	0	0	0

TABLE 7.15 - Geographic Location of Small Respondent Organisations 1999

7.10.5 Respondent's Organisational Type

The organisational type of the respondent is shown below (Figure 7.9):



7.10.6 Respondent Financial Statistics

As in 1998, there was insufficient response to the question regarding financial turnover for this criterion to be applied.

7.11 Preventive Management Actions in Small Organisations

Although this section followed the same principle as the large organisation survey, the number of questions in this section was reduced from 40 to 7 in order to focus on only those items that interviews with executives of small organisations had shown were always relevant. Table 7.16 shows the responses to these questions. The '% USE' column, calculated by allocating a score of 1 to a 'YES' and a zero for a 'NO', shows the proportion of respondents applying the specific preventive action. Thus, a proportion close to 1 indicates a high level of application of the preventive action and, if close to 0 indicates little use of that preventive action. The 95% confidence interval relative to the percentage use score is shown in the right hand column.

	YES	NO	% USE	CONF INT
Written crisis management policy or pre-arranged outside advisory assistance	18	23	0.44	.348,.532
Regular staff training on most likely crises	19	22	0.46	.368,.552
Audits of hazards (beyond OSH requirement)	21	20	0.51	.418,.602
Employee programmes to assist in stressful times	11	30	0.27	.188,.352
Pre-positioned equipment and checklists for likely crises	18	23	0.44	.348,.532
Plan for resuming business if place of work was unavailable	14	27	0.34	.252,.428
Disaster insurance	30	11	0.73	.648,.812

**TABLE 7.16 – Small Organisation Responses to Preventive Management Action Questions 1999**

## **7.12 Extent of Perceived and Actual Impact in Small Organisations 1999**

The designated crisis list was removed from the small organisation questionnaire. However, respondents were still asked in three separate questions to list, in descending order of priority, those events that would be most serious for the organisation, those for which the organisation was most prepared and those that the organisation has actually experienced. The results are shown below in Tables 7.17 to 7.19.

	PRI. 1 SERIOUS	PRI. 2 SERIOUS	PRI.3 SERIOUS	MEAN
Major Accidents	17	13	5	11.7
Environmental Damage	8	7	7	7.3
Loss of Essential Services	4	8	4	5.3
Computer Breakdowns	3	3	5	3.7
Work Related Health Problems	3	5	2	3.3
Executive Succession	2	2	2	2

Damage to Reputation	1	1	2	1.3
Plant Defects	1	0	1	0.7
Product Defects	0	0	2	0.7
Loss of Information	1	1	1	0.3
Boycotts	1	0	0	0.3
Hostile Takeovers	0	1	0	0.3
Poor Morale	0	0	1	0.3
Operator Errors	0	0	1	0.3
On Site Sabotage	0	0	1	0.3

**TABLE 7.17 - Perceived Seriousness of Certain Crisis Events by Small Organisations 1999**

	PRI. 1 PREPARED	PRI. 2 PREPARED	PRI.3 PREPARED	MEAN
Major Accidents	14	7	3	8
Work Related Health Problems	6	2	0	4.3
Loss of Essential Services	5	5	3	4.3
Computer Breakdowns	4	5	2	3.7
Environmental Damage	2	3	3	2.7
Hostile Takeovers	1	1	0	0.7
On Site Sabotage	0	2	0	0.7
Industrial Disputes	0	1	1	0.7
Damage to Reputation	0	0	2	0.7
Plant Defects	1	0	0	0.3
Loss of Information	1	0	0	0.3
Poor Morale	0	1	0	0.3
Product Defects	0	0	1	0.3
Operator Errors	0	0	1	0.3

**TABLE 7.18 - Perceived Level of Preparation by Small Organisations for Certain Crisis Events 1999**

	PRI. 1 OCCURRED	PRI. 2 OCCURRED	PRI.3 OCCURRED	MEAN
Loss of Essential Services	6	2	1	9
Computer Breakdowns	4	1	1	2
Work Related Health Problems	3	3	0	2
Major Accidents	2	3	0	1.7
Environmental Damage	2	2	0	1.3
Executive Succession	2	1	1	1.3

Damage to Reputation	1	1	1	1
Plant Defects	2	0	0	0.7
Hostile Takeovers	1	1	0	0.7
Terrorism	1	0	1	0.7
Poor Security	1	0	0	0.3
Loss of Information	0	1	0	0.3
On Site Sabotage	0	1	0	0.3
Product Defects	0	0	1	0.3
Operator Errors	0	0	1	0.3
Poor Morale	0	0	1	0.3

**TABLE 7.19 - Actual Occurrence Of Crisis Events in Last 5 Years From 1999 for Small Organisations**

### **7.13 Preparedness for Last Event in Small Organisations 1999**

The final question asked for an indication of how well prepared the organisation had been for the crisis it had most recently experienced. A seven point Likert Scale with behavioural anchors showed the mean level of response to be 4.77 and the standard deviation to be 1.135 for small organisations in 1999.

## **Combined 1999 Data for Large and Small Organisations**

### **7.14 Method of Combining Data on Preventive Actions**

In constructing the questionnaire for use with small organisations, the production of an overall result for 1999 presented problems. However, it was considered useful to combine the results of the two questionnaires where this was possible, as this would also enable further comparison between 1998 and 1999 data. From the outset it was accepted that this would be limited to a few data points. The basis for constructing the preventive action questions for the small survey is outlined below. Respondents were asked to identify which preventive actions their organisation had adopted.

Question 1: Written crisis management policy or pre-arranged outside advisory assistance

This question equates to questions 1-4, 10 and 16 in the large organisation survey. These questions are:

- 1. Corporate philosophy supports crisis management (CM)*
- 2. Integration of CM in statements and notions of corporate excellence*
- 3. Integration of CM in strategic planning processes*
- 4. Inclusion of outsiders on board, CM unit team*
- 10. Continual development and changing of emergency policies and manuals*
- 16. Use of outside expert and services in CM*

Question 2: Regular staff training on most likely crises

This question equates to questions 5,6 and 25 in the large organisation survey. These questions are:

- 5. Training and workshops in CM*
- 6. Crisis simulations*
- 25. Media training for CM*

Question 3: Audits of hazards (beyond OSH requirements)

This question equates to questions 17, 19, 20-24 in the large organisation survey. These questions are:

- 17. Legal and financial audit of threats and liabilities*
- 19. Environmental impact audits*
- 20. Ranking of most critical activities necessary for daily operations*
- 21. Early warning signal detection, scanning, issues management*

*22. Dedicated research on potential hidden dangers*

*23. Critical follow-up of past crises*

*24. Stringent maintenance and inspection schedule*

Question 4: Employee programmes to assist in stressful times

This question equates to questions 34-40 in the large organisation survey. These questions are:

*34. Improved acceptance of whistleblowers*

*35. Increased knowledge of criminal behaviour*

*36. Increased visibility of the human and emotional impacts of crisis*

*37. Psychological support to employees*

*38. Stress management and management of anxiety*

*39. Symbolic recall and corporate memory of past crises*

*40. Monitoring of cultural perceptions across employee groups*

Question 5: Pre-positioned equipment and checklists for likely crises

This question equates to questions 9 and 12 in the large organisation survey. These questions are:

*9. Creation of dedicated budget for CM*

*12. Creation of a strategic emergency room or facilities*

Question 6: Plan for resuming business if place of work was unavailable

This question equates to questions 11 and 15 in the large organisation survey. These questions are:

*11. Computerised inventories of plant's employees, products and capabilities*

*15. Technological redundancy (such as computer back-up)*

Question 7: Disaster insurance

This question equates to question 18, which is:

*18. Modifications in insurance of coverage*

**7.15 Consolidated Preventive Management Action Results 1999**

The grouping of questions described above provided the basis for consolidated results. In Table 7.20, the scores in the column headed 'Small Organisations' contains the mean result from each question. In the next column, labelled 'Large Organisations', is the combined mean score for all the questions in the related grouping, as described in paragraph 7.14. The right hand column headed '1999 Result' is the consolidated mean of the small and large organisation scores. As in similar tables, a score close to 1 shows a high occurrence of the use of this preventive action and, if close to 0, shows a low incidence of its use.

Question	Small Organisations	Large Organisations	1999 Result
1	0.44	0.65	0.55
2	0.46	0.61	0.54
3	0.51	0.64	0.58
4	0.27	0.51	0.39
5	0.44	0.49	0.47
6	0.34	0.81	0.58
7	0.73	0.79	0.76

**TABLE 7.20 - Consolidated Preventive Actions by Large and Small Organisations in 1999**



## 7.16 Method for Combining Severity, Preparedness and Occurrence Rankings

In both the large and small organisation questionnaires, the respondents were asked to rank, in descending order, the three events that they considered to have the most serious consequences for their organisation, those for which they were most prepared and those they had actually experienced in the previous 5 years. Since the result was a table of ranked frequency data, the two sets could be added together by event and re-ranked to gain the overall result for 1999. This is shown in Tables 7.21 – 7.23.

	PRI. 1 SERIOUS	PRI. 2 SERIOUS	PRI.3 SERIOUS	MEAN
Environmental Damage	28	16	22	22.0
Major Accidents	24	26	12	20.7
Loss of Essential Services	22	20	16	19.3
Computer Breakdowns	11	25	16	17.3
Damage to Reputation	9	7	12	9.3
Work Related Health Problems	8	7	10	8.3
Loss of Information	9	7	4	6.7
Plant Defects	4	6	7	5.7
Industrial Disputes	3	2	11	5.3
Product Defects	8	3	3	4.7
Poor Morale	2	4	6	4.0
Executive Succession	3	2	6	3.7
Poor Security	2	3	4	3.0
Operator Errors	0	4	2	2.0
On Site Sabotage	0	2	3	1.7
Terrorism	2	1	0	1.0
Hostile Takeovers	2	1	0	1.0
Counterfeiting	0	1	2	1.0
Boycotts	1	0	1	0.7
Copyright Infringement	0	2	0	0.7
Recalls	0	0	2	0.7
Extortion	1	0	0	0.3

**TABLE 7.21 - Perceived Seriousness of Certain Crisis Events by All Organisations 1999**

	PRI. 1 PREPARED	PRI. 2 PREPARED	PRI.3 PREPARED	MEAN
Loss of Essential Services	27	16	12	18.3
Computer Breakdowns	22	20	9	17.0
Major Accidents	22	17	12	17.0
Environmental Damage	16	17	5	12.7
Work Related Health Problems	9	10	9	9.3
Product Defects	8	4	3	5.0
Plant Defects	6	3	6	5.0
Damage to Reputation	3	2	10	5.0
Industrial Disputes	0	6	7	4.3
Loss of Information	4	4	4	4.0
Poor Morale	0	4	6	3.3
Poor Security	1	5	1	2.3
Sexual Harassment	1	2	2	1.7
Hostile Takeovers	2	1	1	1.3
Terrorism	2	0	2	1.3
Operator Errors	0	2	2	1.3
On Site Sabotage	0	3	0	1.0
Counterfeiting	0	1	2	1.0
Recalls	1	0	1	0.7
Copyright Infringement	1	0	0	0.3
Damaging Rumours	1	0	0	0.3
Executive Kidnapping	0	0	1	0.3

**TABLE 7.22 - Perceived Level of Preparation by All Organisations for Certain Crisis Events 1999**

	PRI. 1 OCCURRED	PRI. 2 OCCURRED	PRI.3 OCCURRED	MEAN
Computer Breakdowns	16	11	7	11.3
Loss of Essential Services	18	6	4	9.3
Work Related Health Problems	14	7	6	9.0
Environmental Damage	13	6	4	7.7
Major Accidents	9	11	2	7.3
Damage to Reputation	4	7	6	5.7
Industrial Disputes	3	2	6	3.7
Poor Morale	1	4	5	3.3
Poor Security	5	3	1	3.0

Product Defects	4	4	1	3.0
Plant Defects	5	1	2	2.7
Recalls	3	2	0	1.7
Executive Succession	2	2	1	1.7
Sexual Harassment	1	3	1	1.7
Operator Errors	1	0	3	1.3
Loss of Information	0	3	1	1.3
Hostile Takeovers	2	1	0	1.0
Terrorism	1	0	2	1.0
On Site Sabotage	0	3	0	1.0
Copyright Infringement	2	0	0	0.7
Counterfeiting	2	0	0	0.7
Damaging Rumours	1	0	0	0.3
Executive Kidnapping	0	0	1	0.3
Boycotts	0	0	1	0.3

**TABLE 7.23 - Occurrence of Crisis Events in Last 5 Years from 1999 for All Organisations**

### **7.17 Consolidated Preparedness for Last Event 1999**

Applying the combined mean result from the final question of the two questionnaires provides a consolidated result from the seven point Likert scale reflecting how well the respondents felt they were prepared for the last crisis that they experienced. The large organisation result for this question in 1999 was 5.04 and the small organisation result was 4.77. This gives a consolidated result for 1999 of 4.91, which is closest to the reference point labelled 'Some Areas Prepared'.

### **7.18 Summary**

The 1999 survey of New Zealand organisations has assisted in answering the research questions in two ways. First, the division of the questionnaire into large and small organisational formats has had the effect of increasing the response rate to 15.6% overall. In particular, the large organisation response of 19.7% is almost double that of the previous year and highlights the effect of the small organisation responses on the overall result. The second main outcome of this survey is the greater understanding of issues affecting organisations relative to their size. The results show clear differences regarding large and

small organisations in both preventive actions and consideration of certain types of crises.

The construction of the small organisation questionnaire is based around clusters of key questions included in the larger questionnaire. This enabled a limited comparison of key concepts within the year and also between years. In the following chapter the 1998 and 1999 results are compared. This will assist in highlighting the strengths and weaknesses of BCP in New Zealand organisations and contribute toward answering the research question regarding the current state of BCP in New Zealand.

## **Comparison of 1998 and 1999 Survey Data**

### **8.1 Overview**

The merit of including this chapter is founded on the validity of the two data sets from 1998 and 1999. While reliability and validity data is discussed in Chapter 5, it should be noted that no evidence of a lack of validity was identified during collection or analysis, with the possible exception of the low response amongst small organisations in 1998. This was addressed as described earlier. The interviews conducted between the two postal surveys provided confirmation that all industry groups were represented and there was no undue bias toward only BCP-oriented organisations replying to the questionnaire. The low scores in many categories tend to support this claim. Although the introduction of a second questionnaire in 1999 solved the issue of respondent size, it must be acknowledged that it also introduced challenges in comparing the data. The solution described in Chapter 7 is one means of addressing this issue but caution should be exercised in the application and interpretation of the differences described in this chapter.

The division of the 1999 survey sample into large and small organisations and the attendant changes in the questionnaire made it necessary to compare the data in stages. First, the 1998 data will be compared with the 1999 responses received from large organisations. Second, the same comparisons will be made with the grouped questions in the 1998 responses (described in Chapter 7) and the 1999 small organisation responses. Consolidated comparisons are also made where possible. No detailed presentation of respondent demographic and other data is shown here.

### **8.2 Preventive Management Actions: Comparative Responses 1998/99**

The comparative responses for questions 1-40 between the large organisations for 1998 and 1999 are shown in Table 8.1.

	98	99	% Δ
<b><i>Category A: Strategic Activities</i></b>			
Corporate philosophy supports CM	0.76	0.84	10.50
Integration of CM in statements and notions of corporate excellence	0.40	0.39	-2.50
Integration of CM in strategic planning processes	0.62	0.68	9.70
Inclusion of outsiders on board, CM unit team	0.30	0.40	33.30
Training and workshops in CM	0.51	0.67	31.40
Crisis simulations	0.51	0.67	31.40
Diversification and portfolio strategies for CM	0.43	0.37	-14.00
<b><i>Category B: Technical and structural activities</i></b>			
Creation of a CM unit or team	0.54	0.75	38.90
Creation of dedicated budget for CM	0.28	0.30	7.10
Continual development and changing of emergency policies and manuals	0.76	0.85	11.80
Computerised inventories of plant's employees, products and capabilities	0.70	0.68	-2.90
Creation of a strategic emergency room or facilities	0.60	0.68	13.30
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	0.73	0.58	-20.50
Improved overall design and safety of product and production	0.61	0.59	-3.30
Technological redundancy (such as computer back-up)	0.92	0.94	2.20
Use of outside expert and services in CM	0.64	0.71	10.90
<b><i>Category C: Evaluation and Diagnostic Activities</i></b>			
Legal and financial audit of threats and liabilities	0.73	0.68	-6.80
Modifications in insurance of coverage	0.83	0.79	-4.80
Environmental-impact audits	0.48	0.55	14.60
Ranking of most critical activities necessary for daily operations	0.65	0.77	18.50
Early warning signal detection, scanning, issues management	0.52	0.69	32.70
Dedicated research on potential hidden dangers	0.28	0.40	42.90
Critical follow-up of past crises	0.67	0.66	-1.50
Stringent maintenance and inspection schedule	0.64	0.73	14.10
<b><i>Category D: Communication Activities</i></b>			
Media training for CM	0.40	0.48	20.00
Major efforts in public relations	0.56	0.58	3.60
Increased information to local communities	0.47	0.56	19.10
Increased relationships with intervening stakeholder groups (e.g. police, media)	0.61	0.69	13.10
Increased collaboration or lobbying among stakeholders	0.34	0.35	2.90
Use of new communication technologies and channels	0.68	0.70	3.60
Dedicated phone numbers for recall and consumers	0.56	0.64	14.30
<b><i>Category E: Psychological and Cultural Activities</i></b>			
Strong top management commitment to CM	0.71	0.83	16.90
Increased relationships with activist group	0.22	0.15	-31.80
Improved acceptance of whistleblowers	0.36	0.34	-5.60
Increased knowledge of criminal behaviour	0.40	0.37	-7.50
Increased visibility of the human and emotional impacts of crisis	0.57	0.60	5.30
Psychological support to employees	0.69	0.79	14.50
Stress management and management of anxiety	0.68	0.63	-7.40

Symbolic recall and corporate memory of past crises	0.37	0.46	24.30
Monitoring of cultural perceptions across employee groups	0.39	0.38	-2.60

**TABLE 8.1 - Comparative Responses to Preventive Management Action Questions: All 1998/1999 Large Organisations**

### 8.2.1 Preventive Management Action Comparative Responses Between Public and Private Sector Large Organisations

The comparison of preventive management actions by industry groups between the 1998 and 1999 questionnaire is presented in two parts, due to the volume of the data. Table 8.2 shows the inter year comparisons for the public (made up of central and local government and health) and private sector.

	PTE 98	PTE 99	% Δ	PUB 98	PUB 99	% Δ
<b><i>Category A: Strategic Activities</i></b>						
Corporate philosophy supports CM	0.72	0.81	12.50	0.81	0.87	7.40
Integration of CM in statements and notions of corporate excellence	0.42	0.33	-21.40	0.38	0.42	10.50
Integration of CM in strategic planning processes	0.57	0.64	12.30	0.68	0.71	4.40
Inclusion of outsiders on board, CM unit team	0.18	0.41	127.80	0.43	0.39	-9.30
Training and workshops in CM	0.49	0.51	4.10	0.53	0.77	45.30
Crisis simulations	0.43	0.49	14.00	0.59	0.78	32.20
Diversification and portfolio strategies for CM	0.40	0.39	-2.50	0.47	0.36	-23.40
<b><i>Category B: Technical and structural activities</i></b>						
Creation of a CM unit or team	0.44	0.67	52.30	0.64	0.79	23.40
Creation of dedicated budget for CM	0.17	0.20	17.60	0.39	0.35	-10.30
Continual development and changing of emergency policies and manuals	0.77	0.72	-6.50	0.75	0.93	2.40
Computerised inventories of plant's employees, products and capabilities	0.65	0.67	3.10	0.76	0.68	-10.50
Creation of a strategic emergency room or facilities	0.44	0.43	-2.30	0.77	0.82	6.50
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	0.66	0.72	9.10	0.79	0.45	-43.00
Improved overall design and safety of product and production	0.65	0.77	18.50	0.49	0.48	-2.00

Technological redundancy (such as computer back-up)	0.93	0.91	-2.20	0.91	0.95	4.40
Use of outside expert and services in CM	0.58	0.59	1.70	0.71	0.77	8.50
<b><i>Category C: Evaluation and Diagnostic Activities</i></b>						
Legal and financial audit of threats and liabilities	0.75	0.64	-14.70	0.72	0.69	-4.20
Modifications in insurance of coverage	0.83	0.64	-22.90	0.84	0.87	3.60
Environmental-impact audits	0.53	0.55	3.80	0.42	0.54	28.60
Ranking of most critical activities necessary for daily operations	0.65	0.75	15.40	0.67	0.79	17.90
Early warning signal detection, scanning, issues management	0.55	0.60	9.10	0.48	0.74	54.20
Dedicated research on potential hidden dangers	0.27	0.32	18.50	0.29	0.44	51.70
Critical follow-up of past crises	0.56	0.54	-3.60	0.79	0.73	-7.60
Stringent maintenance and inspection schedule	0.69	0.68	-1.40	0.58	0.76	31.00
<b><i>Category D: Communication Activities</i></b>						
Media training for CM	0.31	0.39	25.80	0.50	0.52	4.00
Major efforts in public relations	0.44	0.41	-6.80	0.70	0.67	-4.30
Increased information to local communities	0.42	0.42	0.00	0.52	0.61	17.30
Increased relationships with intervening stakeholder groups (e.g. police, media)	0.55	0.49	-11.00	0.67	0.79	17.90
Increased collaboration or lobbying among stakeholders	0.28	0.16	-42.90	0.43	0.45	4.70
Use of new communication technologies and channels	0.69	0.55	-20.30	0.68	0.79	16.20
Dedicated phone numbers for recall and consumers	0.61	0.55	-9.80	0.49	0.70	42.90
<b><i>Category E: Psychological and Cultural Activities</i></b>						
Strong top management commitment to CM	0.72	0.70	-2.80	0.68	0.89	30.90
Increased relationships with activist group	0.13	0.07	-46.20	0.33	0.18	-45.50
Improved acceptance of whistleblowers	0.30	0.19	-36.70	0.44	0.39	-11.40
Increased knowledge of criminal behaviour	0.39	0.35	-10.30	0.40	0.36	-10.00
Increased visibility of the human and emotional impacts of crisis	0.48	0.47	-2.10	0.68	0.66	-2.90
Psychological support to employees	0.63	0.73	15.90	0.77	0.83	7.80
Stress management and management of anxiety	0.63	0.63	0.00	0.75	0.63	-16.00
Symbolic recall and corporate memory of past crises	0.31	0.36	16.10	0.45	0.51	13.30
Monitoring of cultural perceptions across employee groups	0.26	0.27	3.80	0.53	0.42	-20.80

**TABLE 8.2 – Comparative Responses for Public and Private Sector Preventive Management Actions: All 1998/1999 Large Organisations**



## 8.2.2 Preventive Management Action Comparative Responses Between Public Sector Components

In the comparison of inter year means for large organisations, the respondents that collectively comprise the public sector group can be analysed separately. This is depicted in Table 8.3.

	CG 98	CG 99	% Δ	LG 98	LG 99	% Δ	H 98	H 99	% Δ
<b><i>Category A: Strategic Activities</i></b>									
Corporate philosophy supports CM	0.75	0.90	20.00	0.83	0.76	-8.40	0.86	0.95	10.50
Integration of CM in statements and notions of corporate excellence	0.21	0.48	128.60	0.36	0.32	-11.10	0.57	0.47	-17.50
Integration of CM in strategic planning processes	0.53	0.71	34.00	0.65	0.63	-3.10	0.86	0.79	-8.10
Inclusion of outsiders on board, CM unit team	0.27	0.29	7.40	0.50	0.42	-16.00	0.53	0.47	-11.30
Training and workshops in CM	0.53	0.86	62.30	0.65	0.60	-7.70	0.40	0.85	112.50
Crisis simulations	0.50	0.71	42.00	0.83	0.68	-18.10	0.43	0.95	120.90
Diversification and portfolio strategies for CM	0.38	0.37	-2.60	0.50	0.37	-26.00	0.54	0.33	-38.90
<b><i>Category B: Technical and structural activities</i></b>									
Creation of a CM unit or team	0.69	0.90	30.40	0.76	0.67	-11.80	0.47	0.81	72.30
Creation of dedicated budget for CM	0.19	0.25	31.60	0.65	0.36	-44.60	0.33	0.43	30.30
Continual development and changing of emergency policies and manuals	0.56	0.90	60.70	0.89	0.92	3.40	0.80	0.95	18.80
Computerised inventories of plant's employees, products and capabilities	0.87	0.71	-18.40	0.69	0.71	2.90	0.73	0.62	-15.10
Creation of a strategic emergency room or facilities	0.69	0.67	-2.90	0.94	0.96	2.10	0.67	0.83	23.90
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	0.64	0.47	-26.60	0.73	0.15	-79.50	1.00	0.74	-26.00
Improved overall design and safety of product and production	0.50	0.40	-20.00	0.14	0.27	92.90	0.83	0.78	-6.00
Technological redundancy (such as computer back-up)	0.88	0.95	8.00	0.93	0.96	3.20	0.93	0.95	2.20
Use of outside expert and services in CM	0.75	0.76	1.30	0.67	0.79	17.90	0.71	0.76	7.00

<b><i>Category C: Evaluation and Diagnostic Activities</i></b>									
Legal and financial audit of threats and liabilities	0.81	0.62	-23.50	0.60	0.75	25.00	0.73	0.71	-2.70
Modifications in insurance of coverage	0.80	0.72	-10.00	0.80	0.88	10.00	0.92	1.00	8.70
Environmental-impact audits	0.33	0.33	0.00	0.57	0.77	35.10	0.36	0.52	44.40
Ranking of most critical activities necessary for daily operations	0.53	0.90	69.80	0.93	0.65	-30.10	0.53	0.81	52.80
Early warning signal detection, scanning, issues management	0.36	0.80	122.20	0.50	0.67	34.00	0.57	0.75	31.60
Dedicated research on potential hidden dangers	0.21	0.52	147.60	0.33	0.32	-3.00	0.33	0.48	45.50
Critical follow-up of past crises	0.60	0.70	16.70	0.93	0.65	-30.10	0.85	0.85	0.00
Stringent maintenance and inspection schedule	0.40	0.68	70.00	0.58	0.73	25.90	0.77	0.86	11.70
<b><i>Category D: Communication Activities</i></b>									
Media training for CM	0.53	0.60	13.20	0.56	0.54	-3.60	0.42	0.43	2.40
Major efforts in public relations	0.57	0.70	22.80	0.80	0.60	-25.00	0.71	0.71	0.00
Increased information to local communities	0.14	0.35	150.00	0.88	0.72	18.20	0.54	0.76	40.70
Increased relationships with intervening stakeholder groups (e.g. police, media)	0.43	0.63	46.50	0.88	0.88	0.00	0.71	0.86	21.10
Increased collaboration or lobbying among stakeholders	0.21	0.47	123.80	0.50	0.33	-34.00	0.58	0.55	-5.20
Use of new communication technologies and channels	0.56	0.81	44.60	0.77	0.83	7.80	0.71	0.71	0.00
Dedicated phone numbers for recall and consumers	0.25	0.69	176.00	0.67	0.71	6.00	0.54	0.70	29.60
<b><i>Category E: Psychological and Cultural Activities</i></b>									
Strong top management commitment to CM	0.63	0.86	36.50	0.88	0.91	3.40	0.54	0.90	66.70
Increased relationships with activist group	0.17	0.22	29.40	0.50	0.07	-86.00	0.33	0.24	27.30
Improved acceptance of whistleblowers	0.33	0.60	81.80	0.50	0.13	-74.00	0.50	0.43	-14.00
Increased knowledge of criminal behaviour	0.30	0.38	26.70	0.27	0.20	25.90	0.62	0.50	19.40
Increased visibility of the human and emotional impacts of crisis	0.53	0.57	7.50	0.73	0.61	16.40	0.79	0.80	1.30
Psychological support to employees	0.71	0.81	14.1	0.75	0.67	10.70	0.86	1.00	16.30
Stress management and management of anxiety	0.64	0.65	1.60	0.77	0.61	-20.80	0.85	0.62	-27.10
Symbolic recall and corporate memory of past crises	0.33	0.58	75.80	0.55	0.38	-30.90	0.46	0.57	23.90

Monitoring of cultural perceptions across employee groups	0.64	0.52	-18.80	0.33	0.29	-12.10	0.62	0.45	-27.40
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**TABLE 8.3 – Comparative Responses between Central Government, Local Government and Health Sector for Preventive Management Actions: All 1998/1999 Large Organisations**

### 8.2.3 Preventive Management Action Comparative Responses by Staff Size

This view of the preventive management data compares the 1998 and 1999 with two categories of organisational staff size (100-500 and greater than 500). Large organisations that identified their staff size to be under 100 are not shown due to the difficulty of analysis with small organisation responses. The table is shown below (Table 8.4):

	<b>100– 500 STAFF 98</b>	<b>100– 500 STAFF 99</b>	<b>% Δ</b>	<b>&gt;500 STAFF 98</b>	<b>&gt;500 STAFF 99</b>	<b>% Δ</b>
<b>Category A: Strategic Activities</b>						
Corporate philosophy supports CM	0.75	0.90	20.00	0.84	0.87	3.60
Integration of CM in statements and notions of corporate excellence	0.32	0.35	9.40	0.52	0.40	-23.10
Integration of CM in strategic planning processes	0.63	0.71	12.70	0.67	0.67	0.00
Inclusion of outsiders on board, CM unit team	0.26	0.49	88.50	0.38	0.40	5.30
Training and workshops in CM	0.56	0.78	39.30	0.52	0.74	42.30
Crisis simulations	0.59	0.71	20.30	0.61	0.71	16.40
Diversification and portfolio strategies for CM	0.42	0.44	4.80	0.50	0.45	-10.00
<b>Category B: Technical and structural activities</b>						
Creation of a CM unit or team	0.63	0.71	12.70	0.71	0.87	22.50
Creation of dedicated budget for CM	0.31	0.26	-16.10	0.30	0.30	0.00
Continual development and changing of emergency policies and manuals	0.81	0.88	8.60	0.81	0.90	11.10
Computerised inventories of plant's employees, products and capabilities	0.84	0.80	-4.80	0.61	0.65	6.60
Creation of a strategic emergency room or facilities	0.76	0.64	-15.80	0.65	0.77	18.50

Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)	0.67	0.62	-7.50	0.81	0.59	-27.20
Improved overall design and safety of product and production	0.48	0.63	31.30	0.78	0.74	-5.10
Technological redundancy (such as computer back-up)	0.94	0.95	1.10	0.90	0.97	7.80
Use of outside expert and services in CM	0.63	0.71	12.70	0.73	0.71	-2.70
Category C: Evaluation and Diagnostic Activities						
Legal and financial audit of threats and liabilities	0.72	0.78	8.30	0.73	0.77	5.50
Modifications in insurance of coverage	0.84	0.84	0.00	0.79	0.83	5.10
Environmental-impact audits	0.52	0.63	21.20	0.63	0.58	-7.90
Ranking of most critical activities necessary for daily operations	0.72	0.80	11.10	0.62	0.87	40.30
Early warning signal detection, scanning, issues management	0.56	0.68	21.40	0.50	0.70	40.00
Dedicated research on potential hidden dangers	0.36	0.46	27.80	0.21	0.40	90.50
Critical follow-up of past crises	0.67	0.71	6.00	0.70	0.70	0.00
Stringent maintenance and inspection schedule	0.73	0.78	6.80	0.71	0.70	-1.40
Category D: Communication Activities						
Media training for CM	0.41	0.51	24.40	0.55	0.58	5.50
Major efforts in public relations	0.53	0.68	28.30	0.64	0.68	6.30
Increased information to local communities	0.46	0.58	26.10	0.52	0.55	5.80
Increased relationships with intervening stakeholder groups (e.g. police, media)	0.64	0.72	12.50	0.70	0.71	1.40
Increased collaboration or lobbying among stakeholders	0.20	0.46	130.00	0.56	0.41	-26.80
Use of new communication technologies and channels	0.63	0.81	28.60	0.75	0.61	-18.70
Dedicated phone numbers for recall and consumers	0.64	0.68	6.30	0.54	0.62	14.80
Category E: Psychological and Cultural Activities						
Strong top management commitment to CM	0.77	0.90	16.90	0.67	0.77	14.90
Increased relationships with activist group	0.16	0.13	-18.80	0.36	0.20	-44.40
Improved acceptance of whistleblowers	0.31	0.29	-6.50	0.55	0.41	-25.50
Increased knowledge of criminal behaviour	0.26	0.40	53.80	0.46	0.41	-10.90
Increased visibility of the human and emotional impacts of crisis	0.48	0.65	35.40	0.58	0.55	-5.20
Psychological support to employees	0.72	0.85	18.10	0.72	0.87	20.80
Stress management and management of anxiety	0.70	0.79	12.90	0.66	0.53	-19.70
Symbolic recall and corporate	0.41	0.55	34.10	0.32	0.41	28.10

memory of past crises						
Monitoring of cultural perceptions across employee groups	0.36	0.38	5.60	0.43	0.42	-2.30

**TABLE 8.4 – Comparative Responses by Staff Size for Preventive Management Actions:**  
All 1998/1999 Large Organisations

### 8.3 Crisis Planning Efforts by Phase – All 1998/1999 Large Organisation Comparisons

Table 8.5 shows the comparative responses of all respondents in 1998 and large organisations in 1999. The scores, on a scale from 0 to 1 show the percentage of respondents that do include each phase in their crisis plans. The right hand column indicates the percentage change between the two years.

	98	99	% Δ
<b><i>Do your organisation's general crisis plans cover:</i></b>			
The Hazard Identification and Risk Reduction Phase	0.85	0.92	8.83
The Planning and Readiness Phase	0.73	0.87	18.42
The Emergency Response Phase	0.84	0.91	8.54
The Recovery Phase	0.66	0.82	24.68

**TABLE 8.5 - Crisis Planning by Phase: All 1998/1999 Large Organisations**

### 8.4 Comparative Allocation of Resources by Phase

Considered against the same four crisis management phases described in Table 8.5, the ranked (1-4) allocation of organisational resources by phase for 1998 and 1999 (large organisations only) is shown in Table 8.6.

	1998 Rank	1999 Rank
Hazard Identification and Risk Reduction Phase	1	1
Planning and readiness Phase	2	2
Emergency Response Phase	3	3
Recovery Phase	4	4

**TABLE 8.6 – Comparison of Ranked Prioritisation of Organisational Resources: All 1998/1999 Large Organisations**

### 8.5 Planning for Specific Crises – Comparison Responses

Table 8.7 shows the comparative responses of all respondents in 1998 and large organisations in 1999 concerning planning for specific types of crisis event.

The scores, on a scale from 0 to 1 show the percentage of respondents that do include each specific type of crisis in their business continuity plans. The right hand column indicates the percentage change between the two years.

	98	99	%Δ
<b><i>Category A: External Economic Attacks</i></b>			
Extortion	0.09	0.15	53.94
Bribery	0.12	0.15	30.85
Boycotts	0.11	0.16	56.70
Hostile takeovers	0.12	0.15	24.54
<b><i>Category B: External Information Attacks</i></b>			
Copyright infringement	0.35	0.20	-43.69
Loss of information	0.74	0.64	-13.58
Counterfeiting	0.19	0.13	-33.17
Damaging rumours	0.47	0.43	-8.39
<b><i>Category C: Breaks</i></b>			
Recalls	0.37	0.25	-33.00
Product defects	0.51	0.38	-25.16
Plant defects	0.55	0.57	2.84
Computer breakdowns	0.97	0.90	-6.96
Operator errors	0.69	0.66	-3.74
Poor security	0.76	0.72	-5.15
Loss of essential services (power, water etc)	0.85	0.92	7.98
<b><i>Category D: Megadamage</i></b>			
Environmental damage	0.71	0.62	-12.25
Major accidents	0.74	0.75	0.81
<b><i>Category E: Psychopathology</i></b>			
Terrorism	0.28	0.24	-14.56
Copycats	0.20	0.05	-73.40
On-site sabotage/tampering	0.48	0.37	-22.70
Off-site sabotage/tampering	0.28	0.22	-22.13
Executive kidnapping	0.11	0.07	-36.43
Sexual harassment	0.76	0.79	4.49
<b><i>Category F: Health Factors</i></b>			
Work-related health problems	0.85	0.86	1.50
<b><i>Category G: Perceptual Factors</i></b>			
Damage to reputation	0.60	0.57	-4.32
<b><i>Category H: Human Resource Factors</i></b>			
Executive succession	0.61	0.51	-16.71
Poor morale	0.59	0.60	2.21
Industrial disputes	0.62	0.68	10.04

**TABLE 8.7 – Comparative Responses for Extent of Organisational Planning for Specific Crises: All 1998/1999 Large Organisations**

### 8.5.1 Planning for Specific Crises – Comparative Responses between Public and Private Sector Organisations

The comparison of the extent of planning for specific crises between all public and private sector organisations in 1998 and the same grouping of large organisations in 1999 is shown in Table 8.8.

	PTE 98	PTE 99	%Δ	PUB 98	PUB 99	%Δ
<b><i>Category A: External Economic Attacks</i></b>						
Extortion	0.16	0.24	50.00	0.02	0.10	400.00
Bribery	0.20	0.29	45.00	0.02	0.08	300.00
Boycotts	0.14	0.23	64.30	0.07	0.13	85.70
Hostile take-overs	0.19	0.28	47.40	0.05	0.08	60.00
<b><i>Category B: External Information Attacks</i></b>						
Copyright infringement	0.46	0.40	-13.00	0.23	0.08	-65.20
Loss of information	0.74	0.69	-6.80	0.75	0.61	-18.70
Counterfeiting	0.33	0.19	-42.40	0.02	0.10	400.00
Damaging rumours	0.50	0.46	-8.00	0.44	0.42	-4.50
<b><i>Category C: Breaks</i></b>						
Recalls	0.54	0.46	-14.80	0.15	0.12	-20.00
Product defects	0.67	0.59	-11.90	0.26	0.26	0.00
Plant defects	0.59	0.64	8.50	0.51	0.48	-5.90
Computer breakdowns	0.96	0.92	-4.20	0.98	0.89	-9.20
Operator errors	0.71	0.72	1.40	0.66	0.60	-9.10
Poor security	0.73	0.69	-5.50	0.79	0.75	-5.10
Loss of essential services (power, water etc)	0.82	0.89	8.50	0.88	0.94	6.80
<b><i>Category D: Megadamage</i></b>						
Environmental damage	0.71	0.63	-11.30	0.68	0.62	-8.80
Major accidents	0.75	0.75	0.00	0.72	0.75	4.20
<b><i>Category E: Psychopathology</i></b>						
Terrorism	0.23	0.24	4.30	0.35	0.26	-25.70
Copycats	0.30	0.12	-6.00	0.08	0.02	-75.00
On-site sabotage/tampering	0.52	0.43	-17.30	0.46	0.35	-23.90
Off-site sabotage/tampering	0.34	0.31	-8.80	0.22	0.17	-22.70
Executive kidnapping	0.17	0.14	-17.60	0.05	0.04	-20.00
Sexual harassment	0.74	0.69	-6.80	0.78	0.85	9.00
<b><i>Category F: Health Factors</i></b>						
Work-related health problems	0.89	0.80	-10.10	0.80	0.90	12.50
<b><i>Category G: Perceptual Factors</i></b>						
Damage to reputation	0.65	0.53	-18.50	0.54	0.60	11.10
<b><i>Category H: Human Resource Factors</i></b>						
Executive succession	0.81	0.60	-25.90	0.40	0.46	15.00
Poor morale	0.67	0.50	-25.40	0.49	0.65	32.70

Industrial disputes	0.70	0.60	-14.30	0.53	0.73	37.70
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**TABLE 8.8 – Comparative Responses between Public and Private Sector Organisations  
for Planning for Specific Crises: All 1998/1999 Large Organisations**

## 8.5.2 Planning for Specific Crises Comparative Responses between Public Sector Components

In the comparison of inter-year means from 1998 with those of large organisations in 1999, the respondents that collectively comprise the public sector group can be analysed separately. This is depicted in table 8.9 below

	CG 98	CG 99	%Δ	LG 98	LG 99	%Δ	H 98	H 99	%Δ
<b>Category A: External Economic Attacks</b>									
Extortion	0.06	0.16	166.70	0.00	0.00	0.00	0.00	0.14	-
Bribery	0.06	0.15	150.00	0.00	0.04	-	0.00	0.05	-
Boycotts	0.00	0.06	-	0.06	0.04	-33.30	0.15	0.29	93.30
Hostile take-overs	0.00	0.06	-	0.00	0.00	0.00	0.15	0.19	26.70
<b>Category B: External Information Attacks</b>									
Copyright infringement	0.20	0.06	-70.00	0.07	0.09	28.60	0.42	0.10	-76.20
Loss of information	0.75	0.67	-10.70	0.56	0.54	-3.60	0.93	0.62	-33.30
Counterfeiting	0.07	0.11	57.10	0.00	0.04	-	0.00	0.14	-
Damaging rumours	0.27	0.40	48.10	0.31	0.29	6.50	0.73	0.57	-21.90
<b>Category C: Breaks</b>									
Recalls	0.00	0.00	0.00	0.08	0.05	-37.50	0.38	0.32	-15.80
Product defects	0.00	0.17	-	0.27	0.10	-63.00	0.50	0.53	6.00
Plant defects	0.20	0.15	-25.00	0.50	0.50	0.00	0.82	0.80	-2.40
Computer breakdowns	1.00	0.85	-15.00	0.94	0.88	-6.40	1.00	0.95	-5.00
Operator errors	0.62	0.31	-50.00	0.53	0.59	11.30	0.85	0.90	5.90
Poor security	0.58	0.79	36.20	0.88	0.59	-33.00	0.92	0.86	-6.50
Loss of essential services (power, water etc)	0.71	0.95	33.80	1.00	0.88	-12.00	0.93	1.00	7.50
<b>Category D: Megadamage</b>									
Environmental damage	0.46	0.65	41.30	0.94	0.63	-33.00	0.64	0.57	-10.90
Major accidents	0.50	0.70	40.00	0.87	0.68	-21.80	0.80	0.86	7.50
<b>Category E: Psychopathology</b>									
Terrorism	0.42	0.44	4.80	0.13	0.08	-38.50	0.50	0.24	-52.00
Copycats	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.05	-80.00
On-site sabotage/tampering	0.38	0.44	15.80	0.29	0.13	-55.20	0.69	0.48	-30.40
Off-site sabotage/tampering	0.17	0.28	64.70	0.18	0.09	-50.00	0.31	0.15	-51.60
Executive kidnapping	0.08	0.06	-25.00	0.00	0.00	0.00	0.07	0.05	-28.60
Sexual harassment	0.60	0.81	35.00	0.75	0.83	10.70	1.00	0.90	-10.00



<b>Category F: Health Factors</b>									
Work-related health problems	0.67	1.00	49.30	0.81	0.76	-6.20	0.93	0.95	2.20
<b>Category G: Perceptual Factors</b>									
Damage to reputation	0.53	0.75	41.50	0.31	0.39	25.80	0.79	0.67	-15.20
<b>Category H: Human Resource Factors</b>									
Executive succession	0.67	0.55	-18.00	0.19	0.35	84.20	0.33	0.48	45.50
Poor morale	0.50	0.67	34.00	0.31	0.63	103.20	0.67	0.67	0.00
Industrial disputes	0.36	0.81	125.00	0.43	0.48	11.60	0.80	0.90	12.50

**TABLE 8.9 – Comparative Responses between Central Government, Local Government and Health Sector for Planning for Specific Crises: All 1998/1999 Large Organisations**

### 8.5.3 Planning for Specific Crises Comparative Responses by Staff Size

This view of the data (Table 8.10) on planning for specific crises compares 1998 and 1999 (large organisations only) across two categories of organisational staff size (100-500 and greater than 500).

	<b>100-500 STAFF 98</b>	<b>100-500 STAFF 99</b>	<b>%Δ</b>	<b>&gt;500 STAFF 98</b>	<b>&gt;500 STAFF 99</b>	<b>%Δ</b>
<b>Category A: External Economic Attacks</b>						
Extortion	0.06	0.08	33.30	0.18	0.30	66.70
Bribery	0.06	0.11	83.30	0.21	0.30	42.90
Boycotts	0.03	0.08	166.70	0.21	0.30	42.90
Hostile take-overs	0.03	0.14	366.70	0.23	0.21	-9.70
<b>Category B: External Information Attacks</b>						
Copyright infringement	0.39	0.19	-51.30	0.32	0.21	-34.40
Loss of information	0.67	0.68	1.50	0.77	0.63	-18.20
Counterfeiting	0.27	0.08	-70.40	0.11	0.21	90.90
Damaging rumours	0.47	0.42	10.60	0.37	0.47	27.00
<b>Category C: Breaks</b>						
Recalls	0.39	0.30	-23.10	0.56	0.32	-42.90
Product defects	0.45	0.46	2.20	0.65	0.44	-32.30
Plant defects	0.43	0.58	34.90	0.79	0.62	-21.50
Computer breakdowns	0.94	0.90	-4.30	1.00	0.97	-3.00
Operator errors	0.62	0.69	11.30	0.69	0.70	1.40
Poor security	0.83	0.78	-6.00	0.75	0.70	-6.70
Loss of essential services (power, water	0.90	0.93	3.30	0.90	0.97	7.80

etc)						
<b>Category D: Megadamage</b>						
Environmental damage	0.83	0.74	-10.80	0.71	0.60	-15.50
Major accidents	0.81	0.78	-3.70	0.77	0.81	5.20
<b>Category E: Psychopathology</b>						
Terrorism	0.21	0.26	23.80	0.55	0.37	-32.70
Copcats	0.18	0.11	-38.90	0.28	0.04	-85.70
On-site sabotage/tampering	0.38	0.45	18.40	0.59	0.45	-23.70
Off-site sabotage/tampering	0.21	0.32	52.40	0.38	0.30	-21.10
Executive kidnapping	0.10	0.05	-50.00	0.24	0.10	-58.30
Sexual harassment	0.79	0.83	5.10	0.90	0.83	-7.80
<b>Category F: Health Factors</b>						
Work-related health problems	0.84	0.93	10.70	0.83	0.93	12.00
<b>Category G: Perceptual Factors</b>						
Damage to reputation	0.55	0.67	21.80	0.50	0.62	24.00
<b>Category H: Human Resource Factors</b>						
Executive succession	0.56	0.64	14.30	0.72	0.41	-43.10
Poor morale	0.66	0.71	7.60	0.46	0.48	4.30
Industrial disputes	0.63	0.75	19.00	0.76	0.79	3.90

**TABLE 8.10 – Comparative Responses by Staff Size for Planning for Specific Crises: All 1998/1999 Large Organisations**

## 8.6 Comparative Responses to Preventive Management Actions Questions in Small Organisation Survey

The small organisation questionnaire contained 7 questions regarding preventive management actions that were a consolidation of a broader number of questions in the large questionnaire. The method of consolidation of these has been explained in Chapter 7. Table 8.11 shows the comparative responses of the 1998 and 1999 (Large Organisations) result with those of the small organisations.

	1999 Small Orgs	1999 Large Orgs	1998 All Orgs
Written crisis management policy or pre-arranged outside advisory assistance	0.44	0.65	0.58
Regular staff training on most likely crises	0.46	0.61	0.47
Audits of hazards (beyond OSH requirement)	0.51	0.64	0.57
Employee programmes to assist in	0.27	0.51	0.49

stressful times			
Pre-positioned equipment and checklists for likely crises	0.44	0.49	0.44
Plan for resuming business if place of work was unavailable	0.34	0.81	0.81
Disaster insurance	0.73	0.79	0.83

**TABLE 8.11 – Comparative Responses to Preventive Management Action Questions in Small Organisation Survey**

## 8.7 Perceived versus Actual Impact on the Organisation – 1998 / 1999 Comparison of All Organisations

Utilising the same crises listed in Table 8.10, the respondents were asked, in three separate questions, to list in descending order of priority, those events that would be the most serious for the organisation, those for which the organisation was most prepared and those that the organisation had actually experienced. The results are shown below in Tables 8.12 – 8.14 using mean responses (shown in earlier chapters) expressed as a percentage of total responses to enable comparison between different sample sizes. These tables are sorted in descending order against the ‘1999 All Organisations’ data since it is the most current and complete set. Crises listed in the questionnaire that received no mention in either year are not shown.

	98	99 Large Orgs	99 Small Orgs	99 All Orgs
Environmental Damage	10.6	14.1	17.8	15.2
Major Accidents	8.7	8.7	28.5	14.3
Loss of Essential Services	13.2	13.5	12.9	13.3
Computer Breakdowns	16.6	13.2	9	11.9
Damage to Reputation	5.8	7.7	3.2	6.4
Work Related Health Problems	4.8	4.8	8.0	5.7
Loss of Information	5.7	5.5	0.7	4.6
Plant Defects	1.9	4.8	1.7	3.9
Industrial Disputes	2.9	5.1	-	3.7
Product Defects	3.2	3.8	1.7	3.2
Poor Morale	3.2	3.6	0.7	2.8
Executive Succession	3.2	1.6	4.9	2.6
Poor Security	2.9	2.9	-	2.1

Operator Errors	1.3	1.7	0.7	1.4
On Site Sabotage	1.7	1.3	0.7	1.2
Counterfeiting	0.7	1.0	-	0.7
Terrorism	0.3	1.0	-	0.7
Hostile Takeovers	0.3	0.7	0.7	0.7
Recalls	1.7	0.7	-	0.5
Copyright Infringement	-	0.7	-	0.5
Boycotts	-	0.3	0.7	0.5
Extortion	-	0.3	-	0.2
Off Site Sabotage	0.7	-	-	-
Damaging Rumours	0.7	-	-	-
Executive Kidnapping	0.3	-	-	-
Sexual Harassment	0.3	-	-	-

**TABLE 8.12 - Comparison of Perceived Seriousness of Certain Crisis Events in All Organisations– 1998/1999**

	98	99 Large Orgs	99 Small Orgs	99 All Orgs
Loss of Essential Services	9.6	13.5	10.5	12.6
Computer Breakdowns	16.3	12.8	9.0	11.7
Major Accidents	8.0	8.7	19.5	11.7
Environmental Damage	8.9	9.6	6.6	8.8
Work Related Health Problems	7.7	6.7	10.5	6.4
Product Defects	3.2	4.5	0.7	3.4
Damage to Reputation	3.2	4.1	1.7	3.4
Plant Defects	2.6	4.5	0.7	3.4
Industrial Disputes	3.6	3.6	1.7	3.0
Loss of Information	3.8	3.6	0.7	2.8
Poor Morale	1.6	2.9	0.7	2.3
Poor Security	1.6	2.2	-	1.6
Sexual Harassment	1.0	1.6	-	1.2
Operator Errors	1.6	1.0	0.7	0.9
Terrorism	1.3	1.3	-	0.9
Hostile Takeovers	0.3	0.7	1.7	0.9
On Site Sabotage	1.0	0.3	1.7	0.7
Counterfeiting	0.7	1.0	-	0.7
Recalls	1.3	0.7	-	0.5
Damaging Rumours	0.7	0.3	-	0.2
Copyright Infringement	0.7	0.3	-	0.2
Executive Kidnapping	0.3	0.3	-	0.2
Executive Succession	2.9	-	-	-
Off Site Sabotage	0.7	-	-	-
Bribery	0.3	-	-	-
Copycats	0.3	-	-	-

**TABLE 8.13 - Comparison of Perceived Preparedness for Certain Crisis Events in all Organisations– 1998/1999**

	98	99 Large Orgs	99 Small Orgs	99 All Orgs
Computer Breakdowns	8.9	8.9	4.9	7.8
Loss of Essential Services	8.4	6.1	2.2	6.4
Work Related Health Problems	4.8	6.7	4.9	6.2
Environmental Damage	5.1	6.1	3.2	5.3
Major Accidents	4.8	5.5	4.1	5.0
Damage to Reputation	2.2	4.1	2.4	3.9
Industrial Disputes	2.2	3.6	-	2.6
Poor Morale	2.6	2.9	1.7	2.3
Product Defects	3.2	2.6	1.7	2.1
Poor Security	2.2	2.6	0.7	2.1
Plant Defects	1.0	1.9	1.7	1.9
Recalls	1.6	1.6	-	1.2
Executive Succession	0.7	0.7	3.2	1.2
Sexual Harassment	-	1.6	-	1.2
Operator Errors	2.6	1.0	1.7	0.9
Loss of Information	2.2	1.0	1.7	0.9
On Site Sabotage	1.0	0.7	1.7	0.7
Hostile Takeovers	0.7	0.3	1.7	0.7
Terrorism	0.3	0.3	1.7	0.7
Counterfeiting	0.7	0.7	-	0.5
Copyright Infringement	0.7	0.7	-	0.5
Damaging Rumours	1.3	0.3	-	0.2
Executive Kidnapping	0.3	0.3	-	0.2
Boycotts	-	0.3	-	0.2
Extortion	0.3	-	-	-
Copycats	0.3	-	-	-

**TABLE 8.14 - Comparison of Actual Occurrence of Crisis Events in Last 5 Years for All Organisations – 1998/1999**

## **8.8 Organisational Ability to Cope**

In each survey, the respondents were asked the extent to which they felt their organisation was prepared for the last crisis that they experienced. These results are shown in Table 8.15. As the 1999 consolidated result is an average of averages, no standard deviation has been calculated.

DATA GROUP	MEAN LEVEL OF PREPAREDNESS	STANDARD DEVIATION
1998 All Organisations	4.86	1.472
1999 Small Organisations	4.77	1.135
1999 Large Organisations	5.04	1.350
1999 All Organisations	4.91	-

**TABLE 8.15 – Comparative Responses to Preparedness for Last Crisis amongst all Organisations 1998/1999**

**8.9 Conclusions**

Although trends cannot be generated from two annual surveys, the comparison of 1998 and 1999 data has assisted in identifying the emergent themes of this research. First, it has shown that the data gathered is consistent between the two years.. While the caution stated in the introductory paragraphs regarding the application of this data must be restated, the results of the inter-year comparisons together with the interviews described in detail in Chapter 9, provide a substantial basis on which to address the questions that this research seeks to answer. In addition, future longitudinal studies can potentially extend from these comparisons.

## **Analysis of the Interviews**

### **9.1 Overview**

The analysis of the interviews was conducted through the use of transcribed audiotapes supported by limited written notes, in accordance with the techniques employed by Kuipers and Kassirer (1987). The detailed method has been described in Chapter 5.

The intent of this phase of the research was twofold. First, it sought to gain further understanding of the current state of preparedness of New Zealand organisations. Second, it sought information on the main reasons for this awareness or preparedness.

From the twenty one interviews conducted, three were unusable due to poor recording levels on the audiotape. There were eighteen usable transcripts and it seemed clear from the survey data that attitudes varied widely between large and small organisations. Consequently, the object models are presented in a manner that identifies large and small (<50 staff) organisations.

### **9.2 Transcript Reduction**

The transcripts went through three stages of reduction from anonymous full text through to factual comment only and finally single meaningful phrase per line. To enable subsequent secondary analysis, all transcripts are available from the researcher if required.

**9.3 Construction of the Object List**

The interviews were all read initially for semantics and the general themes were found to correspond to the stages of questioning in the structured interview script. For the purpose of further analysis the objects used were:

- a. Reaction to the survey
- b. Reason for answers in the survey
- c. Perceptions of business continuity planning
- d. Scenario response

These object headings remained flexible throughout the process, as their primary purpose was to enable the initial grouping of similar concepts and relations. The excerpts were then listed against these object headings in the style:

PHRASE[INTERVIEW NUMBER(Small or Large):LINE  
NUMBER]

E.G.

LEGAL REQUIREMENT[(12S:23,56) (14L:12,105) etc]

These line-by-line descriptions are shown in this section. They are then joined by relationships to form graphical models (paragraph 9.4), which are analysed and interpreted in paragraph 9.5.

**Object 1: Reactions to the Survey**

**FRUSTRATING [(1L:1,4,10,11)]**



**STRAIGHTFORWARD** [(2L:4) (18S: 9-10)]

**BROADENED AWARENESS** [(5L:16,388,390) (6L:6,10,394) (8L:2,27) (11S:26-27)]

**INTENSIVE** [(2L:20) (3L:42) (6L:6)]

**TOPICAL** [(2L:30,90)]

**COMPREHENSIVE** [(3L:4,73) (6L:5) (8L:19-20)]

**DIFFICULT / TRICKY** [(3L:27) (11S:5)]

**EASY** [(4S:5) (5L:4) (16L:5)]

**MANY PARTS NOT RELEVANT** [(9S:7) (11S:7) (18S:19)]

**PERCEPTIONS CHANGED BY SURVEY** [(3L:671-673) (4S:445-447) (5L:388) (8L:417) (9S:401) (12L:594-595) (14S:390-395) (18S:431, 435-438)]

**PERCEPTIONS CONFIRMED BY SURVEY** [(1L:594) (2L:587) (6L:530) (7L:462-467) (13L:562-566) (15L: 365) (17L: 557-559)]

### **Object 2: Reasons for Answers in the Survey**

**AWARENESS** [(1L:30) (3L:158) (4S:24-30) (6L:358-365) (7L:94-96) (8L:45-47) (10L:47) (11S:70) (14S:42-43) (15L:112-113)]

**ORGANISATIONAL CAPABILITY** [(1L:44,140,241) (4S:36-43) (9S:143) (13L:58-62) (17L:550)]

**ALREADY TESTED** [(1L:45,47,53) (10L: 214-217, 567-569) (13L:69-71)]

**SUFFICIENT RESOURCES** [(1L:61,99) (13L:497-505)]

**INSUFFICIENT RESOURCES** [(3L:180,204-205) (4S:128-130) (8L: 133-135) (10L: 94, 173) (11S: 199-201) (12L:166,170-172,180) (13L: 211-212) (15L: 96-99) (16L: 97-98)]

**CONDUCT PLANNING** [(1L:64,70,190,256) (2L:81) (3L:139) (4S:114-116) (5L:31,95) (10L:78) (15L:40-44)]

**RELIANCE ON I.T.** [(1L:72,73) (4S:47-50) (6L:53-55) (9S:59)]

**STAFF COMPETENCY** [(1L:79-81,95)]

**LACK OF STAFF COMPETENCY** [(18S: 130-131, 135-136)]

**REPUTATION [(1L:23,168-169) (2L:67) (9S:124-127) (15L:26)]**

**LACK OF INCIDENT FREQUENCY [(1L:191,221) (6L:81) (17L:63)]**

**NEGATIVE INTERNAL PERCEPTION OF BCP [(1L:249) (3L:161)]**

**POSITIVE INTERNAL PERCEPTION OF BCP [(1L:277) (14S:77)]**

**COMPLIANCE [(2L:53) (3L:118-119) (6L:35,101-106) (12L:50-51) (15L:23-25, 114-116) (16L:196-197) (17L:42-44, 48)]**

**RECENT EXPERIENCE OF CRISIS [(2L:76,102) (3L:134,144,213-215) (4S:84) (6L:86-93) (7L:63,73-74) (8L: 53-54,64-69,142-145) (9S:92-95) (10L:73-76) (11S:42-44, 88-89, 103, 262-264) (12L: 38-43) (13L:21-24, 97-98, 104, 107) (16L: 48, 66-68, 75) (17L: 77-78, 100, 104-105) (18S: 30-32)]**

**LEARNED FROM OTHERS' EXPERIENCE [(11S:217-219)]**

**Y2K [(2L:123) (5L:106) (6L:38) (10L:110) (17L:28)]**

**SHORT TERM FOCUS [(3L:182) (13L:223-225)]**

**COMPETITOR BEHAVIOUR [(4S:71-75) (8L:125-129) (9S:76-83) (18S:68-70)]**

**EXTERNALLY IMPOSED LIMIT ON BCP [(11S:75) (13L:271-277)]**

### **Object 3: Perceptions of Business Continuity Planning**

**FINANCIAL BOTTOMLINE [(1L:287,300-301) (5L:128,136) (8L:87-91) (9S:127) (10L:172) (11S:113) (12L:67) (13L: 123-124) (16L:97) (18S:99)]**

**I.T. MUST HAVE BCP [(1L:302,302) (3L:346) (16L:198)]**

**BCP PART OF NORMAL BUSINESS PRACTICE [(1L:310) (2L:139,168-169) (7L:8-13) (9S:166-170) (10L:116-118, 205-208) (12L:152-159, 199-202) (14S:82, 94-95) (15L:71-74)]**

**SIZE OF ORGANISATION WORKS AGAINST BCP [(1L:337-338) (3L:284-288) (4S:209) (9S:133) (11S:202) (14S: 203-204)]**

**STAFF RETICENCE TOWARD BCP [(1L:358) (4S:174) (17L:208-213) (18S:123-126)]**

**STAFF SUPPORTIVE OF BCP [(3L:271) (5L:120) (6L:197) (14S:77)]**

**STAFF PERCEIVE BCP PREP AS FUN [(1L:369)]**

**STAFF UNINTERESTED / UNAWARE OF BCP [(11S:182-187) (13L:196-200) (15L: 79-80) (16L:154-156, 166-169) (18S:119)]**

**CEO & SENIOR TEAM AS SUSTAINERS [(1L:375) (2L:165,211) (3L:328-333) (4S:198) (8S:113,119) (10L:160-161) (11S:155-157)]**

**MANAGEMENT NEUTRAL TO BCP [(12L:133, 150-151) (16L:57-58, 149) (17L:201-202)]**

**Y2K CHANGED VIEW OF BCP [(1L:378) (3L:691-694) (5L:106) (13L:199) (17L:231-234)]**

**EXISTING HR POLICY RE BCP [(1L:406-412) (2L:235-243) (5L:150) (7L:220-225) (8L:113,119) (10L:251, 259-261) (11S: 242-244) (12L:240-243) (13L:283-288, 300-303) (17L:252-257)]**

**NO EXISTING HR POLICY RE BCP [(3L:344-349) (4S:222) (6L:220) (9S:187) (14S:132) (15L:128-129) (16L:212) (18S:183)]**

**INSUFFICIENT TIME FOR BCP [(2L:184,192) (4S:167-168, 179)]**

**BUDGET PROCESS WORKS AGAINST BCP [(3L:296-298, 302-307)]**

**COMPLIANCE ISSUE [(4S:194) (13L:315)]**

**COMPREHENSIVE BCP IS TOO COMPLEX [(5L:69) (7L:116-118) (10L:99-100) (12L:81) (13L:169-171) (18S:95-96)]**

**FATALISTIC CULTURAL BARRIER TO BCP [(7L:129-130, 399)]**

**BCP IS VERY IMPORTANT [(8L:101,108,146) (10L:148-149, 195-196) (14S: 65-68) (16L:189-190)]**

**NO CLEAR UNDERSTANDING OF BCP [(6L:126-128, 146-149)]**

#### **Object 4: Scenario Responses**

**EXISTING TRAVEL POLICY [(1L:437-439) (13L:347-348)]**

**NO TRAVEL POLICY [(2L:290) (3L:401) (4S:232) (8L:215) (9S:274) (11S:302) (13L:353-360) (14S:319) (15L: 147-151) (18S: 202-203)]**

**ADHOC DELEGATIONS [(1L:452) (3L:412-425) (6L:267-269) (7L:272) (10L:296-300, 591-593) (12L:300, 310, 317) (14S: 199) (15L:142)]**

**STANDING DELEGATIONS [(2L:323) (4S:253-257) (5L:178) (8L:210) (9S:217-218,231) (11S:296-298, 315-318, 465-470) (13L: 368-370, 388-390) (14S:180) (16L: 213) (17L: 283, 295-297) (18S: 195-197)]**

**WITHIN NZ STANDING REINFORCEMENT PLAN [(2L:315-318) (5L:189-191) (9S:240,249-250) (11S:343-348) (12L:323) (13L:397) (14S:215-219) (15L:174-178, 183) (18S:220-221)]**

**WITHIN NZ NO STANDING REINFORCEMENT PLAN** [(1L:463,468) (3L:435) (4S:267) (6L:299) (7L:277-280,285) (8L:225,243) (10L:325) (12L:462-464) (16L:236-240, 246) (17L: 333-337)]

**OVERSEAS REINFORCEMENT PLAN** [(5L:197) (8L:249) (9S:259) (10L:318-320)]

**NEXT OF KIN (NOK) DETAILS HELD** [(1L:476) (2L:392) (3L:466-468) (4S:311) (5L: 219-221) (7L:311-313) (8L:260) (10L:373) (11S: 391-394) (12L:342) (13L:411-412) (15L: 205) (16L:276) (18S: 256-257)]

**HR STAFF CONTACT STAFF OR NOK** [(5L:205) (10L:355-356, 365-368) (12L:347-349)]

**BUSINESS UNIT STAFF CONTACT STAFF OR NOK** [(6L:305) (7L:319-322) (10L:404)]

**ADHOC CONTACT OF STAFF OR NOK** [(1L:486) (3L:471-472) (8L:253-255) (9S:271) (11S:378) (13L:420-422) (14S: 297, 301) (15L:199-200) (18S: 246, 250)]

**WORK REASSIGNMENT NOT PLANNED** [(1L:491,505) (2L:420) (3L:488-494) (6L:286-290, 330) (8:265-266) (12L:375-376) (14S: 242-245) (16L:281-285) (17L:391) (18S:266-274)]

**WORK REASSIGNMENT PLANNED** [(9S:281-286) (10L:286-289, 526-531) (11S:404)]

**FORMULA ASSISTANCE (EAP) TO STAFF & FAMILIES** [(2L:427-430,477) (3L:533-536,558-560,570) (6L:435, 439) (7L:348, 364-365) (10L:484) (17L:454)]

**ADHOC ASSISTANCE TO STAFF & FAMILIES** [(1L:510,527) (2L:454) (4S:369,375) (5L:312-315) (6L:476-477) (7L:335-343, 353) (8L:326-328,340) (9S:299, 303, 319, 327-328) (10L:452-453) (11S:409-411, 430-432) (12L:413-415) (13L:466-474, 479-481) (14S:282, 309) (15L:265-278, 291) (16L:380-384) (17L:520-527)]

**NO ASSISTANCE TO STAFF OR FAMILIES** [(4S:344) (5L:278) (16L:347-349) (18S:330, 335-336)]

**BELIEVE TO BE Y2K COMPLIANT** [(2L:537,547-554, 575) (11S:487) (16L:414-418)]

**BELIEVE TO BE Y2K READY** [(5L: 349-352, 366) (6L:453-456) (8L:356-357) (9S:362-364)]

**Y2K OUTCOME DEPENDENT ON EXTERNAL AGENCIES** [(3L:592-594, 630) (4S:409,423,431,435) (7L:400-401, 425, 433-434) (8L:403) (11S:492-494, 500) (17L:481-483)]

**NORMAL INDUCTION FOR GAP FILLING STAFF [(5L:233) (9S:293-295) (10L:441-444) (12L:389-392) (14S:253, 257-258) (15L:227-228) (16L:298, 302) (17L:403-405)]**

**REDUCED INDUCTION FOR GAP FILLING STAFF [(8L:287, 291-292) (10L:432-433)]**

**ON THE JOB TRAINING [(18S:285,292)]**

**STAFF DEDICATION OFFSETS NEED FOR BCP [(3L:664-666)]**

**INTERNAL UPSKILLING FOR SUCCESSION PLANNING AVAILABLE [(3L:513) (4S:325-329, 335) (7L:258-267) (13L:240-242, 377-381)]**

**NO TRAINING/ MENTORING FOR DEPUTIES [(5L:184) (6L:280) (10L:310-311) (12L:304-305)]**

**ONGOING STAFF BCP TRAINING [10L:672-679) (13L:172-174)]  
CAPABILITY ORIENTATION TO BCP [(18S:414, 422-426)]**

**PROTECTION FROM COMPETITORS [(1L:557,569-571,586) (13L:531-533) (15L:326-331)]**

**REVIEW LESSONS LEARNED [(2L:489-492) (10L:655) (12L: 575-577)]**

**STAFF CAN WORK AT HOME IF NECESSARY [(5L:289) (16L:355-358)]**

**EXISTING OSH POLICY FOR WORK AT HOME [(5L:296)]**

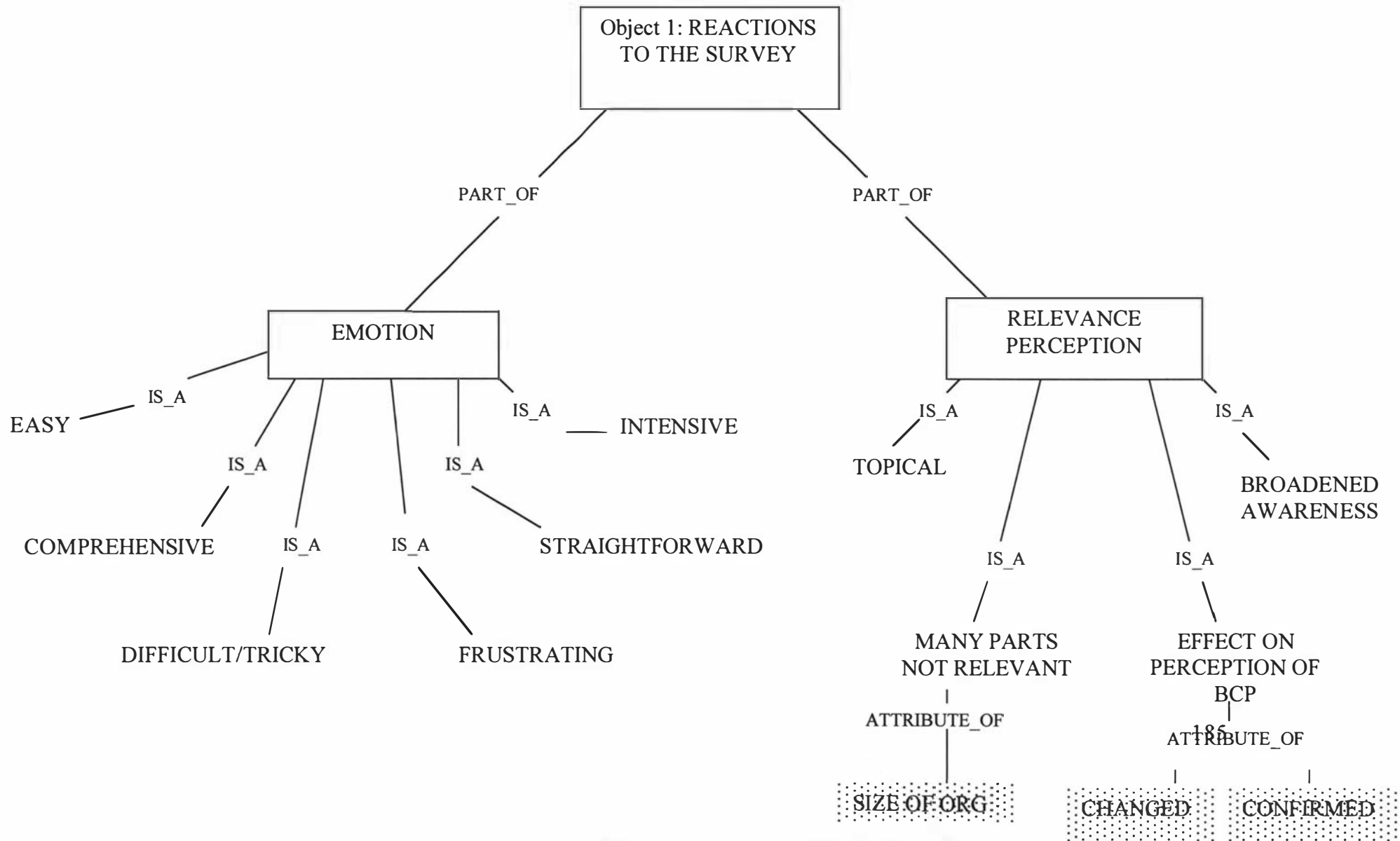
**STANDING SECURITY ARRANGEMENTS [(5L:301) (6L:414) (10L:501) (13L:172-174)]**

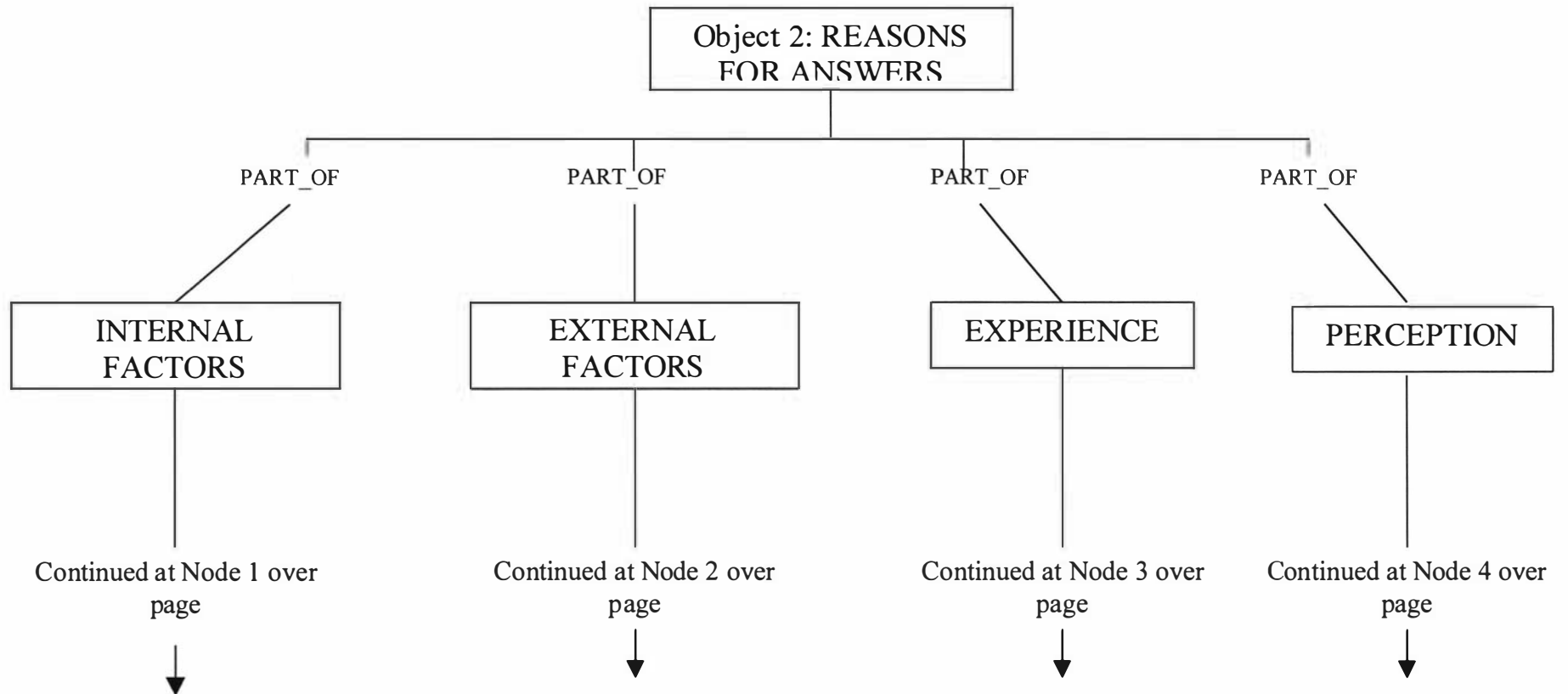
#### **9.4 Construction of the Domain Model**

Having been identified, the objects, concepts and the relationships were arranged into graphical models shown on the following pages. The approach to this process is to create tiers of concepts that are joined by relationships to the higher level. This means that a strand of the model should be read from bottom to top. Taking Object 1 as an example:

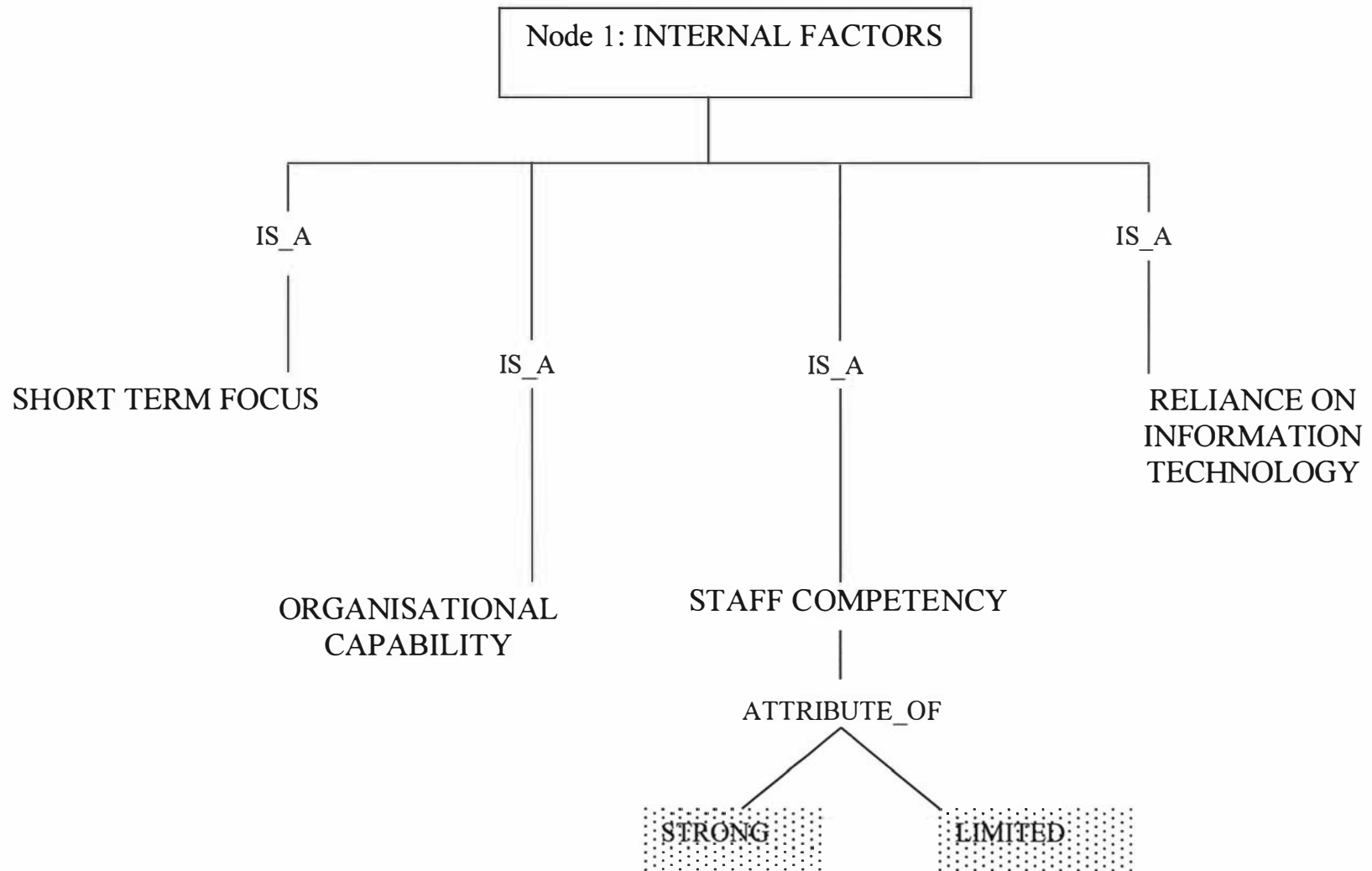
*EASY IS\_A EMOTION PART\_OF REACTIONS TO THE SURVEY*

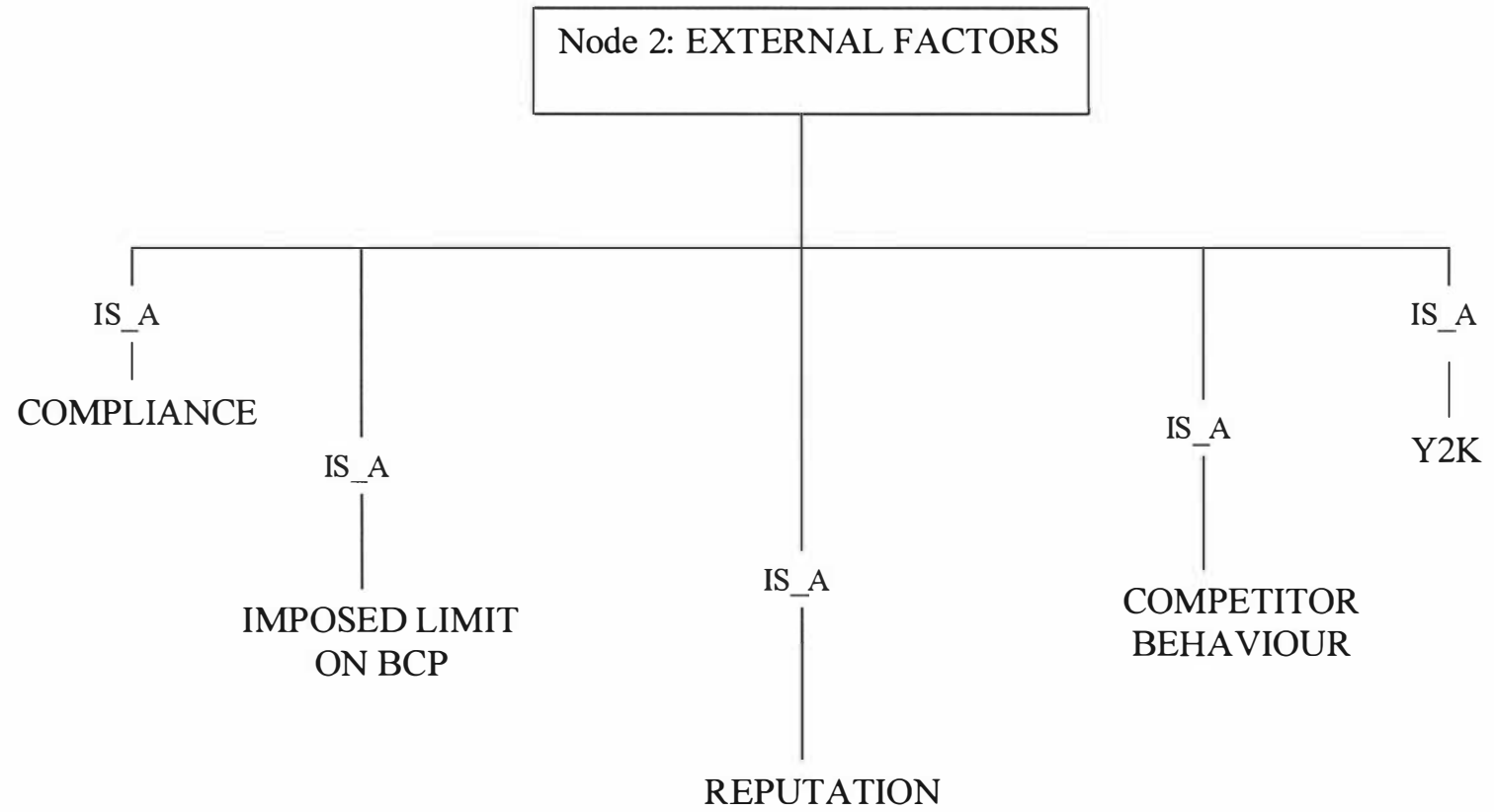
In this example the object “REACTIONS TO THE SURVEY” has two concepts contained within that are named “EASY” and “EMOTION”. The relationship between “EASY” and “EMOTION” is defined as “IS\_A” and the relationship between “EMOTION” and “REACTIONS TO THE SURVEY” is “PART\_OF”.

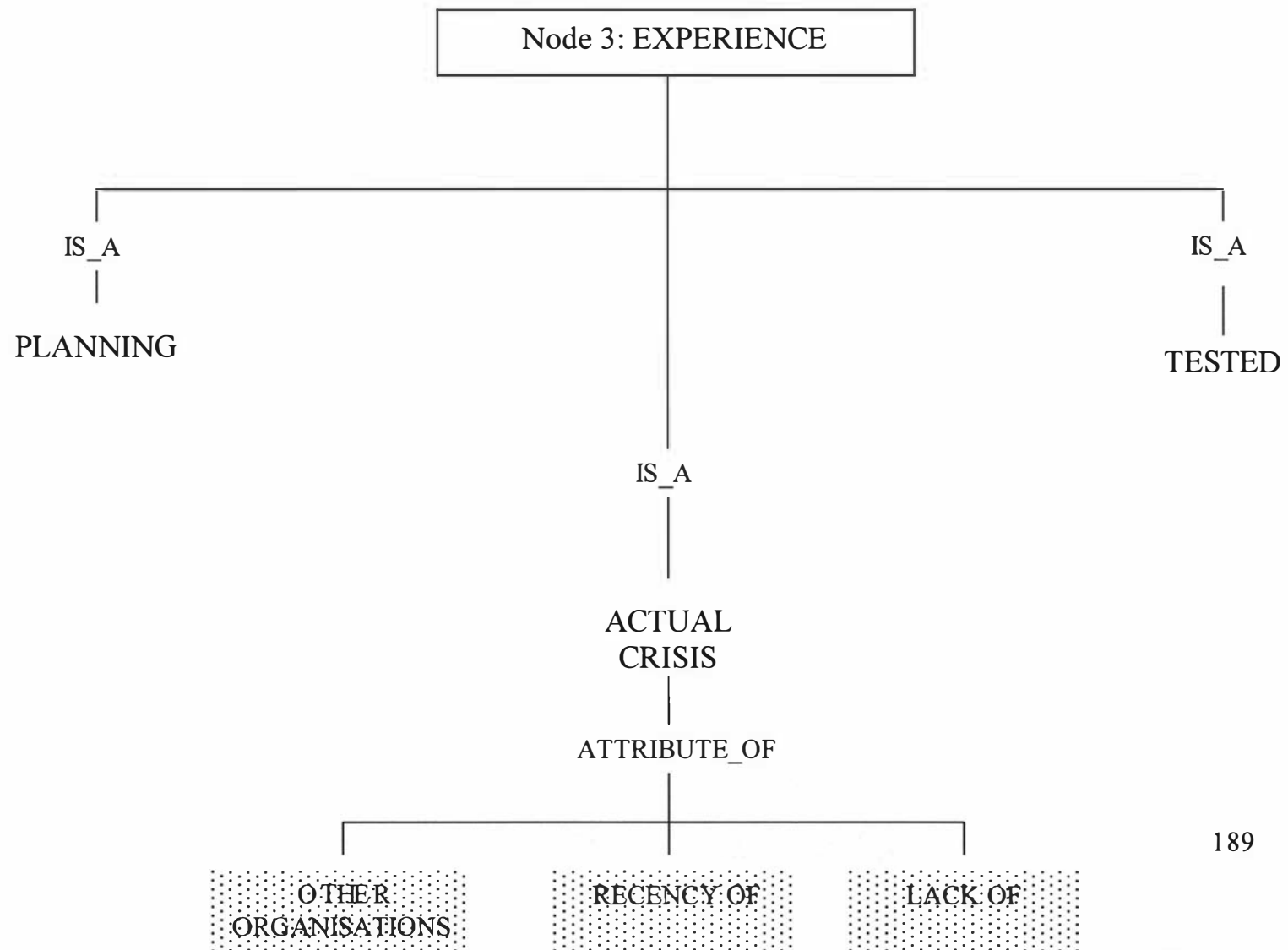


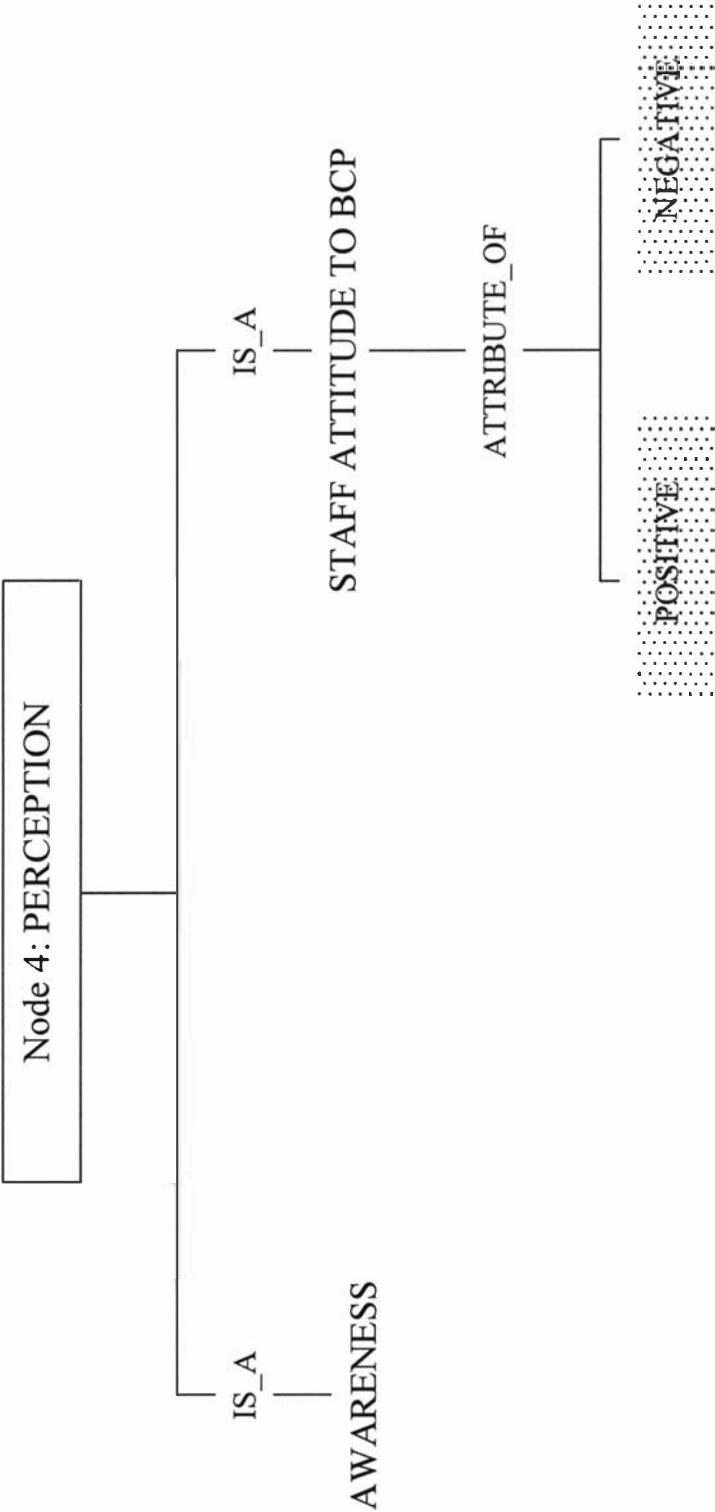


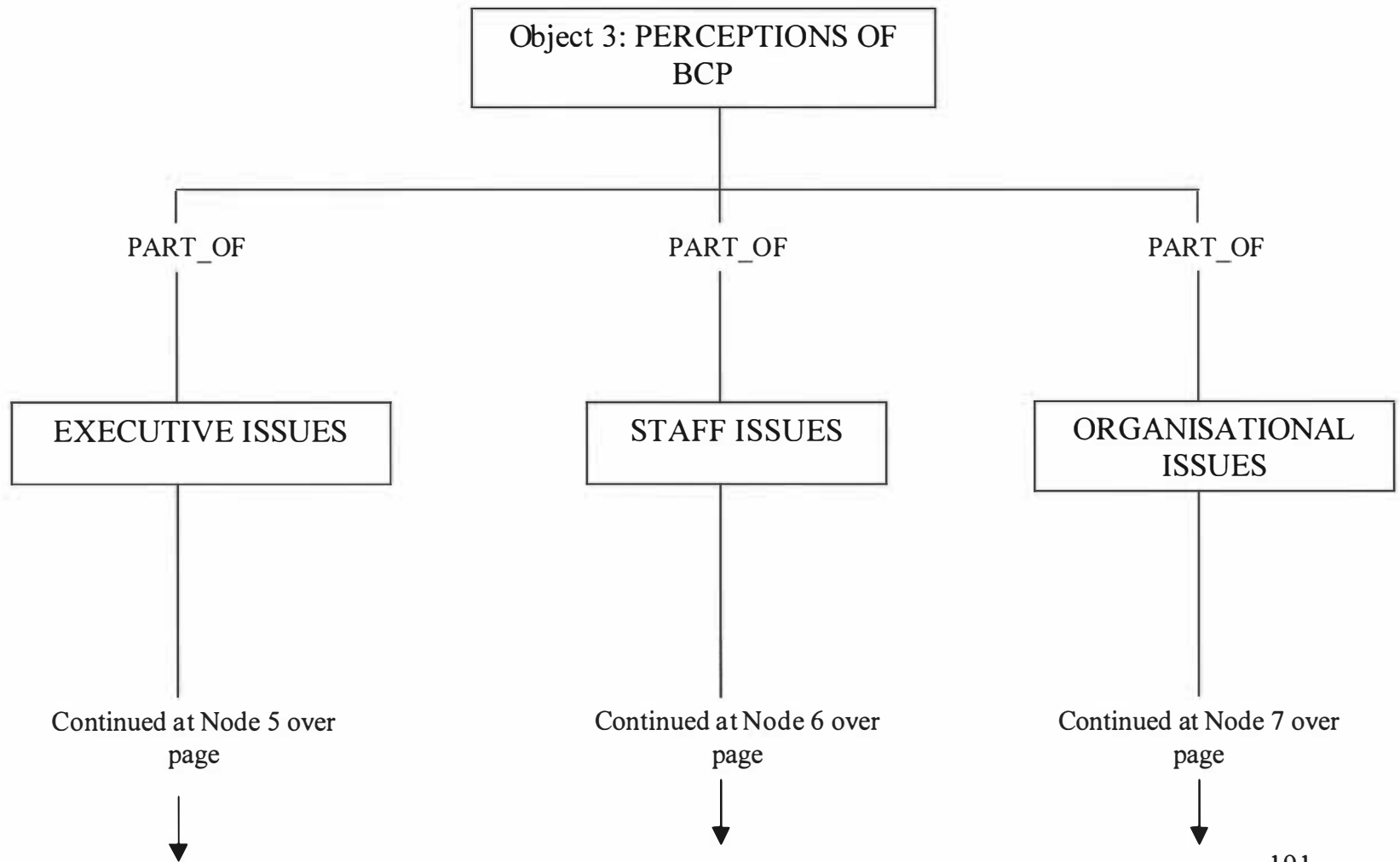


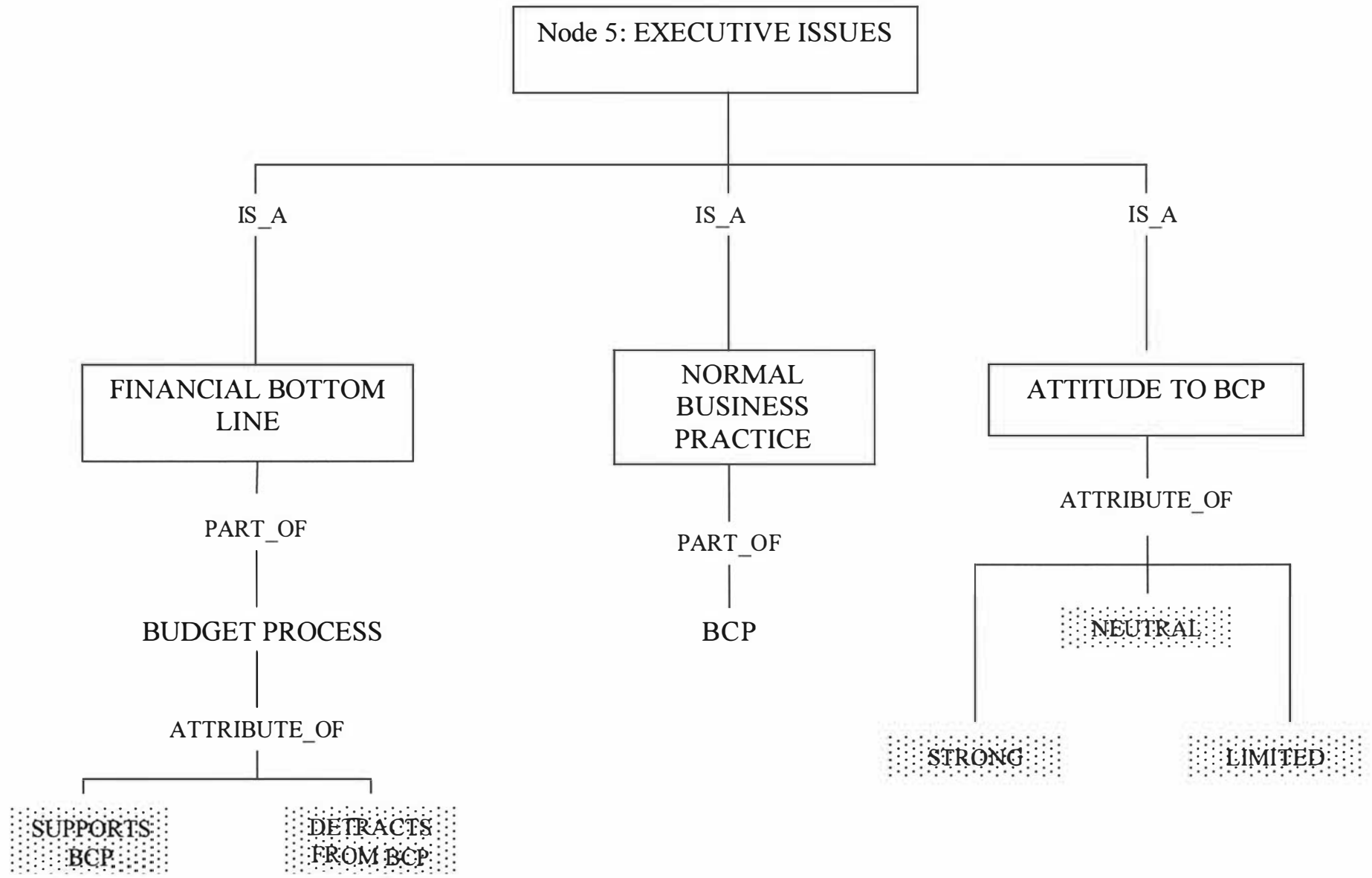


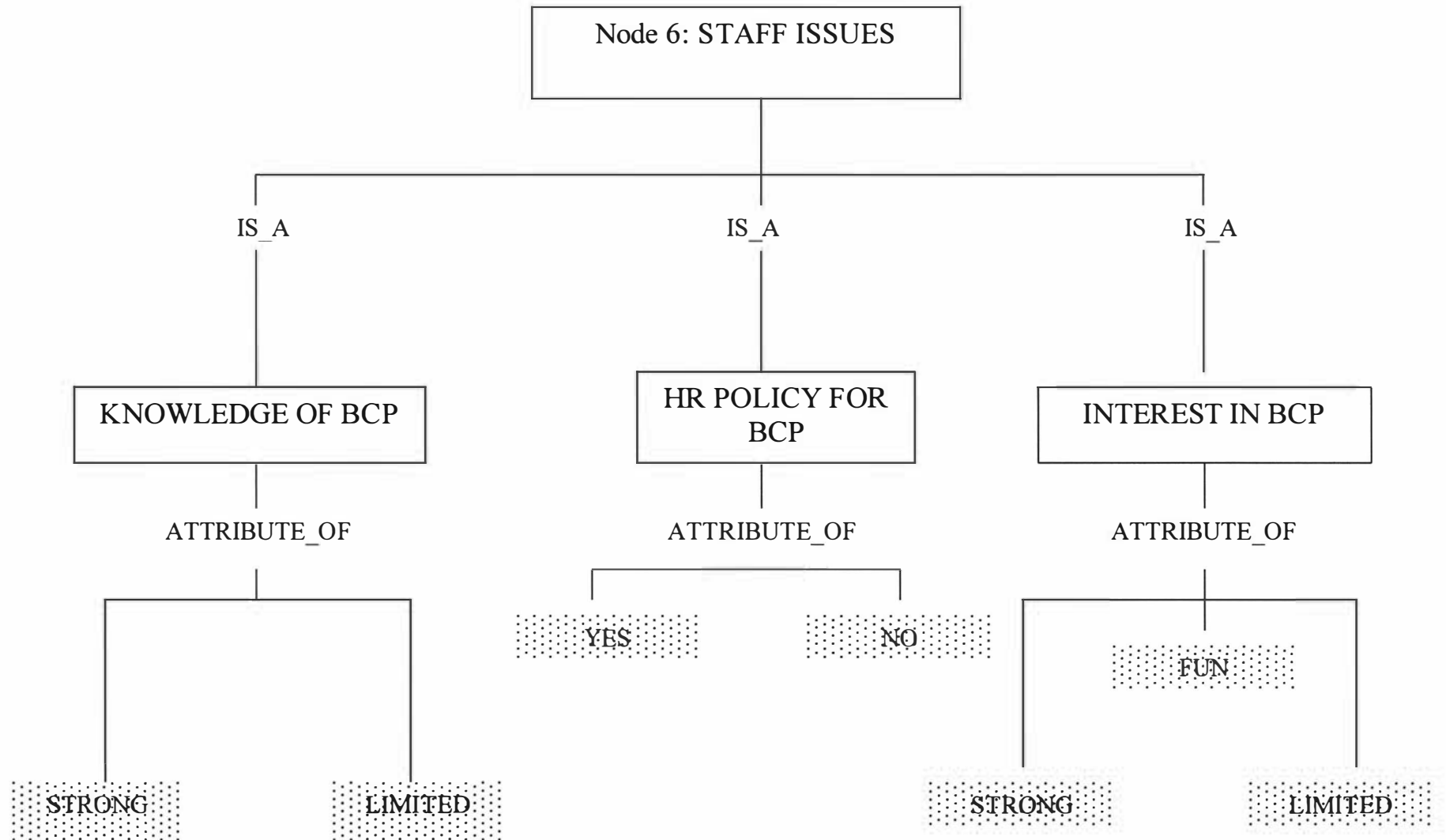


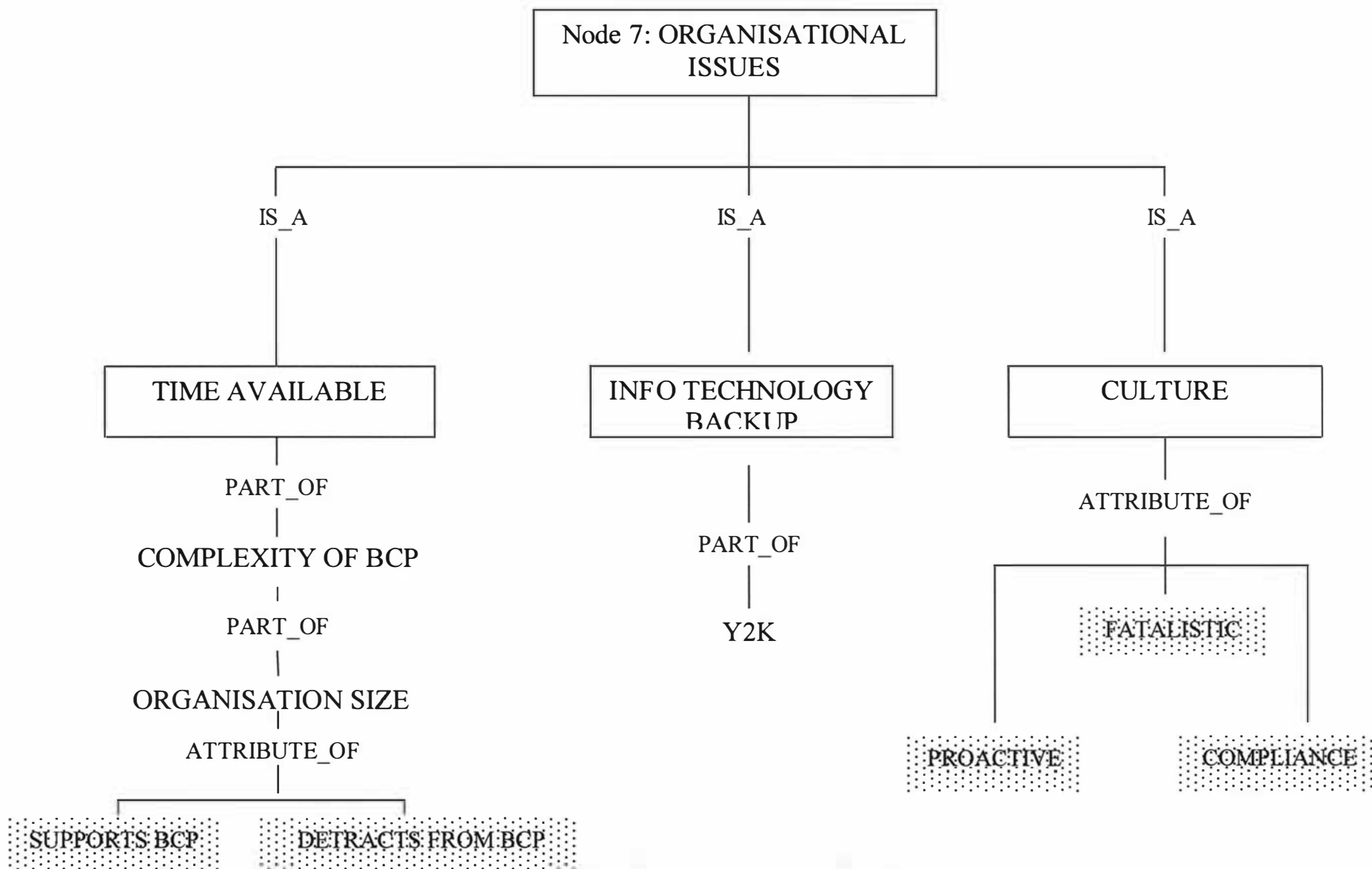




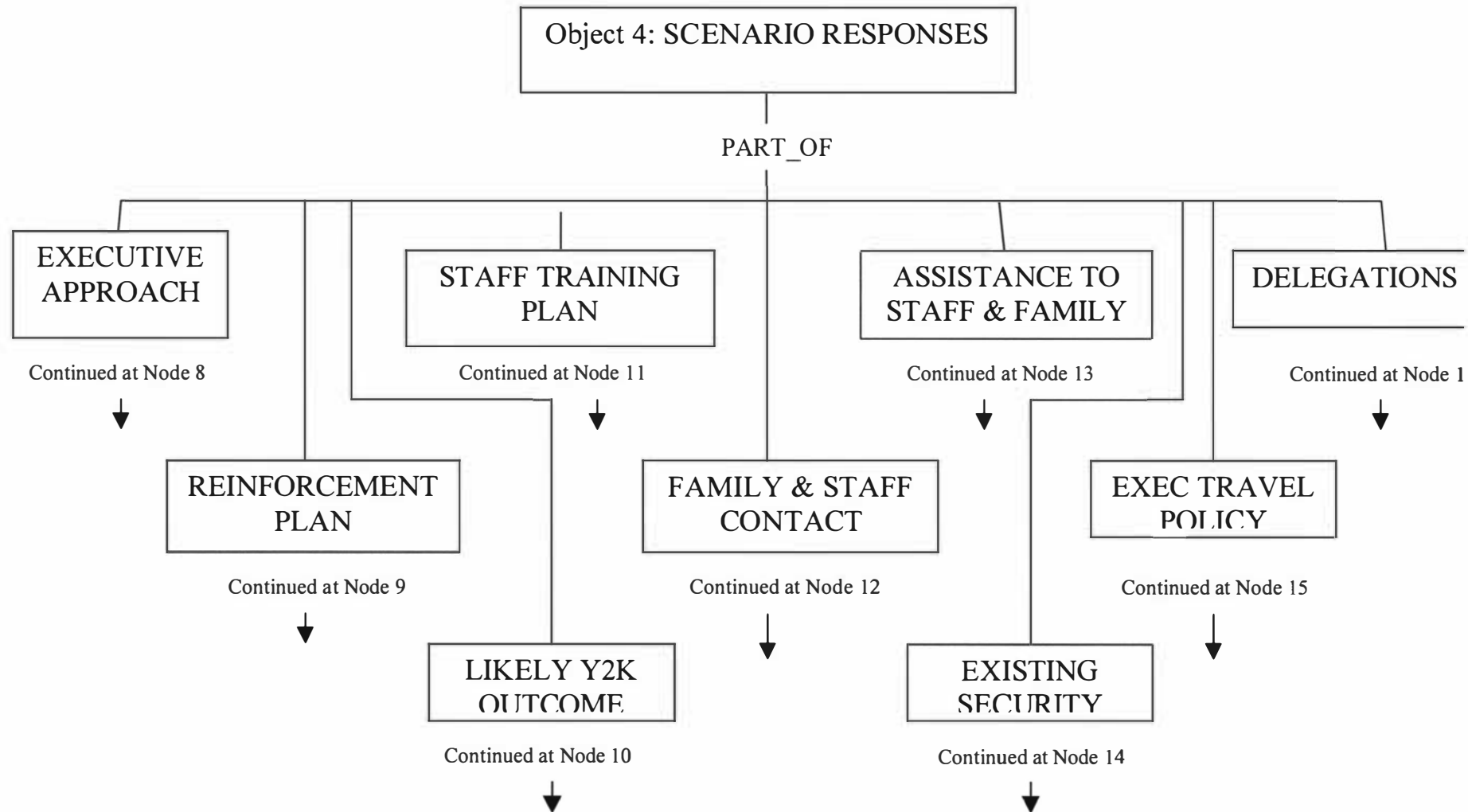


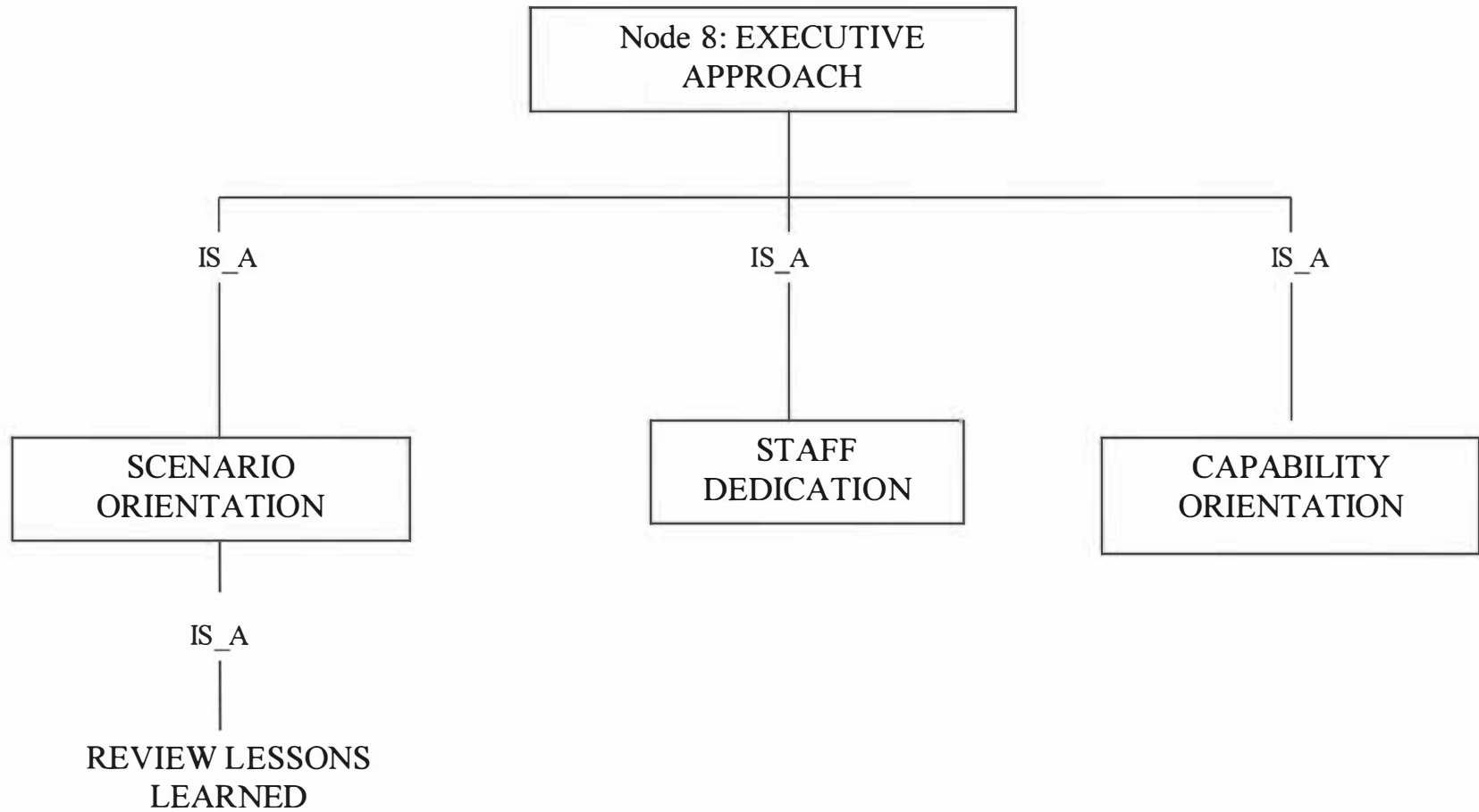


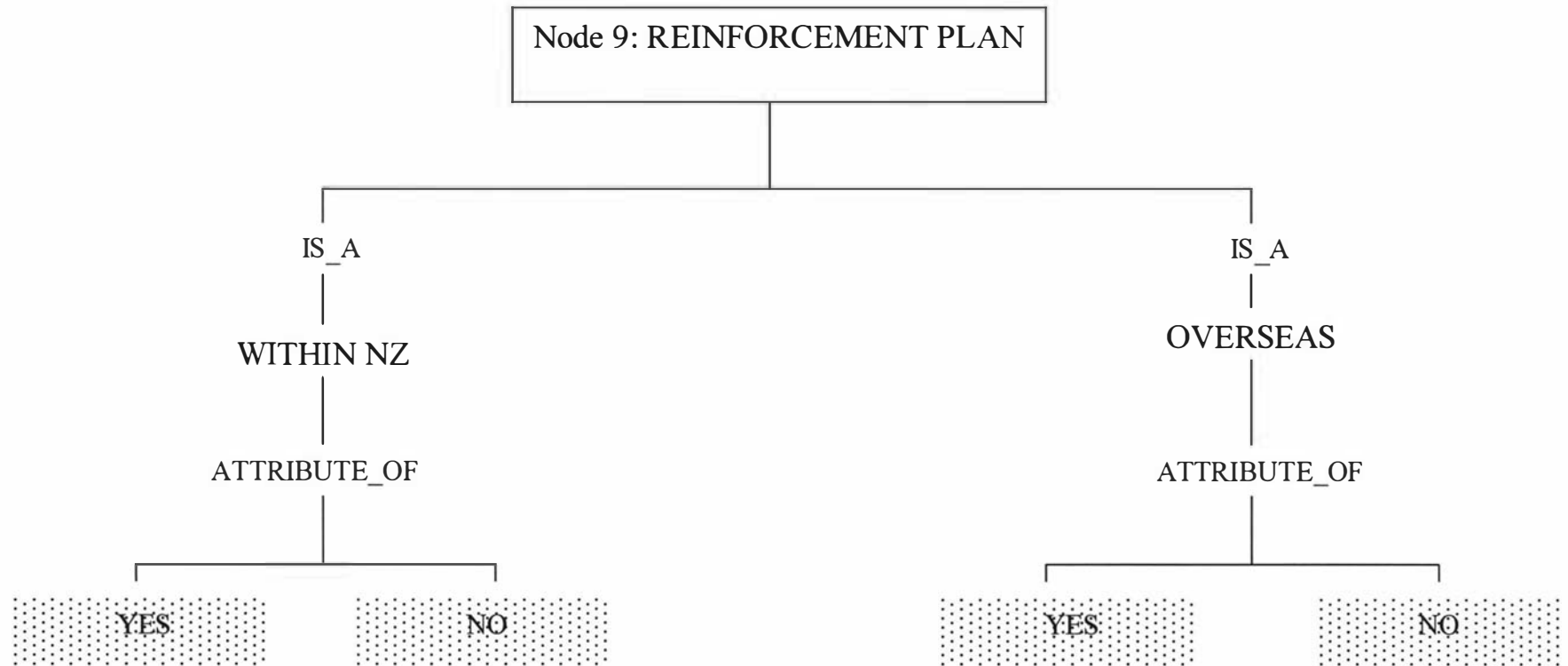


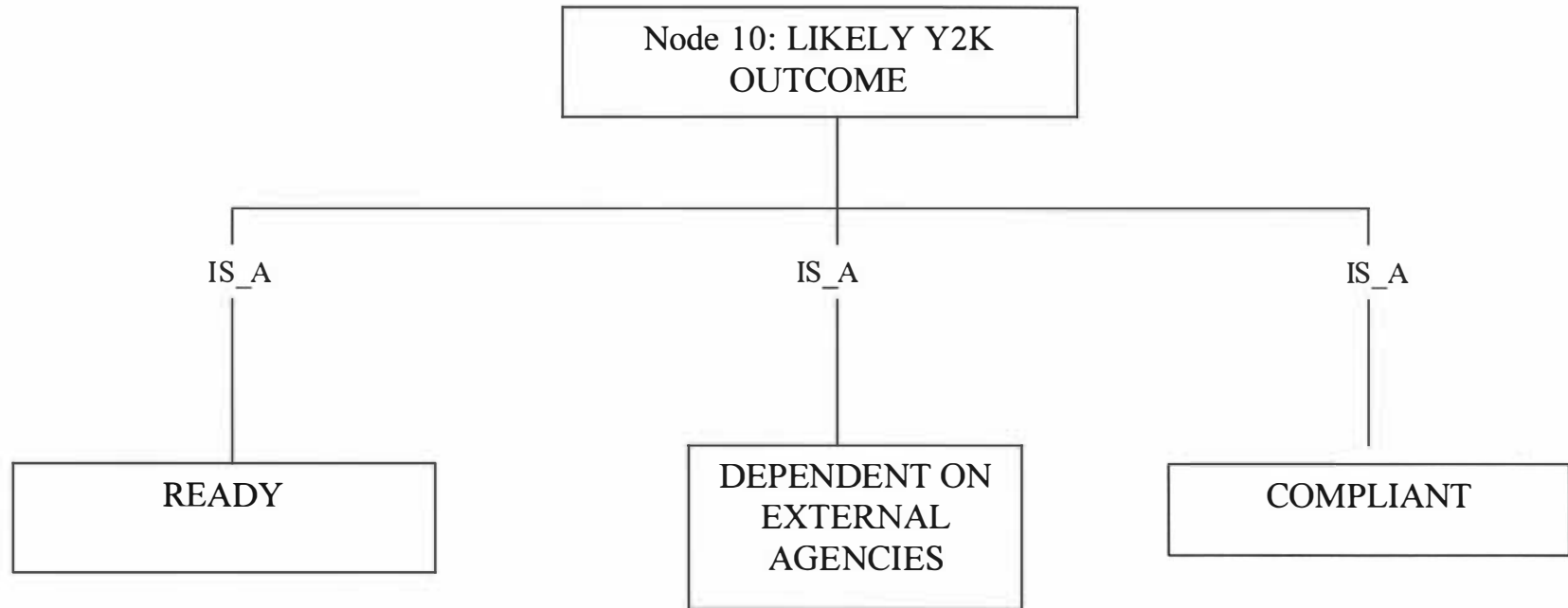


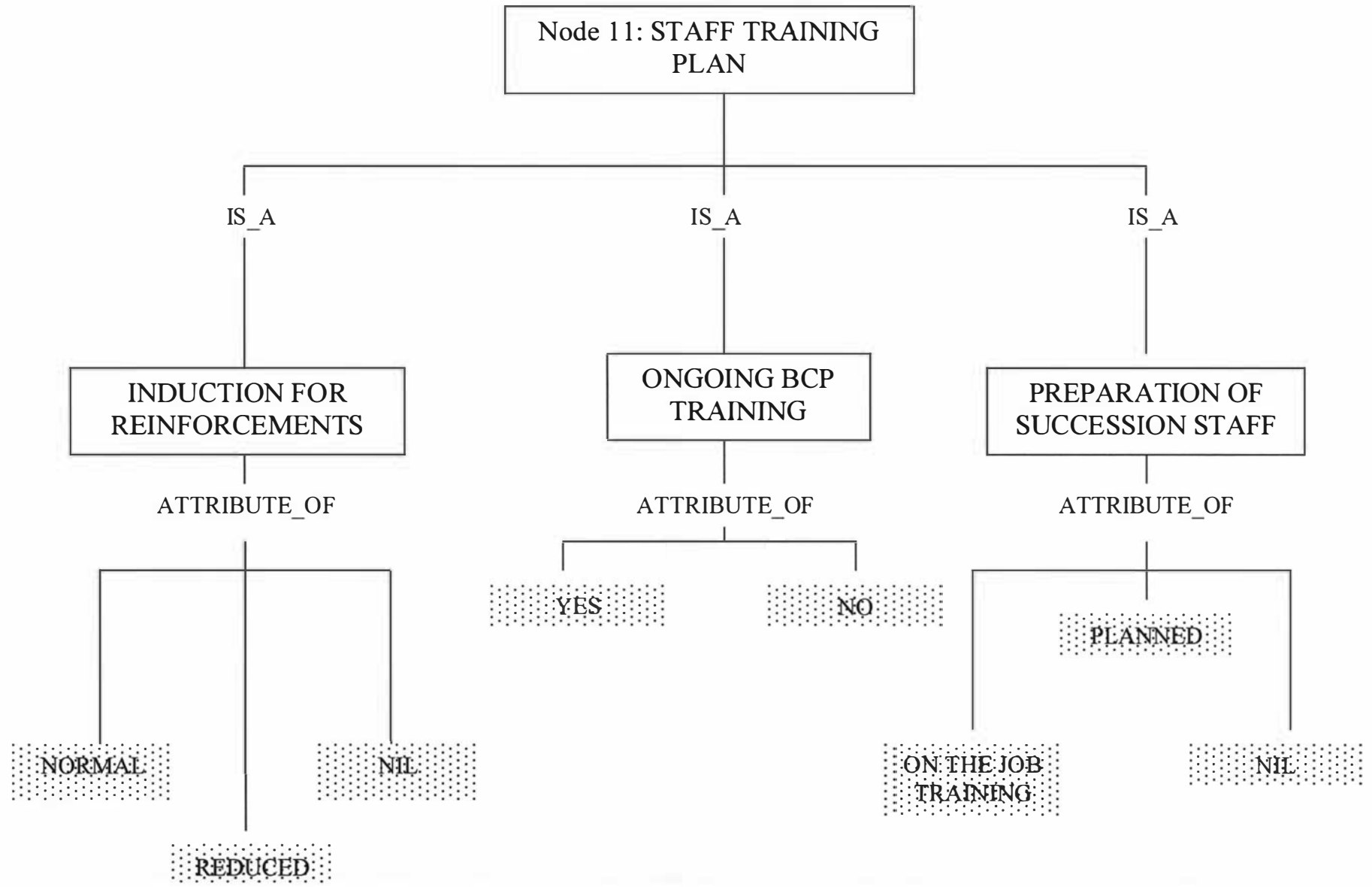


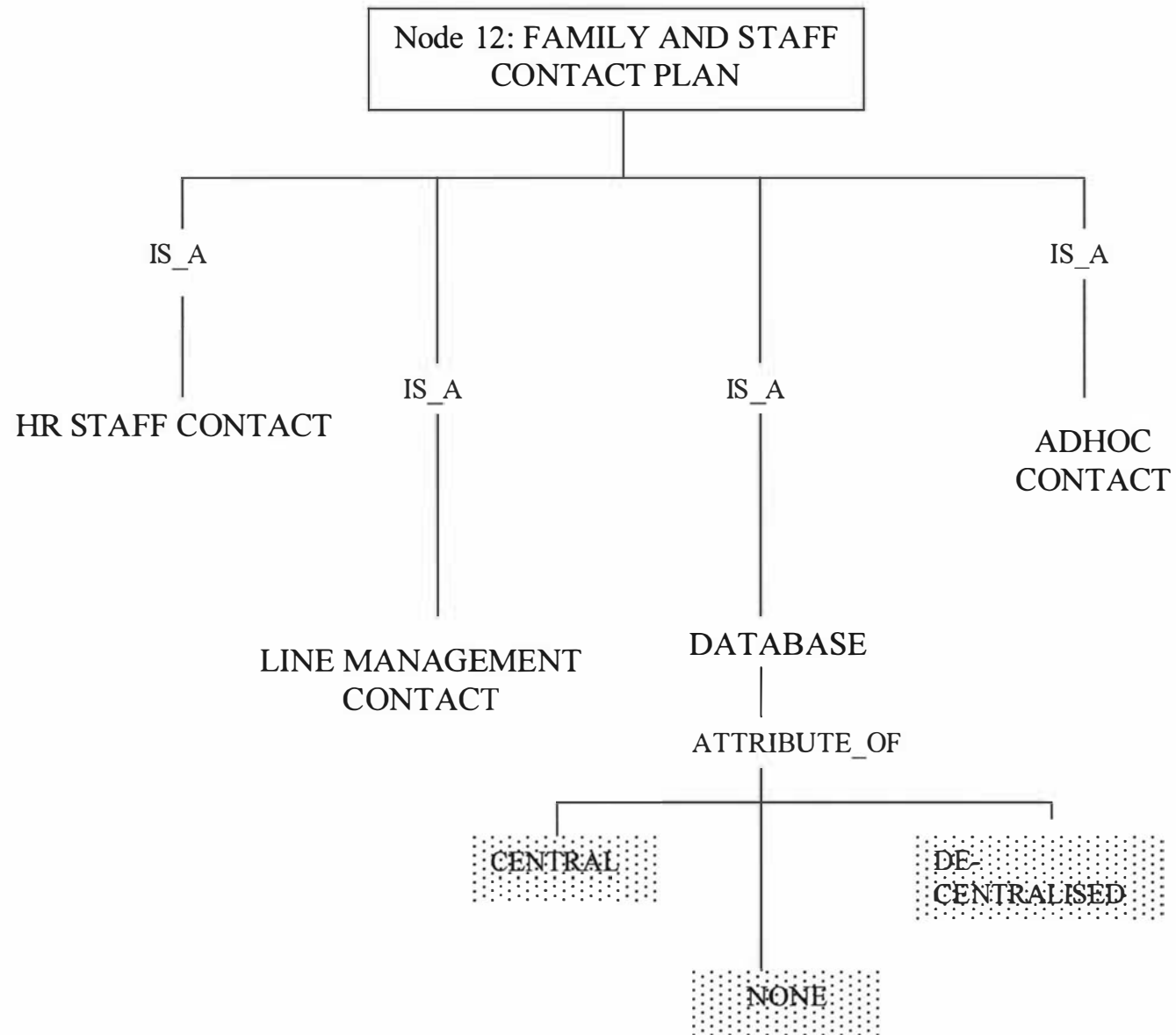


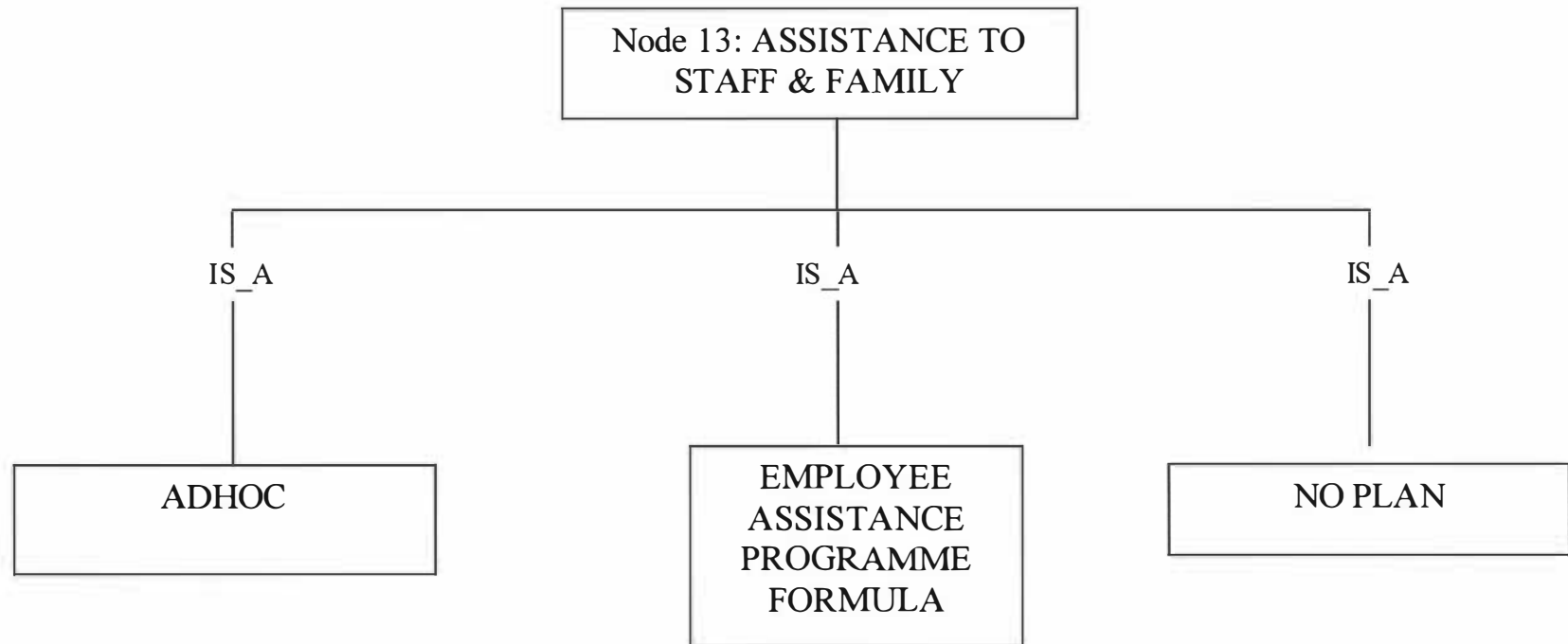










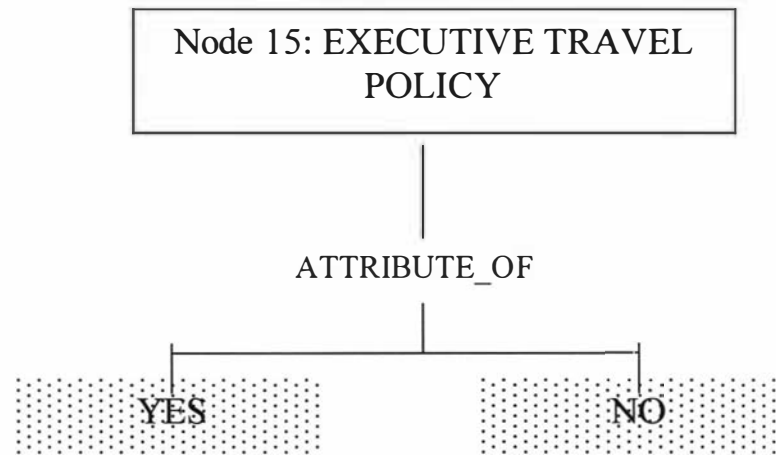


Node 14: EXISTING SECURITY

PART\_OF

PROTECTION FROM  
COMPETITORS





Node 16: DELEGATIONS

ATTRIBUTE\_OF

STANDING ADHOC

## 9.5 Analysing the Domain Model

In seeking to discover what are the main reasons for organisational awareness or preparedness, it is appropriate to first look to the top tier of concepts in the models. These are listed as follows:

- a. emotion
- b. relevance perception
- c. internal factors
- d. external factors
- e. experience
- f. perception
- g. executive issues
- h. staff issues
- i. organisational issues
- j. executive approach
- k. reinforcement plan
- l. likely Y2K outcome
- m. family staff contact
- n. assistance to staff and family
- o. existing security
- p. executive travel policy, and
- q. delegations.

In considering these, items (j) to (q) are concepts that relate specifically to the scenarios given to interviewees and will be discussed later in this chapter.

### 9.5.1 Analysis of Object 1: Reactions to the Survey

#### a. Emotion

While Object 1 could arguably be excluded from this discussion since it relates to the respondents' reaction to the questionnaire rather than the subject itself, it is felt that it offers useful insights into the way the subject of

BCP may affect executives. First, the survey had an emotionally polarising effect on the respondents and the question arises as to whether the questionnaire design or its content was the cause. Two thirds of the second tier concepts in this strand are negative or neutral including difficult / tricky, frustrating, intensive, comprehensive and straightforward. Only 3 respondents viewed the survey as easy although in discussing this point further, none stated that it was difficult to follow or understand, suggesting that the subject matter was the likely stimulus for their response. The only exception to this was in the questions regarding allocation of resources and effort by rank order, which was widely misinterpreted by respondents.

#### b. Relevance Perception

The second main concept within object 1 was that of relevance perception. This provides further insight into the comments regarding emotion. Only one large organisation indicated that the survey was topical which could indicate a general lack of familiarity with BCP processes. However, the respondent group must have had some idea of the concept of BCP as there are 15 comments regarding personal perceptions and the effect that the survey had on these. From this group about half felt that the survey had changed their perception and the remainder believed that their perception had been confirmed. In the latter group, all comments came from large organisations whereas half of those who felt their perceptions had changed were from small organisations. Four subjects cited broadened awareness of the topic as a result of doing the questionnaire and three of these were also cited in the earlier comments on perceptions. Various effects of research on subjects are well reported (Bootzin, Bower, Zajonc & Hall, 1986) and lead to a discussion of ways in which executives can be made more aware of the need to plan comprehensively for business continuity.

#### 9.5.2 Analysis of Object 2: Reasons for Answers

The four top tier concepts in this object are internal factors, external factors, experience and perception. These provide some insights into

the challenges facing executives in general and certain types of organisations in particular.

#### a. Internal Factors

Internal factors are those aspects of an organisation that the interviewees identified as being key determinants of the answers they provided in the questionnaire. They included a short-term focus, organisational capability, staff competency and reliance on information technology.

##### (1) Short Term Focus

A short-term focus was noted by two large organisations that gave vastly different rationale as to why comprehensive BCP fell outside their span of consideration. One of the two was a large Government organisation that dealt with social issues. As a result, the organisation was often in the media whenever something went wrong and consequently, the staff had adopted a very short term 'stay out of trouble' viewpoint. Coupled with this were a lack of knowledge about BCP amongst executives and a significant lack of resources due to rapid expansion of service delivery. The second organisation was a national retail chain that, like many similar, operates in a tight market with small margins. As a consequence, the Head Office function was minimal and information technology was used to centrally monitor the daily sales. Incentives were based on this immediate measure therefore most management effort was oriented toward activities that would result in pay incentives. There were no incentives attached to BCP.

##### (2) Organisational Capability

Three large and two small organisations mentioned organisational capability. Amongst the large companies, which included two national chains and a large health provider, there are some interesting

paradoxes. First, all three believed that they had the correct focus for BCP in orienting their efforts toward good staff, with a wide range of skills, who could turn their hand to any contingency. One referred to this as the 'capability orientation' as opposed to the 'scenario orientation'. They believed that their sheer size was an offset to most difficulties and obviated the need for much of the planning discussed in the survey and interview. All contradicted this position at some point in the interview by noting that they probably did not appear to be well prepared. It was also noted that this research had raised new issues for consideration that would cause them considerable concern if they were to occur. The small organisations took a resigned approach to capability, noting that they were too small and too reliant on suppliers for almost everything that they needed to be able to make any meaningful plan for most contingencies. One of the two respondents, who operated in a commission sales environment, observed that his staff was all sales people, they needed high morale and that that occurred when they were making money. Since BCP was seen as non-revenue earning it was not something he could get his staff involved in.

### (3) Staff Competency

Coupled closely with the previous concept is that of staff competency. The capability orientation of one major chain was again mentioned in regard to their investment in staff continuity skills at the lower levels. Conversely, a small owner operator felt that most people in the labour market to which he had access lacked initiative and no amount of training would give them the mental attitude required to put continuity training into practice.

### (4) Reliance on Information Technology

Reliance on information technology (IT) was raised for two quite different reasons. It is not surprising that all four interviewees that mentioned this concept highlighted their organisation's dependence on

IT and the chaos that would occur were they to lose all or part of their system. All had backups but the larger organisations discussed the subject from the perspective that IT disaster recovery planning was a detached activity and was not part of their mainstream BCP. The second strand of this concept, raised by two small organisations, was in relation to security. The first mention of this element was in relation to staff leaving to join a competitor. It was felt that, with the firm allowing people to do work from home with their personal hardware and company files, it was all but impossible to stop leakage of customer and product data. Second, the 'all in one' nature of IT business systems make them a simple target for those wishing to steal information and one small organisation, that had experienced information theft, felt it lacked the resources to effectively keep out an intruder, be they physical or electronic.

#### b. External Factors

External factors are those that are imposed on the organisation from outside and therefore have an influence on executive behaviour. Some, like Y2K are transient in nature while others such as compliance are pervasive and apply to all legally constituted entities.

##### (1) Compliance

Respondents from 7 large organisations specifically indicated legal compliance issues were part of their rationale for BCP. However, all interviewees acknowledge some requirement to meet the Government's expectations regarding employee safety. The range of compliance related comment was broad. It ranged from implementing the requirements of the Civil Defence Act (1983) for Public Sector organisations through to the funding implications for a Government agency of being unable to deliver its services. Two had a statutory requirement to be able to maintain essential services (local government and health sectors) regardless of circumstance as well as the requirement for local bodies to provide civil defence services for

their communities. One large Government department had, as its core business, the provision of care to another group within the community and had to be able to deliver this service at all times. Two organisations specifically mentioned their obligations under the Health and Safety in Employment Act (1992) and seemed very well informed (and were guided in their actions) by the well-publicised prosecutions of employers in recent times. One of the interviewees noted that the company handled hazardous product as part of its normal daily business and had specific legal constraints as a result. This also extended to the advice they gave end-users of their product. It was noted that the interviewees generally adopted a very serious tone of voice and body language style compared to much of the other proceedings. It could be deduced from this that compliance is a major factor in the level of BCP conducted in organisations. What is absent from the interviews is just as significant. There was no mention, in relation to compliance, of professional bodies, institutes and self-regulating codes. Even though several of the respondents are working within industries that have well established governing groups, these did not appear to have the level of influence over BCP behaviour as legislation.

## (2) Imposed Limit on BCP

Two interviewees felt that their ability to plan for continuity was limited by external factors. In the case of one small business, the fact that the owner did not have control of his premises was a significant impediment to changing to meet structural risks and providing offsets to loss of utilities. This could be construed as a rationalisation given the range of other BCP strategies available to the company but could simply mean that the owner was unaware of these options. The second of the two spoke of limitations imposed by the immediacy of the marketplace. In the national building industry, such issues as the time it takes for a planning consent to be approved, national migration patterns and mortgage interest rates were all cited as factors dictating



the level of planning possible. Once again, it was felt that BCP options existed for this executive and that greater breadth of training and lateral thinking would assist in solving these problems.

### (3) Reputation

Although interviewees had differing viewpoints on what could be defined as a serious risk to their reputation they all agreed that it included the effect of potential damage to the company's financial state. In the case of smaller companies, concern was oriented toward maintaining the long-term relationships built up with key clients. The owner of one small financial institution felt that if he could not recover from a crisis quickly, his customer base might go elsewhere. This is a reasonable motivation for BCP but does raise the question as to how loyal these customers were in the first place. Within this context, BCP has a role to play in the training of relationship managers. A large Government department was concerned about issues such as public expectation and what number of organisations would be affected in the crisis scenario under discussion. This attitude contains elements of schoolyard logic i.e. if we are in trouble as part of a group it is not as bad for us as if we are in trouble by ourselves. If central Government is only setting their planning standard by this measure rather than setting the standard for others then there is cause for concern. A national chain company that had concerns about industrial disputes put forward a different approach to the concept of reputation. While they were confident of having the resources to cope with a dispute (and had done so in the past) they were worried that the effect of a strike on the morale of the remaining staff would have a lingering effect on productivity long after the dispute had ended.

### (4) Competitor Behaviour

Small organisations were mainly concerned with this concept. All three interviewees noted the concern that they were extremely

vulnerable to competitor attacks. Each had experienced covert and overt theft of customer information and also copycat behaviour in relation to their marketing strategies. They had all put in place further protection measures as a result but acknowledged that there was almost nothing they could do to totally exclude the event from their risk profile. One multinational organisation noted that their industry was very competitive and it was part of the corporate culture to be externally focussed. However, there were no mechanisms for staff to provide environmental updates to management and BCP in general was not strong.

#### (5) Y2K

The data collection took place prior to the millennium changeover that was projected to affect many computer systems. Although little damage eventuated from Y2K, there are lessons to be learned from this single point of focus type of event and so the points raised are presented in that context. The five large organisations that mentioned Y2K specifically all viewed it as a watershed point in the company's planning experience. Most felt that if this research had been done a year or two earlier, the results would have indicated considerably lower levels of awareness and planning than what was currently evident. Y2K had the multiple effects of getting executive attention and funding. Because it was a scenario with a finite timeline it could be tracked and measured by executives and this made them more enthusiastic about the undertaking. To support this, project management disciplines should feature in BCP training. Some of the interviewees discussed 'double-hatting' with the same person being given responsibility for Y2K in addition to their current job. While this might be possible for one scenario it is unlikely to succeed for a total hazardscape approach.

### c. Experience

Learning through experience is a widely held belief and the range of experiential development methods in use is wide. For the purposes of this study, the range has been limited by the responses of interviewees to planning and testing activities and lessons learned through actual crises (whether they be recent memories, a lack of crisis or those documented by other organisations).

#### (1) Planning

All interviewees acknowledged planning as an activity with merit. It was noted that it assisted with problem solving and resource allocation. However, interviewees also pointed out that they knew their plans did not go far enough and that they still retained a number of significant risks. The remedy to this apparent inability to cover the hazardscape in plan form was, for one national chain, a capability orientation. This meant that staff skills training and some procedural manuals were preferred to a detailed scenario based plan. While time and resources were the common reason for lack of planning, it was apparent in the discussion that the interviewees had not considered a total hazardscape approach to continuity prior to this research raising the concept. Despite the limited nature of their planning, all organisations had gained some benefit and increased understanding of continuity requirements as a result of the planning that they had done.

#### (2) Actual Crisis

A range of reasons for various types of BCP behaviour was found within this concept. Some organisations pointed out that very little had actually occurred to them in the last few years and that they had to be pragmatic about what they prepared for. This type of 'non-experience' is fraught with danger, as it is not logical to assume that because something has not happened in the past, it will not in the future. Offsetting this is the second attribute, which addresses lessons

learned through the experiences of others. One small retailer said that he was so moved by a conference presentation in which the speaker described his premises being gutted by fire, that he had spent the next ten years working toward a state where he could recover from that type of event. While this is a powerful learning response, the total hazardscape cannot be adequately covered in this way unless a compilation of lessons learned from organisational disruption is made available to executives.

A commonly reported reason for survey responses was that of having recently experienced a crisis. Fourteen of the eighteen interviewees explicitly mentioned recent crises on thirty separate occasions. The bulk of these responses fell into two main areas. Many had found the experience of an actual crisis was a 'wake-up call' and they had set about formalising aspects of BCP as a result. The second common response was the identification of a recent crisis as the reason for their high levels of awareness and preparation for that particular hazard. Often, this was despite the identification of other hazards that were potentially far more serious than those for which they were prepared. Real life experience is a significant learning event and the ability to safely expose executives to organisational disruption in a learning simulation will be discussed in later chapters.

### (3) Testing

Testing an organisation's ability in regard to scenarios provides learning opportunities and is reflected in subsequent plans. Three large organisations noted that they had run test scenarios to establish the level of capability in the organisation and this had provided them with ideas for future BCP. One national chain had tested both their response to disaster and also their ability to recover back to fully operational business mode. The latter activity is noticeably missing from the bulk of responses in both surveys and interviews.

#### d. Perception

Perceptions shape decision-making behaviour in all walks of life. These interviews found that executive perception of the subject and also their perception of how they think their staff view it heavily influences BCP effort. This concept is discrete from actual knowledge of BCP but the two are linked. There are two second-tier concepts to be examined.

##### (1) Awareness

An awareness of specific hazards is frequently brought about by experience and this concept has been discussed in earlier sections. However, there is also awareness brought about by an individual's perception of the organisation and environment. This can include quantitative analysis, intuition or simply an overall grasp of the market or product. Several interviewees noted that they had prepared for crisis events totally or partially on the basis of personal awareness.

##### (2) Staff Attitude to BCP

The perception of staff toward BCP and the way that executives believe it to be may not necessarily be the same thing. However, the attributes of positive and negative attitude will shape the way in which executives approach BCP. Only two interviewees raised this subject as a reason for their survey responses and this is understandable given the depth to which it exposes the culture of the organisation.

#### 9.5.3 Analysis of Object 3: Perceptions of BCP

While perception was offered as one of the top tier concepts in object 2, it is considered to be an important contributor to answering the research question regarding the reasons for the current state of New Zealand organisations. Consequently, a set of questions in the

interviews was oriented solely at this area and the findings are provided in the following sections. There are three top tier concepts within this object, which are executive issues, staff issues and organisational issues.

#### a. Executive Issues

The concept of executive issues encompassed the respondents' views of BCP coupled with normal business considerations that affect decision making. In the second tier of this concept, interviewees discussed the financial 'bottom line' for their organisation, what they considered to be normal business practice and also their general attitude to BCP.

##### (1) Financial 'Bottom Line'

Interviewees had differing viewpoints on the relationship between the financial 'bottom line' and BCP. It was pointed out that there is always a limit to the resources and time available to the organisation and that BCP activities must compete for those like any other. Executives of large and small organisations agreed that total preparation was not cost effective in their view and that there was a law of diminishing returns as one pushed closer to the ideal preparation state. Two large organisations stated that business activities had a priority over BCP and that if they had to choose between making money and doing BCP, they would always choose making money. One small company that is reliant on the loyalty of their customers believed that the cost of not planning was too high and that was what drove them toward a continually better state of preparedness. Another small retail owner said that he would engage in any BCP activity when it could be demonstrated that it would result in better revenue. He believed that he was too small to carry any type of cost centre activity. One large Government department executive observed that the way in which the budget process functions could support or detract from BCP. This executive cited the instance where

money for BCP is departmentalised and could not be accessed from another delegation. At the time of the interview, they had identified this problem but had not yet determined how they would define the 'trigger process' that would enable the organisation as a whole to 'federalise' all BCP funding.

## (2) Normal Business Practice

Where an organisation has continuity outputs as part of its core business, then the processes of BCP were considered to be normal business practice. Such organisations include emergency services, some Government departments, health care providers and local government. However, perceptions of what is normal practice change markedly in the private sector where BCP only contributes to the point it is financially justifiable. An example of this was from one large national organisation where the view was held that information technology required total continuity coverage due to its vital role in the company but that other operational areas could make do with less preparedness. This apparent contradiction in attitude is discussed in later chapters.

## (3) Attitude to BCP

Executive attitudes will inevitably shape behaviour. While later chapters will discuss any convergence or divergence between the survey data and the interviews, the analysis of the model shows three attributes, strong, limited and weak, which all received similar levels of emphasis from different interviewees. Similar numbers of large and small organisations believed that their CEO and senior team were strongly supportive of BCP and would fight to ensure that the necessary resources were acquired. In three other large organisations, the view was that management was at best neutral to BCP and in one local body, the reason was given as 'an endemic lack of perception by management'. In many other organisations, there was a commonly held view that there was a gap between the 'walk and the talk' in that

executives were publicly supportive of BCP but the reality was that their support was limited.

#### b. Staff Issues

Another shaping influence over organisational preparedness is staff. Within these interviews, the second tier concepts revealed were knowledge of and interest in BCP and the existence or otherwise of human resource policies covering BCP or vice versa.

##### (1) Knowledge of BCP

The interviews did not involve meeting with staff. However, executives from each organisation that volunteered to be interviewed offered their opinion on how knowledgeable and skilled they thought their staff was on BCP. The bulk of the responses indicated that staff was perceived to lack knowledge in the area although this was not so in relation to IT staff. In later chapters, the lack of knowledge versus the lack of clear training programmes for BCP will be discussed.

##### (2) Human Resource Policy for BCP

Each interviewee was asked whether their organisation currently had written HR policy for BCP or crisis policies that address HR issues. None of the interviewees were able to present a comprehensive set of policies or guidelines. Seven of the eighteen organisations admitted that they had no such document. Of the remainder that claimed to have policy, it was found during questioning that these were not comprehensive. All of the eleven executives that claimed to have some policies offered to send copies by mail to the interviewer but only one did. This document, from a local government body, revealed provisions for a budget for civil defence training, building security, generic health and safety considerations, and sexual harassment policy.



### (3) Interest in BCP

Coupled with staff knowledge of BCP is the issue of whether they are even interested in it. One large national company noted that their staff viewed BCP preparation as fun. This was a curious response given that the comment derived from staff feedback after consultants had been in the company taking staff through some crisis scenarios. This company claimed to follow a capability orientation to BCP rather than a scenario orientation. Interviewees were evenly divided regarding whether they thought their staff had any real interest in BCP. Some declared the level strong and some limited to non-existent. The link between executive interest and staff interest will be discussed in later chapters, however, these second tier concepts and attributes will likely form useful key performance indicators for executives seeking to measure organisational readiness.

#### c. Organisational Issues

Organisational issues are those that affect the structure of the organisation rather than the behaviour of the people within it. Three top tier concepts were developed from the interviewees and these were related to time available, information technology back up and culture.

##### (1) Time Available

While only two organisations indicated directly that there was a lack of time to conduct effective BCP, several identified related issues that have been nested as second tier concepts or attributes in this model. Amongst these are the size and complexity of the organisation and the effects that these attributes have on effective BCP. The interviewees that claimed there was insufficient time did not provide any direct reasoning but did make comparative comments that were revealing. One small company stated that BCP was less important than day to day policy and this could be the result of incorrect emphasis on

internal work generally or simply poor time management. In regards to complexity, several interviewees made observations such as 'if it's simple it will work' and 'you can put a few plans in place but never be fully prepared'. This type of reaction appears to indicate an inability or unwillingness to come to grips with the entire problem. In later chapters, the ability of executives to deal with high levels of ambiguity and complexity will be discussed as one of the possible reasons for the current state of affairs. Organisational size was also noted as an attribute. Some representatives of large organisations thought that mass assisted them in a crisis due to the resources that they could bring to bear and their dispersed operation. However, two of New Zealand's largest corporates with branches in every city, believed that this represented an impediment due to the immense effort required to conduct training and also get the basic procedures established in all outlets. Four small organisations felt that their size made it very difficult to devote the time and resources to BCP without interfering with the primary business activities.

## (2) Information Technology Back Up

All organisations noted their growing reliance on IT. However, there were differing views on how IT disaster recovery planning and BCP meshed together. Of some concern are the few large organisations who saw the two activities as separate, noting that 'the IT people have good back up procedures and that's important for them', without seeing the need to provide the same similar comprehensive planning for the main operation. Many mentioned that their responses would have been very different had the Y2K issue not been current. In Government, there was a requirement to have continuity plans for Y2K signed off by the State Services Commission 3 months prior to year-end. Some had found that the Y2K event had enabled them to attract executive attention to broader issues of continuity and some executives had attended Civil Defence training as a result. This is consistent with earlier comments on learning through experience.

### (3) Culture

Organisational culture binds together the structure and the inhabitants of an organisation and as a result of shared values it underpins decision-making. Consequently, it is extremely important to BCP and these interviews revealed a range of cultural effects that have been grouped into three broad categories of proactive, fatalistic and compliance. A compliance culture is one driven by rules and the ethos of staying out of trouble. It is a feature of the mechanistic organisation and is common in Government. These organisations prepared only for what they had to prepare for. A fatalistic culture is that which accepts that if it happens, then they will deal with it then. There were two drivers for this approach in the interviews. First, very small organisations took this approach where the entire resource of the executives, who were usually also the owners, was required simply to keep the business afloat. Second, one organisation that was oriented toward dealing with Maori issues identified the Polynesian culture, a fatalistic one, as being that which shaped the organisation's lack of preparedness, through both staff and customer worldviews. In a proactive culture, emphasis is placed on seeking out opportunities and also identifying potential problems before they impact on the operation. Effective BCP is most likely to occur in these organic organisations where this sort of culture is found.

#### 9.5.4 Analysis of Object 4: Scenario Responses

The final phase of the interviews was the discussion of two crisis scenarios selected from the examples shown at Appendix 3. Each organisation was asked to complete one discussion that represented a total, or near total collapse of their ability to function as an organisation. The second was a partial collapse or minor incident. Since each organisation underwent different combinations of events, it was neither possible nor useful to make detailed comparisons of approaches to solving the scenario. In keeping with the style of discourse analysis used so far, the responses have been grouped into

nine top tier concepts, which group all the approaches and outcomes. These are executive approach, reinforcement plan, likely Y2K outcome, staff training plan, family and staff contact, assistance to staff and family, existing security, executive travel policy and delegations.

#### a. Executive Approach

The executive approach to dealing with disruption varied greatly. This concept addresses the conscious assumptions that executives apply to dealing with specific situations, as opposed to general attitudes that underpin their entire decision making. In the interviews three, second tier concepts of scenario or capability orientation and staff dedication were discussed.

#### b. Scenario Orientation

The scenario orientation is that which underpins the bulk of organisational planning. It is based around the question "what if?" and executives responsible for BCP generally select crisis scenarios for which their organisations prepare. In these interviews, reactions varied from 'that's easy, we've had that happen' to 'hadn't thought of that'. These quotes accurately reflect the wide variety of preparedness levels. Most interviewees felt that planning for and testing scenarios had benefit but there were far too many possible crises for them to be well prepared. Systematic review of lessons learned from previous crises was noted as an essential component of this type of approach.

#### (1) Capability Orientation

The opposite approach to the scenario orientation is the capability orientation. One interviewee described this as having the right people, the right attitude and some basic skills along with a few principles and resources to apply to managing disruption. This type of staff should be able to apply itself to any problem no matter how

unforeseen. This approach requires great faith and trust between management and staff along with a comprehensive consideration of the skills required for continuity during recruitment, training and evaluation and no evidence was found of such a comprehensive HR approach during this survey.

## (2) Staff Dedication

One interviewee noted that the staff considered themselves professionals who would keep going no matter what the problem. Although the scenario was industrial relations based, it was accepted under further questioning that there was a limit to this dedication and, notwithstanding any willingness, there were practical and resource limitations on the staff ability to deliver.

### c. Reinforcement Plan

Where the scenario created a shortage of staff on site, the interviewees were asked what standing reinforcement plans they had in place to maintain outputs. Approximately equal numbers had a plan to get extra staff from within New Zealand as had not. However, the bulk of these reinforcement plans related to relatively low levels of skill specialisation such as administrative and reception staff. Frequently, the plan was not finite in shape but simply involved a preferred supplier arrangement with a temporary staff agency. Interviewees acknowledged that these resources might be stretched in a general crisis. Two internal reinforcement plans involved redeploying company staff from one site within New Zealand to another. Interviewees accepted that this would work for some but not all scenarios. Two large and one small multinational company had the capability to bring specialist staff in from one of their overseas branches to cover a short-term problem. All three had done this before and included it in the BCP. The remainder had no plan to bring in staff from overseas to cover a crisis.

#### d. Likely Y2K Outcome

Due to the timing of these interviewees (mid-1999), it was considered vital to include one Y2K disruption scenario. Of the seven companies that believed themselves able to cope with the millennium changeover, three believed themselves to be compliant while four considered themselves ready. The latter is defined as not necessarily having a trouble free software and hardware changeover but having plans in place to cover any disruption that might occur. Readiness plans included hard copy printouts of all status reports and taking in generators or manual typewriters over the period. Six interviewees believed that the result was largely dependent on external agencies such as banks and payroll companies and they would 'roll with the punches' on January 1. The implications of this split result, given the vast educational and other resources that went into Y2K preparedness, is discussed in later chapters.

#### e. Staff Training Plan

Staff training questions within these scenarios covered three main areas, which related to induction for reinforcement staff, ongoing BCP training for regular staff and preparation training for those designated to step up in responsibility in time of crisis.

##### (1) Induction for Reinforcements

In general, induction training did not appear very well organised, with the notable exception being one national production facility that dealt in hazardous chemicals. Where there was an induction programme it appeared to be focussed on occupational safety and health issues rather than a comprehensive immersion into the corporate culture. Eight interviewees stated that any reinforcement would be given their standard induction procedure, which varied in length from one half day to six months (the latter for medical related clearances). Two stated that the bulk of their induction was based around a buddy

system and the flaw in times of crisis is clearly that the experienced buddy may not be available to supervise a new trainee. This then introduces increased risk potential within the organisation. Two organisations acknowledged that they should have a standard reduced induction package for reinforcement staff but there were none in existence at the time of these interviews. Eleven companies had no plans for inducting reinforcement staff whatsoever.

## (2) Ongoing BCP Training

Three companies had BCP training as a routine part of staff development. In the case of a national retail chain, this was mainly focused on security and safety in the store i.e. power outage, armed robbery and fire. One national service provider had invested heavily in BCP consultants to develop their capability orientation and some staff training had occurred as a result. The third was involved in producing hazardous products and had a comprehensive on-site safety training programme. With the exception of some minor OSH related topics, the remaining fifteen organisations had no effective staff BCP training on which to base a response to a crisis.

## (3) Preparation of Succession Staff

Two scenarios asked how the organisation would deal with a sudden loss of key senior staff. This aspect addressed the issue of whether preparatory training was offered to ensure that staff being promoted into a crisis- created vacuum had the skills required in advance of the task. None of the interviewees had what could be described as a comprehensive approach to identifying and training succession staff. While one Government department had a leadership development programme for all staff, another national retail chain had a list of potential successors but no proper training plan. One small organisation used the franchise to which it belonged to provide advancement training and did all their technical upskilling through on the job training. Four large organisations stated categorically that

they did not provide step up training for successors, however the remaining nine organisations were vague about exactly how people would become competent in new jobs during a crisis event.

#### e. Family and Staff Contact Plan

During a crisis it will frequently be necessary for either the organisation to contact off-duty workers or for on-duty workers to be able to contact their families to ascertain their welfare or advise them that they are personally safe. This range of questions sought to establish whether the organisation had the capability to achieve this and how it would be done.

##### (1) Database

All interviewees had some form of personnel record keeping, either through a computerised database or because the company was so small that they all knew each other. However, four of the eighteen companies did not keep next of kin details within their records. Computerised records were divided between centralised databases that only head office staff could access and decentralised records that only branch or regional staff could access. There was no organisation that was able to discuss a 'crisis override' of access controls on their systems to enable crisis teams to view next of kin records. Records were updated between monthly and yearly.

##### (2) Contact Responsibilities

Three large organisations had specific procedures for their HR staff to contact absent staff or next of kin in the case of an organisational crisis. In a further three large organisations, the line management of the business unit to which the staff belonged had specific responsibility for contacting them. By far the largest group of nine interviewees said that they did not have a specific plan for contacting staff and families but that it would be done on an ad hoc basis by



whoever was available and most suitable. It can be assumed that the three who were silent on this matter would also take an ad hoc approach, as it is difficult to imagine an organisation making no attempt whatsoever to contact next of kin during an on-site crisis.

#### f. Assistance to Staff and Family

This category of questions examined the approach that the organisation would take to assisting both the worker and their family in the event of a calamity. In the scenarios, these events ranged from the death of a worker through to fear, intimidation and layoffs.

##### (1) Employee Assistance Programme

Six large companies said that they had an established employee assistance programme (EAP) which could be available to staff and families during a crisis. These generally covered services like counseling advice and incorporated access to the company's policies on sick leave, accommodation and childcare assistance and death benefits. Formula approaches such as this were more common in the public sector with only one corporate featuring in this group.

##### (2) Other Assistance

Four companies stated that they would not provide any assistance to staff or families during the crisis described in their scenarios. However three of these contradicted themselves and accepted that they would probably provide some form of ad hoc help were it deemed appropriate. In total, sixteen interviewees mentioned the provision of ad hoc assistance which, when added to those who had EAP in place means some of those were also willing to extend their help beyond that which they had planned for.

#### g. Existing Security

Security staff provides an organisation with a multi-role response unit. Only two organisations were large enough and had the need to have their own integral security element. Another one had a plan to use a local security contractor. The scenarios that asked about the use of security related to industrial disruption, however, a wide-ranging discussion developed from there. A second tier concept of protection from competitors was identified which addressed such issues as business intelligence (one company had their own unit) as well as how they handled other organisations soliciting their staff.

#### h. Executive Travel Policy

One scenario portrayed a death or incapacitation of all or most of the senior executive team as a result of a vehicle accident. One of the questions in this scenario related to whether there was an organisation wide travel policy in existence that sought to mitigate against such an event. Only two such policies existed and these were both in national retail organisations. However, in one of these cases, the policy only applied to the Board of Directors not travelling together and did not apply to executives. Many interviewees acknowledged the usefulness of such a policy but there were no others in effect.

#### i. Delegations

As part of the examination of succession procedures, interviewees were asked whether there were standing delegations in place for people to take over financial authorisations and like duties in the event of the sudden incapacitation of a more senior executive. Eleven organisations stated that they had signed and formalised delegations in place for financial authorities. In the large organisations this was mostly Government and health care providers. However, somewhat against other trends, the small organisations were very well prepared in this regard with all but one owner operator having automatically

adjusting shareholdings to the other in time of death, insurance policies on each other payable to spouses or partnership insurance. Most had signing authorities devolved to senior staff within their businesses.

## **9.6 Quantitative Results**

As part of this structured interview process, eight quantitative results were recorded. The answers to these questions were recorded at the time and have been analysed using an MS Excel spreadsheet. While some of the commentary associated with these results is represented in the domain model, it is felt that the scores below provide another dimension for the viewing of the interviewees' approach to continuity. Responses were scored on a seven point Likert scale with behavioural anchors attached to each point and the questions and marking sheets can be seen at Appendix 3. The results are as follows:

Question 1: How did you find the experience of filling in the Phase 1 BCP survey? (n=21)

Average = 4.48 which is closest to the reference point entitled "Neutral"

Standard Deviation = 1.21

Question 9B: How do your lists for preparedness and severity events compare with the list of crises you cited your organisation as having experienced in the last 5 years? (n=16)

Average = 4.19 which is closest to the reference point entitled "50/50"

Standard Deviation = 1.56

Question 11: On the scale in front of you please indicate where you would like your organisation to be in terms of preparedness (n=21)

Average = 6.14 which is closest to the reference point entitled "Most Areas Prepared"

Standard Deviation = 0.65

Question 12: How important is BCP to you? (n=21)

Average = 4.9 which is closest to the anchor entitled "More Important than Most Policy"

Standard Deviation = 1.3

Question 13: How seriously is BCP taken by your organisation? (n=21)

Average = 4.33 which is closest to the reference point entitled "Neutral"

Standard Deviation = 1.74

Question 15: How likely is it that the impediments to increasing your crisis preparedness will be removed? (n=19)

Average = 3.68 which is closest to the reference point entitled "50/50"

Standard Deviation = 2.11

Question 17: How likely is it that the current sustaining features of your crisis preparedness will remain? (n=19)

Average = 5.95 which is closest to the reference point entitled "Quite Likely"

Standard Deviation = 0.91

Question 22: In what ways has this study changed your views of business continuity planning? (n=21)

Average = 2.95 which is closest to the reference point entitled "Not in Any Significant Way"

Standard Deviation = 1.72

## 9.7 Comment

While not particularly easy to quantify or support any impressions gained during the interviews, it is felt worthwhile to note them here. This is because the findings from the interviews are contradictory in many parts and the only useful analysis between some verbal and quantitative results might arise from the observations of the interviewer. By far the most realistic attitudes were displayed by the owner/operators of the small businesses that were interviewed. This group readily admitted their lack of knowledge and to having too few resources to meaningfully address the BCP issue. They understood that they risked their businesses because of this. Many executives from the large organisations projected a completely different manner, which in some cases appeared to reflect a level of self-efficacy that was not supported by the facts. Some key indicators of their general lack of knowledge of the area included the citing of previous crises through which they were able to cope without recourse to extensive plans. Documentary evidence and other data provided by this group did not support their references to manuals and staff ability to turn their hand willingly to any crisis. Government, local Government and health providers seemed content to have met their compliance requirements and what was particularly notable was the use of BCP jargon without any understanding of its application. All but one public sector interviewee had no formal background in BCP and in most cases interviewees were even operating outside their core professional qualification when performing day to day duties. Several believed that because they were in the business of providing emergency assistance to others they could easily apply that process to themselves. This can be likened to a surgeon claiming the ability to conduct life saving surgery on him or herself and defies all logic. This leads to the conclusion that either the interviewees were supremely confident or unconsciously incompetent in the BCP arena. Some possible interpretations of these observations will be made in later chapters.

## 9.8 Conclusions

The primary purpose of the interviews was to supplement and validate both the survey data and also other anecdotal evidence. The concepts that have been developed from these interviews highlight the multi-disciplinary approach necessary to understand continuity planning practices. 4 of the 17 top tier concepts related to psychological aspects of executives. 2 relate to factors that are external to the organisation while 11 of these concepts relate to organisational and staff issues. This clearly demonstrates the relevance of exploring continuity from an HRM perspective.

An important finding is that which describes the organisational method of generating BCP capability. Several different terms indicated two main threads. The first of these was the scenario orientation, which was the approach taken through planning for a range of given contingencies. The second was termed the capability orientation where investment was directed toward staff training and awareness of their responsibilities in a crisis.

Compliance emerged as a major motivator in BCP activities. Linkages were evident between this behaviour and the types of cultures of the respondents. However, it is acknowledged that it was impossible to gain more than a peripheral perspective on organisational culture in the time available. Within the field of compliance must be included Y2K. This has had a noticeable effect on BCP awareness and comments to this effect were frequently made.

Prior experience played a large part in the BCP behaviour of most respondents. 14 out of 18 indicated that they had modified their planning as a result of a recent crisis. Unfortunately, this was frequently oriented toward the same event and not the most serious potential event.

Of greatest concern within the context of this research is the finding that most HRM practices needed to assist an organisation through a period of disruption are non-existent, insufficient or ad-hoc in nature. This was confirmed through the discussion of scenarios where definitive responses were only provided when the respondent had prior experience of the particular type of event.

These points will be combined with the questionnaire data in Chapter 10 to provide an overall analysis of the HRM aspects of BCP in New Zealand.

## **Analysis and Discussion**

### **10.1 Introduction**

The discussion is structured around the three research questions posed in the introductory chapters. In addition, the findings are examined in relation to a selection of the major theoretical models presented in the literature review.

### **10.2 The Situation in 1998**

The situation regarding organisational preparedness for disruption in 1998 can only be described as variable. While certain organisations were well prepared for a limited number of events, no organisation demonstrated a comprehensive approach to preparation across the spectrum of likely events and phases of a crisis. It could be argued that this was due to differing frames of reference. The interviews revealed that most executives viewed business continuity planning (BCP) as being those processes that enabled them to keep their organisations functioning during times of significant change. This included environmental and internally generated disruption but was mostly oriented toward foreseeable contingencies. Crisis management (CM) on the other hand, was commonly viewed as the actions taken by the organisation when it was confronted with an unforeseen dilemma or when the level of disruption that it was experiencing moved beyond the parameters of the continuity plan. It is likely that one reason for the low apparent levels of preparedness is the confusion created through the use of different terms and definitions. This lack of clarity makes it difficult to conduct training programmes or transfer knowledge across industries. If BCP and CM are distinct practices, the interviews have demonstrated that there is no clear understanding of the junction point between the two. This is further demonstrated in the discussion that follows.



### 10.2.1 Preventive Actions

The first category of the 1998 questionnaire contained 40 Yes / No questions related to the preventive actions that an organisation currently takes to effectively manage crises. The responses were analysed as simple frequency data with a range of 0 (no use of that preventive action) through to 1 (consistent use by all respondents of that preventive action). Those questions that scored above 0.75 were considered highly used preventive actions and included:

- a. Corporate philosophy supports crisis management (Qu 1 = 0.76)
- b. Continual development and changing of emergency policies and manuals (Qu 10 = 0.76)
- c. Preventive plan for technical redundancy e.g. computer backup (Qu 15 = 0.92)
- d. Modifications in insurance of coverage (Q18=0.83)

Conversely, those questions that scored below 0.25 were considered to be under-employed preventive actions and included only one item; increased relationships with activist group (Qu 33 = 0.22).

It appears from this result that the process of developing and changing emergency policies and manuals may be unrelated to the actual preparedness of the organisation but has become a self-fulfilling function. On closer examination of the interviews, this deduction must be limited to the large, public sector organisations. Several questions showed that preparedness was very selective and was closely linked to those crises that organisations have actually experienced. This provides some rationale for the 0.92 score described in sub paragraph 'c', as this was the highest equal category on *actual* crisis occurrence (along with loss of essential services and environmental damage).

### 10.2.2 Planning and Resourcing by Crisis Phase

The second major section of the questionnaire asked respondents to discuss their organisation's use of the four major phases of crisis management planning, which are:

1. the hazard identification and risk reduction phase,
2. the planning and readiness phase,
3. the emergency response phase, and
4. the recovery phase.

High levels of planning activity were found in the first and third categories (0.85 and 0.84 respectively). The planning and preparedness phase scored 0.73 and the recovery lowest at 0.66. It is possible that the higher planning levels associated with hazard identification, risk reduction and emergency response are due to compliance responsibilities associated with occupational safety and health legislation, as well as several recent education and awareness programmes conducted by civil defence organisations. Qu 1.3 asked the respondent to rank the relative amount of organisational resources allocated to each of the four stages of planning. This ranking followed the sequence of the stages exactly i.e. most to hazard identification and least to the recovery phase.

### 10.2.3 Planning for Specific Types of Crises

Part three of the questionnaire asked for Yes / No indications of whether the organisation plans for a range of 28 different crises which were divided into the categories of:

- a. external economic attacks
- b. external information attacks
- c. breaks in normal operations
- d. megadamage
- e. psychopathology

- f. health factors
- g. perceptual factors, and
- h. human resource factors

Through applying the same scoring criteria previously discussed (i.e. high above 0.75 and low below 0.25) it was found that the results were somewhat inconsistent with earlier comments on preparedness. While scores for computer breakdown planning were high (0.97), two previously unmentioned other issues scored highly; poor security and sexual harassment (both at 0.76). Loss of essential services was expected to rank highly (0.85) given the history of these events and increasing dependency on technology. Work related health problems also scored highly at 0.85 and the interviews revealed this largely to be a compliance response to legislation and in particular the Health and Safety in Employment Act (1992). The low preparedness category indicates that New Zealand organisations place little priority on external economic and information attacks or the possibility of psychopathological behaviour toward them. The issues that scored particularly low and in descending order were as follows:

- a. copycats (Qu 67 = 0.2)
- b. counterfeiting (Qu 55 = 0.19)
- c. bribery (Qu 50 = 0.12)
- d. hostile takeovers (Qu 52 = 0.12)
- e. boycotts (Qu 51 = 0.11)
- f. executive kidnapping (Qu 70 = 0.11)
- g. extortion (Qu 49 = 0.09)

The contradictions are apparent in this result since extortion, bribery and kidnapping all have clear implications for corporate security, which was claimed by respondents to have a high level of preparedness. This could imply that 'security', as it is understood by organisations, is too limited in its definition and may only be considered in regard to such activities as physical access and information protection. In addition, the

literature shows (Hewitt, 1983; Drabek, 1986) that hazard is only a function of vulnerability. Security, in its broadest sense, is one area where specific measures can be implemented that will immediately reduce vulnerability.

### 10.2.4 Hazard Perceptions

The fourth section of the questionnaire set out to examine whether there was any consistency between the crises that organisations perceived as potentially most serious, those they were prepared for and those that they had actually experienced. These results are shown in Table 10.1 :

	Most Serious	Most Prepared For	Experienced last 5 years
Highest	Computer Breakdowns	Computer Breakdowns	Computer Breakdowns
Second highest	Loss of Services	Loss of Services	Loss of Services
Third highest	Environmental Damage	Environmental Damage	Environmental Damage

**TABLE 10.1 – Relationship between Severity, Preparation and Experience of Crises in 1998**

The findings show that organisations tend to be aware of and prepared for crises that they have experienced previously. However, it is unclear whether actual experience affects the organisation’s perception of severity of that event resulting in over-compensatory behaviour. Many of the other 24 categories would have far-reaching effects on the viability of the organisation. Examples of this can be seen in the recent litigation against the tobacco industry and the ongoing damage caused to industries where disputes and damage to reputation have been prevalent. This indicates that perhaps New Zealand managers have too narrow a focus on what BCP actually is and the need for education in this area becomes apparent. The alternative is for legislation to be passed which requires organisations considered critical to the health of the economy to have comprehensive continuity plans or to comply with a mandatory New Zealand Standard on Risk Management (AS/NZS 4360:1999). The requirement for a comprehensive plan may also be

worthy of consideration for insurance companies that are expected to cover losses arising out of these events, many of which could be avoided or mitigated against.

#### 10.2.5 Perception of Coping with Past Crises in 1998

The final question asked for the respondent's view of how well their organisation has been prepared for the crises that it had experienced. On a scale from 1-7, the mean response was 4.86. This was closest to the behavioural anchor labelled "Some Areas Prepared". It is difficult to reconcile this result with the findings regarding preventive management actions and awareness of hazards. The survey results show generally low levels of preparedness and yet respondents claim to have coped with their most recent crisis. Perhaps the measure of what 'coping' means to the respondents is too unclear to enable any real conclusion to be drawn. It is possible that a lack of systems thinking (Senge, 1990) is assisting in the perpetuation of this apparent contradiction.

### 10.3 The Situation in 1999

In 1999, the survey was divided into two sections with the original questionnaire distributed to 528 organisations estimated to have over 50 staff and the remaining 400 to small organisations. While it was accepted that this would create some challenges in later comparisons with 1998 results, the desirability of gaining a higher response from small New Zealand organisations was considered worthwhile enough to outweigh any other disadvantages. It was assumed that the lack of resources mentioned by many small organisations in 1998 might have had the effect of reducing scores for large organisations. Thus, it was likely that the 1999 large organisation result might provide a more accurate picture of BCP practices in those organisations. The data is discussed from the perspective of the two surveys and, where possible, from the perspective of a consolidated 1999 result.

### 10.3.1 Preventive Actions

Applying the same criteria of the upper and lower limits from the earlier study (1998) provided an enlarged list of factors. Preventive actions that scored highly were:

- a. Corporate philosophy supports crisis management (Qu 1 = 0.84)
- b. Continual development and changing of emergency policies and manuals (Qu 10 = 0.85)
- c. Preventive plan for technical redundancy e.g. computer backup (Qu 15 = 0.94)
- d. Modifications in insurance of coverage (Qu 18 = 0.79)
- e. Ranking of most critical activities necessary for daily operations (Qu 20 = 0.77)
- f. Strong top management commitment to CM (Qu 32 = 0.83)
- g. Psychological support to employees (Qu 37 = 0.79)

Three additional factors became significant in comparison to the 1998 survey. This has been the result of relatively small numerical changes, which have taken some earlier results over the threshold criteria. It could also be argued that the exclusion of small organisations from this data contributes to the increase in areas such as ranking of activities, top management commitment and psychological support to employees. These issues all have resource implications and during the interviews, it became clear that time, money and access to appropriate staff were significant limiting factors in smaller organisations undertaking BCP comprehensively.

As in the previous year, the only lower scoring item was increased relationships with activist group (Qu 33 = 0.15). However, this represents a 32% decrease (from 0.22 in 1998), which it is not believed to be attributable to the characteristics of small organisations since this type of activity would be resource constrained as well. This could imply

that there is a hardening of corporate attitudes toward activists or that they are simply not considered a risk to most organisations.

### 10.3.2 Planning and Resourcing by Crisis Phase in 1999

The highest scores in relation to planning were again found in the first and third categories (identification phase = 0.92 and response phase = 0.91). However, there were large percentage increases in the other two phases. In the planning and readiness phase, the score of 0.87 was 18.4% higher than the previous year and in the recovery phase the score of 0.82 was 24.7% higher than 1998. Were this to be just a reflection of the removal of small organisations, which could be argued have limited capacity for planning, then it would be reasonable to expect similar movements across all scores. It is more likely that the awareness created by Y2K and, to a lesser extent the Auckland power crisis, has driven organisations to be more prepared and also to pay more attention to their ability to get back in operation quickly. There was no change to the ranking of organisational resource allocation by crisis phase.

### 10.3.3 Planning for Specific Types of Crises in 1999

In assessing the degree to which respondents planned for specific types of crises the same upper and lower 25% criteria were applied as before.

a. High Scores in Relation to Planning. Crises for which there were high levels of planning were as follows:

- (1) computer breakdowns (Qu 60 = 0.9)
- (2) loss of essential services (power, water etc Qu 63 = 0.92)
- (3) sexual harassment (Qu 71 = 0.79)
- (4) work related health problems (Qu 72 = 0.86)

b. Low Scores in Relation to Planning. There were several crises for which planning levels fell below the 25% threshold as follows:

- (1) extortion (Qu 49 = 0.15)
- (2) bribery (Qu 50 = 0.15)
- (3) boycotts (Qu 51 = 0.16)
- (4) hostile takeovers (Qu 52 = 0.15)
- (5) copyright infringement (Qu 53 = 0.2)
- (6) counterfeiting (Qu 55 = 0.13)
- (7) terrorism (Qu 66 = 0.24)
- (8) copycats (Qu 67 = 0.05)
- (9) off-site sabotage / tampering (Qu 69 = 0.22)
- (10) executive kidnapping (Qu 70 = 0.07)

These results represent the addition of three more crisis types in comparison to the preceding year. Two factors showed significant reductions; copycats (decrease of 73.4% from 1998) and copyright infringement (decrease of 43.7% from 1998).

### 10.3.4 Hazard Perceptions in 1999 – All Organisations

	Most Serious	Most Prepared For	Experienced last 5 years
Highest	Environmental damage	Loss of essential services	Computer breakdowns
Second highest	Major accidents	Computer breakdowns / Major accidents	Loss of essential services
Third highest	Loss of essential services	Environmental damage	Work related health problems

**TABLE 10.2 - Relationship between Severity, Preparation and Experience of Crises in 1999**

In a similar way to earlier findings, the areas that organisations are most prepared for are the ones that they have most recently experienced. This is supported by Mileti's (1999) observation of the



application of the availability heuristic to determine likely event frequency. However, in an apparent contradiction with Mileti (1999) and Pauchant and Mitroff (1992), the data shows that environmental damage was considered the most serious potential threat to the organisation but does not appear on the preparedness list until the fourth ranking. It is numerically well behind the top three.

#### 10.3.5 Perception of Coping with Past Crises in 1999

On the seven-point scale reflecting how well the respondents believed their organisation had been prepared for the last crisis, the consolidated score for all organisations was 4.91. The closest reference label to this would be 'Some Areas Prepared'. The mean score for large organisations was 5.04 and for small organisations 4.77. However, there are problems in the interpretation of these findings. First, the data shows that there are numerous categories of crisis for which the majority of organisations are largely unprepared. This score could well bolster confidence in an organisation, leading to reluctance to commit further resources to BCP. However, the outcome may relate to an event that might not occur again, to good luck or to the intervention of external agencies.

### 10.4 Organisational Group Preparedness

In Chapters 6-8, the survey results were analysed using the criteria of industry group and staff size. The main industry subsets analysed were the public and private sector. Within the public sector, health, central and local government groups' results were also presented. Staff size divisions of under 100, 100 – 500 and greater than 500 staff were applied across all respondent data. By applying the same upper and lower criteria described earlier, it was possible to describe general strengths and weaknesses by organisational type. This was achieved by tabulating and counting the type of preventive management actions and crisis events that fell above and below the arbitrary threshold criteria of 10% above or below the sample mean. The results of this further analysis using 1999 data only are shown below (Table 10.3)

Subset	Preventive Management Actions		Planning for Specific Crises	
	# High	# Low	# High	# Low
Private	2	4	3	6
Public (composite of next 3 subsets – excluded from computation of mean below)	15	1	4	10
<i>Central Government</i>	<i>11</i>	<i>1</i>	<i>6</i>	<i>11</i>
<i>Local Government</i>	<i>10</i>	<i>4</i>	<i>4</i>	<i>13</i>
<i>Health</i>	<i>19</i>	<i>1</i>	<i>9</i>	<i>9</i>
<b>Mean for Groups</b>	<b>10.5</b>	<b>2.5</b>	<b>5.5</b>	<b>9.8</b>
< 100 Staff	3	3	2	13
100-500 Staff	13	1	6	8
> 500 Staff	10	1	6	5
<b>Mean for Size</b>	<b>8.7</b>	<b>1.7</b>	<b>4.7</b>	<b>8.7</b>

**TABLE 10.3 – Comparative Result of High and Low Scores by Organisational Type and Size 1999**

Table 10.3 shows several elements of information. The public sector result, on first examination, appears to be much stronger than that of the private sector, especially in regard to high scores for preventive management actions. Conversely, public sector awareness of and inclusion in planning of specific crises is below that of the private sector as demonstrated by the number of low scores. Within the public sector, the health sector appears to be performing more strongly in both preventive management and comprehensive planning.

Local Government is the weakest of the three public sector components on these criteria.

Staff size also appears to have a relationship with these two functions. Organisations with less than 100 staff have far fewer high scores for preventive management and planning than those with more staff. They also have significantly more low scores than larger organisations. While further research is necessary to confirm this relationship and to identify the specific reasons for it, this does serve to highlight a potential factor for the mitigation of business risk. In Chapter 2, it was proposed that work by Mack & Baker (1961, cited in Mileti et al, 1975) regarding the tendency for economic status to correlate with acceptance of disaster signals could be extended to organisational size. This study has now shown, through the lack of pattern between scores of very large and very small organisations, that this is not likely to be the case.

While the global result has been noted already as being low, some possible risk groups can be identified for further study. All organisations with less than 100 staff appear to be less well prepared for disruption than the remainder of the sample. Based on the data, small local government and private sector organisations appear to be those with the least comprehensive preparedness profile. Large health sector organisations have demonstrated the strongest planning profile of any group in this study.

## **10.5 The Main Reasons for the Current State of Preparedness**

The underlying reasons for the current state of preparedness are important to identify in the development of plans aimed at improving the performance of New Zealand organisations. To determine these, the interviews are examined and discussed in this section, using the same conceptual framework employed in Chapter 3.

### **10.5.1 Culture**

The study found a number of links between BCP behaviour and organisational culture. Three specific types of cultures were identified

in the interviews. These were labelled proactive, fatalistic and compliance cultures. The level of proactivity was not high and with one exception, was a characteristic of small organisations involved in retail operations. While the literature suggests that organic organisational cultures, i.e. low in complexity and formalisation, are often found in smaller or start-up enterprises, this does not correspond with the outcomes of the interviews. Of those organisations considered to have proactive cultures, one was a very large State Owned Enterprise with high levels of formalisation. However, they are well known in New Zealand for their innovative approach to business. This organisation was doing more than most to increase preparedness and was very firm in its 'capability orientation' to BCP. It had employed consultants and was training staff to be able to cope with any possible crisis event. Of the smaller organisations considered proactive, the most obvious difference was the demeanour of the CEO. Two owner-operators interviewed from the retail scene were lively, engaging and knowledgeable about all aspects of their business. They employed between 10 and 20 staff each and their personality had a clear, positive impact on the culture. However, one of these would be described in the literature as a mechanistic organisation. It had been in existence for over 10 years, had many systems, structures and delegations in place and applied them rigidly. The owner was making a significant (in relative terms) investment in BCP and implementing measures at the time of the interview. The second owner admitted that he could see the problems but felt constrained by the proximity of the marketplace i.e. continuous externally generated changes to his business coupled with tight margins made it difficult to apply himself to BCP. He was actively working on the matter of greatest concern for him, which was succession planning to enable him to eventually withdraw from the business with his equity. At the conclusion of the interview, this executive said that the research was a timely reminder of some of his organisational weaknesses and he intended to follow up with some further planning for continuity. Proactive cultures are considered a healthy basis for effective BCP but clearly they are not, in themselves,

enough. The parallels with the learning organisation concept are evident and can be developed for the enhancement of organisational preparedness.

Compliance cultures were the dominant group observed and this term would apply to 16 of the 21 interview subjects. In essence, these organisations displayed attitudes reflective of a culture oriented toward 'playing by the rules'. Many comments were made about audits and the need to achieve a good compliance report. There was also recent corporate memory in many of these organisations of some difficulties associated with a breach of compliance requirements and the desire not to be responsible for a recurrence. None of those interviewed cited any corporate memory of a member of the organisation being remembered positively for bending the rules or operating in a lateral manner. Two organisations had probably developed compliance cultures because of the hazardous nature of the products they used in their businesses. The great concern with this type of culture is that it generates a decision making process that will only prepare for the events that it has to. This compulsion might be as a result of the nature of their product or service, or it could be because of a legislative requirement. It would be impossible to provide meaningful legislation to force executives to prepare properly for all possible causes of disruption and, for these organisations, this means that the preparation is less important than compliance activities.

Comments such as "there's just nothing we can do about it" from the owner of one small organisation underpinned a type of fatalistic culture that believed crisis was just one of the things that had to be dealt with when it arose. It is unclear whether the personality of the owner was consistent with this worldview or the nature of the business (consultancy services) brought a high dependency on external factors. One unique variation in culture came from an organisation that dealt exclusively in Maori issues. The interviewee stated explicitly that Maoridom had a fatalistic view of the world and that this was probably

the reason why there were low levels of formalisation in all business processes and almost no BCP. He further reinforced this point during the scenarios with observations such as "if we need space we just go to a marae" and "if people need support it's just arranged informally...you might find prayer groups in the middle of the office floor for instance". This aspect of biculturalism in New Zealand is intriguing. On the one hand, it could be argued that BCP is therefore a western approach that seeks to control matters that cannot be controlled. On the other hand, it could be challenged as naïve and inappropriate for an organisation that wishes to succeed in the modern marketplace.

#### 10.5.2 Organisational Structure

Of the 21 organisations interviewed, only 2 had a member of their staff dedicated to emergency or hazard management and none had people responsible solely for continuity planning. Pauchant and Mitroff (1992) have highlighted the need for a crisis management unit comprised of key staff that operates as a steering group. They note that crisis preparedness should not increase the complexity of either the structure or operations of an organisation but believe that it would not be very long before large organisations will employ a member of the senior executive team solely or largely on continuity management. The simplest interpretation of this situation is that if no one is given responsibility for an area of management, then it most likely would not be done. Certainly the absence of dedicated staff will mean no budget allocation for the activity unless the organisation has a performance management system that requires continuity to be included as a key result area. This is a matter of organisational design and delegation of work and there is a need for position descriptions to make continuity responsibilities at every level clear.

The size of the organisation appears to have some bearing on the degree of preparedness. While a large organisation has inbuilt redundancy and therefore might be able to redeploy some staff to deal with a crisis, planning for this was limited to the response and recovery phase. It was

suggested by those interviewed that the advantage generated by organisational size and geographic spread for these latter two phases actually worked against the initial phases of hazard identification / risk reduction and planning / readiness. This was believed to be so due to the difficulty in conducting large-scale training or embedding procedures throughout all branches or outlets. However, there are some contradictions in the findings here with the reported levels of planning in both years being highest for phase 1 and 3 and resource allocation highest in phase 1 and 2. Pauchant and Mitroff (1992) note that structural concerns regarding BCP generally parallel those of organisational design in general. Therefore, it could be that the organisations in this study are examples of incorrectly structured companies. In addition, this could be reflective of the inevitable destabilisation and loss of structural integrity that has resulted from successive restructuring since the late 1980s.

#### 10.5.3 Technology

Used in this context, technology relates to the method of conversion of inputs to outputs and can therefore be 'hard' or 'soft' and relate to products or services. However, all organisations revealed high levels of dependency on IT and this offered a unique point of comparison between them all. First, dependence on IT is a prevalent and growing phenomenon for most, if not all, organisations. Since the first batch processing of the 1970s, the subject of data back up and recovery from hardware failure has developed as a sub-discipline within the computer world. The survey data clearly showed that there were high levels of awareness, preparedness and even experience of IT failure. It is concerning to note though, that several large companies saw IT disaster recovery as either separate to other continuity planning or the highest / only priority for the organisation. The Y2K issue has brought the effects of broad spectrum IT failure into the minds of many executives and this has had a positive effect in raising awareness and increasing preparedness for other risks such as loss of utilities. What is less clear

is how long this experience will remain in the forefront of the corporate memory without a similar event occurring in the future or the lessons learned being translated into comprehensive continuity plans. No evidence was found to suggest that organisations were undertaking this activity.

Technological processes that were inherently hazardous, such as the handling or production of chemicals, brought with it much greater organisational care. This was presented not just from a compliance point of view but also in terms of the company's ethical position and the potential damage to reputation that could follow an accident. However, detailed processes such as these seemed to fixate executive attention and in these organisations there was no obvious flow on effect of planning in other areas of the business. Perhaps this can be attributed to lack of capacity to do more, although this is always an executive choice. More likely this is the result of a lack of awareness of the broader hazardscape, the immediacy of the market and the selective attention that arises from the primacy and recency effect (i.e. paying most attention to first or last impressions).

The financial implications of BCP are a factor in levels of organisational preparedness. There is a limit to the time, money and other resources that can be dedicated to BCP and several interviewees suggested that resources committed to that activity had to be justified for removing from others. This is a long-standing budgetary dilemma and is not limited to BCP. At the executive level few discussed dedicated budgets for BCP and the survey shows the scores to be low at 0.28 (1998) and 0.3 (1999 large organisations only). There appears to be little interest in dedicating resources to BCP, despite acknowledgements of its importance and the general recognition that budgets are one of the most important mechanisms for communicating executive intent. Second, the behavioural aspects of budgeting must be considered. Wilson & Chua (1988) note that there are two possible faces to the budget process. Whereas the first is about communicating



input, output and performance information, they describe a second group of theories based around budgets being primarily a political tool for resolving conflict and also as a means for negotiation. This logic can possibly be extended to being a means by which executives who have difficulty coping with complexity and ambiguity, choose not to allocate priorities, objectives or funds for continuity because in so doing, they would be forced to resolve these matters in their own mind. Likewise, the absence of specialist staff or extensive staff training in BCP could be a self-protective measure by executives against the discovery of their own skill deficiency.

The findings of this research show that organisations that work in 'hard' technologies take an engineering approach to their planning and are reasonably well prepared for disruption in their primary activity. They do not extend this discipline to the human resources areas of the business. Organisations in the service sector are oriented toward dealing with the immediacy of the marketplace and the nuances of dealing with people. Every interaction with a client is seen as different and there is little thought to continuity other than the systems used by service delivery staff as part of their work.

#### 10.5.4 Attitudes and Behaviour

This section addresses executive attitudes as well as some that are attributable to all staff. Many common themes regarding executive attitudes emerged from the interviews. These were grouped in Chapter 9 as describing the financial 'bottom-line', normal business practices and attitude to BCP.

The general attitudinal tenor of executives was equally divided between strong, limited and weak support for BCP. Various reasons were provided and these were largely oriented around financial considerations and the need to develop a business case to justify BCP. However, this can only be viewed as a justification for not conducting BCP given that only one large and one small organisation indicated that

they had actually conducted a cost-benefit analysis to determine their continuity needs. Executives from organisations that had a primary responsibility for emergency or continuity services (such as health providers) were more positive about the process of BCP however there was confusion as to the degree that preparedness to help others enabled an organisation to help itself during disruption. In general, there appeared to be over-confidence regarding self-support capability amongst executives from these organisations. Consistent with the findings of Pauchant & Mitroff (1992) over half of the executives interviewed thought that their companies could handle any crisis that occurred despite the lack of a comprehensive continuity plan. Further research regarding the link between executive personality and planning behaviour (Pauchant and Mitroff, 1992) and internally generated crises (Albrecht, 1996) will provide greater understanding of this result.

Executive attitudes to staff and vice versa assist to shape the culture. While many respondents indicated that the CEO and management team were strongly supportive of BCP (83% in 1999 large organisations), some interviewees took the opposite stance making comments that indicated that the top team might claim to be supportive but didn't actually do anything about it. This may have several effects. First, a policy (written or verbal) that has no substance to it is little use to the organisation. Second, it may actually reduce the level of trust between employees and management that might pervade the culture and affect other functions. Most interviewees thought that the staff lacked knowledge in BCP and about half thought that staff would not be at all interested in the subject. These responses suggested a general lack of belief by management in the efficacy of the staff to be involved with BCP. This is concerning as it may be that the executive attitude in regard to BCP is the result of a lack of belief in staff efficacy in other areas of the business.

Finally, one must address attitude to risk itself. In their review of several key works on risk perception, Mileti et al (1975) noted two

points that can be commented on through this research. First, this study concurs with the position of Mileti et al (1975) that people have a consistent tendency to underestimate a hazard. Second, this study contradicts the statement in Mileti's review that more previous experience with the specific hazard provides more accurate perception of it. On the contrary, this study has shown that many organisations overcompensate due to previous experience and therefore waste resources while ignoring other more serious hazards.

## **10.6 The Human Resource Implications**

The results of this study fit well within a human resource management conceptual framework. The accepted components of the discipline include personnel administration, human resource development, organisational development and change, employee relations and communications. Other implications follow after these sections.

### **10.6.1 Personnel Administration**

The process of personnel administration impacts on almost every part of the employee / employer relationship. It includes recruitment, payroll and related issues, holidays, occupational health and safety and workplace issues in general. The most obvious implication of a failure to manage disruption effectively is that the organisation that cannot function at all clearly cannot administer its staff. In looking beyond this, the discussion that follows is centred in the first instance on the upper and lower regions of the survey result.

Preventive actions that were commonly used included a supportive corporate philosophy, development of policy and backup plans for problems such as computer breakdown. Corporate philosophy and policy can impact upon several areas. It will impact on the type of person being recruited for the organisation. The 1999 results show vastly different positions between large and small organisations and this can give some feel for the type of culture i.e. proactive, fatalistic or

compliance, to be developed in each level. However, this could be argued to be true of any type of policy and is not necessarily confined to preparedness for crisis. Preparedness for offsite resumption is again quite different for large and small organisations and the deduction that could be drawn from this is that workers in small organisations are very likely to find themselves poorly administered should computer or manual administration systems be disrupted. This may be caused by a problem at the parent company itself or, with the increasing proliferation of bureau agencies for pay and administration, due to a problem at the latter site. However, bureaux are likely to be far more aware of the risk to their core business and, given that most small businesses do not have the time or resources to manage their own risk effectively, personnel administration through a bureau or other off-site facility is a logical risk reduction measure. As a consequence, the risk reduction factor needs to be taken into account when evaluating the cost of outsourcing these functions.

An interesting implication of the lower threshold result is that the only category identified in both 1998 and 1999 is the lack of relationship building with activist groups (0.22 and 0.15). At the personnel administration level one can deduce that job candidates or staff stating their position as a strong advocate of this practice as part of business continuity planning are unlikely to find support in the top teams of large organisations and even less enthusiasm in small, owner operator New Zealand companies.

The least commonly implemented systems of planning and resourcing were found to be in the recovery phase of a crisis. From a personnel administration point of view this could mean that staff should expect disruption to normal human resource practices for a significant period after the event has occurred and been brought under control. New Zealand organisations do not seem to place a high priority in getting themselves back in business quickly and the effect of this will, at best, be limited ability to manage staff and at worst, loss of jobs. As an

indication of the importance of quickly returning to normal a study in Australia revealed that 65% of businesses and 71% of councils indicated that the longest time they could be out of operation was 24 hours.

In respect to planning for specific types of crises, it seems that employees are the benefactors of governmental policy and education programmes. In the upper region, along with the predictable presence of computer backup was poor physical security and sexual harassment. Heightened awareness of both these issues means that workers are less likely to encounter or involve themselves in these events. However, as was mentioned earlier, New Zealand organisations place little priority on external economic, information or psychopathological attacks. While the first two might on the surface only represent potential breaches of employee privacy, the potential for the entire viability of an organisation to be threatened through such crises poses a real risk to employees and owners alike. The payroll system or the bank account that interacts with it is probably the most valuable target for many external attacks, although personnel data in itself is valuable to competitors in order to target headhunting activities or to benchmark salaries (Albrecht, 1996; Ingles-le Noble, 1999).

Of particular concern are the low levels of planning assigned to bribery, executive kidnapping and extortion. Illegitimate accesses to personnel data enables attackers to learn of home addresses and phone numbers, names and ages of dependants and sometimes, the financial position of the employee. This may be used in terms of psychopathological behaviour against the staff member or their family who will have no warning and may not even understand initially why he or she is being targeted.

#### 10.6.2 Human Resource Development

Human resource development (HRD) is the training, education and development of employees in the attitudes, skills and knowledge

required for accomplishment of their work. In a limited supply workforce, an effective HRD programme is considered essential to the achievement of organisational success but it is sometimes difficult to identify exactly what subject matter needs to be focussed on. This study assists HRD managers and owner operators in considering this question.

What is most obvious from the results of the study is that there is a general lack of awareness and competency in BCP in New Zealand. HRD managers and consultants should consider their role in bringing these subjects to the attention of executives and developing programmes that will meet the needs of their organisations. The greatest need at this time appears to be for small New Zealand organisations, which employ the bulk of the workforce but have little capability to develop and deliver any training at all. For these, public courses, supported by continuity kits containing checklists and job aids are likely to be the most efficient means of skill transfer.

In the first part of the survey results, the preventive actions that are commonly in use were identified. Two of these related to the corporate philosophy and to the continuous development of policies and manuals. As has been previously discussed, it is concerning to find this result on the one hand when overall the state of preparedness of New Zealand organisations is quite poor. The HRD opportunity here lies in the enhancement of understanding as to the actual role, usefulness and application of policies and manuals, i.e. what is required in day to day operations. In short, it could be argued that too few managers understand the need to ensure that policy is converted into action within their organisations. From the HRD perspective, the low preventive management action scores represent a tremendous gap between the actual and desired level of ability in the knowledge, skills and attitudes required for effective BCP.

In terms of the planning and resourcing of crisis preparedness by phase, one potential conclusion that could be drawn is simply that owners and managers are unaware of the structural nature of crisis and therefore

planning was based on their own perceptions. This is supported by the interview data, where several subjects noted at the end that the questions they had been asked had caused them to rethink their approach to business continuity planning. An HRD programme that demonstrated the need to apply balanced resources to all phases of a crisis would make it obvious to managers and staff that without an effectively planned recovery phase, business continuity will be problematic. More emphasis on BCP in New Zealand tertiary courses is a natural corollary of this finding.

The interviews provided further information on HRD practices for BCP. Only one company had an induction programme that was suitable for both routine recruits and also reinforcements brought in during a crisis. While most respondents had some form of routine induction training, eleven had no idea how they would abbreviate and focus it for use by short term, crisis recovery staff. Only three of eighteen organisations conducted routine BCP training. This gap in current training is a clear opportunity for both internal and external HRD specialists.

A final need identified by the conduct of the interviews was that of succession training. Even in the few instances where the successors to senior executives are identified, no organisation indicated the existence of a comprehensive approach to their development. This represents another area for attention by HRD specialists.

#### 10.6.3 Organisational Development and Change

Stallings (1987) notes that disaster, as a time-compressed change event, is a natural laboratory for the study of change. Although this research did not set out to prove the point, it seems possible that quantifying an organisation's preparedness for and ability to manage crisis might well provide some insight into its ability to cope with change in general. This can be considered from many perspectives. First, the culture that is proactive and looks for potential problems before they occur will not only see continuity risk but also changes in the environment and

marketplace and will plan accordingly. Willingness and ability to perform strategic and environmental updates is inseparable from BCP. It is also at the heart of the learning organisation concept (Senge, 1990). The organisation that has a structure capable of aligning policy and putting training in place despite its size or complexity will be able to embed the new skills required for business success. If these organisations cannot create, transmit and embed BCP skills and disciplines then it is likely they cannot do it for any subject. Executives that are able to balance all the conflicting demands of their position are likely to be successful executives. It can be postulated that those who cannot find the time or lack the ability to deal with the ambiguity of BCP will have difficulty with other operational tasks and therefore the organisation will be in difficulty in those areas. Finally, how will the organisation know what its state of readiness for change is unless it tests it and records the lessons learnt? In this regard, the appealing sentiment of the capability orientation to BCP breaks down, for without testing some scenarios, there is no way of knowing what the organisational response will actually be. A combination of capability and scenario orientation is a useful model since, as Stallings suggests, the time-compressed nature of the event provides the learning laboratory. Much more research is required in this particular area to establish firm links but at first consideration, this appears to be a worthwhile investment.

#### 10.6.4 Employee Relations

Since this research was conducted, the Government has made substantial changes to the law that controls employee relations in New Zealand. The Employment Relations Act (2000) (ERA) sets out to provide an environment of good faith between employers and employees. This Act sets in place an intent that was first represented in the Occupational Safety and Health Bill in 1990. Campbell (1991) observes the fact that several western countries, notably Canada and the United Kingdom have taken the line in legislation that workers have the



right to know the hazards faced and participate in determining safety measures. Despite the ERA requiring this in New Zealand, the attitude of employers interviewed indicated a lack of faith in staff or a lack of belief in their ability or interest in these matters. This efficacy gap may require education for both groups or there is a risk of industrial disputes arising, since the legislation contains provision for workers to strike on safety grounds.

#### 10.6.5 Communications

Communications is at the centre of an effective organisation. This applies equally to internal and external audiences. While numerous researchers (Barton, 1993; Fitzpatrick & Mileti, 1994; Albrecht, 1996; Shields, 1996) have warned of the dangers to the organisation of poor communications and observed the need for strong networks, this research shows that these activities are not given a high priority. As the professionals often responsible for communications, HR practitioners have responsibility for highlighting this need to senior executives.

Given the link between organisational value and public opinion, staff at all levels must be trained in the contextual issues surrounding business continuity and also to be able to overcome the reticence toward the media cited as common at all times but particularly during a crisis. In addition, much preparation can be done in terms of pre-determined messages, signage and media choices before these items are required.

### 10.7 Implications for the Human Resource Management Profession

While the implications for staff and human resource professionals have been discussed in the preceding sections, it is considered useful to apply these against an established model. This will enable the establishment of relativity between this study and other work and also follow the development of the HRM requirement before, during and after a crisis. The model chosen for this section is the relationship between task and structure by Dyne (1970) (Figure 2.5).

In his work, Dyne describes four types of task/role labelled:

- a. established (Type 1)
- b. expanding (Type 2)
- c. extending (Type 3)
- d. emergent (Type 4)

#### 10.7.1 Established HR Practices

During initial assessment it might be assumed that the established roles of HR practitioners do not change significantly in the first quadrant of the model. As has been shown in earlier sections these tasks include personnel administration, human resource development, organisational development and change management, employee relations and communications. However, there are two other factors likely to impact on this position. First, the HR profession itself is changing and, if the role of HR in strategic management is accepted then routine tasks change as a result. Second, as noted by Pauchant and Mitroff (1992), crisis management should be a natural part of strategic management and this will therefore involve the senior HR executive. If organisations are progressing toward better crisis preparedness as part of natural improvement, the HR professionals will need to upskill themselves in the knowledge required to participate in this area of strategy.

#### 10.7.2 Expanding HR Practices

Regular tasks performed in a new structure are those that lie in the second quadrant. Having already established what is considered the normal range of HR tasks, it is necessary to describe what constitutes a new structure. This could be brought about through enlargement of the HR function as a result of crisis planning activities or because contractors or other temporary HR staff have been brought in to assist with a disruptive event. In this instance, the HR professional will need to be able to quickly form the group into a cohesive unit, establish internal communication channels and set down internal procedures for

the conduct of the recovery. While some may do this as a normal part of their function, many HR professionals operate on their own or in small teams and will have had little or no experience in these skills in a compressed timeline. During this period, it will be equally important to ensure that all resources do not become absorbed into the crisis event and that normal HR functions are re-assigned and supervised. If this is not done then new crises, such as industrial disputes, can quickly arise in unrelated areas of the organisation. Outsourcing some functions for a short period of time may be the most suitable option for HR practitioners in a temporary surge (i.e. requirement for a sudden increase in staff) situation. Contracts with external providers of HR services both before and during a crisis need to have clauses that enable the HR practitioner to suspend or terminate without penalty such matters as routine training courses. Employment agreement negotiations must also have a mechanism for suspension without penalty during these times. Some communications to stakeholders will be predictable (such as a bank branch after a hold-up closing for the investigation) and these communications should be prepared in advance and kept on file to save time during the crisis.

### 10.7.3 Extending HR Practices

This quadrant includes tasks that will be required when non-regular requirements are placed on the old structure. Such an occurrence might be when the HR Manager is required to act for the first time as the organisational spokesperson to the media during a crisis. Alternatively, it could be because the senior executives have been killed or injured in a vehicle accident and the most senior person available is the HR Manager. To prepare for these circumstances, signed delegations, succession planning and cross training, coaching and mentoring are all important strategies through which the HR Manager can prepare him or herself for the situation.

10.7.4 Emergent HR Practices

Emergent HR practices are those that occur through the requirement to undertake non-regular roles in a new structure. These practices, such as the secondment of the HR Manager to a national crisis centre or corporate office to coordinate recovery operations, are almost impossible to predict. The best preparation is that of the individual emotionally and cognitively i.e. a generic ability to take on new, previously unexpected tasks. The competent HR professional needs to develop their ability to handle high levels of complexity and ambiguity, to remain of flexible mindset and maintain high levels of optimism. Personal development programmes for HR professionals should include these types of subjects.

10.8 Summary of Findings using the ‘Onion-Skin’ Model

The Onion-Skin Model of Crisis Management (Pauchant & Mitroff, 1992) was introduced in Chapter 4 (Figure 4.3). Because of its broad applicability and the fact that its developers are also those on whose work this study is adapted from, this model has been selected in order to group and compare some principle findings. This model was designed to provide a foundation for the determination of whether an organisation was crisis prone or crisis prepared and it is this state that underpins the human resource implications of the research. It is felt that this model will also provide HR practitioners and academics with a transportable framework for future development in this area. Tables 10.4 to 10.7 below highlight the similarities and differences of the two studies against the four layers of the Onion-Skin Model, beginning at the outer layer. 1999 data provided is that for large organisations only.

Pauchant & Mitroff	This Study
1. The concept of reliability is no longer held as a key function of management	1. Integration of crisis management in statements of corporate excellence = 40% in 1998 and 39% in 1999. Seen as an operational matter by most
2. Crisis management planning is handicapped by its divergence of	2. No general agreement on definitions and particularly the difference between

<p>definitions</p> <p>3. Crisis management should be part of strategic management but generally is not</p> <p>4. The stakeholder group applied by most organisations is too limited to address crisis management issues</p> <p>5. Top management needs to be involved with crisis planning.</p> <p>6. Emergent crisis management is inevitable but thinking through issues in advance is necessary for this to work.</p> <p>7. A failure to manage any phase of a crisis is likely to cause or escalate the crisis itself.</p> <p>8. Crises can be clustered and planning must occur for each cluster type to protect the organisation properly.</p>	<p>crisis management and BCP</p> <p>3. Integration of crisis management in strategic planning process = 62% in 1998 and 68% in 1999.</p> <p>4. Increased collaboration or lobbying among stakeholders = 34% in 1998 and 35% in 1999</p> <p>5. Top management commitment to crisis management = 71% in 1998 and 83% in 1999.</p> <p>6. Ranking of most critical activities for daily operations = 65% in 1998 and 77% in 1999.</p> <p>7. Existence of Identification Phase Plan = 85% and 92% Existence of Planning Phase Plan = 73% and 87% Existence of Response Phase Plan = 84% and 91% Existence of Recovery Phase Plan = 66% and 91%</p> <p>8. Conduct of crisis simulations = 51% in 1998 and 67% in 1999.</p>
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**TABLE 10.4 – Organisational Strategy (Level 4) Comparisons**

Pauchant & Mitroff	This Study
<p>1. An effective Crisis Management Unit structure is essential</p> <p>2. Complex organisational structures make crisis management more difficult</p> <p>3. Special training, tasks and rewards related to crisis management assist its proper function</p> <p>4. Innovative approaches to structure during times of crisis to assist recovery</p>	<p>1. Creation of a Crisis Management unit or team = 54% in 1998 and 75% in 1999. Creation of a dedicated budget for crisis management = 28% in 1998 and 30% in 1999</p> <p>2. Executives from some large organisations reported size and complexity to be a hindrance in disseminating crisis policy and training.</p> <p>3. Training and workshops in crisis management = 51% in 1998 and 67% in 1999. Continual development of emergency policies and manuals = 76% in 1998 and 85% in 1999.</p> <p>4. Use of new communication technologies and channels = 68% in 1998 and 70% in 1999</p>

**TABLE 10.5 – Organisational Structure (Level 3) Comparisons**

Pauchant & Mitroff	This Study
<p>1. Organisational culture is a subset of societal culture</p> <p>2. Organisational cultures are sometimes used by individuals to protect themselves from personal anxiety.</p> <p>3. Effective managers in a crisis situation are consciously aware of their personal defence mechanisms</p> <p>4. Crisis prone organisations allow dangerous fallacies to become part of the culture especially ‘our size is our protection’ and ‘someone else will rescue us’.</p>	<p>1. Some executives believed that the Laissez faire New Zealand approach had served them well and would continue to One organisational culture was founded in Maoridom and held a fatalistic view of crisis consistent with this race’s worldview.</p> <p>2. Monitoring of cultural perceptions across employee groups = 39% in 1998 and 38% in 1999.</p> <p>3. Stress management and management of anxiety = 68% in 1998 and 63% in 1999 Psychological support to employees = 69% in 1998 and 79% in 1999.</p> <p>4. Relationships with activist groups = 22% in 1998 and 15% in 1999. Acceptance of whistleblowers = 36% in 1998 and 34% in 1999 Knowledge of criminal behaviour = 40% in 1998 and 37% in 1999.</p> <p>5. Symbolic recall and corporate memory of past crises = 37% in 1998 and 46% in 1999.</p>

**TABLE 10.6 – Organisational Culture (Level 2) Comparisons**

Pauchant & Mitroff	This Study
<p>1. Managers must face the emotional reality of crisis to be able to plan for it. Those driven only by self-interest cannot cope.</p> <p>2. Humans generally do not change unless they are obliged to.</p> <p>3. Personality disorders in managers translate into crisis proneness.</p>	<p>1. Increased visibility of the human and emotional impacts of crisis = 57% in 1998 and 60% in 1999.</p> <p>2. Clear increase in levels of preparedness for those events that have been recently experienced, to the exclusion of more serious possibilities.</p> <p>3. Unable to comment in clinical terms but impressions during interviews showed some potential for attitude and personality preference to be connected to level of organisational preparedness, especially in compliance oriented cultures.</p>

**TABLE 10.7 – Individual Character (Level 1) Comparisons**

These comparisons demonstrate that New Zealand organisations rate above average on structural matters but below average on cultural issues. The research did not set out to establish any points regarding individual psychology although the connections between this and organisational culture described in the literature do suggest that there is potential for some relationship. The points raised can be grouped into macro and micro levels. In the macro level are the environmental, cultural (societal) and imposed economic factors that direct or influence the BCP behaviour of executives. At the micro level are the straightforward managerial choices that can and should be made. These include observance of the phased and systematic approach from signal detection through to recovery from a crisis and learning from it.

### 10.9 Conclusions

The findings from this research have revealed that New Zealand organisations are not well equipped to manage the total hazardscape approach advocated in much of the literature. However, in that regard, these organisations are similar to those studies in the United States.

Some interesting patterns occur. The questionnaire data, especially that which relates to the main themes developed by Pauchant and Mitroff (1992) indicates

that New Zealand organisations have a reasonable understanding and activity rate on most preparatory actions. On the other hand, there are significant gaps in knowledge relating to the potential crises that might befall an organisation and this is particularly so in the case of external economic and information attacks and psychopathological behaviour. Organisations mostly prepare for the events that they have recent experience of despite there being more serious or more likely contingencies that they are aware of. This is contrary to Drabek's (1986) theory of the 'lightning strike' that suggested people did not think that a crisis could happen to them twice.

The implications for human resource management are broad. However, they can be grouped as described into macro and micro level issues. This study has focussed on the micro level issues that directly relate to an organisation's awareness of, willingness to and competence in preparing for and managing disruption. At that level there is scope for improvement in most facets of managerial performance and much of this work should and will fall to the HR practitioner. Pauchant and Mitroff (1992) note that any weakness or non-observance of one of the key phases of crisis management practice can have the effect of 'multiplying by zero'. Therefore, an average all-round performance is preferable to a 'strong / weak' profile.



## **Summary and Conclusions**

### **11.1 Introduction**

This final chapter will provide a summary of the research, present key conclusions, and highlight the implications of the research from a human resource management perspective. This will enable the results to be more applicable to a wider community while suggesting areas for future research to those practitioners in the discipline.

### **11.2 Summary of the Study**

This study set out to provide a baseline for the improvement of organisational performance in BCP in New Zealand. It sought to do this through the collection and analysis of quantitative and qualitative data (not previously captured in New Zealand) and the implications of this research for the working population and, in particular, HR practitioners.

#### **11.2.1 Statement of the Problem**

An initial examination of the literature revealed that there were no substantial studies of New Zealand organisations upon which to base a strategy for the development of HR practices arising from organisational disruption. Intuitively, it was thought that the *laissez faire* attitude toward life (that is part of the New Zealand stereotype), would pervade into BCP practices and the consequences of this for staff would be injurious, if not catastrophic, in personal and economic terms. Comparable studies overseas, though not proven to be cross-culturally valid, indicated that levels of preparedness would be low, but gave few clues as to the implications for staff or HR management. The knowledge gaps needing to be addressed therefore were:

- a. the current status of BCP in New Zealand business,

- b. what perceptions New Zealand managers have about BCP, and
- c. the implications for staff in general and HR practitioners in particular.

#### 11.2.2 Statement of the Procedures

An 86 question postal questionnaire, based on that used by Mitroff and Pearson (1993) in the United States was sent to 1000 New Zealand organisations. Limited reliability and validity data was available for this survey instrument and this is accepted as a potential weakness in the methodology. The survey respondents were generally representative, in terms of demographic spread, of the disposition of New Zealanders as shown in the 1996 Census. This survey was used in both 1998 and 1999, with a specific, small organisation version being used in addition to the original in the latter year. Between the distribution of the two surveys, interviews were conducted with 21 volunteer executives from the original 1998 list of respondents.

#### 11.2.3 The Research Questions

The three specific research questions for this study were as follows:

- a. to what extent are New Zealand organisations aware of and prepared for the range of crises that could befall them?
- b. what are the main reasons for this awareness or preparedness or lack thereof?
- c. what are the human resource implications of the current situation?

### 11.3 Conclusions

This research has confirmed many well-reported aspects of crisis management and business continuity planning. It has also discovered new findings that relate to both the New Zealand and international BCP environment. This section will

address the major conclusions grouped around the three research questions, followed by a general discussion of the main points.

#### 11.3.1 Conclusions Regarding the Current New Zealand Situation

The situation regarding BCP in New Zealand is concerning. While there are some hazards for which organisations are well prepared, e.g. computer breakdown and loss of essential services, there are many more where the extent of preparation is minimal or non-existent. In particular, these include external economic and information attacks and psychopathological behaviour. Exposure to such threats is commonplace in the world and well reported in the media. Those subjects interviewed acknowledged that New Zealand organisations are part of the global marketplace and it is logical to assume that disruptive events occurring overseas will also occur in this country. This supports the review of findings by other researchers (Mileti et al, 1975) that people tend to consistently underestimate a hazard until they have experience of it.

In the first major section of the survey, respondents were asked to indicate the preventive management actions they employed in their organisations. The most important conclusion to be drawn from this is the significance of the disjunction between policy making and BCP process. Whereas management activity rated highly (e.g. 76% felt that their corporate philosophy supported crisis management and the continual development and changing of emergency policies and manuals) interview feedback was more ambivalent. Approximately two thirds of those interviewed felt that there was a limited or weak connection between the policy-making statements of their executives and the reality of BCP in the organisation. If policy has little actual meaning in regard to BCP it is possible that this is also the case for other functions. However, this analysis tends to limit the generalisation to larger public sector organisations as this research has shown that policy making has a low priority in private sector and smaller organisations.

The analysis of planning and resourcing by phase has shown that efforts oriented toward the return of an organisation to normal operations (the recovery phase) lags behind the other three phases by a considerable margin. While identifying hazards, mitigating against them or dealing with them as they occur are all important, other research (Musson & Jordan, 1999) has shown that most organisations need to return to normal operations within a short period of time (as little as 24 hours) in order to survive. New Zealand organisations do not appear to have considered this eventuality.

Perceptions of hazards and the effect that these have on planning behaviour have been commented on frequently in the literature (Hewitt, 1983; Drabek, 1986; Mileti, 1999). Research by Pauchant and Mitroff (1992) noted that even though executives could identify the event that would be most serious for their organisation, they tended to be more prepared for some other event. This research has produced variable support for these propositions. In 1998, the top three events in severity, experience and preparedness were the same. The 1999 survey produced some mismatching between the three lists. For instance, environmental damage was listed as most serious but was fourth in the order of preparedness by a reasonable margin. This might indicate a change of focus through the period of the Y2K bug. However, the more important conclusion is in regard to previous literature reviews (Mileti et al, 1975), which suggested that people tend to have a more accurate perception of hazards when they have previous experience of them. This research suggests that New Zealand executives overcompensate for hazards that they have experienced before, perhaps to the exclusion of other, potentially more serious events. This overcompensation may bring a sense of comfort to those involved in the planning but possibly makes the organisation more vulnerable to other threats. It is also contrary to Drabek's (1986) 'lightning strike' principle that suggests people do not think a traumatic event could happen to them twice. Clearly, many New Zealand executives do think this could happen.

Certain patterns appeared in the survey data regarding types of organisations and a summary of these was provided in Table 10.3. Measured against the means for all organisations, private sector organisations are less prepared for disruption than those in the public sector. Smaller organisations show lower levels of preparedness than large organisations. Therefore, it follows that small, private sector organisations are high risk within a generally high risk New Zealand business environment. It appears that compliance and audit requirements create the impetus for the public sector to prepare more fully. However, within this group, the local government subset is noticeably weaker than central government and health sectors. It follows that small, local government agencies will also carry higher risk profiles than others in the public sector. Large health providers generally have the strongest profile for both preventive management and planning for specific crises however the global results indicate no cause for complacency there either. The earlier assumption that the work by Mack & Baker (1961, cited in Mileti et al, 1975) regarding the tendency for economic status to correlate with acceptance of disaster signals in relation to organisational size was not borne out by this research.

#### 11.3.2 Conclusions Regarding the Reasons for the Current Situation

The conclusions from this research are developed largely from the results of the interviews and subsequent interpretation of these against the survey data and the literature. The greatest single difficulty in establishing the dialogue for the interviews was in relation to language. There are no generally agreed definitions or meanings for commonly used terms in the field of BCP and this makes it difficult to conduct and maintain in-depth discussion on the matter. It is essential that this be corrected in the future.

While much has been written on the subject of executive personality, it was not within the scope of this research to examine this phenomenon. However, the link between executive personality and culture has been

frequently commented on and this research identified several cultural issues. The interviews identified three main types of organisational culture that were labelled proactive, fatalistic and compliance. These offered some interesting contradictions and insights. The cultures considered proactive were largely those of the smaller organisations. While they appeared to be in touch with the marketplace and keen to do everything possible to stay in business, their size, as indicated earlier, tended to preclude the availability of resources for comprehensive BCP. Compliance cultures can be likened to the mechanistic culture well reported in the literature. This was most often found in the public sector although not exclusively. These organisations were typified by high apparent levels of paper planning leading to a confidence of ability to cope with any contingency. This did not translate into comprehensive planning across the hazardscape defined in the questionnaires and therefore a potential ‘false sense of security’ was associated with these types of organisations. Fatalistic cultures seemed to be associated directly with organisations oriented toward the Polynesian culture. This is an interesting finding as it may suggest that increasing movement toward the bicultural partnership enshrined in the Treaty of Waitangi might result in an increase in the incidence of this type of culture in New Zealand organisations.

Only 2 of the 21 organisations interviewed had a member of their staff dedicated to emergency or hazard management. 54% of 1998 respondents and 75% of 1999 (large organisation) respondents claimed to have a crisis management unit or team. Given that volunteers for interviews are likely to be the most interested in the subject, one must consider the empirical result with some caution. Alternatively, it may be again a case of misinterpreted definitions in that the survey respondents may have been referring to the person who conducted routine data backups rather than a BCP specialist. Nonetheless, this highlights the need for a “champion” within organisations to ensure that the resources and political influence required to make BCP effective is put in place.

The size of organisations appears to have some bearing on the preparedness. This is concerning in the New Zealand context given the high percentage of people who are self-employed or who work in small organisations. However, some large organisation respondents indicated that they found it difficult to implement any new policy or skill because of the inertia generated by their size and geographic spread. This latter issue suggests the need for higher levels of resourcing and possibly skill in the human resource development section of the organisation.

There is little doubt that most organisations are becoming increasingly dependent on information technology (IT). Of concern, however, is the finding from this research that many executives view IT disaster recovery planning as a separate, and in some cases more important feature of general BCP. Human resource professionals and their relationship with their IT colleagues are likely to become critical to the resolution of this misalignment of resources. Otherwise, there is the potential for IT to become the pre-eminent consumer of BCP resources and the organisation to fail on another front. There are some challenges associated with this given the amount of resources that were invested in preparing for the “Y2K bug” only to have very little disruption as a consequence. HR practitioners must address this issue urgently to ensure that, not only are senior executives kept interested in business continuity but that the balance is struck between IT and other elements of continuity planning.

There is a clear dysfunction between the performance management process in general and budgetary process in particular with regard to BCP. The survey indicated low levels of commitment to a dedicated BCP budget (28% in 1998 and 30% in 1999 large organisations). Interviewees confirmed that there was few dedicated cost elements related to BCP. An effective performance management system that includes BCP as a key result area was not discussed in any of the interviews, however it is only through this mechanism that funds can be assigned and accountability ensured.

The general attitude of executives to the subject of BCP was variable. While interviewees were helpful, there were a number of apparent rationalisations evident such as the need for a business case to support its inclusion, when no cost benefit analysis had been used to exclude it.

Of greater concern was the general lack of belief in the efficacy of staff to understand or engage in BCP processes. This type of attitude, should it pervade other functional aspects of the organisation could underpin difficult employment relations, limit spending on HRD and constrain the New Zealand economy. Just as Stallings (1987) view of disaster as a change laboratory might offer insights into general change capability in organisations, this lack of belief in staff efficacy might signal a general malaise in the New Zealand organisation.

### 11.3.3 Conclusions on the Implications for HR Practitioners

Academic research in the business environment is most useful when the results can be applied immediately. In order that this research provide HR practitioners with clear guidance when seeking to convince executives of the need to pay more attention to BCP, this research question addressed matters of immediate relevance to practitioners.

In earlier sections it has been shown that BCP in New Zealand organisations is not well developed. Moreover, BCP is an essential element of organisational behaviour and development that touches on every facet of the human resource function. Therefore, the profession cannot ignore its relevance.

The most important implication arising from this study is that of the significant gap between the need and the reality of knowledge and skills. This gap appears to exist at all levels in the organisations surveyed, from Board of Directors and Chief Executive Officers, to senior management, supervisors and staff. HR practitioners themselves appear to lack a complete understanding of the field of BCP and their role within it. Therefore, self-development, as well as the development



of management and staff is considered essential. For small organisations, where dedicated HR professionals are not usually employed, this will require additional training by HR training providers. Consultants need to acknowledge the requirement and create programmes for in-house delivery that may consist of simple job aids, checklists and 'crisis kits'. Senior executives need to be appraised of the usefulness and applicability of policies and manuals and the need to co-ordinate their use with staff training, crisis exercises and simulations. Special induction programmes, that can accommodate the needs of temporary staff brought in to assist during crisis are largely non-existent and need to be developed without delay. Succession training for those likely to have to take on increased responsibility during crisis is also not well managed at the moment and this is another HRD task that the profession needs to address.

This research has shown that organisations that work in 'hard' technologies tend to take a system approach to the continuity of their technology but lack preparedness for human issues. Conversely, those in the service sector are more oriented toward their people and clients but less well prepared for system failure. This serves as a general warning to HR practitioners in different industries in that the requirement and expectation on them regarding BCP will vary from group to group. No generic approach or training will necessarily apply and they will need to upskill themselves in a wide range of approaches to BCP. Further to the sector-oriented approach, this study has found that executives that work in organisations where the prime function is the provision of emergency service (e.g. hospital or ambulance) have an over-estimated view of the ability of their organisation to use its resources to ensure its own continuity. HR professionals can assist in running regular 'reality checks' through workshops and simulations.

It has been shown in the survey data that most organisations place the lowest priority for planning and resources on the recovery phase. However, the need for an offsite location for staff to work, perhaps for

a sustained period of time is clearly within the HR range of responsibilities. Likewise is the provision of a reliable workforce, notwithstanding that some regular staff may not be able to or not wish to attend work. It is imperative that HR staff arrange for back-up premises and staff in advance of a crisis. Moving many services, such as payroll, to bureaux providers may transfer the risk. However, HR staff must ensure that interconnecting and outsourcing agencies have viable BCP processes built into their contracts. Whether communications is outsourced or not, communications with staff (and perhaps other audiences) is the responsibility of HRM. As much analysis and preparation of messages, media channels and other key elements of the crisis communications plan should be prepared in advance.

Employee relations have many points of relevance to BCP. This is not only in regard to provision of workplaces and whether or not workers should be paid when the organisation cannot provide work (although this needs to be included in contract negotiations). The Employment Relations Act (2000) provides employees with the right to strike on the grounds of safety and it is possible that poor continuity practices might lead to this eventuality. HR staff should be seeking to avert this through assurances of sound continuity plans.

There is little doubt that the HR profession is not prepared at this time to engage in the subject of BCP. This research has shown that HR practitioners must develop themselves to prepare for the requirements of the current situation as well as that which will be placed on them during future contingencies. In doing so, the general knowledge and skill level of executives and staff must be improved. HR policies and procedures should be revised or established to formalise these practices where possible.

#### 11.3.4 General Conclusions

In order to progress this field, a sustained research programme is necessary that not only tracks trends in BCP in New Zealand but is able to compare these, in the form of a benchmark, with practice internationally. In support of such a longitudinal study, it is recommended that 1999 data should be taken as a starting point.

While the development of trends in BCP will assist the HR profession to improve organisational performance, there is still much to learn about the reasons why this state of readiness is as it is. To answer this question requires an examination of two other key areas. These relate to the attitudes of New Zealand executives to risk in general and BCP in particular.

#### 11.4 Implications of this Study

The literature on BCP shows that the extent of preparedness for BCP in other countries is generally low. Studies in crisis behaviour and management psychology reveal consistent patterns of inaction in relation to executives making effective choices on continuity planning for their organisations. In producing what is believed to be the first comprehensive review on the current state of preparedness for disruption in New Zealand organisations, the thesis has contributed to the set of empirical evidence. The surveys have generated data that will assist with future examinations of New Zealand organisations preparedness. The interviews provide a unique insight into the attitudes, emotions and perceptions of the types of senior executives that form the decision making body of New Zealand corporates.

The interviews have provided much more than just a clearer picture of the current state of BCP in New Zealand. Through using discourse analysis combined with the modelling technology developed in the field of knowledge engineering, this research has provided a structural basis for future research in determining the empirical relationships between the concepts portrayed by the interviewees and the state of their organisations. This may well extend far

beyond the field of BCP and provide an insight into the general state of an organisation's ability to deal with all change. Executive predisposition that can be established during recruitment may be produced from such a finding, as will future training needs for individuals or course curriculum requirements for business courses.

The modelling process is useful as the basis for the development of knowledge bases and this domain model will be helpful to those seeking to develop expert or intelligent tutoring systems. Tools such as these are particularly useful where there are scarce human resources with sufficient expertise.

In the preceding chapter, it has been demonstrated that the HR implications are far-reaching and range from recruitment to training, performance management to communications, and employee relations. There is virtually no area of a worker's life that is not potentially impacted on by the findings of this research.

### **11.5 Suggested Further Research**

The following are suggested areas for future research activities that have originated directly from this research:

- a. confirmation of cross-cultural validity and reliability of the revised survey instrument,
- b. continuation of the longitudinal study on the state of organisational preparedness in New Zealand in order to generate trends, and
- c. development and application of a new survey to establish specific executive attitudes toward BCP.

### **11.6 Final Summary**

This last chapter commenced with a restatement of the problem, research questions and the manner in which they were examined. It was found that the state of organisational preparedness for disruption in New Zealand is generally weak. While there are some areas that could be said to be well prepared, these are generally limited in their scope and largely reflect those events that the

organisation has previously experienced or for which legal compliance and audit forces them to prepare. When the analogy of the 'chain only being as strong as its weakest link' is applied, the situation is grim. New Zealand organisations are largely unprepared for external economic or information attacks or for dealing with psychopathological behaviour. Far too little emphasis is placed on getting back into business as quickly as possible (the recovery phase) despite the literature showing the potentiality for a delayed return to normal operations being closely connected to early organisational failure.

Staff have little input into BCP and few protections from the implications of this situation. Given the nature of employment relations in New Zealand, it seems inevitable that, if executives do not take a leadership role in improving the preparedness of their organisations, unions or legislators will step in and fill this role as they become more aware of the potential effects of this situation on employees and New Zealand communities.

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# **APPENDIX 1**

## **SAMPLE LETTER AND SURVEY FOR ALL RESPONDENTS IN 1998 AND LARGE ORGANISATIONS IN 1999**



**MASSEY  
UNIVERSITY**

Private Bag 11222  
Palmerston North  
New Zealand  
Telephone +64-6-356 9000  
Facsimile +64-6-350 5000

**FACULTY OF  
BUSINESS STUDIES**

DEPARTMENT OF  
HUMAN  
RESOURCE  
MANAGEMENT

24 August 1998

**Dear Human Resource Manager**

My name is Simon Ewing-Jarvie and I am a PhD student in the Department of Human Resource Management at Massey University. My doctoral research is concerned with the extent to which New Zealand organisations prepare for and deal with crisis. My research is being supervised by Dr Ian Laird and Professor Philip Dewe from the Department of Human Resource Management at Massey University. They can be contacted on (06) 350-4374 and (06) 350-4268. I can be contacted on (021) 440 412.

Your organisation was selected from public records and you are being invited to be part of this research and to complete the attached questionnaire. The questionnaire should take about 20-30 minutes to complete. The questionnaire consists of two parts. In Part One you are asked to indicate what crisis preventative actions your organisation currently adopts. In Part Two you are asked to indicate what type of crisis your organisation currently plans for. For some recipients not every question will be relevant. It is assumed that filling out the questionnaire implies consent. You have the right not to answer any question. The completed questionnaire can be returned to me in the stamped addressed envelope provided.

The returned questionnaires will be seen only by myself and my supervisors. The data will be analysed in such a way that it will not be possible to identify individual responses. You are not asked to identify yourself or your organisation. Your responses will be anonymous and when reported only summarised information will be used. The results will be used as part of my thesis and may also be published in academic and professional journals.

In phase two of the research I am interested in interviewing managers regarding how their organisation prepares for dealing with crisis. If you would like to participate in this phase of the research then I have enclosed a separate sheet for you to complete. This can be returned to me in the second stamped addressed envelope so that it is quite separate from the questionnaire. Once I have received this information I will contact you about participating in the second stage of the research. If you would like to discuss the questionnaire or this research with me then I can be contacted on (021) 440 412.

Yours sincerely

Simon Ewing-Jarvie

# 1998 SURVEY ON

## BUSINESS CONTINUITY PLANNING

### Preventive Actions

- 1.1 Please indicate with a cross whether your organisation has adopted any of the following crisis management (CM) preventive actions. (Not all will apply to every organisation):

	YES	NO	Analysis
<b><i>Category A: Strategic Activities</i></b>	■	■	
Corporate philosophy supports CM			1
Integration of CM in statements and notions of corporate excellence			2
Integration of CM in strategic planning processes			3
Inclusion of outsiders on board, CM unit team			4
Training and workshops in CM			5
Crisis simulations			6
Diversification and portfolio strategies for CM			7
<b><i>Category B: Technical and structural activities</i></b>	■	■	
Creation of a CM unit or team			8
Creation of dedicated budget for CM			9
Continual development and changing of emergency policies and manuals			10
Computerized inventories of plant's employees, products and capabilities			11
Creation of a strategic emergency room or facilities			12
Reduction of hazardous products, services and production processes (e.g. tamper-resistant packaging)			13
Improved overall design and safety of product and production			14
Technological redundancy (such as computer back-up)			15
Use of outside expert and services in CM			16
<b><i>Category C: Evaluation and Diagnostic Activities</i></b>	■	■	
Legal and financial audit of threats and liabilities			17
Modifications in insurance of coverage			18
Environmental-impact audits			19
Ranking of most critical activities necessary for daily operations			20
Early warning signal detection, scanning, issues management			21
Dedicated research on potential hidden dangers			22
Critical follow-up of past crises			23
Stringent maintenance and inspection schedule			24
<b><i>Category D: Communication Activities</i></b>	■	■	
Media training for CM			25
Major efforts in public relations			26
Increased information to local communities			27
Increased relationships with intervening stakeholder groups (e.g. police, media)			28

Increased collaboration or lobbying among stakeholders			29
Use of new communication technologies and channels			30
Dedicated phone numbers for recall and consumers			31
<b>Category E: Psychological and Cultural Activities</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Strong top management commitment to CM			32
Increased relationships with activist group			33
Improved acceptance of whistleblowers			34
Increased knowledge of criminal behaviour			35
Increased visibility of the human and emotional impacts of crisis			36
Psychological support to employees			37
Stress management and management of anxiety			38
Symbolic recall and corporate memory of past crises			39
Monitoring of cultural perceptions across employee groups			40

### Crisis Phases

	YES	NO	
<b>1.2 : Do your organisation's general crisis plans cover:</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
The Hazard Identification and Risk Reduction Phase			41
The Planning and Readiness Phase			42
The Emergency Response Phase			43
The Recovery Phase			44
<b>1.3 : Please rank the extent to which your organisation devotes resources to the four phases above (1 = most resources, 4 = least resources)</b>	<b>ENTER RANK HERE</b>		
The Hazard Identification and Risk Reduction Phase			45
The Planning and Readiness Phase			46
The Emergency Response Phase			47
The Recovery Phase			48

### Types of Crises

1.4 Please indicate with a cross whether your organization plans for each of the following types of crisis:

	YES	NO	
<b>Category A: External Economic Attacks</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Extortion			49
Bribery			50
Boycotts			51
Hostile takeovers			52
<b>Category B: External Information Attacks</b>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Copyright infringement			53
Loss of information			54
Counterfeiting			55
Damaging rumours			56

<b>Category C: Breaks</b>	■	■	
Recalls			57
Product defects			58
Plant defects			59
Computer breakdowns			60
Operator errors			61
Poor security			62
Loss of essential services (power, water etc)			63
<b>Category D: Megadamage</b>	■	■	
Environmental damage			64
Major accidents			65
<b>Category E: Psychopathology</b>	■	■	
Terrorism			66
Copycats			67
On-site sabotage/tampering			68
Off-site sabotage/tampering			69
Executive kidnapping			70
Sexual harassment			71
<b>Category F: Health Factors</b>	■	■	
Work-related health problems			72
<b>Category G: Perceptual Factors</b>	■	■	
Damage to reputation			73
<b>Category H: Human Resource Factors</b>	■	■	
Executive succession			74
Poor morale			75
Industrial disputes			76

1.5 Of the crises listed in the previous question which three are potentially the most serious for your organisation? (in descending order of severity)

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

1.6 Of the crises listed in question 1.4 which three is your organisation most prepared for and why? (in descending order of preparation level)

- a. \_\_\_\_\_
- \_\_\_\_\_
- b. \_\_\_\_\_
- \_\_\_\_\_
- c. on next page

Analysis

77

78

79

80

81

82

c. \_\_\_\_\_  
\_\_\_\_\_

1.7 Of the crises listed in question 1.4 which has your organisation actually experienced in the last 5 years? (if there have been more than 3 please list them in descending order of severity).

a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_

1.8 How well prepared has your organisation been for the crises it has experienced? (circle one of the upright posts only)

Totally Unprepared	Mostly Unprepared	Some Deficiencies	Sufficient To Cope	Some Areas Prepared	Most Areas Prepared	Totally Prepared

83

84

85

86

**Any other comments you wish to make about your organisation and its crisis preparedness?**

That completes the questions on crisis preparedness. Please complete the data sheet over the page which is essential to our use of your responses.

## BACKGROUND DATA TO ACCOMPANY THE 1998 SURVEY ON BUSINESS CONTINUITY PLANNING

*Questions 1 - 3 are optional. They do not form part of the survey analysis but assist us in accounting for data and clarifying responses if necessary.*

1. Name of person completing survey: \_\_\_\_\_
2. Position title: \_\_\_\_\_ Phone number: \_\_\_\_\_
3. Organisation: \_\_\_\_\_

### Questions about your organisation

(The survey data is invalid without these responses)

4. The geographic region your **main facility** is based in: \_\_\_\_\_
5. Other geographic regions you have significant facilities in: \_\_\_\_\_
6. What is the size of the staff in the organisation for which you have responded? (include temporary and casual staff as well)
  - a. Under 20 staff ☐
  - b. 21 to 100 staff ☐
  - c. 101 to 500 staff ☐
  - d. 501 to 1000 staff ☐
  - e. 1001 to 2000 staff ☐
  - f. Over 2000 staff ☐
7. What industry group does your organisation belong to?
  - a. Automotive ☐
  - b. Investment (Property) ☐
  - c. Computers, Office equipment ☐
  - d. Industry and Community Services ☐
  - e. Oil, Gas, Minerals, Electricity ☒
  - f. Chemicals, Pharmaceuticals ☐
  - g. Communications, Media ☐
  - f. Diversified Corporate ☐
  - g. Research ☐
  - h. Transport, Ports, Tourism ☐
  - i. Manufacturing ☐
  - j. Retail, Wholesale, Distribution ☐
  - k. Primary Production ☐
  - l. Food (Processed), Beverages ☐
  - m. Banking, Finance ☐
  - n. Insurance, Superannuation ☐
  - o. Health ☐
  - p. Central Government ☐
  - q. Local Government ☐
  - r. Other:..... ☐
8. What type of incorporation i.e. private, public, society etc: \_\_\_\_\_
9. Last reported annual turnover (if appropriate): \_\_\_\_\_

THANK YOU! Please return this survey in the Freepost envelope enclosed



# 1998 SURVEY ON BUSINESS CONTINUITY PLANNING

## PHASE 2

The survey form that you have just completed is the first phase of this study. It seeks to ascertain what NZ organisations are currently doing in relation to business continuity practices. Phase 2 of this study is designed to ascertain why these results are so and what the logical consequences are. From this, it is intended that a range of management interventions can be developed that will assist NZ managers conduct business better.

Data collection in phase 2 is via a range of structured interviews. These will last approximately one hour and will be conducted at a time and place to suit the participants. It is absolutely vital to the success of this research that a broad cross-section of managers is interviewed. I hope that you will make yourself available for this phase by completing the section below and returning it separately in the second reply paid envelope enclosed. If you require more information about phase 2 prior to agreeing, feel free to call me on (021) 440 412.

*I agree to you contacting me regarding phase 2 interviews for the 1998 Survey on Business Continuity Planning. I understand that I can withdraw this agreement at any time. My details are given below:*

Name: _____	
Title: _____	
Organisation: _____	
Address for mail: _____	
Contact Phone No: _____	
Fax No: _____	Email: _____
Signature: _____	

THANK YOU! Please mail this to us in the second reply-paid envelope

## **APPENDIX 2**

### **PRE-INTERVIEW LETTER TO INTERVIEW VOLUNTEERS**



**MASSEY  
UNIVERSITY**

Private Bag 11222  
Palmerston North  
New Zealand  
Telephone +64-6-356 90  
Facsimile +64-6-350 56

**FACULTY OF  
BUSINESS STUDIES**

DEPARTMENT OF  
HUMAN  
RESOURCE  
MANAGEMENT

Date

«FirstName» «LastName»

«JobTitle»

«Company»

«Address1»

«City»

Dear «FirstName»

## **BUSINESS CONTINUITY PLANNING: RESEARCH ON NZ ORGANISATIONS**

In late 1998, you participated in a mail survey that forms part of my PhD research concerning the extent to which New Zealand organisations prepare for and deal with crisis. At that time, you agreed to participate in interviews that form the second part of this research examining organisational perceptions toward, and implications of business continuity practices. Dr Ian Laird and Professor Philip Dewe from the Department of Human Resource Management are supervising my research at Massey University. They can be contacted on (06) 350-4374 and (06) 350-4268.

In the next week or so, I will be contacting you to arrange a time to meet. Interviews are designed to last between 30 and 45 minutes. I recognise that much has changed since you first submitted your survey and if it is no longer suitable for you to undertake an interview, you are free to withdraw. If this is so, please call me on 04 298 9887 or 021 440 412. Alternatively, you can let me know at the time that I call.

At the start of the interview, you will be asked to confirm your agreement to participate by signing a simple consent form. Only my supervisors and myself will see the interview data. The data will be analysed in such a way that it will not be possible to identify individual responses. You are not asked to identify yourself or your organisation. Your responses will be anonymous and when reported only summarised information will be used. The results will be used as part of my thesis and may also be published in academic and professional journals.

Otherwise, I look forward to talking with either you or your PA soon and meeting with you before very long.

Yours sincerely

Simon Ewing-Jarvie

# **APPENDIX 3**

**INTERVIEW INFORMATION SHEET**

**CONSENT FORM**

**AND RESEARCHER'S**

**GUIDE NOTES**

***RESEARCH INTO THE HUMAN RESOURCE IMPLICATIONS OF BUSINESS  
CONTINUITY PLANNING PRACTICES IN NEW ZEALAND***

**INTERVIEW INFORMATION SHEET**

My name is Simon Ewing-Jarvie and I am a PhD student in the Department of Human Resource Management at Massey University. My doctoral research is concerned with the extent to which New Zealand organisations prepare for and deal with crisis. In particular I am seeking to better understand the human resource implications of current preparedness levels. Dr Ian Laird and Professor Philip Dewe from the Department of Human Resource Management are supervising my research at Massey University. They can be contacted on (06) 350-4374 and (06) 350-4268. I can be contacted on (021) 440 412.

In late 1998, as a result of your organisation being selected from public records, you participated in a mail survey, which sought to establish the current level and type of business continuity planning activities in NZ organisations. At that time, you sent in a second form volunteering to participate in phase 2 of the research, a structured interview examining organisational perceptions toward, and implications of business continuity practices. Naturally, much may have changed for you since then and so you are further invited to participate in this stage of my research.

You are free to decline this invitation or elect to withdraw from the research at any time. You may decline to answer any particular question. To assist my study of the findings, I intend to use an audio tape recorder throughout this phase for later transcription. You have the right to request that the audiotape be stopped at any time during the research. While there are no inherent risks to you in this study, you should advise me at the outset if you have previously suffered any personal trauma as a result of an organisational crisis in the past. This may constitute grounds to discontinue the interview and we can discuss this at the time. You are free to ask questions about the study at any time during participation.

This interview is scheduled to last between 30 and 45 minutes and involves you answering 23 questions. All but 2 of these questions are either open ended or yes/no style and I will record the result on a marking guide. Two questions involve crisis scenarios supplied by me in which you will be asked about the implications for your organisation of 16 different human resource issues. Should you wish a summary of the findings of this research will be available on completion at no cost. The audiotapes will be transcribed by an independent secretarial service who will be required to sign a confidentiality agreement regarding the material. Once the transcriptions have been checked, the audiotapes will be erased.

Only my supervisors and myself will see the interview data. The data will be analysed in such a way that it will not be possible to identify individual responses. You are not asked to identify yourself or your organisation. Your responses will be anonymous and when reported only summarised information will be used. The results will be used as part of my thesis and may also be published in academic and professional journals.

Yours sincerely

Simon Ewing-Jarvie

**RESEARCH INTO THE HUMAN RESOURCE IMPLICATIONS OF  
BUSINESS CONTINUITY PLANNING PRACTICES IN NEW ZEALAND**  
*Simon Ewing-Jarvie - Researcher*

**INTERVIEW CONSENT FORM**

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researchers on the understanding that my name or the name of my organisation will not be used without my permission. (The information will be used only for this research and publications arising from this research project using summarised data).

I agree / do not agree to the interview being audio-taped.

I also understand that I have the right to ask for the audio-tape to be turned off at any time during the interview.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signed: .....

Name: .....

Organisation: .....

Date: .....

## INSTRUCTIONS FOR CONDUCT OF PHASE TWO STRUCTURED INTERVIEW

Time allotted : 60 minutes – 45 min max with interviewee

### **Preliminaries:**

1. Before proceeding the interviewer is to ensure that the following conditions have been complied with:
  - a. The interview room should have adequate lighting, space and ventilation, with a minimum of noise from external sources. Ensure phones are diverted.
  - b. The interviewee should be calm and not distracted. Check for fatigue, illness, emotional upset or any other condition that might contaminate the results of the interview.
  - c. Give the candidate the option to withdraw if they have been involved in any traumatic incident or organisational crisis in the past.
2. If any of these required conditions cannot be met, the interview should be postponed or, in extreme situations, cancelled.

### **ESTABLISHING A RAPPORT**

3. Spend approximately five minutes in general conversation establishing a level of comfort in the interview. Inviting the interviewee to talk about themselves through the use of open questions oriented toward family and personal interests most easily does this.

### **EXPLAIN THE STRUCTURE OF THE INTERVIEW**

4. The text in italics should be read out verbatim:

*You are about to take part in a structured interview that forms part of a study into the human resource management implications of organisational crises.—This interview will take approximately 45 minutes. You are free to withdraw or to decline to answer any questions at any stage in the interview.*

*In addition to receiving this specialist feedback, you will also receive a personal copy of this research when it is complete. If you have any questions now or at any stage during the interview, please raise them.*

### **ENDING THE INTERVIEW**

5. *AT THE COMPLETION OF THE INTERVIEW, WIND DOWN BY DISCUSSING RELATED BUT LOW KEY MATTERS SUCH AS OTHER RESEARCH PROJECTS THE INTERVIEWEE HAS BEEN INVOLVED IN, THEIR OWN UNIVERSITY EXPERIENCES, HOW THEIR ORGANISATION CONDUCTS RESEARCH AND DEVELOPMENT. THE INTERVIEWEE WILL PROBABLY BE*



*QUITE TIRED AND THIS PART SHOULD BE DESIGNED TO BE A LIGHT, 'INTELLECTUAL WARM-DOWN'.*

## **ACCOUNTING FOR EVERYTHING**

6. Ensure that you have all the material you arrived with. Leave nothing behind with the interviewee. In particular check that you have the following:
  - a. the interview script and filled out copy of the interview response sheet,
  - b. any documents that the interviewee provided, and
  - c. any working notes that you made at the time.
7. Thank the interviewee for his or her time.

## **Questions for Phase 2 Interviews into NZ Business Continuity Planning Practices**

### **Phase 1 Review**

1. How did you find the experience of filling in the Phase 1 BCP survey?
2. What aspects did you find difficult?
3. Why were those aspects particularly difficult?
4. What aspects did you find interesting?
5. Why were those aspects particularly interesting?
6. A. Can you recall the crises you identified your organisation as being ready for?  
B. If so, why are those the ones you chose?
7. A. Can you recall the crises you identified as being the most serious for your organisation?  
B. If so, are they the same as those listed in the previous question?
8. (If Qu 7 = NO) Why are the two lists different in your opinion?
9. A. Can you recall the crises you cited your organisation as having experienced in the last 5 years?  
B. If so, how do they compare with your lists for preparedness and severity?
10. Why are there differences between the lists in your opinion?
11. On the scale I am showing you please indicate where you would like your organisation to be in terms of preparedness?

### **Interviewee Perceptions**

12. How important is BCP to you?
13. How seriously is BCP taken by your organisation?
14. Who or what are the impediments to increasing crisis preparedness?
15. How likely is it that these will be removed?
16. Who or what are the sustaining features of crisis preparedness?
17. How likely is it that these will remain?

### **Human Resource Implications**

18. Do you have HR policies covering crisis or vice versa?
19. (If Qu 18 = YES) Can I take a copy of these?
- 20/21. For the following two scenarios (select total and partial organisational failure scenarios from list) would you tell me what the implications for your organisation are in the following areas:
  - A. succession procedures for management and staff who are not available
  - B. transfer of staff from elsewhere in NZ
  - C. arrangements with temp agencies in NZ to supplement own staff
  - D. arrangements with other businesses or consultancies in NZ to supply staff
  - E. arrangements to get staff from overseas
  - F. contacting staff who are not at work
  - G. work scheduling and relief
  - H. orientation and training of new staff
  - I. monitoring staff status and availability
  - J. pay, expenses and compensation – how long does pay continue in total failure?
  - K. family support / child care
  - L. temporary staff housing and meals

- M. administration of routine personnel
- N. alternative workplace arrangements – OSH and staff benefits
- O. physical danger, violence, megadamage and security
- P. psychological trauma

Interviewee Closing Perceptions

- 22. In what ways has this study changed your views of business continuity planning?
- 23. What other comments would you like to add?

**GO TO CLOSURE SCRIPT**

Proforma Response Sheet  
Phase 2 Interviews into NZ Business Continuity Planning

Name: Title: Date:

Organisation:

Phase 1 Review

	Extremely Difficult	Mostly Difficult	Somewhat Difficult	Neutral	Somewhat Enjoyable	Mostly Enjoyable	Extremely Enjoyable
1.							

Additional Commentary ☐

2. 

---

---

Additional Commentary ☐

3. 

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---

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Additional Commentary ☐

4. 

---

---

---

Additional Commentary ☐

5. 

---

---

---

Additional Commentary ☐

6.  
A. YES NO  
B. 

---

Additional Commentary

☐

7.
- A.

YES

NO
- B.

YES

NO

Additional Commentary

☐

8.

Additional Commentary

☐

9.
- A.

YES

NO
- B.

Not at all the same

Slight match

Fewer matches than differences

50/50

More matches than differences

Almost the same

Exactly the same

Additional Commentary

☐

10.

Additional Commentary

☐

11.
- Totally Unprepared

Mostly Unprepared

Some Deficiencies

Sufficient To Cope

Some Areas Prepared

Most Areas Prepared

Totally Prepared

Additional Commentary

☐

12.
- Not at all important

Of very little importance

Less important than most policy

Neutral

More important than most policy

Very important

Vitally important

Additional Commentary

☐

13.

Not at all seriously

Very little seriousness

Less serious than most policy

Neutral

More seriously than most policy

Very seriously

Totally seriousness

Additional Commentary

☐

14.

Additional Commentary

☐

15.

Not at all likely

Possible but unlikely

Likely if policy change

50/50

Quite likely

Very likely

Guaranteed

Additional Commentary

☒

16.

Additional Commentary

☒

17.

Not at all likely

Possible but unlikely

Likely if policy change

50/50

Quite likely

Very likely

Guaranteed

Additional Commentary

☐

18.

YES

NO

Additional Commentary

☒

19.

YES

NO

Additional Commentary

☐

20.

Scenario number:

A-P.

Use free text response pages/ tape recorder

21.

Scenario number:

A-P.      Use free text response pages / tape recorder

22.

Not at all changed	Minor changes only	Not in any significant	See need to re-evaluate	Moderately changed	Substantially changed	Totally changed
-----------------------	-----------------------	---------------------------	----------------------------	-----------------------	--------------------------	--------------------

Additional Commentary

☒

23.

Additional Commentary

☐

**Date:**

**Page no:**



## **BUSINESS CONTINUITY PLANNING RESEARCH**

### **PHASE 2 INTERVIEWS**

#### **MAJOR FAILURE SCENARIOS FOR Question 21**

##### **Scenario No 1: Earthquake**

*Suitable for large scale production or processing oriented companies*

A strong earthquake has struck during a midweek night in the vicinity of your major facility. In a near miracle, your production/processing capability has escaped mostly unscathed and that is just as well because you have a large contract underway which has tight penalties for delay. Unfortunately, the administration buildings and cafeteria are only 50% usable and the computer network is completely out of action. The nearby city, from which you draw most of your staff, has been badly affected. The Chief Executive, who was a member of the Volunteer Fire Brigade, was killed by falling debris while assisting others to escape from a damaged building.

The next day about 30% of your staff report for work. Several of them have been up all night in temporary shelters with their families but on hearing that the plant was still OK, decided to come in anyway. Your own family, now settled in a Red Cross shelter, urges you to go in to work to see what can be done.

## **BUSINESS CONTINUITY PLANNING RESEARCH**

### **PHASE 2 INTERVIEWS**

#### **MAJOR FAILURE SCENARIOS FOR Question 21**

##### **Scenario No 2: Road Accident**

*Suitable for medium or small companies in any industry*

It has been a good year and as promised, the CEO puts on an all expenses paid holiday for staff that involves a three-day bus outing, visiting tourist sites and staying in hotels along the way. Because the business has to keep running, the trip is organised into two groups with half going in the bus while the others 'mind the shop'. They are scheduled to change around with a day handover in between.

As one of the senior staff running the business during the first outing, you are stunned to get a phone call from the Police advising you that the bus carrying your company group has been involved in a serious accident. Details are sketchy but it seems as though there are at least two dead and many seriously injured. While you are digesting the news, families of staff members on the trip start to phone in. They have heard about an accident on the news and want to know if it is the company group or not.

## **BUSINESS CONTINUITY PLANNING RESEARCH**

### **PHASE 2 INTERVIEWS**

#### **MAJOR FAILURE SCENARIOS FOR Question 21**

##### **Scenario No 3: Industrial Dispute with Pathological Behaviour**

*Suitable for all companies*

Despite your best efforts at maintaining a harmonious work environment, a small, disaffected portion of your workforce has formed an employee group and has become increasingly vocal about their demands for the employment contract. You have made a very fair offer and in any case can't afford to pay them any more. They are not interested in performance based incentives either.

Without warning, this group goes on a wildcat strike and picket your building. On the first day a few workers make it through the picket line but many turn back. After about an hour's work, the power goes off in the whole building and the electricians that you call tell you that the main box (outside in the alley), was sabotaged. The press is having a field day and the police don't seem very interested. One of your loyal workers phones you that night to inform you that threats are being made against the families and homes of those who go to work during the strike. In light of this he apologises but declines to come in tomorrow or to lay a complaint. The next day there is insufficient staff to run your business and the picket continues.

## **BUSINESS CONTINUITY PLANNING RESEARCH**

### **PHASE 2 INTERVIEWS**

#### **PARTIAL FAILURE SCENARIOS FOR Question 22**

##### **Scenario No 4: Year 2000 Computer Problems**

*Suitable for all companies*

The company finds that during its return to work after the end of year holiday period that, despite assurances from many manufacturers, there are Y2K related issues with the computers. The automated in-house and also the IRD payroll system will not run and simply puts up an error message saying “data outside allowable parameters”. The customer invoicing system starts generating back accounts for every customer. You thank your lucky stars that you arranged for an analyst/programmer to be available for just such a contingency.

Unfortunately the A/P you contracted was hedging his bets and offered himself to many companies on the same basis. When you phone him he informs you that they have been offered better money elsewhere. The press is reporting that salaried computer staff have ‘vanished’ and contractors very scarce.

## **BUSINESS CONTINUITY PLANNING RESEARCH**

### **PHASE 2 INTERVIEWS**

#### **PARTIAL FAILURE SCENARIOS FOR Question 22**

##### **Scenario No 5: Succession of Management**

*Suitable for smaller, owner-operator companies or partnerships*

The company was running very well when the untimely death of the Managing Director stunned the owners. Not only had she been an excellent head of the company but was also the major shareholder. In her will she left her entire shareholding to her husband who had previously been uninvolved in the business.

Against the expectations of the remaining shareholders, he insisted on becoming involved (although he knew little about the business) and argued that, because he was the majority shareholder, he should be Managing Director in his wife's stead. This idea has not found favour but while the debate continues, the business is losing momentum.

## **BUSINESS CONTINUITY PLANNING RESEARCH**

### **PHASE 2 INTERVIEWS**

#### **MAJOR FAILURE SCENARIOS FOR Question 22**

##### **Scenario No 6: Hostile Foreign Competitor**

*Suitable for medium to large companies*

A major player in your business, who has branches all over the world, has decided to enter the NZ market. They have a reputation for uncompromising business practices that turn out to be true.

You find that many of your best staff are being headhunted by the new arrival for money that you cannot match. Worse still, some proprietary information relating to a new initiative designed to counter their entry into the market has been leaked (sold?) to them. There are rumours about town that, far from the truth, you are about to go under and some contracts are not coming your way. You are understaffed and not sure who to trust in your organisation. Market share is steadily declining.

# **APPENDIX 4**

## **SURVEY TO SMALL ORGANISATIONS IN 1999**

1999 SURVEY ON  
BUSINESS CONTINUITY PLANNING  
FOR SMALL NZ ORGANISATIONS

Preventive Actions

1. Please indicate with a tick if your organisation has adopted any of the following crisis management (CM) preventive actions.

Tick Here	Crisis Management Activity	Analysis
	Written crisis management policy or pre-arranged outside advisory assistance	1
	Regular staff training on most likely crises	2
	Audits of hazards (beyond OSH requirement)	3
	Employee programmes to assist in stressful times	4
	Pre-positioned equipment and checklists for likely crises	5
	Plan for resuming business if place of work was unavailable	6
	Disaster insurance	7

2. For those items in question 1 where you have not ticked the box, please briefly describe here why you have not addressed those issues:

.....

.....

.....

3. Please list the three types of crises that are potentially most serious for your organisation (in descending order of severity):

a. ....

b. ....

c. ....

8

9

10

4. Please list the three type of crises that your organisation is most prepared for and why (In descending order of severity):

a. ....

b. ....

11

12



c.	.....	
	.....	13
	.....	
5.	What crises has your organisation actually experienced in the last 5 years. (If there have been more than 3 please list them in descending order of severity):	
a.	.....	14
b.	.....	15
c.	.....	16
6.	How well prepared has your organisation been for the crises it has experienced? (circle one of the upright posts only):	17
Totally Unprepared	Mostly Unprepared	Some Deficiencies
Sufficient To Cope	Some Areas Prepared	Most Areas Prepared
Totally Prepared		

7. Any other comments you wish to make about your organisation and its crisis preparedness?

That completes the questions on crisis preparedness. Please complete the data sheet over the page, which is essential to our use of your responses.

**BACKGROUND DATA TO ACCOMPANY THE 1999  
SURVEY ON BUSINESS CONTINUITY PLANNING  
FOR SMALL NZ ORGANISATIONS**

*Questions 1 - 3 are optional. They do not form part of the survey analysis but assist us in accounting for data and clarifying responses if necessary.*

1. Name of person completing survey: \_\_\_\_\_
2. Position title: \_\_\_\_\_ Phone number: \_\_\_\_\_
3. Organisation: \_\_\_\_\_

**Questions about your organisation**

(The survey data is invalid without these responses)

4. The geographic region your **main facility** is based in: \_\_\_\_\_
5. Other geographic regions you have significant facilities in: \_\_\_\_\_
6. What is the size of the staff in the organisation for which you have responded? (include temporary and casual staff as well)

- |                   |                          |                    |                          |
|-------------------|--------------------------|--------------------|--------------------------|
| a. Under 10 staff | <input type="checkbox"/> | d. 51 to 75 staff  | <input type="checkbox"/> |
| b. 11 to 20 staff | <input type="checkbox"/> | e. 76 to 100 staff | <input type="checkbox"/> |
| c. 21 to 50 staff | <input type="checkbox"/> | f. Over 100 staff  | <input type="checkbox"/> |

7. What industry group does your organisation belong to?

- |                                    |                          |                                    |                          |
|------------------------------------|--------------------------|------------------------------------|--------------------------|
| a. Automotive                      | <input type="checkbox"/> | i. Manufacturing                   | <input type="checkbox"/> |
| b. Investment (Property)           | <input type="checkbox"/> | j. Retail, Wholesale, Distribution | <input type="checkbox"/> |
| c. Computers, Office equipment     | <input type="checkbox"/> | k. Primary Production              | <input type="checkbox"/> |
| d. Industry and Community Services | <input type="checkbox"/> | l. Food (Processed), Beverages     | <input type="checkbox"/> |
| e. Oil, Gas, Minerals, Electricity | <input type="checkbox"/> | m. Banking, Finance                | <input type="checkbox"/> |
| f. Chemicals, Pharmaceuticals      | <input type="checkbox"/> | n. Insurance, Superannuation       | <input type="checkbox"/> |
| g. Communications, Media           | <input type="checkbox"/> | o. Health                          | <input type="checkbox"/> |
| f. Diversified Corporate           | <input type="checkbox"/> | p. Central Government              | <input type="checkbox"/> |
| g. Research                        | <input type="checkbox"/> | q. Local Government                | <input type="checkbox"/> |
| h. Transport, Ports, Tourism       | <input type="checkbox"/> | r. Other:.....                     | <input type="checkbox"/> |

8. What type of incorporation i.e. sole trader, partnership, pte coy etc: \_\_\_\_\_

9. Last annual turnover (optional): \_\_\_\_\_

THANK YOU! Please return this survey in the Freepost envelope enclosed