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Chapter 15

MANAGING COMPANY RISK AND RESILIENCE THROUGH BUSINESS CONTINUITY MANAGEMENT

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INTRODUCTION

Fundamental to societal resilience is the capacity of companies to sustain key business processes and functions despite adverse impacts upon their activities. In this context, any disturbance, whether from a failure of a key supplier or a natural disaster, becomes a crisis when it reveals an unambiguous failure of management actions and policy (Folke, Colding & Berkes, 2003; Levene, 2004). Levene, in an address to the World Affairs Council, argued, in the context of the fact that a lack of business preparedness accounted for about 25 percent of the $40 billion lost as a result of the September 11, 2001 terrorist attacks, for greater emphasis to be paid to developing company capacity to adapt to interruption to business activity from disasters. He also cited evidence to the effect that an estimated 90 percent of medium to large companies that can't resume near-normal operations within five days of an emergency will go out of business, and that 40 percent of companies hit by a disaster go under within five years. The fact that less than half of U.S. corporations have crisis-management plans in place illustrates both the scale of this problem and the urgent need for businesses to take action to remedy this problem. Doing so involves business continuity management.

How businesses manage risks and develop resilience is crucial for their survival (Elliott, Swartz & Herbane, 2002; Rose & Lim, 2002). Business continuity management (BCM) is a management process by which businesses can assess risk and develop plans and strategies to mitigate these risks (Hill, 1996; Paton, 1999; Shaw & Harrald, 2004). It influences societal resilience by contributing to sustaining the economic vitality of an area and continuity of employment. BCM also contributes to the effectiveness of recovery activities (e.g., ensuring the availability of building material suppliers, building contractors, welfare agencies). Business continuity planning and management thus has significant implications, not just for individual firms, but also for the wider society.

It is, therefore, important that businesses develop strategies to manage risk through improving their resilience. This chapter discusses those practices that comprise an effective business continuity plan and the procedures and competencies required to sustain organizational activity in the event of large-scale natural hazard activity.

BUSINESS CONTINUITY AND DISASTER

Shaw and Harald (2004) define business crisis and continuity management as comprising those practices that focus and guide the decisions and actions required to prevent, mitigate, prepare for, respond to, resume, recover, restore, and transition from a crisis event. Furthermore, they argue that such activities should be consistent with its strategic objectives and comprise activities that enhance resilience to disruption.

Business Resilience and Continuity

Resilience describes the capacity of the people and systems that facilitate organizational performance, to maintain functional relationships in the presence of significant disturbances as a result of a capability to draw upon their resources and competencies to manage the demands, challenges and changes encountered. Comfort (1994), in her study of risk and resilience in relation to the Northridge earthquake in the United States in 1994, describes resilience as a capacity to reorganize resources and action to respond to actual danger after it occurs.

A capability to reorganize resources will not just happen. Nor will it be possible to conduct such a reorganization during, or even immediately prior to, a crisis. Rather, it requires the systematic appraisal of the conditions that could necessitate change, and the development of the systems and staff competencies capable of facilitating continuity under atypical crisis conditions. While it is impossible to influence the likelihood of natural hazard activity, it is possible to manage risk by altering its consequences through better planning and preparedness. It is the latter activities that confer upon an organization and its employees a resilient capability to maintain levels of functioning during and following a disaster.

To create a resilient organization, business continuity planning requires three core elements. First, it requires that management and information systems are available (by safeguarding existing systems and/or arranging for substitutes) to facilitate continuity of core business operations (Davies & Walters, 1998; Duitch & Oppelt, 1997; Lister, 1996). Second, it requires crisis management systems and mechanisms for managing the transition between routine and crisis operations (Paton, 1997a; Shaw & Harrald, 2004). Competencies and systems must be designed to ensure continuity of functioning under the atypical crisis operating conditions necessitated by a large-scale natural disaster.

Disaster associated with natural hazard activity, such as that likely to accompany seismic, volcanic or flooding events, will occur at the upper end of the events that need to be considered within the continuity planning process (Reiss, 2004). Under these circumstances, for example, businesses must plan to deal with prolonged and/or intermittent loss of utilities (e.g., power, water, gas), conduct core operations away from their HQ, deal with casualties and deaths amongst staff, reconcile work with the family needs and concerns of staff, and ensure that staff fulfilling disaster continuity roles can deal with the high demands over prolonged periods of time (possibly several months).

The last point illustrates how continuity planning involves ensuring the availability of staff capable of operating these systems under challenging circumstances (Paton, 1999; Shaw & Harrald, 2004). They must thus be specifically selected and trained for these roles. Attention will also have to be directed to ensure that appropriate crisis management systems and procedures are in place. Transnational organizations

would also have to accommodate the cultural dimension within this process.

This chapter examines how BCM strategy contributes to sustaining business activity following significant natural hazard activity and, thereby, to the social and economic resilience of a community. It commences with an overview of business continuity management. It then discusses the processes and competencies required to realize its benefits and the issues that must be considered to mobilize plans should disaster strike.

BUSINESS CONTINUITY PLANNING

BCM is a proactive and holistic management process that aims to ensure the continued achievement of critical business objectives (Standards Australia, 2003). It provides an iterative, structured process that incorporates planning, risk identification and management, training and the development of disaster recovery plans and procedures. BCM is built around understanding what the organization must achieve (its critical objectives), identifying the barriers or interruptions that may prevent their achievement, and determining how the organization will continue to achieve these objectives should interruptions occur. In order to achieve these objectives the following processes are recommended (Elliott et al. 2002; Business Continuity Institute, 2002):

- Understand the critical processes required to ensure the supply of goods and/or services to customers, provide income for the business, and maintain employment.
- Identify potential risks to the business in the context of its business, its geographical position (e.g., susceptibility to natural hazards), or its position in the marketplace.
- Assess the impact on the business of potential crises. Often referred to as "Business Impact Analysis," this involves assessing risk in terms of financial loss.
- Consider strategies and options available to mitigate identified risks to the business. These could include, for example, increasing the amount of insurance to transfer the risk; improving the structure of the building to withstand severe weather; installing an efficient back-up system for the computers so that data can easily be

retrieved.

- Draw up a business continuity plan that defines the action/s the business will take in the event of a disaster.
- Train staff and embed a culture of BCM within the business. Staff participation is an essential component of BCM. It helps inculcate continuity planning into the culture of the organization (i.e., BCM is "the way we do things round here"). It contributes to staff morale by heightening awareness that the business is concerned with their welfare. It also facilitates good communication within the business. The latter plays an important role in risk assessment and identifying realistic mitigation strategies.
- To accommodate changes in personnel, business practices or the external environment, the plan should be tested, maintained and revised.

Business Continuity Planning: What it Means in Practice

The underlying precepts of BCM contribute significantly to organizational resilience. The first is that BCM is a very individual process; there is no "one size fits all" complete solution. Each business must decide what its key processes are, what particular risks it faces, what the impact of particular interruptions would be on its business, and what resources are available to it to assist in developing contingency and disaster recovery plans. The individual business should ensure that these plans accommodate the interests of its stakeholders and its social responsibilities. This means that the business can focus its resources, both human and financial, in more cost-effective ways and ensure that plans and recovery measures are adapted to suit its particular circumstances. For example, Morgan Stanley, the investment bank, was the largest tenant in the World Trade Center in New York and they realized after the previous attack on the Center in 1993 that they were very vulnerable to future terrorist attacks. Accordingly they established contingency and continuity plans which were tested rigorously and regularly. As a result, the company began evacuating its employees to its three recovery sites one minute after the first plane flew into the World Trade Center and they lost only seven employees (Coutu, 2002).

The second precept is that BCM is about getting the business "up and running again." It is not intended as a method for returning the

business to exactly the same state as it was before the disaster. One of the constituents of organizational resilience is the ability to deal with change and a disaster presents a major change for an organization. BCM facilitates managing change because it focuses on maintaining the key processes of the business, with the continuity plan providing a structure for the physical recovery of the business. It thus provides a basis for the business to move forward after a disaster. Depending on the extent of the disaster, the business has an opportunity to learn from the experience and to change its practices if necessary (see below). A survey of small businesses affected by disaster in the United States concluded that the extent to which the owner recognizes and adapts to the post-event situation is a significant predictor of survival. Those who continue to do business under the old paradigm, assuming that the community will return to pre-existing conditions, have all the cards stacked against their long-term survival (Alesch, Holly, Mittler & Nagy, 2002).

One of the main features of BCM is the inclusion of an operations management stage in the business continuity plan. This is a checklist of "who does what" in the event of an incident and includes details about cooperating with the emergency services, the utility companies, local authorities, the insurance companies and perhaps other businesses in the area (see the discussion on managerial competencies below). The procedures that are outlined in the continuity plan equip the business to deal with a power failure, a flood, a fire or any other kind of business interruption. The adoption of an all-hazards approach greatly increases the overall resilience of the organization.

To be carried out effectively, BCM requires an adequate allocation of resources, both financial and human. While many large businesses, particularly financial organizations, have risk-management policies in place which can be expanded into full BCM processes, for smaller businesses the allocation of resources for BCM is very much a discretionary expenditure. Consequently, managerial acceptance of risk and their commitment to BCM is essential to planning being initiated and developed to an appropriate state of readiness. There are, however, many factors that can conspire against their developing continuity plans.

The personal attitudes and background of the owner/manager are important (Ewing-Jarvie, 2002). Many small business owners believe

that having an insurance policy is sufficient to protect them from the effects of a disaster (Hill, 1996). Insurance, however, will only provide monetary compensation, and not necessarily immediately after the disaster. It will not provide alternative premises, specialized equipment, or competent staff. Furthermore, claims on insurance are not always successful (Hill, 1996). Other influences include the attitude that disasters always happen to someone else, that some government or other external agency will come forward to help, or that disasters should be accepted as a normal part of life and one for which there is no point in preparing.

Organizational commitment to disaster business continuity planning can also be constrained by managers overestimating existing capabilities and ambiguity of responsibility (Gunderson, Holling, & Light, 1995; Paton, 1999; Shaw & Harrald, 2004). The last point is particularly important. Because continuity planning crosses several organizational role boundaries, responsibility for its performance may not fall within the purview of any one established organizational role. Consequently, a precursor to effective BCM is having responsibility vested in a key figure who can direct and sustain the planning process (Paton, 1999; Shaw & Harrald, 2004). Preparing plans and developing organizational capability is one important part of the process. The other is ensuring the availability of staff capable of implementing plans under atypical crisis conditions.

ESTABLISHING BUSINESS CONTINUITY CAPABILITY

The establishment and maintenance of BCM capability requires an immense commitment from management to ensure that it is effective in the event of a disaster. The problem remains regarding how to motivate managers to commit the necessary resources. "It (*BCM*) has all the ingredients of a nonstarter in corporate terms–it costs money but gives no direct return; it requires detailed planning yet has no clear endpoint; it does not offer the high flier a route to the Board and (worst of all) it forces managers to consider problems they would prefer to ignore" (Bird 1994, p 22). As with other organizational changes, BCM often requires a "champion" within the organization: someone who is committed to the concept of BCM and is in a position to "sell" the benefits to management and to those required to implement them.

For organizations that are subject to legislation, in particular legislation regarding corporate governance, obtaining management commitment is less of a problem. It is also less of a problem for organizations which already have effective risk management policies because these can provide a springboard for BCM. However, for other organizations, particularly small businesses, obtaining management commitment is more difficult. Increasingly, though, pressure for this to happen is coming from stakeholders who want to know that the organization is prepared to deal with crises so that their investments are protected. Larger organizations which have implemented BCM themselves are putting pressure on suppliers to protect themselves from any breakdown in the supply chain. For smaller businesses the pressure to adopt BCM may need to come from other agencies within the community so that they can work together to improve the overall resilience of the community. Encouragement for such planning may be forthcoming when the community understands the role of small business for employment and for the economic vitality of the community. They may, however, need assistance (financial and expertise) to put plans and competencies in place. In regard to the latter, a potential role for Chambers of Commerce of other groups (e.g., Rotary) can be identified. Making the decision to implement BCM is one thing, organizations then need to implement the necessary changes to culture, attitudes and practices.

BCM for disaster resilience is different to other organizational processes. For example, it involves developing a capability to manage disruption from events that have not occurred and that could present in a context of widespread societal disruption and devastation (such as occurred in New Orleans in 2005) that is difficult to anticipate and comprehend. Yet, managers must confront this task armed primarily with experiences derived from their own business history and the performance of routine activities.

A Capability for Change: Planning for Success and Planning for Failure

Promoting effective change requires understanding the factors that predispose managers to think about this eventuality. An important issue here concerns the fact that, over time, the "mental maps" that inform managers' thinking and action become entrenched in the rou-

tine and insulated from environmental input. Under such circumstances, managers become cognitively complacent and render new, complex and ambiguous environmental data understandable by making it "fit in" with previous experience (Paton & Wilson, 2001). This makes it difficult for managers to consider, far less confront, nonroutine BCM contingencies. Consequently, those undertaking BCM planning must engage in a level of environmental monitoring, discussion with others (e.g., scientific and emergency management agencies), and develop a capacity for creative decision making that is unique to this activity. By understanding the cognitive processes that guide strategic thinking and the data upon which these processes operate managers can develop planning process and activities that challenge assumptions, facilitate change, and ensure that cognitive industry models most appropriate for identifying risk and developing BCM plans. The next issue concerns organizational willingness and/or ability to change.

There are various defense mechanisms which organizations adopt to deny their vulnerability to potential disasters. These include thinking that crises only happen to other organizations, that the organization is too big and powerful to be affected by a disaster and that a disaster will only affect a small part of the organization and therefore the organization can easily recover (Mitroff & Anagnos, 2001). Some organizations also choose to ignore signals within the organization that things are going wrong and therefore make no plans to mitigate or control a potential disaster (Paton, 1999; Paton & Wilson, 2001). These internal processes can mitigate against change, or render its implementation a more challenging endeavor.

Implementing change can be particularly problematic for organizations where power and authority are highly centralized (Gunderson et al., 1995; Harrison & Shirom, 1999). But if the organization has sufficient structural flexibility, it will be in a better position to develop its capability to manage significant disruptions (Alesch et al., 2001; Folke et al., 2003; Paton, 1997a). However, the structural capability to respond effectively need not always exist, and different categories of response can be anticipated.

At one end of the spectrum lies the "nonresponse." This occurs when bureaucratic inertia and vested political interests conspire to block change and, indeed, sow the seeds of future and more complex

crises (Gunderson et al., 1995). A second type of response is where the organization responds, but lacks appropriate experience to do so effectively. This can occur as a consequence of a failure to consider risk from nonroutine events or because the organization has failed to learn lessons from previous disturbances. The consequent implementation of untried actions, even while recognizing a need for change, can increase resilience or it can increase vulnerability and exacerbate the loss of adaptive capacity (Folke et al., 2003). That is, the outcome, greater resilience or heightened vulnerability, is determined more by chance than by sound planning and good judgment.

Folke et al. (2003) emphasize the fact that, to increase resilience, experience of failure is required. The idea that a business should plan for failure as well as success is a difficult concept to accept. The majority of books and other literature written for businesses, particularly small businesses, are focused solely on strategies for success. However, "failing to plan to fail" is as important as "failing to plan to succeed."

Not only must the organization learn to live with risk and uncertainty, it must develop strategies to learn from the unexpected disturbances and failures that arise over time. Recognition of the importance of institutional learning leads to a third strategy, one capable of contributing to resilience. According to Folke et al. (2003), this involves several activities. Firstly, it requires the memory of prior crises, with personal experience of a disaster or knowledge of a disaster in a neighboring or similar business being potent motivational factors (Dahlhamer & D'Souza, 1995; Hill, 1996), and the lessons learnt being incorporated into institutional memory. Secondly, it requires a commitment to learn from these experiences and to develop future capability. Finally, these activities lead to the development of new rules and procedures. The effectiveness of this institutional learning approach can be enhanced by creating small-scale, controlled disturbances to facilitate the learning process and challenge complacency (Folke et al., 2003; Paton & Wilson, 2001). One of the outcomes of this process is the identification of the competencies and capabilities required of the staff who will be responsible for implementing the plan during a disaster.

BUSINESS CONTINUITY: SELECTION AND TRAINING

The atypical and complex environment within which business continuity plans are implemented will differ substantially from routine circumstances. Realizing the benefits of the BCM plan requires the availability of staff capable of applying them in a context defined by a need to confront challenging circumstances. This can be accomplished by selecting and training staff for their BCM roles.

Staff Selection

In addition to selecting for specific competencies (e.g., crisis decision making), staff selection decisions can be informed by knowledge of the demographic, dispositional and experiential factors that affect stress vulnerability and resilience. For example, older staff, ethnic minority staff, single parents and staff with young children may face levels of competing demands from nonwork sources that would reduce their capacity to respond effectively to crisis events (Paton, 1997a), making them less suitable for filling key response roles. Vulnerability is also affected by biological (e.g., heightened autonomic reactivity), historical (e.g., pre-existing psychopathology), and psychological (e.g., learned avoidance of threat situations, social skills deficits, and inadequate problem-solving behavior) elements (Scotti et al., 1995). Knowledge of these factors can be used to screen out staff. With regard to factors that can inform the selection of continuity staff, dispositional resilience factors such as, for example, hardiness, emotional stability, decisiveness, controlled risk taking, self-awareness, tolerance for ambiguity, and self-efficacy (Dunning, 2004; Flin, 1996; Lyons, 1991; MacLeod & Paton, 1999; Paton, 1989, Paton, 2003; Paton & Jackson, 2002) could be used.

Organizations may not, however, have the luxury of selecting staff in this manner. There may be insufficient flexibility to afford an opportunity to implement this option or staff may be cast into crisis roles by the unexpected timing of the crisis event. Under these circumstances, knowledge of predictors of stress vulnerability and resilience can be used for the post-event assessment of staff to identify those at risk and to prioritize them for support and monitoring during and after the disaster (Lyons, 1991; Paton, 1989; Tehrani, 1995). This strategy can facilitate staff recovery, hasten their return to work, and minimize recov-

ery costs (e.g., from compensation, absenteeism, illness, hiring temporary staff). Once selected, staff need to be trained.

Training for BCM Roles

Realizing the benefits of BCM also requires developing the competencies required to effectively action the plan (Grant, 1996; Paton, 1997a). The first step is a training needs analysis conducted explicitly to identify the consequences likely to be encountered and the competencies required to manage them. Given the rarity of large scale disasters, practicing and evaluating the effectiveness of BCM procedures and competencies is problematic. This limitation can be remedied using exercises and simulations.

Simulations afford opportunities for BCM staff to develop technical and managerial skills, practice their use under adverse circumstances, receive feedback on their performance, increase awareness of stress reactions, and rehearse strategies to minimize negative reactions (Flin, 1996; Paton & Jackson, 2002; Rosenthal & Sheiniuk, 1993). Detailed process and content evaluation, conducted by someone with sufficient authority and independence to be critical of the exercise/response and make recommendations for future system and staff development, should follow training exercises and actual crisis events. The results should be incorporated into future planning and training agenda designed to promote future response capability. These activities can also contribute to the development of a supportive organizational climate (Folke et al., 2003; Paton, 1997a).

Significant differences between routine and post-disaster environments create novel and highly challenging demands for managers. Training is thus required to enhance their response capability (Paton, 1997a). Training should cover, for example:

- hazard analysis and its implications for staff risk status and for operational continuity;
- developing a managerial style suited to identifying and planning to meet staff and business needs;
- adapting decision style under conditions of uncertainty (see below);
- familiarization with response plans and procedures and the use of problem-solving skills to adapt them to manage diverse (and

changing) circumstances;
- operating under devolved authority and planning for management succession (into crisis roles and from crisis back into routine operations);
- communicating and working with people with differing backgrounds and abilities;
- reconciling staff and business recovery needs (overtime), and
- staff monitoring and managing the return to work process.

A key area for training is information and decision management. While some communication problems result from hazard effects (e.g., loss of communication from seismic activity), lack of crisis information management expertise can generate additional problems. During the planning process, organizations need to consider what information will be required to maintain functions, how it should be collated, and how it should be interpreted and used to make decisions (Paton, Johnston & Houghton, 1998). During planning, dialogue should be entered into with information providers to discuss these issues. Staff should be trained to specify information needs, to interpret it appropriately on receipt, and, if required, to adapt information for different functions and end users. Organizations not only require information from diverse sources to manage response and recovery activities, they may also be called upon to distribute information to their staff, shareholders, suppliers and distributors, the community, the media, and board members.

In addition to considering information needs, decision-making procedures must be reviewed. Not only will decision procedures differ from those used in routine contexts, a capacity to adapt the style to suit the changing circumstances of the disaster response is also required (Flin, 1996; Paton et al., 1998). For example, long-term recovery planning requires an analytical approach to evaluate and compare options. During the disaster and its immediate aftermath rapid decisions are frequently required, making an intuitive or naturalistic style (Klein, 1997) more appropriate.

Given that a disaster can have community-wide consequences, all staff will be affected to some extent. Consequently, managers responsible for BCM will need to train to develop their capacity to facilitate both staff recovery and their return to normal functioning and productivity. Fulfilling the former involves their acting as good role mod-

els (e.g., acknowledging their own feelings) and providing feedback and information to staff (Paton, 1997b). This behavior demonstrates how to reconcile the personal impact of the event with continuing to work through a crisis or with returning to work. The latter is an important contributor to personal, business and societal recovery. Because it helps staff put their experience into perspective, allows access to support networks, and facilitates their regaining a sense of perceived control, returning to work is therapeutic and should be encouraged. However, managing the gradual return and reintegration into work requires careful planning and judgment. Managers should ensure that staff do not take on too much too soon and, because cognitive capacities may be temporarily diminished, remind them to take care when, for example, operating machinery, driving, or making complex decisions. Managers are also well-placed to help staff resolve their experiences in a beneficial manner. This can be facilitated by, for example, helping staff to identify strengths that helped them deal with this event and using the experience to focus on developing future capability.

Developing resilient staff is one part of this process. To fully realize its benefits, the attitudes, beliefs and values that constitute the organizational "culture" must sustain BCM activities. Recognition of the importance of organizational culture emphasizes the fact that developing people who are resilient does not guarantee the resilience of the organization as a whole (Coutu, 2002). Organizational resilience depends on the culture, structure and business practices of the organization as a whole. BCM provides a framework for building this resilience into an organization.

Business continuity plans should be developed in a consultative manner to ensure they are familiar to, and accepted by, those required to act on them and driven by the goal of developing the capability to respond effectively to any event (Lister, 1996; Paton, 1997a; Paton, 1999; Shaw & Harrald, 2004). Plans should be linked to training programs, resource allocation, and disaster simulation exercises. If not, plan effectiveness will be diminished when put into practice (Paton, 1997a).These collaborative activities provide staff with tangible evidence of organizational concern for their welfare, a shared responsibility for recovery (Powell, 1991) and help sustain staff loyalty (Bent, 1995), and ensure that planning and action occur within a supportive culture (Paton, 1997b). Organizational culture has another contribution to make. It provides the impetus to recognize a need for special-

ist crisis management systems and procedures.

Crisis Management Systems and Procedures

Key predictors of effective BCM are organizational characteristics (e.g., management style and attitudes, reporting and decision procedures) and bureaucratic flexibility (Doepal, 1991; Paton, 1997b; Powell, 1991; Turner, 1994). Rigid bureaucracies can, by persistent use of established procedures (even when responding to different and more urgent crisis demands), internal conflicts regarding responsibility, and a desire to protect the organization from criticism or blame complicate the response process. Effective response involves relaxing normal administrative procedures and replacing them with procedures designed specifically to manage response and recovery (both for staff and productivity) and, most importantly, accepting organizational ownership of the crisis and its implications (Elliot et al., 2002). Training programs for senior management and considerable organizational development may be required to plan and implement systems designed to support staff rather than (pre-existing) bureaucratic imperatives.

Crisis management systems will be required to cover, for example, delegation of authority; allocation of crisis response tasks, roles and responsibilities and the development of appropriate management procedures; identifying and allocating resources necessary to deal with the crisis, information management, communication and decision management, and liaison mechanisms. Flexibility in these systems is important. They will be required to deal not only with the uncharacteristic demands of the crisis, but also atypical demands emanating from dealing with unexpected emergent tasks; dealing with unfamiliar people and roles, and frequent staff reassignment (Paton, 1997a). Communication systems, designed to meet the needs of diverse stakeholders and response groups, are required for information access and analysis, defining priority problems, guiding emergency resource needs and allocation, coordinating activities, providing information to managers, staff and the media, and for monitoring staff and business needs (Bent, 1995; Doepal, 1991; Paton, 1997a). Information management and decision-making procedures are required (Bent, 1995; Paton, et al., 1998, Shaw & Harrald, 2004). Moreover, these activities may be required over a period of several months.

CONCLUSION

BCM provides a framework for developing the administrative and technical resources and staff competencies required to facilitate a capacity for business to adapt to adverse consequences. The organizational analyses that comprise BCM facilitate plan development, define the training and support needs of staff, and to identify the culture, systems and procedures that promote organizational resilience. Returning to productive capacity also requires that business continuity planning is a managed process which integrates staff and management systems via appropriately designed recovery resources. These integrated systems should be capable of adapting, over the course of the response and recovery period, to accommodate changing staff and business needs.

REFERENCES

Alesch, D. J., Holly, J. N., Mittler, E., & Nagy, R. (2002). *Organizations at risk: What happens when small businesses and not-for-profits encounter natural disasters.* [http://www.riskinstitute.org/ptr_item.asp?cat_id=1&item_id=1028] accessed 14th February 2003.

Bent, D. (1995). Minimizing business interruption: The case for business continuance planning. In A.G. Hull and R. Coory (Eds.), *Proceedings of the Natural Hazards Management Workshop 1995.* Institute of Geological and Nuclear Sciences, Lower Hutt, New Zealand.

Bird, L. (1994). What happens if peace breaks out?, *Survive! The Business Continuity Magazine, 1994,* Issue 2, p 22.

Business Continuity Institute (2002). Good practice in business continuity management. *Continuity, 6,* 2.

Comfort, L. K. (1994). Risk and resilience: Interorganizational learning following the Northridge earthquake of 17 January 1994. *Journal of Contingencies and Crisis Management, 2* (3), 157–170.

Coutu, D. L. (2002). How resilience works. *Harvard Business Review,* May, 46-55.

Dahlhamer, J. M., & D'Souza, M. J. (1995). *Determinants of business disaster preparedness in two U.S. metropolitan areas,* Preliminary Paper #24. Disaster Research Center, University of Delaware, U.S.

Davies, H., & Walters, M. (1998). Do all crises have to become disasters? Risk and risk mitigation. *Disaster Prevention and Management, 7,* 396–400.

Doepal, D. (1991). Crisis management: the psychological dimension. *Industrial Crisis Quarterly, 5,* 177–188.

Duitch, D., & Oppelt, T. (1997). Disaster and contingency planning: A practical approach. *Law Practice Management, 23,* 36–39.