Business Continuity Planning: A New Road to Nurture Business Growth

Dheeraj Kumar, Anant Kumar Rai, Himanshu Mishra, and Priyanka Srivastava

Abstract—Disasters never ring a bell before its arrival; it just arrives and destroys everything that comes in its way. Whether it is natural (Earthquakes, Cyclone) or manmade (System Failures), it doesn’t matter. In such cases, it is an essential requirement for those organizations, interested in safeguarding their data and operations, to pay extra attention to have a Business Continuity Plan in place.

In current perspective, where probability of both types of disasters are same whether it is natural or manmade (e.g., floods and 9/11 attack), the necessity for implementing a business continuity plan is increasing day-by-day. The inauspicious event like 9/11 gives a wakeup call to global business community to get prepared for any such disaster. At present different organizations are implementing Disaster Recovery Plans and Business Continuity Plans for their smooth and uninterrupted services in case of such types of disasters.

There are different major sectors operating globally – Banking, FSI (Financial services and insurance), TMT (Technology, Media and Telecommunications), Manufacturing and Others (includes Educational Institutions, Non-Government Organizations, Research Institutes etc) [1]. These sectors contribute to a major part to the global economy. This paper basically focuses on issues regarding BCP in these sectors and establishing a relation between BCP and Basel II by highlighting some of the aspects of BCP which are covered in Basel II. The paper also discusses the need for BCM and presents a model to design, implement, operationalise and assess Business Continuity Plan along with its Outsourcing Issues. It also provides a comparative analysis of existing and proposed models for implementing Business Continuity Planning in organizations. A methodology for effective Business Continuity Management is developed.

Index Terms—Business continuity, disasters, outsourcing issues, resilience, vulnerability.

I. INTRODUCTION

“Business Continuity Planning is associated with identifying, acquiring, developing, documenting along with conducting a testing for resources and procedures so that it ensures the key or critical operations of an organization in case of a disaster or any such event.”

“Successful business continuity planning – creating plans that allow an organization to perform its critical business processes during and after a disaster – relies more upon human nature and less upon technical knowledge and rigor than many people realize. Utilities tend to be highly technical environments given both the nature of the business and the nature of people who have come up through the ranks of those organizations.”[2]

Business Continuity can simply be defined as:
1) To identify critical business operations
2) To identify risk associated with those operations
3) To identify ways to mitigate or avert the risk
4) A plan to proceed business operations in event of emergency or disaster
5) A plan to rejuvenate business again as soon as possible

What does a Critical Function in an organization means? These are the functions which an organization must perform in order to continue its business. This can also be termed as “different things to different organizations”. If the primary function of business is to produce microchips which generate income for the organization then any interruption in microchips production can put the business at risk. There might be other concerns like account, customers or even IT concerns like software support but the primary function is to produce microchips. If for any reason production unit is down, resources are not utilized in an efficient way or shipment problem of finished goods, the company may shut down. So for such organizations production unit is a Critical Function and any risk related to production is a point of concern for the planner.

A. Models and Methodologies

There are various BC planning models and methodologies. Most of the models include the following phases of the BCP (Fig. 1.) :
1) Analysis
2) Solution Design
3) Implementation
4) Testing & Acceptance
5) Maintenance

Fig. 1. BCP

Manuscript received May 21, 2012; revised June 20, 2012. This work was supported in part by the Indian Institute of Information Technology, Allahabad, UP India.

D. Kumar, A. K. Rai and H. Mishra are with the Department of Cyber Law & Information Security, Indian Institute of Information Technology, Allahabad, UP 211012 India (e-mail: dheerajsrivastava12@gmail.com, anantrafeb@gmail.com, anantrafeb@gmail.com).

P. Srivastava is with the Computer Science Department, Jaypee University of Engineering & Technology, Guna, MP 473226 India (e-mail: priyanksrivastava.cse@gmail.com).

DOI: 10.7763/IJCTE.2013.V5.666
B. Problem Definition

We cannot deny the possibility of a disaster and we cannot stop it from happening but the only thing which we can do is to mitigate the effect of such disaster to an extent that could possibly create no or very less effect on the business process. To do so, we have to come up with a plan that can perform the task more effectively and efficiently. For this purpose, we have designed a model in this paper which will cover all the basic tasks in order to build a time and cost effective business continuity plan. Basel II also defines business continuity management as an essential requirement for the organizations especially for the financial sectors. Principle 7 of Basel II also emphasize on conducting a business continuity management review by financial authorities for the ongoing assessment of financial industry participants for which they are responsible.

Basel committee emphasizes on having a Business Continuity Management implementation in organizations to make it more resilient especially the financial sector. Many organizations believe that they are resilient but there are no formal attempts made to infer the real thinking behind the concept of business continuity and resiliency.

With the unfortunate event like Tsunami and 9/11, the need for having a Business Continuity Management strategy is now asking for more attention than ever. It could be taken as a wake up call for implementing a proper BCM strategy in each and every organization of every sector working globally.

Basel II Providing a base for Business Continuity Management.

Basel II is the guidelines that are basically provided to the banks in order to defend them from operational and financial risks that they can face. Basel committee also issued documentation i.e. “Sound Practices for Management & Supervision of Operational Risk” to incorporate sound practices in different areas related to Operational Risk. One such area is Business Continuity. There are certain principles in this documentation which provide the guidelines perform analysis & potential impact of risks that can take place. Not all the principles but some strictly emphasize on such parameters:

**Principle 1:** Board of Director awareness regarding operational risk

**Principle 3:** Senior management responsibility for operational risk management framework implementation, generating awareness and policy development

"...Clear strategies and oversight by the board of directors and senior management... are all crucial elements of an effective operational risk management framework for banks of any size and scope."

**Principle 7:** It very specifically focuses on contingency planning and business continuity planning:

"...Banks should have in place contingency and business continuity plans to ensure their ability to operate on an ongoing basis and limit losses in the event of severe business disruption."

**Principle 9:** Management's role in evaluating operational risk management policies, procedures, and practices [3]

The reason to include these principles here is that there is a relation between Operational Risk and Business Continuity.

Basel committee defines operational risk as:

"The risk of loss resulting from inadequate or failed internal processes, people and systems or from external events."

Basel committee also specifies seven specific risk event categories. Among these seven categories, three directly relates to business continuity:

1) Employment practices and workplace safety
2) Damage to physical assets, caused by environmental and man-made events
3) Business disruption and system failures (caused by hardware, software, network and utility issues).

The main purpose of defining Basel II is that if Basel II guidelines can be implemented to Banking and Financial sector and if it is working effectively in these sectors then “why not implementing these guidelines in other sectors as well to incorporate Business Continuity Management in organizations??”

C. Proposed Model

![Proposed Model Diagram](Fig. 2. proposed model)

**Tier 1: Requirement Analysis**

- **Objective & Assumptions**
- **Business Continuity Objectives & Requirements**
- **Business Continuity Definition, Terms & Assumptions**
- **Scope & Out of Business Continuity Project**
- **Business Continuity Steering Committee**
- **Business Continuity Policies**

**Tier 2: Design & Development**

- **Plan Scope & Objective**
- **Major Plan Component**
- **Scenario to Execute to Plan**
- **Escalation, Notification & Plan Activation**
- **Storage Programs**
- **Data Loss Estimator**

**Tier 3: Implementation & Testing**

- **First Gathering, Alternatives and Management Decision**
- **Risk Analysis & Control**
- **Business Impact Analysis**
- **Alternative Business Continuity Strategies**
- **Cost Benefit Analysis**
- **Business Continuity Program Budget**
This model can be used to operate on each phase of Business Continuity Plan more specifically and it can be more efficient too because it covers almost each & every aspect of the organization’s BC planning.

Above 4-tier model for Business Continuity Planning shows different steps which are involved in each phase.

II. KEY TERMS

A. Business Impact Analysis:

One of the primary duties of a Security Professional in an organization is to ensure that their information system and data can survive even in case of a disaster. In order to achieve this, these professionals identify critical information systems, tasks and processes and also define the priority of one over another so as to identify which order these processes must be recovered after the disaster. A key requirement to identify such critical functions of organization is to conduct an effective Business Impact Analysis.

Like BC planning, there are various methods for conducting BIA. The most elementary steps required to conduct a BIA is shown below:

A BIA is conducted to find the “maximum tolerable outage” [4] for each & every business process of an organization. It tells an organization, for each of its business process, the maximum time duration the organization can tolerate being without the process before its absence makes a significant impact on the business [3].

After performing a Business Impact Analysis, the next vital step in a business continuity planning is to use the information that is collected in BIA as an input for selecting the strategy to recover critical business processes. But before selecting the strategy, one should recognize the preventive controls that exist in the organization. These controls can save money as well as effort while pursuing BCP strategy.

Different types of preventive controls include:

- Information Security Control
- Environmental Security
- Physical Security
- Disaster Recovery Plans
- Awareness Program

### TABLE I: DIFFERENT TYPES OF PREVENTIVE CONTROLS

<table>
<thead>
<tr>
<th>Preventive Controls</th>
<th>Data Sought</th>
<th>Interview Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Security</td>
<td>Information Security Policies, Procedures &amp; Standards</td>
<td>Information security management, internal audit, IT management</td>
</tr>
<tr>
<td>Environmental Security</td>
<td>Facilities Plans and Environmental Control Diagrams</td>
<td>Facilities management, risk management, physical security management, data centre management, internal audit</td>
</tr>
<tr>
<td>Physical Security</td>
<td>Physical Security Policies</td>
<td>Facility management, physical security management, internal audit</td>
</tr>
<tr>
<td>Disaster Recovery Plans</td>
<td>Existing Recovery Plans, Plan Test Reports</td>
<td>Recovery plan management, data centre management, internal audit</td>
</tr>
<tr>
<td>Information Security Awareness</td>
<td>Awareness Plans &amp; Status Reports, Awareness Materials/Resources</td>
<td>Information security management, IT management, internal audit, individual business unit management</td>
</tr>
</tbody>
</table>
III. CONCLUSION

It is evident that there is growing awareness of Business Continuity Management in current business environment but the only problem is the lack of understanding about what a BCM program is and what it can imply. Another important thing is that there is lack of resources for implementing BCM program. It is mainly due to inadequate man power designated for such a key area.

People are having misconception regarding a BCM and a DRP. So there is a need to increase awareness and branding in BCM to make it more effective. We must remember that “A journey of a thousand miles begins with a single step” and we probably are already a few miles on the road!

REFERENCES

1) Survey by Deloitte (Deloitte Touche Tohmatsu India Private Limited (DTTIPL)) in association with The Business Continuity Institute, UK (The BCI).
4) Peltier, R. Thomas, Justin, Blackley, and John, Security fundamentals.