Chapter-4: Business Continuity Planning and Disaster Recovery Planning

**Paper-6 Part-1 of 5**

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Learning Objectives

1. To understand the concept of Business Continuity Management
2. To understand the key phases and components of a Business Continuity Plan
3. To understand the key aspects of Business Continuity Plan implementation
4. To learn about Back-up and Disaster Recovery Planning
5. To learn how to audit a Business Continuity Plan
Task Statements

To design, develop, implement, test, maintain and audit all key phases and components of a Business Continuity Plan in an enterprise.

To conduct Risk assessment and Business Impact Assessment.
Knowledge Statements

To understand the concepts and components of Business Continuity Management

To know the development of Business Continuity Plans, Disaster Recovery Plans; Emergency Plans etc

To know the different phases and components of Business Continuity Plan
Chapter Overview

- Business Continuity Management
- Business Continuity Planning
- BCP Implementation
- Back up and DR
- Auditing BCP
## Topics Covered

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# Topics Covered

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Topics Covered

PART-1

4.1 Introduction

4.2 Need for Business Continuity Management

4.3 BCM Policy

4.4 Business Continuity Planning

4.5 Developing a Business Continuity Plan
4.1 Introduction

Business Continuity Management (BCM) is an effective management process to

Manage disruption of all kinds

Provide countermeasures to safeguard

To ensure effective implementation of BCM, an enterprise should conduct regular internal audits at planned intervals

BCM facilitate understanding of the concept, planning, implementation and continuous improvements of Business Continuity Plans (BCP)
4.2 Need for BCM

Key terms

- **Business Contingency**
  - An event with the potential to disrupt computer operations, thereby disrupting critical mission and business functions.

- Eg. power outage, hardware failure, fire, or storm. If the event is very destructive, it is often called a disaster.
4.2 Need for BCM

Key terms

• **BCP Process**
  
  A process designed to reduce the risk to an enterprise from an unexpected disruption of its critical functions and assure continuity of minimum level of services necessary for critical operations

• Purpose is to **ensure that vital business functions (critical business operations) are recovered and operationalized** within an acceptable timeframe
4.2 Need for BCM

Key terms

- **Business Continuity Planning (BCP)**

- **Ability of enterprises to recover from a disaster and continue operations with least impact**

- **Independent audit to confirm adequacy and appropriateness to meet enterprise needs**
## Related Terms

<table>
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<th>Term</th>
<th>Definition</th>
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<tr>
<td><strong>Asset</strong></td>
<td>- Something of value to organisation</td>
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<tr>
<td><strong>Vulnerability</strong></td>
<td>- Weakness in system safeguards</td>
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<tr>
<td><strong>Threat</strong></td>
<td>- Potential to harm the system</td>
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<tr>
<td><strong>Exposure</strong></td>
<td>- Extent of loss when risk materializes</td>
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<tr>
<td><strong>Likelihood</strong></td>
<td>- Probability that threat will succeed</td>
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<tr>
<td><strong>Attack</strong></td>
<td>- Set of actions designed to compromise CIA</td>
</tr>
<tr>
<td><strong>Risk</strong></td>
<td>- Potential harm if a threat exploits a vulnerability</td>
</tr>
<tr>
<td><strong>Countermeasure</strong></td>
<td>- Measure that reduces vulnerability of a system</td>
</tr>
<tr>
<td><strong>Residual Risk</strong></td>
<td>- Risk still remaining after the counter measures</td>
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What is BCP?

Process designed to reduce the organization’s business risk

Much more than just a plan for the information systems
Risks of inadequate BCP

Inadequate BCP could result in risks

- Inability to maintain critical customer services
- Damage to market share, reputation or brand
- Failure to protect Assets including IP and personnel
- Business control failure
- Failure to meet contractual or regulatory requirements
BCP Manual

Documented description of actions to be taken
Resources to be used and
Procedures to be followed before, during and after a disruptive event.

BCP Manual specifies the responsibilities of the BCM team which serve as liasoning teams between the functional area(s) affected and other departments providing support services in the event of an incident or disaster.
BCM is a framework that

• Proactively improves an enterprise’s resilience against the disruption of its ability to achieve its key objectives.

• Provides a rehearsed method of restoring an enterprise’s ability to supply its key products and services to an agreed level within an agreed time after a disruption.

• Delivers a proven capability to manage a business disruption and protect the enterprise’s reputation and brand.
Scope of Business Continuity

Top management needs to define the scope of the BCM program.

It involves identifying key products and services that support enterprise's objectives, obligations and statutory duties in line with the threat scenario and the business impact analysis (BIA).

In case of an outsourced service or activity, the risk accountability remains with the enterprise.
Advantage of Business Continuity

- Ability to proactively assess the threat scenario and potential risks
- Planned response to disruptions which can contain the damage and minimize the impact on the enterprise
- Ability to demonstrate a response through a process of regular testing and trainings
4.3 BCM Policy

A high level document

- To make a systematic approach for disaster recovery
- To bring about awareness among the persons in scope about the business continuity aspects and its importance
- To test and review the business continuity planning for the enterprise in scope.

Developing the BCM policy involves

- Defining the scope
- Defining the BCM principles, guidelines and minimum standards
4.3 BCM Policy

Objective of this policy is to provide a structure through which

- Critical services and activities will be identified.

- Plans will be developed to ensure continuity of key service delivery following a business disruption.

- Invocation of incident management and business continuity plans can be managed.

- Incident management and business continuity plans are subject to ongoing testing, revision and updation.

- Planning and management responsibility are assigned to a member of the relevant senior management team.
4.4 Business Continuity Planning

“Business Continuity Planning (BCP) is the

Creation and validation of a practical logistical plan

For how an organization

Will recover and restore partially or

Completely interrupted critical (urgent) functions

Within a predetermined time after a disaster or extended disruption.”
Business Continuity Areas

Business resumption planning
• The operation’s piece of business continuity planning

Disaster recovery planning
• The technological aspect of business continuity planning

Crisis management
• The overall coordination of an organization’s response to a crisis in an effective timely manner
Disaster recovery focuses on the IT or technology systems that support business functions.

- It is a subset of business continuity.
## Elements of Business Continuity

<table>
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<tr>
<th>Disaster Recovery</th>
<th>Recover mission-critical technology and applications at an alternate site.</th>
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<td>Business Recovery</td>
<td>Recover the business process at an alternate site. Workspace recovery.</td>
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<tr>
<td>Contingency Planning</td>
<td>To manage an external event that has far-reaching impact on the business.</td>
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Business Continuity Life Cycle

- Risk Assessment
- Recovery Alternatives
- Recovery Plan implementation
- Recovery Plan validation
Objectives and Goals of BCP

Primary Objectives of BCP

• To minimize loss by minimizing the cost associated with disruptions

• To enable an organisation to survive a disaster

• To re-establish normal business operations
Objectives and Goals of BCP

Key Objectives of Contingency Plan

- Provide for the safety and well-being of people on the premises at the time of disaster

- Continue critical business operations

- Minimise the duration of a serious disruption to operations and resources

- Minimise immediate damage and losses
Objectives and Goals of BCP

Key Objectives of Contingency Plan

• Establish management **succession and emergency powers**

• Facilitate effective **co-ordination of recovery tasks**

• Reduce the **complexity of the recovery effort**

• Identify **critical lines of business and supporting functions**
Objectives and Goals of BCP

Goals of Business Continuity Plan

• Identify weaknesses and implement a disaster prevention program

• Minimise the duration of a serious disruption to business operations

• Facilitate effective co-ordination of recovery tasks

• Reduce the complexity of the recovery effort
1. Discuss the objectives and goals of Business Continuity planning.

(5 Marks) (Nov 2008)

6. (c) What are the goals of Business Continuity Plan?

4 Marks (Nov. 2012)

1. c) What is meant by Business Continuity Planning? Explain the areas covered by Business Continuity.

(5 Marks) (Nov. 2010)
The primary objective of a business continuity planning is to enable an organization

- To survive in a disaster and
- To re-establish normal business operations.

In order to survive, the organization must assure that critical operations can resume normal processing within a reasonable time frame.
The **key objectives** of the contingency plan should be to:

- Provide for the **safety and well-being of people** on the premises at the time of disaster
- **Continue critical business operations**
- Minimise the **duration of a serious disruption to operations and resources (both information processing and other resources)**
- Minimise **immediate damage and losses**
Establish management succession and emergency powers

Facilitate effective co-ordination of recovery tasks

Reduce the complexity of the recovery effort and

Identify critical lines of business and supporting functions.
Therefore, the **goals** of the business continuity plan should be to

- Identify weaknesses and implement a **disaster prevention program**

- Minimise the **duration of a serious disruption** to business operations

- Facilitate effective **co-ordination of recovery tasks**

- Reduce the **complexity of the recovery effort**.
4.5 Developing a BCP

Methodology for developing a BCP

- Understanding the total efforts required
- Commitment from appropriate management
- Defining recovery requirements
- Documenting impact of an extended loss
- Disaster prevention, impact minimisation & orderly recovery
- Business continuity teams
- Understandable, easy to use & maintain
- Integrated into ongoing business planning
8 phases of Business Continuity Plan

- Pre-Planning activities
- Vulnerability assessment & general definition of Requirements
- Business Impact Analysis (BIA)
- Detailed definition of Requirements
- Plan development
- Testing program
- Initial Plan Testing & Plan Implementation
- Maintenance program
Phase 1 – Pre-Planning Activities (Project Initiation)

Obtain an understanding of the existing and projected systems environment

Enables the project team to:

- Refine the scope of business continuity planning, associated work program
- Develop project schedules
- Identify and address any issues that could have an impact on the project

A Steering Committee is established with the overall responsibility for providing direction and guidance to the project team.
Phase 1 – Pre-Planning Activities
(Project Initiation)

**Business Continuity Manager** works with the Steering Committee in finalising the detailed work plan and developing schedules for conducting Security Assessment and Business Impact Analysis (BIA).

Two other key deliverables are:

- Development of a **policy** to support the recovery programs
- An **awareness program** to educate management and senior individuals.
Phase 2 – Vulnerability Assessment and General Definition of Requirement

Vulnerability assessment

• Thorough Security Assessment of the system and communications environment

• Improve any existing emergency plans and disaster prevention measures

• Implement required emergency plans and disaster prevention measures where none exist

• Present findings and recommendations to the Steering Committee
Phase 2 – Vulnerability Assessment and General Definition of Requirement

General definition of Requirement

- Define the scope of the planning effort.
- Acquire recovery planning and maintenance software.
- Develop a Plan Framework.
- Assemble business continuity team and conduct awareness sessions.
Phase 3 – Business Impact Assessment

- Identify critical systems, processes and functions
- Assess the economic impact of incidents and disasters
- Assess the pain threshold - the length of time business units can survive without access to the system, services and facilities
Phase 4 – Detailed Definition of Requirements

A profile of recovery requirements is developed:

- To be used as a basis for analysing alternative recovery strategies
- By identifying resources required to support critical functions
- Includes hardware, software, documentation, outside support, facilities and personnel for each business unit.

Recovery strategies will be based on short term, intermediate term and long term outages.

Another key deliverable of this phase is the definition of the plan scope, objectives and assumptions.
Phase 5 – Plan Development

The recovery plans components are defined and plans are documented.

It includes the implementation of changes to user procedures, operating procedures, vendor contract negotiations and definition of Recovery Teams.

Recovery standards are also developed during this phase.
Phase 6 – Testing Program

Testing/exercising goals are established

Alternative testing strategies are evaluated

Testing strategies tailored to environment are selected

An on-going testing program is established
Phase 7 – Maintenance Program

- Maintenance of the plans is critical to the success of an actual recovery.
- The plans must reflect changes to the environments.
- Change management procedures will be recommended and implemented.
- Many recovery software products take this requirement into account.
Phase 8 – Initial Plan Testing and Implementation

- Defining the test purpose/approach
- Identifying test teams
- Structuring the test
- Conducting the test
- Analysing test results
- Modifying the plans as appropriate
Describe the methodology of developing a Business Continuity Plan. (5 Marks) (Nov 2008)
The methodology for developing a business continuity plan can be sub-divided into eight different phases. The extent of applicability of each of the phases has to be tailored to the respective organisation.

The methodology emphasises on the following:

• Providing management with a comprehensive understanding of the total efforts required to develop and maintain an effective recovery plan
• Obtaining commitment from appropriate management to support and participate in the effort
Defining recovery requirements from the perspective of business functions

Documenting the impact of an extended loss to operations and key business functions

Focusing appropriately on disaster prevention and impact minimisation, as well as orderly recovery

Selecting business continuity teams that ensure the proper balance required for plan development
Answer

Developing a business continuity plan that is understandable, easy to use and maintain

Defining how business continuity considerations must be integrated into ongoing business planning and system development processes in order that the plan remains viable over time.
Risk Model

Simple Risk Model

1 – Critical assets (information, systems, programs, people, equipment or facilities)
2 – Vulnerabilities in systems, programs, people, equipment or facilities
3 – Threat environment
4 – Critical assets for which there are known vulnerabilities, but no known threat exposure
5 – Critical assets for which there are known vulnerabilities and threat exposure
6 – Threat has acquired specific knowledge and/or capability to exploit a vulnerability although not a critical asset vulnerability
7 – Critical asset for which there are no known vulnerabilities, but there is exposure to a specific threat

#1 – Determine what is most important; identify the critical infrastructure assets
#2 – Prioritize asset assessments based on the threat to critical assets, if specific threat information is available
#3 – Pick from the critical assets priority list to establish the assessment work program
#4 – Evaluate risks from a mission perspective
PART-1

4.1 Introduction

4.2 Need for Business Continuity Management

4.3 BCM Policy

4.4 Business Continuity Planning

4.5 Developing a Business Continuity Plan
Thank you!