Week - 06

Introduction to Business continuity Planning

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Introduction

- The purpose of this lecture is to give an overview of what is Business Continuity Planning and provide some guidance and resources for beginner.

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Do I need Business Continuity?

- You are part of a successful business.
- However, in this uncertain world, you need a business that is flexible.
- Which can change with differing conditions and be strong through any disaster, be it natural or malicious
- What if a crisis prevented delivery to a key customer?
- How would a major incident affect the morale of your employees?
- Would serious damage to your premises or resources affect your ability to carry on the business?

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Small Business

- If you are part of a small business then you are more likely to suffer from any incident that prevents your business from functioning normally.
- The slightest delay in supporting your customers can and will be costly

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What is Business Continuity Plan?

- According to SANS definition 1:
  - Business Continuity refers to the activities required to keep your organization running during a period of displacement or interruption of normal operation.

  Whereas,

  - Disaster Recovery is the process of rebuilding your operation or infrastructure after the disaster has passed.

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What is Business Continuity Plan?

- According to Business Continuity Institute's Glossary2 :
  - "Business continuity plan is A collection of procedures and information which is developed, compiled and maintained in readiness for use in the event of an emergency or disaster."

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What is Business Continuity Plan?

- Business Continuity Planning (BCP) takes business protection beyond the disaster recovery plan, which just focuses on the short term re-establishment of your business following an incident.
- It is a proactive approach, identifying potential threats before they occur and planning an organised response so that the effects of the incident are minimised.

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For example

- If your business was hit by a fire:
  - A BCP would cover all anticipated effects of such a disaster and detail plans and actions to minimise the damage to your business.
  - Most importantly, it would guide you through the incident and direct your resources and efforts in the right direction to bring normality back to your business as soon as possible.
- A generic BCP can provide the basis of any response no matter what the nature of the incident is.

(specific details can be aimed at particular problems within the plan)

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Concerns?

- If your premises was hit by a fire, would all the computer systems also be affected?
- If so, would you lose vital information about suppliers, customers and orders?
- Would documents and paperwork also be destroyed?

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Why we need Business Continuity Plan?

- Disaster might occur anytime, so we must be prepared. Depend on the size and nature of the business, we design a plan to minimize the disruption of disaster and keep our business remain competitive.

- Due to the advancement of Information Technology (IT), business nowadays depends heavily on IT. With the emergence of e-business, many businesses can't even survive without operating 24 hours per day and 7 days a week. A single downtime might means disaster to their business.

- Therefore the traditional Disaster Recovery Plan (DRP), which focuses on restoring the centralized data center, might not be sufficient. A more comprehensive and rigorous Business Continuity Plan (BCP) is needed to achieve a state of business continuity where critical systems and networks are continuously available.

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When we need Business Continuity Plan?

- We need Business Continuity Plan when there is a disruption to our business such as disaster.
- The Business Continuity Plan should cover the occurrence of following events:
  - a) Equipment failure (such as disk crash).
  - b) Disruption of power supply or telecommunication.
  - c) Application failure or corruption of database.
  - d) Human error, sabotage or strike.
  - e) Malicious Software (Viruses, Worms, Trojan horses) attack.
  - f) Hacking or other Internet attacks.
  - g) Social unrest or terrorist attacks.
  - h) Fire
  - i) Natural disasters (Flood, Earthquake, Hurricane)

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Who should participate in Business Continuity Planning?

- With the shift of IT structure from centralized processing to distributed computing and client/server technology, the company's data are now located across the enterprise. Therefore it is no longer sufficient to rely on IT department alone in Business Continuity Planning, all executives, managers and employee must participate.
- Normally Business Continuity Coordinator or Disaster Recovery Coordinator will be responsible for maintaining Business Continuity Plan. However his or her job is not updating the Plan himself or herself alone. His or Her job is to carry out review periodically by distributing relevant parts of the Plan to the owner of the documents and ensure the documents are updated.

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Where to carry out Business Continuity Plan during disaster?

- **Cold Site**
  - An empty facility located offsite with necessary infrastructure ready for installation in the event of a disaster.
- **Mutual Backup**
  - Two organizations with similar system configuration agreeing to serve as a backup site to each other.
- **Hot Site**
  - A site with hardware, software and network installed and compatible to production site.
- **Remote Journaling**
  - Online transmission of transaction data to backup system periodically (normally a few hours) to minimize loss of data and reduce recovery time.
- **Mirrored Site**
  - A site equips with a system identical to the production system with mirroring facility. Data is mirrored to backup system immediately. Recovery is transparent to users.

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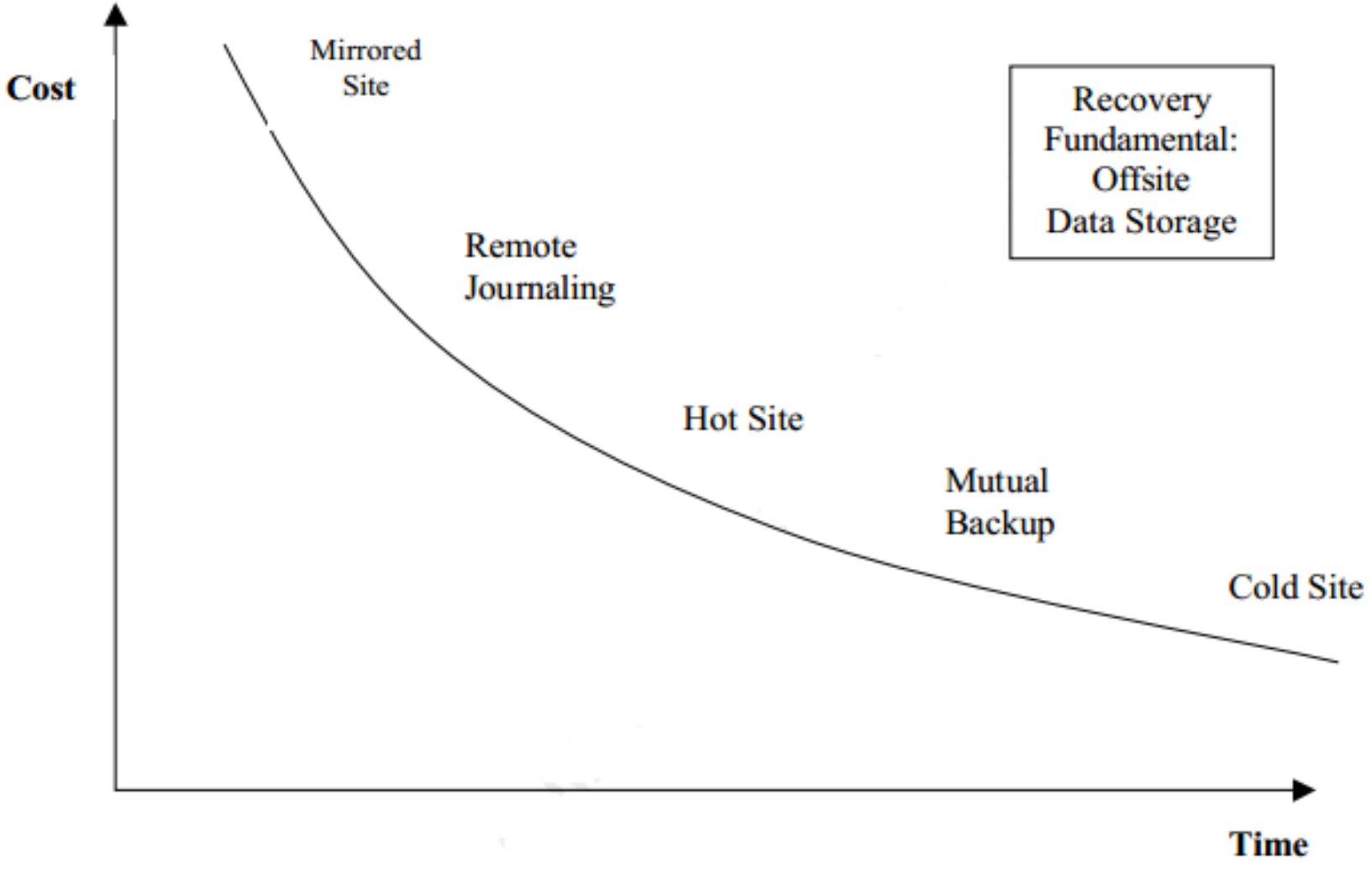
Recovery Alternatives



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Recovery Alternatives

- From the diagram, we notice that shorter the recovery time, higher the cost.
- **Do it yourself or use the facility of service provider**
  - Organization can decide whether to set up the backup center on its own or use the facility provided by of business continuity provider. In making the decision, the organization should consider the following point:
    - Availability of facility (floor space).
    - Ability to maintain redundant equipment.
    - Ability to maintain redundant network capacity.
    - Relationships with vendors to provide immediate replacement or assistance.
    - Adequacy of funding.
    - Availability of skilled personnel.

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How to prepare Business Continuity Plan? (Business Continuity Plan Phases)

- **Project Initiation**
  - Define Business Continuity Objective and Scope of coverage.
  - Establish a Business Continuity Steering Committee.
  - Draw up Business Continuity Policies.
- **Business Analysis (Business Impact Analysis)**
  - Perform Risk Analysis and Business Impact Analysis.
  - Consider Alternative Business Continuity Strategies.
  - Carry out Cost-Benefit Analysis and select a Strategy.
  - Develop a Business Continuity Budget.

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How to prepare Business Continuity Plan? (Business Continuity Plan Phases)

- **Design and Development (Designing the Plan)**
  - Set up a Business Recovery Team and assign responsibility to the members.
  - Identify Plan Structure and major components
  - Develop Backup and Recovery Strategies.
  - Develop Scenario to Execute Plan.
  - Develop Escalation, Notification and Plan Activation Criteria.
  - Develop General Plan Administration Policy.
- **Implementation (Creating the Plan)**
  - Prepare Emergency Response Procedures.
  - Prepare Command Center Activation Procedures.
  - Prepare Detailed Recovery Procedures.
  - Prepare Vendors Contracts and Purchase of Recovery Resources.
  - Ensure everything necessary is in place.
  - Ensure Recovery Team members know their Duties and Responsibilities

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How to prepare Business Continuity Plan? (Business Continuity Plan Phases)

- **Testing**
  - Exercise Plan based on selected Scenario.
  - Produce Test Report and Evaluate the Result.
  - Provide Training and Awareness to all Personnel.
- **Maintenance (Updating the Plan)**
  - Review the Plan periodically.
  - Update the Plan with any Changes or Improvement.
  - Distribute the Plan to Recovery Team members.

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BCP Benefits

- Business Survival
  - Prepare for the worst. If well practiced, staff and management will be able to respond to an incident appropriately
  - Resources necessary to support the business through an incident will be identified and available
  - Any alternative premises and resources will be ready for use

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BCP Benefits

- Risk management
  - Identify, manage and mitigate as many risks as possible
  - Reduce the risks where necessary
  - Promotes a safer working environment and improves working conditions
- Responsibility
  - A company that takes BCP seriously will be a more attractive proposition for Bankers, investors, insurers, customers and employees
  - A business with a BCP will have a responsible management

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BCP Benefits

- Employee satisfaction
  - A sound working environment
  - Welfare and safety concerns of the employee addressed
  - A BCP shows your employees that they are important to the survival of the company
  - Training exercises and drills are vital to the successful implementation of a BCP

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Additional benefits of Business Continuity Planning

- Provides opportunity to evaluate & implement major infrastructure upgrades
  - Data centers or network changes, system centralization server, consolidation or storage networking
- Provides assurances that electronic data protection and accountability compliance regulations can be met
- Standardizes business
  - Administrative cost saving and/or reduction of business risk
- Documentation developed can be used as training materials for new employees
- Planning process often highlights workflow inefficiencies, training inconsistencies and policy and internal control issues

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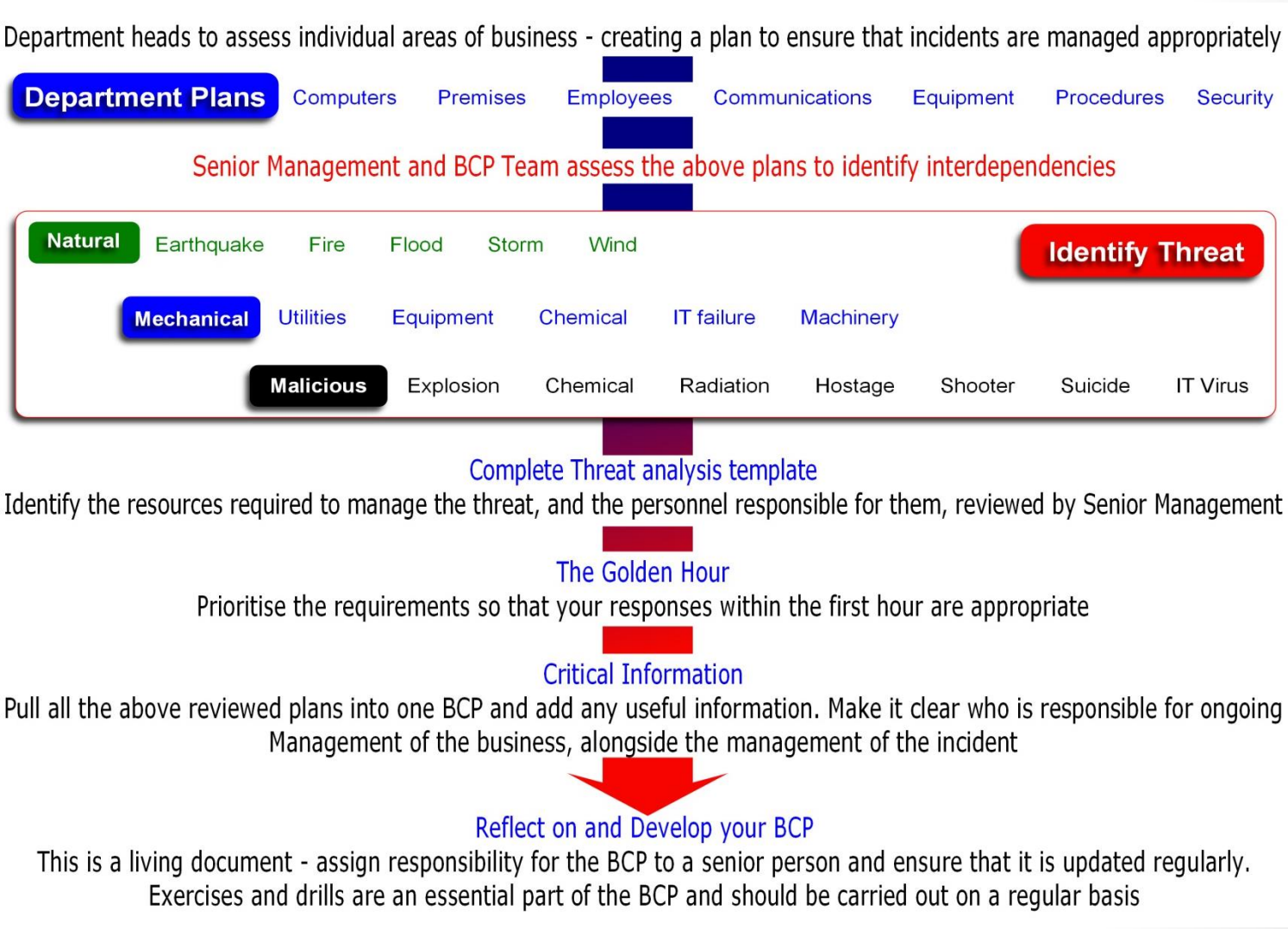
BCP Process



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Risk Management

- The purpose of the Risk Management is to determine the events that can adversely affect the company and its facilities, the damage such events can cause and the controls needed to prevent or minimize loss
- Process:
  - Perform interviews and conduct facility & building walkthroughs to gather data
    - Document organization Al structure and critical processes & systems
    - Document components of the critical infrastructure.
  - Identify single points of failure both with internal and external (vendor/partner) infrastructure and systems

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Risk Management

- Identify potential threats, vulnerabilities and impacts
- Determine options and alternatives for controls (mitigations)
- Present a Decision matrix for implementing controls

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Business Impact Assessment (BIA)

- The purpose of the BIA is to identify the impacts of an outage on the business and to establish objectives for recovering critical processes, systems and applications
- Process:
  - Interview business leaders and managers of key departments
  - Identify time-critical business functions and processes
  - Identify technology systems, data and workspace required to support critical functions
  - Determine the impacts of a disruption
  - Prioritize critical functions and processes, and group into levels
  - Establish Recovery Objectives
    - establish levels such as critical, Essential and important group functions by level
    - When will we recover and to what level of service?
    - RTO = Recovery Time Objective (tolerance for downtime)
    - RPO = Recovery Point Objective (tolerance for data loss)

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What is a Disaster?

- A sudden, unplanned, calamitous event causing great disruption, damage or loss
- Plan for a range of outage scenarios
  - Loss of critical infrastructure or applications- longer term
  - Loss of access to critical systems – typically short term
  - Office is uninhabitable and/or the building does not have power- indefinite interruption
- Take into account the scope of the disaster
  - Individual, local, regional or national impact
- Make the plan modular to allow greatest flexibility in an outage

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