

The ABC's of Business Continuity Strategy Selection



Presented by:

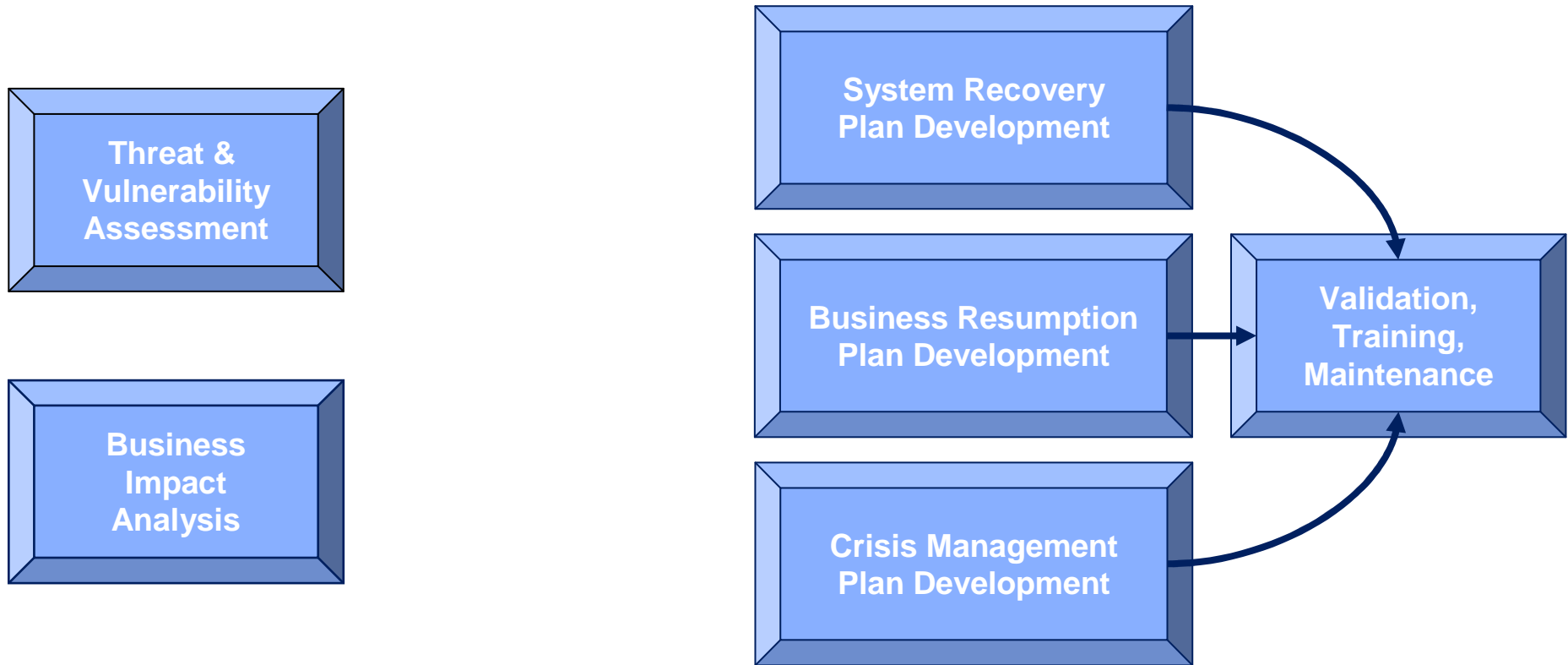
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A basic definition:

What is Business Continuity Planning?

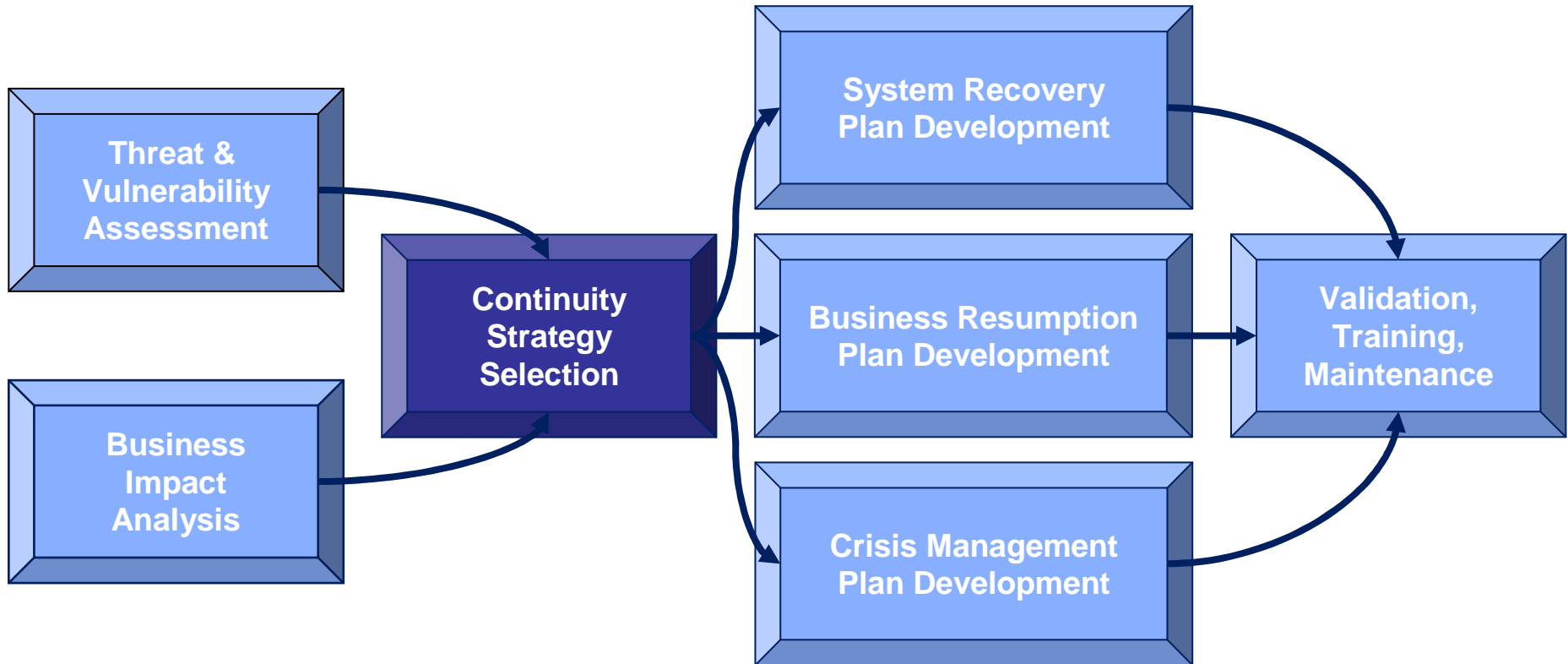
Business Continuity Planning is a suite of processes followed to ensure that an organization does not experience unacceptable interruptions in any of its essential business processes.

The Business Continuity Planning Life Cycle



WHAT'S MISSING FROM THIS DIAGRAM?

The missing link is Strategy Selection



- This is the crucial point at which the organization decides what strategies best meet its continuity requirements, as determined through the TVA and BIA
- Until strategies are selected and approved, detailed planning cannot begin

Let's talk about strategy selection



What are BC Strategies?

- **BC strategies are the approaches the organization will implement to:**
 - **Reduce the likelihood of business interruption and/or**
 - **Ensure the ability to recover from an interruption within an acceptable timeframe**

- **Based on the results of the Threat Assessment and the Impact Analysis, strategies should be selected for:**
 - **Reducing risk**
 - **Reducing impact**
 - **Recovering computer systems**
 - **Resuming business operations**

Strategies for Reducing Risk

- Strategies for reducing the risk of a disruptive event may include:
 - physical building and perimeter security
 - fire detection and suppression systems
 - UPS systems (uninterruptible power supply)
 - computer security systems (e.g. passwords, firewalls)
 - regular backup of electronic data
 - secure storage of critical paper documents
 - minimizing 'single points of failure'
 - regular maintenance of equipment
 - employee screening procedures
 - executive travel policies, etc.

Strategies for Reducing Impact

- Strategies for reducing the impact of a disruptive event may include :
 - developing contingency procedures for specific events (e.g. postal strike, transportation problems)
 - splitting business operations between two or more locations (e.g. call centres)
 - splitting data centre operations between two or more locations
 - establishing alternate means of voice or data communication
 - pre-establishing outsourcing arrangements
 - cross-training employees
 - developing executive succession plans
 - developing 'workaround' procedures for loss of computer systems, etc.

Strategies for Resuming Business Operations

- **Strategies for resuming business operations must address five basic components:**

- 1. LOCATION:** A suitable location to resume operations
- 2. CONNECTIVITY:** Sufficient communication bandwidth from the resumption location to the computer systems
- 3. WORKSTATIONS:** Sufficient workstations (with phones, phone lines, voice mailboxes, PC's, printers, etc.)
- 4. EQUIPMENT & SUPPLIES:** Any specialized equipment or supplies required to resume operations
- 5. STAFF** Sufficient trained staff to perform all essential functions

Strategies for Resuming Business Operations

1. Possible Strategies for Location:

a) Recover at original location once it is accessible and usable

May not be available for days or weeks – if ever

b) Recover at another company location (possibly displacing existing staff)

May not be enough space, phone lines, PC's, etc.

c) Recover at a location to be determined at the time

A prepared location may not be available for days or weeks

d) Recover at a commercial recovery site

Should be readily available, but must be contracted in advance

e) Work from home

Immediately available (assuming the supporting infrastructure is in place)

Strategies for Resuming Business Operations

2. Possible Strategies for Connectivity:

- | | |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| a) Use existing connectivity from original location | <i>May not be available for days or weeks – if ever</i> |
| b) Use existing connectivity from another company location | <i>May not be sufficient bandwidth available</i> |
| c) Acquire bandwidth when required | <i>May take weeks</i> |
| d) Pre-establish full connectivity from another company location | <i>Readily available when required (but may be expensive)</i> |
| e) Pre-establish full connectivity from a commercial recovery site | <i>Readily available when required (but may be expensive)</i> |
| f) Use the Internet (via VPN) | <i>Immediately available (assuming the supporting infrastructure is in place)</i> |

Strategies for Resuming Business Operations

3. Possible Strategies for Workstations:

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|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| a) Use original workstations once they are accessible and usable | <i>May not be available for days or weeks – if ever</i> |
| b) Use compatible workstations at another company location | <i>May not be sufficient capacity available</i> |
| c) Acquire desks, phones, phone lines, PC's, printers, etc. when required | <i>May take days (full phone systems could take weeks)</i> |
| d) Use workstations at a commercial recovery site | <i>Readily available when required (but somewhat expensive)</i> |
| e) Use laptops and home computers | <i>Immediately available (assuming the supporting infrastructure is in place)</i> |

Strategies for Resuming Business Operations

4. Possible Strategies for Equipment & Supplies:

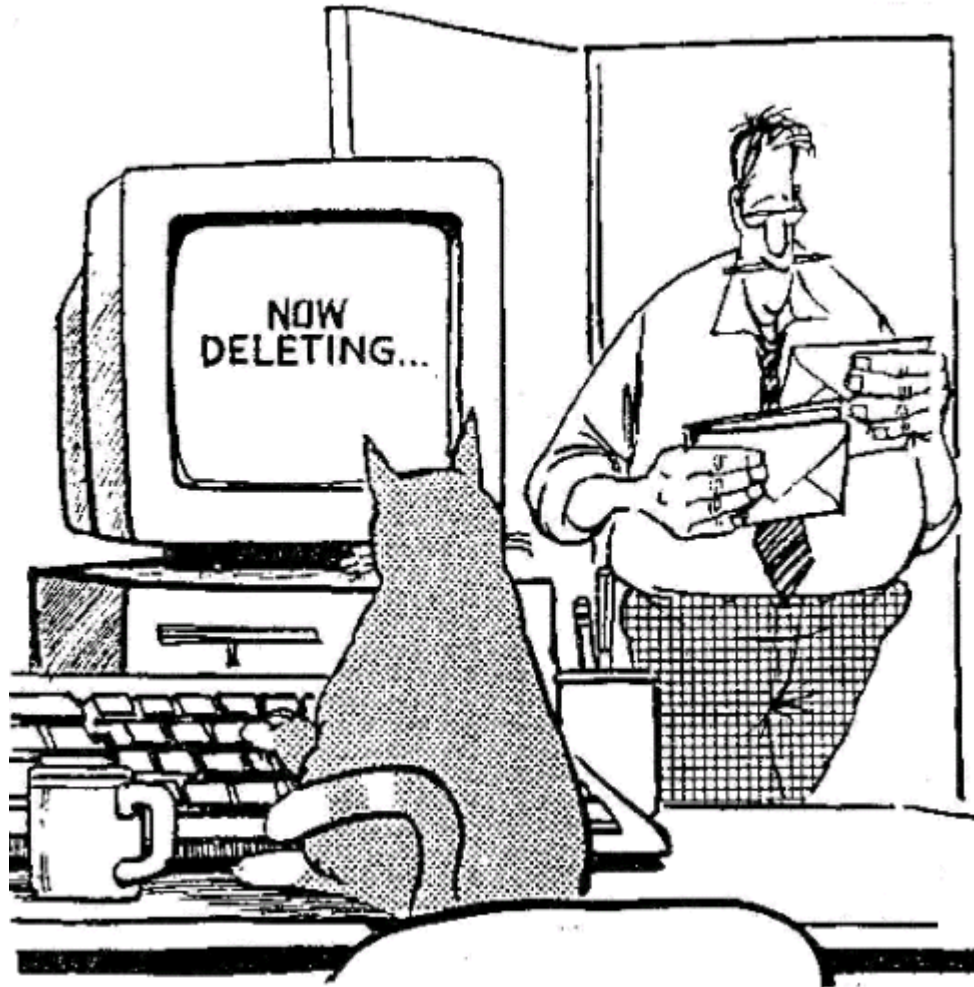
- | | |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| a) Use original equipment and supplies once they are accessible and usable | <i>May not be available for days or weeks – if ever</i> |
| b) Use compatible equipment and supplies at another company location | <i>May not be sufficient equipment capacity or quantity of supplies</i> |
| c) Acquire equipment and supplies when required | <i>May take weeks (or months for specialized equipment)</i> |
| d) Keep spare equipment and supplies at another company location | <i>Readily available when required (but may be expensive to maintain)</i> |
| e) Temporarily outsource operations requiring specialized equipment or supplies | <i>May not be feasible on short notice unless advance arrangements made</i> |

Strategies for Resuming Business Operations

5. Possible Strategies for Staff:

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|------------------------------------------------------------------------|---------------------------------------------------------|
| a) Have staff wait until original location is accessible and usable | <i>May not be available for days or weeks – if ever</i> |
| b) Have staff at another company location perform essential operations | <i>May not be enough staff with required expertise</i> |
| c) Have staff temporarily relocate to another company location | <i>May not have enough staff able to relocate</i> |
| d) Have staff temporarily relocate to a commercial recovery site | <i>May not have enough staff able to relocate</i> |
| e) Hire temporary staff or outsource some operations | <i>May not be feasible on short notice</i> |
| f) Have staff work from home | <i>They're already there!</i> |

Working from home can have its challenges!



Strategies for Recovering Computer Systems

- **Strategies for recovering computer systems must address five basic components:**

- 1. LOCATION:** A suitable location to recover the systems
- 2. CONNECTIVITY:** Sufficient communication bandwidth from the recovery location to the system users
- 3. HARDWARE:** Sufficient compatible hardware to operate the systems
- 4. BACKUPS:** Current backups of software and data
- 5. STAFF:** Sufficient trained staff to recover, operate and support the systems

Strategies for Recovering Computer Systems

1. Possible Strategies for Location:

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|------------------------------------------------------------------|-------------------------------------------------------------------------|
| a) Recover at original location once it is accessible and usable | <i>May not be available for days or weeks – if ever</i> |
| b) Recover at another company location | <i>Should be readily available, but may require preparation</i> |
| c) Recover at a location to be determined at the time | <i>A prepared location may not be available for days or weeks</i> |
| d) Recover at a commercial recovery site | <i>Should be readily available, but must be contracted in advance</i> |
| e) Recover in a mobile trailer | <i>Could be available within a day or two, if contracted in advance</i> |

Strategies for Recovering Computer Systems

2. Possible Strategies for Connectivity:

- | | |
|-------------------------------------------------------------|-----------------------------------------------------------------|
| a) Use existing connectivity to original location | <i>May not be available for days or weeks – if ever</i> |
| b) Use existing connectivity to another company location | <i>May not be sufficient bandwidth available</i> |
| c) Acquire bandwidth when required | <i>May take weeks</i> |
| d) Pre-establish connectivity to another company location | <i>Readily available when required (but very expensive)</i> |
| e) Pre-establish connectivity to a commercial recovery site | <i>Readily available when required (but somewhat expensive)</i> |
| f) Use satellite communications from a mobile trailer | <i>Readily available when required (but expensive)</i> |

Strategies for Recovering Computer Systems

3. Possible Strategies for Hardware:

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|-----------------------------------------------------------|---------------------------------------------------------------------------|
| a) Use original hardware once it is accessible and usable | <i>May not be available for days or weeks – if ever</i> |
| b) Use compatible hardware at another company location | <i>May not be sufficient capacity available</i> |
| c) Acquire hardware when required | <i>May take weeks</i> |
| d) Install spare hardware at a another company location | <i>Readily available when required (but may be expensive to maintain)</i> |
| e) Use hardware at a commercial recovery site | <i>Readily available when required (but somewhat expensive)</i> |
| f) Arrange a contract for quick shipment of hardware | <i>Could be available within a day or two (cost varies)</i> |

Strategies for Recovering Computer Systems

4. Possible Strategies for Backups:

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|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| a) Create regular tape or disk backups on-site | <i>May not be available – ever</i> |
| b) Create regular tape backups and ship off-site | <i>May lose some data</i> |
| c) Create regular backups and transmit off-site to tape or disk | <i>May lose less data</i> |
| d) Transmit transaction journals off-site to tape or disk (in addition to full backups) | <i>May lose very little data</i> |
| e) Replicate data to off-site disk asynchronously or synchronously | <i>Little or no data loss; no restoration from tape required</i> |
| f) Replicate data to an off-site 'hot standby' system | <i>Little or no data loss; backup system ready to go immediately</i> |

Strategies for Recovering Computer Systems

5. Possible Strategies for Staff:

- a) Rely on availability of existing IT staff
 - Some IT staff may be not be available due to the disaster*
 - If recovering at a remote location, not all IT staff may be able to relocate*
 - Current IT staffing levels may not be adequate to support both recovery and restoration*
- b) Supplement IT staff with staff at a commercial recovery site
 - Requires detailed procedures for system recovery and operation, and regular training*
- c) Outsource IT operations to a larger organization
 - May provide a larger pool of resources to draw upon, but rarely considered for BC purposes alone*

Impact of new technologies on recovery strategies

Wireless Handhelds

Server Virtualization

Virtual Networks

Thin Clients

Voice over IP

Cloud Computing

Managed Service Providers

Software as a Service

Storage Area Networks

Platform as a Service

Grid Computing

SAN to SAN Replication

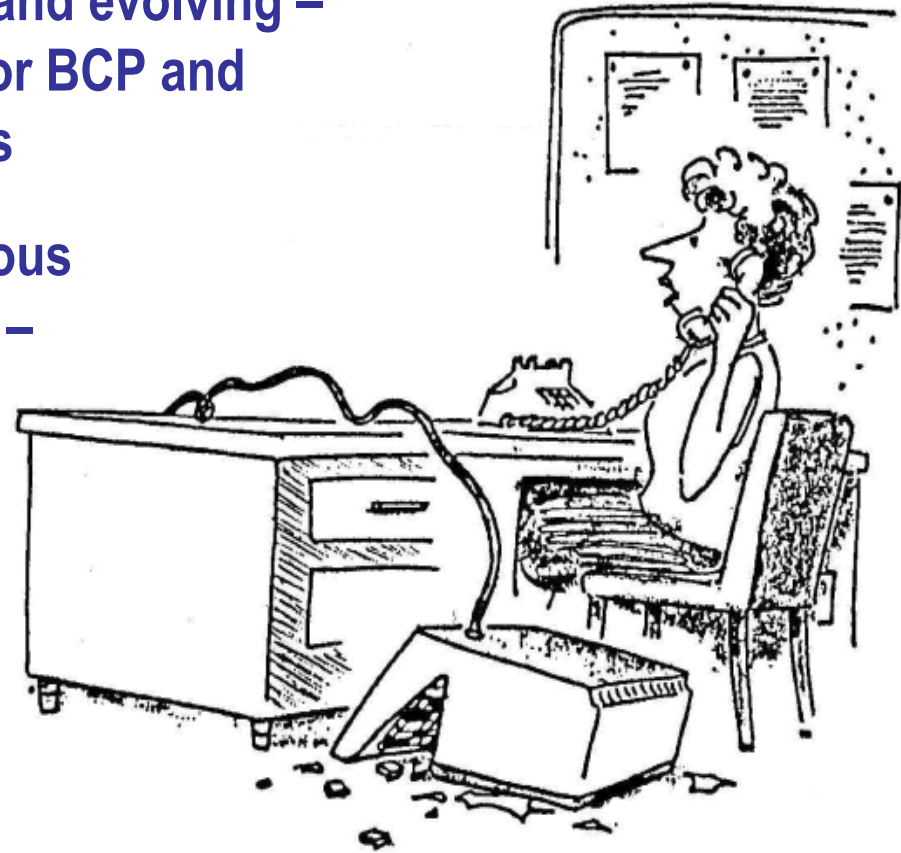
Virtual Desktops

Thick Clients

Impact of new technologies on recovery strategies

- Technologies are always changing and evolving – sometimes presenting challenges for BCP and sometimes presenting opportunities
- Current trends are towards continuous availability of applications and data – from anywhere at any time – rather than on recovery of technology

which may ultimately make this a thing of the past!



“I’m sorry, sir, but our computer is down.”

Selecting the Right Strategies

- Identify all feasible strategies for each potential 'disaster scenario'
- Use a formal, structured approach for evaluating the pros and cons of each strategy
- The evaluation should be performed by a cross-disciplinary group, not by one or two 'specialists' who may have preconceived biases
- Strategy selection should not just be based on what the company can afford, but what it can (or cannot) afford to lose

Failing to follow a structured approach can result in selection of short-sighted strategies that provide a completely false sense of security

Selecting the Right Strategies

Selecting the 'right' Business Continuity strategies usually involves trade-offs

- Typically, the most effective strategies are also the most expensive
- Conversely, the least expensive strategies are often impractical, risky, or fail to meet business requirements
- The challenge is to identify those strategies, or mix of strategies, that are affordable but will provide an appropriate level of risk management

If the strategy for any potential disaster scenario is “do nothing and hope for the best,” make sure management formally accepts the risk

Questions?



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