



WELCOME TO

 **ncs**
making IT happen

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Together, we scale the heights of the value chain.



GREETINGS

BUSINESS CONTINUITY PLANNING

Presented by

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AGENDA

- ▣ **Disaster scenes**
- ▣ **Impacts of Disaster**
- ▣ **BCP Methodology**
- ▣ **Key parameters and Concepts**
- ▣ **Recovery Alternatives**
- ▣ **Industry offering**
- ▣ **NCS Value Proposition**
- ▣ **Q & A**

*What is a **DISASTER** ?*

A **disaster** is a sudden, unplanned, calamitous event that creates an inability on an organisations part to provide the critical business functions for some predetermined period of time, and which results in great damage or loss.

DRI International

Disaster Scenarios



Impact of Disaster



■ Tangible losses

- Loss of data, assets, productivity
- Recovery costs

■ Intangible losses

- Diminished service reputation
- Missed service level guarantees
- Confidence from users, partners & customers

■ Others

- Uninsured losses
- Legal liabilities

Business Continuity Planning (BCP) Methodology



■ Pre-planning

- Project initiation and management
- Risk evaluation and control
- Business impact analysis

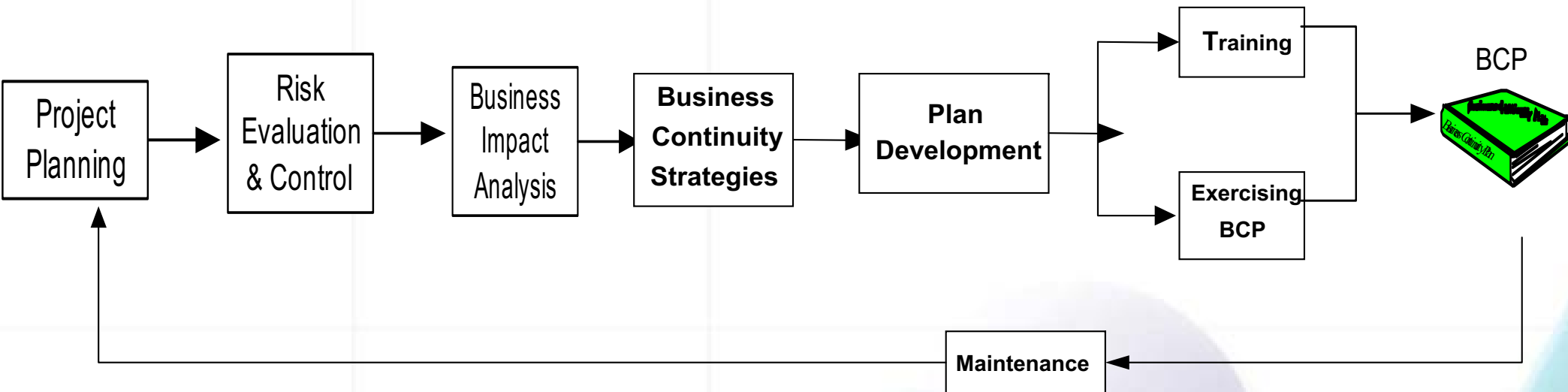
■ Planning

- Business continuity strategies
- Emergency response and operations
- Plan development + implementation

■ Post-planning

- Awareness/training
- Exercising the plans
- Plan maintenance

BCP Methodology



Methodology

Project Management and Planning

- Assist to define objectives, policies etc
- Manage BCP project
- Ensure management buy-in
- Develop project plan & budget
- Define & manage project
- Manage project process

Risk Evaluation & Control

- Identify threats / risks / exposures
- Identify external expertise required
- Controls needed to minimise potential loss
- Determine acceptable risk levels
- Provide cost-benefit analysis to justify investments

Business Impact Analysis

- Identify business impacts from disaster
- Quantify & qualify impacts
- Identify reps in area of expertise
- Co-ordinate analysis
- Define recovery objectives & timeframes
- Present BIA

Methodology

Business Continuity Strategies

- Provide BCS for recovery of business & IT
- Identify recovery strategies with biz units
- Identify off-site facilities & storage requirements
- Obtain business unit consensus



Plan Development

a. Emergency Response & Operations

- Develop procedures to response to emergency
- Define roles, authority & communications processes for managing an emergency

b. PR & Crisis Coordination

- Establish programs for proactive crisis mgt
- Co-ordination with external agencies
- Communication plans to customers, shareholders, public etc
- Plan restoration procedures with public authorities

Training

- Create corporate awareness
- Develop training programs
- Enhance skills required to execute BCP
- Identify external training opportunities

Exercising BCP

- Exercise strategies
- Pre-plan & co-ordinate exercises
- Evaluate results
- Verify effectiveness of BCP

Business Continuity Plans

- Errors and omissions found from the Exercise to be updated in the BCP
- Endorsement of BCP
- Implement BCP

Maintenance and updating of BCP

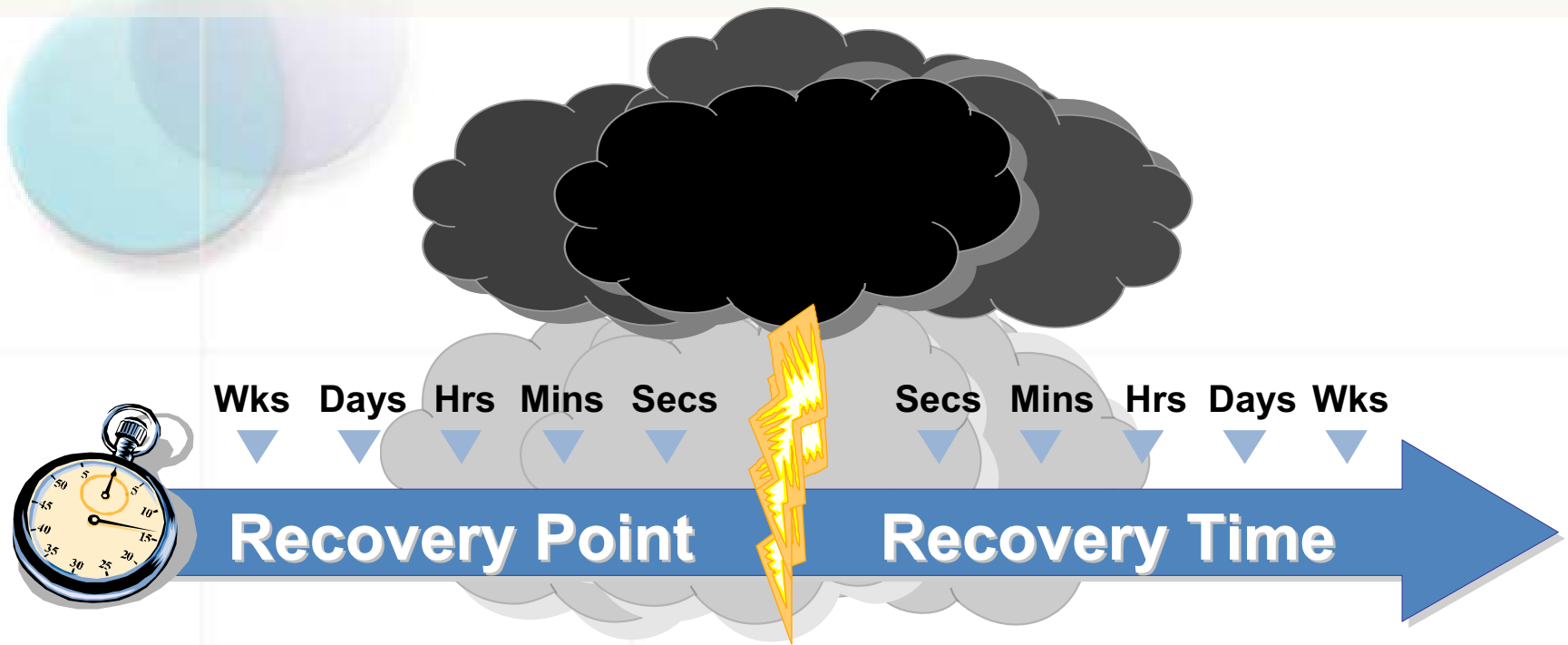
- update source of changes in the environment
- defining maintenance procedures
- review recovery plan documentation
- evaluating adequacy of maintenance plans



Key parameters

- Awareness of the issue
- Determine critical systems
 - **All systems are important but not all are mission critical.**
- Recovery time frame
- Amount of acceptable data loss
- Fall back procedures
- Training
- Recovery exercises
- Audits
- Plan maintenance

Key Concepts



- **Recovery Time Objective (RTO)**

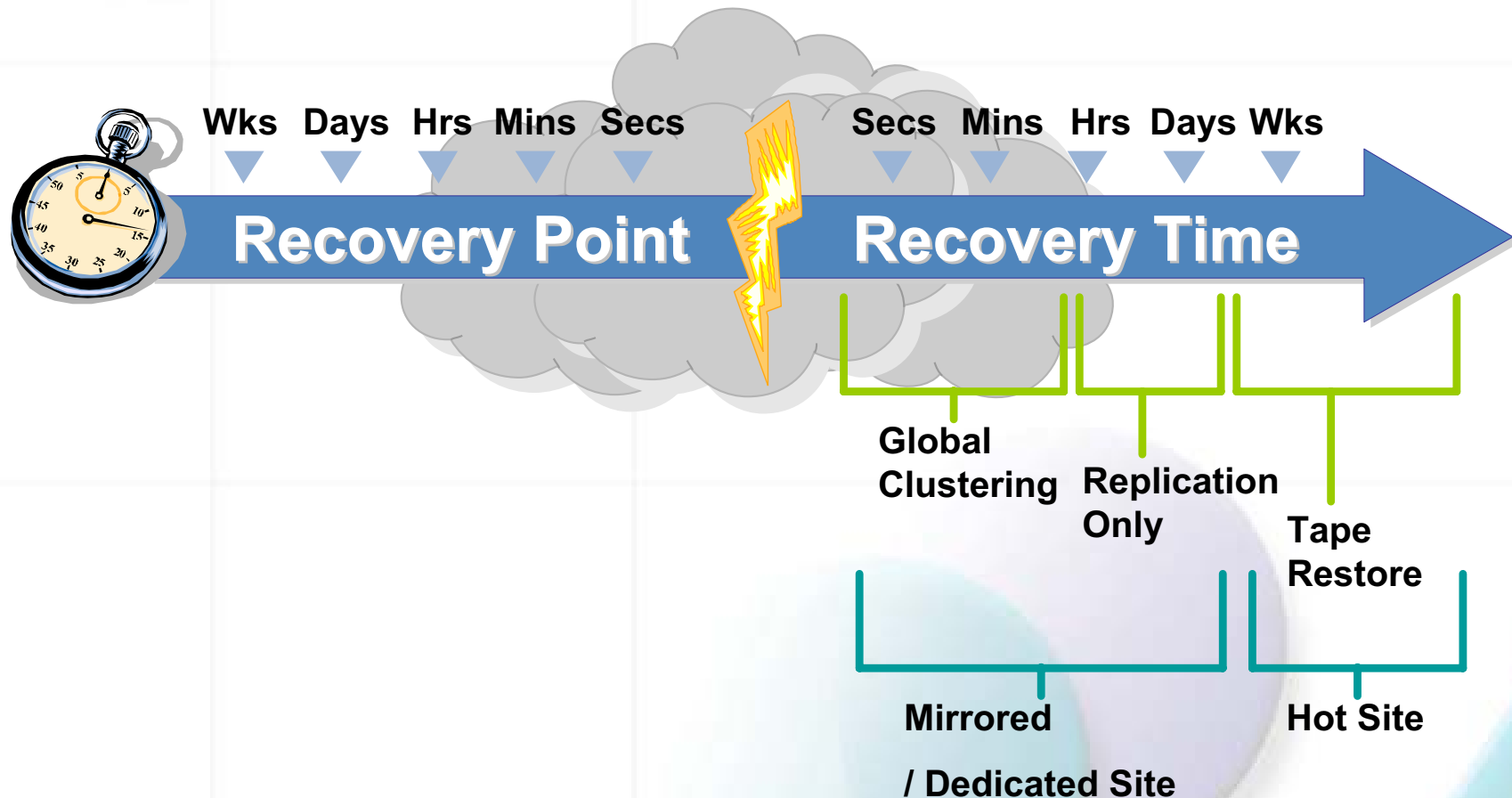
Maximum elapsed time required to complete recovery of application data

- **Recovery Point Objective (RPO)**

Point in time to which applications data must be recovered to resume business transactions

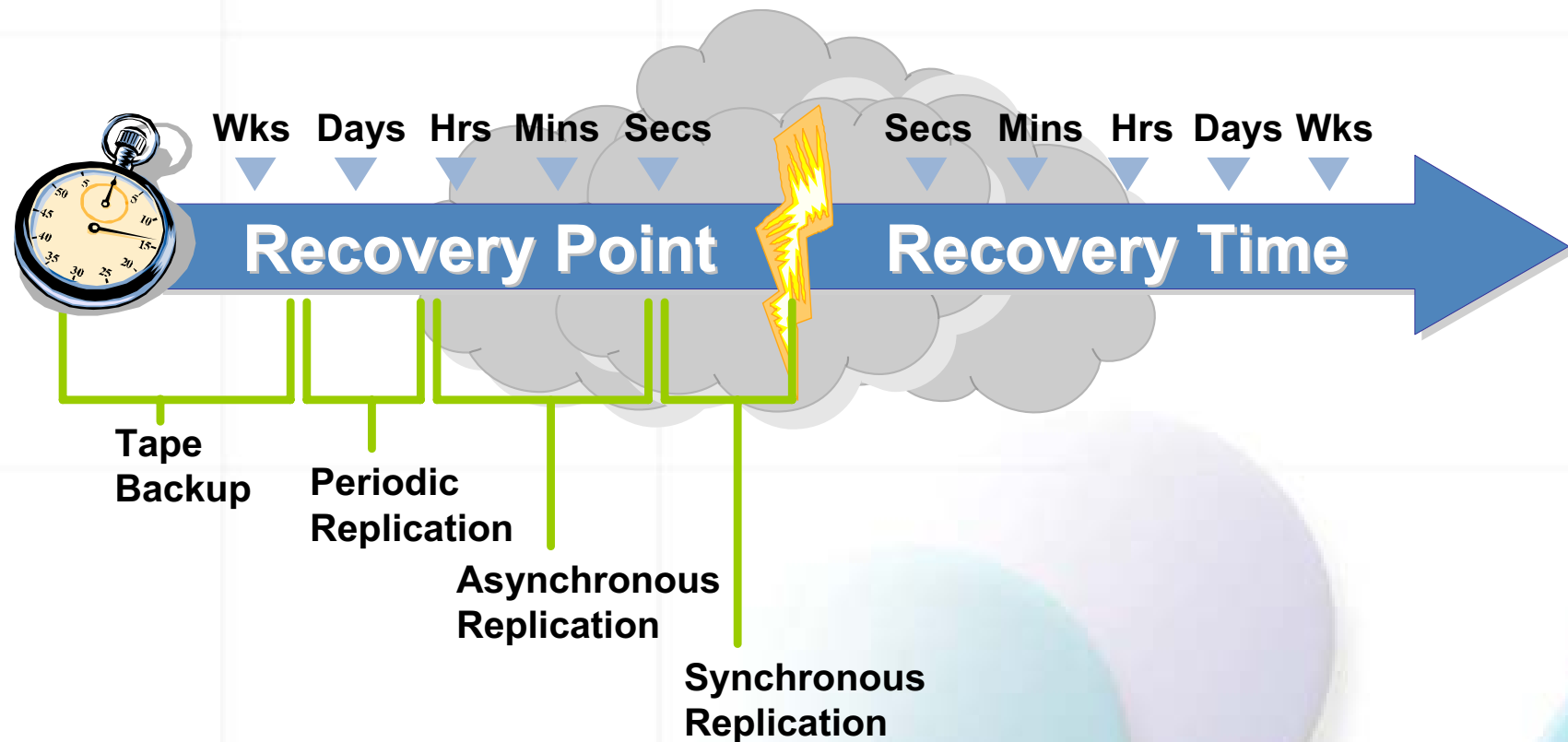
Key Concept - Recovery Time Objective (RTO)

How much downtime can you endure?

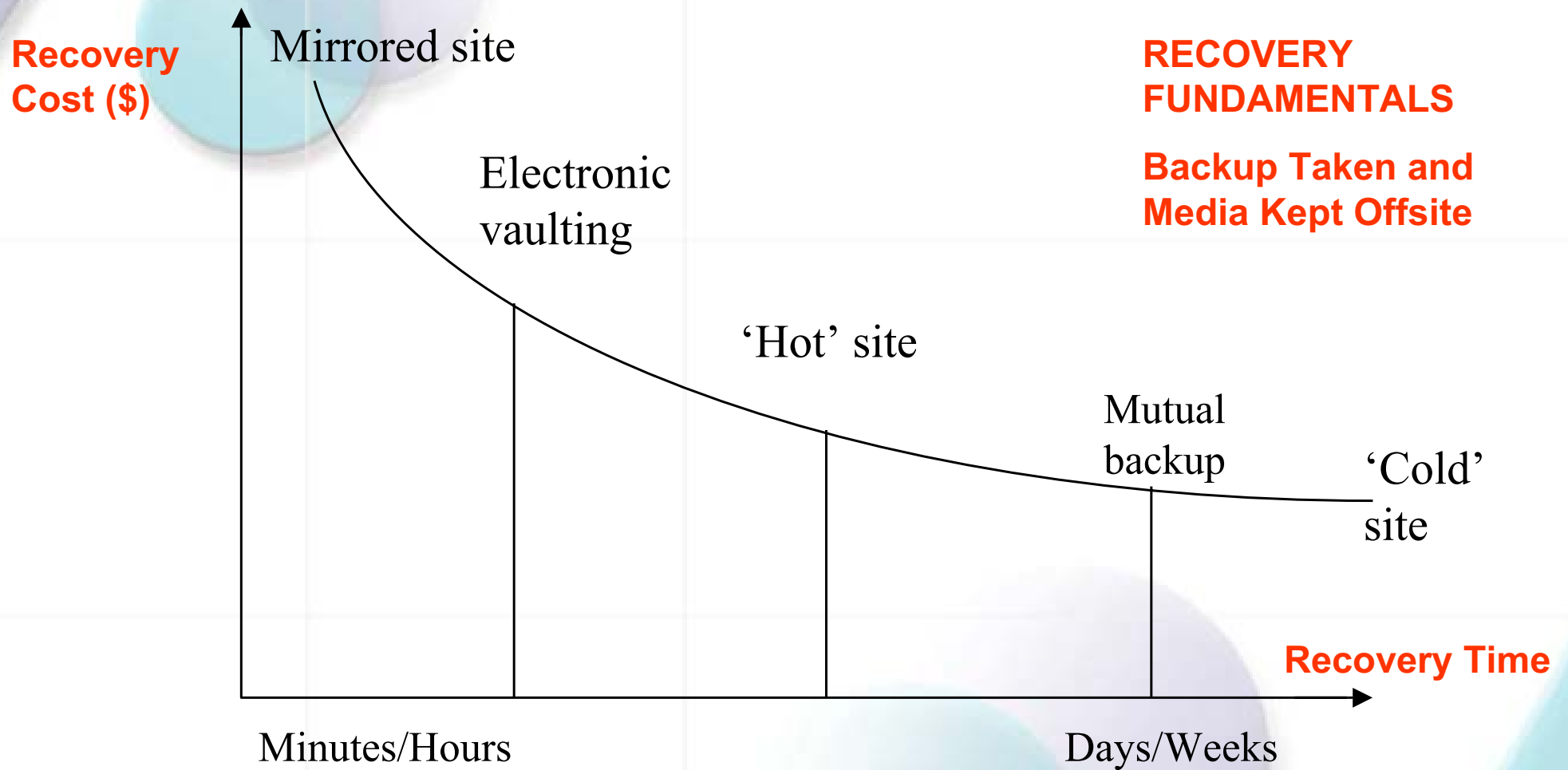


Key Concept - Recovery Point Objective (RPO)

Business needs drive the technology choice



Recovery Alternatives



Mirrored Site

- Active-Active Data Centres
- Should be far apart
- Dedicated hardware
- Data at both sites synchronised

Mirroring

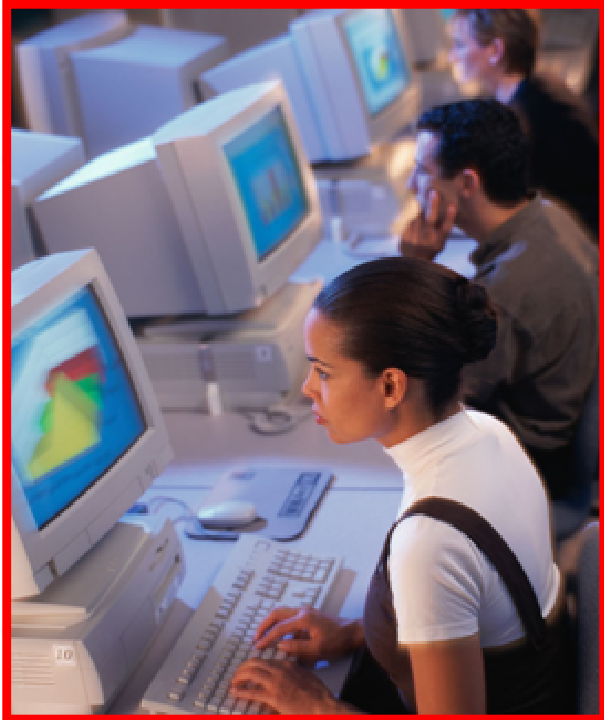
- Virtually no data loss
- Very costly

Dedicated Site

- Active or Passive DR
- Dedicated hardware

Hot Site

- Servers + network equipment (4hrs preparation)
- On-site technical support
- “First come, First served”
- Up to 6 weeks



Cold site

- computer room set-up (power points, air-con, raised floor, UPS, standby generator, etc)
- bring in own equipment
- packaged with work area recovery

Industry Offering - BRC Facilities



Work area recovery

- equipment and office environment
- on-site technical support
- up to 6 weeks
- move to Cold Site after basic 6 weeks
- shareable DRS
 - “first come, first serve”

Industry Offering - BRC Facilities

Hot Site

- Most economical
- Servers/network is sharable
- First come first serve basis
- Recovery window < 36 hrs
- Data is as old as your last backup

Dedicated Site

- Known as “dedicated standby”
- Can pre-load OS, Apps
- Guarantee availability during disaster
- Recovery window < 24 hrs
- Data is as old as your last backup

Mirrored Site

- known as Real-Time Mirroring
- Dedicated equipment with high speed link
- Typically with SAN solution
- Recovery window < 4hrs
- Data is live!



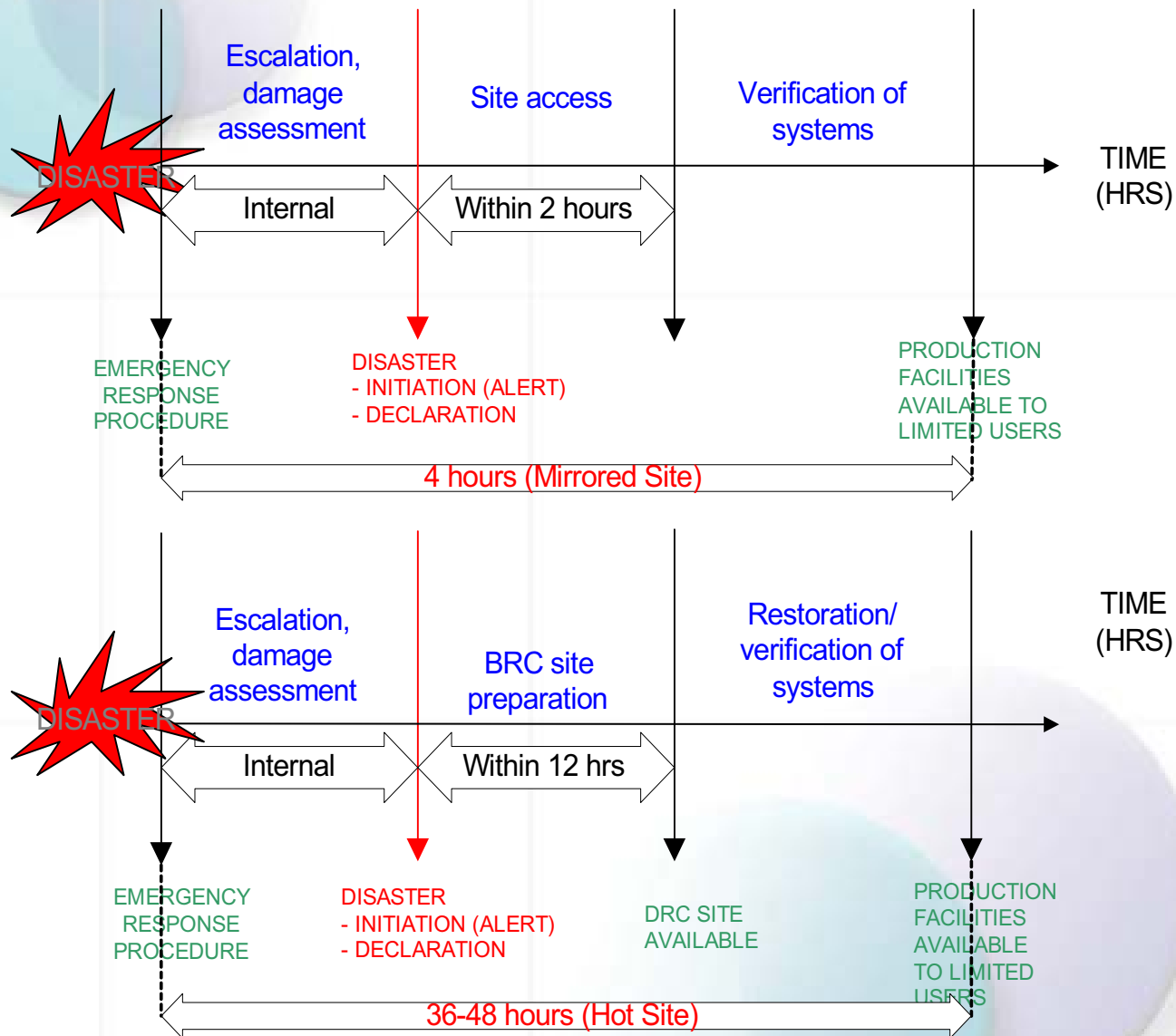
LAN/WAN recovery

- Network equipment
- Co-ordinate with SingTel for links to other remote sites

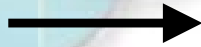
Testing

- testing allowance

Recovery Timeline



Activation Flowchart



Authorising Officer



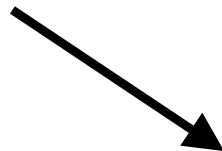
Helpdesk (24x7 Hotline)
- Agent to authenticate caller
- Escalation to BR Project Manager



Project Manager activated
- Render assistance on
Damage Assistance



Onsite technical support



BRC Facilities to be prepared

Value Proposition

People

**Certified
Business
Continuity
Planner**

Process

- ISO 9001
- BS7799

Technology

**Strong Alliances
& SingTel
Communication
Infrastructure**

Knowledge

**Vast experience from
running large scale
systems, mission critical
systems, round the clock**

Questions & Answers Time





THANK YOU

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