

**Risk Management MN220:
Seminar 7: Crisis
management**



SHERIDAN COLLEGE

PERTH | WESTERN AUSTRALIA

Refresh - Implementation plan

Contains:

- How the risk management plan (RMP) will be implemented in the business;
- Time line on activities;
- Milestones for achievement; and
- Training/ education/ awareness.

Seminar 8.

Crisis management and business continuity mgnt.

- Introduction
- What a crisis and how does it arise?
- What is a disaster?
- Crisis management and disaster recovery
- Crisis management team
- Crisis Management Plan (CMP)
- Business continuity planning and management
- Business impact and threat analysis
- AS/NZS 5050:2010, Business continuity –Managing disruption-related risks
- AS/NZS HB 221:2004, Business Continuity Management
- The Business Continuity Plan (BCP)
- Case study



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Preventative

- Risk Management Planning
- Business Impact Analysis (BIA) after Risk assessment is complete
 - MAO
 - Duration of disruption
 - Critical Business Function
 - Crisis Response and Business Continuity Planning (BCP) is initiated

Event

- Disaster**- natural or man made
- Crisis**- Unplanned Events
- Recovery begins
- Business Continuity Management (BCM) begins

Recovery

- Disaster Recovery Plan executed
- Business Continuity Planning executed
- **CMT**- Crisis Management Team and Team Leader (CEO)
- Crisis Command Centre** to roll out Crisis Management Plan

Crisis

“A crisis is a major unplanned event which either in itself is a major problem, or leads to the development of a major problem”.¹

Crises arise from:

- Accidents;
- Third party involvement;
- Events arising from an accident.

• 1 Campbell, R., Crisis Control, Preventing & Managing Corporate Crises.

Crisis

“Situation that is beyond the capacity of normal management structures and processes to deal with it effectively.”₂

- 2 AS/NZS 5050:2010, Business continuity –Managing disruption-related risks

Crisis management

“Crisis management is now an important part of strategic management because it enables an organisation to reduce the threats and vulnerabilities related to a crisis.”₃

- ₃ Campbell, R., Crisis Control, Preventing & Managing Corporate Crises.

Crisis Management

- <https://www.youtube.com/watch?v=mel31geq2LQ>

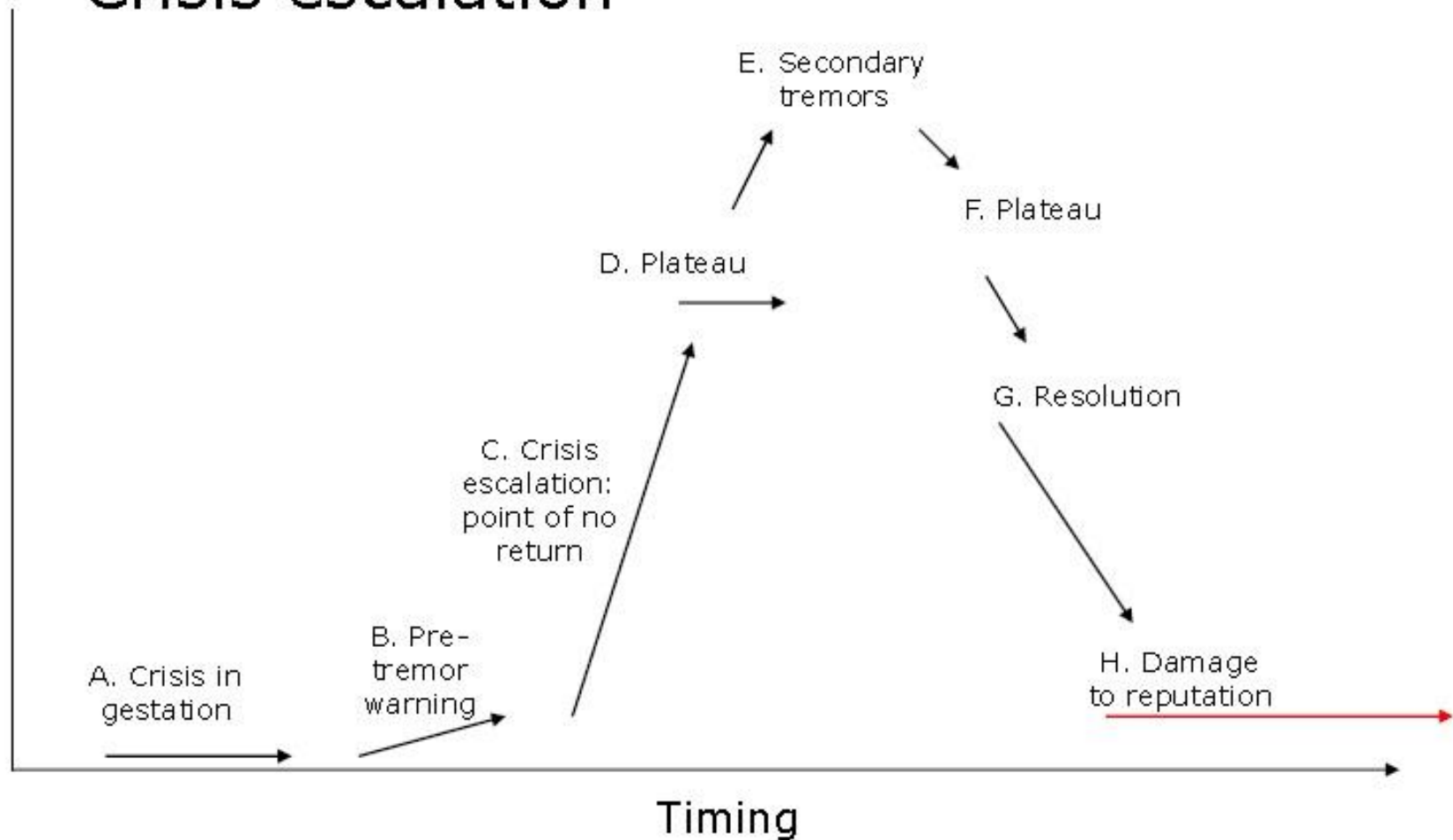
Disaster

- (From Greek meaning, "bad star") is a natural or man-made event that negatively affects life, property, livelihood or industry often resulting in permanent changes to human societies, ecosystems and environment;
- A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources;
- Any unplanned circumstance or event that results in an inability to support critical business functions within the current environment.

Crisis creating events

- Business scandal;
- Death or resignation of CEO;
- Bankruptcy;
- Government/tax department investigation;
- Major changes in the marketplace;
- Hostile takeover;
- Loss of sensitive or critical information;
- Security breach;
- Staff redundancies or lay-offs.

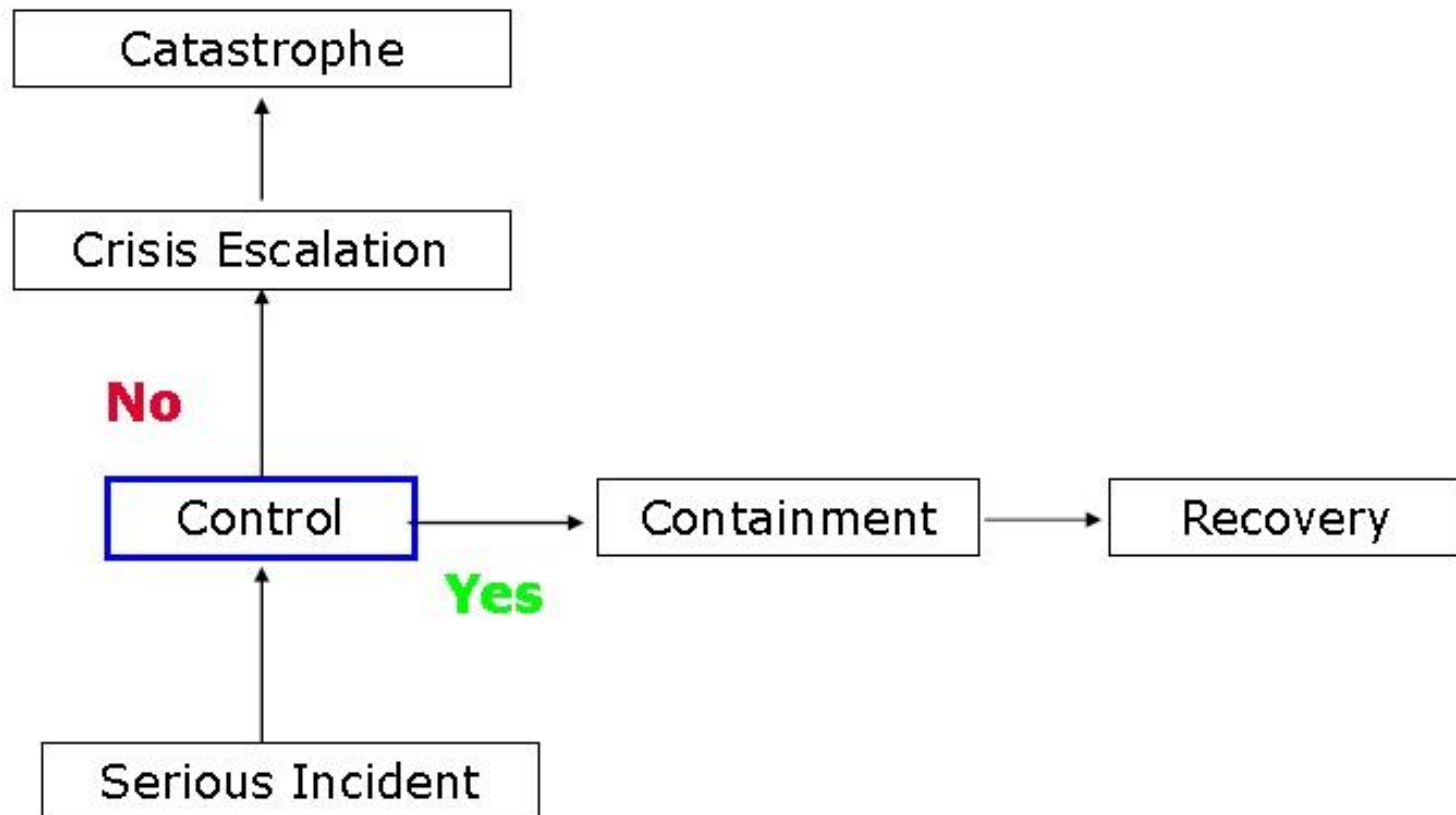
Crisis escalation⁵



⁵Curtin, T., Hayman, D., Husein, N., Managing A Crisis, A Practical Guide



Crisis control⁶



⁶ Campbell, R., Crisis Control, Preventing & Managing Corporate Crises.

Stakeholders in a crisis

- Employees & their families;
- Directors;
- Shareholders;
- Media;
- Regulators;
- Politicians;
- Public;
- Activists;
- Customers;
- Suppliers.

Media in a crisis

Bad news makes headlines

“If the company does not control the management of information, the media will.”

Media need to be briefed about the crisis.

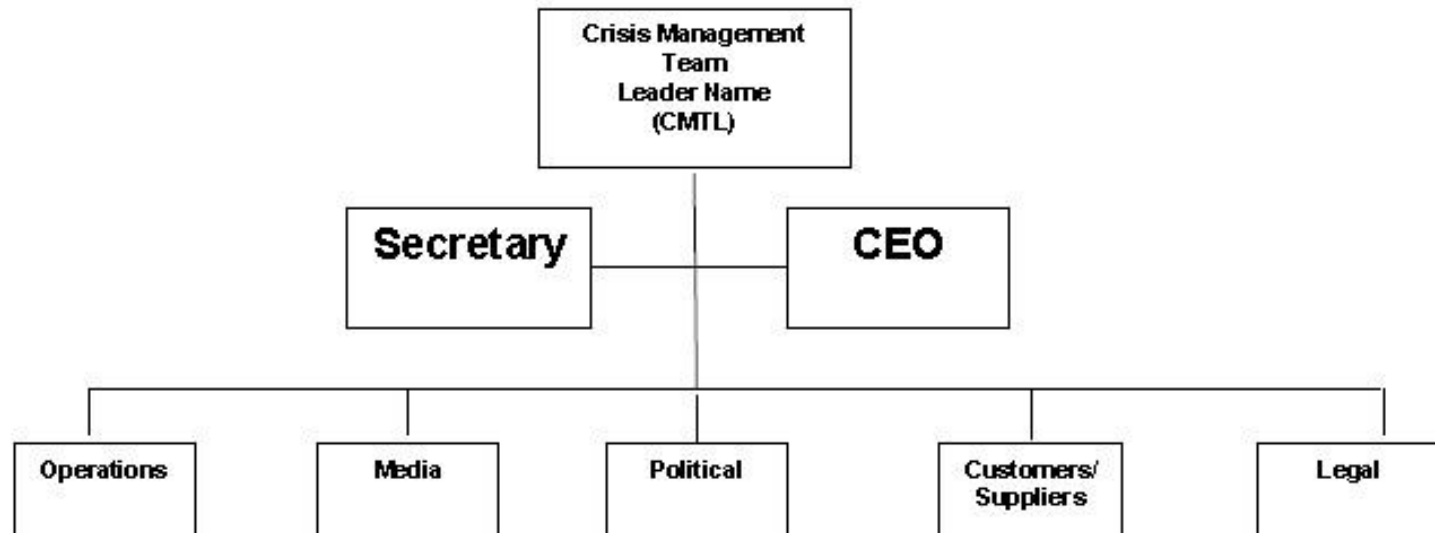
Communication must be:

- Appropriate;
- Timely;
- Consistent.

Crisis Management Team (CMT)

- The establishment of the Crisis Management Team is one of the most important elements of crisis management;
- Each person on the team has a designated role;
- No person will take another person's role;
- Each person must be equipped for the role;
- Each person must be tested for the role; and
- Each person must know the other team members.

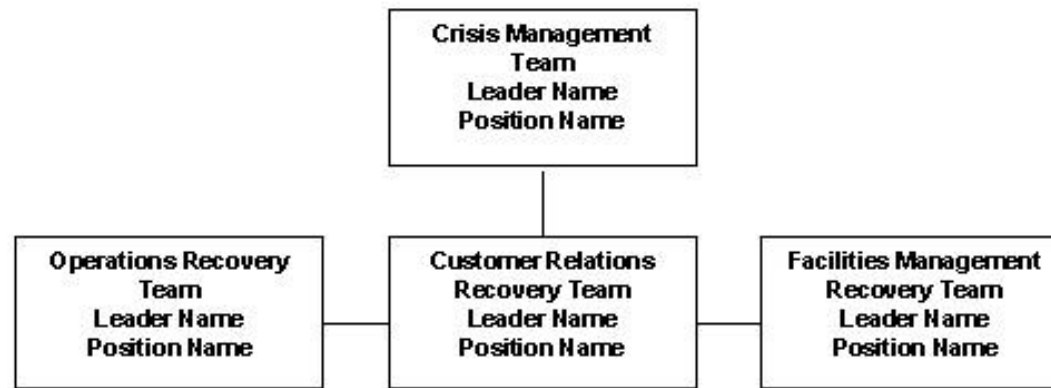
Crisis Management Team (CMT)⁷



⁷ Curtin, T., Hayman, D., Husein, N., Managing A Crisis, A Practical Guide

Crisis Management Team (CMT)

- simplified



Crisis Management Team Leader (CMTL)

- The Crisis Management Team Leader may or may not be the CEO;
- The Crisis Management Team Leader must have the following attributes:
 - Authoritativeness;
 - Decisiveness;
 - Ability to communicate effectively; and
 - Diplomacy.

Crisis command centre⁸

- Central location for managing communications ;
- Central location for implementation of CMP;
- Room equipped with communications available outside the normal company's network;
- May be multi-purpose room (used for training or other purposes).

•⁸Campbell, R., Crisis Control, Preventing & Managing Corporate Crises.

The Crisis Management Plan (CMP)

- The CMP must be endorsed by the CEO and the board;
- The CMP must be part of corporate policy;
- The plan must be simple and easy to use;
- Accountability is essential;
- It must be capable of application at each business location;
- The plan must have recording process to keep accurate records of events;
- The plan must be budgeted; and
- The plan must be tested.

Recovery

- The business needs to continue during and after the crisis;
- The business will be stressed and will be operating under different conditions;
- Once the nature of the crisis has been determined and the CMT is managing the crisis, the business continuity plan(s) can be invoked.



The Difference Between Business Continuity and Disaster Recovery

- <https://www.youtube.com/watch?v=qfjWhAmWYL8>

Business Continuity Management

“Business Continuity Management provides the availability of processes and resources in order to ensure the continued achievement of critical objectives.”⁹

- 9 Australian/New Zealand Standards, HB 221:2004 Business Continuity Management

Business Continuity RM¹⁰

- Principles
- Framework
- Process
- Verification

Note: Draws on fundamentals of AS/NZS ISO 31000

•10 AS/NZS 5050:2010, Business continuity –Managing disruption-related risks

Business Impact Analysis (BIA)

“Detailed risk analysis that examines the nature and extent of disruptions and the likelihood of the consequences.”¹¹

- Method of determining the degree to which the business will be impacted;
- Carried out following the risk assessment;
- May be for part of the organization or whole of organization.

•¹¹ AS/NZS 5050:2010, Business continuity –Managing disruption-related risks“

Business Impact Analysis (BIA)¹²

- Business unit/ department
- Contact details and information
- Type of impact
- Impact over time (hours, days, weeks, months)
- Operational impact over business objectives

• ¹²Australian/New Zealand Standards, HB 221:2003 Business Continuity Management

Duration of disruption

“Detailed risk analysis that examines the nature and extent of disruptions and the likelihood of the consequences.”¹³

- Method of determining the degree to which the business will be impacted;
- Carried out following the risk assessment;
- May be for part of the organisation or whole of organisation.

Maximum Acceptable Outage (MAO)

“Maximum period of time that an organization can tolerate the disruption of a critical business function.”¹⁴

- 14 AS/NZS 5050:2010, Business continuity –Managing disruption-related risks

Critical Business Function¹⁵

“A business function or part thereof identified as essential for survival of the organization and achievement of its critical objectives .”¹⁵

- 15 AS/NZS 5050:2010, Business continuity –Managing disruption-related risks“

Crisis response and BCP

Three responses to a crisis:

- **Emergency** response (carried out by Crisis Management Team);
- **Continuity** response (processes and controls to meet critical requirements of the organisation);
- **Recovery** response (processes and resources to bring the organisation back to “pre-crisis” condition).

Risk and Business Continuity Planning

- Risk management is preventative, business continuity is corrective;
- Risk and BCP are interrelated;
- Risk identification and analysis is the precursor to developing the BCP.

Six key elements of BCP¹⁶

1. Understanding the environment in which the organisation operates;
2. Determining the parts of the business critical to its short term and long term success;
3. Quantifying the disruptive impact of threats on critical business processes;

•16 Adapted from Australian/New Zealand Standards, HB 221:2004 Business Continuity Management

Six key elements of BCP (cont'd)

4. Documenting the key resources, infrastructure, tasks and responsibilities to support critical processes;
5. Establishing processes that ensures information remains current in a changing risk environment;
6. Ensuring relevant stakeholders and employees are aware of the BCP arrangements.

BCP processes and risk management¹⁷

- 9 steps in the BCP process;
- 7 elements in the risk management process;
- Risks are identified through the business impact analysis and risk and vulnerability analysis;
- BCP deals with risk impact over time.

¹⁷Australian/New Zealand Standards, HB 221:2003 Business Continuity Management

Nine steps in BCP₁₈

1. Commencement – establishing scope and objectives of the process, management commitment and the project team;
2. Risk and vulnerability analysis – determines which risks will impact critical processes;
3. Business impact analysis – impact over time on critical business processes. Scenario development, and Maximum Acceptable Outage (MAO), and workarounds;

- 18 Australian/New Zealand Standards, HB 221:2003 Business Continuity Management

Nine steps in BCP (cont'd)

4. Response strategies – emergency (crisis), continuity, and recovery;
5. Resources and interdependencies – resources required and external interdependencies;
6. Documentation – documenting the continuity plans for scenarios;

Nine steps in BCP (cont'd)

7. Communication strategy – development of the communication strategies;
8. Training, maintaining and testing – testing the plan(s), training team members, and maintenance of plans;
9. Activation and deployment – plan activation and governance (during plan activation).

BCP team

Similar to crisis management team approach.

Core components:

- Technology recovery;
- Facilities recovery;
- Human resource management.

Need to communicate with stakeholders.

- 19Barnes, J., A Guide to Business Continuity Planning

Criteria for analysis

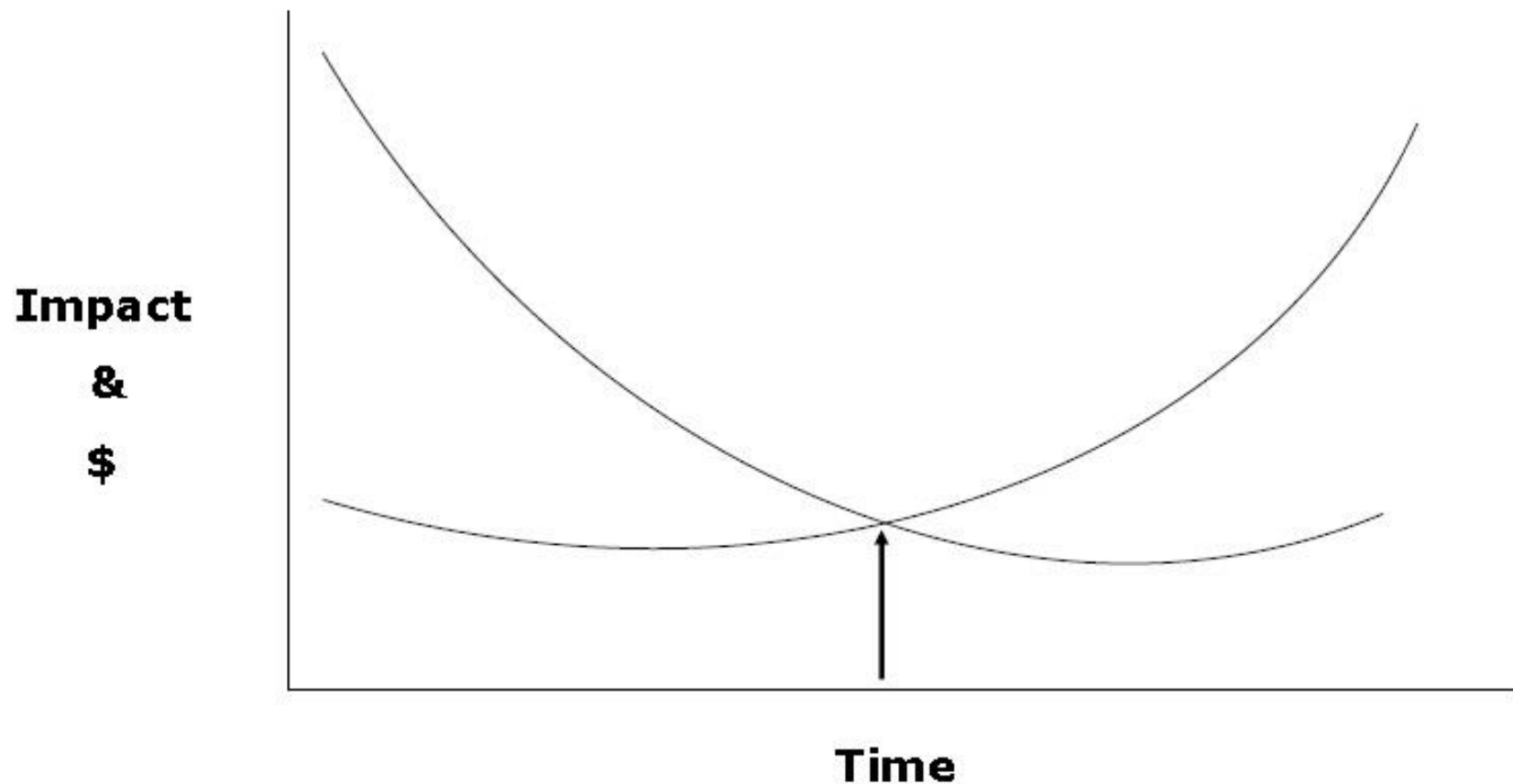
Similar to AS/NZS ISO 31000:

- Consequence ratings 1-5 (insignificant to catastrophic);
- Impact covering financial and non-financial (operations).

Strategy selection

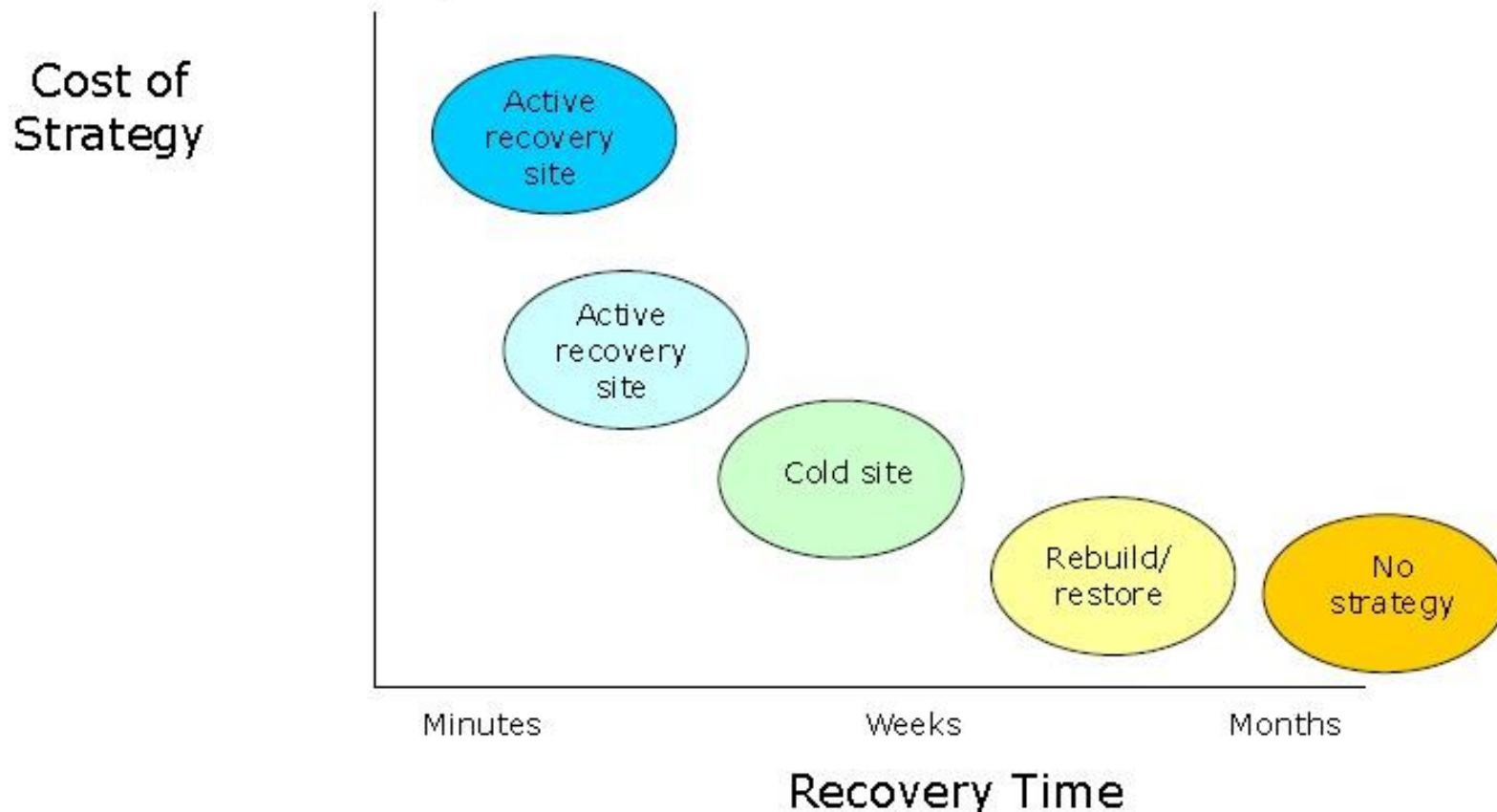
- What are the emergency/ recovery/continuity strategies?
- What is the most cost effective strategy?
- How will it be implemented?
- What resources are required to implement the strategy?
- Where are the contact details for the stakeholders?

Strategy selection²⁰



²⁰Barnes, J., A Guide to Business Continuity Planning

Example – computer centre recovery²¹



²¹Barnes, J., A Guide to Business Continuity Planning

Resourcing

What physical resources are required?

- Desks, chairs, office furniture;
- Telecommunications, computers, email/messaging.

What human resources are required?

- Third party (contract) personnel.

What financial resources are required?

- Additional costs of office/equipment rental;
- Temporary outsourced process management.

Communication strategy

- Responsibilities for communication (reference CMP if in place);
- Stakeholder message (staff/personnel, board, fire/police/government, media);
- Management of the communication
- Deployment .

Testing

Desktop review:

- Examination of documentation and plans (for viability, integrity, deployability).

Desktop scenario:

- Walkthrough of each of the BCP's examining the scenarios.



Testing (cont'd)

Notification and call-out:

- Notify team members of business disruption;
- Evaluate effectiveness of response.

Live scenario:

- Testing on scenarios, limited or across the business.

Business recovery:

- Close down of processes/systems;
- Fully deploy BCP.

Issues

- Developing a BCP takes time and resources;
- Often the attitude is “it won’t happen to us”
- BCP’s are difficult to fully test;
- Fully testing a BCP can bring risks to maturity should the BCP’s fail.

Summary

- What is a crisis and how does it arise?
- What is a disaster?
- Crisis management and disaster recovery;
- Crisis management team;
- Crisis Management Plan (CMP);
- Business Continuity Planning (BCP) and management;
- Business impact and threat analysis;
- AS/NZS HB 221:2004, Business Continuity Management (BCM);
- Relationship between AS/NZS ISO 31000 and AS/NZ 5050:2010;
- The Business Continuity Plan (BCP).

BCP Reverse-Engineering

Role Play

- Group Activity on Scenario
 - 3 Groups are formed
 - Crisis Team Leaders (CEO & Exec. Team)- 3 people
 - Crisis Command Centre – 4 people
 - Execution Team – 4 People
 - Reporter/Runner (Lecturer)

Video

- https://www.youtube.com/watch?v=IBx_tM_jNUQ
- Airplane Crash Melbourne

Lecture 8-Cont.

Enterprise risk management (ERM)

- Enterprise Risk Management (ERM)
- Establishing a risk management culture
- Leadership, management and commitment
- Interdependency between policy, goals, reward and sanction
- Methodologies, processes, and outputs
- Structure
- Consolidation and mapping
- Tools and technology
- Training and development
- Timetable and programme
- Integrating quantitative and qualitative elements of risk management
- Developing the ERM system – case studies



What is enterprise risk management ?

- https://www.youtube.com/watch?v=w_y6S8yF7WA

Enterprise risk management¹

*“The process required to establish effective risk management as part of the day-to-day business at an **organisational level** and subsequently at **operational, project or team levels** is likely to require a **change of culture** for many organisations.”¹*

¹AS/NZS 4360:2004, Risk Management

ERM

- Term once frequently used to discuss the management of risk across the enterprise;
- Related to “whole of business” rather than individual business process;
- Used less often today as risk management becomes more pervasive across and within the business.

BASIC EXTERNAL ANALYSIS

- PESTLE
- Using Coso

Organisational culture

Organisational culture is shaped by the following²:

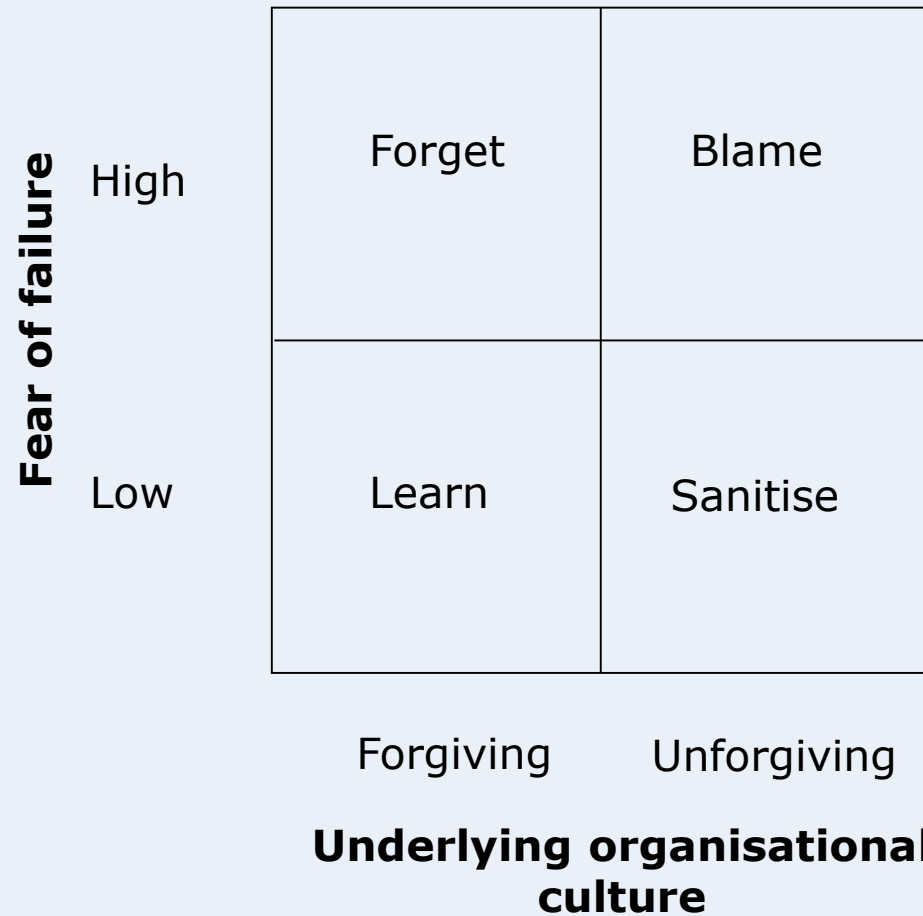
- Rules and policies;
- Goals and measures;
- Rewards and recognition;
- Staffing and selection;
- Training and development;
- Ceremonies and events;
- Leadership and behaviour;
- Communications;
- Physical environment;
- Organisational structure.

² Holmes, A., Smart Risk

Enterprise risk management culture

- Senior management must be engaged;
- Risk management needs to be “seen” at all levels of the organisation;
- Training conducted throughout the organisation assists in ERM;
- Success stories need to be “sold;”
- A “champion” or sponsor is required to engender a positive risk management culture;
- Staff need to be supported by management to manage risk.

Response to failure³



³ Holmes, A., Smart Risk

“Hands up – cover up”

- A “hands up” culture occurs when **fear of failure** is **low** and where the organisation is forgiving;
- A “cover up” culture occurs when **fear of failure** is **high** and where the organisation is unforgiving;
- A “hands up” culture encourages risk taking, whilst managing negative risk.

Leadership and management

- The board needs to be committed to risk management;
- The CEO needs to be committed;
- Commitment needs to be demonstrated by both leadership (doing and saying), and through management (policy, procedures and processes).

Commitment

- Risk management responsibilities need to be allocated;
- Risk Manager or Manager of Risk?
- Build risk into Key Performance Indicators (KPI's).

Methodologies, processes and outputs

AS/NZS ISO 31000:2009

- Risk assessments;
- Risk treatment;
- Risk monitoring;
- Risk reviews/audits;
- Communication and consultation;
- Risk register that is incorporated into strategic and business planning.

Structure

- Risk management committee (for **large** companies);
- **Risk champion** for smaller companies;
- Establish risk into the **board agenda**;
- Establish risk into the **executive committee agenda**;
- Establish risk into the **strategic planning process**;
- Apply **reward and sanction** in embedding risk management;

Consolidation and mapping

- Corporate (enterprise) risk register;
- Division/business unit risk register;
- Branch office risk register;
- Risk register consolidation;
- Risk consequence mapping.

Corporate risk mapping

- Contextualises relative **risk impact** within the business;
- Provides a mechanism for business unit and project risk analysis;
- Reduces “noise” in the corporate risk register;
- Allows lower level common risks to be aggregated and escalated.

Corporate risk mapping⁴

Division Consequences	Enterprise Consequences		Business Unit Consequences	Enterprise Consequences
Catastrophic	Major		Catastrophic	Moderate
Major	Moderate		Major	Minor
Moderate	Minor		Moderate	Insignificant
Minor	Insignificant		Minor	Insignificant
Insignificant	Insignificant		Insignificant	Insignificant

⁴ Moore, P.

Corporate risk mapping

Consequence	Corporate Financial Impact	Divisional Financial Impact	Business Unit Financial Impact
Catastrophic:	> \$10M	>\$500,000	> \$200,000
Major:	\$500,000 -\$10M	\$200,000 - \$500,000	\$100,000 -\$200,000
Moderate:	\$50 000 - \$500,000	\$100,000 - \$200,000	\$50,000 - \$100,000
Minor:	\$5,000 - \$50,000	\$5,000 - \$100,000	\$5,000 - \$50,000
Insignificant:	<\$5,000	<\$5,000	<\$5,000



Corporate risk mapping - examples

Risk : Inadequate insurance

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3 Inadequate insurance

Description Cause/consequence Comments Attachments

Inadequate insurance cover for the business

Sum of Costs

Ctrl Total	Control Cost
0	0.00
Treat. Total	Treat. Cost
1	0.00

Assessment Quantification Corporate Assessment Audit Assessment

Assessment

☒ Relevant

Consequence Likelihood Control Effectiveness Risk Score

Absolute Catastrophic Almost Certain 25

Controlled Moderate Possible Reservations 9

Treated Minor Unlikely 4

Level of Risk Severity

☒ Very High ☐ Acceptable

☒ High ☐ Acceptable

☒ Low ☐ Acceptable

Attributes Additional Information Controls Treatments Findings Loss Events Review Notes Linked Risk Areas Linked Accounts Linked Objectives Linked Processes Tests

Risk Owner Simon High

Risk Status

Review By

Reference

Control Risk Self Assessment

☐ Control RSA

CRSA Status

Audit Assessment

Corporate Assessment

Impact

☒ Environmental

☐ Financial

☐ Public Image

Business Units

Business Unit

Risk Category 2

Risk Category 3

Creator Groups

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Review Perth
Perth office

REVIEW3
3/03/2005

enterprise
risk|assessor

ERA | Reporting | Risk Areas | Objectives | Accounts | Processes | Risks | Controls | Treatments | Action Plans | Loss Events | Tests | Findings | Review Notes



	#	Name	Ctrl Consequence	Ctrl Likelihood	Ctrl Risk Level	Owner	rp Ctrl. Consequence	Corp Ctrl. Risk Level	Ctrl. Risk S
1	14	Failure to develop new client base	Major	Almost Certain	Very High	Sue Stevens	Minor	High	10
2	19	Loss of key personnel	Major	Almost Certain	Very High	John Smith	Minor	High	10
3	10	Poor project management performance	Major	Likely	High	John Smith	Minor	Medium	8
4	20	Dust and noise	Major	Likely	High	Simon High	Minor	Medium	8
5	1	Industrial action	Major	Possible	High	Fred Green	Minor	Medium	6
6	4	Poor design resulting in product failure	Major	Possible	High	Simon High	Minor	Medium	6
7	2	Inadequate sub-contractor agreements	Moderate	Possible	High	John Smith	Insignificant	Low	3
8	3	Inadequate insurance	Moderate	Possible	High	Simon High	Insignificant	Low	3
9	6	Poor supplier delivery timeframes	Moderate	Possible	High	John Smith	Insignificant	Low	3
10	23	Inability to deal with major impact to business	Moderate	Possible	High	John Smith	Insignificant	Low	3
11	8	Use of unskilled equipment operators	Moderate	Unlikely	Medium	Simon High	Insignificant	Low	2
12	13	Increased competition	Moderate	Unlikely	Medium	Stephen Rogers	Insignificant	Low	2
13	15	Inadequate insurance leading to limited products and services	Moderate	Unlikely	Medium	Sue Stevens	Insignificant	Low	2
14	17	Unsafe work environment leading to injuries	Moderate	Unlikely	Medium	Greg Miller	Insignificant	Low	2
15	24	Vandalism to equipment	Moderate	Unlikely	Medium	Steve Jones	Insignificant	Low	2
16	26	Computer hardware failure	Moderate	Unlikely	Medium	Steve Jones	Insignificant	Low	2
17	27	Impact on schedule due to failure of contractor	Moderate	Unlikely	Medium	Sue Stevens	Insignificant	Low	2
18	7	Subcontractor poor performance	Minor	Possible	Medium	Fred Green	Insignificant	Low	3
19	9	Failure to achieve project objectives	Minor	Possible	Medium	Steve Jones	Insignificant	Low	3
20	21	Loss of data (IT failure)	Minor	Possible	Medium	Steve Jones	Insignificant	Low	3
21	25	Fraud or theft	Minor	Possible	Medium	Stephen Rogers	Insignificant	Low	3
22	5	Loss of license	Minor	Unlikely	Low	Tony George	Insignificant	Low	2
23	16	Inadequate scoping of work	Minor	Unlikely	Low	Bill Brown	Insignificant	Low	2
24	18	Inadequate resources	Minor	Unlikely	Low	Greg Miller	Insignificant	Low	2
25	22	Use of outdated technology	Minor	Unlikely	Low	Simon High	Insignificant	Low	2

Risk : 25 of 25. Selection:1

Tools and technology

Managing the information;

Risk management software:

- Proprietary
- Generic (i.e., MS Excel)

Maintaining currency.

Training and development

Training can be carried out at different levels within the organisation:

- Strategic risk management at senior management level;
- Operational risk management at the business process management level;
- Awareness and training for operating personnel.

Timetable and program

- Set **realistic timetable and timeframe**;
- Develop the **program of activities**;
- Ensure **adequate resources** are applied to the program.

Integrating quantitative & qualitative measures

- Develop formal structures and processes;
- Embed risk management into job descriptions for business process owners;
- Implement reward and sanction measures;
- Lead, guide and train personnel in risk management;
- Engage personnel at all levels;
- Adopt a “push-pull” approach to risk management.

Enterprise risk management

*“Enterprise-wide risk management represents a **paradigm shift** in the way businesses **manage the uncertainties** that stand in the way of achieving their **strategic, operational, and financial objectives**.”⁵*

⁵Barton. T., Shenkir, W., Walker, P., Making Enterprise Risk Management Pay Off.



Developing ERM Risk Register

- <https://www.youtube.com/watch?v=kagXUDLDUlo>

Future of ERM

- <https://www.youtube.com/watch?v=nQoJj6FBxrY>

Companies studied⁶

- Chase Manhattan Corporation;
- E.I. du Pont de Nemours and Company;
- Microsoft Corporation;
- **United Grain Growers Limited;**
- Unocal Corporation

⁶Barton. T., Shenkir, W., Walker, P., Making Enterprise Risk Management Pay Off.

United Grain Growers

“The second way I get comfortable (about risk) is the quality and institutionalisation of the controls at the micro level. The credit approval process and the trading monitoring process – we are probably the most vigilant about those two processes, and that’s where I think we have very good systems.”⁶

⁶Barton. T., Shenkir, W., Walker, P., Making Enterprise Risk Management Pay Off.

United Grain Growers Case study- Lecturer to discuss questions below with students

- What has happened? (the event)
- What was the root cause? (contributing factors)
- What could have been done to prevent it? (controls)
- How could the UGG managers better managed ERM Risks? (executives, managers and staff)
- What were the risks and outcomes for the Public/clients, the company , internal stakeholders and staff? (take different perspectives and contexts)

Unocal Corporation

“(Now we’ve had) an organisational shift to saying, “Look, the only way we’re really going to get our line people to truly embrace safe operations, effective operations, control operations as a part of their job is to take away the crutch of (overreliance on) staff support and, at the same time, go from a compliance-based loss control system to a more commitment-based system – here is how you run your business, and by the way, if you run your business in an effective way, the loss control numbers should follow.”⁷

⁷Barton. T., Shenkir, W., Walker, P., Making Enterprise Risk Management Pay Off.

Lessons learned⁸

1. A **cookbook recipe** for implementing enterprise-wide risk management is not feasible because so much depends on the **culture** of the company and the **change agents** who lead the effort.
2. To manage effectively in today's environment, companies should make a **formal, dedicated effort** to identify all their **significant risks**.
3. **Various techniques** are available to identify risk, and once identified, the process of identification should be **dynamic and continuous**.
4. Risks should be ranked on some **scale** that captures their **importance, severity, or dollar amount**.
5. Risk should be ranked on some **scale of frequency of probability**.
6. Measure **financial risk** with the most sophisticated and relevant tools available, such as **VAR and stress testing**.

⁸Barton. T., Shenkir, W., Walker, P., Making Enterprise Risk Management Pay Off.

Lessons learned¹⁰

7. **Develop sophisticated tools and measures** to meet the organisation's needs and that management can easily understand.
8. Know your **company's** and your **shareholders' appetite for risk**.
9. Apply **more rigour to measuring nonfinancial risks** whenever possible.
10. Companies are choosing **various combinations of acceptance, transfer, and mitigation** to manage risk.
11. Decisions regarding control (an application of mitigation), acceptance, and transfer are **dynamic** – they must be **continuously re-evaluated**.
12. Seek **creative solutions** and **transfer risk where economic opportunities exist**.

¹⁰Barton. T., Shenkir, W., Walker, P., Making Enterprise Risk Management Pay Off.

Lessons learned from case studies¹¹

13. Organisations should adopt an **enterprise-wide view** of risk management.
14. **Consultants**, if they are used, should **supplement**, not replace, senior management involvement in the risk management effort.
15. Successful companies are good at managing silos of risk. Enterprise-wide risk management offers them **more effective risk management** at potentially **lower costs**.
16. **Making risk consideration** a part of the decision-making process is an essential element to enterprise-wide risk management.
17. Risk management **infrastructures vary in form** but are essential to driving throughout the organisation the idea that decision makers should consider their risks.
18. A prerequisite for implementation of enterprise-wide risk management is the **commitment of one or more champions at the senior management level**.

¹¹ Barton. T., Shenkir, W., Walker, P., Making Enterprise Risk Management Pay Off.

Summary

- Enterprise Risk Management (ERM);
- Establishing a risk management culture;
- Leadership, management and commitment;
- Interdependency between policy, goals, reward and sanction;
- Methodologies, processes, and outputs;
- Communication and consultation;
- Training and development;
- Integrating quantitative and qualitative elements of risk management.

We trust you enjoyed participating in the journey of risk management. All the best for the exam!