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Safety and Security

Ramsay McAuley MBA, MSc, CSC

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- Senior Advisor at Pegasus Business Risk Management Solutions
- 22 Years Royal Military Police (UK)
- Close Protection Team Leader British Embassy Jakarta (2009-2011)
- MSc Organsational Resilience
- Master of Business Administration
- Formal security qualifications, including Security and Risk Management, Managing Security Surveys, Terrorism Studies
- Certified Security Consultant
- Member of the Security Institute (UK)
- Overseas security experience; ME, Afghanistan, West Africa and SE Asia

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Things to Remember

- Safety is regulatory (HSE)
- Security is a nicety - but needed to protect your assets (people, property, information, and reputation)
- Risk Management is required - for Corporate Governance and underpins safety and security

** All three assist with organisational resilience, which supports and protects your organisation's sustainability and reputation*

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What is Organisational Resilience?

"Organisational resilience is the ability of an organisation to anticipate, prepare for, and respond and adapt to incremental change and sudden disruptions in order to survive and prosper."

(British Standard, BS65000:2014)

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SUSTAINABILITY

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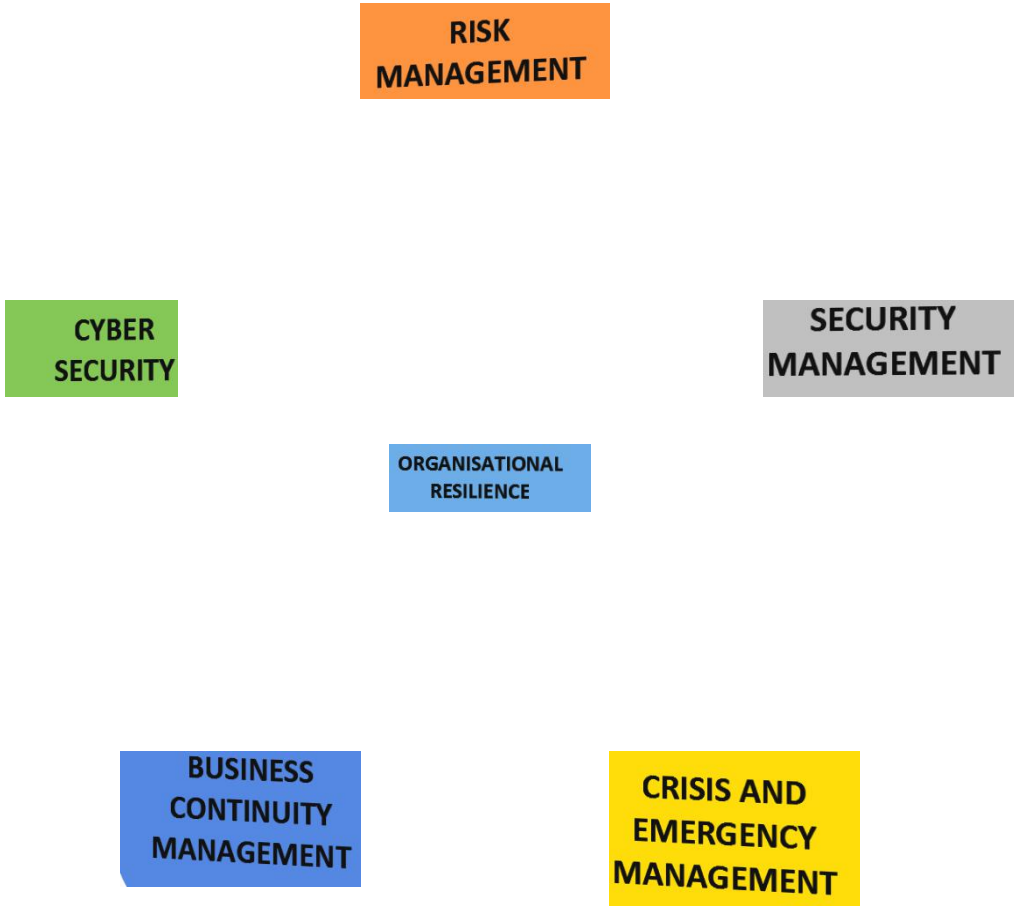
Core Disciplines of Organisational Resilience



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Risk Management

- Risk management is a component of good Corporate Governance and is generally applied in organisational strategy setting and is designed to identify potential disruptions which may effect your business.
- Risk should be evaluated correctly and treated accordingly. A Risk review should be conducted following the ISO:31000:2009 guidelines and under the following circumstances:-
  - Periodically - Annually / Bi-annually.
  - Post Incident.
  - Changes in personnel or operations.
  - Changes in legislation.
  - New Threats identified.
  - Changes in perceived level of Risk.

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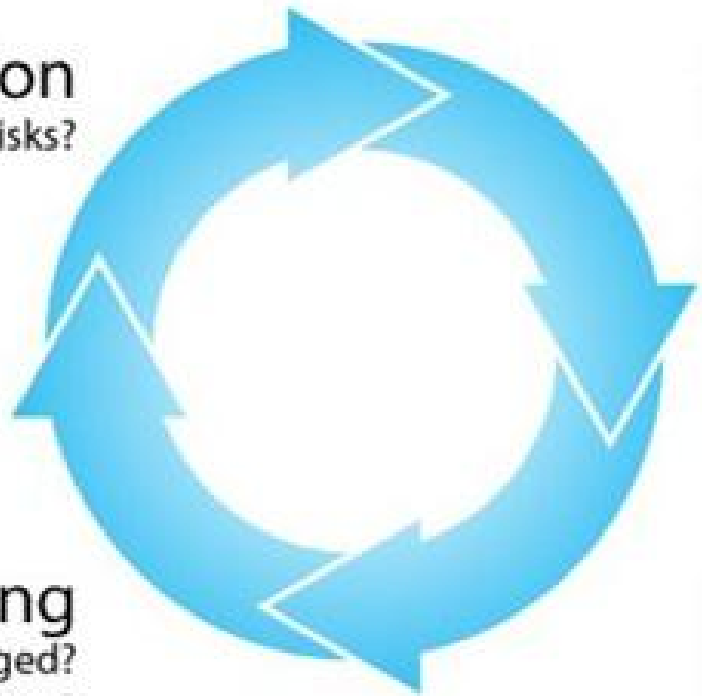
Risk Cycle



1. Identification
What are the risks?

2. Assessment
What is the likelihood of the risk occurring?
How severe will the risk impact be?

3. Control
What can we do to reduce the impact of the risk?

4. Monitoring
Has the situation changed?
Are there new risks emerging?

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Security Management

- Security Management should be aligned with your organisation's security strategy with a clear understanding of your assets to be protected, the threat facing the organisation and a realistic assessment of the risks, as identified in the risk management practice.

- Sound Security Management can be achieved through robust mitigation measures for protecting company assets, which may also include developing and implementing plans, policies and procedures.

Crisis & Emergency Management

‘An emergency is any unplanned event that can cause death or significant injuries to employees or the public; or that can shut down your business, disrupt operations, cause physical or environmental damage, or threaten the facility's financial standing or public image.’ (FEMA, 2008)

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- Indonesian Government Act Number 24 of 2007 categorises 11 natural and man-made emergency situations, these are: earthquake, tsunami, volcano, flood, drought, hurricane, landslide, technology failure, epidemics and outbreak of disease, social conflict and terrorism

- Emergency Planning supports Business Continuity by potentially reducing the time period of an incident allowing for the recovery phase to begin

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Business Continuity

‘A holistic management process that identifies potential threats to an organisation and the impacts to business operations those threats, if realized, might cause, and which provides a framework for building organisational resilience with capability of an effective response that safeguards the interest of its key stakeholders, reputation, brand and value – creating activities.’ (ISO 22301:2014)

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Case Study- Buncefield Oil Storage Terminal

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Case Study- Buncefield

- Occurred on 11 Dec 2005 at the Buncefield Oil Storage Terminal, located in Hertfordshire, England
- The terminal was the fifth largest oil-products storage depot in the United Kingdom, with a capacity of about 60,000,000 gallons of fuel, fire destroyed 5% of UK petrol stock
- Fire lasted approx. 3 days
- Joint venture between Total and Texaco, operated by Total
- Companies housed at Maylands industrial park (one of the UK's largest mixed business areas, 325 hectares and 620 businesses with 16,500 employees and sustains circa 25,000 jobs), were affected including distribution centres or Sainsbury's, Scottish & Newcastle Brewer, M&S, ASOS Fashion and many more

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Case Study Summary- Buncefield

- Injured 200 people, 2000 were evacuated, more than 300 homes damaged
- The explosion destroying 350,000 sq ft and leaving 200,000 sq ft of commercial space in need of repairs.
- Every business on Maylands was adversely affected and were unable to access their premises for up to a week
- 92 businesses employing 9,500 people were displaced from their premises
- The clean up operation was massive with approximately 50 tonnes of industrial removed from the Maylands business area.
- A government Impact Assessment (April 2006) reported that: 923 temporary and casual jobs lost, 410 redundancies were notified shortly after the explosion. Some businesses permanently relocated - costing the area 513 jobs and 8 companies temporarily relocated and were unsure as to whether they would return - risking 1420 jobs, 16 companies had to relocate permanently
- In 2007 25% of businesses were still suffering disruption and loss of sales. (£70 million)
- Small business in the area, including, cab drivers, catering companies, cleaners, couriers and vehicle cleaners were also directly affected as their services were less in demand from the companies on Maylands.
- ‘Total’ was ordered to pay $750 million plus property damage bills of individual business clients, most of whom were insured

Cyber

- Cyber warfare is not a current threat for most organizations
- Cyber crime is current and growing threat:
  - Theft or corruption leading to loss of money, goods and/or information
  - Ransomware
  - Malicious damage that can impede or stop business operations
  - Corporate espionage / competitive intelligence
- Attack actors can be:
  - External – domestic and foreign
  - Internal – malicious or careless insiders, poor internal technology, processes and/or staff training
- Technology:
  - Old threats never go away – DDoS now being executed using Internet of Things
  - Blended attacks – DDoS attacks masking system attacks e.g. Talk Talk

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Case Study – Saudi Aramco 2012

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Case Study – Saudi Aramco 2012

- Attack by “Cutting Sword of Justice” group
  - Used Shamoon malware
- Industrial Control Systems well protected - minimal impact
- Attack focussed on office systems:
  - Attack duration – Few hours
  - 35,000 office computers inoperable
  - Time to fix – 5 months
  - Required purchase/replacement of 35,000 hard drives
    - Enough to increased world-wide market prices
- Consequential damage to production:
  - Finance systems off-line – suppliers could not be paid
  - General management systems unavailable - had to fall back to manual systems

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NORSE
ATTACK ORIGINS
COUNTRY
417 China
131 United States
126 Taiwan
54 Netherlands
40 Russia
29 France
27 Germany
14 South Korea
13 India
11 Vietnam
ATTACK TYPES
PORT SERVICE TYPE
125 3389 ms-wbt-server
96 508... unknown
95 80 http
92 508... unknown
67 445 microsoft-ds
64 5900 vnc
57 23 telnet
35 53 domain
33 22 ssh
29 8080 http-proxy
ATTACK TARGETS
COUNTRY
766 United States
37 France
36 Guatemala
26 United Arab Emi...
15 Taiwan
15 Germany
12 Saudi Arabia
12 Romania
12 Hong Kong
11 Italy
LIVE ATTACKS
TIMESTAMP ATTACKER ATTACKER IP ATTACKER GEO TARGET GEO ATTACK TYPE PORT
14:53:53.827 China Unicom Beijing Province Network 221.217.240... Beijing, CN Lynnwood, US unknown 508...
14:53:54.213 Hil Llc 185.94.111.1 Moscow, RU De Kalb Junc... snmp 161
14:53:54.632 Hil Llc 185.94.111.1 Moscow, RU Lynnwood, US domain 53
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Jan 13 2016

Added Value

- Protect and /or enhance reputation
- Customer confidence
- Investor confidence
- Wider stakeholder confidence, including regulators

*Which all leads to value creation and enhancement

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Safety - Bluewater Horizon

- On the evening of 20 April 2010, a gas release and subsequent explosion occurred on the Deepwater Horizon oil rig
- Prior to the accident Halliburton had completed some cementing of casings in the well – 24 hrs
- Weatherford International and M-I SWACO were also working on the rig at the time

*Not every case will hit all 5 core disciplines of 'OR'

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- A risk assessment (HSE) should have been conducted before recommencing drilling
- Crisis and emergency response was reasonable from a number of agencies and company
- Initial crisis communication was dreadful, with Tony Haywood, CEO BP making gaff after gaff
- December 2014, BP had spent more than $14 billion on response and clean-up activities alone
- More than 200 mil gallons of crude oil was pumped into the Gulf of Mexico for a total of 87 days, making it the biggest oil spill in U.S. history.
- 16,000 total miles of coastline was affected, including, Louisiana, Mississippi, Alabama, and Florida

*Final cost to BP $61.6 billion !!!!

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Staff Safety – Indonesia

All organisations have a ‘duty of care’ to their employees and the communities surrounding their locations, this can be achieved through:

- Having a credible HSE policy in place throughout your organisation
- Subscribing to a security information service (Risk)
- Staff travel plans
- Staff safety and security training
- Having robust contingency plans, including evacuation (worse case scenario) (Security)
- Thorough emergency response / crisis management planning
- Having correct cyber security mitigation measures in place (protecting operational control systems)

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Overview

The selection of the organisation's resilience strategy should be based on the findings of the risk assessment.

Therefore, you should adopt a resilience strategy that will:

- Limit the impact of any disruption to your organisation and its key services
- Mitigate against any potential disruption

  and / or
- Implement measures that will assist in shortening the period of any disruption

(ISO 22301:2012)

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Any Questions?

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