



MALAYSIAN ASSOCIATION OF RISK &
INSURANCE MANAGEMENT

MARIM INTERNATIONAL CONFERENCE 2023

UNCOVERING NEW FRONTIERS IN RISK & RESILIENCE

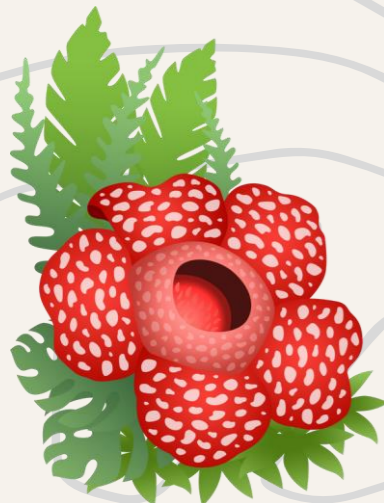
11 & 12 September 2023 The Waterfront Hotel, Kuching



Parallel 2: BCM & Crisis Management

Add Value to your Business through Effective Risk Management

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Advisor & Facilitator
Risk Management
Tenaga Nasional Berhad



ADD VALUE TO YOUR BUSINESS THROUGH EFFECTIVE RISK MANAGEMENT

KHAIRULANWAR ABD HAMID

MARIM CONFERENCE | 11 SEPTEMBER 2023



HOW BOEING LOST ITS WAY?

By QuickTake, Bloomberg



<https://www.bloomberg.com/news/videos/2020-03-12/the-story-of-how-boeing-lost-its-way-video>

Risk events

- Recurrence of Boeing 737 Max crash incidents (Ethiopian Airlines Flight 302) on 29 Oct 2018 & 10 March 2019 respectively due to malfunction sensor. 346 victims.
- Boeing 737 Max grounded by authorities for 20 months (March 2019 – Dec 2020).
- Deteriorate engineering excellence in prioritizing cost reduction.

Impact

- In January 2021, the US charged Boeing with fraud. But the company was able to avoid going on trial, by agreeing to pay \$2.5bn, including \$500m to the families of those killed, and promising to tighten up its compliance procedures
- Boeing targets 2025 for return to pre-crisis 737 MAX production rates.

Why is risk management important?

1

Assurance to shareholders on effective risk management

MCCG's Principle B states that proper risk management and internal control are important aspects of a company's governance, management and operations

2

Guide for informed decision making

Risk management and data analytics can guide management and employee in making informed decisions that will help meet and exceed company objectives

3

Manage unexpected risk events

Timely implementation of risk mitigations are crucial to manage unexpected risk events

4

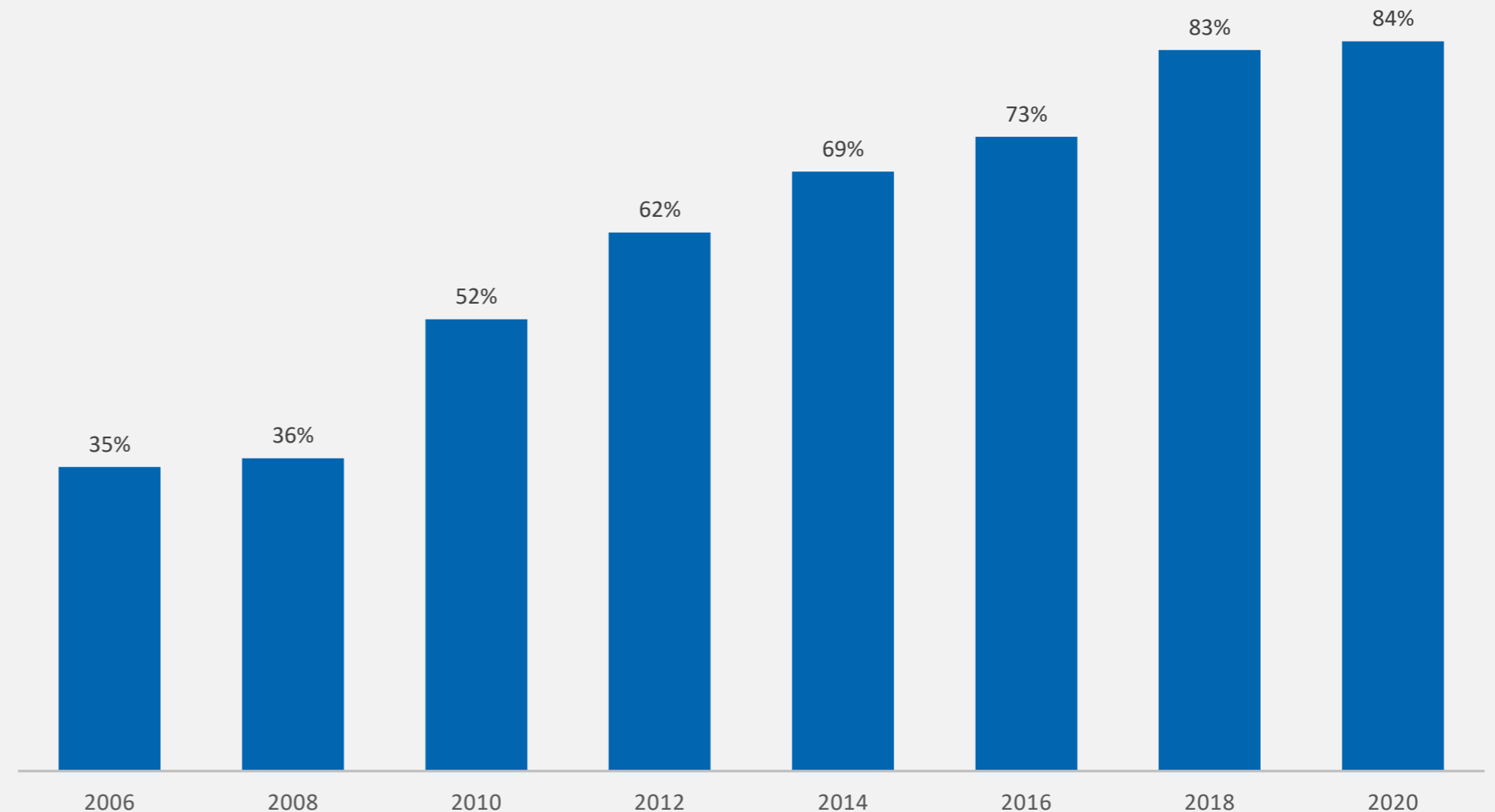
Enhance effective project management

Effective management of project risks reduces the likelihood and impact of common project problems / issues

Increasing trend of ERM program adoption for companies is observed from 2006 until 2020

Does your organization have an enterprise risk management program or equivalent?

Percentage responding "Yes"



Source: Deloitte Global Risk Management Survey 12th Ed, 2021

Survey participants: CROs or their equivalents at 57 financial services institutions around the world

Many companies are having difficulties to effectively apply ERM



Concerns regarding application of risk management

Insight & risk transparency

- Reporting of hundreds of risks without insight - Unable to anticipate and respond to **high impact** risks

Risk appetite & strategy

- Unclear risk appetite (on desired risk level)
- No explicit decisions on risk ownership

Informed decision

- Risk analysis is not part of key decision-making processes

Risk governance

- ERM team struggles to enforce risk framework, policy to line management
- ERM is a bureaucratic exercise

Risk culture

- Risk culture is a “fuzzy” concept

Key Success Factor For Effective Risk Management

Key success factors for effective risk management



Leadership & commitment

Clear tone for a constructive risk culture, promote organization-wide risk management, clear risk appetite, align risk management with strategic planning



Risk Culture

The mindsets & behaviors of individuals and groups within an organization to identify, understand, discuss and act on organizations risks



Risk Governance

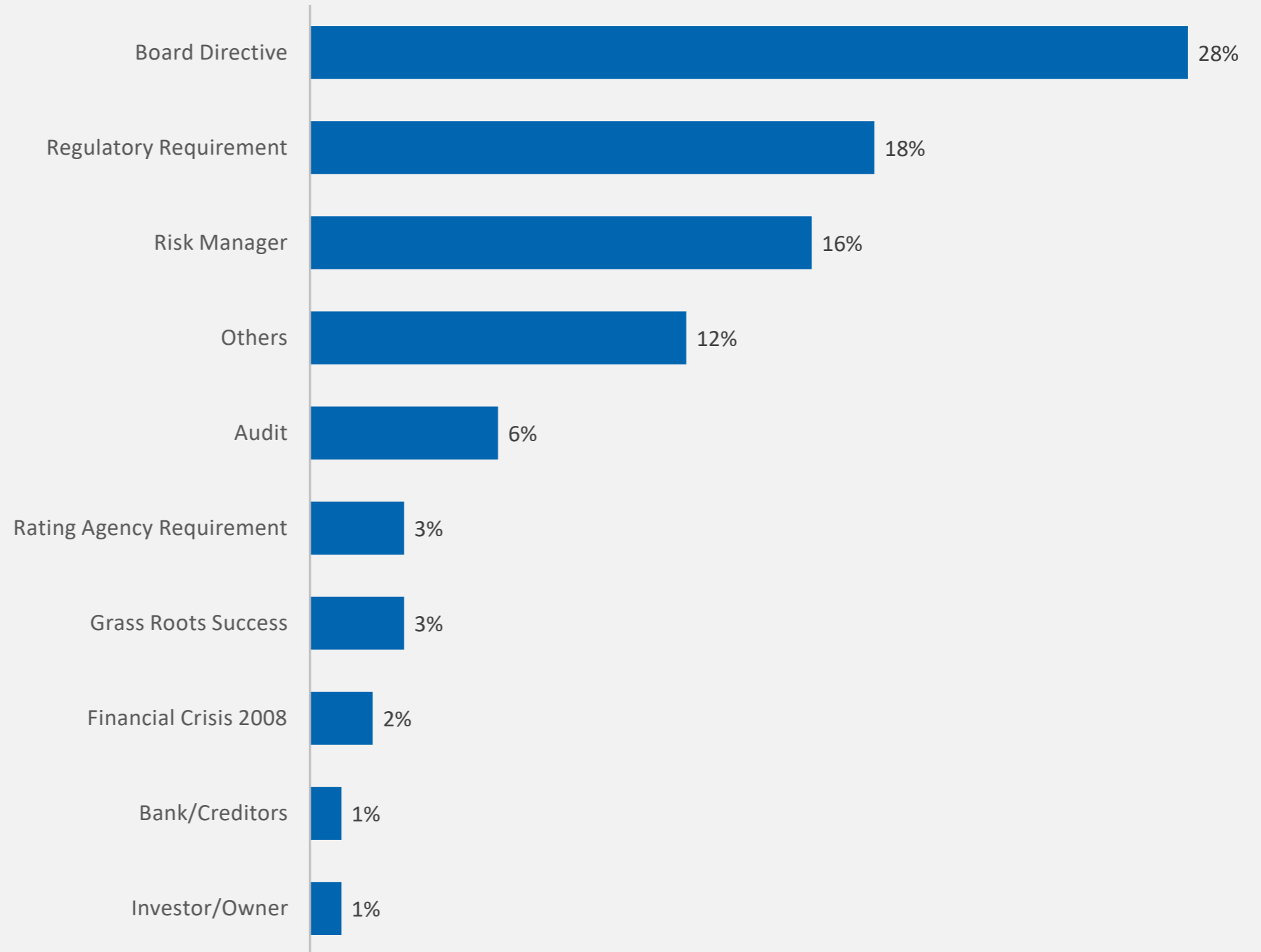
Establish a well-defined governance structure for ERM that outlines roles, responsibilities, and reporting lines. This structure ensures accountability and ownership of risk management activities



Reporting & Insight

Reporting risks to top management with transparency and insights allows leaders to make informed decisions and proactively address potential threats

What motivated the implementation and/or expansion of the enterprise risk management (ERM) program at your organization?



Source: 2017 ERM BENCHMARK SURVEY by RIMS

Participants: 397 respondents from more than 14 different industries

Key Success Factor #1: Leadership & Commitment

The Board in the governance of risk is to provide oversight of the company's risk management and internal controls system, while the management shall implement and monitor the risk management and internal control systems.

Risk Governance Guidance for Listed Board, Corporate Governance Council (2012)

The board is provided with reasonable assurance that adverse impact arising from a foreseeable future event or situation on the company's objectives is mitigated and managed

- Ensure there is a sound framework for internal controls and risk management
- Understand the principal risks of the company's business and recognise that business decisions involve the taking of appropriate risks
- Set the risk appetite within which the board expects management to operate and ensure that there is an appropriate risk management framework to identify, analyse, evaluate, manage and monitor significant financial and non-financial risks

Malaysia Code of Corporate Governance, 2021

In TNB, The Board and top management plays an important roles for effective implementation of risk management

Board Risk Committee

- Provide oversight on the implementation of risk management and internal control.
- Approve TNB Risk Management Framework as a structured and consistent approach to risk management.
- Approve TNB's risk appetite reflective in the Key Risk Indicators (KRI).
- Monitor the company's risk exposures and the key risks that could prevent achievement of TNB's aspiration.



TNB Management

- Identify and manage risks that can prevent the achievement of TNB's aspiration
- Anticipate and respond to risks resulting from changes in the internal and external context
- Communicate risk information through a clear and robust monitoring and reporting structure
- Integrate risk management in key processes and decision making.



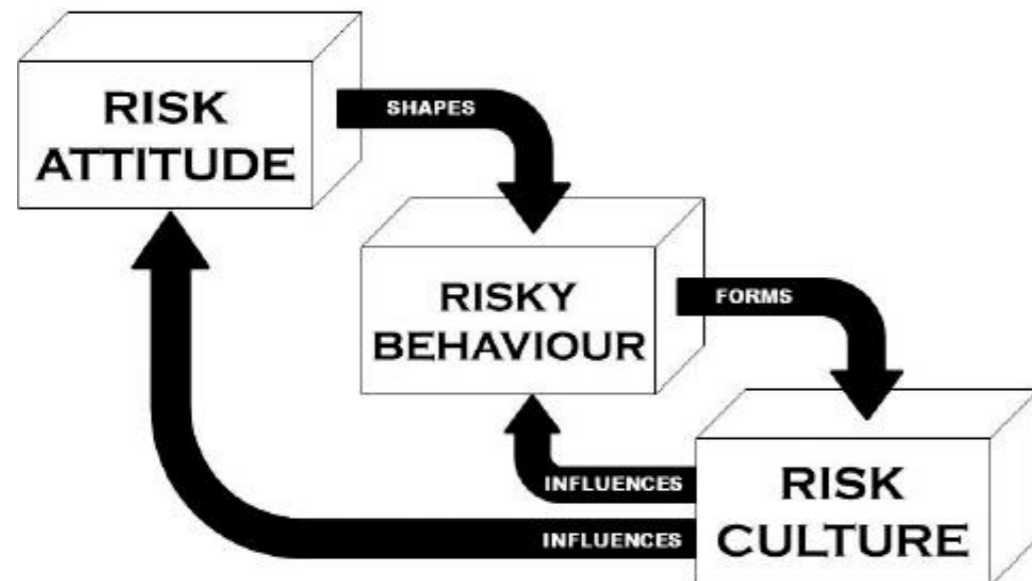
Key Success Factor #2: Risk Culture

Risk Culture: Values, beliefs, knowledge, attitudes and understanding about risk shared by a group of people with a common purpose.

Institute of Risk Management (IRM)

Why is risk culture important?

Risk Culture aids the transition from mere compliance to something that creates value for an organization.

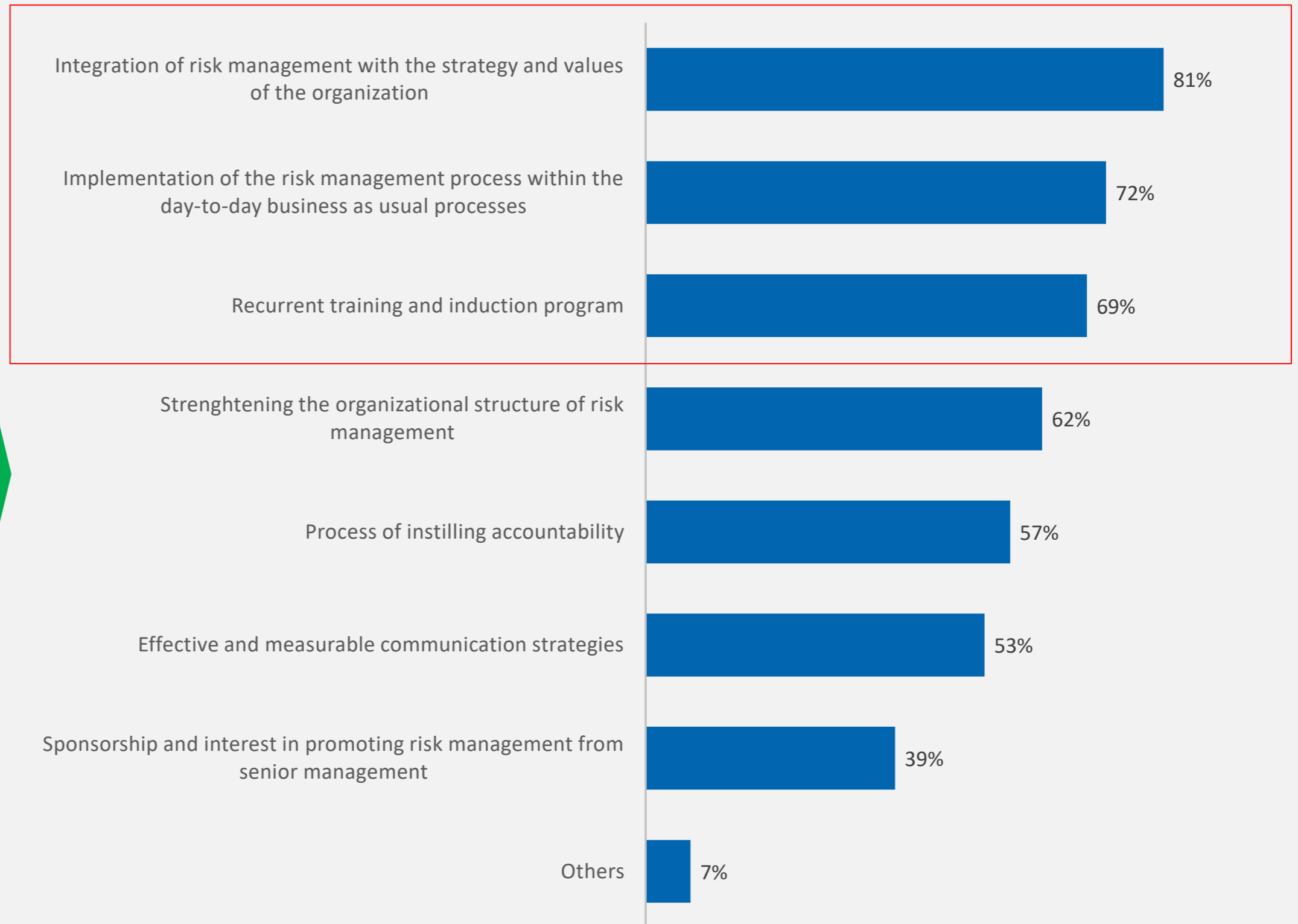


Source: Institute of Risk Management (IRM)



Source: Mckinsey Risk Practice

What strategies do you find necessary to transform the culture of your organization to be risk management oriented?



Source: Marsh RIMS Excellence in Risk Management, 2018
Participants: 450 risk executives through online survey

Incorporating risk management into daily operations and consistently educating and training are vital for fostering a risk culture

1

Integration of risk management with the strategy and values of the organization

2

Implementation of the risk management process within the day-to-day business as usual processes

3

Recurrent training and induction program

Corporate

1. TNB Strategic Risk & Key Risk Indicators alignment with Reimagining TNB strategy.
2. TNB 3-Year Cycle Risk Governance Plan for risk management assurance.
3. TNB Culture alignment:



Integrity



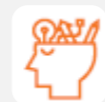
Collaborative



Professionalism



Customer Centricity



Forward Thinking



Mindfulness

Operation

1. Integration of risk management in division/department/subsidiary Business Plan, Annual Operating Plan (AOP) and budget.
2. Investment Risk Methodology (IRM) for local & oversea investment.
3. Risk assessment for digital initiatives through Change Advisory Board (CBA).
4. Risk assessment incorporated in work processes, e.g., procurement process, project/initiatives approval, HIRADC, RCM, etc.
5. Risk Governance Plan by division/department/subsidiary .

1. Risk Management courses at ILSAS:
 - a) Fundamental
 - b) Intermediate
2. Risk management E-Learning module for all executives
3. Risk Management Certification program with ARIMM
4. Annual Risk Management Survey for executives and non-executives to gauge perception of employee on risk management
5. Learning Journey for Risk Managers
6. Risk Conference (Executives) and Risk Forum (Non-Executives)
7. Risk management webinars

Key Success Factor #3: Risk Governance

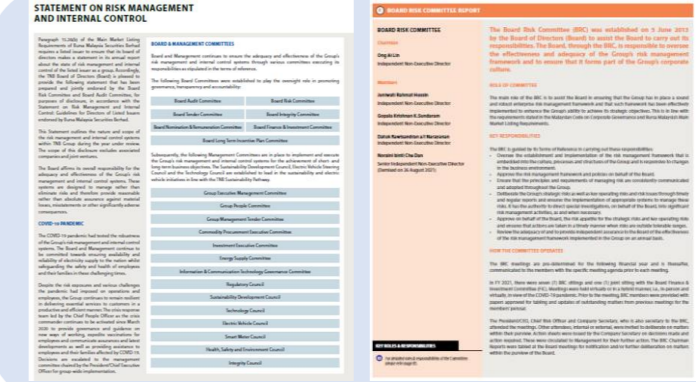
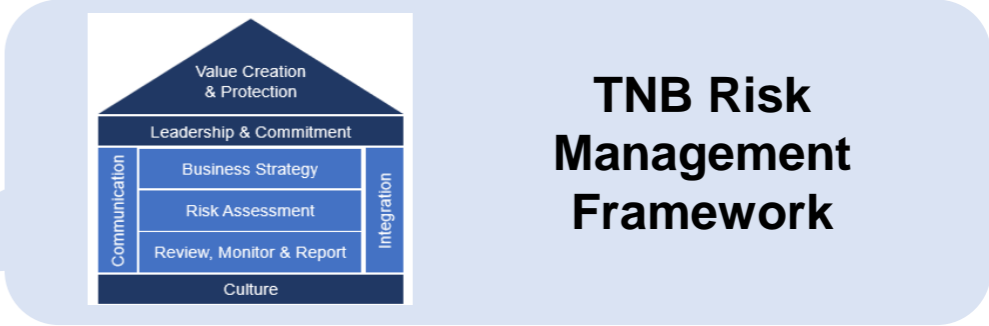
MCCG's Principle B states that "proper risk management and internal control are important aspects of a company's governance, management and operations"

Intended Outcome

- Companies make informed decisions about the level of risk they want to take and implement necessary controls to pursue their objectives.
- The board is provided with reasonable assurance that adverse impact arising from a foreseeable future event or situation on the company's objectives is mitigated and managed.

Practice:

- The board should establish an effective risk management and internal control framework.
- The board should disclose the features of its risk management and internal control framework, and the adequacy and effectiveness of this framework.
- [STEP UP] The board establishes a Risk Management Committee, which comprises a majority of independent directors, to oversee the company's risk management framework and policies.



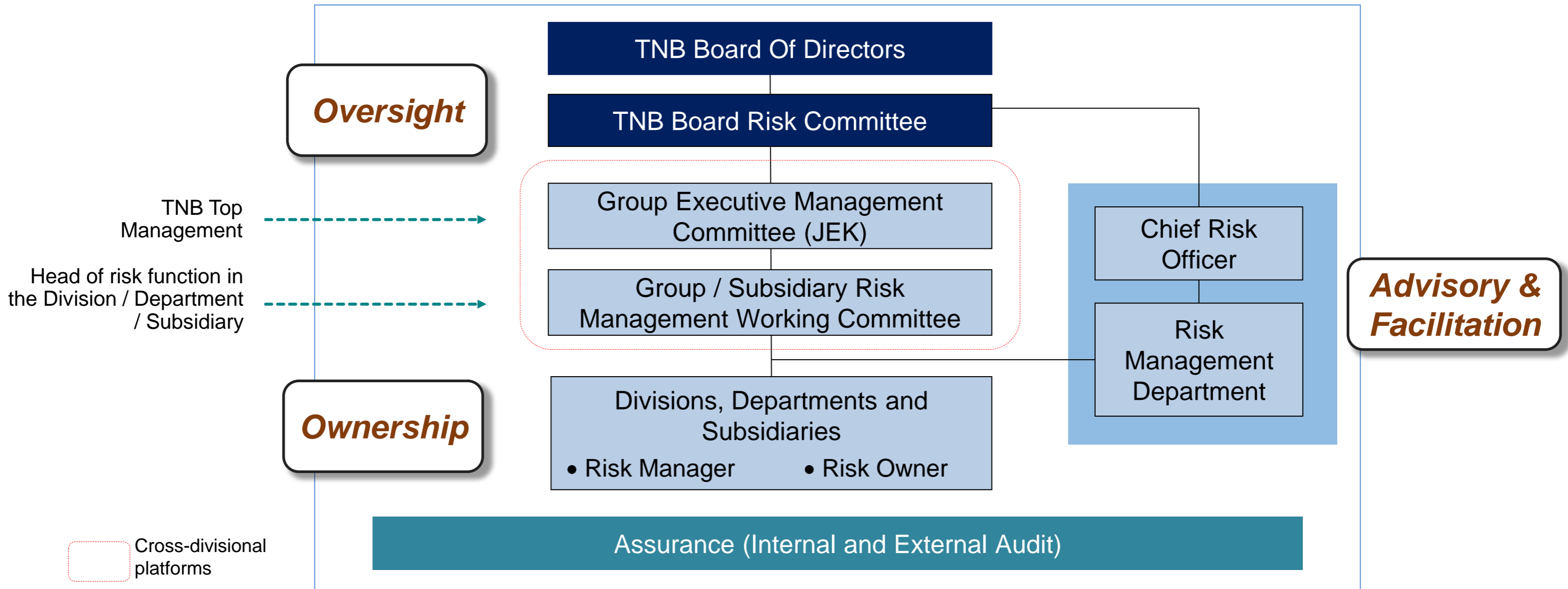
*Statement of Risk Management and Internal Controls

SORMIC* and Board Risk Committee Report in TNB Integrated Annual Report

TNB Board Risk Committee

Key Success Factor #3: Risk Governance

Each party in the TNB Risk Governance Structure plays its role in ensuring a sound and robust risk management framework is implemented across TNB Group



TNB Risk Governance Structure

Key Success Factor #4: Reporting & Insight

Reporting risks to top management with transparency and insight is a crucial practice for any company. It allows leaders to make informed decisions and proactively address potential threats

Transparent & Insightful report

Informed Decision-Making: Transparent and insightful risk reporting provides top management with accurate information, thus empowers them to make well-informed decisions that align with the company's strategic goals and risk appetite.

Regular Reporting Cadence: Establish a consistent reporting schedule, whether it's monthly, quarterly, or annually. Regularity builds the expectation of transparency and keeps management engaged in risk management efforts.

Quantitative Analysis: Whenever possible, use quantitative data to support risk assessments. Numbers and metrics can provide a more objective understanding of risks and their potential consequences.

Leverage Technology: Utilize risk management software or tools that facilitate data collection, analysis, and reporting. These tools can help streamline the process and enhance the quality of insights.

Key Success Factor #4: Reporting & Insight

EMERGING RISK

Prepared by: Risk Management Department, Aug 2020

Low Carbon Transition: Uncertainties Surrounding TNB's Coal-Fired Power Plants

Power Generation Mix in Malaysia %

Currently TNB owns 3 coal in Malaysia, with a total of 6,800MW, making TNB the power producer in the country.

Driven by Malaysia's the Conference of Parties 14 December 2015 in Paris, TNB is committed to support direction towards low carbon reducing 45% greenhouse emissions intensity by 2035.

EMERGING RISK #5

Cybersecurity: Cloud Computing July 2020

Cybersecurity: Cloud Computing

Cloud computing is the on-demand delivery of IT resources over the Internet with pay-as-you-go pricing. Instead of buying, owning, and maintaining own data centers and servers, companies can rent access to applications, storage from a cloud provider on an as-needed basis.

79%

EMERGING RISK #5

July 2020

Cybersecurity: Cloud Computing

OVERVIEW

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EMERGING RISK #5

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EMERGING RISK #5

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OVERVIEW

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Bi-Monthly Emerging Risk report to provide top management insights on emerging risks around the world.

Financial Impact of KRIs at Breaking Point (1/3)

No.	KRI	Breaking Point	Impact (RM'm)	Assumption and Basis
1	KRI 1: Equivalent Unplanned Outage Factor (EUOF) a) Hydro plants b) Coal plants c) CCP	a) > 4.00% b) > 8.00% c) > 6.00%	a) 88 b) 447 c) 257	<ul style="list-style-type: none"> Assuming 90 days forced outage, the exposure of two (2) generating facilities with highest Capacity Payments (CP) in each category are: <ul style="list-style-type: none"> a) RM58mm for SSJCH & SSJSP b) RM447mm for TNBJ GF 1 and JEP (U1 & U2) c) RM257mm for SJTJ and SPG Q3 FY2022 Status: <ul style="list-style-type: none"> a) Hydro: 0.83% b) Coal: 7.79% equivalent to CP reduction RM225mm c) CCP: 6.01% equivalent to CP reduction RM128mm
2	KRI 2: Heat Rate Variance a) Coal power plants b) Gas power plants	≤ -2% ≤ -2%	202	<ul style="list-style-type: none"> Exposure of RM201.49mm per annum in fuel cost when heat rate (HR) variance is at -2% for both gas and coal power plants, based on average fuel revenue in the previous 3 years: <ul style="list-style-type: none"> a) Coal power plants at -2% HR: RM121.04mm b) Gas power plants at -2% HR: RM80.45mm Q3 FY2022 Status: <ul style="list-style-type: none"> a) Coal: -1.87% b) Gas: 0.35%
3	KRI 3: Threat to Power System Security	Load Loss: 60% of Maximum Demand (11,510 MW)	898	<ul style="list-style-type: none"> Exposure of RM898mm Value of Loss Load (VoLL)* per hour The normalised composite VoLL amount per MWh is RM77,980 based on the 'Study for Value of Load Loss for Peninsular Malaysia' conducted by TNB Labs Sdn. Bhd. and UNITEK R&D Sdn. Bhd. completed in July 2021 At 60% Maximum Demand, 11,510MW x RM77,980 VoLL/MWh x 1 hour = RM898mm Q3 FY2022 Status: 2,250MW loss

1 Operations (14 KRIs)

- Generation Availability & Efficiency: KRI 1: EUOF, KRI 2: Heat Rate Variance
- Grid & Distribution Network System: KRI 3: Threat to Power System Security, KRI 4: Operating Reserve Margin, KRI 5: Project Delivery Index, KRI 6: SAIDI, KRI 7: Losses
- ICT Network: KRI 8: Intrusion to TNB critical system, KRI 9: Data Leakage, KRI 10: ICT Service Availability
- People: KRI 11: Critical Talent Readiness
- Safety: KRI 12: Loss Time Injury Frequency (LTIF)
- Supply Chain: KRI 13: Disruption in Coal Supply, KRI 14: Supply Chain Resiliency

3 Regulatory (4 KRIs)

- Compliance: KRI 19: Non-compliance to Regulatory Requirements, KRI 20: Fraud cases
- IBR: KRI 21: ICPT, KRI 22: Revenue Under-Recovery

4 Reputation (4 KRIs)

- Media Sentiment: KRI 23: Social Media Negative Sentiment & Mainstream Media Negative Tonality
- Stakeholders' Perception: KRI 24: Total Shareholder's Return (TSR), KRI 25: Customer Complaints
- ESG: KRI 26: ESG Performance Rating

5 International Investment (6 KRIs)

- RE Growth: KRI 27: Growth of NED RE Portfolio
- RE Returns: KRI 28: EBIT from RE
- Operational: KRI 29: Operational, KRI 30: Liquidity, KRI 31: Macroeconomics Scoring, KRI 32: Image & Reputation

- 32 Key Risk Indicators (KRIs) are reported to CEO (monthly) and BRC (quarterly) on company's risk exposures. Additionally, 22 KRIs are deliberated at working level (GRMWC)
- Quantitative analysis (commercial impact) were reported for selected KRI a more objective understanding of the exposures.

Area	Element	Threshold
Economic	GNI per capita	GNI < USD8,000 per capita
	Country credit rating	BB+, BB, BB-, B+, B, B-, CCC+ and below
	Inflation rate	Inflation ≥ 6% or ≤ 0%
	GDP Growth	GDP Growth ≤ 3% or ≥ 7%
Political	Political Violence	Medium High / High / Very High risk
	Political Interference	Medium High / High / Very High risk
Legal	Corruption perception index	Score ≤ 40
	Rule of Law Index	Score < 0.40
Government of Host Country	Contract Enforcement Index	Score ≥ 1.5
	Government Effectiveness	Score < 50
Security	Regulatory Quality	Score < 50
	Global Peace Index	Score > 2.20
Forex Policy and Stability	Global Terrorism Index	Score ≥ 4.00
	Exposure due to volatility of forex between currencies (to MYR)	Volatility > 5.4%
Interest Rate	Exposure due to the volatility of interest rate	Volatility > 108%
Foreign Investment	Foreign Investor Confidence / Sentiment	Avg 5 Year Net Financial Accounts less than (-)USD20bn
Taxation	Exposure to double taxation on investment income	No Double Tax Agreement in place
	Withholding Tax rates for interest	WHT ≥ 10%
Cash Repatriation	Withholding Tax rates for dividends	WHT ≥ 10%
	Capital Control Policy	Capital Control Policy in Place with no Investment Guarantee Agreement
Capital Market Structure	Access to Debt / Liquidity of Capital Market	% of Private Debt to GDP < 132%

Investment Risk Methodology (IRM) assessment for investment (local & oversea)

Key Takeaway

1 Assurance to shareholders on effective risk management

2 Guide for informed decision making

3 Manage unexpected risk events

4 Enhance effective project management

“Companies that are able to link business risks with their strategic imperatives are more likely to have achieved an annual profit margin of greater than 10% over the past three years, and better profit margin growth”

*Risk in review: Decoding Uncertainty, Delivering Value | PwC | 2015
Survey by 1,229 senior executives and board members*

Thank You

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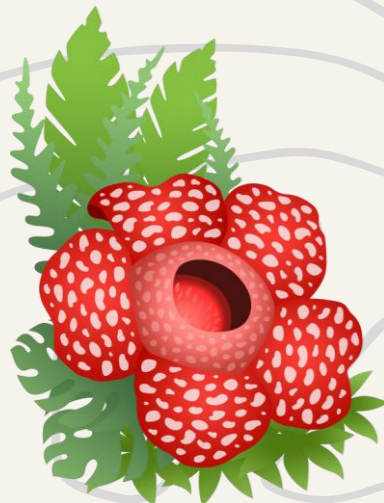


Parallel 2: BCM & Crisis Management

Cutting Edge Risk Management

– AI Adoption and Digitalization of the Business Continuity & Crisis Management Programme

Alessandro Caillat
Senior Financial Officer
World Bank Treasury



**MALAYSIAN ASSOCIATION OF
RISK & INSURANCE
MANAGEMENT**



UNCOVERING NEW FRONTIERS IN RISK & RESILIENCE

September 11 2023, The Waterfront Hotel Kuching

**Alessandro Caillat, FBCI
Senior Financial Officer | World Bank Treasury**

**DIGITALIZATING THE BUSINESS CONTINUITY AND
CRISIS MANAGEMENT PROGRAMME**

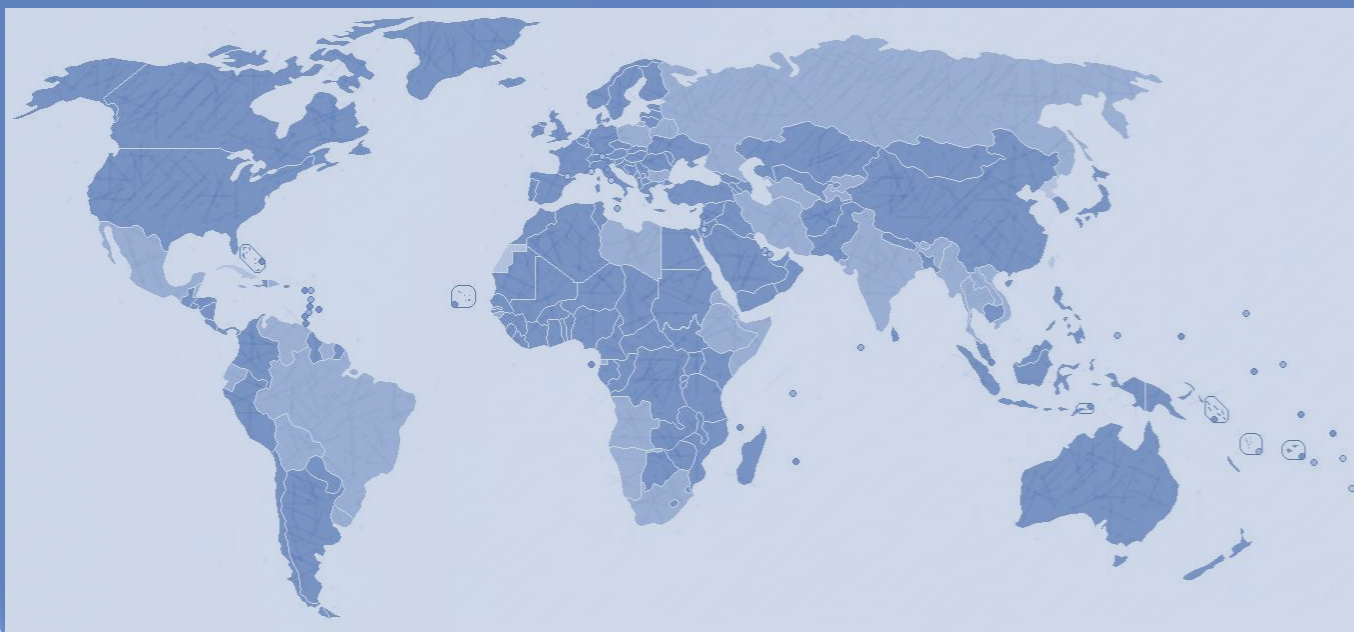
About Me



- I'm Alessandro Caillat, please call me Alex.
- I'm from Italy. I work for World Bank Treasury. I have been with the Institution for almost 15 years.
- Since August 2021, I live and work in Singapore.
- I am the team lead for Treasury's work programs on Business Continuity and Access Controls.
- Fellow Member of the Business Continuity Institute, Certified Trainer with the Institute, and ISO22301 Lead Implementer.

World Bank Treasury

The World Bank Group works with more than 170 countries, engaging with the public and private sectors. The goal to end poverty and tackle some of the most pressing development challenges.



- World Bank Treasury activities are organized in three departments.
 - **Capital markets.** leading the World Bank's funding program in international markets, with an annual average issuance around US\$ 60billion.
 - **Asset management.** Managing more than \$185 billion in assets for the World Bank and other official-sector investors.
 - **Operations** supports business units with payments and cash flow management needs, totaling over \$7 trillion each year.
- Large and significant player in the international financial markets. 70 year of reputation as a global, prudent and innovative borrower, investor, and risk manager.

Opportunity Statement



The business environment of the last few years has become more disruptive and challenging. This is the poly-crisis world.

A cluster of related global risks with compounding effects and significant impacts on governments, society, people and organizations.

Digital transformations undertaken by many organizations is rapidly changing their IT environment and operating models.

Integration of digital technology into all areas of a business fundamentally changes how businesses operate and deliver value.

Despite guidance from professional bodies, academic research, and significant corporate investments in GRC tools, business continuity management programs at most organizations remain largely manual and siloed.

Clear opportunity for risk managers to embrace digitalization.

Business Continuity software provides the tools and capabilities to holistically support a business resilience program.

Treasury's Experience with BC Software

RFP to assess the available tools with integration between business continuity and operational risk management.

Adoption of a SAAS solution for the entire World Bank Group. Solution implementation to support Treasury's entire BC program.

Mid 2010s

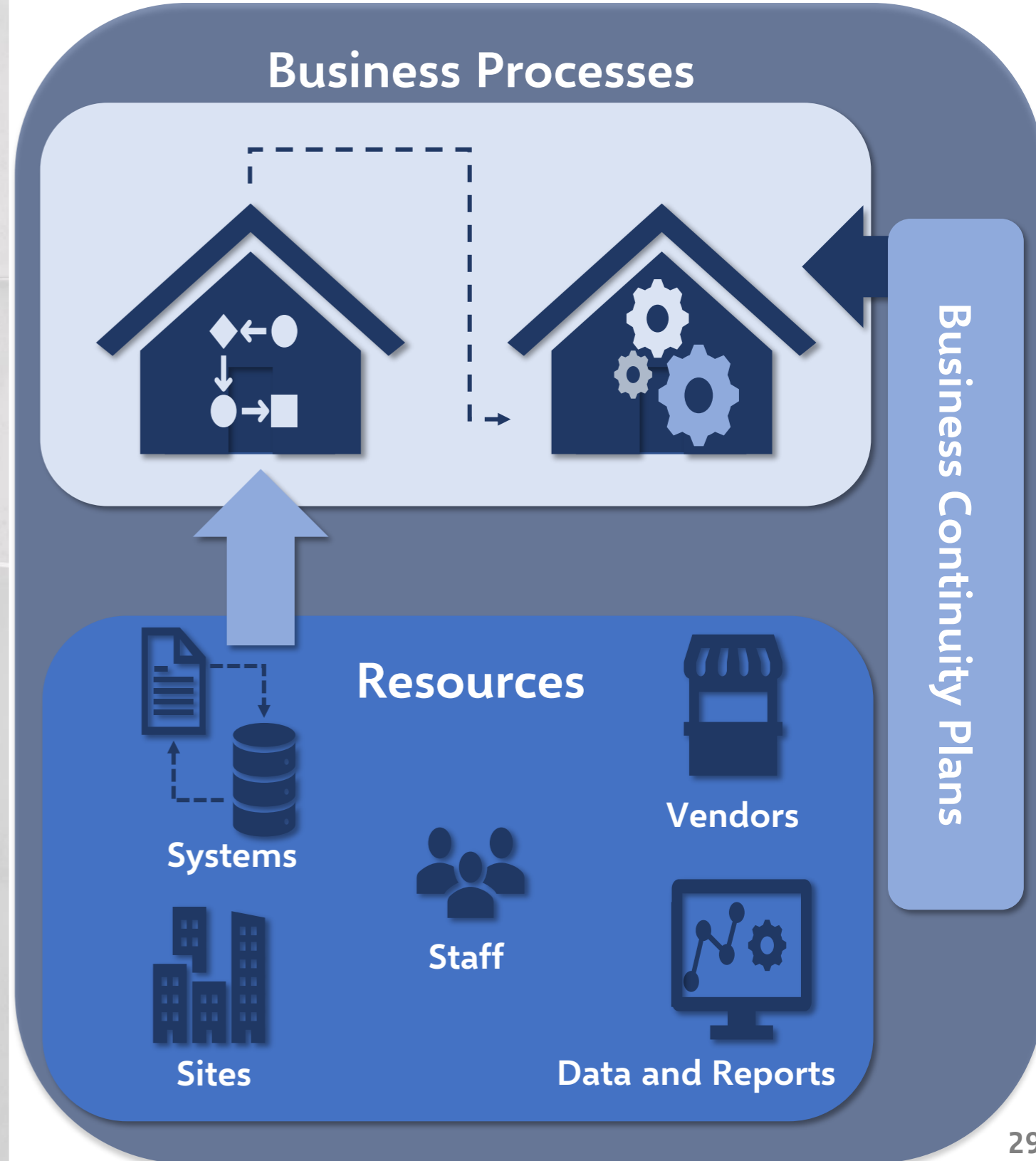
Late 2010s

Early 2020s

BC module developed within corporate GRC tool. Solution included BIA, BPCs and approval workflows, with limited analytics capabilities.

BC Software - A Data Model of the Organization

- A business continuity software provides a digital representation of how, within an institution, business processes are organized and structured.
- The data model defines **data entities**: business processes, business continuity plans, resources (systems, sites, vendors).
- Software helps identifying and documenting relationships between processes, supporting resources and plans.
- **Logical rules** governing data integrity and consistency across the model.



Resources and Attributes

- **Site** where the process is being executed is considered a **Resource** or an **Entity**.
- **With defined Attributes:**
 - **Number of staff** at location supporting each business process.
 - **Capacity of process execution.** An estimate of how much time staff is supporting the process (%).
 - **Volume of transactions** at the site (%).
- **Tool enhances the Business Impact Analysis** by modeling the relationships between processes and key resources (**Sites, Systems and Vendors**), with own specific sets of attributes.



Business Continuity Metrics

- For each process, software can assign the MTPDs, RTOs and RPOs.
- Calculates the **lowest metric** for the associated resources supporting several processes.
- **Generates reports** summarizing the BC metrics calculations and key findings associated to the resource attributes.
- Helps identify vulnerabilities, single points of failure, and **concentration risk**.
- Facilitates communication of **BC requirements** to management and stakeholders (Information Technology, Procurement, Risk Management).

Mitigation Factors

- **Software evaluates mitigation strategies already in place by the Institution:**
 - Alternate location
 - Remote work capabilities
 - Supplemental workforce (locally or across sites)
 - Cross trained Staff with appropriate authority and access to systems
 - Documented recovery procedures and regularly exercised
- **Inherent Risk.** Software evaluates the amount of risk that exists in the absence of mitigation measures.
- **Residual Risk** is the amount of risk that remains after the assessment of the implemented mitigation measures.

Risk Indexes

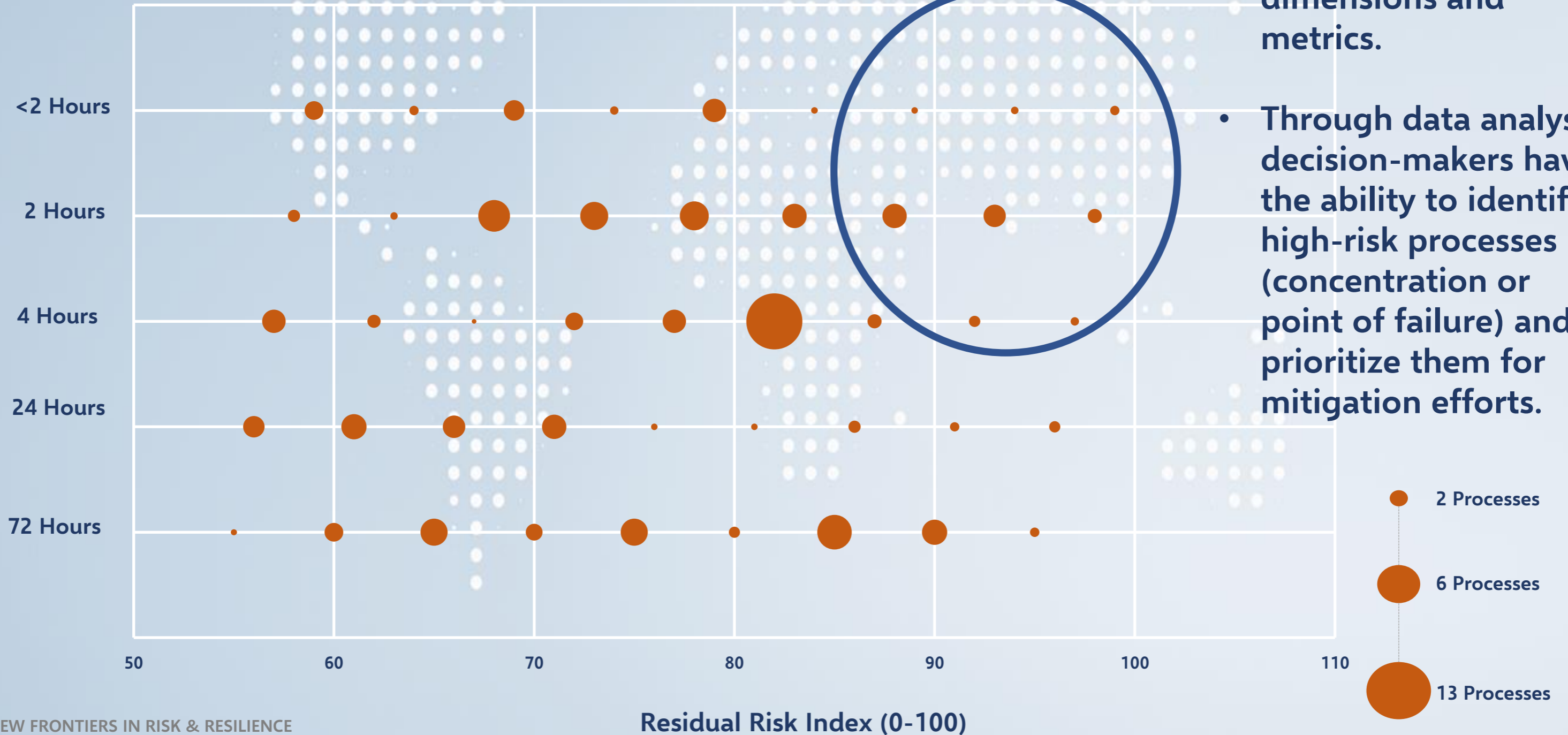
- Risk indexes determine the overall risk associated with specific business processes.
- Index algorithm includes process dependencies, MTPDs, impact thresholds, (Financial, Reputational, Operational), and mitigation factors.
- The software assigns risk scores to each business process. The score, expressed as a number between 0 and 100, represents a risk score (Inherent and Residual) for the process.
- With risk indexes, BC managers can prioritize their work-program on the most critical areas of their organization.

Data Visualization

- Software offers data visualization tools such as charts, graphs, and heatmaps to visually represent dimensions and metrics.

Chart values for illustrative purposes only

Maximum Tolerable Period of Disruption (MTPD)



- Through data analysis, decision-makers have the ability to identify high-risk processes (concentration or point of failure) and prioritize them for mitigation efforts.

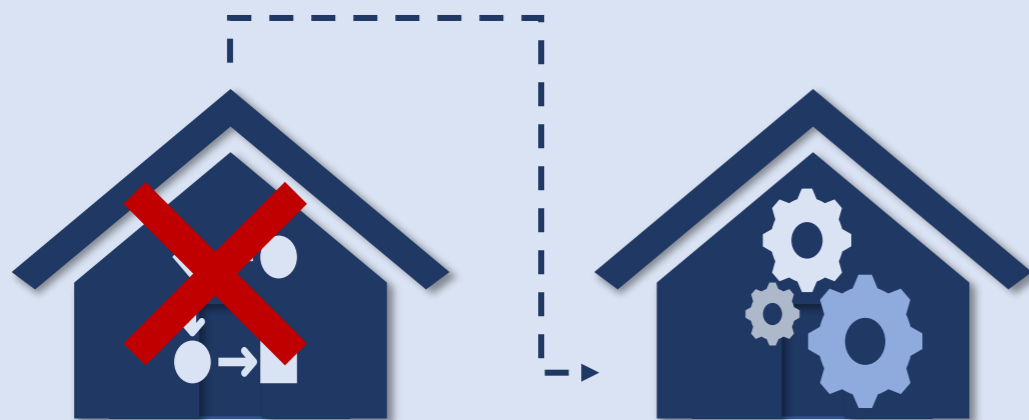
Business Processes and Plans

- Software offers a centralized platform for creating and maintaining business continuity plans at the business process level.
- Provides **templates** and tools for generating comprehensive business continuity plans and step by step procedures.
- **Central repository** for storing all relevant documents and information related to the business continuity plans.
- This includes contact lists for staff and teams, recovery resources, and other critical elements for the business response.

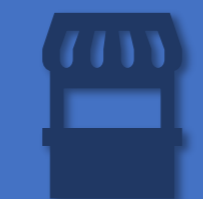
Incident Invocation

Streamlines the process of managing business continuity plans, supporting organizations through the entire incident lifecycle.

Business Processes



Resources



Data and Reports

Incident Dashboard

Incident Details:

Unavailable resources and impacted processes

Software invokes Incident BC Plans and Recovery Procedures

Incident Activities, Milestones and Logs

Key Contacts

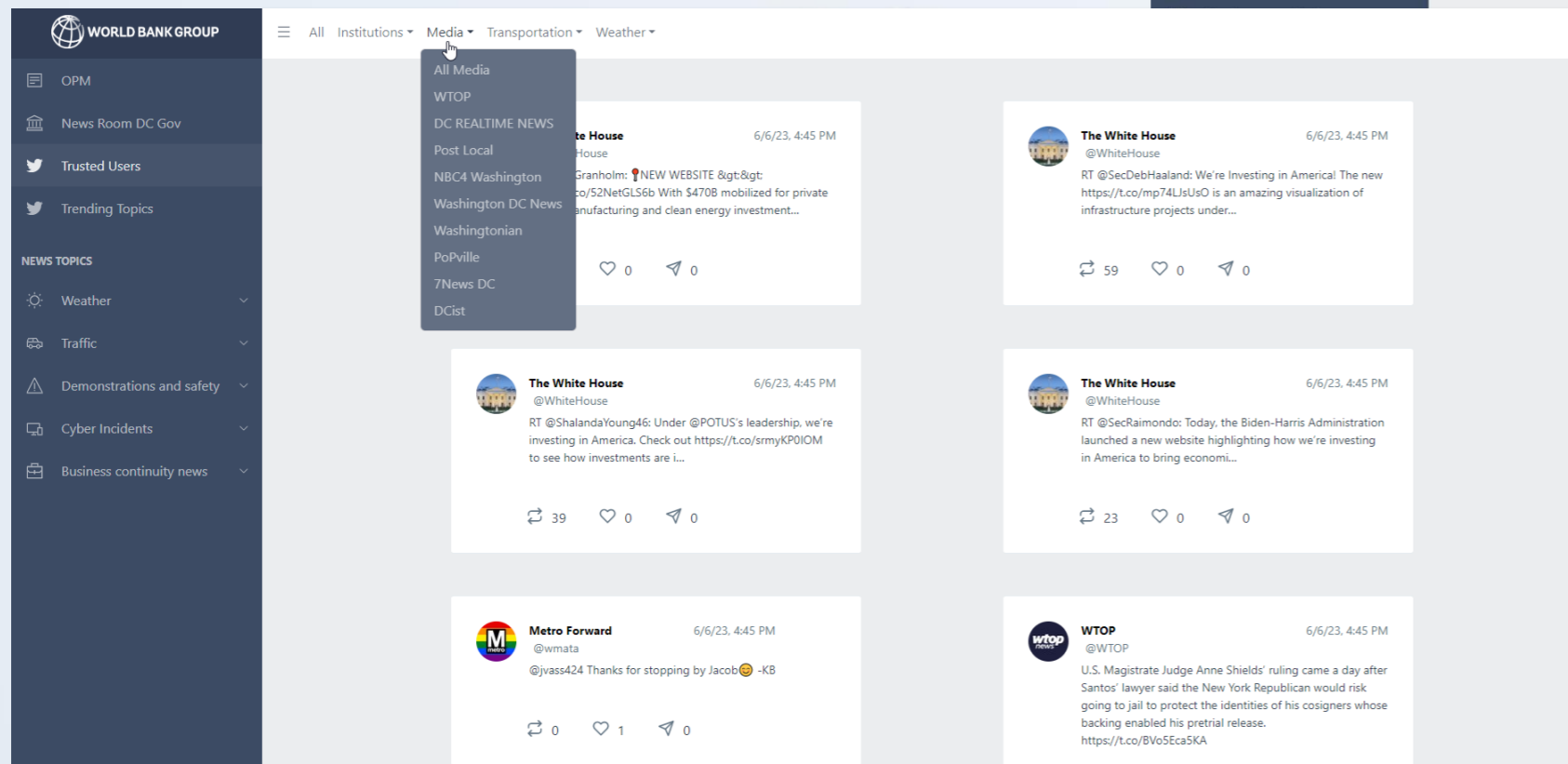
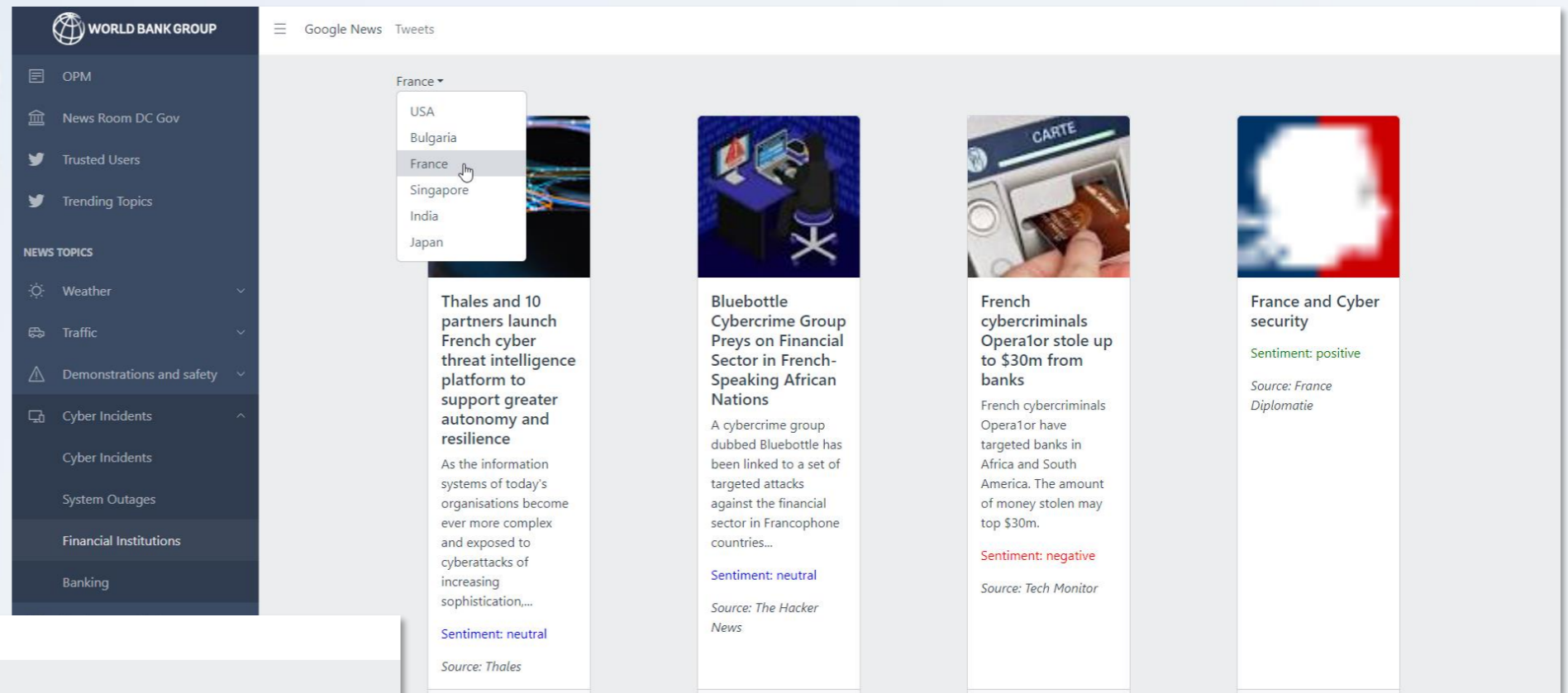
Incident Management Team

RTOs & RPOs

Detailed Incident Report, gaps and action items.

AI News Sourcing Tool (Proof of Concept-POC)

- The monitoring of external events, given their constant changing and complexity, is challenging for any institution.
- Capacity constraints, when dedicated staff need to manually scan news sources for relevant threats.



- WB Treasury, as a POC, to test the use of Artificial Intelligence and Machine Learning to automatically retrieve Curated News, high quality and verified, from external information sources.
- Use of key keywords to develop searches most relevant to the business. POC includes a user interface, available also on smartphones.

Approval Workflows

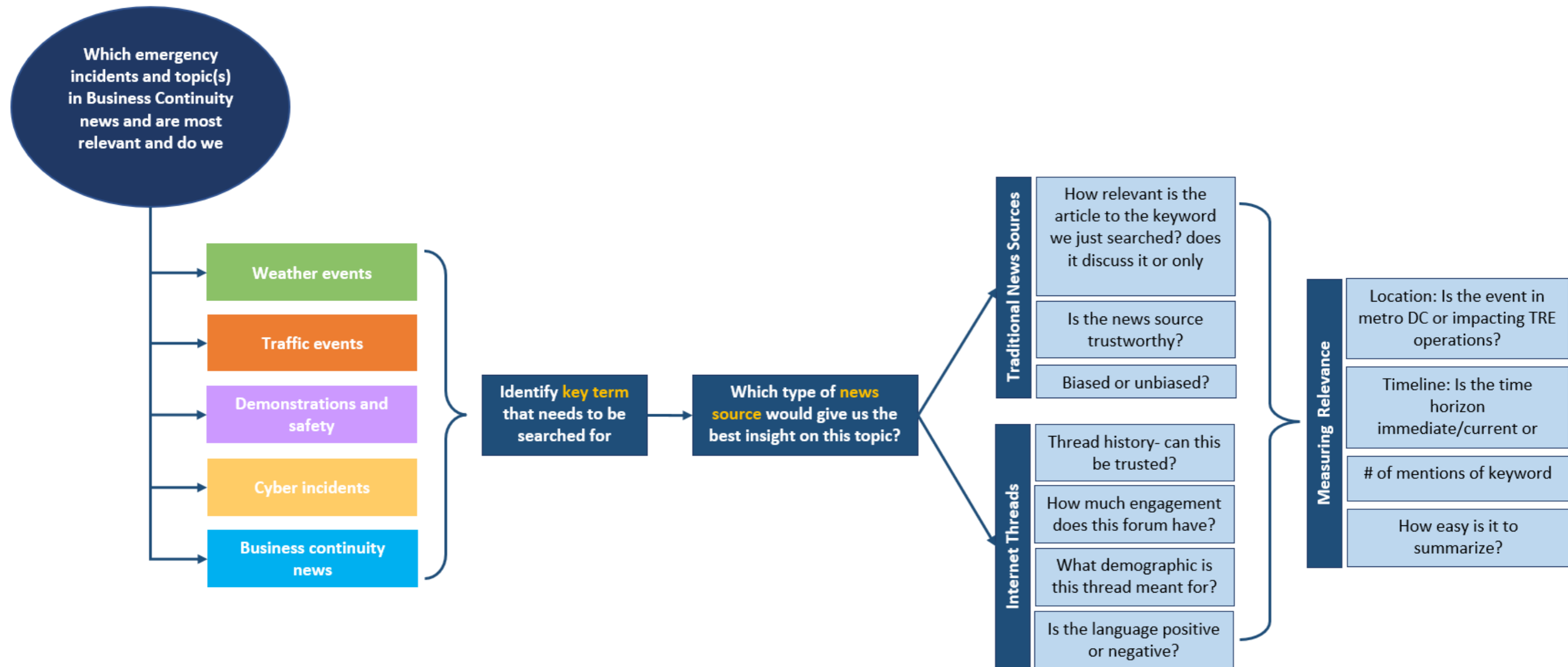
- Approval workflows are essential for ensuring all components of the BC program are reviewed and endorsed by relevant stakeholders during Analysis, Implementation and Review phases.
- When creating a business continuity plan, the software allows designated users to draft the plan and submit it for approval to management for official record keeping.
- Institutions can have the assurance that the **Governance program** meets:
 - appropriate review and endorsement from relevant stakeholders
 - required **standards** (ownership, periodicity)
- Facilitate the collection and review of the **Audit documentation**, enhancing the overall review process.

Wrap Up

- Software supports **BIA practice** by standardizing data collection, analyzing dependencies, and calculating business continuity metrics.
- Offers a **centralized platform** for creating, maintaining, and updating business continuity plans.
- Enhances **incidents management function**, providing tools to respond effectively to disruptions.
- Streamlines the governance process, tracks revisions and approvals. Facilitates collaboration among process owners and stakeholders.
- Leveraging business continuity software, organizations can demonstrate their compliance with **ISO 22301** requirements.



BC AI News Sourcing Tool – High Level Requirements





MALAYSIAN ASSOCIATION OF RISK &
INSURANCE MANAGEMENT

MARIM INTERNATIONAL CONFERENCE 2023

UNCOVERING NEW FRONTIERS IN RISK & RESILIENCE

11 & 12 September 2023

The Waterfront Hotel, Kuching



Parallel 2: BCM & Crisis Management

Cutting Edge Risk Management

– AI Adoption and Digitalization of the Business Continuity & Crisis Management Programme

Alessandro Caillat
Senior Financial Officer
World Bank Treasury





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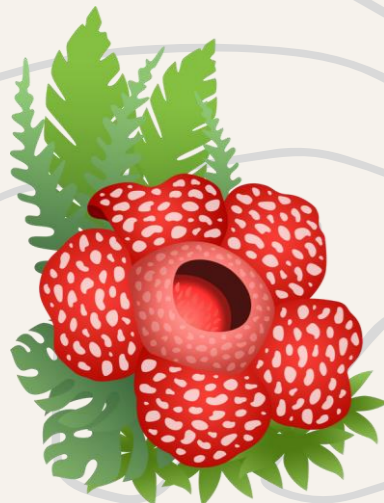
11 & 12 September 2023 The Waterfront Hotel, Kuching



Parallel 2: BCM & Crisis Management

Armour Up: Empowering the Ground Crisis Response Team

Dr David Teo Kwang Joo
Regional Medical Director - Asia
International SOS





ARMOUR UP

Empowering the Ground Crisis Response Team

Colonel (retr.) Dr David Teo
MBBS, M.MED (OM)
Regional Medical Director Asia
International SOS



Disasters, Medevac, Crisis Management

- **Retired Chief Army Medical Officer, Rank of Colonel**
- **UN Peacekeeping**
 - Medical Ops / Planning Officer
 - **UNITED NATIONS HQ DEPARTMENT OF PEACEKEEPING OPERATIONS**
 - UN Peacekeeping Mission, MINUGUA (Guatemala)
 - UN Peacekeeping Mission, East Timor
- **Disaster Response (UN Disaster Assessment Team)**
 - UNDAC Mission to Asia Tsunami
 - UNDAC Mission to Bengkulu Earthquake
 - UNDAC Mission to Flood Bangladesh
- **Military Experience**
 - Ex Chief Army Medical Officer (Colonel)
 - SAF Medical Mission: Head of SAF Response Team to Taiwan 921 Earthquake
 - Other SAF missions
- **International SOS Response (Terrorist Attacks)**
 - Pakistan, India, Bangladesh, India, Indonesia
- **International SOS Response (Transport Incidents)**
 - Mass Casualties Incident Bus Crash (Vietnam)
 - Mass Casualties Incident (Sabah Earthquake)
 - Mass Casualties Incident (New Zealand)
 - Offshore Oil and Gas Incidents

- **Occupational Health Senior Consultant**
 - Refinery and Rigs and Factories Audit
- **Trainer**
 - HAZMAT Medical Response
 - CMT & IMT Medical Trainer
 - MCI Medical Trainer
- **COVID Information Operation Lead Asia**
International SOS



**Western Pacific Typhoons
6 Oct 2021**

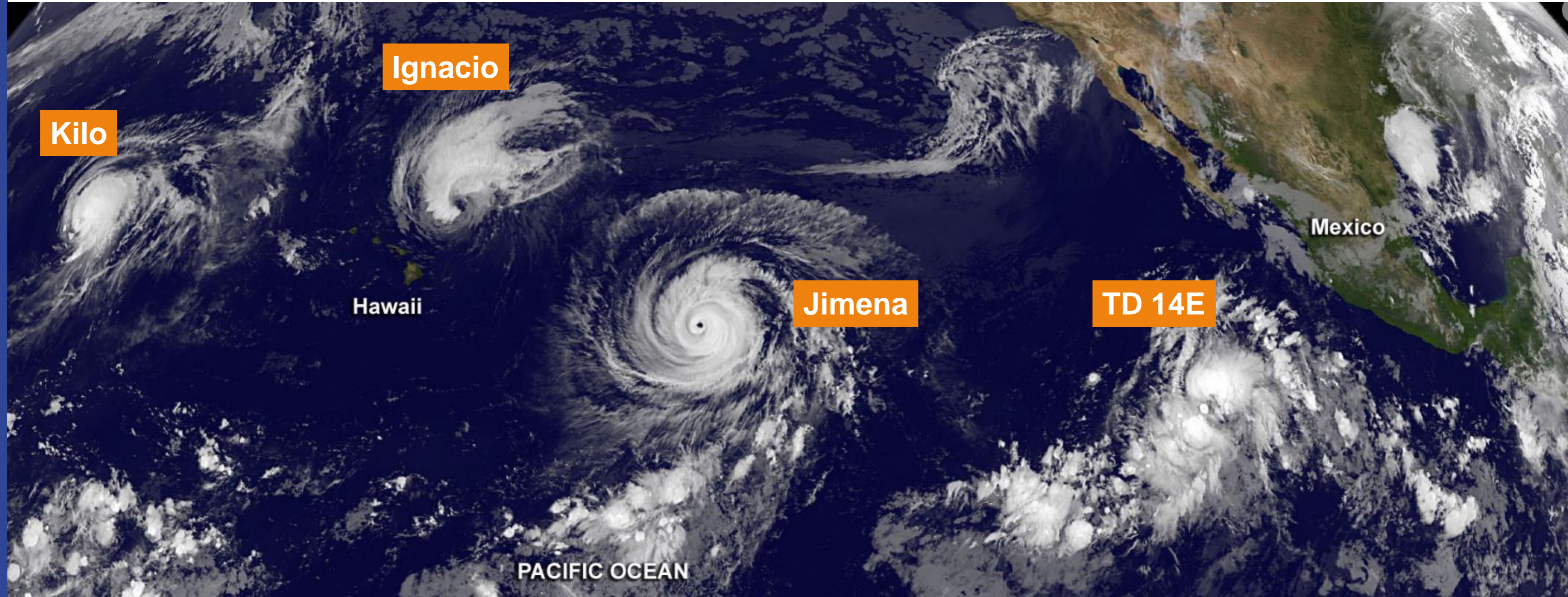
Typhoon Nida

Typhoon Mirinae

Typhoon Lupit



North America: Cyclones 2015

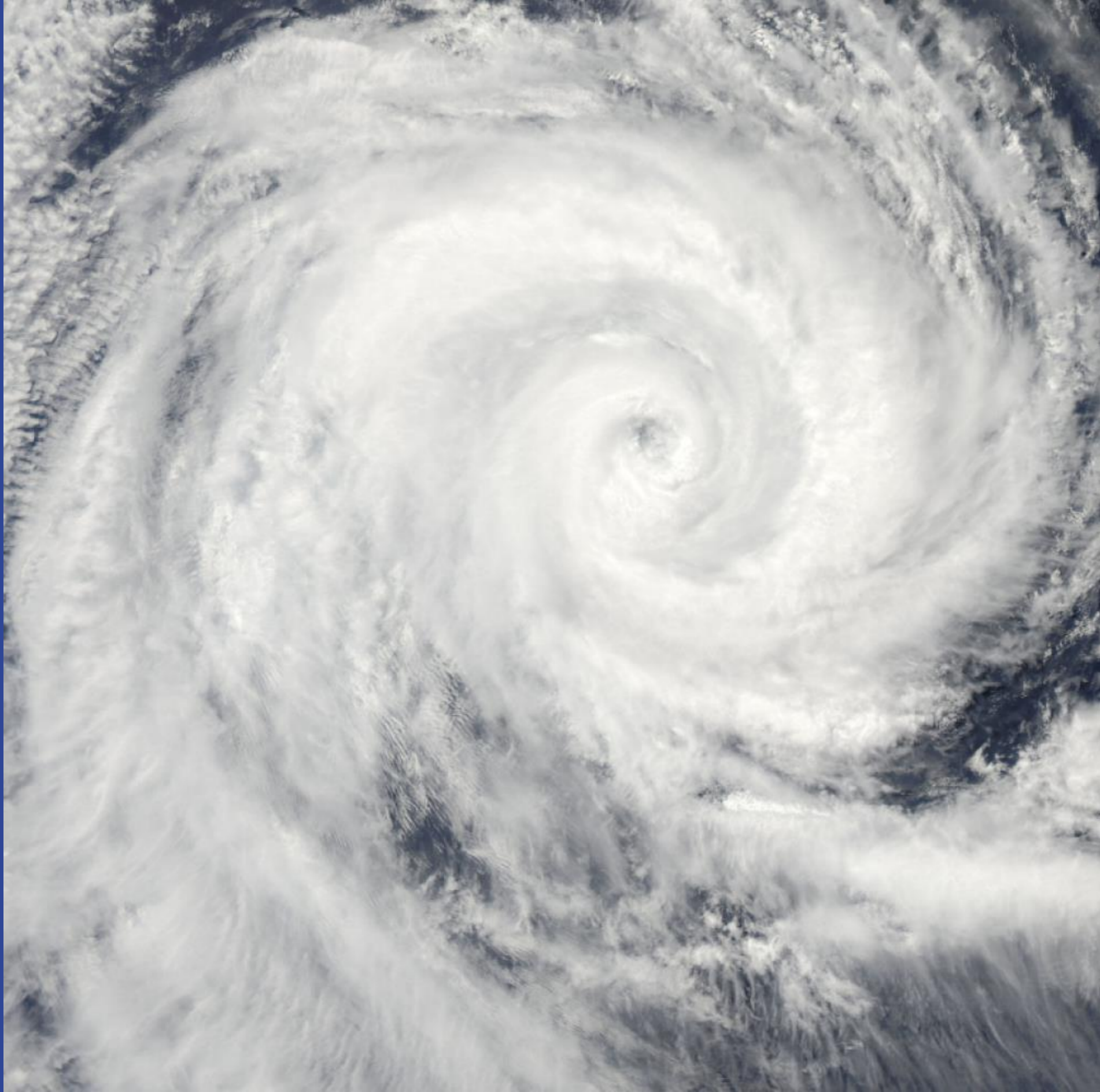


Australia: Cyclones 2020 Feb 20



Cyclone Ferdinand

Cyclone Esther



Quiz 1: **Typhoon**

You received this report from your source. A new Typhoon forming and heading towards Philippines where your company has 2 factories. Wind speed estimated 140 km per hour.

You are planning to send alert to your team in Philippines and kicking off their BCP

What are your thoughts before hitting the **Send Button?**

Agenda

- Definitions
- What and Why of Crisis Response Team
- Selection
- Preparation



Crisis Management Team

- Definitions



A Crisis Management Team is a group of people who protect an organization against the adverse effects of a crisis.



The Team prepares the organization for potential threats and inevitable threats, recommend / decide on future course of action and devices strategies to help organization come out of difficult times



Crisis Management will ensure save lives and prevent reputational loss, minimize financial loss and ensure Business Continuity

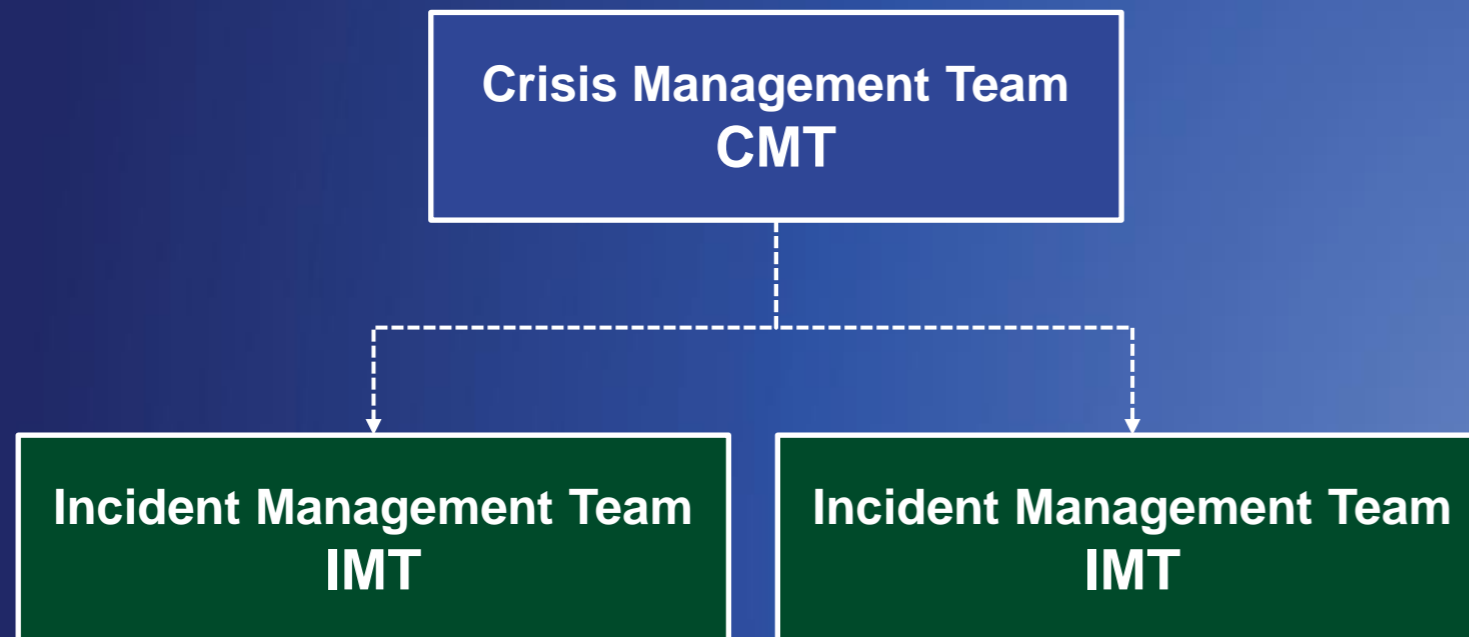


Crisis Management Team need to be selected and undergone Crisis Management Training. They are guided by Company SOP and supported by the Management

Crisis Management preparation could either make or break your company during expected events, such as:

- Natural Disasters
- Man-Made Disasters
- Cybersecurity Attack
- Technological Failure
- Financial Crisis

CMT vs IMT



- **CMT Crisis Management Team**

- Organization Management
- Global or Regional or Country
- Lead by Most Senior Person (Managing Director or General Manager)
- Supported by Functional Heads, Security, Medical, Media
- Based on HQ

- **IMT Incident Management Team**

- IMT
- Team deployed to Incident Site
- Team of SME lead by a Leader
- Ground Assessment and Assistance
- Organization may have more than 1 trained IMT



Incident Management Team

WORLDWIDE REACH. HUMAN TOUCH.



Incidence Management Team

- A small team of SME send to an Incident Site to support Company CMT +/- Clients
- Group < 10 disciplined and dedicated persons
 - Each one is a SME in his/her role
 - Work Independently in his/her assigned role
 - Work as a Team when functioning together
 - Number of individual functions depend on mission and area of operations

1	Operations	Coordinate of all ground support, requests and reports, call & task logs, comms with CMT / Stakeholders
2	Logistic	Arrangement of ground logistic, accommodation, transport, water and food, finance, flights
3	Security	Security Tasks on the ground; assessment and analysis of security threats; mitigation measures
4	Comms	Setting up Comms between site HQ and IMT members going out and with CMT. Especially in remote settings where infrastructure has broken down
5	Medical	Medical Tasks on the ground; health risk and health needs on the ground, including medical facilities assessment
6	Others	HR, Finance



Gather Information



- Country / Area Infrastructures
- Damage Assessment (Infrastructures +/- Company Assets)
- Transportation Structures
- Food and Water Supply
- Accommodations
- Medical Facilities
- Security Situation
- Casualties
- Company Premises & Damages
- Company Employees

Ground Assistance

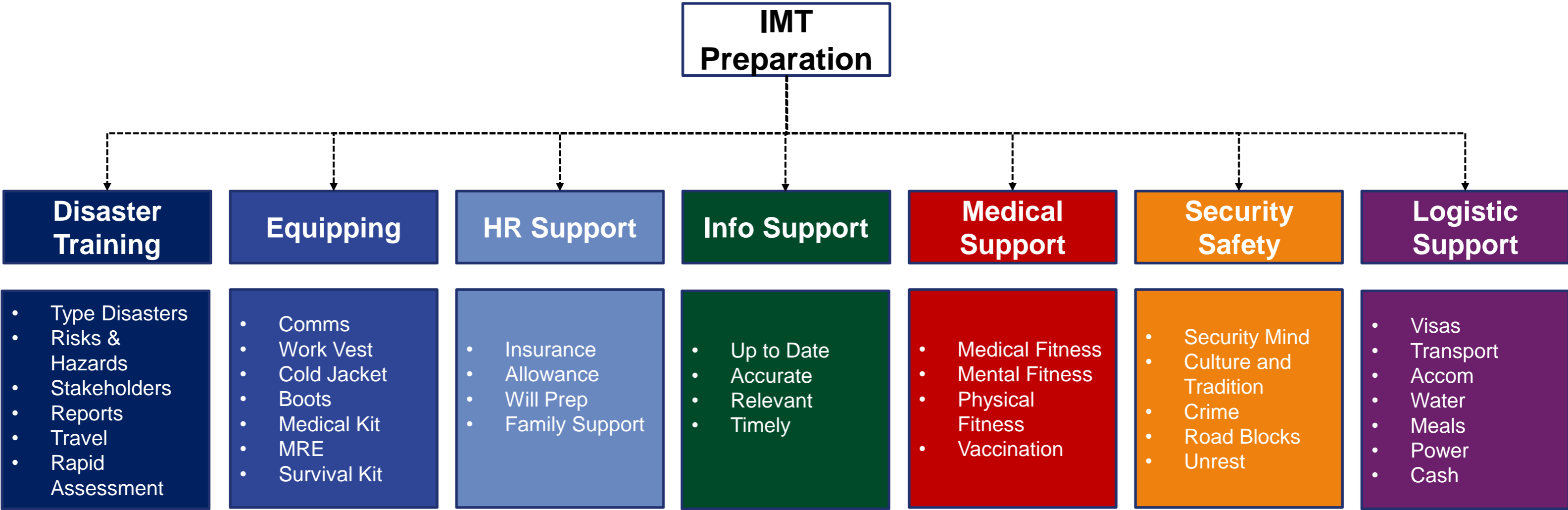


- Company Assignees & Local Staff
- Company Local Management
- Assistance for BCP on ground
- Assistance for Domestic or International Movement
- Assistance for
 - ✓ Logistic
 - ✓ Accommodation
 - ✓ Medical
 - ✓ Security & Safety



MEDIA

IMT Preparation



Medical Preparation

A	Vaccinations	Childhood Vaccinations	BCG, Diphtheria, Measles, Mumps, Rubella Polio, Tetanus
		Additional Vaccinations	Hepatitis A, Hepatitis B, Typhoid Fever Typhoid Fever or Booster; Tetanus booster Rabies **, Yellow Fever **, Meningococcal **
B	Chemo Prophylaxis	Malaria	Malarone, Doxycycline, Mefloquine
		Ticks	Doxycycline
C	Medical Screening	Medical Fitness	Fitness to Travel and Fitness to Participate
		Physical & Mobility Fitness	
		Mental Fitness	
D	Medical Skills	First Responder Training	First Aid, CPR, AED, IV Lines and OTC and common Antibiotics
		Medical Kit	



Selection of IMT Members

Subject Matter Expert



Medical (Medical & Mental) Fitness



Physical Fitness



HR Screen (Financial, Family, Personality)



Languages



Military or Police or NGO experience



Completed Training (IMT, First Aid)



Stake Holders

National Authorities

- Police
- Fire Services
- Search & Rescue
- Military
- Health
- Government Ministries
- National Media

Internal

- Individual Volunteers
- National Companies
- Internal Interest Groups
- Internal NGOs
- Affected Population

Your Organisation

- National Employees
- International Assignees
- International Visitors
- Subcontractors
- Employees Families
- Company Assets
- ERT & IMT

External

- Regional Countries
- United Nations Agencies
- International NGOs
- International Search Rescue
- Individual Volunteers
- International Media

Organisation Assistance

- Partner Assistance Companies
- International SOS

Risk / Hazard



Risk / Hazards Training

- Awareness
- Assessment
- Primary and Secondary

	Primary	Secondary
Floods	Drowning Destruction Property Destruction Transportation	Diseases Animal bites (rats, snakes) Injuries (walking in flooded water)
Earthquake	Crushed Injuries Destruction Infrastructures Destruction Transportation	Diseases Tsunami Collapsed Dams and Bridges Aftershocks Risks Crimes Unrests, Riots, Looting
Terrorists	Casualties Hostages Destruction of Property	Fake News Psychological Impact Cramp down Travel





Quiz 2: Floods

You are leading a Team towards
Company Asset for Assessment.
Area is flooded and so is the road

Do you proceed?

Quiz 3: Volcanoes

A



B



- What is the safety distance for Volcano A?
- Which is more dangerous A or B?



Type of Disasters

WORLDWIDE REACH. HUMAN TOUCH.



Natural Disasters vs Man-Made Disasters

Natural Disasters

- Earthquakes
- Volcanic Eruption
- Tsunami
- Typhoons / Cyclones
- Tornados
- Floods

Man-Made Disasters

- Transport Accident
- Industrial Accident
- Infrastructure failure / collapse
- Terrorist Attack
- Civil Unrest

Disaster: Simple vs Complex

- **Simple**
 - Natural Disaster or Man-Made Accidents
 - There is no security element at play
- **Complex**
 - Natural Disaster or Man-Made Accidents
 - Plus Security Risks to Emergency Aid Workers and Casualties and Survivors
 - Earthquake in Syria, Afghanistan
 - Cyclone hitting Myanmar



Disaster: Compensated vs Uncompensated

- **Compensated**
 - Infrastructures is intact or not impacted
 - The country could rely on organic infrastructures
 - External Help may not be needed (in general except for specialized unit e.g. SAR)
- **Uncompensated**
 - Infrastructures is damaged and cannot support the affected population or rescue work
 - External help needed (National and International)
 - Typically, a developing country e.g. Bangladesh or Sri Lanka

SHIELD for IMT

Security **S**afety **S**kills



Health



Insurance



Environment



Logistics



Data



Security, Safety, Skills



SECURITY

(Information & Changes)



SAFETY

(Information & Changes)



SKILLS

(Well Trained)



WORLDWIDE REACH. HUMAN TOUCH.



Health

A	Vaccinations	Childhood Vaccinations	BCG, Diphtheria, Measles, Mumps, Rubella Polio, Tetanus
		Additional Vaccinations	Hepatitis A, Hepatitis B, Typhoid Fever Typhoid Fever or Booster; Tetanus booster Rabies **, Yellow Fever **, Meningococcal **
B	Chemo Prophylaxis	Malaria	Malarone, Doxycycline, Mefloquine
		Ticks	Doxycycline
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		Medical Kit	

A	Medical Assistance when IMT Deployed	Telemedicine	Access to Doctors Advice
		Medical Updates	Latest change in Medical Situations on ground. Medical Facilities on sites, infectious diseases,
		Medevac	Domestic and International Medevac
B	Long Term Support	Psychological Support	Pre, During Mission and Post Mission Psychological Support
		Injuries and Illness during mission	Long Term Support

Insurance

- Hospitalization Insurance
- Evacuation Insurance
- Repatriation Insurance
- Disability
- Death Compensation
- Medical Benefits need to include Mental Health
- Any declination by Insurance needs to be supported by Company



Environment

- **Environment (Physical)**
 - Geography
 - Weather
 - Towns and Transportation
 - Water and Hygiene Standards
- **Environment (People)**
 - Race and Religion
 - Culture
 - Language
 - Food



Logistic

- **Transportation (Ground Transfer)**
 - Need for 4-wheel drive
 - Need for fording water obstacles
 - Local Drivers (Self Drive – Last Option)
- **Transportation (Domestic Transfer)**
 - Air vs Rail vs Water vs Road
- **Accommodation**
- **Water and Food**
- **Communications**
- **Local Agent & Language Support**



Data / Information

- **Information Feeding to the IMT**
 - Raw Information
 - Analyzed Information
- **What Information to IMT**
 - Changes in Security Information
 - Changes in Weather
 - Changes in Health Information
 - Changes in Political Information
 - Updates on Infrastructure
- **Access to Tele-Medical Assistance**





Quiz 4: Earthquakes

1. Earthquake A (Richter Scale of 5) and Earthquake B (Richter Scale of 6). What is the difference in Intensity between Earthquake A and Earthquake B?
 - a) 2 times
 - b) 4 times
 - c) 5 times
 - d) 10 times

2. If you can choose to be facing a disasters, which of the following would be your preference
 - a) Earthquake
 - b) Typhoon
 - c) Tsunami
 - d) Volcano
 - e) Floods

Post Mission Management

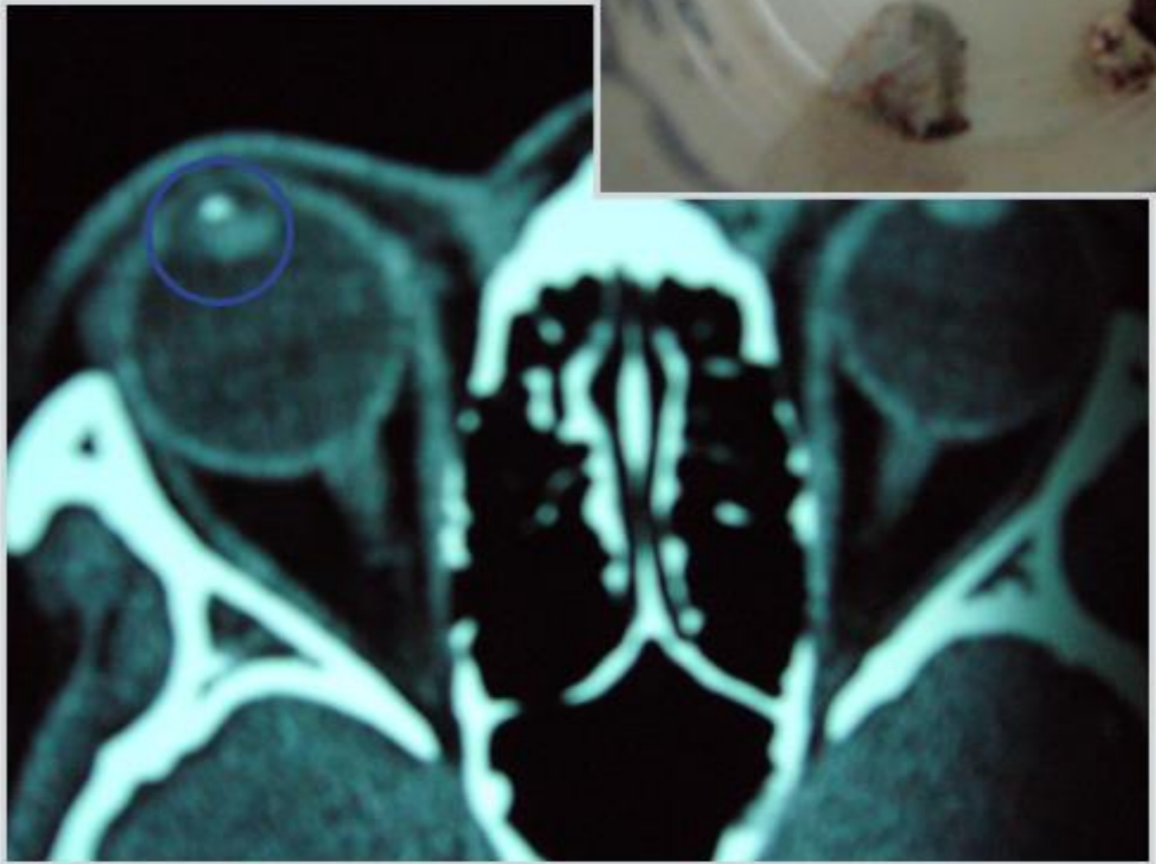
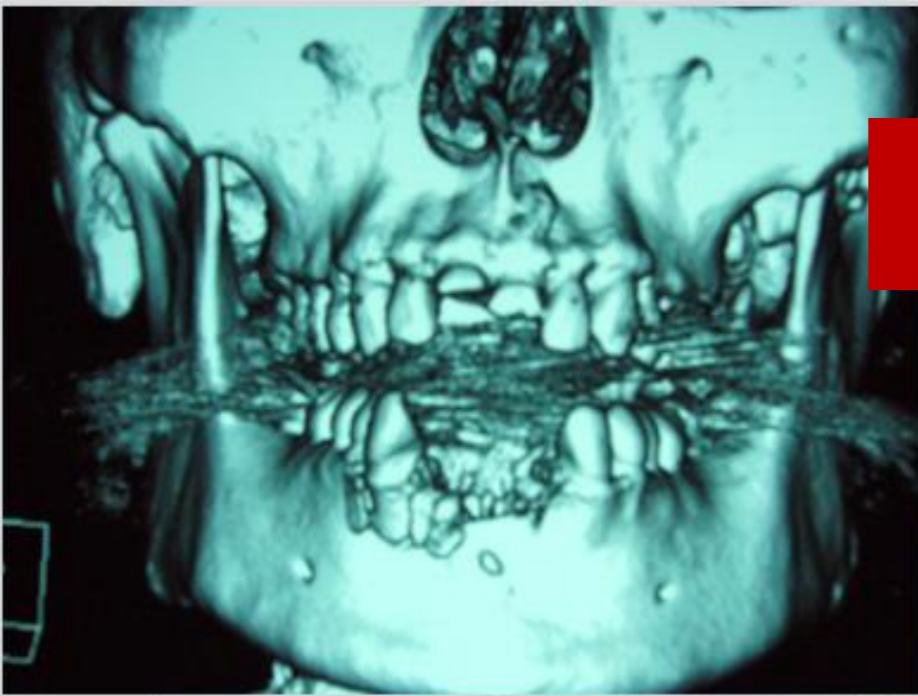
- **Medical Injuries + Mental Health**
- **Reports**
- **Media**
- **Social Media**
- **Family**
- **Recognition**



This is Not a Quiz: Terrorist Attack



Do you have Crisis Ground Team Responding to Terrorist Attack?



THANK YOU





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