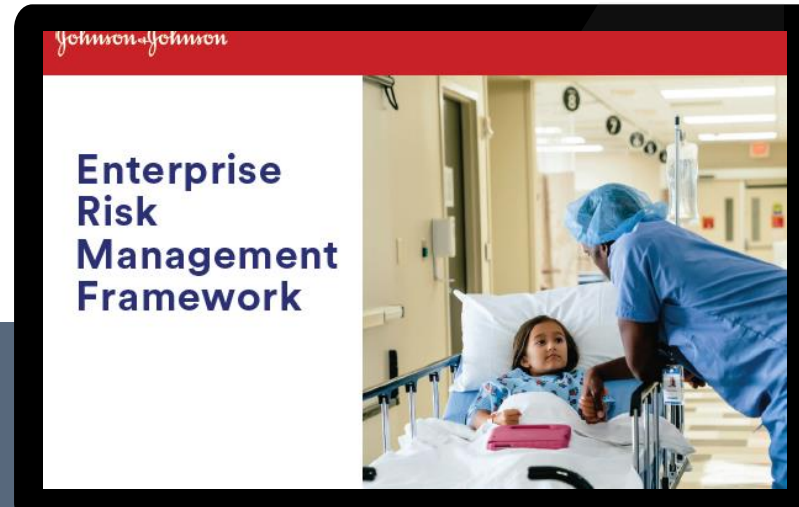# Enterprise Risk Management

Prof Akram Hassan SME@PMI

# 1980 **Johnson & Johnson** Story

★ ★ ★

Reputation risk

Someone poisoned bottles resulting in several deaths

Johnson-Johnson

Enterprise Risk Management Framework

**100%**

Honest open communication

**100%**

Recovery of share value

The company reacted quickly, removing and replacing its products at retail outlets, cooperating fully with law enforcement authorities, and keeping the media (and, hence, the public) informed throughout.
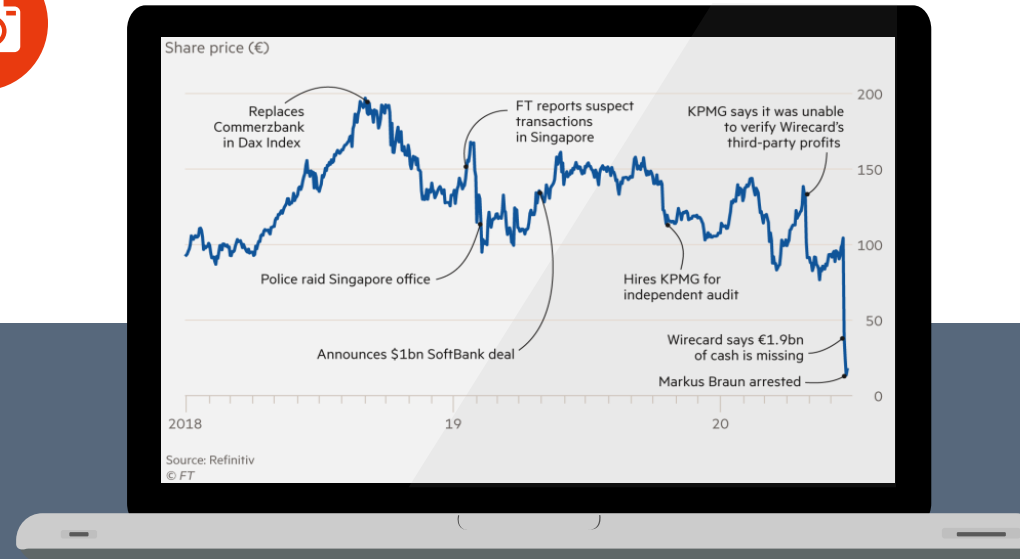
# 2020 **Wirecard Group** Story

★ ★ ★

Fraud risk

Corruption Case

Share price (€)

Replaces Commerzbank in Dax Index

FT reports suspect transactions in Singapore

KPMG says it was unable to verify Wirecard's third-party profits

Police raid Singapore office

Hires KPMG for independent audit

Announces $1bn SoftBank deal

Wirecard says €1.9bn of cash is missing

Markus Braun arrested

200

150

100

50

0
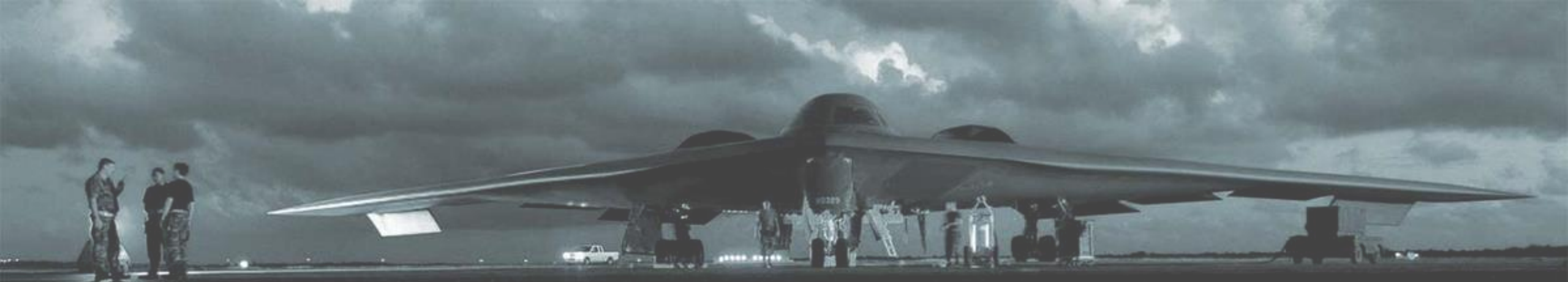
2018    19    20

Source: Refinitiv
© FT

**0%**

Honest open communication

**$ 97%**

Failure of share value

Wirecard acknowledges for the first time from 2015 the potential scale of a multiyear accounting fraud, warning that the €1.9bn of cash probably does "not exist". Wirecard says it will file for insolvency.

*"The primary purpose of ERM is the creation and protection of value."*
©2019 PMI

*What constitutes "best practices" in ERM has yet to be defined.*
©2020 Investopedia

# Agenda

**01** <span style="color:red">Enterprise Risk</span> Management

**02** Identify <span style="color:red">Enterprise Risk</span>

**03** Analyze <span style="color:red">Enterprise Risk</span>

**04** Respond <span style="color:red">Enterprise Risk</span>

**05** <span style="color:red">ERM</span> Maturity Model

# 01 Enterprise Risk Management

# Traditional Risk Management Vs ERM

★ ★ ★

Tactical

Reactive

Silo-based processes

Chief Risk Officer (CRO)
to coordinate ERM efforts.

Strategic

Proactive

Integrated processes

**RM**

**WHY ?**

**ERM**

Unlinked to decision makers

Supported by rules

Linked to decision makers

Supported by risk culture

# Risk Culture

★ ★ ★

| | | |
|---|---|---|
| Recognizing the value of risk management. | **1** | Individual commitment/ responsibility. |
| Open and honest communication. | **2** **3** **4** | Organizational commitment. |
| Tailoring risk effort. | **5** **6** | Integration with OPM. |

# CRO

A chief risk officer (CRO) is an executive in charge of managing risks to the company.

## Executive Role

## High Experience

It is a senior position that requires years of experience in accounting, economics, legal, or actuarial backgrounds.

> **ERM** provides decisionmakers with a realistic picture of likely outcomes to their strategic initiatives by integrating risk into the cost-benefit analysis of all strategic investments.

**ERM** Proactive Approach

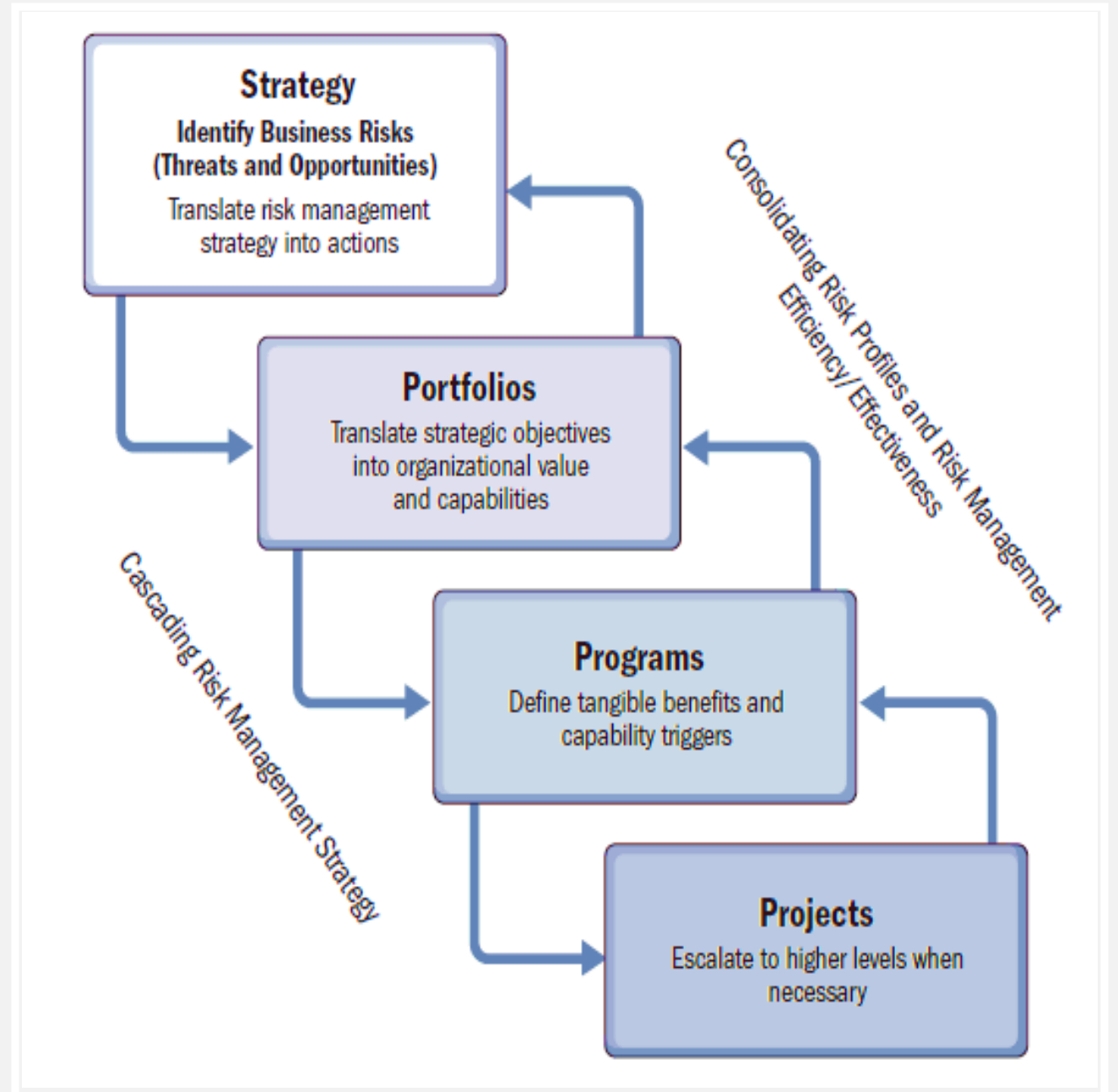# E R M
# Integration
## Consolidating & Cascading

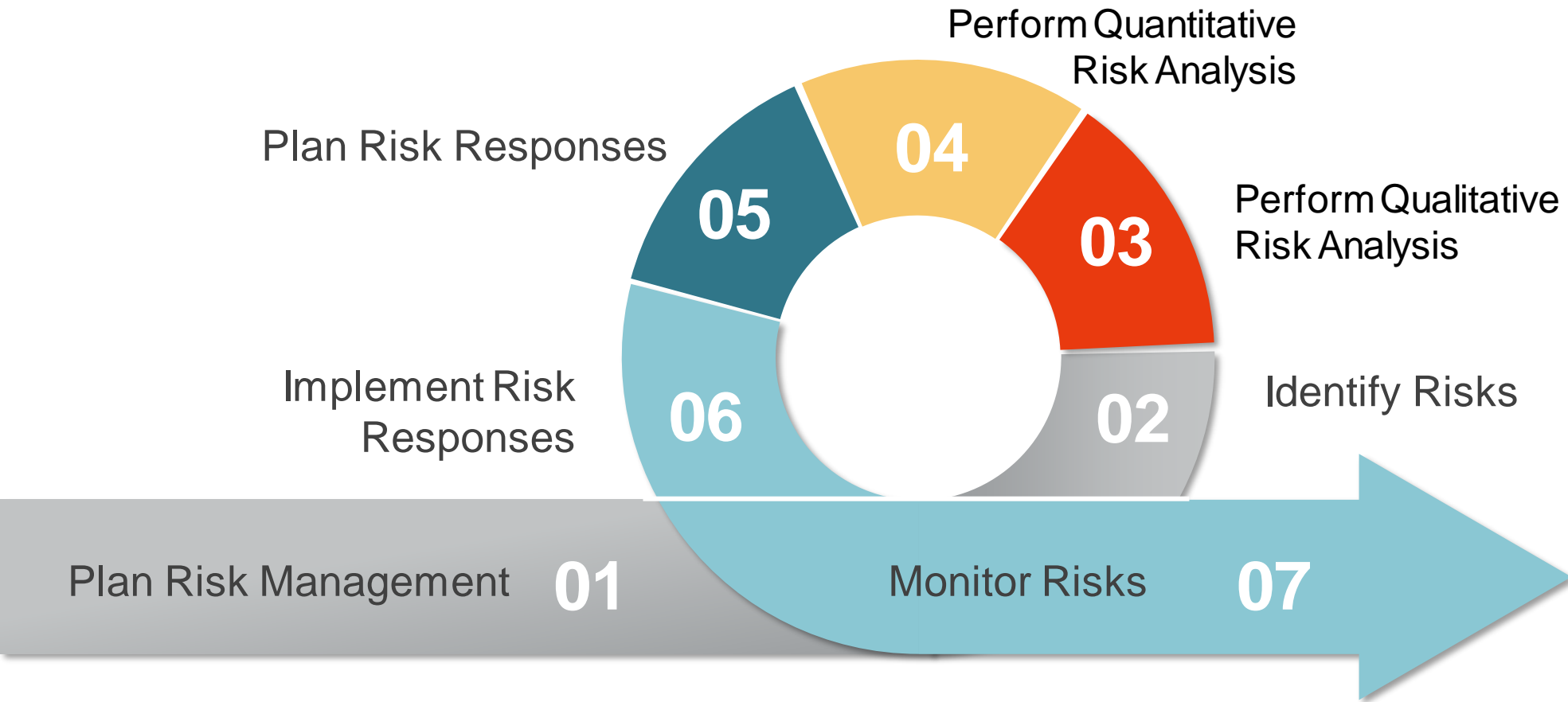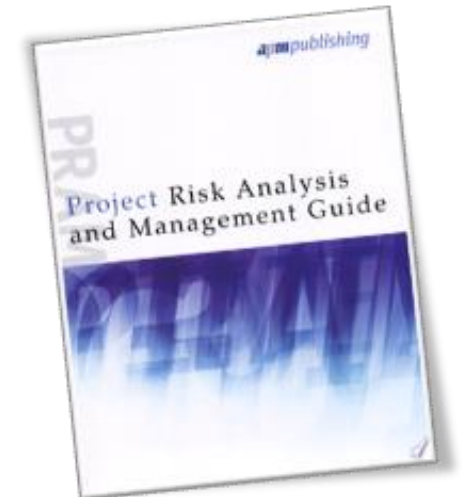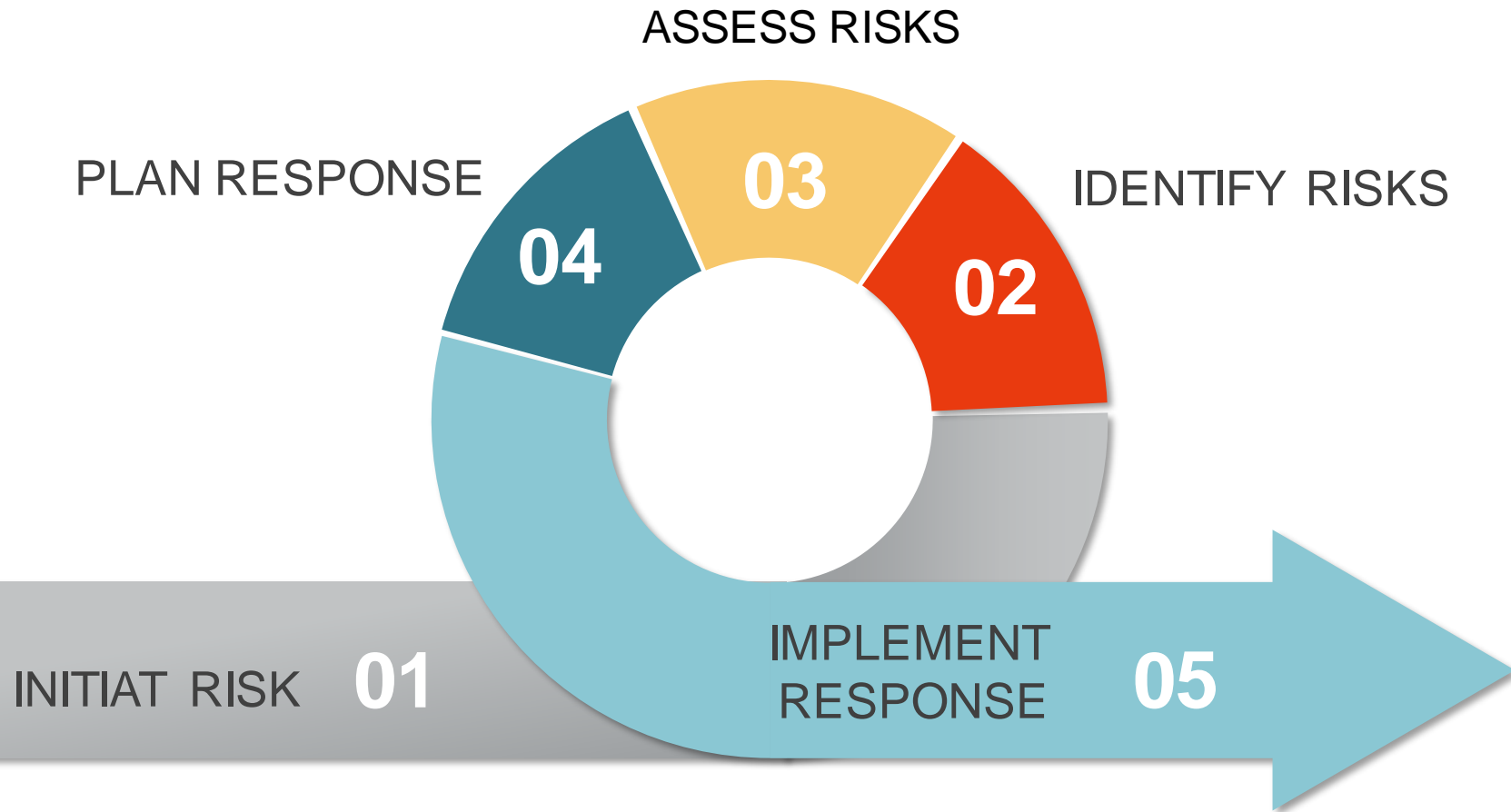| Identify | Forecast | Respond |
|----------|----------|---------|

**ERM is an approach for:**
1. Identifying major risks that confront an organization.
2. Forecasting the significance of those risks to business processes.
3. Responding to create or protect the value.



**Strategy**
Identify Business Risks
(Threats and Opportunities)
Translate risk management strategy into actions

**Portfolios**
Translate strategic objectives into organizational value and capabilities

**Programs**
Define tangible benefits and capability triggers

**Projects**
Escalate to higher levels when necessary

Consolidating Risk Profiles and Risk Management
Efficiency/ Effectiveness

Cascading Risk Management Strategy

# ERM Life Cycle Framework

★ ★ ★

Perform Quantitative Risk Analysis

**04**

Plan Risk Responses

**05**

Perform Qualitative Risk Analysis

**03**

Implement Risk Responses

**06**

Identify Risks

**02**

Plan Risk Management **01**

Monitor Risks **07**

# ERM Life Cycle Framework

★ ★ ★

ASSESS RISKS

PLAN RESPONSE

IDENTIFY RISKS

**04**

**03**

**02**

INITIAT RISK **01**

IMPLEMENT RESPONSE **05**

Project Risk Analysis and Management Guide

# ERM Life Cycle

**ESTABLISHING THE CONTEXT**

**COMMUNICATION AND CONSULTATION**

**MONITORING AND REVIEW**

**RISK ASSESSMENT**

RISK IDENTIFICATION

RISK ANALYSIS

RISK EVALUATION

**RISK TREATMENT**

# ERM Plan Success Factors

★ ★ ★

Acceptance

Bias correction

Alignment

Balance

Completion
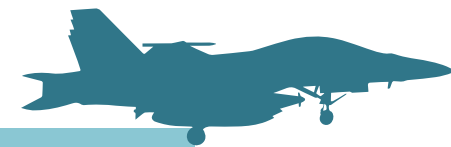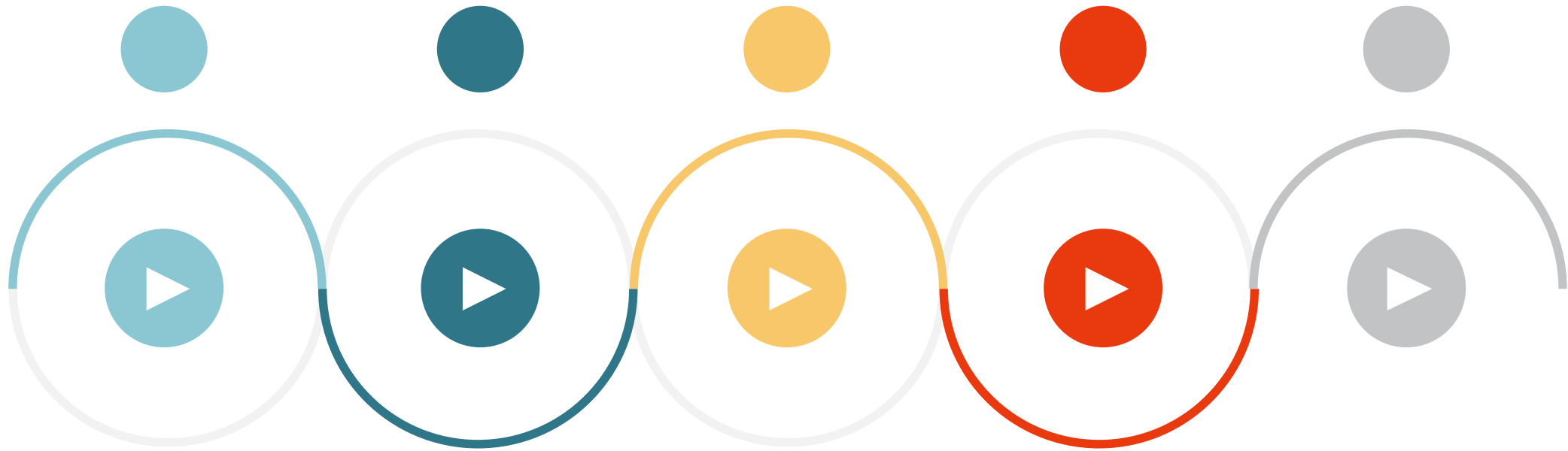
# 02 Identify **Enterprise Risk**

# Risks permeate…

01  People

02  Processes

03  Technology

04  Information



**Context of Organizational Activities**

**Management of Risks**

Vision

Mission

Organizational Strategy and Objectives

Portfolio Management
Strategic Planning and Management of Programs, Projects, and Operations

Management of Ongoing Operations (recurring activities) Producing Value

Management of Authorized Programs and Projects (projectized activities) Increasing Value Production Capability

**Organizational Resources**

# Risk Classification

★ ★ ★

**Unknown-Unknown (Emergent Risk)**
Knowledge does not exist within the sphere of influence.

**Unknown–Known (Hidden fact)**
Knowledge exists in community but not with the entity working on the endeavor.
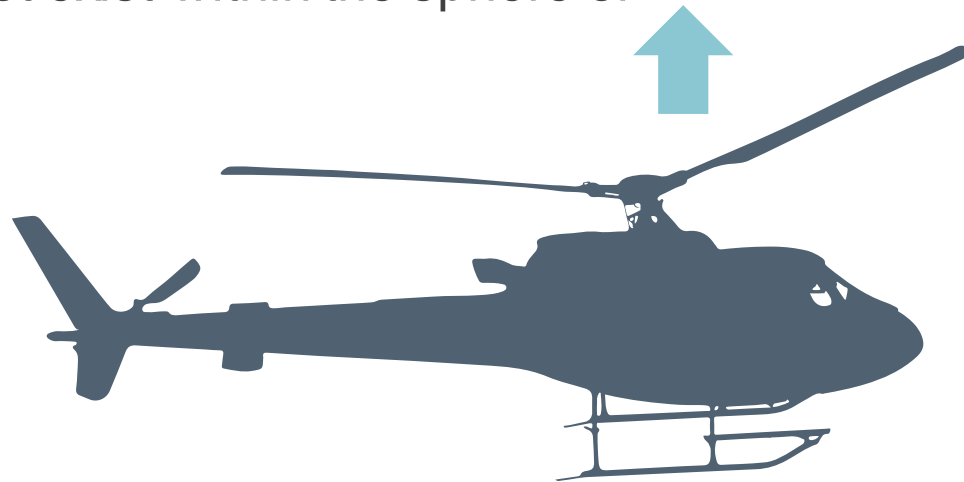
**Known–Unknown (Classic risk)**
There is knowledge to identify probability and impact.

**Known–Known (Facts)**
Managed as a part of scope. Not a risk.
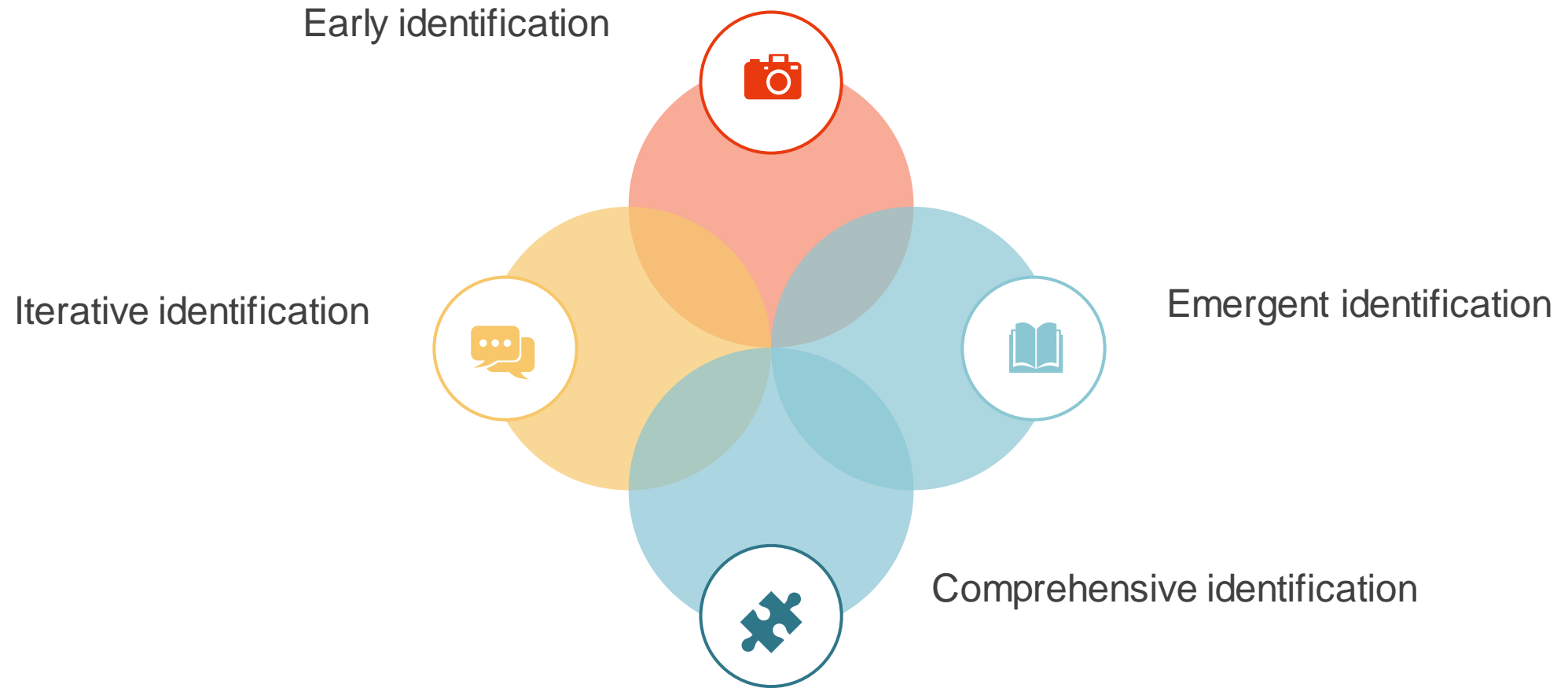
# Cause – **Risk** – Effect

★ ★ ★

**FACT**

As a result of cause

**CAUSE**

risk may occur

**RISK**

**EFFECT**

**RESULT**

which lead to effect
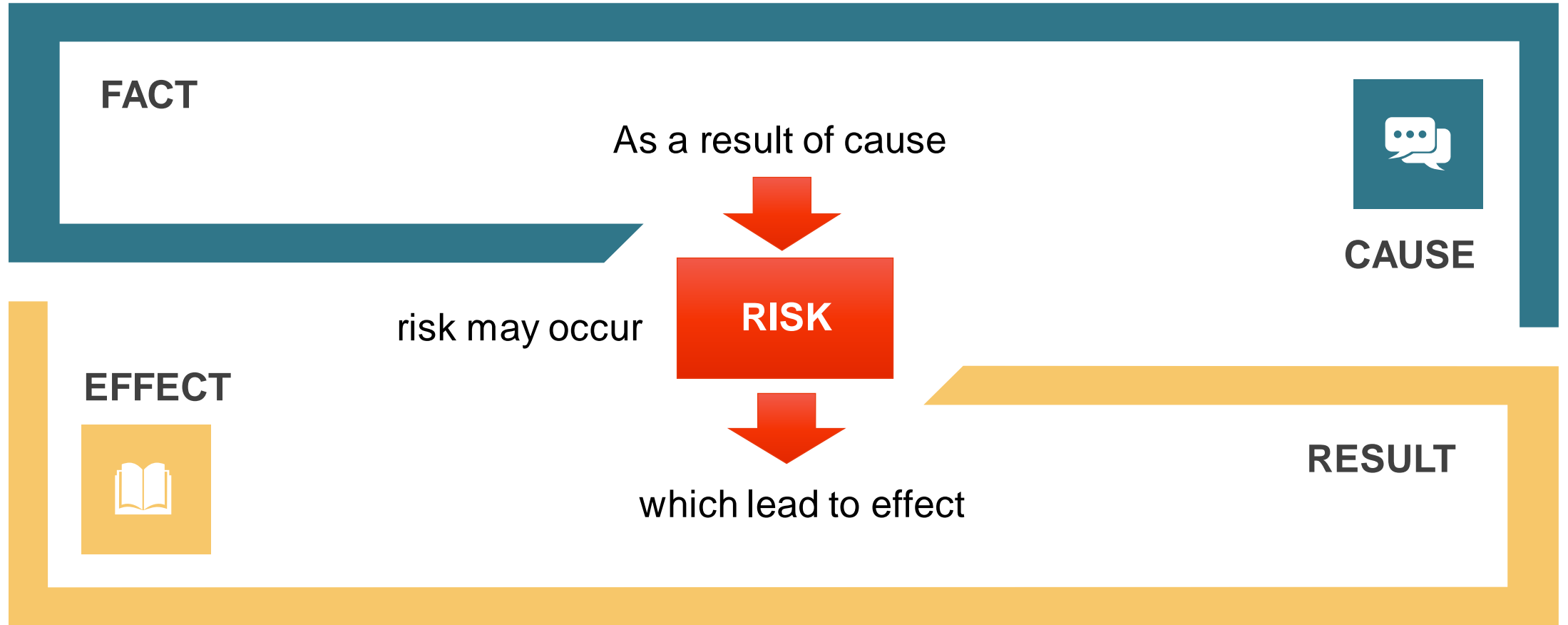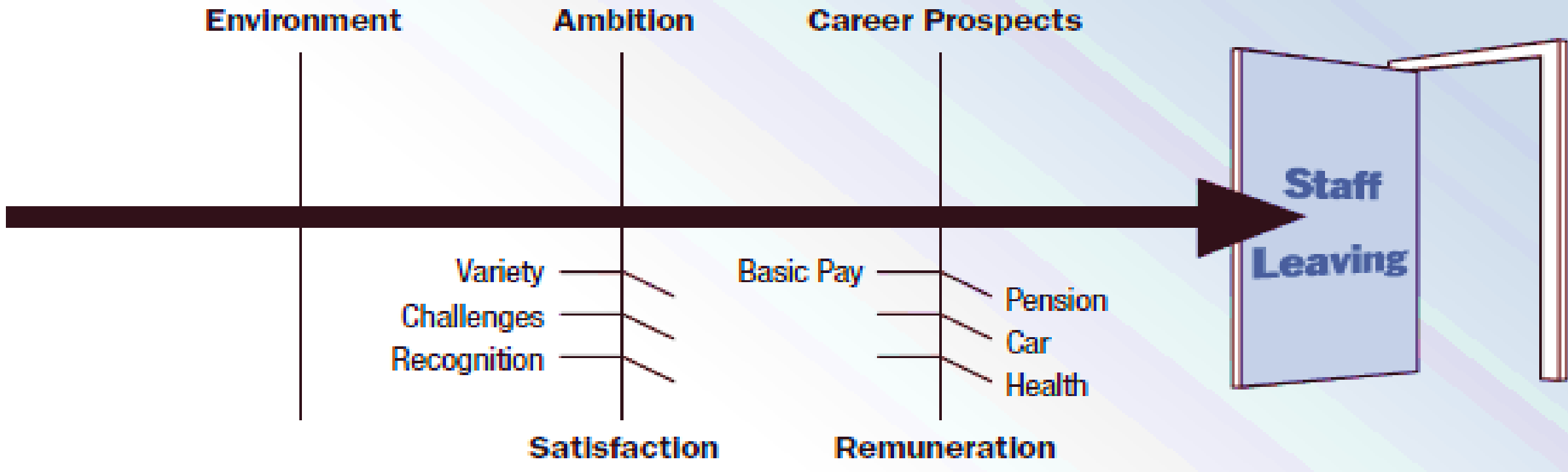
# Ishikawa Diagram
Example of a Cause and Effect

# ERM Identification Success Factors

★ ★ ★

Early identification

Iterative identification

Emergent identification

Comprehensive identification

# ERM Identification Tool

★ ★ ★

Socio-cultural

Political

Economic

Competitive

**SPECTRUM**

Prompt List

Technology

Regulatory/legal

Uncertainty

Market

# ERM Identification Tool

★ ★ ★

## Financial Risks

Pricing risk, Asset risk, Currency risk, Liquidity risk.

## Strategic Risks

Competition, Social trend, Capital availability.

## Hazard Risks

Liability torts, Property damage, Natural catastrophe

## Operational Risks

Customer satisfaction, Product failure, Integrity, Reputational risk; Knowledge drain.

# 03 Analyze **Enterprise Risk**

# **ERM** Criteria

★ ★ ★
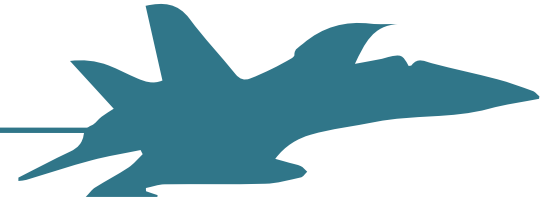


| Category | Severe (5) | Major (4) | Moderate (3) | Minor (2) | Insignificant (1) |
|---|---|---|---|---|---|
| Financial | Decrease in revenue by >20%; incurring costs >20% of revenue | Decrease in revenue by 11-20%; incurring costs 11-20% of revenue | Decrease in revenue by 1-10%; incurring costs 1-10% of revenue | Decrease in revenue by <1%; incurring costs up to 1% of revenue | No impact to revenue |

| | **Threats** | | | | | **Opportunities** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Very High 0.90 | 0.05 | 0.09 | 0.18 | 0.36 | 0.72 | 0.72 | 0.36 | 0.18 | 0.09 | 0.05 |
| High 0.70 | 0.04 | 0.07 | 0.14 | 0.28 | 0.56 | 0.56 | 0.28 | 0.14 | 0.07 | 0.04 |
| Medium 0.50 | 0.03 | 0.05 | 0.10 | 0.20 | 0.40 | 0.40 | 0.20 | 0.10 | 0.05 | 0.03 |
| Low 0.30 | 0.02 | 0.03 | 0.06 | 0.12 | 0.24 | 0.24 | 0.12 | 0.06 | 0.03 | 0.02 |
| Very Low 0.10 | 0.01 | 0.01 | 0.02 | 0.04 | 0.08 | 0.08 | 0.04 | 0.02 | 0.01 | 0.01 |
| | Very Low 0.05 | Low 0.10 | Moderate 0.20 | High 0.40 | Very High 0.80 | Very High 0.80 | High 0.40 | Moderate 0.20 | Low 0.10 | Very Low 0.05 |

**Probability** (left axis) / **Probability** (right axis: Very High 0.90, High 0.70, Medium 0.50, Low 0.30, Very Low 0.10)

**Negative Impact** | **Positive Impact**

# Heat Map
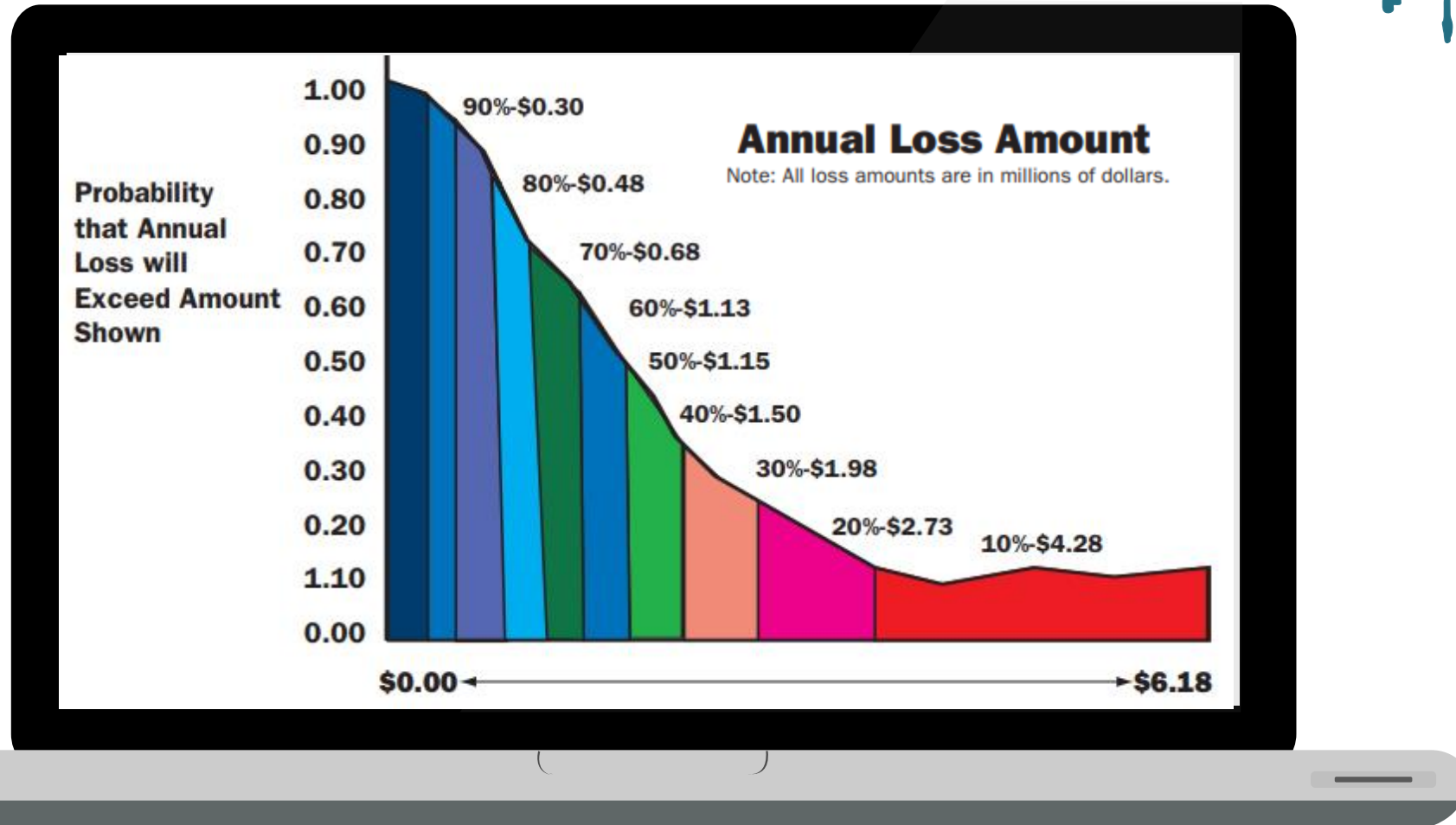Exposure = Impact × Probability

**60%**  **40%**
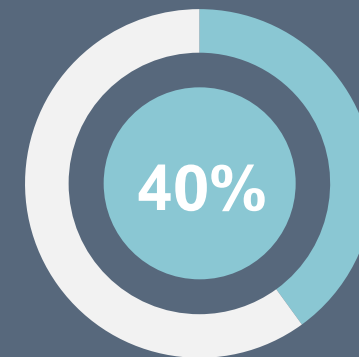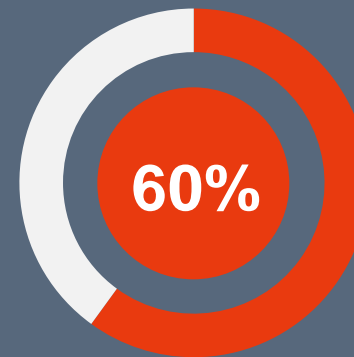
# ER Prioritization

**Proximity.** The period of time before the risk might have an impact on one or more project objectives. A short period indicates high proximity.

**Detectability.** The ease with which the results of the risk occurring, or being about to occur, can be detected and recognized. Where the risk can be detected easily, detectability is high.
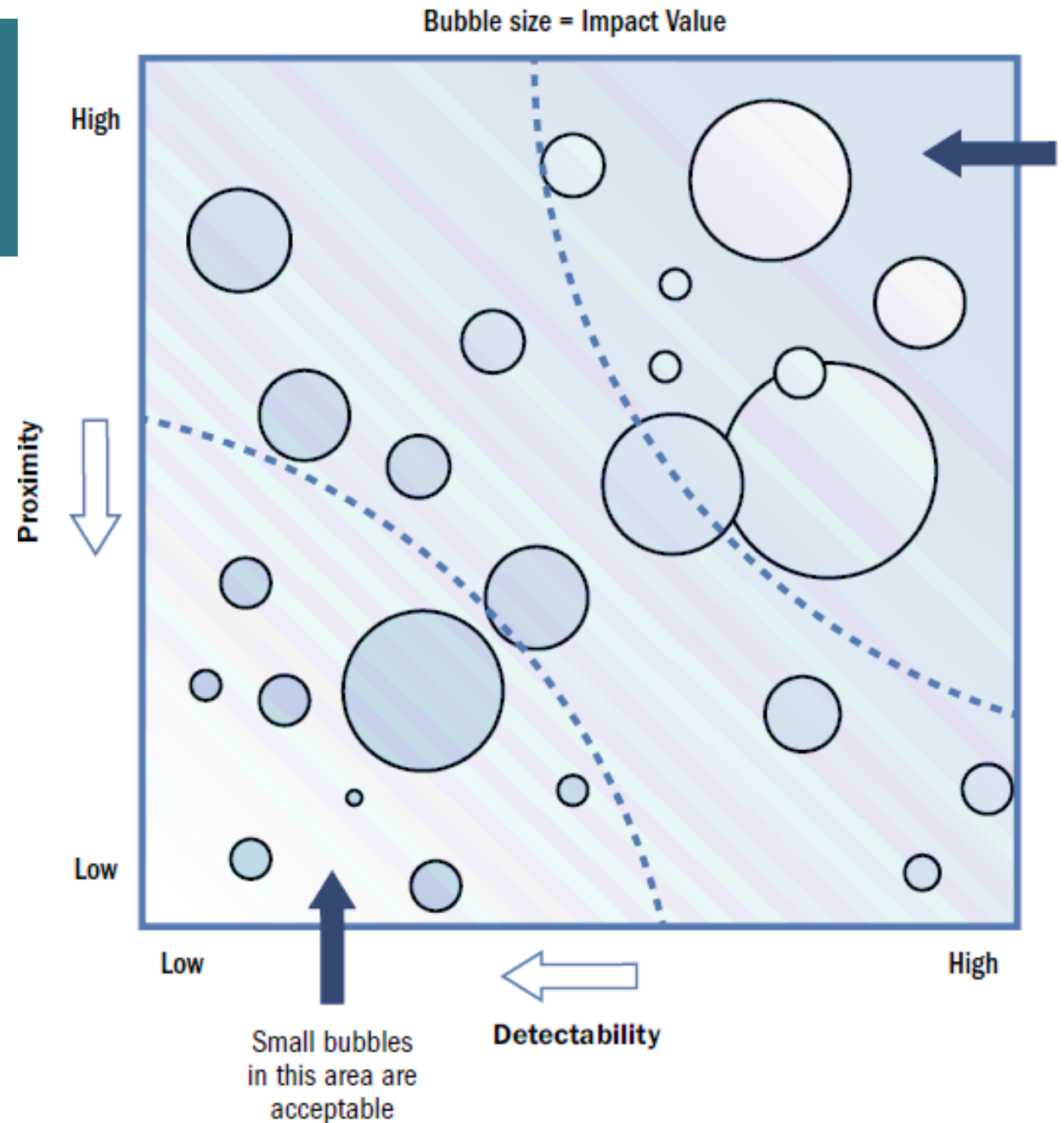
Bubble size = Impact Value

Proximity

High

Low

Low

Detectability

High

Small bubbles in this area are acceptable

# ER Forecasting



**Annual Loss Amount**
Note: All loss amounts are in millions of dollars.

Probability that Annual Loss will Exceed Amount Shown

- 90%-$0.30
- 80%-$0.48
- 70%-$0.68
- 60%-$1.13
- 50%-$1.15
- 40%-$1.50
- 30%-$1.98
- 20%-$2.73
- 10%-$4.28

$0.00 ← → $6.18

# 04 Respond **Enterprise Risk**

"

The point of ERM is not to create more bureaucracy, but to facilitate discussion on what the really big risks are.

Thomas Stanton (Feb 18, 2017). "Enterprise Risk Management".

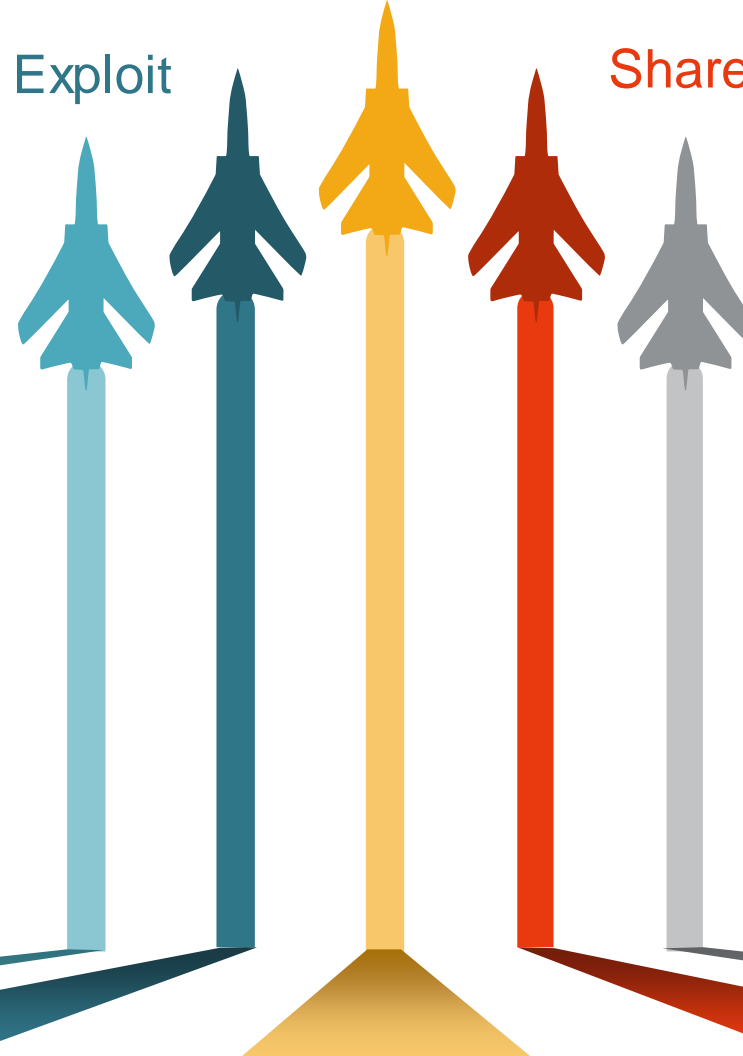# ERM Strategies (Threats)

★ ★ ★

Mitigate

Avoid

Escalate

Transfer

Accept
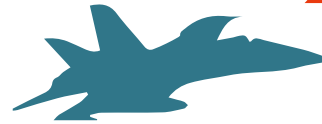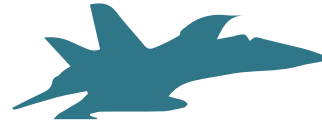
# ERM Strategies (Opportunities)

Escalate

Exploit

Share

Enhance

Accept

# ER
# Response Tool

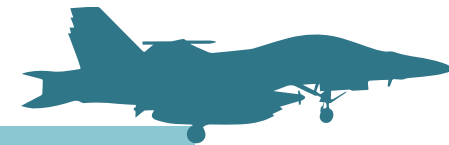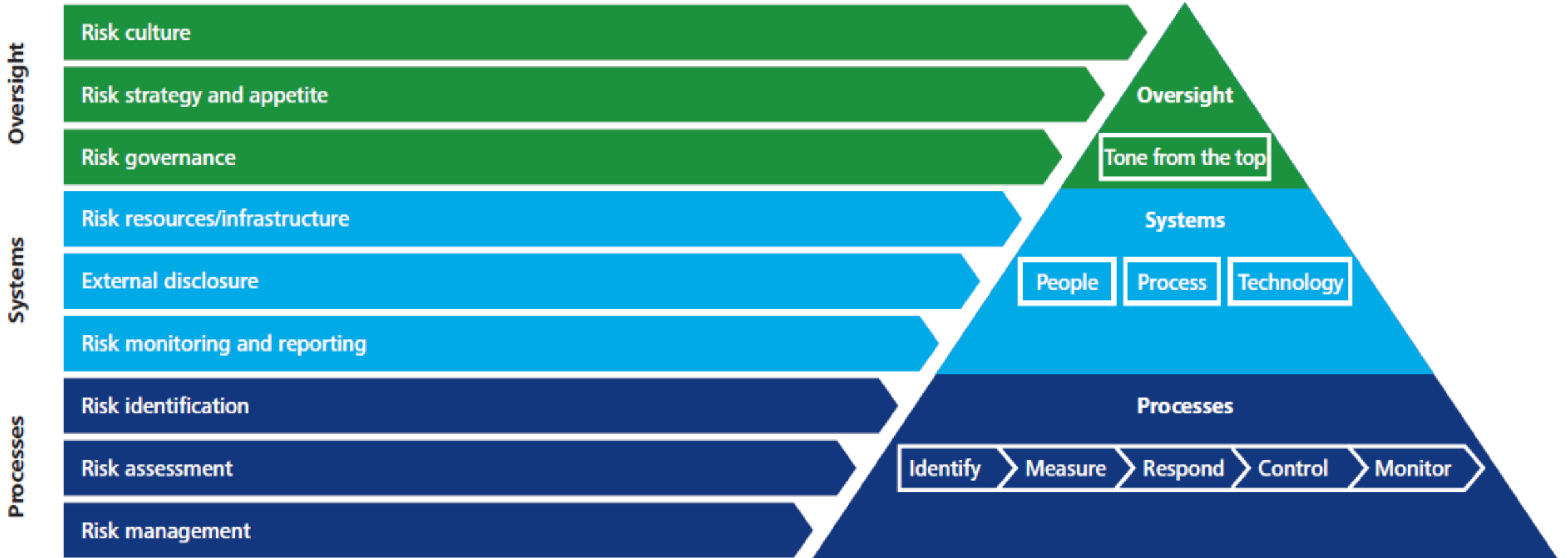**Force Field Analysis**

Balance of Forces for and against Change



**Forces for Change**

| | |
|---|---|
| 4 | Customers want new products |
| 2 | Improve speed of production |
| 3 | Raise volumes output |
| 1 | Control rising maintenance costs |

**Plan**
Upgrade factory with new manufacturing equipment

★ ★ ★

**Forces against Change**

| | |
|---|---|
| Loss of staff overtime | 3 |
| Staff frightened of new technology | 3 |
| Environmental impact of new technology | 1 |
| Cost | 3 |
| Disruption | 1 |

Total **10**

Total **11**

# 05 ERM Maturity Model

# ERM Model

★ ★ ★

# ERM Stakeholders

★ ★ ★

**Deloitte.**

| Risk Governance | Board of Directors (and the Audit Committee) | | | | Technology (all pervasive): |
|---|---|---|---|---|---|
| | • Foster a risk Intelligent culture<br>• Approve risk appetite<br>• Ratify key components of the Enterprise Risk Management (ERM) programme<br>• Discuss enterprise risks with executive management | | | | • Provide periodic/ real-time dashboards to oversee risks<br>• Make monitoring and reporting easier<br>• Support timely maintenance and pre-empt problems<br>• Facilitate risk escalations |
| Risk Infrastructure and Management | **Executive management:**<br>• Define the risk appetite<br>• Evaluate proposed strategies against risk appetite<br>• Provide timely risk-related information | **Enterprise risk group:**<br>• Aggregate risk information<br>• Identify and assess enterprise risks<br>• Monitor risks and risk response plans | **Internal Audit:**<br>• Provide assurance on effectiveness of the ERM programme, and the controls and risk response plans for significant risks | **Risk Management:**<br>• Create a common risk framework<br>• Provide direction on applying framework<br>• Implement and manage technology systems<br>• Provide guidance and training | |
| Risk Ownership | **Business units:**<br>• Take intelligent risks<br>• Identify and assess risks<br>• Respond to risks<br>• Monitor risks and report to enterprise risk group | | **Support functions:**<br>• Provide guidance/support to the enterprise risk group and business units | | |

# ERM Maturity Model

**Stakeholder value**

**Desired state**

**Interim state**

**Current state**

**Stages of ERM capability maturity**
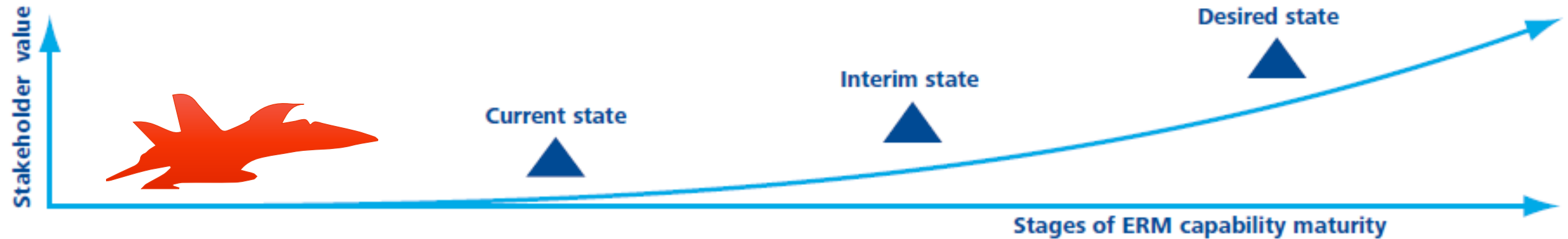
| Initial | Fragmented | Comprehensive | Integrated | Strategic |
|---|---|---|---|---|
| • Ad hoc/chaotic<br>• Enterprise takes minimal risks into consideration for determining the vulnerability to risks<br>• No formal procedures for risk assessment | • Risk is defined differently at different levels and in different parts of the organization<br>• Risk is managed in silos<br>• Limited focus on the linkage between risks<br>• Limited alignment of risk to strategies<br>• Disparate monitoring and reporting functions | • Risk universe is identified<br>• Common risk assessment/response approach developed and adopted<br>• Organization-wide risk assessment performed, action plans implemented in response to high priority risks<br>• Communication of top strategic risks to the senior management team | • Risk management activities coordinated across business areas<br>• Risk analysis tools developed and communicated<br>• Enterprise risk monitoring, measuring, and reporting<br>• Scenario planning<br>• Opportunity risks identified and exploited<br>• On-going risk assessment processes | • Risk discussion is embedded in strategic planning, capital/resource allocation, product development, vendor selection, etc.<br>• Early warning system to notify the risks above established threshold to board and management<br>• Linkage to performance measures and incentives<br>• Risk modeling |
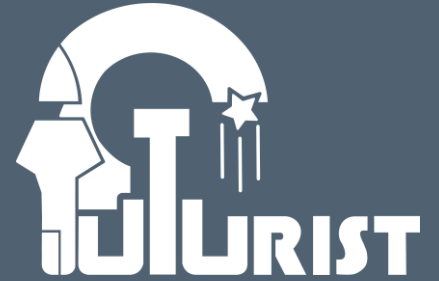
*Be Safe…*
*Manage the Risks…*
*Protect Your Business…*

Prof Akram Hassan SME@PMI
akramkram@yahoo.com  +201014356420