

# SCRM--Supply Chain Risk Management: *“Fundamentals & Taxonomies”*



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# SCRM Taxonomies Agenda....

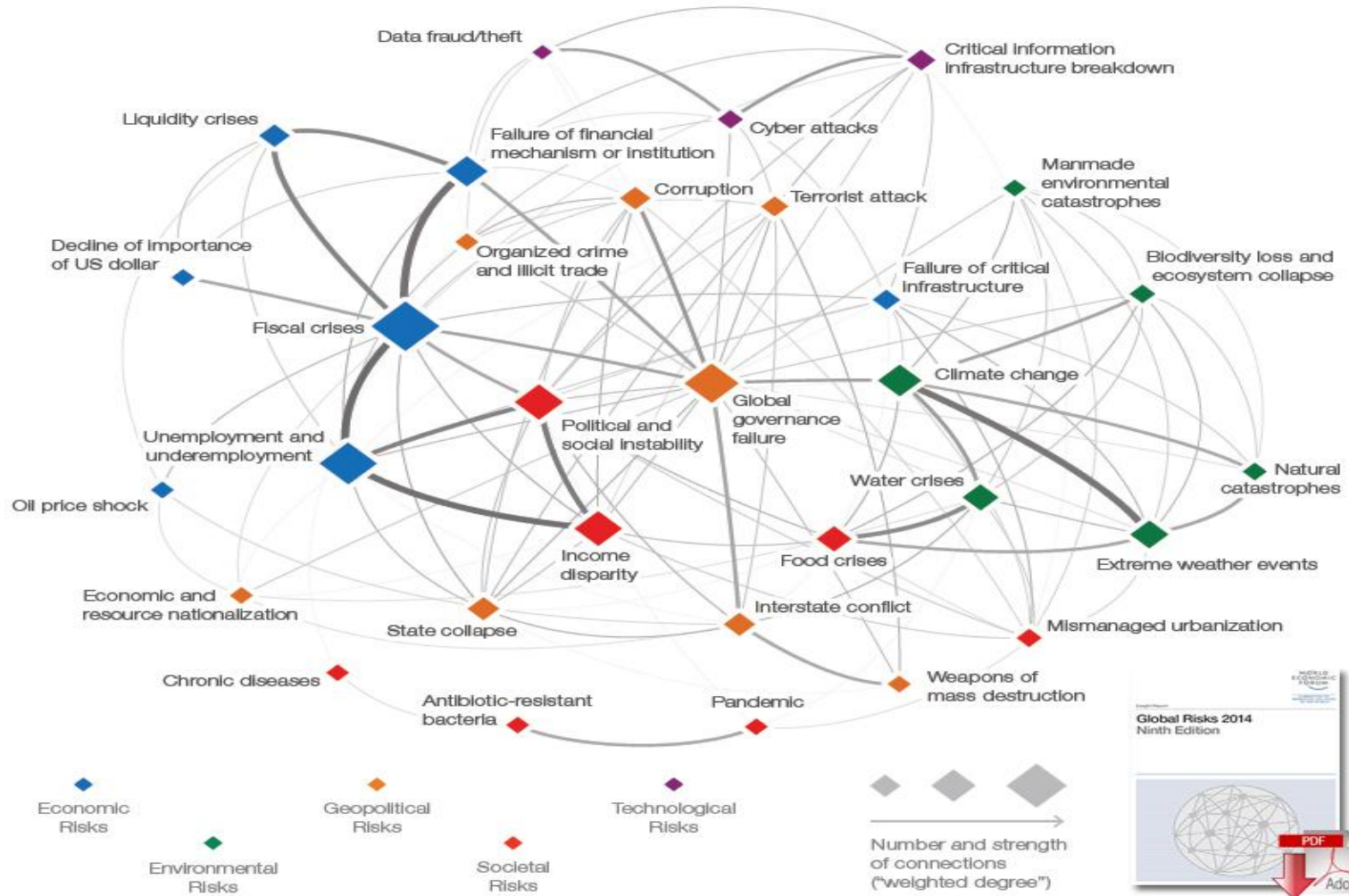
- Our View of Supply Chain Risk Management
- What is a Taxonomy
- The Devastating Impacts of Supply Chain Disruptions
- New SCRM Frameworks
- Emerging Plans, Maturity Rates and Adoption

# SCRM--Supply Chain Risk Management: *“Our View of SCRM”*



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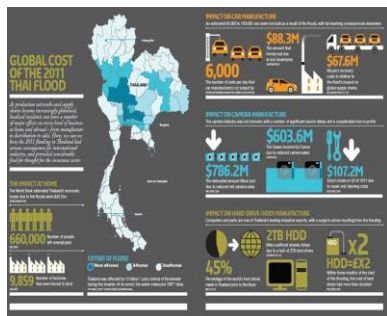
# World Economic Forum's View of Risk



# Supply Chain Risk Management....

- **Supply Chain Risk Management (SCRM)....** *“It is the implementation of strategies to manage every day and exceptional risks along the supply chain through continuous risk assessment with the objective of reducing vulnerability and ensuring continuity. One way to view SCRM is to think of it as the intersection of supply chain management and risk management.”* ----**Dr Robert Trent & Gregory L. Schlegel, Lehigh University**

Thailand Flood



## SCRM has been in the news!



Iceland

Stock Market

## BP Oil spill

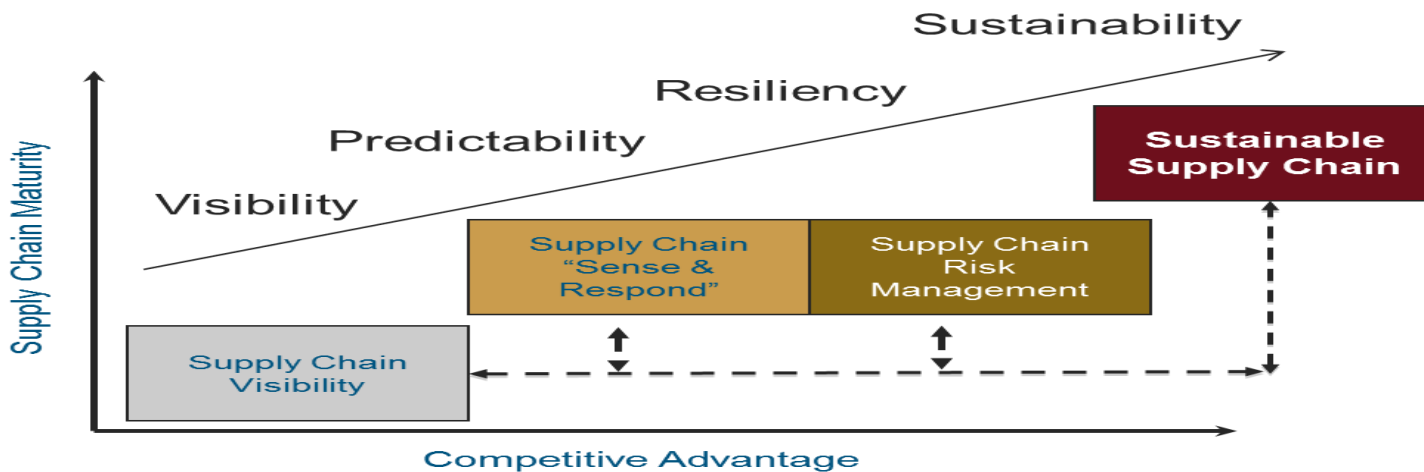


Sandy



# 21<sup>st</sup> Century Supply Chain Risk Model.....

*Identify, Assess, Mitigate & Manage Risk*



**As your Supply Chain Maturity Grows-----**

*Your Supply Chain Inherent Risks Decrease*



**SUPPLY CHAIN RISK MANAGEMENT**  
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# Emerging Elements of SCRM....

*What we are teaching at Lehigh, Villanova & APICS*

1. Risk Assessment & Tools
2. Uncertainty, Complexity & Risk
3. Risk Mitigation Strategies & Tactics
4. Fraud, Theft & Counterfeiting
5. Business Continuity Planning
6. Risk Mitigation Tools & Techniques
7. Organization Development & KRI's
8. Governance, Risk & Compliance
9. ERM, Enterprise Risk Management
10. 21<sup>st</sup> Century Supply Chain Maturity Model

## Tools: Supply Chain Risk Assessment

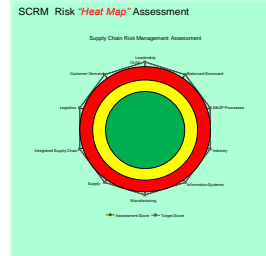
**Description**  
A structured assessment tool for each dimension of the supply chain network. It combines best practice standards and is also tailored to industry specifics.

### Typical Deployment

All elements of the organization are evaluated using a Risk Maturity Assessment Tool.

A comprehensive process checklist is developed during deployment phase covering all aspects of the organization's supply chain network. Each aspect is rated, based on Best-in-Class Risk Maturity Models and industry risk elements.

The workshop leader is responsible for planning and delivering the results for each attendee and discussing the assessment score.



## APICS' New SCRM CERTIFICATE



### Introducing the new APICS Risk Management certificate

APICS now offers a comprehensive, forward-looking program that will prepare you to lead risk management activities or participate in the development of global risk mitigation strategy. The APICS Risk Management certificate validates that you have received 12 educational contact hours in core and elective risk management topics.

Obtain the hours necessary to earn the certificate by attending the Risk Management learning path at the 2012 APICS International Conference & Expo (5 hours) and participating in one of the following to complete the remaining 7 hours:

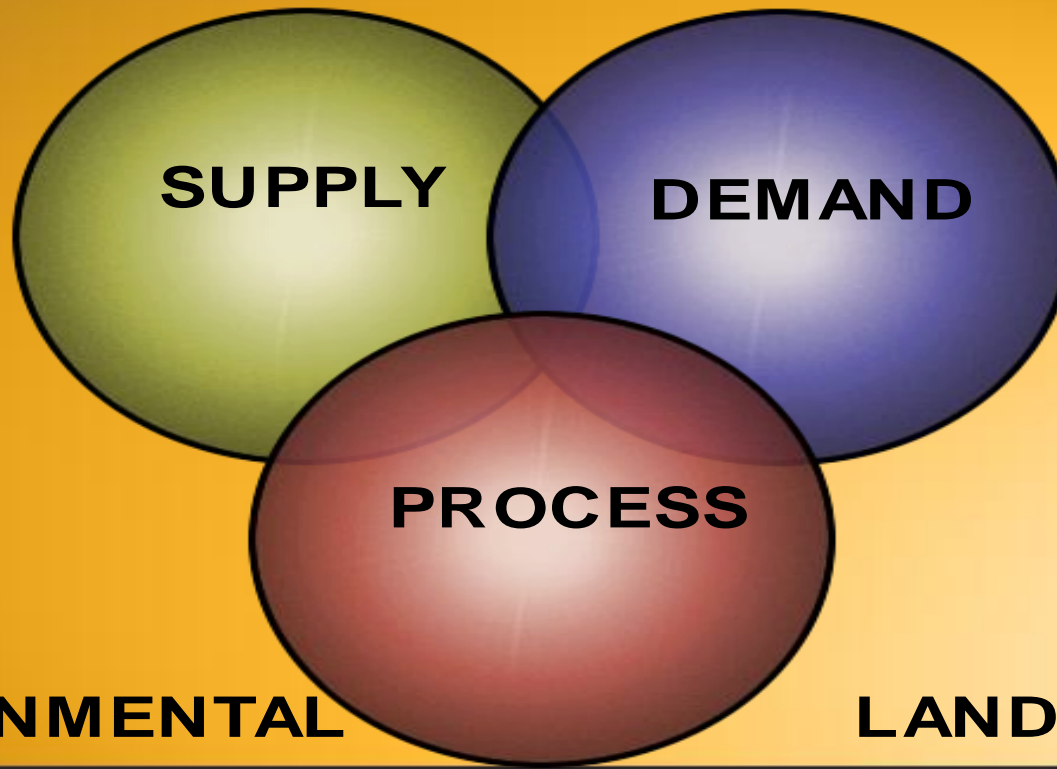
- a combination of risk sessions at future educational events including the APICS International Conference & Expo, APICS Supply Chain Asia Conference, or Best of the Best SBCP Conference
- APICS Risk Management Seminar (7 hours)
- pre-approved risk management education sessions at partner events.



SherTrack



# The Four Spheres of Supply Chain Risk





Series on Resource Management

# Supply Chain Risk Management

An Emerging Discipline

Gregory L. Schlegel  
Robert J. Trent

 CRC Press  
Taylor & Francis Group

**SUPPLY CHAIN RISK MANAGEMENT**  
CONSORTIUM™

# SCRM--Supply Chain Risk Management: *“What is a Taxonomy”*



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# RISK TAXONOMY: A Definition...

- **Taxonomy** is the practice and science of naming, classifying and defining relationships between resources, risks, goals and business processes in the enterprise.
- Without a risk taxonomy you can't compare different types of risks across the enterprise. Without it there's no common set of standards or way to manage relationships between different data types.
- Without a taxonomy, every department and level would potentially speak a different language!

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# Risk Management Terms

- *Risk* – Identification, management and mitigation of adverse events that could potentially impact a decision or organization
- *Risk acceptance* – A decision to continue with a course of action even though risk is present
- *Risk analysis* – A review of the uncertainty associated with the research, development, and production of a product, service, or project
- *Risk appetite* – The degree to which a company *chooses to engage* in activities that increasingly involve it in the possibility of an adverse outcome

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# Risk Management Terms (cont'd)

- *Compliance* – Meeting the required or mandated regulations, whether they be governmental, industry-specific or internally imposed
- *Decisions under risk* – Decision problems in which the analyst elects to consider several possible futures, the probabilities of which can be estimated
- *Governance* – The frameworks and tools, such as policies, procedures, controls, and decision-making hierarchy, employed to manage the business
- *Resilience* – The ability of a company to recover from disruptions of any type

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# Risk Management Terms (cont.)

- *Risk aversion* – The degree to which a company *will not engage* in activities that increasingly involve the possibility of an adverse outcome
- *Risk avoidance* – Changing a plan to eliminate a risk or to protect plan objectives from its impact
- *Risk register* – A report that contains all identified risks and associated details
- *Risk response plan* – Defines known risks including description, cause, likelihood, costs, and proposed responses. It also identifies current status on each risk

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## Risk Management Terms (cont.)

- *Supply chain risk* – Decisions and activities that have outcomes that could negatively affect information or goods within a supply chain
- *Vulnerability* – The potential impact on a company presented by the combination of the likelihood of a disruptive event and its potential severity

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# SCRM--Supply Chain Risk Management: *“The Devastating Impacts of SC Disruptions”*

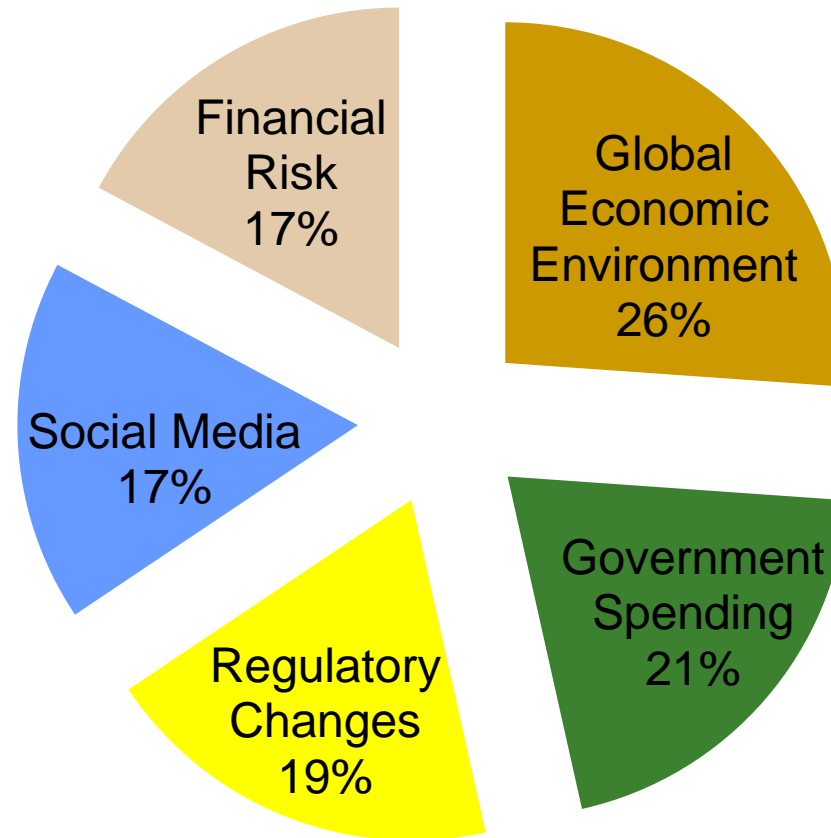


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# Where Are the Risks?



Deloitte 2012

# Why are These Risks Occurring?

Low cost country sourcing

Risks due to long lead times, exposure to political, security, regulatory and currency.

Outsourcing

Risks due to limits to supply chain visibility and coordination.

Lean and just-in-time

Risks due to stock outs, and disruptions due to supply and delivery glitches.

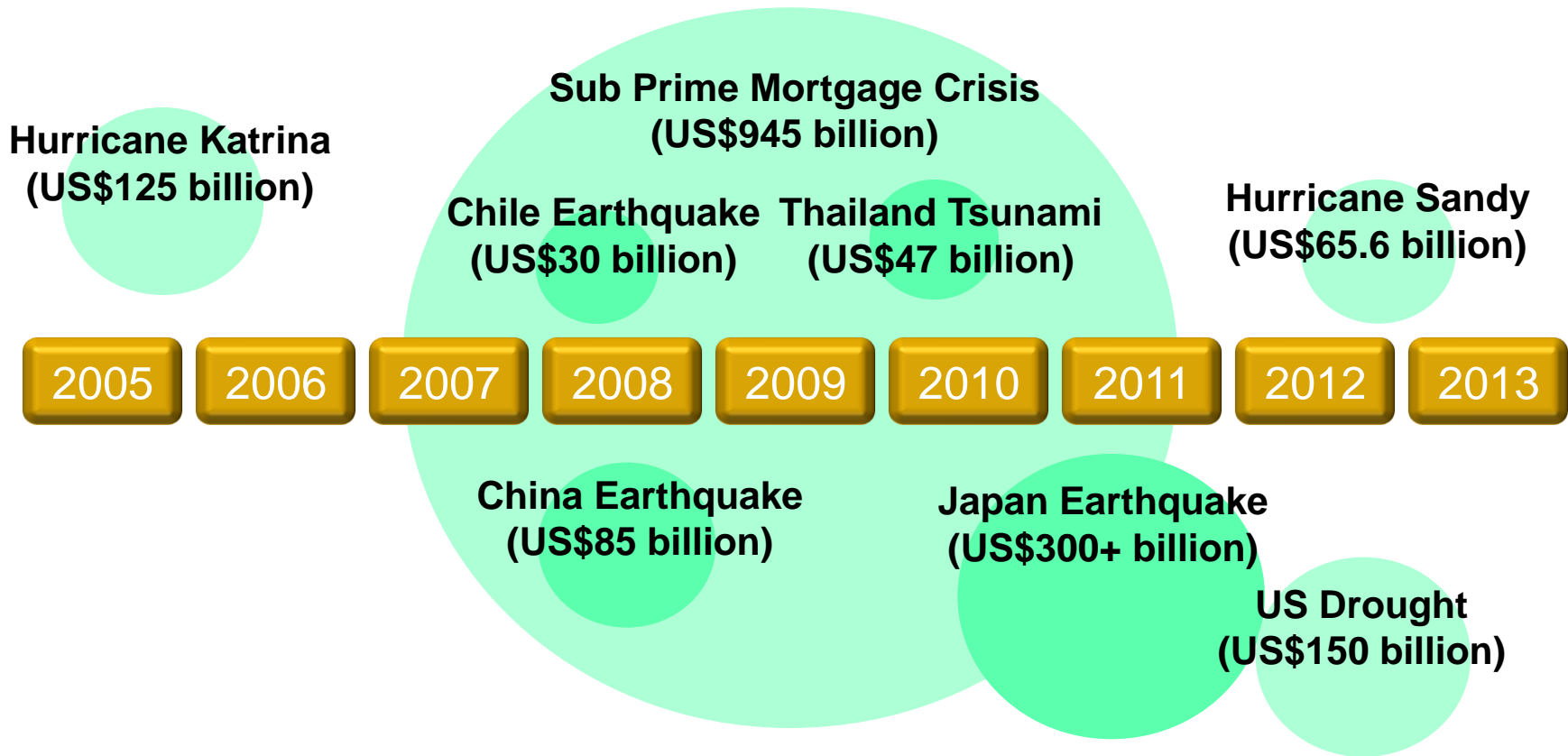
Supply base rationalization

Risks due to narrowing of the supplier base to a single supplier.

“Siloed” business processes

Risks due to internal conflicts, cross-purpose objectives and lack of communication.

# Tale of Global Disruptions



Reference: The Smart Cube

# WHY we feel SCRM is Important.....

- Based on a sample of 885 disruptions announced by publicly traded firms, companies on average experience...
  - **A 107 percent drop in their Operating Income**
  - **A 114 percent drop in Return on Sales**
  - **A 93 percent drop in Return on Assets**
  - **6.92 percent lower Sales Growth**
  - **10.66 percent growth in Cost and 13.88 percent growth in Inventories**
- Another study of 1,000 companies' supply chain glitches determined their subsequent **impacts to be about 10 percent reduction in shareholder value!**
- Deloitte 2012 Disruption Study.....
  - **Over 200 current & emergent risks impacting supply chains**
  - **85% of global supply chains have experienced at least one disruption in last 12 months**

Hendrick & Singhai– “The Effect of Supply Chain Disruptions on Long-Term Volatility”  
ChainLink Research– “Shareholder Value, Profitability and Share Price”

Deloitte Consulting LLP—“Visualizing Risk”, Logistics Magazine, 2012”

# SCRM--Supply Chain Risk Management: *“New SCRM Frameworks”*

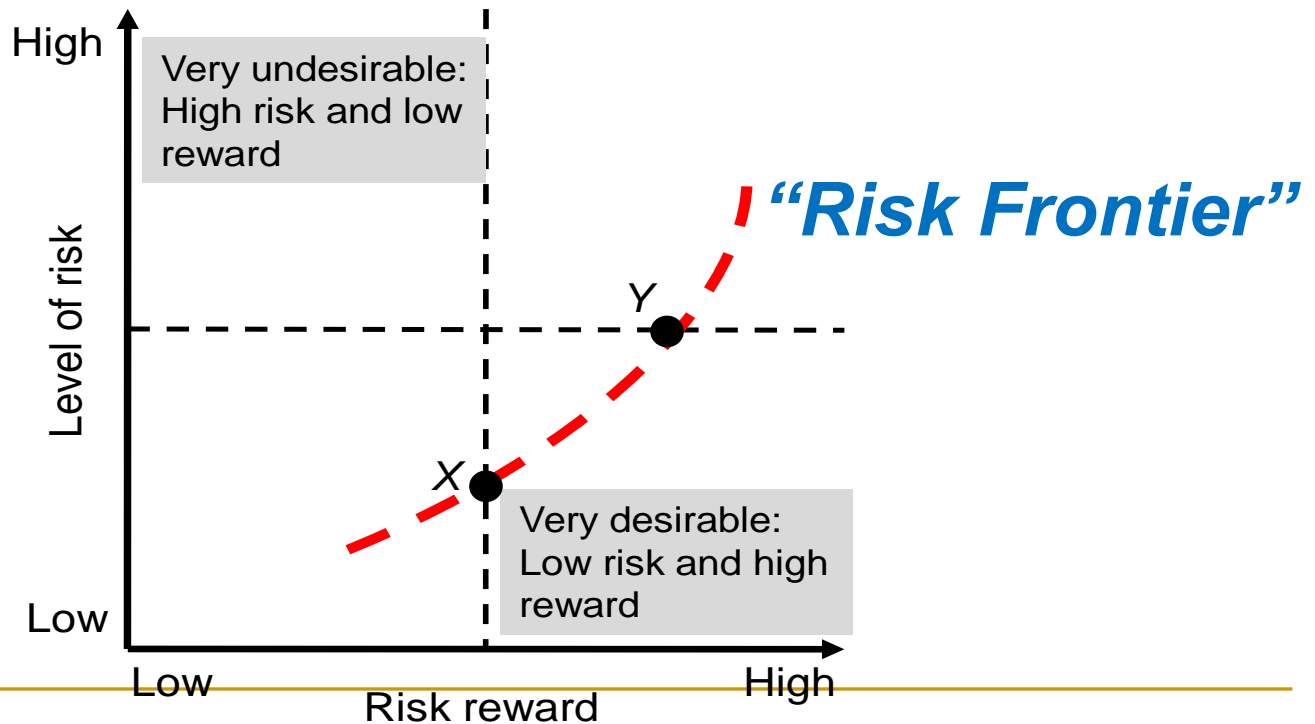


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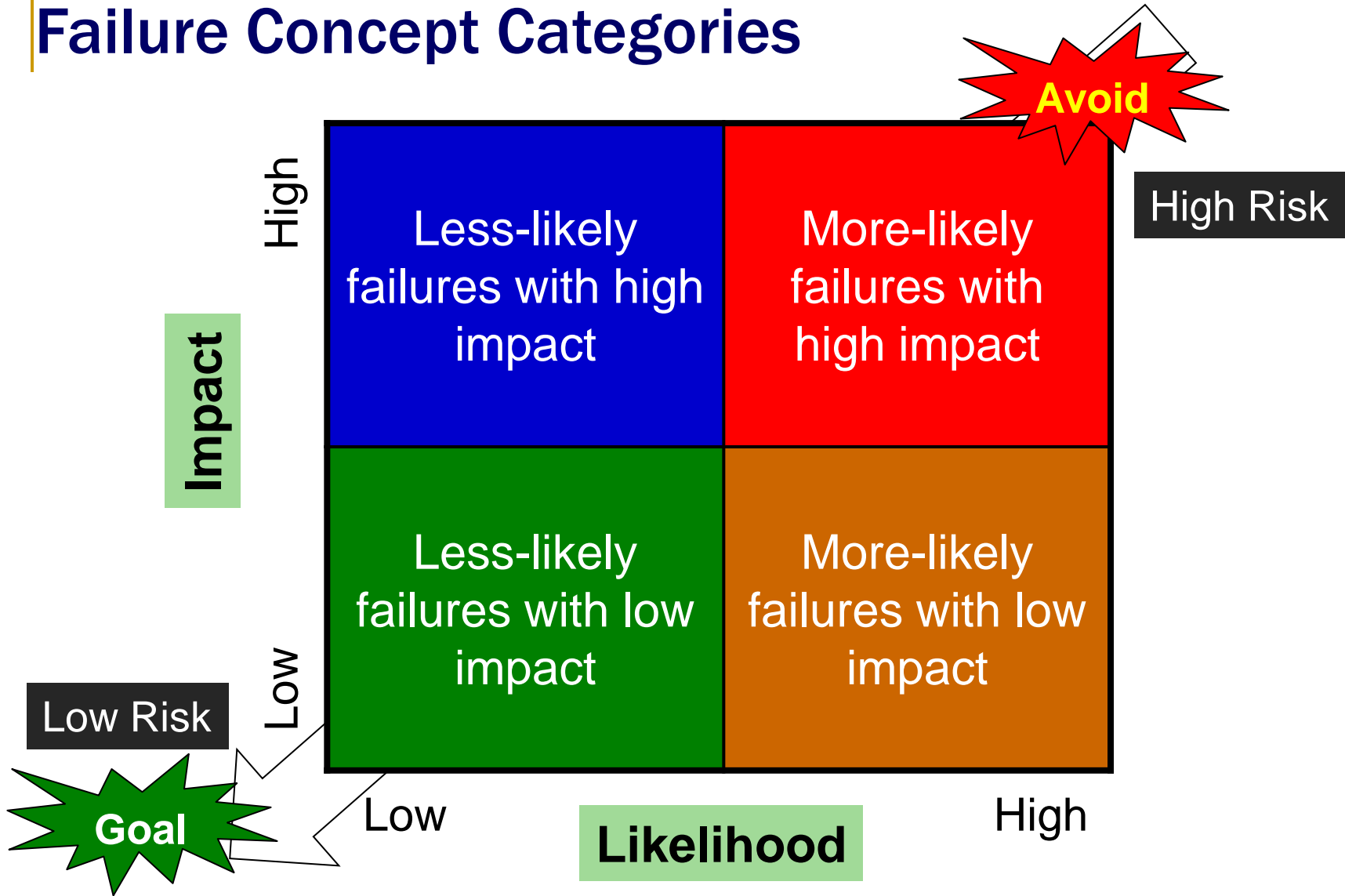
# Basic Concept of Risk Management

- Risk stems from uncertainty or lack of full and timely information

- Risk must be evaluated relative to its potential cost exposure and the likelihood of occurrence



# Failure Concept Categories



Source: *Operations and Process Management*, Slack et al., 2nd ed., 2009; reprinted by permission of Pearson Education

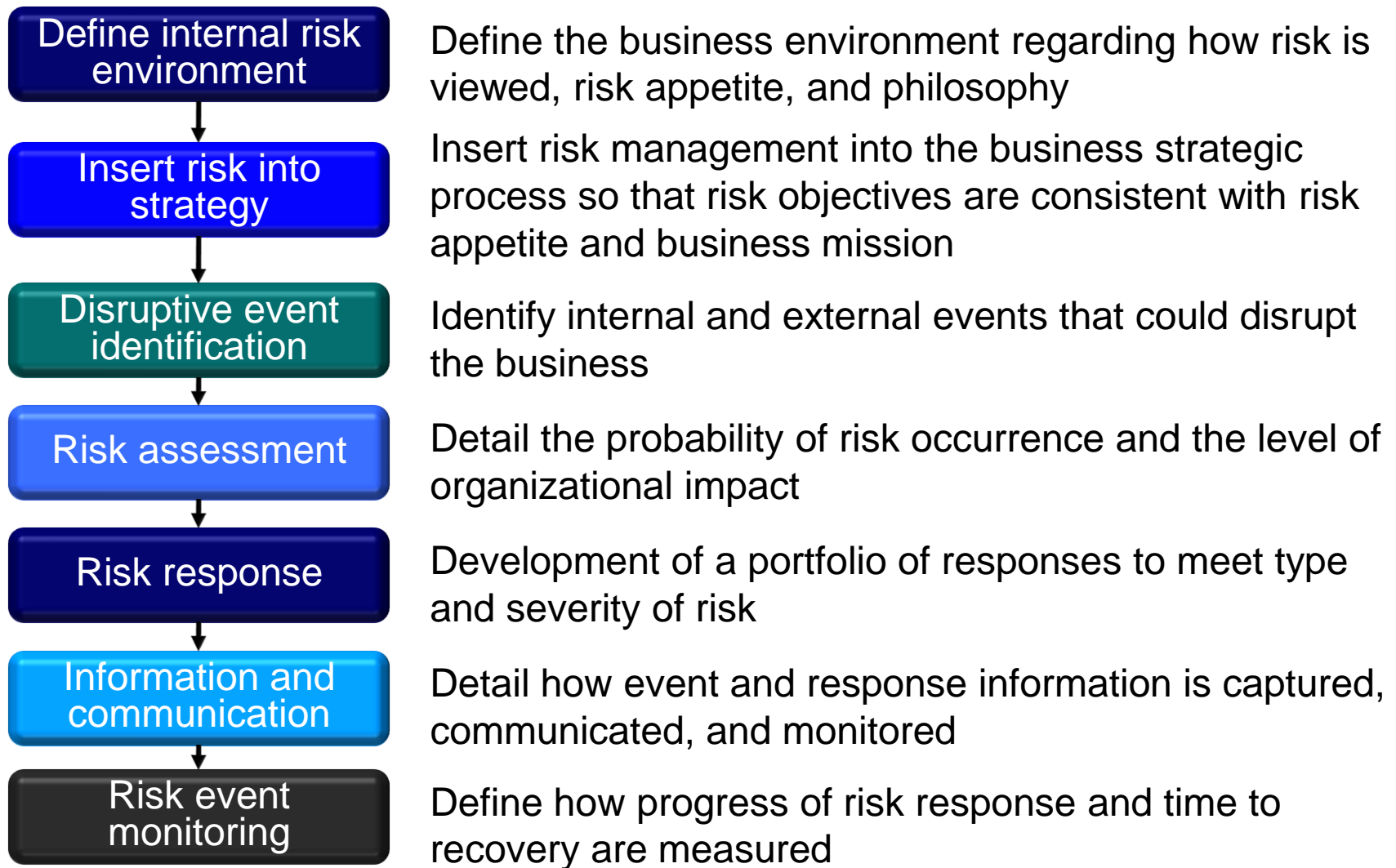
# Enterprise Risk Management (ERM).....

Aberdeen *Group*

- *“A process for effective identification, assessment, and management of all significant risks to an entity.*
- *This includes not only the traditional areas of **financial** and **hazard** risk, but also larger **operational** and **strategic** risk. ERM refers to the people, tools, systems and structures that are part of a broader framework of **Governance, Risk and Compliance. (GRC)**”*



# Basic ERM Model



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# ERM: What Types of Risk?

- Hazard risk
  - liability torts, property damage, natural disasters
- Financial risk
  - pricing risk, asset risk, currency risk, liquidity risk
- Operational risk
  - customer satisfaction, product failure, integrity and reputational risk
- Strategic risk
  - competition, social trends, and capital availability

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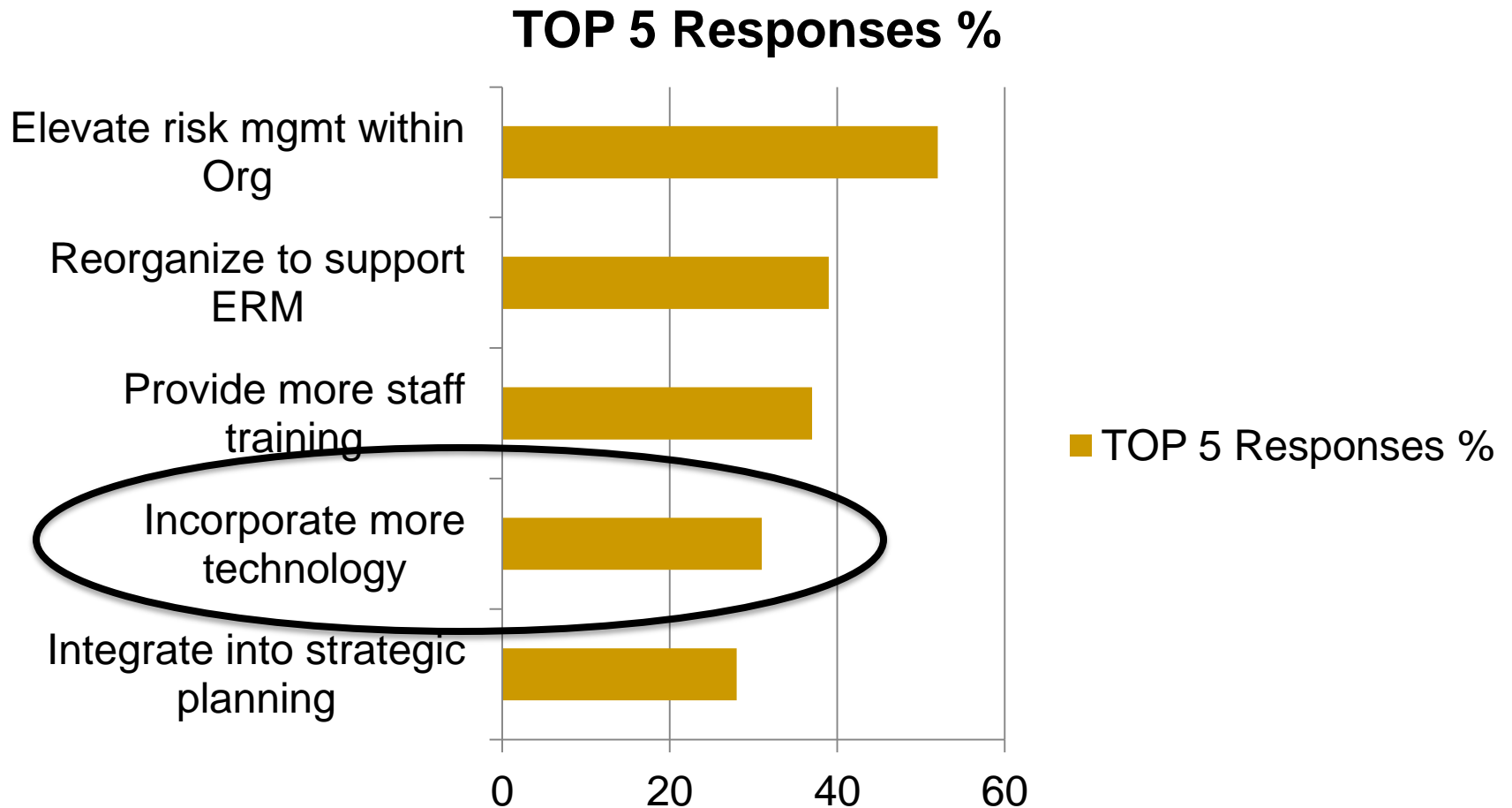
# SCRM--Supply Chain Risk Management: *“Emerging Plans, Maturity Rates & Adoption”*



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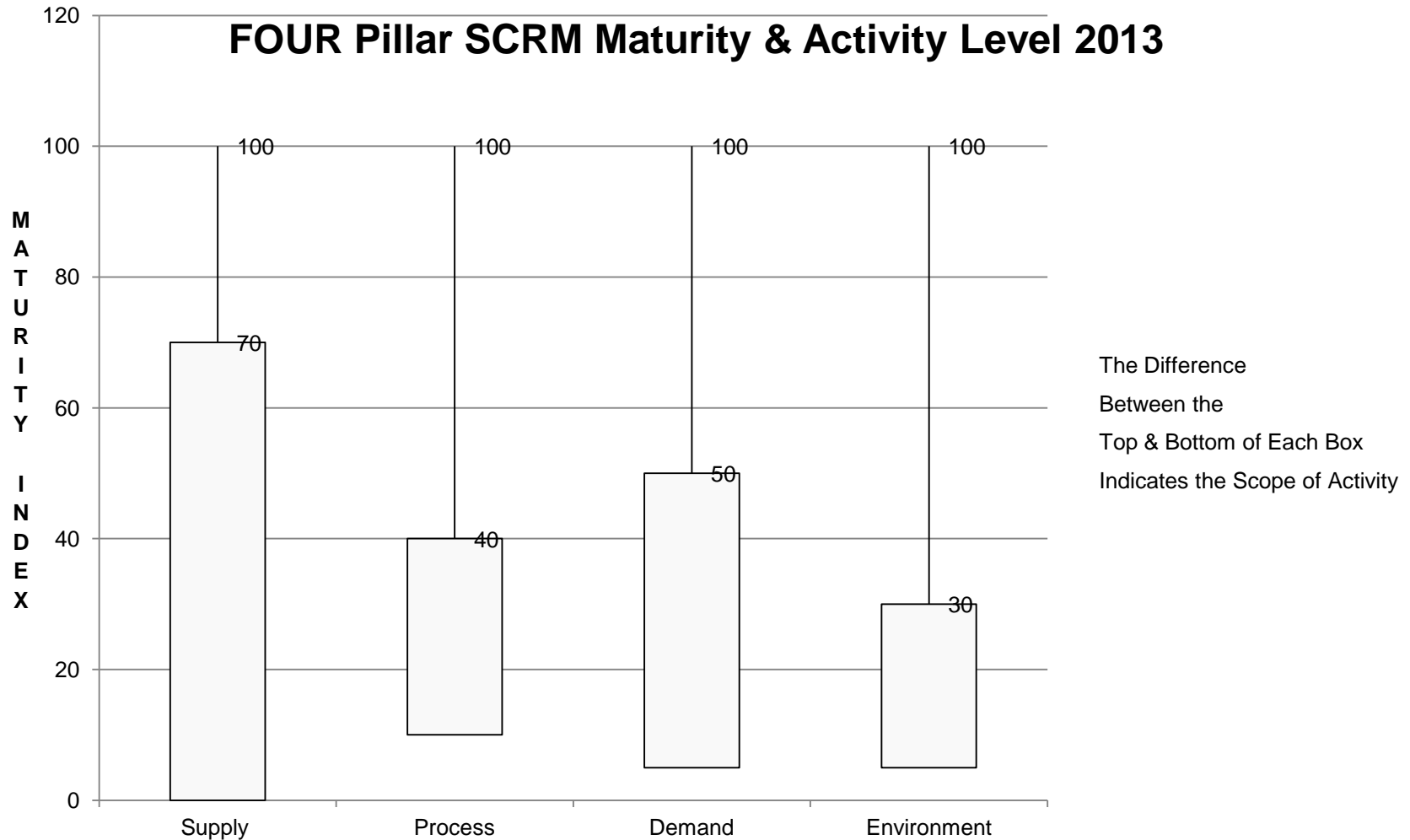
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# What are the Plans to Manage Risk



Deloitte 2012

# SCRM Spheres/Pillars Maturity



# SCRM Adoption Curve

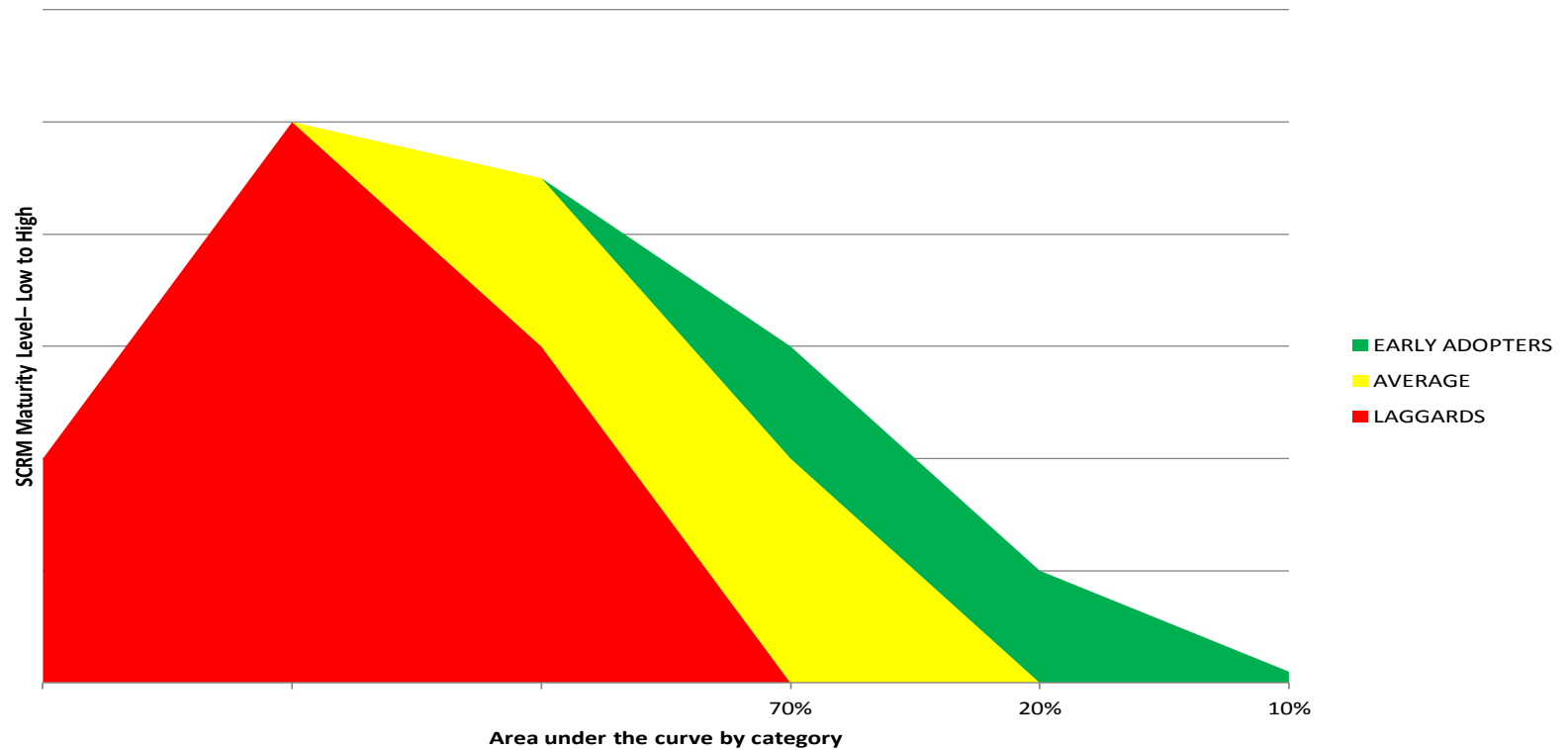
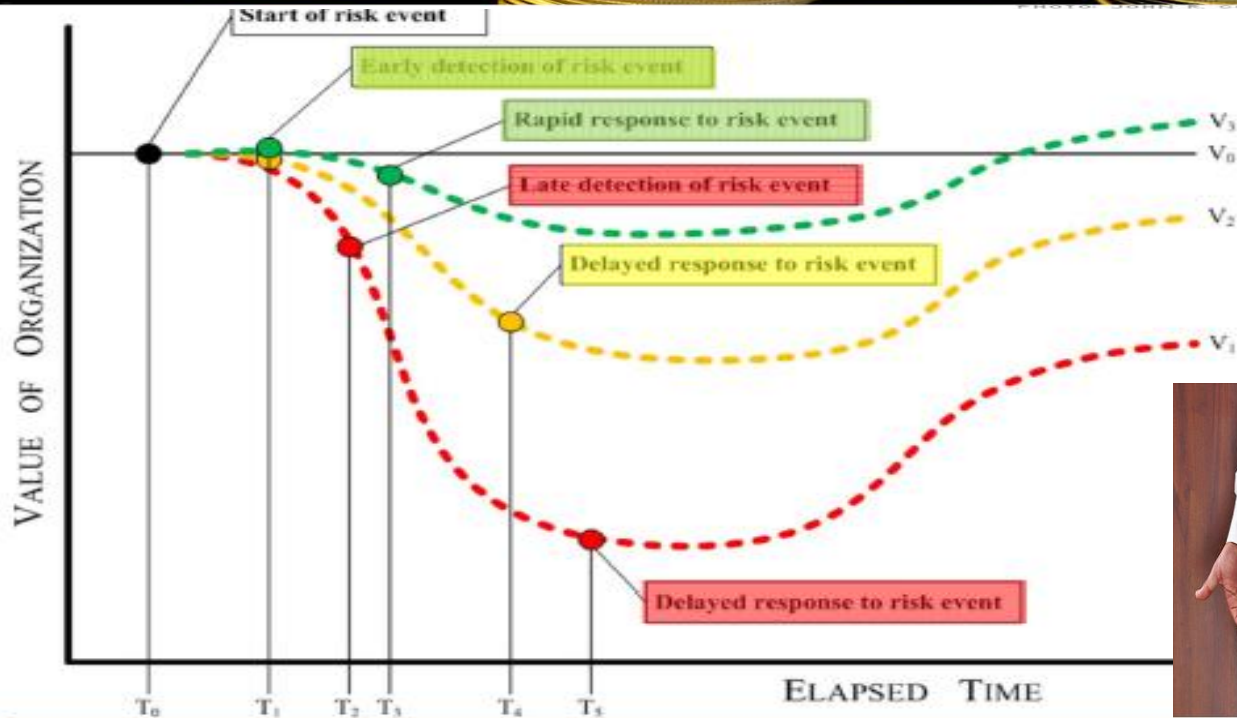


Figure 2.4  
SCRM Adoption Curve

# The SCRM “Holy Grail”



- 1) Reduce time & duration of the event
- 2) Reduce severity & slope of the event
- 3) Accelerate the T-t-R, Time to Recovery

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