

# MARSH

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## Managing Global Supply Chain Risk

Financial Executives International Canada



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Marsh & McLennan Companies



## Discussion Points

- Supply chain – risk issues and current problems
- Supply chain risk management research results
- Risk management and control strategies

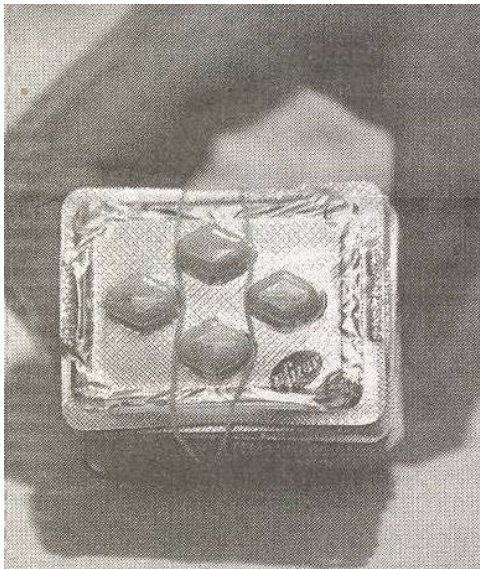
# Supply Chain Risk

*“Just-in-time can become “just-too-late” if something goes wrong and there is no alternative built into the supply chain “*





Source:  
New York Times June 5, 2007



Source  
Globe and Mail Nov 15, 2006

GLOBE Nov 15

III MANUFACTURING

## German sting nets huge haul of running shoe knockoffs

German customs officers have seized what they said could be the world's largest haul of counterfeit goods, including nearly one million pairs of knockoff Nike Inc. sneakers.

The customs department in the northern port of Hamburg said it had confiscated a total of 117 shipping containers filled with fake goods since the end of August.

The equivalent amount of genuine branded goods would be worth about €393 million (\$558-million), it said in a statement.

The goods included 101 containers loaded with 945,384 pairs of counterfeit sneakers from Nike, and 10 more containers with about 105,000 pairs of fake adidas AG and Puma AG sports shoes. Also impounded were 76,760 knockoff watches and 1,454 toys.

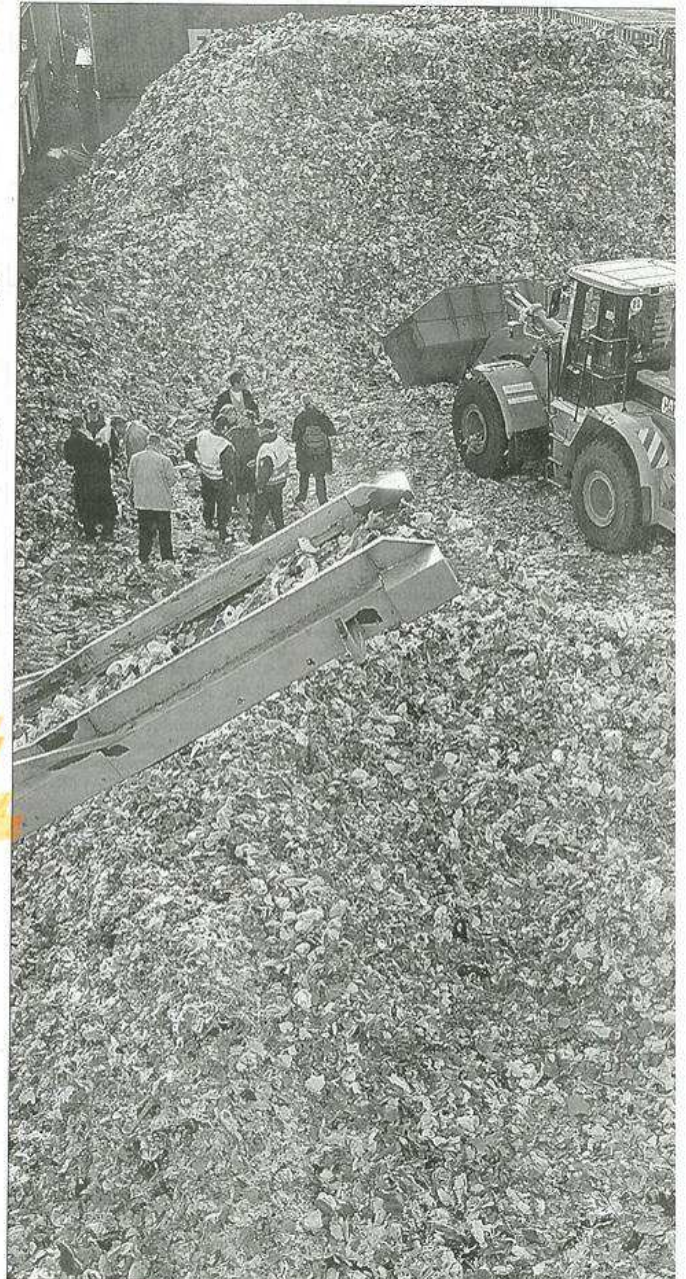
The goods were shipped to Hamburg from Asia and were destined for recipients at addresses — some of them fictitious — in Italy, Austria and Hungary.

The customs department said it was up to brand holders such as Nike to take further legal steps against the suspected smugglers.

Contractors have begun shredding the estimated 1,500 tonnes of shoes and textiles and trucking the waste to incineration facilities for disposal.

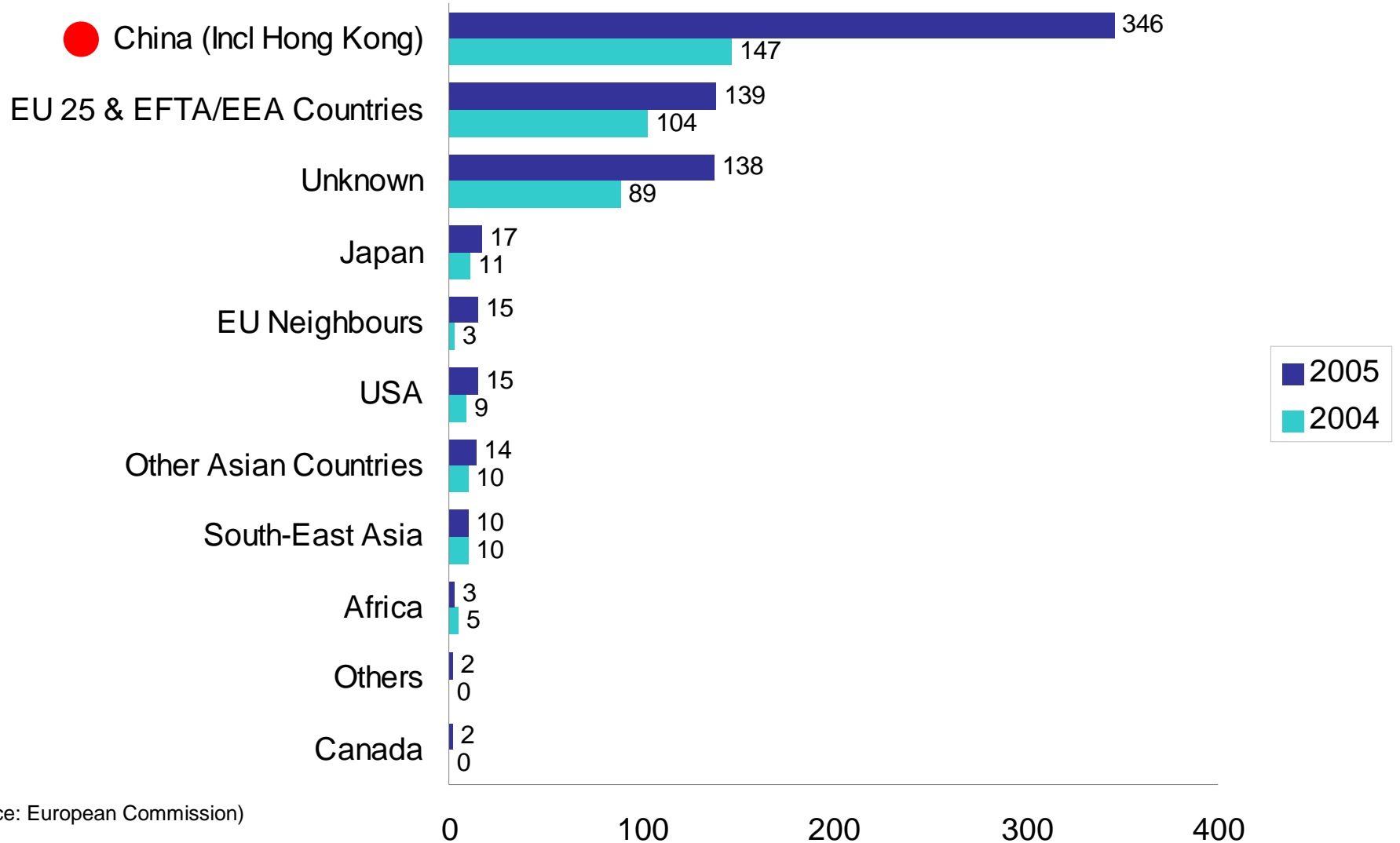
Forty-three of the containers were seized in September as part of a co-ordinated sweep on counterfeit smugglers in 15 of Europe's major ports.

"Based on the overall value and the number of counterfeit items seized in the 117 containers, this could be the largest counterfeit seizure worldwide," the statement said. AP



CHRISTIAN G  
Customs officials and journalists watch the shredding of more than one million shoes

# Over 50% of the risk notifications (RAPEX) were related to product from China - increased 135% in 2005



(Source: European Commission)

## Could this happen to your shipments?

Contraband mingled in a trailer for electronic products. 670 packages weighing 11,000 pounds of marijuana

### Factors:

- Driver admitted knowledge
- ID was not checked by the shipper since Security knew him
- Trailer went missing for 9 hours
- **Seal found intact!**





Mattel

- **Company:** Mattel Inc., the largest U.S. toy company
- **Products:** Recalls involve 21 million Chinese-made, magnetic toys globally (China makes 65% of Mattel's product lines).
- **Reason for Recall:** hazards from small, powerful magnets and lead paint
- **Implications:** Unhappy shareholders - Mattel stock has fallen 10%; company is fighting to maintain its reputation.
- Mattel's second and third recalls came as it launched a national advertising campaign to assure consumers it is on top of product safety. They may recall additional products as testing is stepped up.

**Mattel called on the carpet**  
National Post September 12, 2007

**Massive toy recall alarms parents...**  
Toronto Star Aug.15, 2007



## Trial by Fire..... “A Blaze in Albuquerque Sets Off Major Crisis For Cell-Phone Giants”

The Wall Street Journal - *Caused by a lightning bolt, the blaze in an Albuquerque, N.M., semiconductor plant burned for just 10 minutes last March. But far away in Scandinavia, the fire touched off a corporate crisis that shifted the balance of power between two of Europe's biggest electronics companies, both major players in the global electronics industry.*

Nokia Corp. of Finland and Telefon AB L.M. Ericsson of neighboring Sweden both bought computer chips from the factory, which is owned and operated by Philips Electronics NV of the Netherlands. The flow of those chips, crucial components in the mobile phones Nokia and Ericsson sell around the world, suddenly stopped.

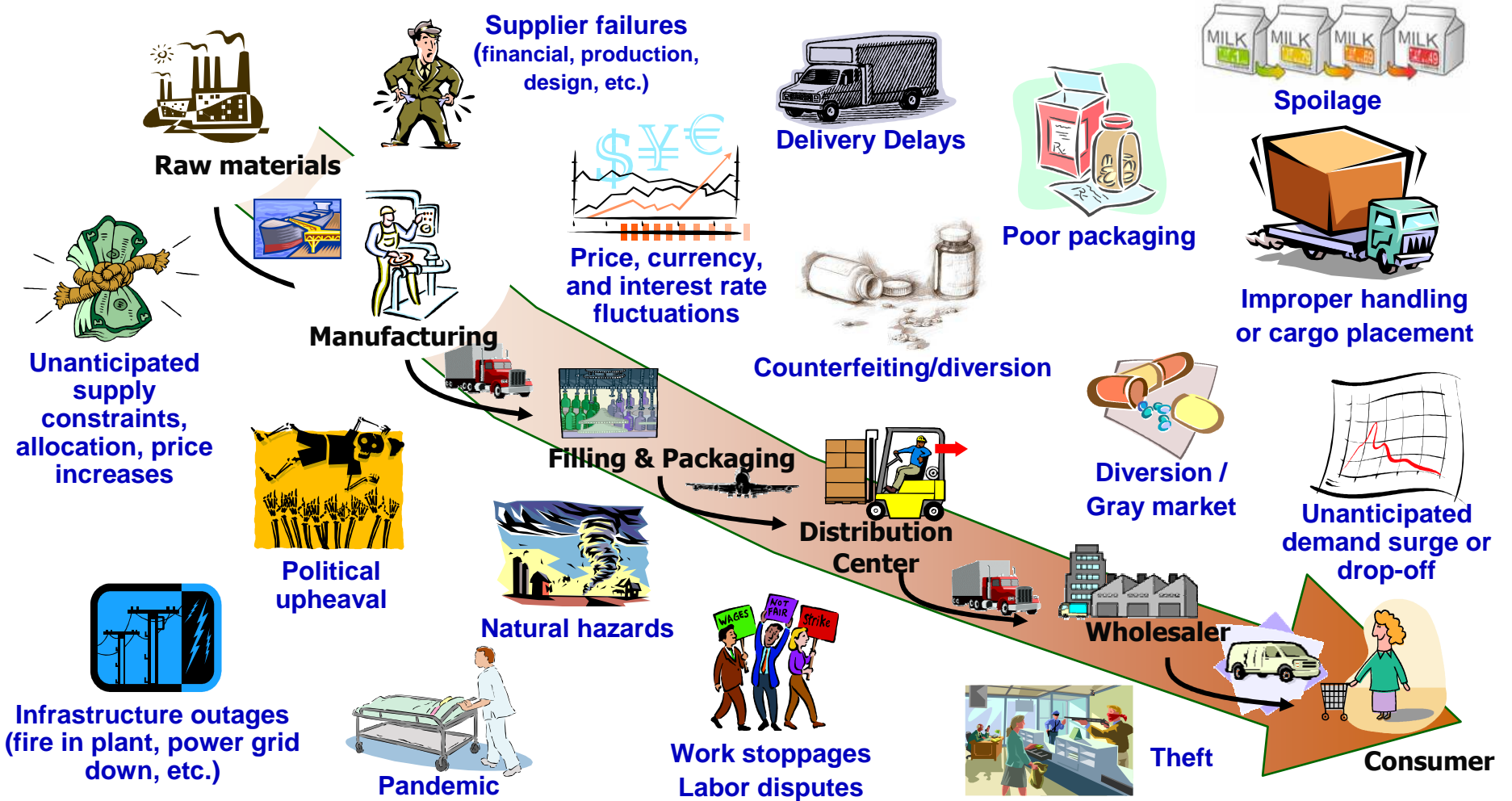
Philips needed weeks to get the plant back up to capacity. With mobile-phone sales booming around the world, neither Nokia nor Ericsson could afford to wait.



**But how the two companies responded to the crisis couldn't have been more different. Nokia, which was Europe's largest corporation by market capitalization at the time, met the challenge with a textbook crisis-management effort -- the kind companies of all stripes are finding essential as the pace of global commerce quickens.**

# Supply Chain Risks Impact Margin, Brand Equity & Customer Loyalty

Lean initiatives and global outsourcing have made our supply chains even more vulnerable



Source: Marsh

# Who owns the problem?

Legal / Contractual

Change Management

Transportation Management

Integrated Logistics Management

Warehouse & Distribution Management

Demand / Forecasting



Marketing & Sales Management

Customer / Supplier Relationship Management

Financial Management

Knowledge Management

Product Management

Inventory Management

International Sourcing

Personnel / HR

Operations Management

Risk Management

Procurement

Information Technology

Logistics Outsourcing Management

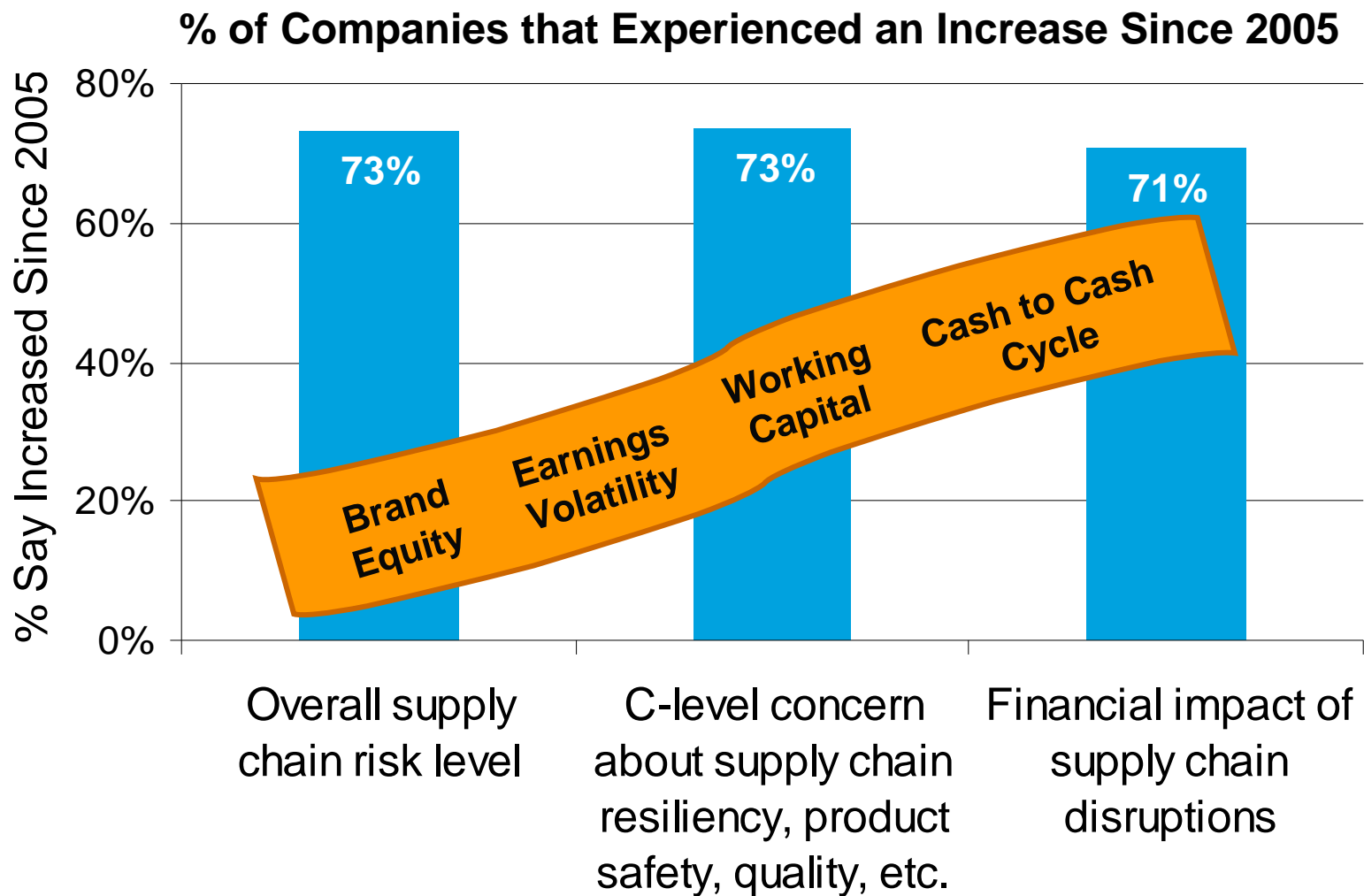
Process Orientation

Security

# Supply Chain Risk Management Research Results



# Supply Chain Risk Levels and Impacts Have Risen Sharply Since 2005



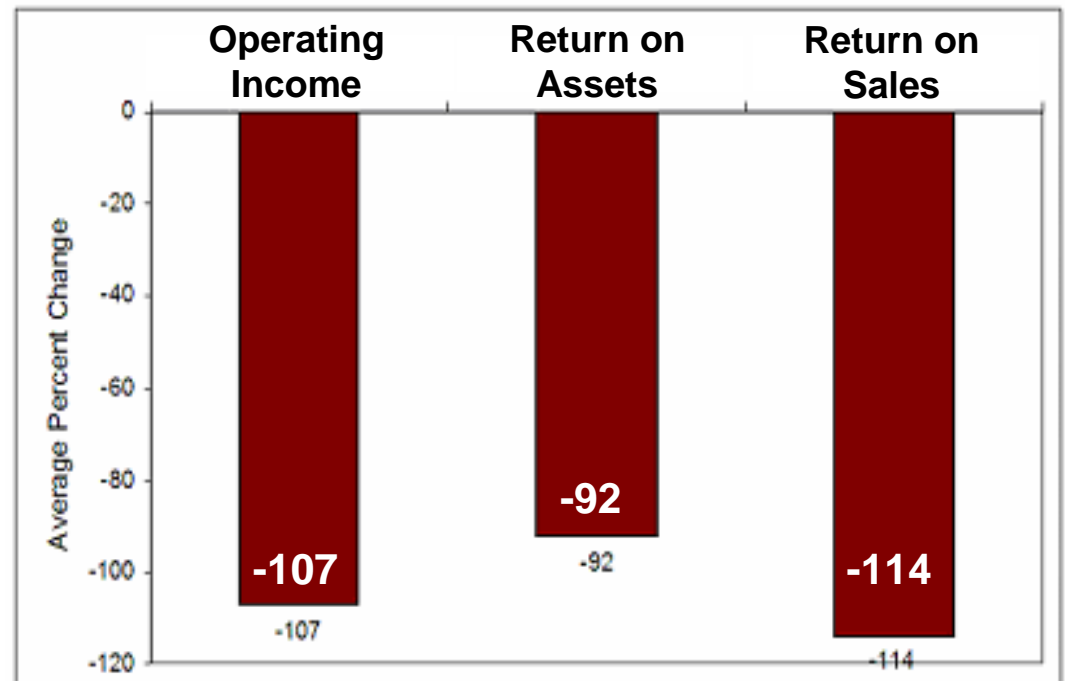
Source: Marsh Supply Chain Risk Study

## The Risk Dimension: How It Impacts Financial Performance and Earnings Volatility

A study of 885 disruptions of publicly traded firms found the average company experiences:

- **107% Drop in Operating Income**
- **114% Drop in Return on Sales**
- **93% Drop in Return on Assets**
- **6.92% Lower Sales Growth**
- **10.66% Higher Growth in Cost**
- **13.88% Higher Growth in Inventories**

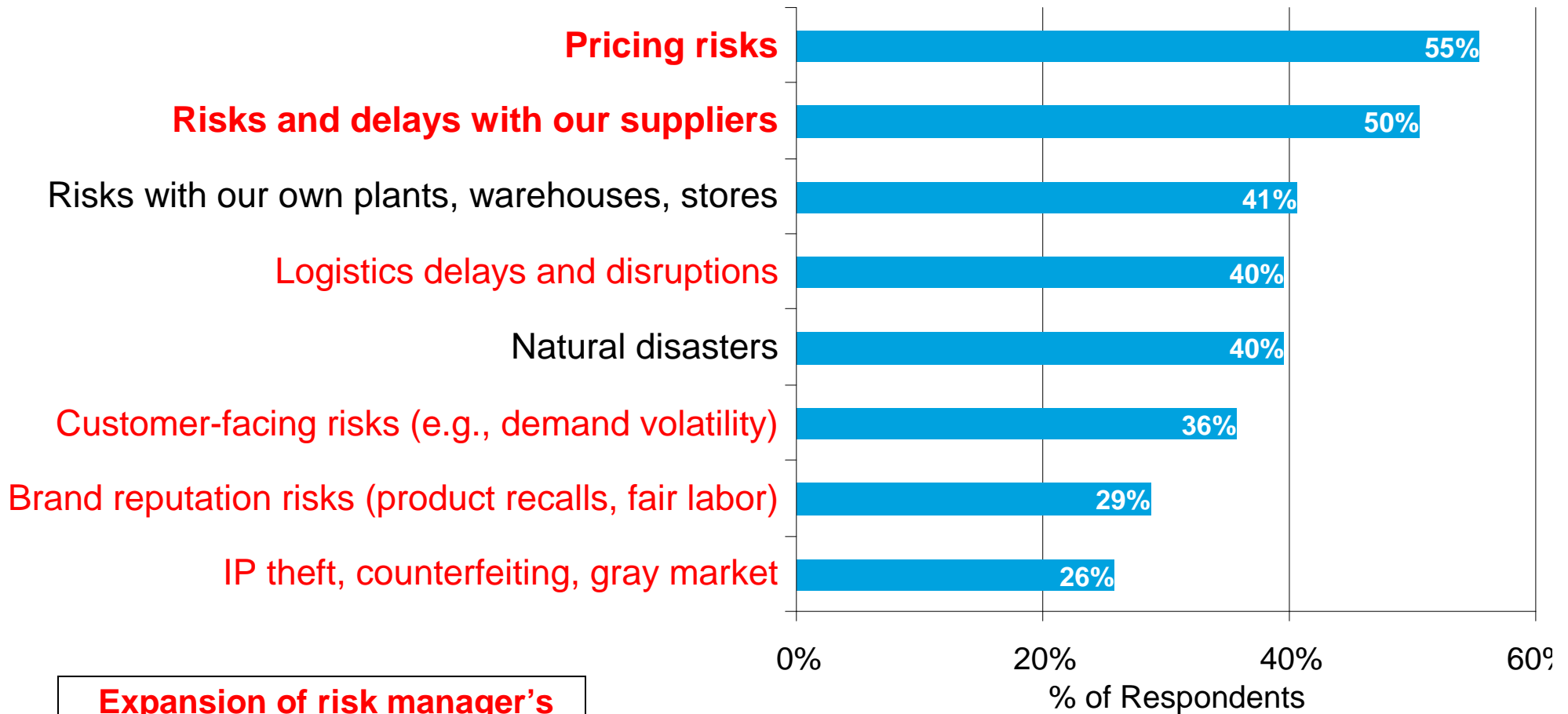
Average Changes Associated With Supply Chain Disruptions



Sources: Hendrick and Singhal - The Effect of Supply Chain Disruptions on Long-term Shareholder Value, Profitability, and Share Price Volatility

# Top Supply Chain Risk Concerns

## Top Supply Chain Risk Concerns at Our Enterprise

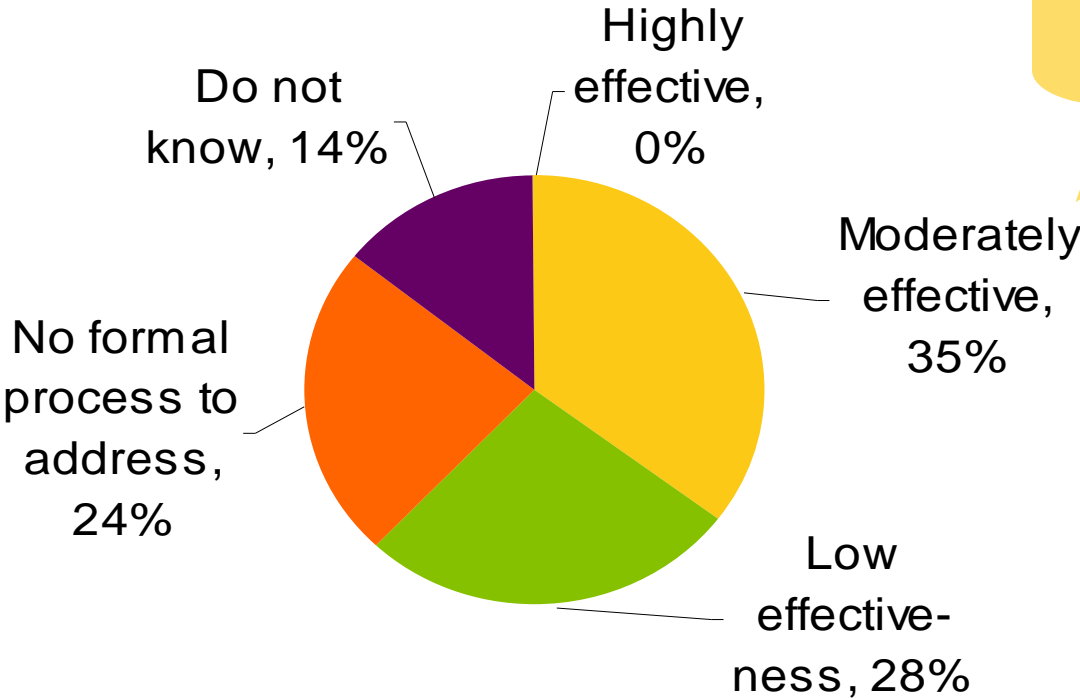


**Expansion of risk manager's traditional responsibilities**

Source: Marsh Supply Chain Risk Study

**Supply Chain Risk Management Is an Emerging Discipline:**  
Not one participant said they had highly effective S.C. risk mgmt practices

**Effectiveness of Supply Chain Risk Management Processes at Our Enterprise**



**Classified as “Innovators”**

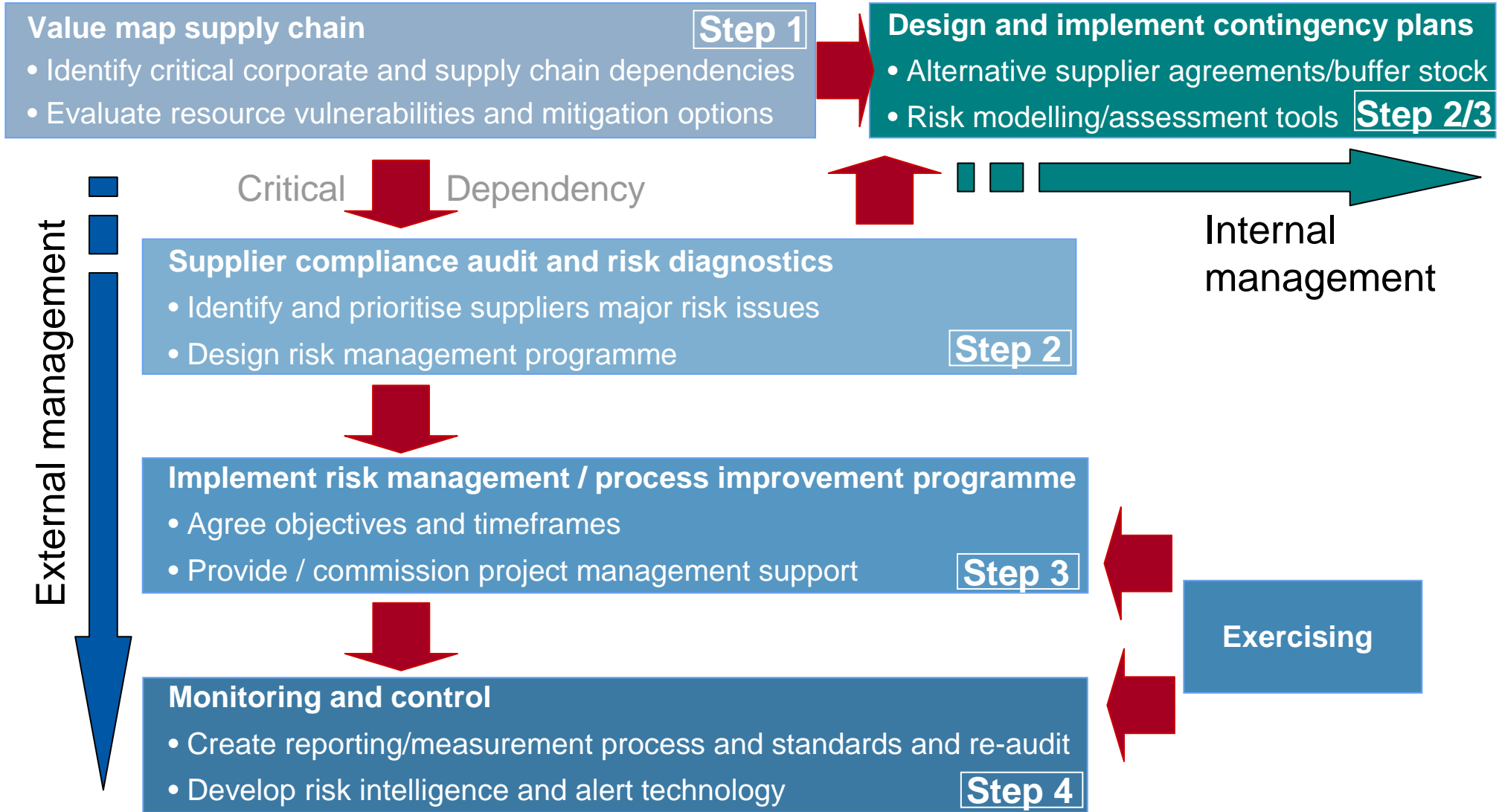
Source: Marsh Supply Chain Risk Study

# Supply Chain Risk Managing for success

*Effective sourcing means knowing how and where your suppliers are vulnerable and collaborating with them to assure they are effectively managing risks to safeguard your business.*



# Managing Supply Chain Risk... Supplier Focused process



# Managing Supply Chain Risk

## Step 1: Value map supply chain – supplier criticality

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Supply Chain Risk Diagnostics

Home

### Classification of Suppliers:

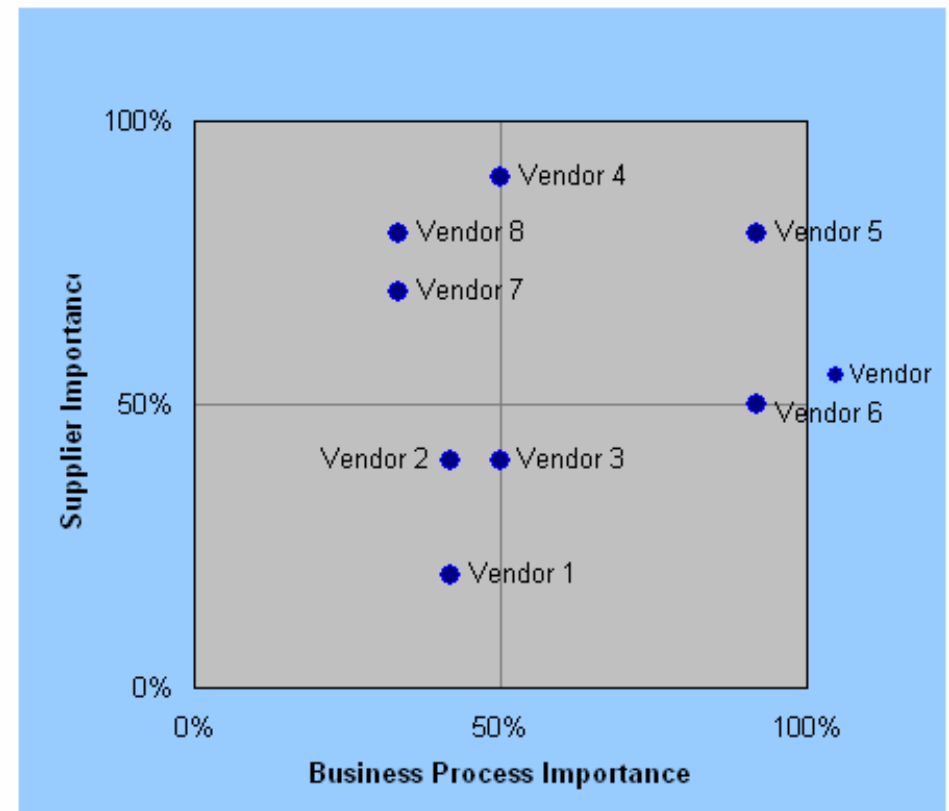
BP Process	Vendor	Last Yr Purchase	BP Importance	Supplier Importance	Score
BP3	Vendor 5	50,000	92%	80%	73%
BP3	Vendor 6	110,000	92%	50%	46%
BP2	Vendor 4	40,000	50%	90%	45%
BP4	Vendor 8	130,000	33%	80%	27%
BP4	Vendor 7	120,000	33%	70%	23%
BP2	Vendor 3	30,000	50%	40%	20%
BP1	Vendor 2	20,000	42%	40%	17%
BP1	Vendor 1	10,000	42%	20%	8%

### Logistics Vulnerability:

**MODERATE 50%**

where

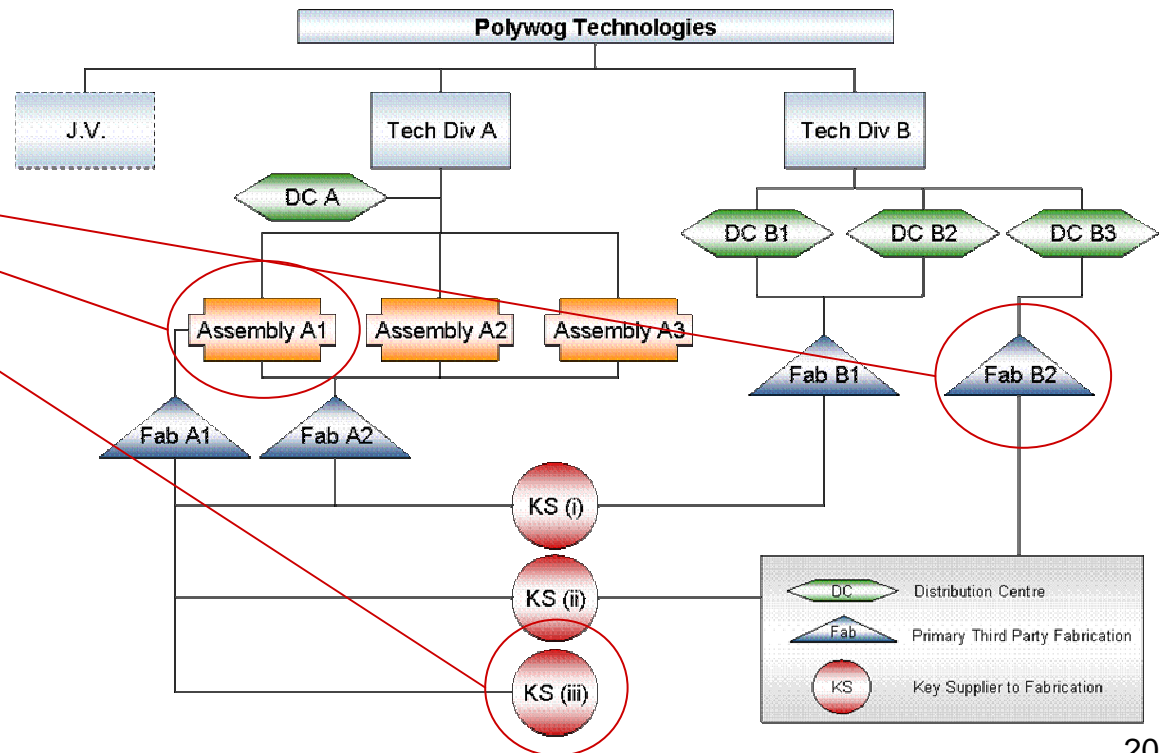
Vulnerability	Score
High	0-<33%
Moderate	33%-67%
Low	>67%-100%



# Example – Geographically Concentrated Vulnerabilities



- Natural Hazards
- Utilities
- Human Capital (Pandemic, SARS, etc.)
- Transportation and Logistics
- Political Risk



# EQ Hazard for Specific Portfolio



# Managing Supply Chain Risk

Step 3: Implementation of risk intelligent process - avoidance, mitigation and transfer

Risk issue	Risk Mitigation				Risk Transfer
Natural Disaster	Business Continuity Management				Property All Risks / Business Interruption
Terrorism	Security Risk Management	Business Continuity Management			Terrorism, Kidnap & Ransom
Fraud and Corruption	Background Screening	Business Intelligence and Investigation			Fidelity Guarantee, Trade Credit
Ethical Risk	Social Accountability	Health and Safety	Environmental		Environmental & Employers' Liability
Infrastructure Risk	IT Security	Business Continuity Management			Business Interruption
Quality and Counterfeiting	Business Intelligence and Investigation	Product Risk / Recall			Legal Expense
Pandemics	Business Continuity Management				(Business Interruption)
Regulatory Risk	Regulatory Research	Business Intelligence and Investigation			Political Risk

Risk Avoidance

Crisis Communications

# Managing Supply Chain Risk

## Step 4: Monitoring and control - risk intelligence and alert technology

For critical and / or dynamic elements:

- Layer the supply chain over an intelligent source of data that enables the dynamic monitoring of risk along each critical resource of the supply chain
- Create alerts by threat, severity or geography that provides 24x7 monitoring of the supply chain and enabling you be aware of issues in real-time
- Respond to material and relevant supply chain risks using a global dashboard. Stay abreast of the changing business landscape by tracking risk profile changes over time



Alerts list:

- 10:05:00 10:05:00 Passport Requirements Changes United States Passport requirements for travel and
- 10:05:00 10:05:00 Flood Warning - Bangkok, Thailand Bangkok on flood alert ahead of Oct. Chao Phraya River.
- 10:05:00 10:05:00 Violent Mining Protests in Oruro - Bolivia Violent clashes occur at Huasani m...
- 10:05:00 10:05:00 Niger Delta Security Situation Update Nigeria UPDATE 3: MEND threatens retaliat...
- 10:05:00 10:05:00 Religious Riots in Jimma - Ethiopia Religious riots in Jimma, Ethiopia, leave four dead and several wounded. Expect tight security, further violence possible.

ALERT FILTERS

Select desired filters and click Apply to refresh list

Category

- Security
- Transportation
- Health
- Entry/Exit
- Communication/Technology
- Legal
- Financial
- Environment
- Language
- Culture

Location(s):

Start Date: MM/DD/YYYY

End Date: MM/DD/YYYY

Limit: 5

Include Info Alerts:

Situation Reports:

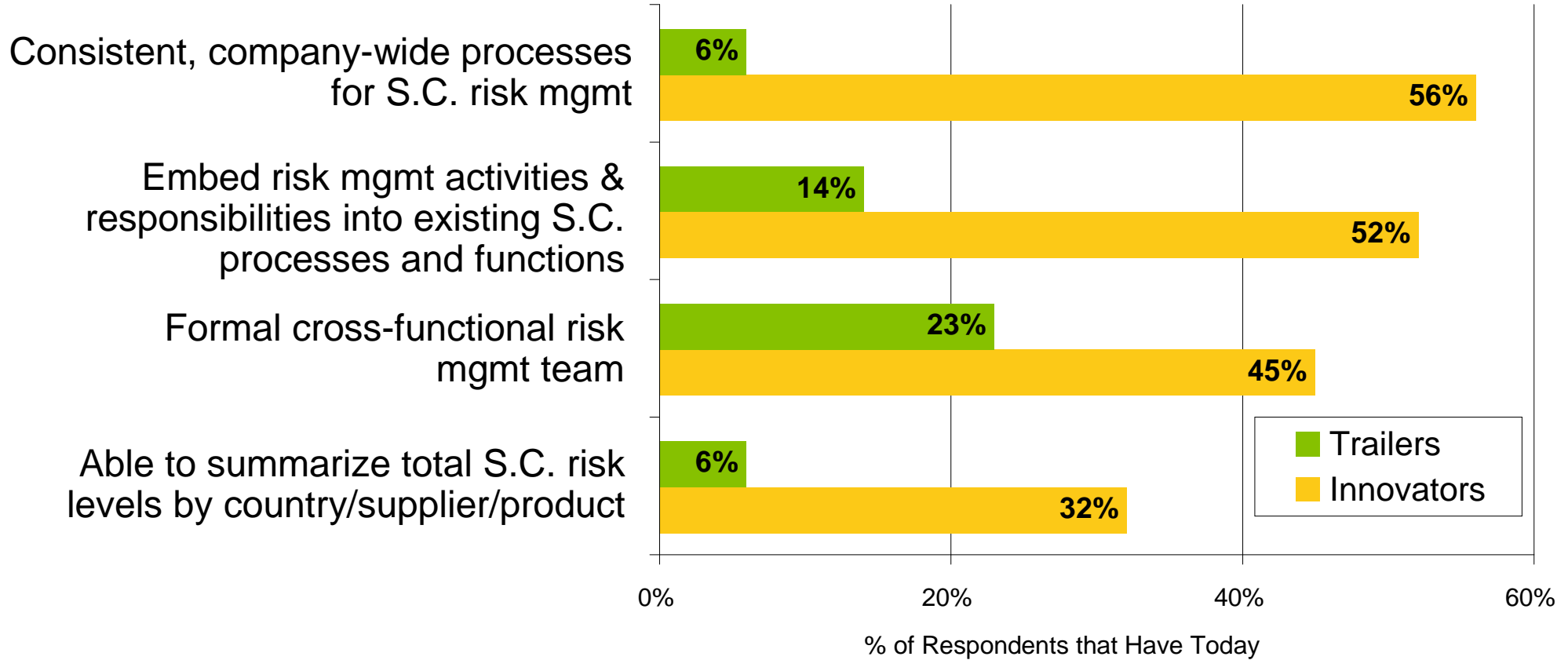
Sort by:  Date  Severity

Actual  Save Filter Settings

ALERT TYPE	5 VERY HIGH	4 HIGH	3 MODERATE	2 LOW	1 MINIMAL	TOTAL
Act	0	0	0	0	0	0
Watch	1	2	3	0	0	6
FYI	0	1	2	0	1	4
N/A	0	3	2	11	0	23
TOTAL	1	6	7	11	1	33

# What Innovators Do Differently

## Supply Chain Risk Management Approaches Used Today



Source: Marsh Supply Chain Risk Study



## Financial Executive Key Questions

- 1. What is our margin and revenue erosion because of unanticipated supply chain costs and delays?**
- 2. How do we more cost-effectively manage business volatility?**
  - How resilient are we compared to our competition?
  - Given our changing supply chain, are we really buying the right type and amount of insurance coverage?
- 3. How do we identify hidden interdependencies in our supply chain?**
  - Is a Tier 2 or 3 supplier supplying multiple Tier 1 suppliers for a critical material?
  - Are our suppliers paying lip service to risk? Or is there real substance behind contingency planning and security?
  - How will we protect our key customers if a disruption occurs?  
How will our cash flow be impacted by supply chain disruptions?

## Summary

***The ‘Upside.... Effective risk management of the supply chain enables organizations to make better business and financial decisions with confidence. Effective and efficient allocation of risk spend: capital, management priorities, time, and resources***

- Develop a healthy fear of ignorance... What am I afraid to find out? How can I find it out today?
- Supply chain management needs to be risk intelligent. Efficiency gains can be completely wiped out by impacts of supply disruption
- Risk Management prioritisation should reflect both the corporate value of each product line or process, and the inherent vulnerabilities.
- Standardised approaches and tools for risk assessment will help minimise time and cost and enable benchmarking. Process should be objective and holistic (e.g.regulatory compliance and cultural / sociopolitical differences in regions where you source).
- Implementation of risk management and mitigation programmes should reflect corporate risk appetite and tolerances, as well as strategic direction.... Brand damage is probably more important than direct financial loss..
- Have a plan... Balance ‘Just-in-time’ with ‘Just-in-case’



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**Continuous Risk Improvement<sup>SM</sup>**



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