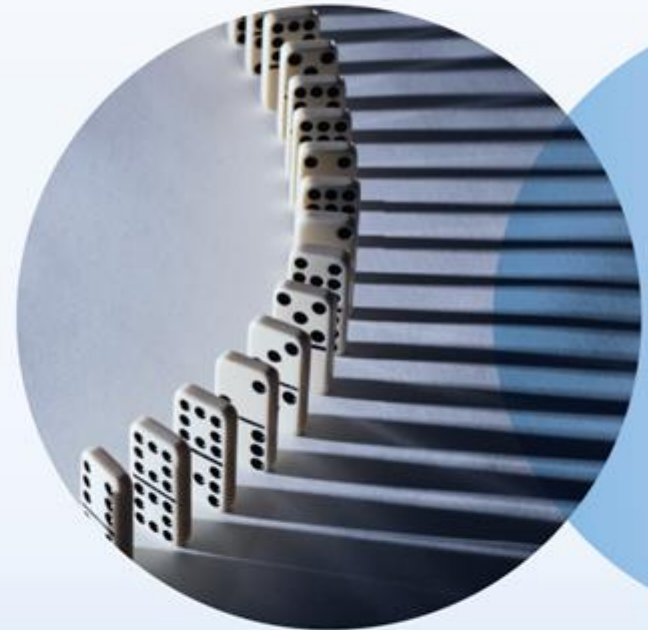


# Supply chain insurance and risk assessment

Protecting profitability if the chain breaks

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# About the Supply Chain Resilience Survey



- Annual BCI and Zurich survey which considers **supply chain disruption** and benchmarks **BC arrangements** in this area
- **Sixth** of an annual series, 2014 report authored by Patrick Alcantara (BCI Research Associate)
- **525 respondents** from **71 countries**, around 60% are BC or supply chain professionals

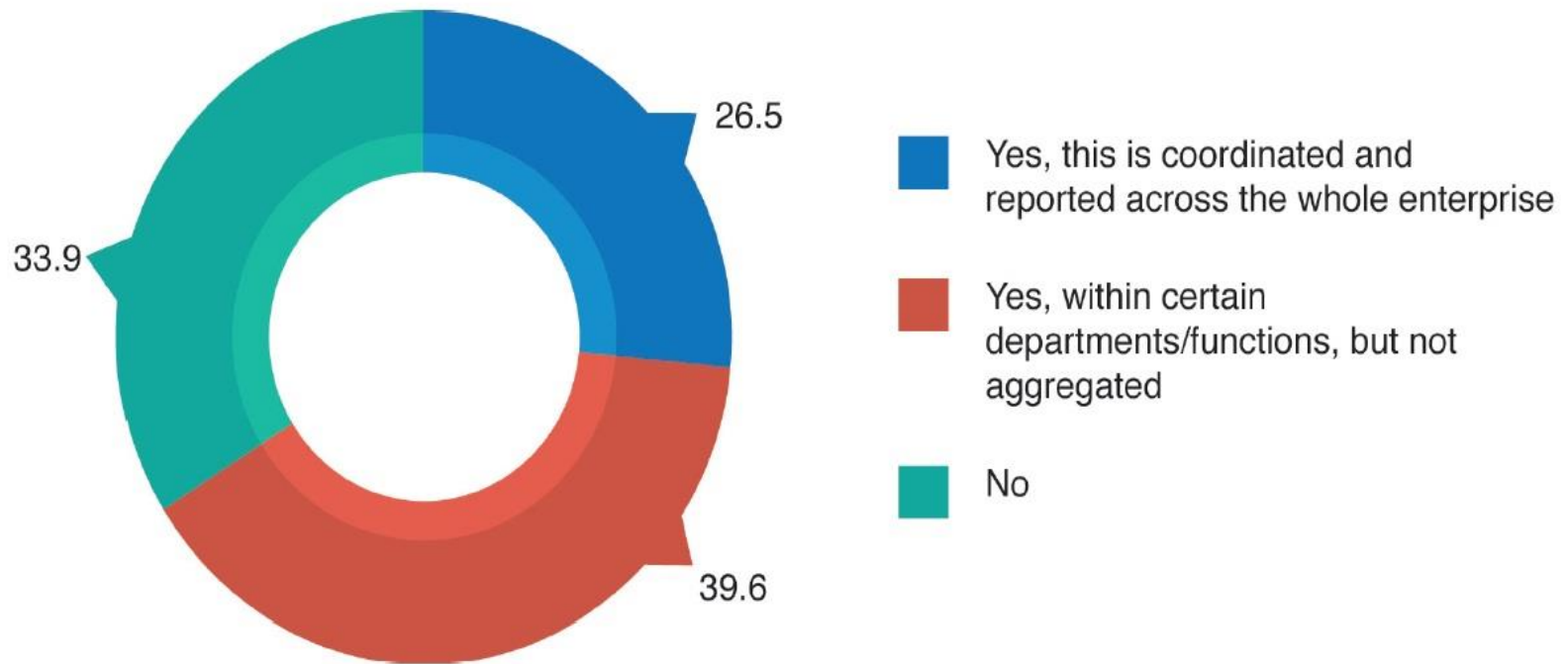
# The Headlines

- Nearly 75% of respondents still **do NOT have full visibility** of their supply chains.
- At least 80% report **at least one instance** of supply chain disruption. **Half** of disruptions originate below the **Tier , direct supplier**.
- The primary sources of disruptions were **unplanned IT & telecoms outage, adverse weather** and **outsourcer service failure**. These comprise the top three sources of disruption **since 2012**.
- **70% of the world's goods go through 6 ports**

# The Headlines

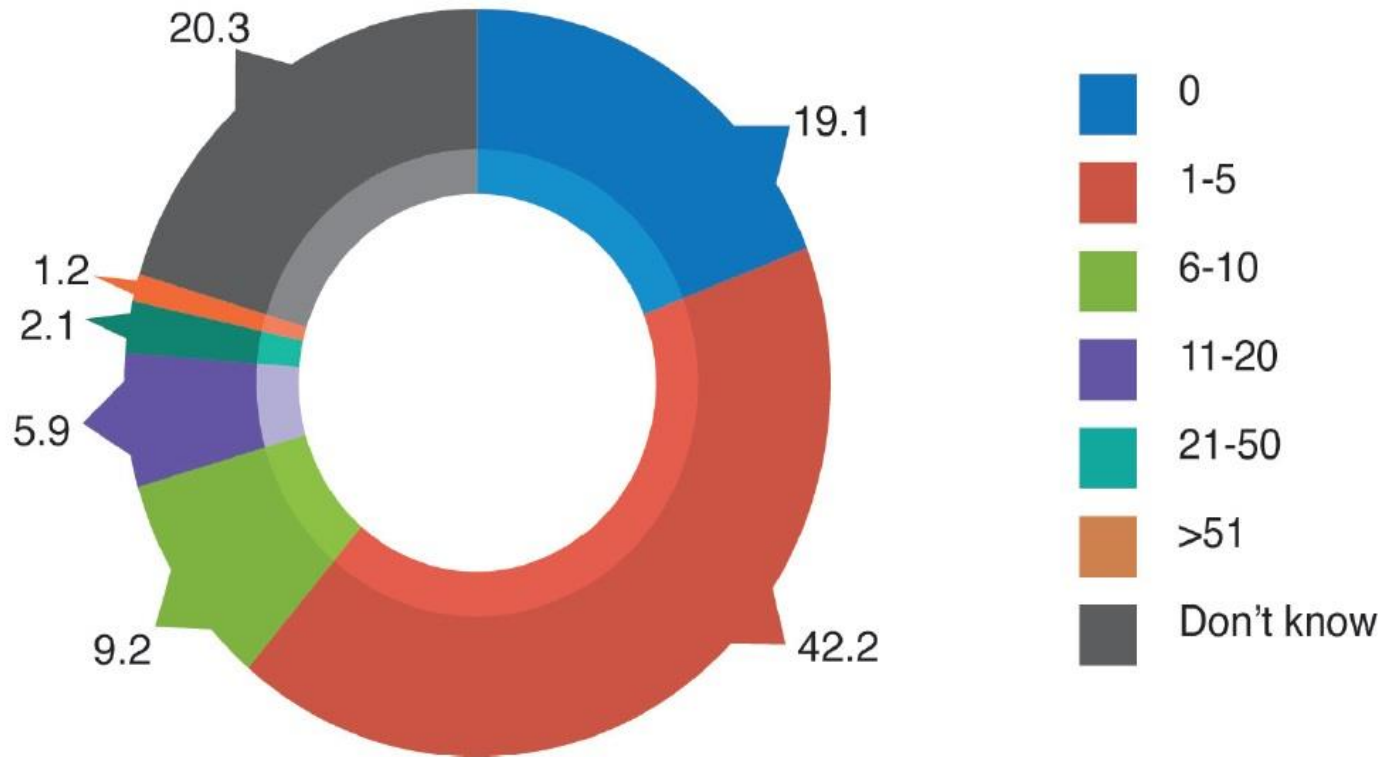
- The **loss of productivity** remains as the top consequence of supply chain disruptions for the sixth year running. The **increased cost of working** and **loss of revenue** round out the top three.
- Almost a quarter of respondents (23.6%) report **annual cumulative losses of at least €1 million**. More have recorded losses of **at least €1 million from a single incident** (13.2% from 8.6%).
- 40% of respondents **have NOT insured their losses** arising from supply chain disruption (through Contingent Business Interruption cover or Zurich's 'all risk' Supply Chain Insurance)

# Recording Supply Chain Disruption



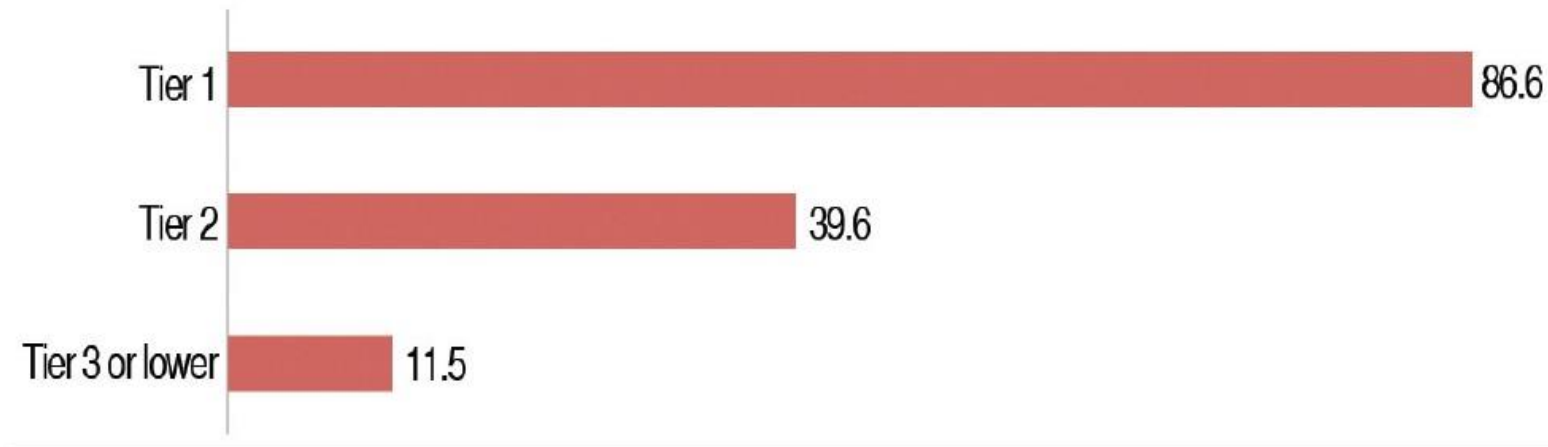
*Only 26.5% have full visibility of their supply chains.*

# Number of Supply Chain Incidents



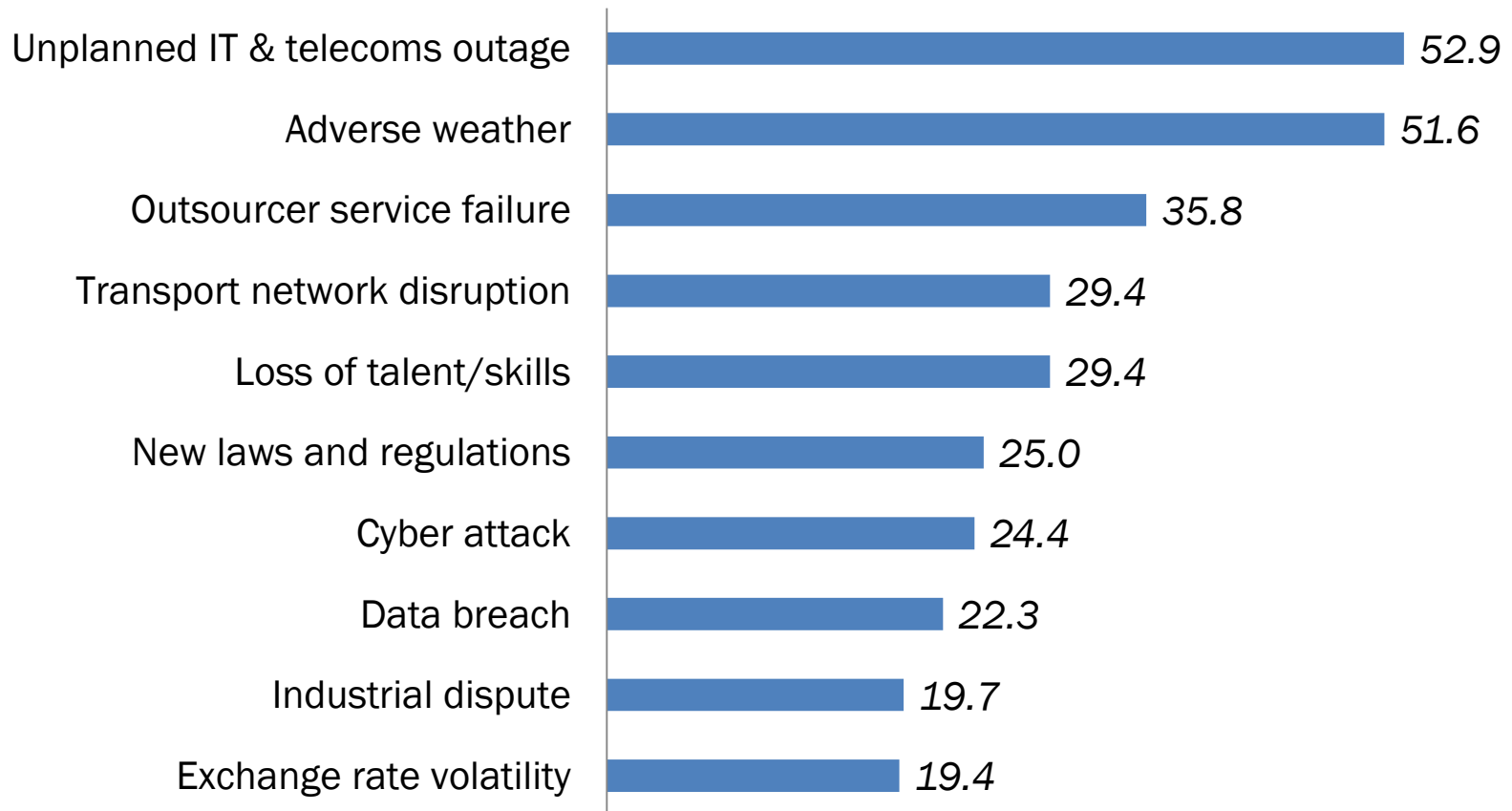
*At least 80% report at least one instance of supply chain disruption in the last 12 months.*

# Origins of Supply Chain Disruption



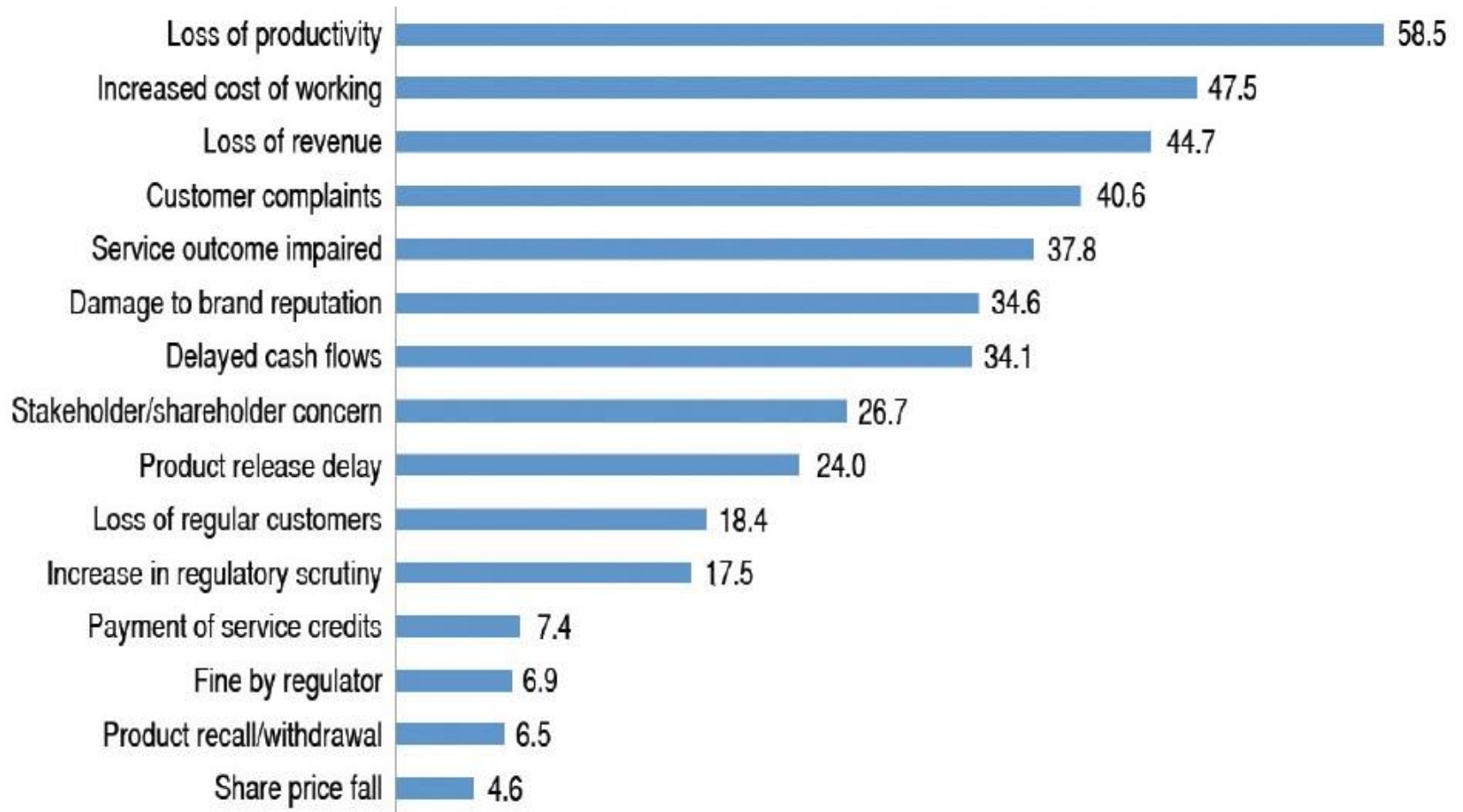
*Half report disruptions occurring below Tier 1 suppliers.*

# Causes of Supply Chain Disruption



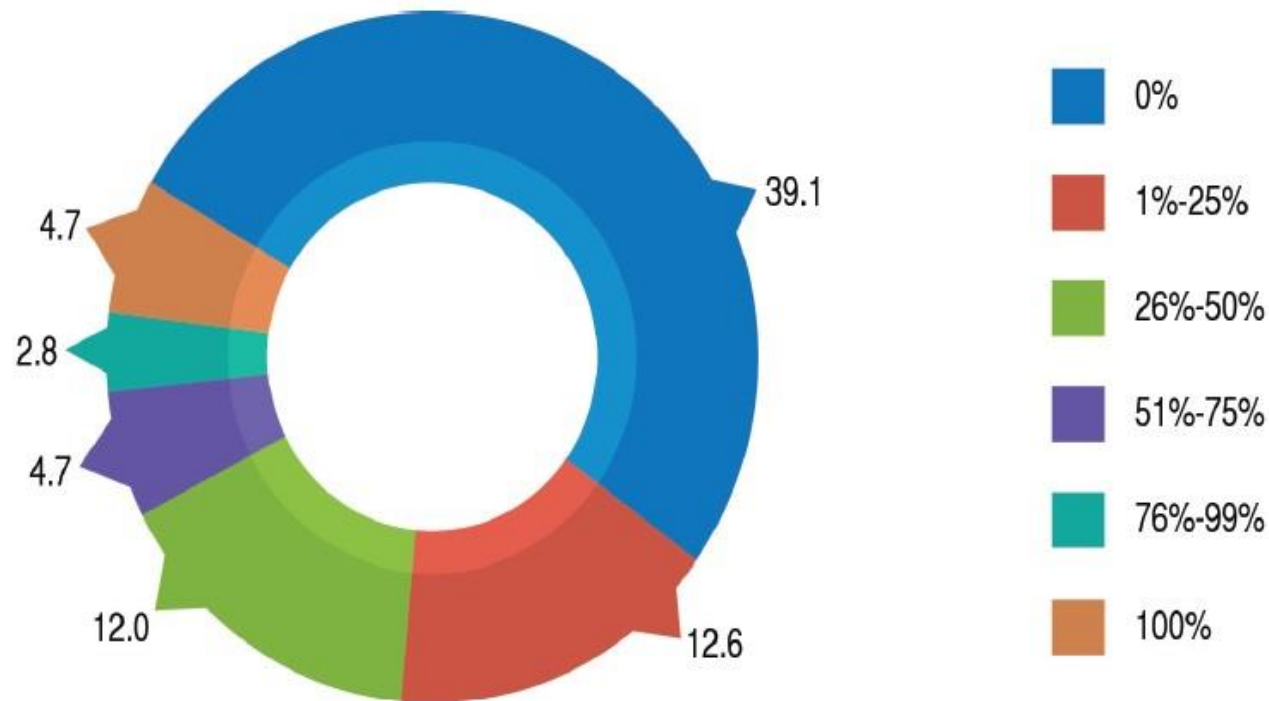
*\*Expressed in %, multiple answers allowed*

# Consequences of Supply Chain Disruption



*More than a third of respondents (34.6%) mention reputational damage as a consequence of disruption.*

# Insuring Supply Chain Loss



*Almost 40% do not insure losses from supply chain disruption (through Contingent Business Interruption cover or Zurich's 'all risk' Supply Chain Insurance)*

*\*Expressed in %, 'Don't know' responses excluded*

# Horizon Scanning Risks to Supply Chains

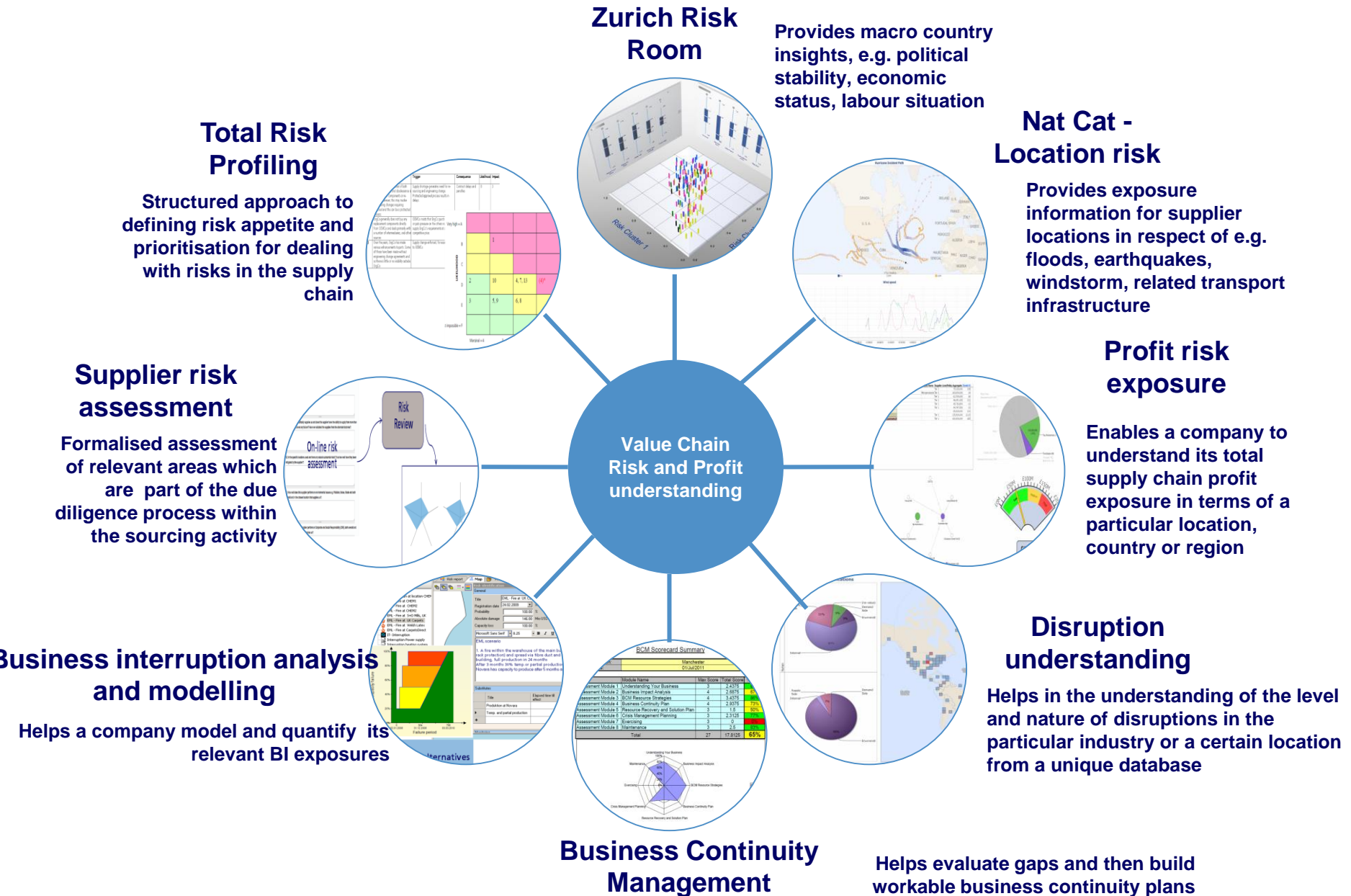
## In the next 12 months

- IT & telecoms outage (57.7%)
- Adverse weather (48.8%)
- Outsourcer service failure (41.4%)
- Cyber attack (37.2%)
- Data breach (36.3%)

## In the next 5 years

- Cyber attack (53.9%)
- IT & telecoms outage (51.0%)
- Outsourcer service failure (42.3%)
- Data breach (38.9%)
- Adverse weather (38.0%)

# Zurich business resilience and supplier tool suite



# Zurich Risk Room on the go



A **simplified, demo version** of the full app

Contains **7 predefined scenarios** on:

- *Macroeconomic Imbalances*
- *Political Volatility*
- *Nat. Cat. and Disaster Management*
- *Supply Chain Disruption*
- *Demographic Shifts*
- *Sustainable Growth*
- *Human Capital*

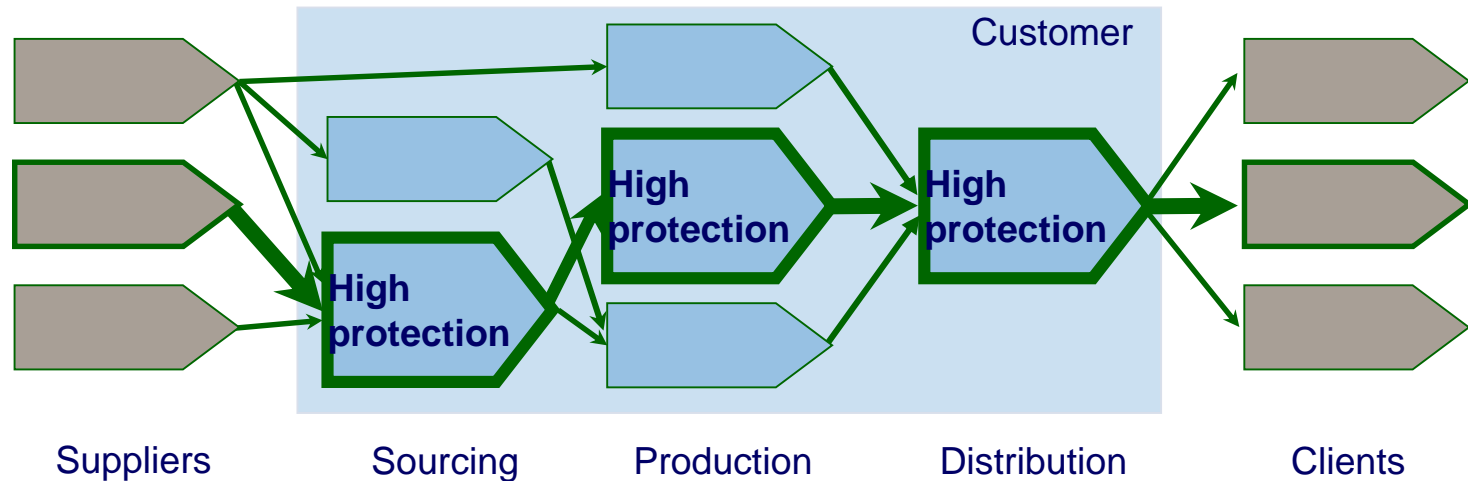
**Easy to navigate, intuitive interface**

Provides the ability to **model changes in individual risks** to see how they **impact other, interconnected risks**

Available **free of charge to the general public** as part of Zurich's thought leadership innovations and initiatives

Visit [www.zurich.com/riskroom](http://www.zurich.com/riskroom) or download a free demo for Apple or Android

# Business Interruption modeling:



Analyzing risks along the value chain encourages risk quantification and prioritization of mitigation

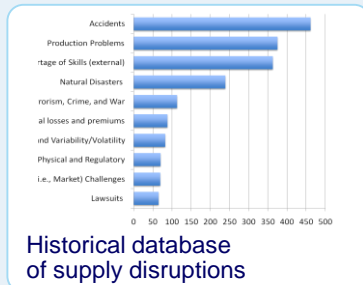
# Understanding where and how your supply chain could be vulnerable



# Risk assessment stages



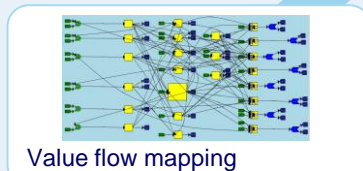
# Zurich supply chain rating risk model



Supply / supplier 1\_

Risk Factor	As Is
Industry/Supply-Specific - Geographical Exposures	B
Industry/Supply-Specific - Economic Exposures	C
Industry/Supply-Specific - Political Exposures	B
Industry/Supply-Specific - Structural Risks	B
Supplier Specific - Geographical Exposures	B
Supplier Specific - Economic Exposures	C
Supplier Specific - Structural Risks	B
Product Management / New Product Development	B
Supplier Selection Management	B
Supplier Management (Contract Strength)	B
Supply Chain Performance	B
Internal Risk Management	C
Business Continuity Management (BCM)	C
Vulnerability To Accidents / Errors	B
Contribution To Malicious Interference	A
Commercial Contract Management	B
Skills And IP Management (Insured)	E (+G)
Regulatory Issues	A
Relationship With Supplier (Influence, Maturity)	B
Supplier's Security Of Supply	B
Supplier's Knowledge And Experience Of Providing Required Supplies	A
Skills And IP Management (Supplier)	E (+G)
One Engineering Factor	B

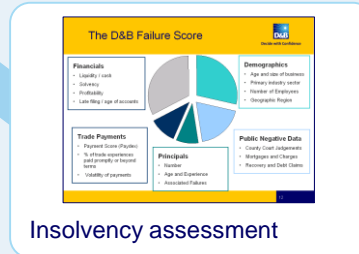
Assessment and grading



This information will be used to monitor and manage ACCUMULATION. It will be updated as part of the underlying data used in the supply chain risk model.

Supplier	Supplier Name	Supplier Type	Supplier Address	Supplier Contact
1	Supplier 1	Supplier Type 1	Supplier Address 1	Supplier Contact 1
2	Supplier 2	Supplier Type 2	Supplier Address 2	Supplier Contact 2
3	Supplier 3	Supplier Type 3	Supplier Address 3	Supplier Contact 3
4	Supplier 4	Supplier Type 4	Supplier Address 4	Supplier Contact 4
5	Supplier 5	Supplier Type 5	Supplier Address 5	Supplier Contact 5
6	Supplier 6	Supplier Type 6	Supplier Address 6	Supplier Contact 6
7	Supplier 7	Supplier Type 7	Supplier Address 7	Supplier Contact 7
8	Supplier 8	Supplier Type 8	Supplier Address 8	Supplier Contact 8
9	Supplier 9	Supplier Type 9	Supplier Address 9	Supplier Contact 9
10	Supplier 10	Supplier Type 10	Supplier Address 10	Supplier Contact 10

Accumulation database



# Supply chain grading

	Risk Factor	As is	Comments	To Be	Advice
1	Industry/Supply-Specific - Geographical Exposures	B		A	
2	Industry/Supply-Specific - Economic Exposures.	B		A	
3	Industry/Supply-Specific - Political Exposures.	B		A	
4	Industry/Supply-Specific - Structural Risks	B		A	
5	Supplier Specific - Geographical Exposures	B		A	
6	Supplier Specific - Economic Exposures	B		A	
7	Supplier Specific - Political Exposures	B		A	
8	Supplier Specific - Structural Risks	B		A	
9	Product Management / New Product Development	B		A	
10	Supplier Selection Management	B		A	
11	Supplier Management (Financial Strength)	B		A	
12	Supply Chain Performance	B		A	
13	Internal Risk Management	B		A	
14	Business Continuity Management (BCM)	B		A	
15	Vulnerability To Accidents / Errors	B		A	
16	Vulnerability To Malicious Intervention	B		A	
17	Commercial Contract Management	B		A	
18	Skills And IP Management (Insured)	B		A	
19	Regulatory Issues	B		A	
20	Relationship With Supplier (Influence, Maturity)	B		A	
21	Supplier's Security Of Supply	B		A	
22	Supplier's Knowledge And Experience Of Providing Required Supplies	B		A	
23	Skills and IP Management (Supplier)	B		A	
24	Risk Engineering Factor	B		A	
OVERALL GRADING =		72		4	

# Supplier vulnerability rating / questionnaire

Core information					Financial basis	Vulnerability factors							Vulnerability score
Supplier	Supply	Location(s)	Plants	Lines	Margin	Single source - One location	Single source - Multiple locations	Product Uniqueness	Alternative replacement time	Contingency arrangements	Relationship	Delivery performance	
		City, country	How many	How many	€m est	Y / N	Y / N	Hi / Med / Lo	Months	Describe	Poor = 1 Excellent = 5	Poor = 1 Excellent = 5	
Supplier 1	Supply 1	Osaka, Japan	5	9	100	Y		Hi	12	Inventory (2 week)	4	5	85
Supplier 2	Supply 2	Guangzhou, China	7	7	80	Y		Lo	1	None	4	1	65
Supplier 3	Supply 3	Vigo, Spain Milan, Italy	1	1	25	N	Y	Lo	6	Inventory (3 days)	1	3	55
Supplier 4	Supply 4	France, Spain, Germany, UK, Italy	3	4	50	N	N	Lo	1	Several alternative suppliers approved	2	4	40
Supplier 5	Supply 5	Hsinchu, Taiwan	2	3	40	Y		Med	9	Inventory (3 days)	4	1	60

# How we have helped other customers through risk assessment



Two key suppliers at the next level in the supply chain were in significant financial trouble

Exposure due to potential failure of a supplier higher than initially estimated: USD10 million vs. USD1 million

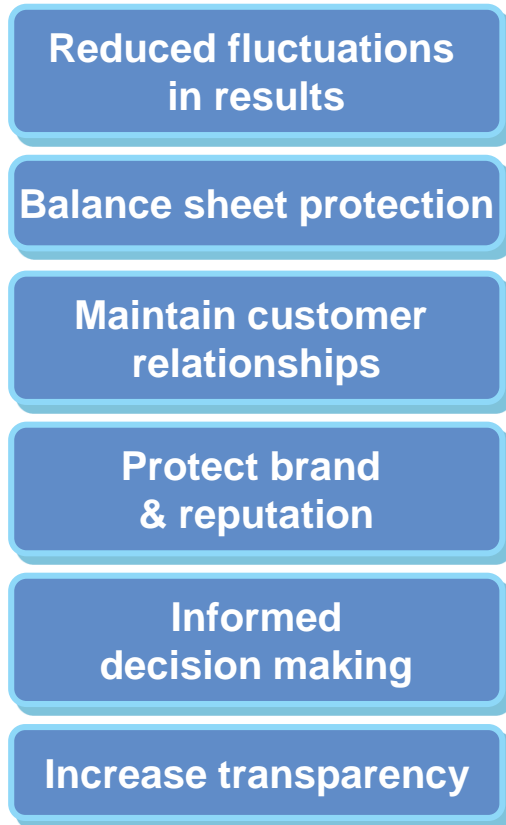


Actual reliance on one supplier significantly greater than presumed: 70% vs. 20%

Company discovered that key component supplier and its alternative were located in earthquake zone



# Protecting profitability and balance sheet funding



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# Industry awards and recognitions

**BUSINESS  
INSURANCE**

*2011 Innovation Award,  
to recognize leadership,  
inventiveness and  
ingenuity*



The Institute of  
Risk Management

*2011 Best Supply  
Chain Risk Initiative*

**CIR**

CONTINUITY INSURANCE & RISK  
thinking resilience

*2012 World's Best Global  
Supply Chain/Trade  
Disruption insurer*

**GLOBAL  
FINANCE**

*2013 World's Best Global  
Supply Chain/Trade  
Disruption insurer*

# Covering risks not covered by other insurance products

	Supply Chain	Contingent BI	Marine & Marine BI	Trade Credit	Political Risk	Product Liability
Supplier insolvency	*			*		
Failure of fuel supply or utilities	*					
Communication system failure	*					
Transport failures or port blockage	*		*			
Raw materials or component delays	*					
Supplier staff illness or strikes	*					
Cyber risks, virus	*					
Denied access to supplier's premises	*					
Physical damage	*	*	*			
Political risk	*				*	
Expropriation	*				*	
Prod. Quality/recall						*

# Transparent, predictable claims settlements

## A simple example:

- Loss of profits for failure of supply of components = USD300,000 per week
- Increased cost of working to source alternative = USD100,000 per week  
(Based on higher cost of replacement component, additional shipping costs)

## Probable Maximum Loss

Loss of component deliveries relating to  
**30 weeks** of production

Alternative supplier available but cannot deliver  
for **20 weeks**

Back to original supplier after **30 weeks**

---

### Calculation:

20 weeks loss of profits     $20 \times \text{USD}300,000 = \text{USD}6\text{m}$

10 weeks increased costs     $10 \times \text{USD}100,000 = \text{USD}1\text{m}$

**PML = USD7m > Limit**

## Claim based on agreed formula

Loss of component deliveries relating to  
**15 weeks** of production

Alternative supplier available but cannot deliver  
for **8 weeks**

Back to original supplier after **15 weeks**

---

### Calculation:

8 weeks loss of profits     $8 \times \text{USD}300,000 = \text{USD}2.4\text{m}$

7 weeks increased costs     $7 \times \text{USD}100,000 = \text{USD}0.7\text{m}$

**Claim = USD3.1m**

# Benefits of Supply Chain Resilience

Communication is the key to ensure **appropriate plans are activated before the impact is felt** within the organisation. When our supplier told us they were experiencing issues, we invoked a plan immediately and **saved any issues downstream.**

- Respondent from 2014 survey

# Benefits of Supply Chain Resilience

There were multiple occasions where we have rallied to support a client when either third party suppliers... or our own direct suppliers have caused disruption; in most cases **our reputation has actually improved** as a result of our dedication to resolve issues.

- Respondent from 2014 survey

# Supply chain risk assessment and insurance

Protecting profitability if the chain breaks

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## Thank you

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