

Adaptation

An Approach to Effectively Managing Uncertainty



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Executive Summary

In the spring of 2012, Deloitte¹ and Forbes Insights surveyed 192 U.S. executives from companies in the consumer and industrial products, life sciences, healthcare, and technology/media/telecommunications industries and found that a stunning 91% plan to reorganize and reprioritize their approaches to risk management in some form in the coming three years. Some of the other key survey findings are:

- **Leaders expect risk to become more volatile**

Two-thirds of respondents identified financial risk as having the potential to be even more volatile over the next three years. More than half indicated they believe that risks ranging from regulatory to technology to geopolitical/political concerns would increase in volatility over the next three years.

- **Technology is a frequent focus of improvement**

More than half of the respondents said that their companies plan to invest in continuous risk monitoring. Almost a third said that they are in the process of automating risk reporting.

- **Social media risk rivals financial risk as an area of concern**

Twenty-seven percent of respondents identified social media as one of the most important sources of risk over the next three years – the same percentage who identified financial risk.

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Executive Summary (cont.)

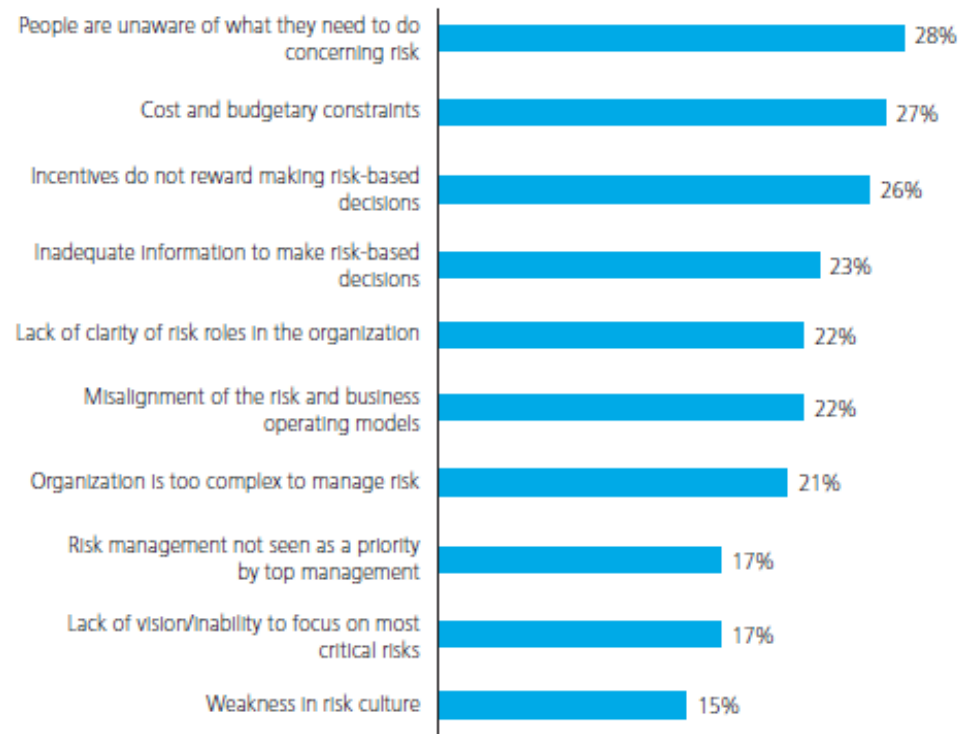
- **Lack of awareness is the most common barrier to effectiveness**
Twenty-eight percent of respondents said their main risk management challenge is that "people are unaware of what they need to do concerning risk," more than the percentage citing any other factor.
- **Risk management now lives in the C-Suite**
Twenty-six percent of respondents, a plurality, pointed to the CEO as the executive with primary responsibility for overall risk management; 23 percent named the CFO/Treasurer. Only 19 percent named the CRO/Head of Risk.
- **Risk management budgets are frugal, but not stingy**
About half of the respondents expect only minimal changes to risk management budgets for all risk categories. However, fewer than 15 percent of respondents across all risk areas thought that risk budgets will decrease over the next three years.



Risk management for value creation, not just value protection

The survey shows that awareness is a more significant challenge to effective risk management than available skills, technology or corporate culture. The largest group of respondents (28%) stated the main challenge is that “people are unaware of what they need to do concerning risk.”

Figure 5. What do you believe are the biggest challenges you face to effectively manage risk? (Top ten)



Note: Respondents could select more than one answer.

Climate change is “already altering markets, creating both new opportunities and new risks for companies...some companies and industry sectors will be more at risk than others, but all will be affected. **Only those companies that are prepared will thrive.**”

-Pew Research Center

"Severe weather in North America" – Munich Re Study

This just released study was prepared to support underwriters and clients in North America, the world's largest insurance and reinsurance market.

- For the period concerned – 1980 to 2011 – the overall loss burden from weather catastrophes was US\$ 1,060bn (in 2011 dollars). The insured losses amounted to US\$ 510bn, with some 30,000 fatalities due to weather catastrophes in North America during this time frame.
- The study reveals a nearly quintupled number of weather-related loss events in North America for the past three decades, compared with an increase factor of 4 in Asia, 2.5 in Africa, 2 in Europe and 1.5 in South America.
- The North American continent is exposed to every type of hazardous weather peril – tropical cyclone, thunderstorm, winter storm, tornado, wildfire, drought and flood. “One reason for this is that there is no mountain range running east to west that separates hot from cold air.”

At the same time, infrastructure resiliency and preparedness are at low points...making innovation a priority

In 2009, the American Society of Civil Engineers scored America's infrastructure on capacity, condition, funding, future need, operation and maintenance, public safety and resilience, resulting in the following grades:

www.asce.org/reportcard

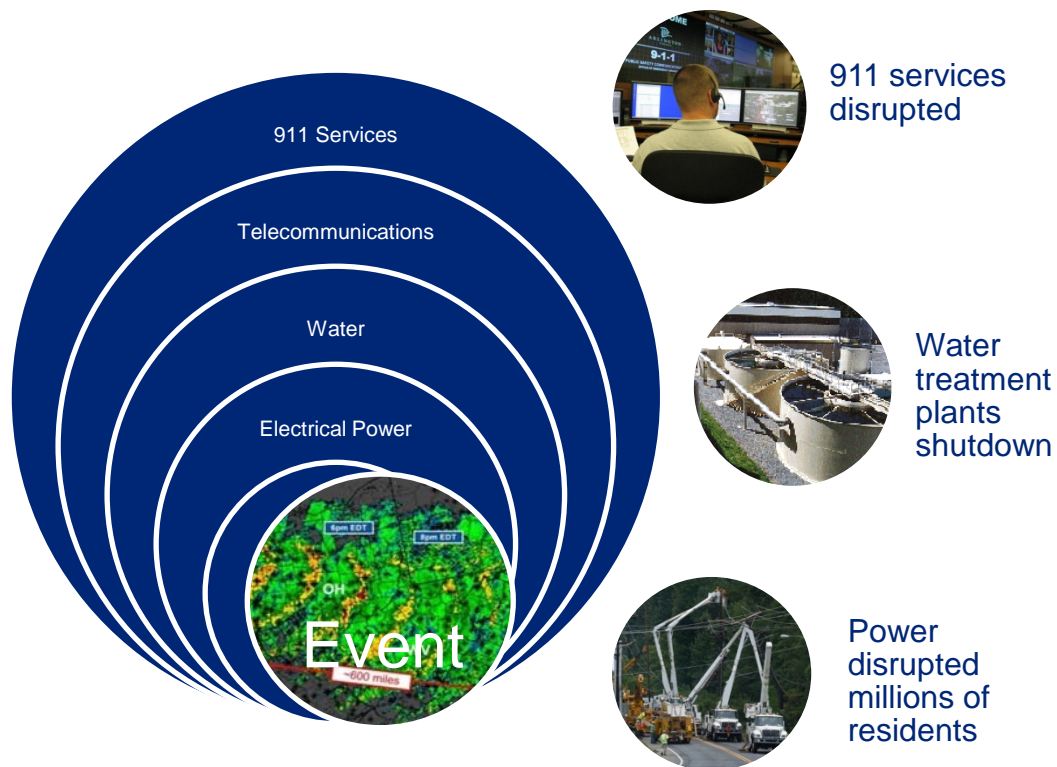
Aviation	D
Bridges	C
Dams	D
Drinking Water	D-
Energy	D+
Hazardous Waste	D
Inland Waterways	D-
Levees	D-
Public Parks and Recreation	C-
Rail	C-
Roads	D-
Schools	D
Solid Waste	C+
Transit	D
Wastewater	D-
America's Infrastructure G.P.A.	D

To improve America's critical infrastructure's rating to "good condition," it may likely take \$2.2 trillion over the next 5 years.

– www.asce.org/reportcard

A Local Recent Example of Extreme Event – Derecho

- June 29th Derecho
- Cascading impacts through DC Metropolitan Area
- Record-setting heat further impacted mass transit
- Exposed 20th century power grid as single point of failure for businesses, government services, and other dependent infrastructure
- Benefit to be derived from proactive risk management and investment in mitigating and adaptation strategies



Defining goals that incorporate protecting and creating value, and support effective reporting – we should seek Game Change not just Step Change actions

Ensuring continuity of operations and protection of physical and financial assets

Value Protection

Leveraging change to identify and develop new revenue-generating opportunities

Value Creation

Reporting

Meeting regulatory requirements to identify risks and develop and implement adaptation plans

A 'Bottom-Up' Methodology identifies, quantifies and prioritizes actions, And challenges 'business as usual'



- Identify Vulnerabilities



- Define Uncertainty



Will
Hurricane
Frost Rain El Nino
Drought Flood Blizzard
Monsoon
Tornadoes
Heat Wild Fire
Impact your business?

- Quantify Impacts



- **Prioritize Actions**



What

are your **alternatives**?

are the **costs and benefits**?

will determine which **actions to take**?

are the consequences of **inaction**?



New 1 Gigawatt power plant/week for next 20 years needed to meet demand

9 billion people by 2050

Are We Ready?

Increasing wealth = increasing demand

Urban sprawl + people leaving rural communities for cities

Global resource constraints

Deloitte.

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