

# GFIRST 2011

## How Eco Risk Management Can Help Predict Risk for Critical Infrastructure Businesses

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# Ecosphere Risk Management Background

- Current Environment
  - COSO, ISO, AS/NZS
- Drivers
  - Federal Government, SEC, rating agencies
- Need for new approach
  - No clear Enterprise Risk Management best practices
  - No means of measurement

# Ecosphere Risk Management

- The Ecosphere of Risk is the universe of risks that surround every business that can influence decision and affect planned outcomes.
- The Ecosphere of risk includes:

<b>External Risks</b>	<b>Internal Risk</b>
Competitive	Strategic
Legal/Regulatory	Reputation/Brand
Geopolitical	Third Party Contracting
Environmental	Human Resources
Financial	Process
Catastrophic Events	Information Technology

# The Ecosphere of Risk

## ERManaged Business (ERMB)

- Businesses fail by taking risk they do not identify, and/or don't fully understand, minimizing their ability to either avoid those risks or take steps to mitigate those risks
- The ERManaged Business™ considers the broad range of events that may alter expected outcomes and ensures that all business processes necessary to achieve expected results are designed to minimize the effect of adverse events and take advantage of opportunities.

# Ecosphere of Risk - Case Study

- The EcoRisk Institute is conducting case studies of companies within industries defined in Critical Infrastructure Sectors
- These sectors include:



Agriculture and Food



Commercial Facilities



Dams



Energy



Information Technology



Postal and Shipping



Banking and Finance



Communications



Defense Industries



Government Facilities



National Monuments



Transportation Systems



Chemical



Critical Manufacturing



Emergency Services



Public Health



Nuclear Facilities



Water Supplies

# Ecosphere of Risk - Case Study

- Currently the case studies includes companies within 3 Critical Infrastructure Sectors



- Agriculture and Food



- Energy



- Chemical

# Ecosphere of Risk - Case Study

- The study reviewed publically available data from the Item 1A - Risk Factors of each company's Annual SEC 10K filing
  - provides insight for investors into what public companies see as risk they must deal with over the coming year.
  - The information contained Item 1A should include a discussion of the most significant risks facing that company. (Regulation S-K Section 503)
  - Guidelines provided by the SEC state that risk should be disclosed across three major categories; Industry risk, Company risk and Investment risk.

# Ecosphere Risk Case Study - Findings

- A study of over 300 energy/utility companies SEC filings revealed
- 2,600,000 individual words used to describe risk across these 300 companies, the word “**security**” as related to **information** or **infrastructure** was only used 56 times
- “**cyber**” (as related to attacks) only 25 times and risk to “**trade secrets**” only twice

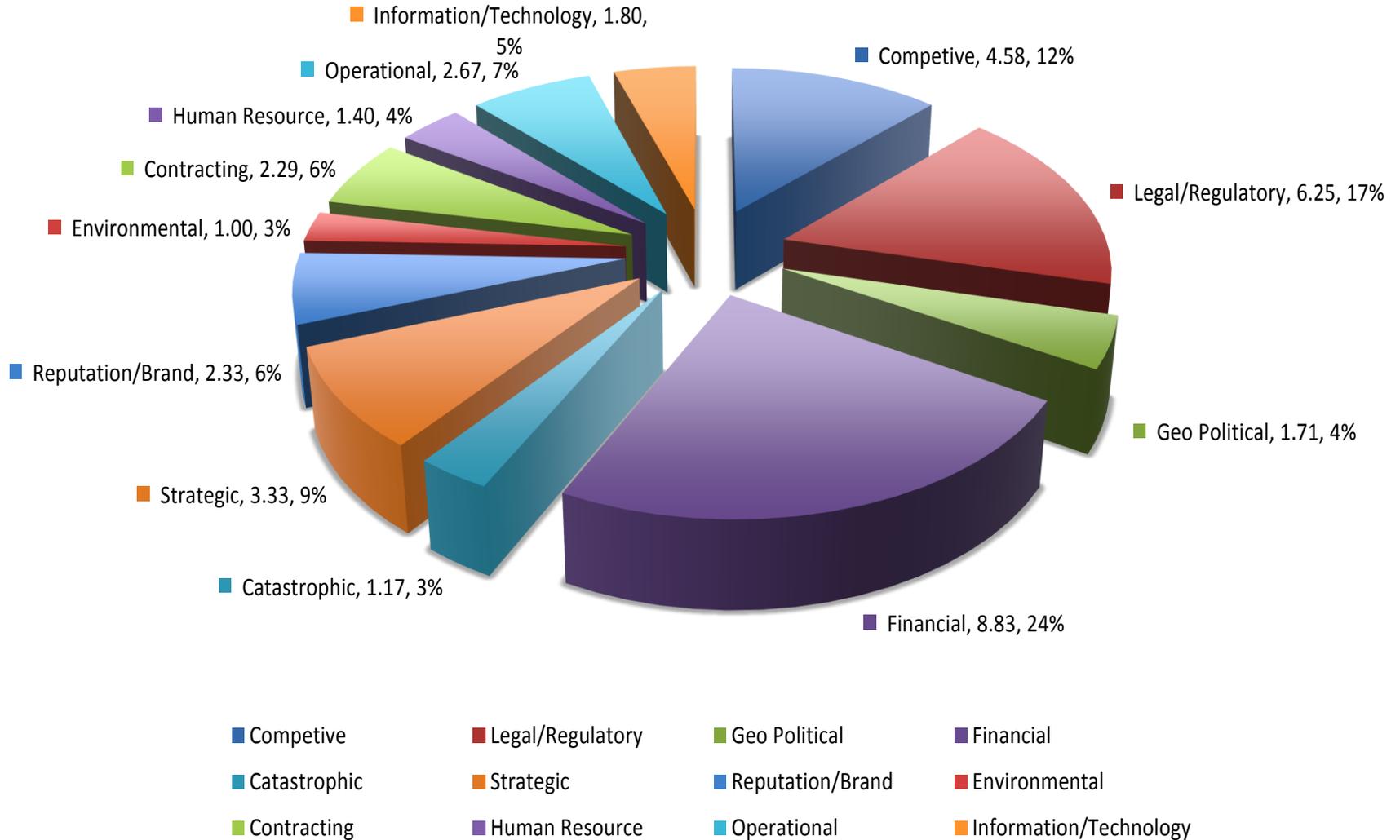
# Ecosphere Risk Case Study - Findings

- An average of over 8,000 words per risk factors discussion.
- Approximately 6,800 unique words.
  - “**costs**” are mentioned over 3,500 times
  - “**result**” - over 2,600 times
  - “**capital**” - over 1,500 times
  - “**cyber**” - 25 times
  - risk to “**trade secrets**” only twice
  - “**benefits**” - 90 times
  - “**strategy**” - 74 times
  - “**skills**” - 46 times
  - “**reputation**” - 43 times
  - “**aging**” - (as related to the work force) - 35 times
  - “**innovation**” – 9 times

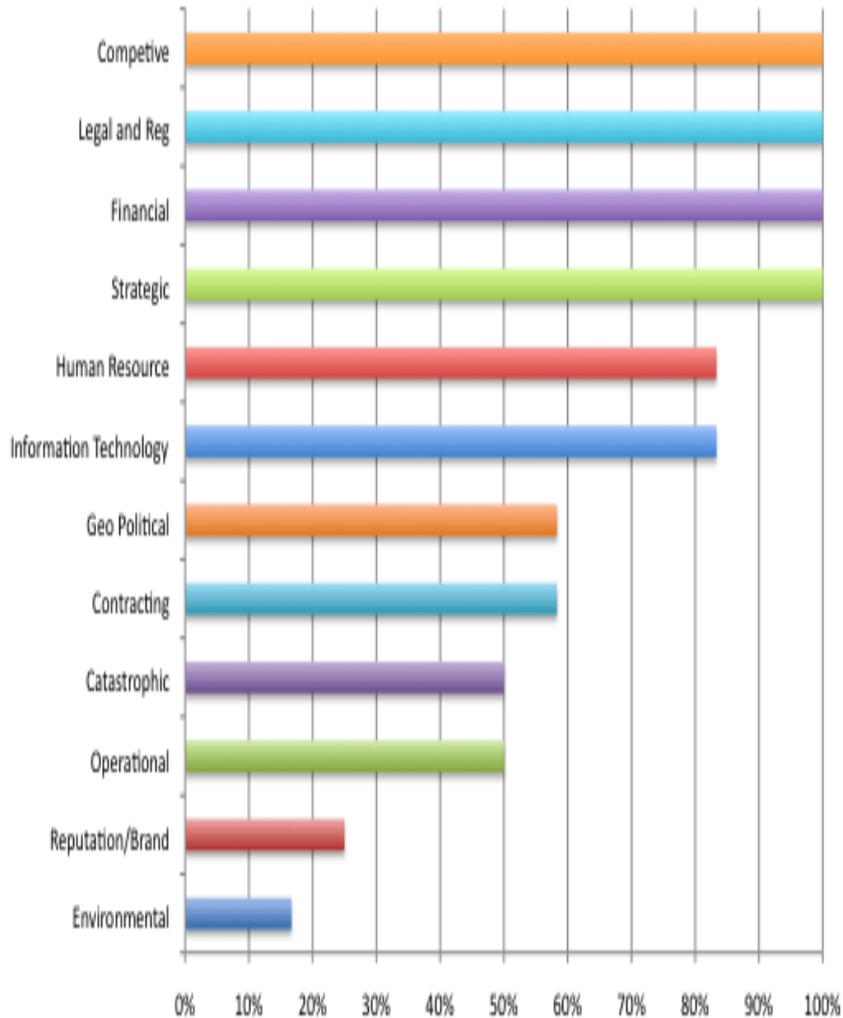
# Ecosphere Risk Case Study - Findings

- A number of words are used about the same number of times.
  - “**terrorism**” is used approximately 600 times or about the same number of times as the word “**weather**”
  - “**mergers**” and “**acquisitions**” about the same number of times as “**hurricanes**” and “**tornados**” about 125 times each
  - “**taxes**” and “**technology**” comparable at 250 times each
  - this may lead the reader to believe that the risk of “**terrorism**” is roughly equivalent to the risk of bad “**weather**”

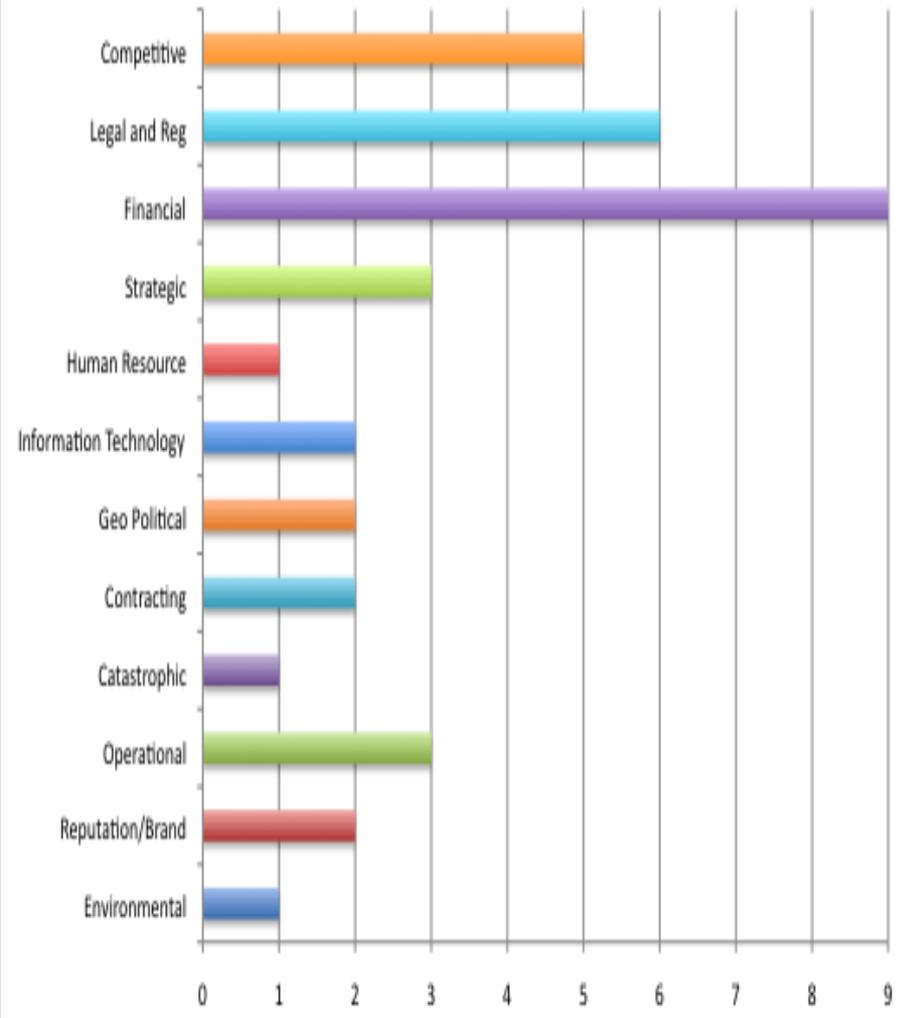
## Average distribution of risk factors disclosed



### Percent of companies disclosing risk factors for:



### Average number of comments when disclosed



# Ecosphere Risk Management Conclusions

- SEC Categories currently too broad to be useful
- Expanding risk category analysis reveals holes
- Risk factors need be categorized/prioritized
- Analysis of risk factors can be a predictive tool
- Leads to the development of new risk rating gaming processes and tools

# Ecosphere Risk Management

THANK YOU  
QUESTIONS?

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