

PREVENTING CATASTROPHE IN ORGANIZATIONS

Anne Kleffner, University of Calgary

Max Wang, Suncor Energy

George Campbell, Fall Line Systems

PREVENTING CATASTROPHE IN ORGANIZATIONS

AGENDA

- Recent research
- Barriers to prevention
- Overcoming the barriers
- Q & A and discussion

RISK MANAGEMENT PROCESS: FIVE TYPES OF FAILURE

- Identify and measure risks
 - Risk measures may be inappropriate
 - Known risks can be mis-measured
 - Important risks can be ignored
- Communicate risks
 - Failure to communicate risk to management
- Decide how much and which risks to take
 - Failure to monitor and manage risks
 - Only take acceptable risks, ensure they remain within established guidelines

Stulz, Rene. "Risk Management Failures: What Are They & When do they Happen?" (2008) *Journal of Applied Corporate Finance*.

WHAT CAUSES ORGANIZATIONAL DISASTERS?

“Organizational disasters, studies show, rarely have a single cause. Rather, they are initiated by the unexpected interaction of multiple small, often seemingly unimportant, human errors, technological failures, or bad business decisions. These latent errors combine with enabling conditions to produce a significant failure ...

Near misses arise from the same preconditions, but in the absence of enabling conditions, they produce only small failures and thus go undetected or ignored.”

Tinsley, Dillon and Madsen “How To Avoid Catastrophe” (2011) *Harvard Business Review*.

RECOGNIZING AND PREVENTING NEAR MISSES

- Heed High Pressure to Meet Goals
- Learn from Deviations
- Uncover Root Causes
- Demand Accountability
- Consider Worst Case Scenarios
- Evaluate Projects at Every Stage
- Reward Owning Up

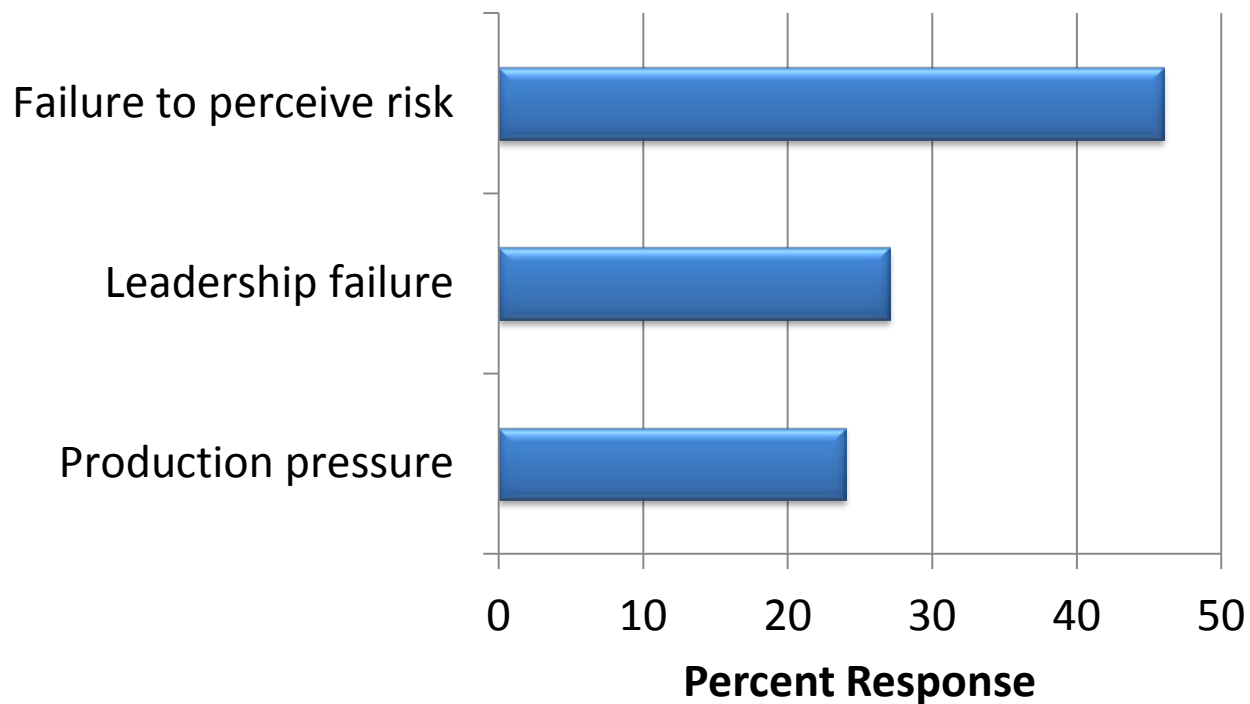
Tinsley, Dillon and Madsen “How To Avoid Catastrophe” (2011) *Harvard Business Review*.

OVERVIEW OF THE FALL LINE RESEARCH STUDY

- Research conducted in 2011
- Delphi study, with three rounds of input, each building on the previous report
- Expert Group
 - 22 participants
 - Mostly Alberta-based, also New England, New Brunswick, UK, Europe
 - Board members, senior executives, senior operations leaders, advisors
 - Pipelines, offshore drilling, oil and gas production, upgrading, refining, major construction, high speed rail, nuclear plant inspection, regulator
 - People who are known to deal successfully with high risk, complex projects and operations

BARRIERS TO PREVENTIVE ACTION

Key Barriers to Preventive Action



BARRIER 1: FAILURE TO PERCEIVE RISK

- Inadequate risk assessment systems and processes
- Short term focus
- Normalization of deviance
- Complacency
- Silos

BARRIER 2: LEADERSHIP FAILURE

- Senior leaders
 - “Lack of buy-in, particularly from senior management”
 - “Weak management who cannot comprehend the risks”
 - “Lack of operational experience, technical skills”
- Flawed management systems
 - “Lack of clear accountability, discipline or strategy”
 - “Lack of a cohesive set of standards and procedures”
 - “If individual behaviours are not aligned, then preventive action is compromised”

BARRIER 3: PRODUCTION PRESSURE

- Delay to schedule
 - “It takes time to plan”
 - “It takes time to look at root causes”
 - Requires “a radical modification in the way a corporation functions”
- Cost of preventive action
 - “Preventive actions are seen as a cost rather than a cost savings”

SINCERE MANAGEMENT SUPPORT

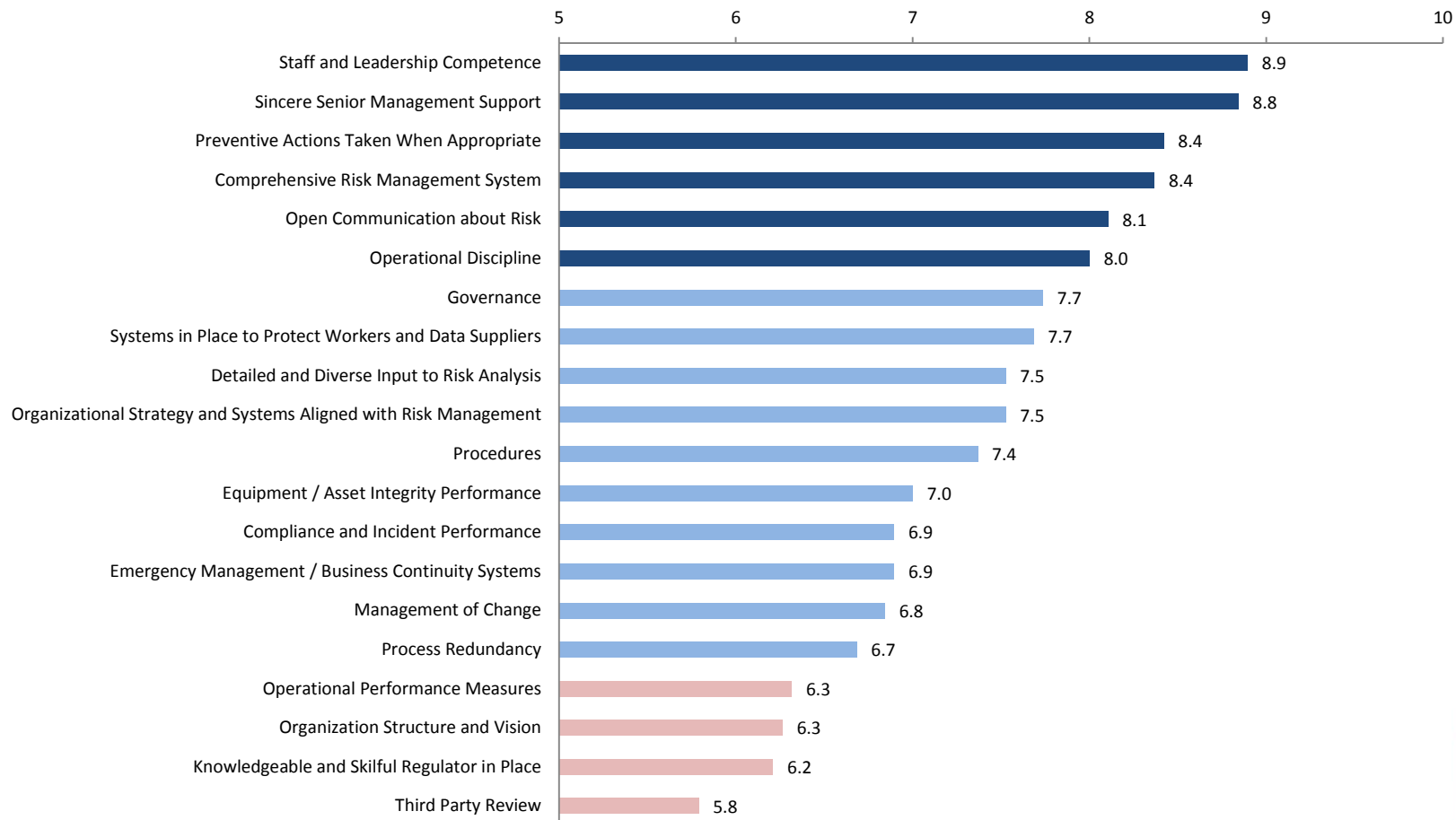
- Preventing catastrophe has more to do with **leadership action**, management competence, operational discipline and open communication than it does systems, equipment and compliance
- **Walk the talk**: different RMS roles at each level
- **Keep balanced**: production pressure and prevention pressures
- **Fight risk blindness**: actively look for risks
- **Avoid risk deafness**: encourage two-way communication re risk

ONE VIEW OF SINCERE MANAGEMENT SUPPORT

“Board and senior Executive team ‘walking the talk’ about RMS all the time even if it costs more, reduces earnings, disappoints shareholders or analysts or results in dismissal of a senior executive. RMS can’t be seen as being implemented only ‘when it doesn't hurt.’”

ORGANIZATIONAL CAPABILITIES FOR PREVENTION

Scorecard Elements--Sorted by Average Weight



TOP 6 ORGANIZATIONAL CAPABILITIES FOR PREVENTION

Note: All 20 capabilities are important. None can be zero or negative

MORE INFORMATION

- **Research reports:** interim reports posted now, final report soon
 - www.fall-line.ca
 - (403) 228-6623
- **Course on Preventing Catastrophe**
 - University of Calgary, Continuing Education
 - May 29-30, 2012
 - (403) 220-2866

