

# RISK MANAGEMENT: THE FUTURE OF QUALITY

Greg Hutchins  
Quality + Engineering  
March 15, 2011

# Who is Quality Plus Engineering?

## Q+E Background:

Critical Infrastructure Protection: Forensics, Assurance, Analytics® - US Department of Homeland Security Safety Act Certified

Q+E technologies are DHS 'Qualified Anti-Terrorist Technologies'

QualityPlusEngineering.com

## Greg Hutchins's Background:

Licensed professional engineer (WA/OR)

Author of 12 books, including **ISO 9000** (8 languages), **Standard Manual of Quality Auditing, Supply Management Strategies**

Developer of Certified Enterprise Risk Manager® Certificate

Developer of Value Added Auditing®

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## Partial Client List:

- Federal Aviation Administration (FAA)
- Bonneville Power Administration (BPA)
- Midwest Reliability Organization
- Department of Homeland Security
- Department of Energy
- Pacific Corp.
- Port of Seattle
- Coca Cola
- MI SWACO
- Freightliner (Daimler Chrysler)
- First Data Corporation
- Microsoft
- Boeing

# Q+E DHS Certification



# Agenda

- It's a VUCA world
- Role of quality in the VUCA world
- Integration of risk and quality management
- What does risk management look like?





# The New York Times

Tuesday, March 15, 2011 Last Update: 6:21 PM ET



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Global Edition

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Weddings/  
Celebrations  
**TRAVEL**

All Blogs  
Cartoons  
Classifieds  
Corrections  
Crossword /

**BREAKING NEWS** 6:13 PM ET **Japanese Officials Report New Fire at Daiichi Nuclear Plant**

## Workers Strain to Retake Control After Blast and Fire at Japan Plant

 **TIMESCAST: AFTERMATH** **NEW**  **TIMESCAST: THE WORKERS** **NEW**

 **PHOTOGRAPHS**



The Times's Mac William Bishop: A fishing village after the earthquake and tsunami.

### Radiation Level Falls but Fuel Rods Stay Dangerously Hot

By HIROKO TABUCHI and KEITH BRADSHAW  
20 minutes ago

A small crew of technicians braved radiation and fire on Tuesday as they fought to prevent three reactors from

### Certainties of Modern Life Upended in Japan

By KEN BELSON 3:54 PM ET  
Tokyo residents are learning that things they have taken for granted can quickly slip beyond their reach.

• Overwhelmed by Toll, Coastal Town Shifts Focus to Survivors

### Stocks Slump Worldwide as Investors Flee Risk

By GRAHAM BOWLEY and JAVIER C. HERNANDEZ  
4:33 PM ET  
Japan's nuclear disaster, the latest blow to the global growth

### OPINION »

**Fixes: How to Protect Foreign Aid? Improve It**  
A new approach to foreign aid, Cash on Delivery, would base payments on results and give poor countries the freedom to develop their own solutions.

- Brooks: The Ike Phase
- Comments (357)
- Herbert: Change Football
- Editorial: Japan's Multiple Calamities
- Fish: So's Your Old Man
- Kristof: Help Me Choose My Win-a-Trip Winner!

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### WHAT'S POPULAR NOW

- Photos of Japan After Earthquake and Tsunami - Photographs
- Let Kids Rule the School





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# Today's New York Times's Headlines

■ (March 15, 2011)

- “Worker’s Strain To Retake Control After Blast and Fire at Japan Plant”
- “Radiation Level Falls But Fuel Rods Stay Dangerously Hot”
- “Japan Confronts Multiple Crises as Death Toll Rises”
- “Stocks Slump as Investors Flee Risk”
- “Two Protesters Dead as Bahrain Declares State of Emergency”

# Questions



What's the common theme to the headlines?

Why is there so much uncertainty?

What's the solution?

We need to understand VUCA.



# Who Invented VUCA?



## FOG OF WAR

Only those that have put their life on the line get to second guess a soldier in the field.



# Volatility

Nature and dynamics of change, and the **nature and speed of change forces** and change catalysts.



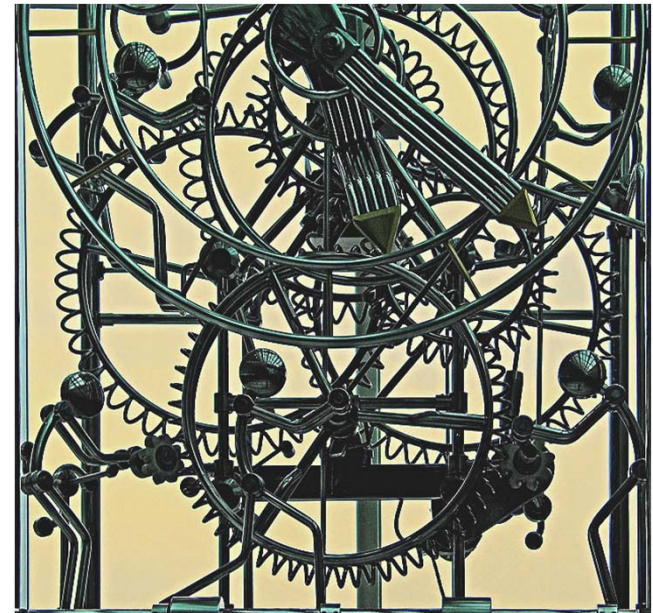
# Uncertainty

**Lack of predictability**, the prospects of predictability, the prospects for surprise, and the sense of awareness and understanding of issues



# Complexity

Multiplicity of forces,  
the confounding of  
issues and the  
**chaos and  
confusion** that  
surround an  
organization or  
unknown situation



# Ambiguity



Fog of reality, the potential for misreads, and the mixed meaning of conditions; **no action; cause and effect confusion; lack of clarity,**

**I DON'T  
KNOW  
WHAT I'M  
DOING**

# Let's Look At Quality VUCA?



- MBNQA is now Baldrige Performance Excellence Program
  - ▣ Program funding is now being questioned
- Global registrars are now risk shops
  - ▣ DNV, BSI, Lloyd's, etc.
- Quality assurance is moving to business assurance
- What other

# Quality Registrars



MANAGING RISK



# MBNQA

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# Risk Based Standards



- ❑ ISO 28000. Supply chain security.
- ❑ ISO 27000. IT security.
- ❑ ISO 22000. Food Safety
- ❑ FAA. Safety Management System.
- ❑ AS 9100 Aerospace.
- ❑ Etc.

# It's a VUCA World



A close-up photograph of a person's hand reaching towards a small white die on a dark, reflective surface. Several other white dice are scattered around, some showing different faces. The background is blurred, showing a black chair and a wall.

# **Risk Management— The Future of Quality**

**Mitigating risk requires a different  
mindset than ensuring quality.**

**by Greg Hutchins**



We are moving from a **linear world** of **known problem solving** and **clear decision making** to a **dynamic world** of **sense making**, **risk based decision making** in VUCA land.

# Volatility – New School Solutions

## Old School

- Is inwardly focused, accepts status quo
- Blind to cause and effect relationships

## New School

- Thinks about tomorrows risks before they happen
- Continually assessing risks, looking for the Black Swan Event



# Uncertainty - New School Solutions

## Old School

- ❑ Cling to safe, existing processes even when they are inadequate
- ❑ Rely on past solution to solve today's issues

## New School

- ❑ Develops new, capable, and transforming processes
- ❑ Recognizes opportunities to experimentally change processes and seeks to



# Complexity – New School Solutions

## Old School

- Looks at the issue, but ignores the environment, context, and potential causes
- Struggles to understand the entire issue prior to moving forward

## New School

- Considers the context of the issue & the environmental relationship
- Define what's in/out of scope and clearly outlines the issue at hand





# Ambiguity - New School Solutions

## Old School

- Uncomfortable with ambiguity, seeks out structure & direction
- Unable to identify the

## New School

- Use ambiguity to innovate and find a competitive advantage
- Has a sense for



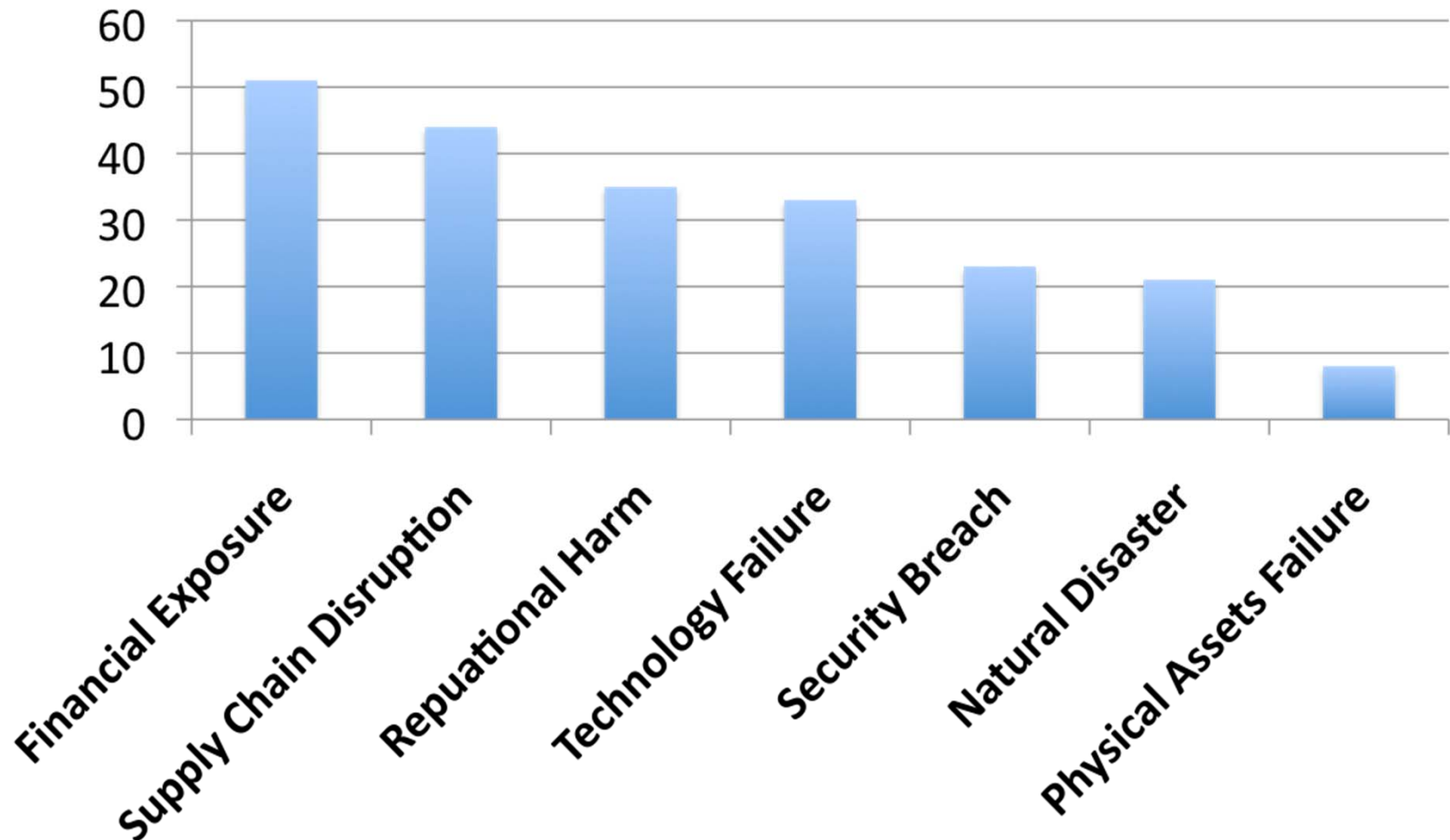
# Harvard Business Review – Adaptive Leadership

“Military leaders **need new tools and techniques to face a fast-changing and unpredictable** type of enemy—so the armed services train their officers in ways that build a culture of readiness and commitment. **Business leaders need just such a culture to survive and succeed, given that they, too, face unprecedented uncertainty**—and new types of competitors.”

Source: Harvard Business Review,  
*Four Lessons in Adaptive Leadership*, November 2011,



# Top Enterprise Risks



Source: CFO Research Services, June 2010; each response had 3 choices.

# Discussion: Korn Ferry Risk Survey

**1) Are senior executives and directors in your company spending more time on risk management?\***

(Number of responses: 205)

Yes, they are spending more time (117)	57%
No, they are spending less time (29)	14%
There has been no change (54)	26%
Unsure (5)	2%

*\*Due to rounding, responses do not equal 100 percent.*

**2. Has your company improved the quality and timeliness of information shared with the Board to assist with decision making and better risk management?**

(Number of responses: 264)

Yes, it has improved (154)	58%
No, it has worsened (32)	12%
There has been no change (70)	27%
Unsure (8)	3%

**3. Who has direct responsibility for risk management at your company?\***

(Number of responses: 533)

Chief Executive Officer (227)	43%
Chief Operating Officer (99)	19%
Chief Risk Officer (108)	20%
Lead Director (41)	8%
Other (58)	11%

# Discussion: Korn Ferry Survey

**4. Will expanding and increasing aggressive federal securities oversight affect the composition of your board?**

(Number of responses: 674)

Yes (270)	 40%
No (404)	 60%

**5. Will the recent, heightened attention on corporate reputation risk affect your board's view of reputation risk management and crisis preparedness?**

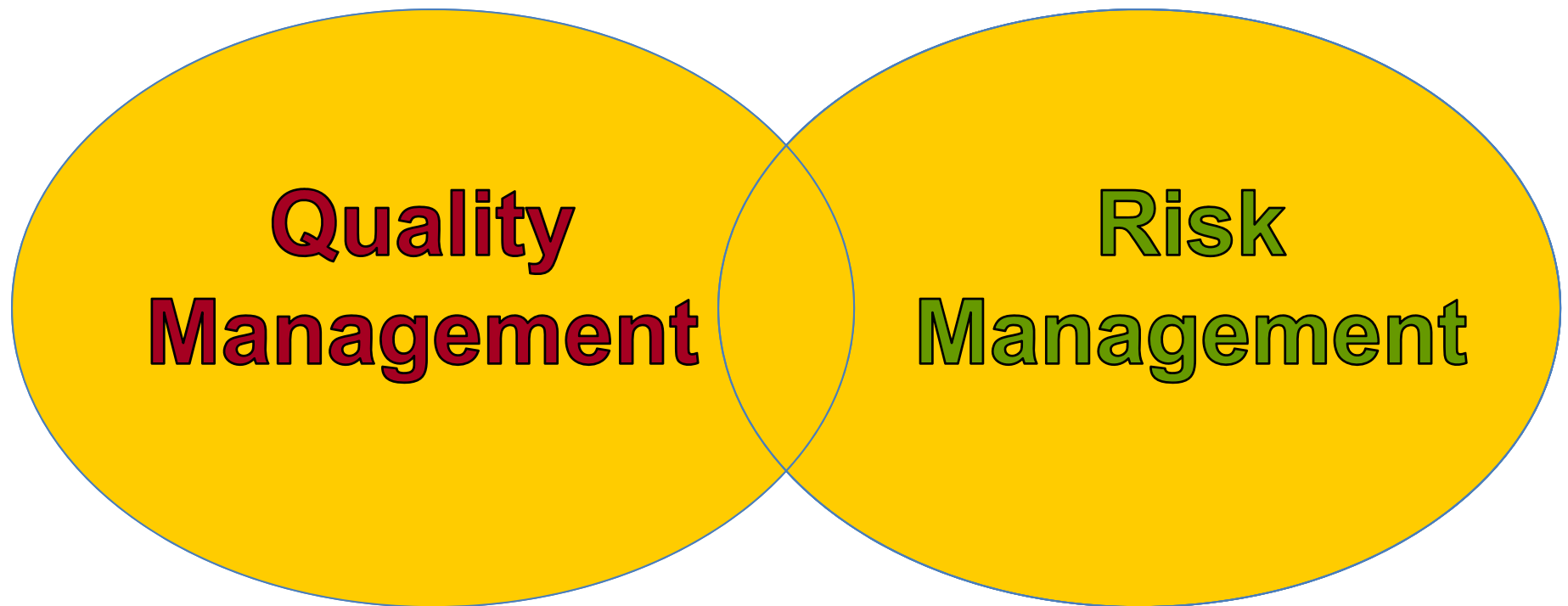
(Number of responses: 441)

Yes (259)	 59%
No (125)	 28%
Unsure (57)	 13%

Source: Korn Ferry, July 2010

# Linkage Between Quality and Risk Management

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# Quality Management

- Process of designing and executing products and services effectively and efficiently
  - **Effectiveness** primarily involves the ability of the products and services to meet or exceed customers' expectations
  - **Efficiency** involves the ability to provide products and services without wasting any resources
  - **Economics** involves the ability to generate requisite revenues





# Risk Management

Process of identifying, addressing, prioritizing, and eliminating potential sources of failure

Risk management is being:

- Proactive
- Preventive
- Predictive
- Preemptive



# Chinese Characters for Risk

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- Two risk characters:
  - ▣ Upside risk: Opportunity
  - ▣ Downside risk: Danger

风险

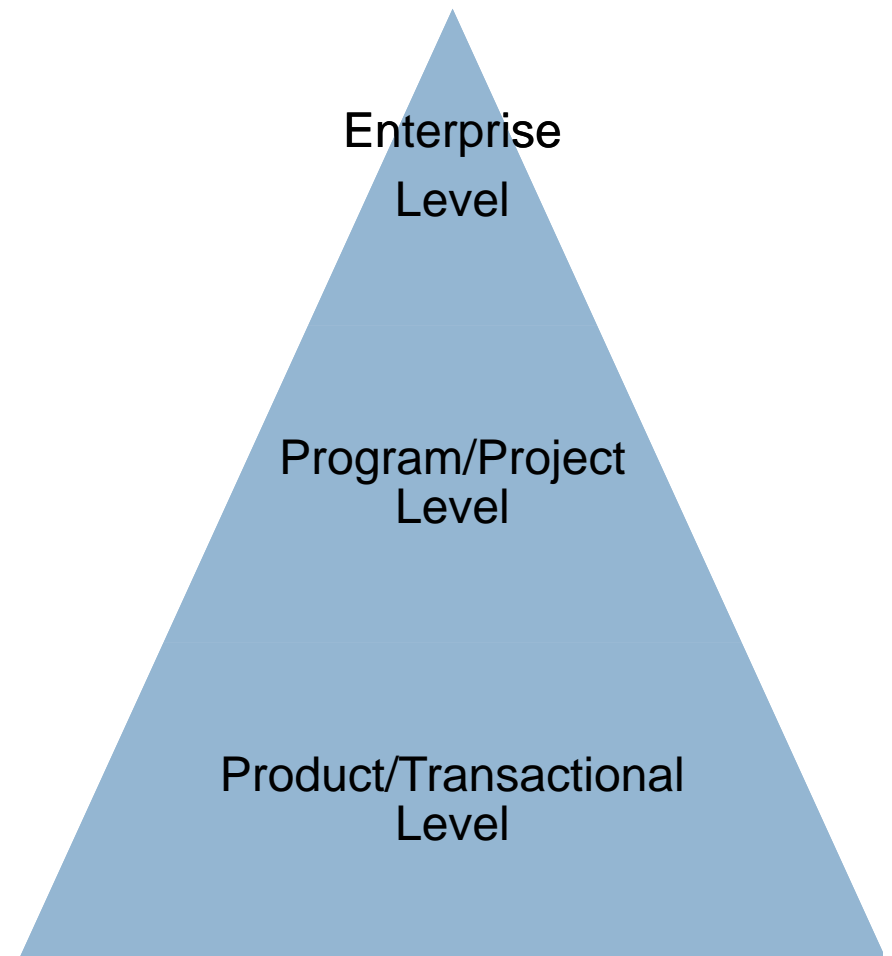
# What is Enterprise Risk Management?

- Committee of Sponsoring Organizations (COSO) definition

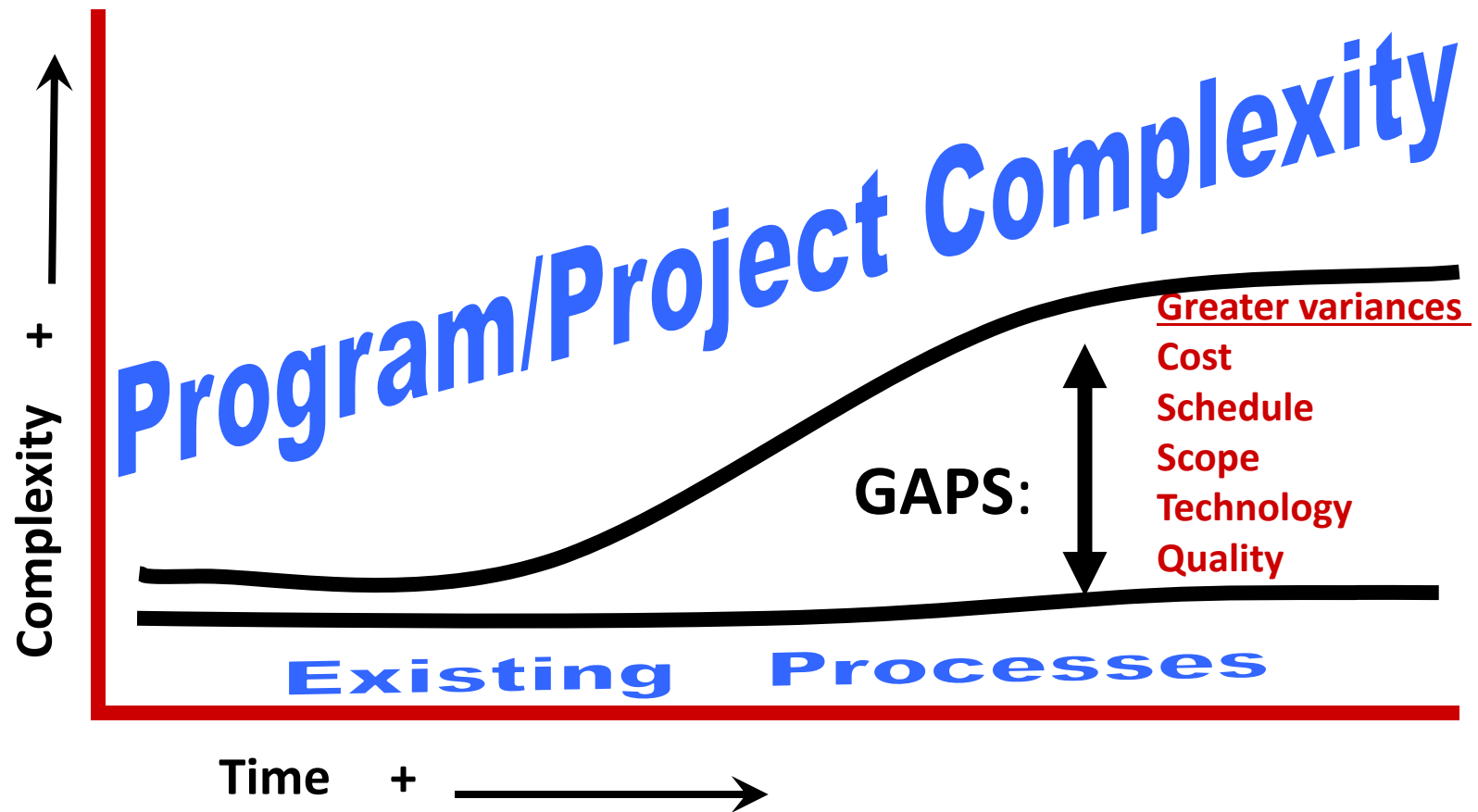
“A process affected by an entity’s **board of directors**, management, and other personnel, applied in **strategy setting** and **across the enterprise**, designed to identify potential events that may affect the entity, and manage risks to be **within its risk appetite**, to provide **reasonable assurance** regarding the **achievement of entity objectives**.”

# Types of Operational Risks

- **Enterprise risk** – Risk related to the operation of a business, execution strategy, systemic issues, material issues, etc.
- **Project risk** – Risk related to the planning and delivery of a product or service and not being able to meet project ‘triple constraints’ – scope/quality, schedule, cost including technology others.
- **Process risk** – Risk relating directly to planning and delivery of a product or service and not being able to meet 1. stability, 2. capability, 3. improvement; inability to achieve consistent outcomes.



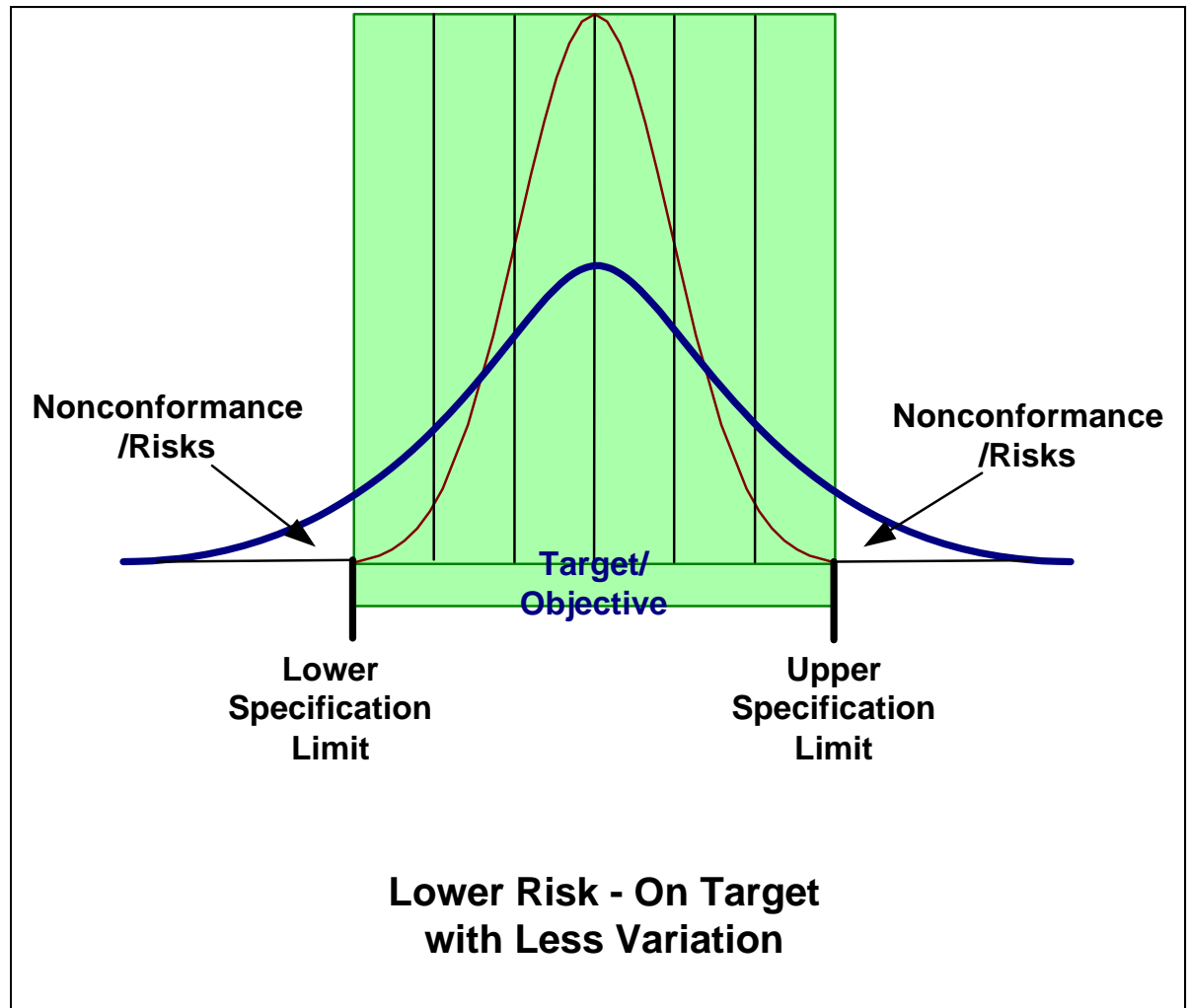
# Why Manage Risk?



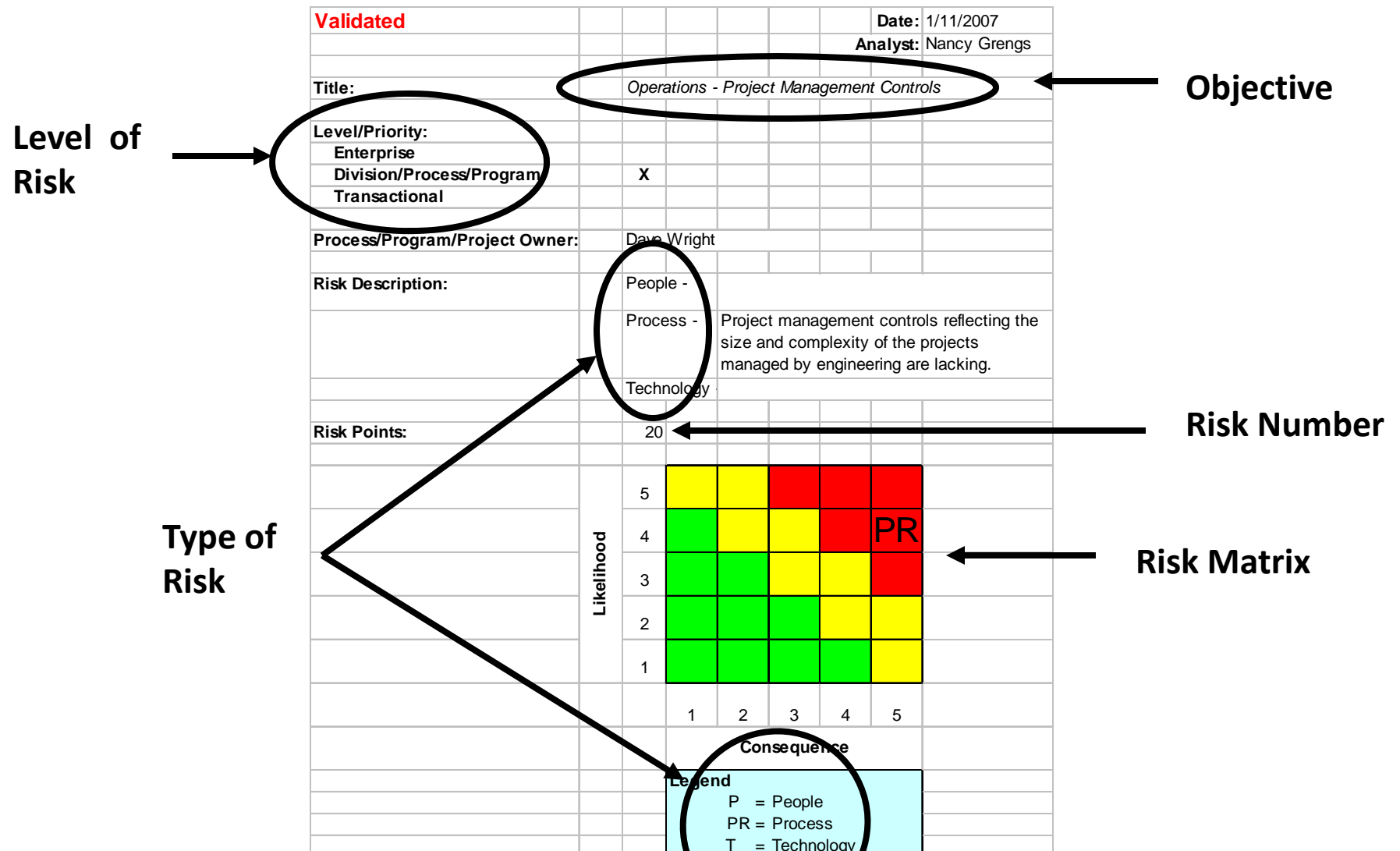
# Objective Gaps => Higher Deltas => Higher Risk

□ More  
variances

□ Higher  
variation

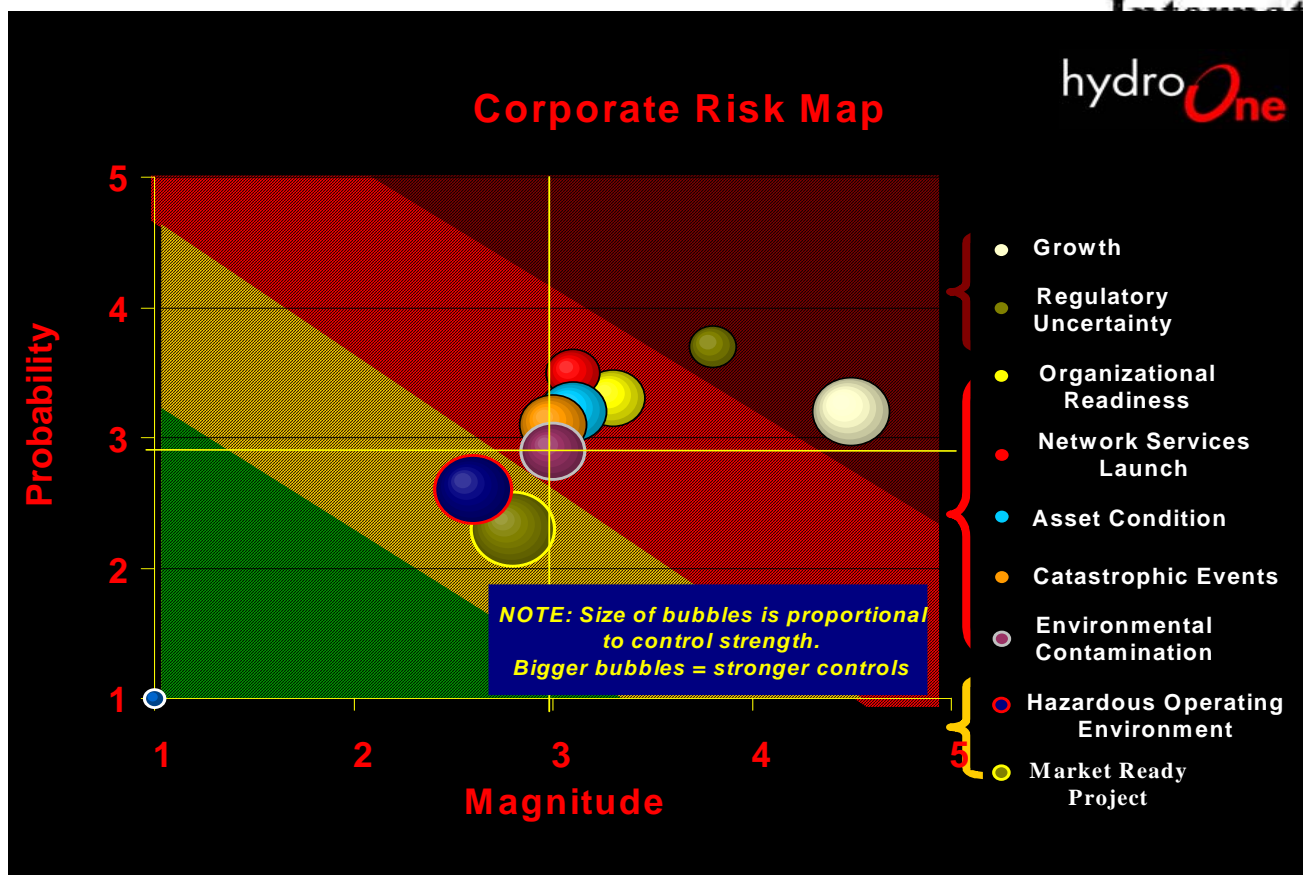


# Risk Map Structure





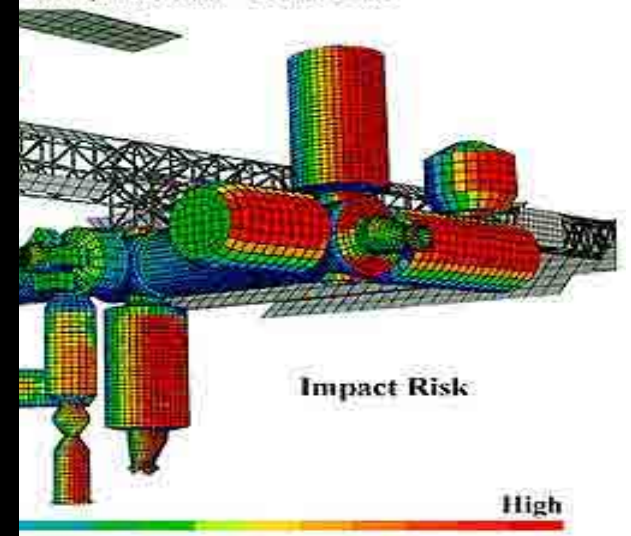
# Qualitative Analysis: Heat Maps



hydroOne

International Space Station

No Impacts From a > 1 cm Ø Debris



# Quantitative Analysis

## Quantitative Analysis:

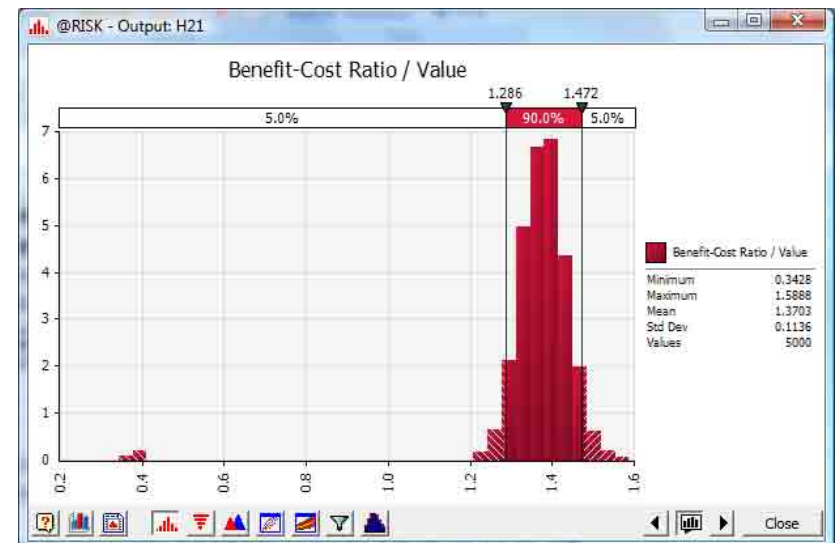
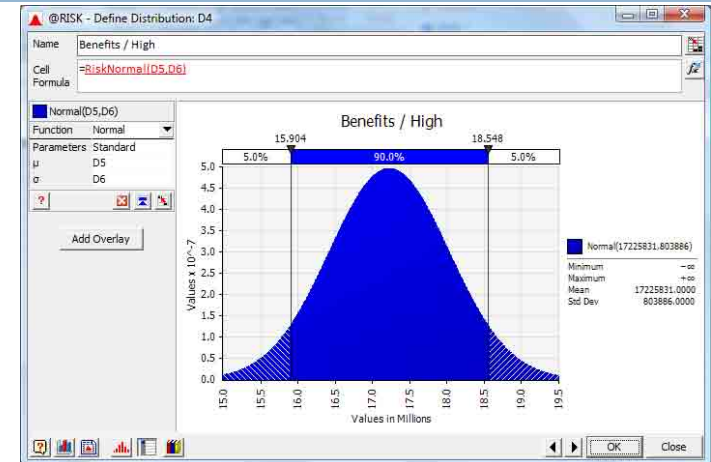
Relies on numerical values

Uses objective data to determine values

Requires an understanding of probability

Removes some uncertainty

Should be based on historical or scientific data



# Certified Enterprise Risk Manager®



- Q+E proprietary certificate program
- Purpose:
  - ▣ Operational risk management
- Foundation workshops:
  - ▣ Enterprise Risk Management™
  - ▣ Process Risk Management™

# Key Questions



So, what do you think is the future of quality?

What is the role of risk management in quality?