

Four Dimensions to Effective Safety Management

VPPA Conference

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MANAGING RISK 

Objective 

**To enable your organizations to make
better risk decisions when it comes to
protecting life, property and the
environment.**

MANAGING RISK 

Improving Safety 



The primary objective of a safety management system is to provide a thorough understanding of the organization's risk profile, specifically as those risks affect people, property, process and the environment, and to provide the means necessary to proactively control those risks.

MANAGING RISK 

Standards and Guidelines

ISO9000:2000

ISO14000



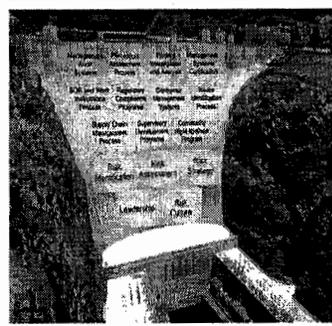
OHSAS

<ol style="list-style-type: none"> 1. General Policy 2. Management Control Planning 3. Loss Exposure Identification and Evaluation 4. Regulations and Permits to Operate 5. Design of Products and Services 6. Organizational Structure and Responsibility 7. Training 8. Communications and Promotion 	<ol style="list-style-type: none"> 9. Documentation and Records 10. Operations Control 11. Inspection and Testing 12. Rules and Work Orders 13. Logistics and Contractor Management 14. Emergency Preparedness 17. Management Review
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MANAGING RISK 

Guidance from the ISO 18000 effort (failed)

Building a System



Functions of A Dam

- ❖ Control Flooding
- ❖ Produce Electricity
- ❖ Irrigation Source
- ❖ Recreation

MANAGING RISK 

Risk



Chance of Loss

MANAGING RISK 

Four Dimensions

MANAGING RISK

Culture

- Corporate Values and Beliefs
- Norms and Assumptions
- Fear
- Appetite for Improvement
- Risk Tolerance
- Management Style
- Ethics
- Competitive Spirit

MANAGING RISK

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Experience

- Major Losses (Accidents)
- EHS Record (Good or Bad)
- Fines and Legal Actions
- Business Results and Profitability
- Industry Experience
- Personal History

MANAGING RISK

Systems

- Financial and Reporting of Financial Results
- Change Management
- Certifications (ISO)
- Project Management
- Communications

MANAGING RISK

Environment

- Physical Characteristics
- Process
- Organizational Infrastructure
- Political and Social Issues
- Regulations and Standards
- Market
- Competition

MANAGING RISK

Application

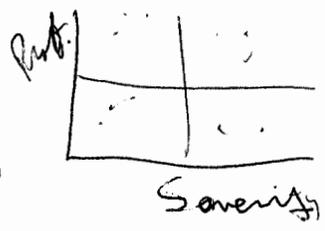
How well does your organization understand and use each of these dimensions in its decision-making process?

MANAGING RISK

Identify Risks : (What to do?)

- Terminate Risk (Chronic substantive)
- Treat it New or better technology (Treat it)
- Tolerate (need to understand it or tolerate it)

Severity
Probability
Frequency



Terminate, Treat, Tolerate

Improving Safety



The primary objective of a safety management system is to provide a thorough understanding of the organization's risk profile, specifically as those risks affect people, property, process and the environment, and to provide the means necessary to proactively control those risks.

MANAGING RISK 

THANK YOU

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MANAGING RISK 



Evaluating How Well Your Organization Utilizes Experience

As a means to evaluate how well your organization utilizes experience, indicate with a check mark which of the following pairs of statements is more true. If both are somewhat true, which is more true? If both are false, which is less false?

1. Walking backwards into the future

- A. We don't track or evaluate past experience—"every day is a brand new world!"
- B. Key experience indicators have been identified, and past experience is tracked and evaluated as input to decision making.

2. Learning from others

- A. We have to touch it to know it's hot.
- B. We have an active "lessons learned" process to collect, analyze, and communicate experience within and between groups in the organization.

3. Industry experience (good and bad)

- A. It isn't meaningful if it didn't happen here.
- B. Our "lessons learned" process to collect, analyze, and communicate experience extends to the experience of others.

4. Using experience to understand your "R"

- A. Decisions are made in the "ivory tower," away from the distracting influences of the shop floor.
- B. We actively involve all levels of the organization in gathering information to add to our knowledge base of experience, so that decisions are based on the best-available data.

5. Reacting only to major events

- A. The level of attention paid by decision makers and the speed and magnitude of their reactions are determined by the size of the actual profit or loss experienced.
- B. Potential profit or loss experiences ("what could have happened if . . . ?") are integrated into the decision-making and action-planning processes.

6. Knowledge creation and the rewards structure

- A. Length of service and line promotions are the only determinant of compensation level.
- B. Project team leader (or "Knowledge Engineer") is a viable career move.

7. Experience and knowledge is valued

- A. Organizational size and structure and manpower decisions are based mainly on "head count."
- B. Processes are effectively used for accessing sources of experience and knowledge (internal or external), transferring these assets ("mentoring"), and capturing more data (observation and documentation), to ensure that the organizational experience and knowledge base is continually enhanced.

8. Dealing with standards and regulations

- A. We regard new standards and regulations as a necessary evil.
- B. We find ways to comply with standards and regulations that also improve our processes.

9. How you design your systems

- A. There is probably a system that will solve any problem, if you can just find it.
- B. Experience is a critical ingredient in determining which systems are needed.

10. Experience establishes patterns and culture

- A. The organization takes a laissez-faire approach to the impact of experience on its (and its employees') response patterns and culture.
- B. The organization actively monitors and responds to the impact of experience (counteracting the impact of negative experiences, e.g., loss of market share, and reinforcing the impact of positive experiences, e.g., exceeding profit expectations).

11. Interactions among individuals as opportunities to share tacit knowledge

- A. "Everyone is an island."
- B. We encourage and enhance experience sharing to enable people to learn from one another.

12. Perception of and learning from interpretation of experiences

- A. Experiences are essentially viewed as "one-off" events.
- B. A "lessons learned" process is in place that collects and evaluates individual and organizational perceptions of experiences and interprets, communicates, and applies the lessons to like, similar, and even dissimilar future situations.

Count the number of "B's" you checked _____. Divide that number by 12 _____ to arrive at a rough score of how well your organization utilizes experience. Each "A" that you checked could indicate an opportunity for improvement.

Evaluating Your Systems Influences

As a means to evaluate how well your organization utilizes its systems, indicate with a check mark which of the following pairs of statements is more true. If both are somewhat true, which is more true? If both are false, which is less false?

1. Effectiveness versus efficiency of systems

- A. Systems are not evaluated for either effectiveness or efficiency.
- B. Effectiveness (how well are they doing what they should) and efficiency (bang for the buck) of our systems are both evaluated regularly against established expectations.

2. Systems inertia (creation, maintenance, change, and necessary momentum for each)

- A. We build systems to last.
- B. We understand that in the current competitive environment our systems have to be flexible.

3. Cost of systems

- A. We do not know the cost-benefit ratios of our systems.
- B. Cost-benefit assessments are a part of the output measurements of each system.

4. Motivation for having systems, e.g., political, individual, corporate level

- A. We love systems so much that we keep trying new ones.
- B. The motivation for each system must be clearly established and justified.

5. Use of systems for innovation versus control

- A. Systems are used to restrict unapproved actions.
- B. Systems are the framework that defines working inside and outside the box.

6. Means versus an ends

- A. Our systems tend to become ends unto themselves.
- B. Our systems are only means to achieve other ends.

7. Transparency (objective of system)

- A. If you asked why we do things a certain way the answer could very well be "Just because" or "We've always done it that way."
- B. Most of our people can tell you the real purpose of the systems affecting their work.

**8. Synergies and vice versa**

- A. Each of our systems tends to be "stand alone"
 B. The synergistic aspects of our systems are a crucial concern.

9. Recognition in the market (certification)

- A. We have not really used certification of our systems for recognition in the marketplace.
 B. We use certifications as demonstrations of our potential for reliability in providing goods and services.

10. Systems shape and are shaped by culture

- A. We have some undesirable aspects of our culture that seem to be locked in place by our systems.
 B. We try to ensure that our systems reinforce the best parts of our culture.

11. Systems can be a product of environment, i.e., imposed

- A. Most of our systems grew up around things we were forced to do to stay out of trouble.
 B. We implemented our systems because of the contribution we felt they could make to our processes.

12. Standards and measurables

- A. Measurables that emerge from our systems are not very useful.
 B. Effective self-evaluations, management reviews, and internal audits are key components of our organizational process.

13. Complacency

- A. There is a general feeling that if there is a system, any problems related to it are resolved.
 B. While we have confidence in our systems, we do not blindly trust them.

14. Successfully engineered and implemented

- A. Our systems tend to look good on paper but are poorly executed.
 B. We implement systems thoroughly to obtain maximum benefit from them.

Count the number of "B's" you checked _____. Divide that number by 14 _____ to arrive at a rough score of how well your organization utilizes its systems. Each "A" that you checked could indicate an opportunity for improvement.



Evaluating Your Risk Culture

As a means to evaluate your risk culture, indicate with a check mark which of the following pairs of statements is more true. If both are somewhat true, which is more true? If both are false, which is less false?

1. Consistency of response

- A. "Different strokes for different folks."
- B. Our rules and policies are carefully prepared, kept to a minimum, and consistently reinforced.

2. Is the culture triangulated?

- A. We spend a lot of energy on "us versus them" issues.
- B. We respect different viewpoints, and when we differ we get it out in the open and resolve it.

3. Is there a blame culture?

- A. If you don't punish people for their mistakes, they will never learn.
- B. Mistakes, even when they cause problems, can be learning opportunities.

4. Is there a blame culture?

- A. If there is a problem we focus on who is at fault.
- B. If there is a problem we focus on what is at fault.

5. Theories about people

- A. Most people will try to get away with as much as they can.
- B. Most people want to do a good job and will do so if given the opportunity.

6. Effectiveness of responses

- A. Our typical response to problems is to have a meeting, find the guilty party, make a list of things to be done, and get on with business.
- B. Most real problems are system problems; we fix the system.

**7. Learned helplessness**

- A. If we want their opinion we will ask for it.
- B. We cultivate our employees' creativity in problem solving.

8. Fit between systems and culture

- A. We love systems so much that we are constantly trying out new ones.
- B. Every proposed system is vetted against our unique culture to ensure compatibility.

9. Respect for subcultures

- A. You either fit the mold or you're out of here.
- B. We have found diversity to be a real source of strength.

10. Continual improvement

- A. Continual improvement is trying to get people to shape up and do their jobs.
- B. Continual improvement is mostly about improving our processes and systems.

11. Centralized/decentralized management

- A. Tight control of people is the best way to ensure consistency.
- B. We focus on managing the processes, not the people.

12. Knowledge of our organizational culture

- A. We don't talk much about culture or core values.
- B. Any of our people can tell you exactly what our core values are.

Count the number of "B's" you checked _____. Divide that number by 12 _____ to arrive at a rough score of the health of your organization's culture. Each "A" that you checked could indicate an opportunity for improvement.



Evaluating Your Response to Environment Influences

As a means to evaluate how well your organization responds to its environment, indicate with a check mark which of the following pairs of statements is more true. If both are somewhat true, which is more true? If both are false, which is less false?

1. Trend toward using market forces versus regulation to change business behavior

- A. We change our business behaviors only when compelled to do so by regulatory requirements.
- B. We track and trend market forces and outside interests to optimize our business behaviors.

2. Competitors

- A. Its up to our competitors to keep up with us.
- B. Tracking our competitors is a key component in our decision-making processes.

3. Regulatory environment

- A. We react when the inspector hands us an order to comply.
- B. We track and trend regulatory "futures," as well as ensuring that all current regulatory requirements are met.

4. Social environment (non governmental, activist organizations, e.g., Greenpeace)

- A. We pay no heed to "fringe groups."
- B. We have a formal process in place to identify, communicate with, and respond to special-interest groups and their concerns.

5. Business environment and strategy

- A. While no man may be an island, our organization is.
- B. All aspects of the environment of each theater in which we operate are considered in the development of our business strategies.

6. Market-driven

- A. We tell our customers what they want and need.
- B. We frequently interact with our customers to enable us to anticipate their needs.

7. Physical surroundings

- A. What happens in our physical surroundings is beyond our control.
- B. While we may not be able to control our physical surroundings, we are actively involved in influencing them.

8. Operational plant and building interiors

- A. This is a workplace, not a showroom.
- B. We are sensitive to the role that lighting, ventilation and décor have on morale and productivity.

Count the number of "B's" you checked _____. Divide that number by 8 _____ to arrive at a rough score of how well your organization responds to its environment. Each "A" that you checked could indicate an opportunity for improvement.