

Designing a Process to Assess Culture and Drive Outstanding Operational Performance

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**Pacific Northwest National Laboratory
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Topics

- ▶ Identifying Cultural Attributes
- ▶ Self Assessment Techniques
- ▶ Cultural Indicators
- ▶ Call to action



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Approach Provides

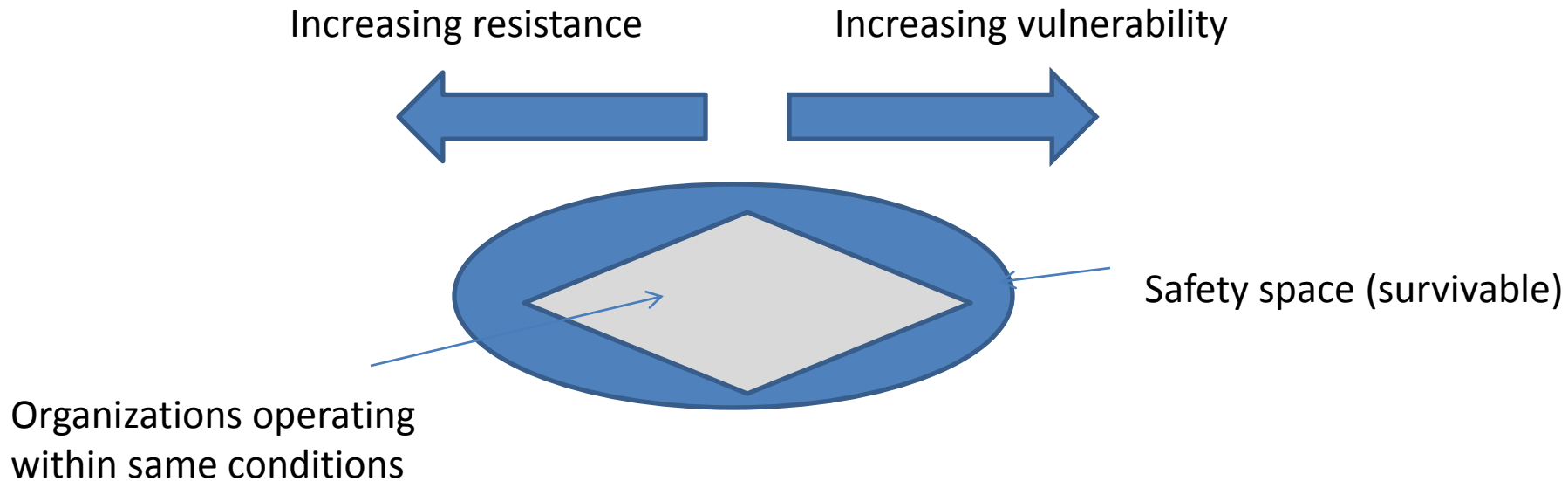
- ▶ A technically justifiable process for cultural assessment and measurement.
- ▶ A holistic look at all aspects of business performance and ties directly to successful mission accomplishment.
- ▶ One strategy that is governed and sustained through Senior Leadership



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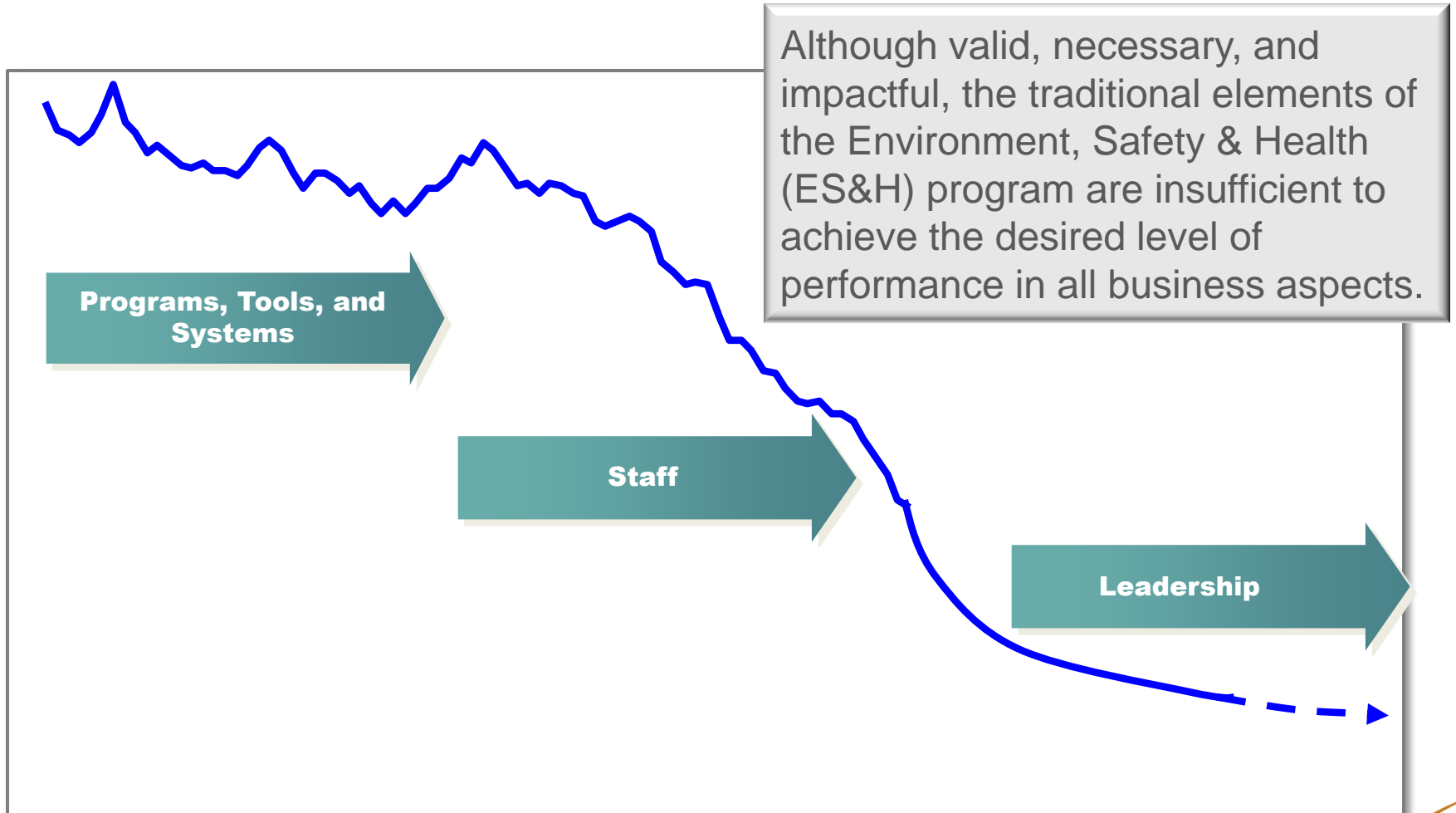
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Staying Within the Bubble: Reason Model



- ▶ Strategy to position within the safety space
- ▶ Instead of zero “maximum intrinsic resistance to hazards”
- ▶ Culture drives the direction of movement

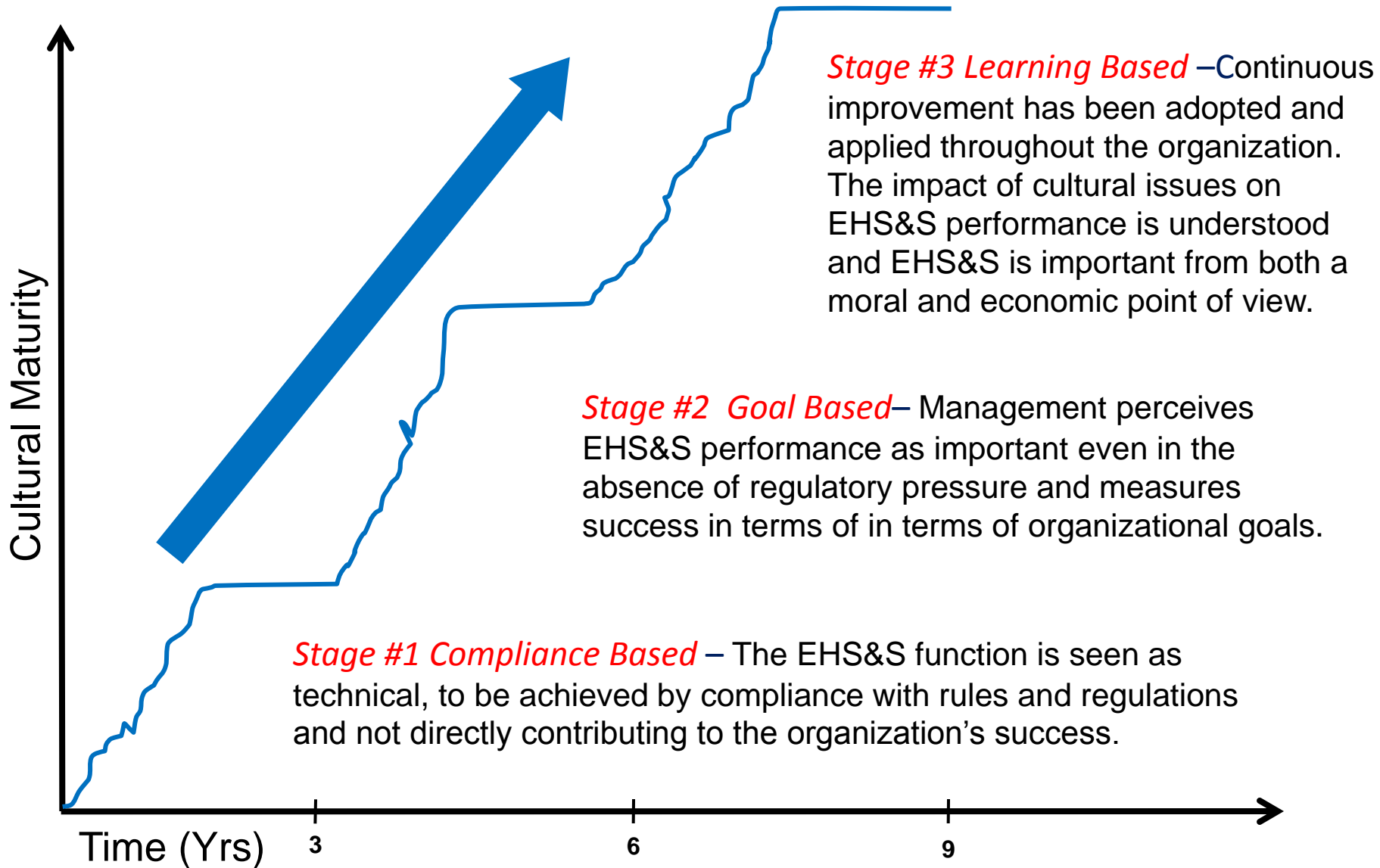
Maturity Journey



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Cultural Development Model



PNNL Strategic Compass

- ▶ The PNNL Credo for Operational Excellence was established to provide a set of guiding principles that define the desired culture of operational excellence and serves as the foundation for measurement and analysis of PNNL culture.
- ▶ The credo focuses on the four themes of leadership, risk mitigation, continuous improvement and engagement.



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I Believe	I Know	I Do the Following
<p>Theme: Leadership</p> <p>Human life and health have value above all else</p>	<p>My actions set examples that ensure operational excellence and positively impact the Laboratory's reputation</p> <p>I must create an environment where open and honest inputs are encouraged and addressed fairly</p>	<p>Hold managers and individuals, including myself, accountable for our actions</p> <p>Consistently communicate performance expectations and recognize a job well done</p> <p>Visit the workplace frequently</p>
<p>Theme: Risk Mitigation</p> <p>All incidents are preventable</p> <p>Human error is inevitable; but I can reduce its likelihood and severity</p>	<p>I understand the scope of work, the associated risks and how to manage the risks</p> <p>I must act to reduce the likelihood and severity of human error to prevent incidents</p>	<p>Ensure that work is planned and there are adequate resources to do work right</p> <p>Anticipate and recognize change and reassess risks</p>
<p>Theme: Continuous Improvement</p> <p>To improve we must be innovative and learn from our experiences</p>	<p>I strive to continuously improve the way we work.</p>	<p>Incorporate feedback and learning from others to improve.</p> <p>Encourage people to make suggestions, raise issues and actively participate in resolution.</p>
<p>Theme: Engagement</p> <p>I am responsible for my own well being and for the well being of all those around me</p>	<p>We all have the authority to stop work and are expected to use it when needed</p>	<p>Actively care for the safety and welfare of myself and others</p> <p>Maintain a questioning attitude</p>

Model for Measuring and Assessing Culture



Self Assessment Techniques

- ▶ Written questionnaire
- ▶ Performance measures
- ▶ Questionnaire with narrative questions
- ▶ Face to face interviews
- ▶ Focus group interviews



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Assessment Strategy

- ▶ Triangulated approach: A combination of different methods measure the same phenomenon.



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Written Questionnaire

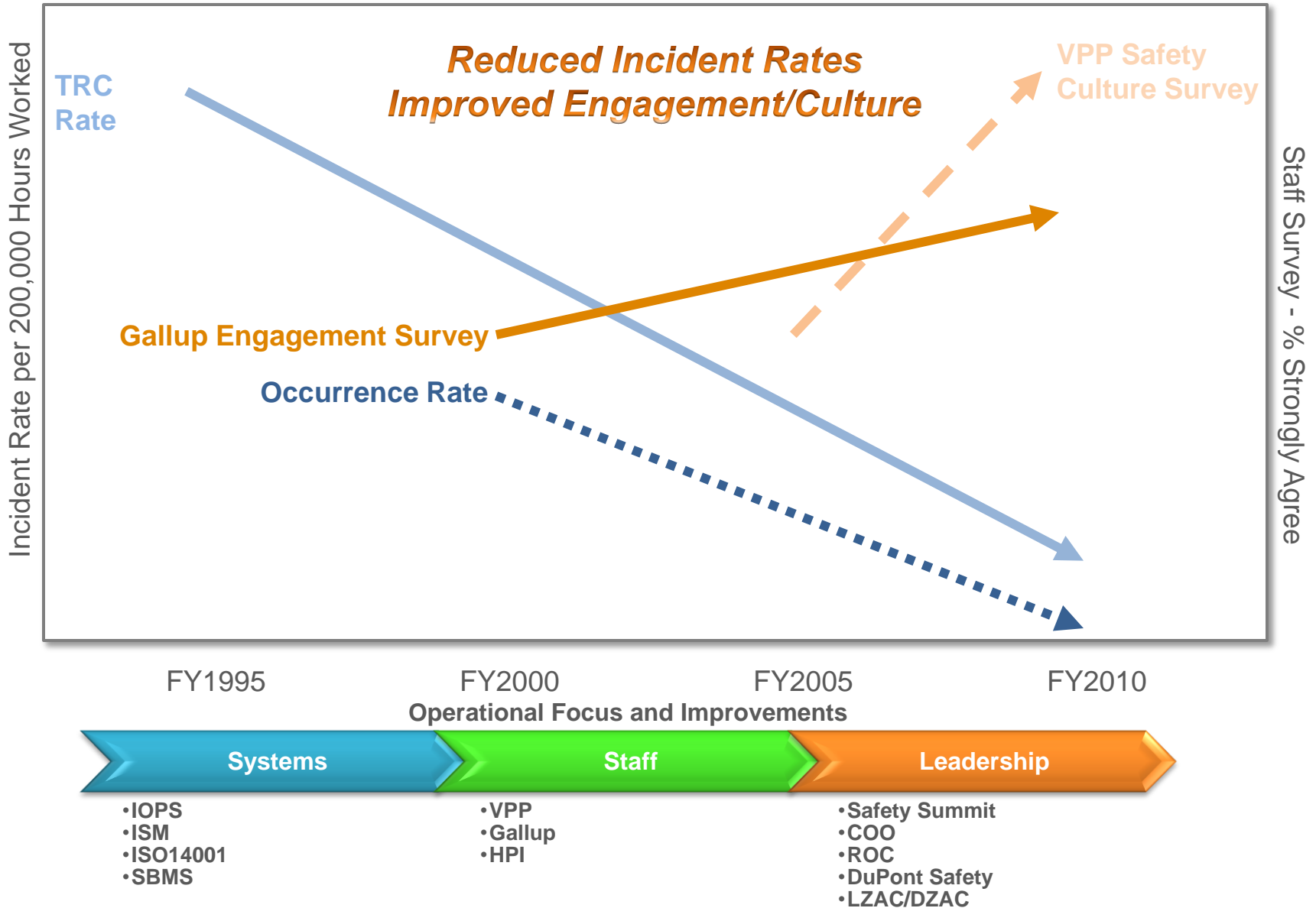
- ▶ Precise data
- ▶ Reflects the view of the population
- ▶ Rapidly analyzed
- ▶ Respondents can remain anonymous
- ▶ Design, application and interpretation critical
- ▶ Less effective for exploring complicated or ambiguous issues
- ▶ Will not provide an understanding of the attitudes, motivations or concerns that are beneath the responses



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Surveys provide quantifiable information



Performance measures

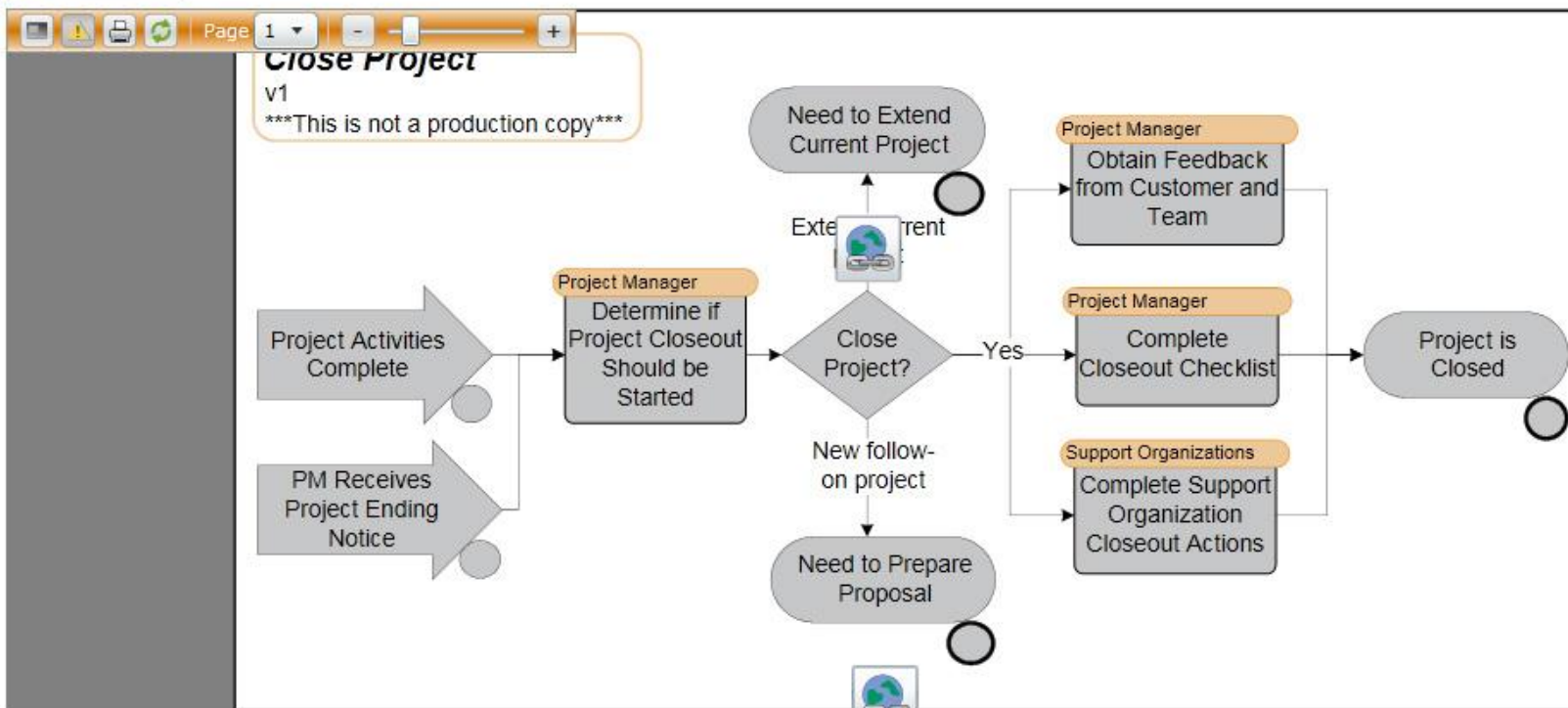
- ▶ Measuring perceptions only determines if those polled have a perception and if the perceptions of the group are similar or dissimilar. Need to ground the metrics to give context, i.e. behaviors and processes



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Close Project



Report for Close Project

PNNL Requirements:

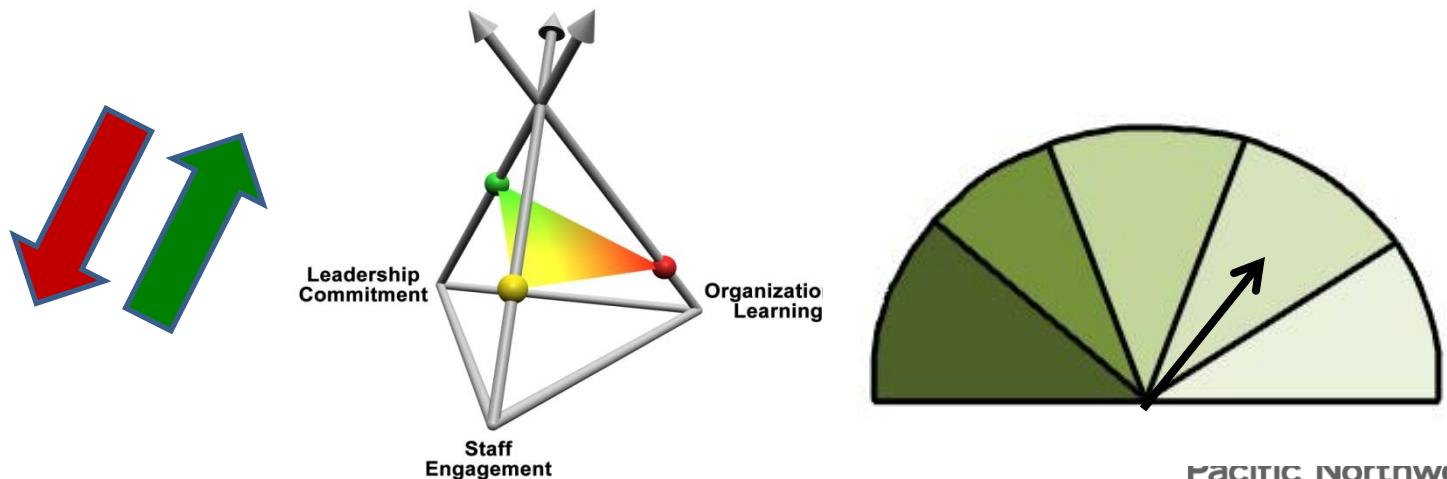
- Initiate and complete closeout activities using Electronic Prep & Risk (EPR) closeout checklist.

Staff Engagement Measures

Source	Measure
Project Lifecycle	Project Planning
	Conducting Project Work
	Project Closeout
Staff Lifecycle	R2A2s/Feedback
Lab-Level	Involvement in LZAC/DZAC
	Reporting of Issues
	Survey
	Lessons Learned

Cultural Index

- ▶ Presenting information from several related areas simultaneously
- ▶ Multiple sets of information compiled into an overall measure
- ▶ Indicator measures performance to a goal



Questionnaire with narrative questions

- ▶ Mixture of closed multiple choice and narrative response
- ▶ Provides a way to explain complicated issues
- ▶ Less control over the form and content of information provided



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Face to face interviews

- ▶ Means of providing data to assist in questionnaire design
- ▶ Explore qualitatively the issues emerging from written survey
- ▶ Efficient means of collecting complicated information
- ▶ Response does not lend itself to quantitative analysis
- ▶ Inefficient for large populations



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Focus group interviews

- ▶ Interaction of the group can prompt and sustain interaction without a high level of input
- ▶ Genuine open discussion of an issue
- ▶ Not constrained by preconceptions of interviewers
- ▶ Output not conducive to collective analysis
- ▶ Not anonymous



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The Survey Process

Identify Key Objectives

Assess costs

Assess benefits

Build Ownership

Initial data gathering

Build survey tool

Pilot

Conduct Core Survey

Analysis and Interpretation

Feedback and follow-up

Action

Example of a triangulated approach used by PNNL

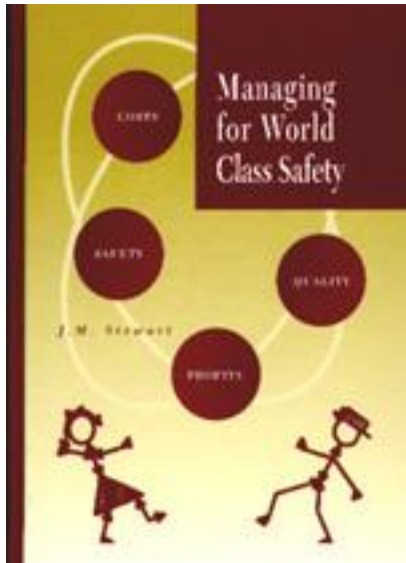
- ▶ Questionnaire
- ▶ Questionnaire with narrative
- ▶ Focus group
- ▶ Performance measures



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Data Streams and Benchmarks



Benchmark research investigating five North American Companies that have achieved world class safety performance

The 12 Elements of Great Managing

To identify the elements of worker engagement, Gallup conducted many thousands of interviews in all kinds of organizations, at all levels, in most industries, and in many countries. These 12 statements – the Gallup Q12 – emerged from Gallup's pioneering research as those that best predict employee and workgroup performance.

1. I know what is expected of me at work.
2. I have the materials and equipment I need to do my work right.
3. At work, I have the opportunity to do what I do best every day.
4. In the last seven days, I have received recognition or praise for doing good work.
5. My supervisor, or someone at work, seems to care about me as a person.
6. There is someone at work who encourages my development.
7. At work, my opinions seem to count.
8. The mission or purpose of my company makes me feel my job is important.
9. My associates or fellow employees are committed to doing quality work.
10. I have a best friend at work.
11. In the last six months, someone at work has talked to me about my progress.
12. This last year, I have had opportunities at work to learn and grow.

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The Gallup Q12 database is considered the largest employee benchmark available (>5.4 million responses).

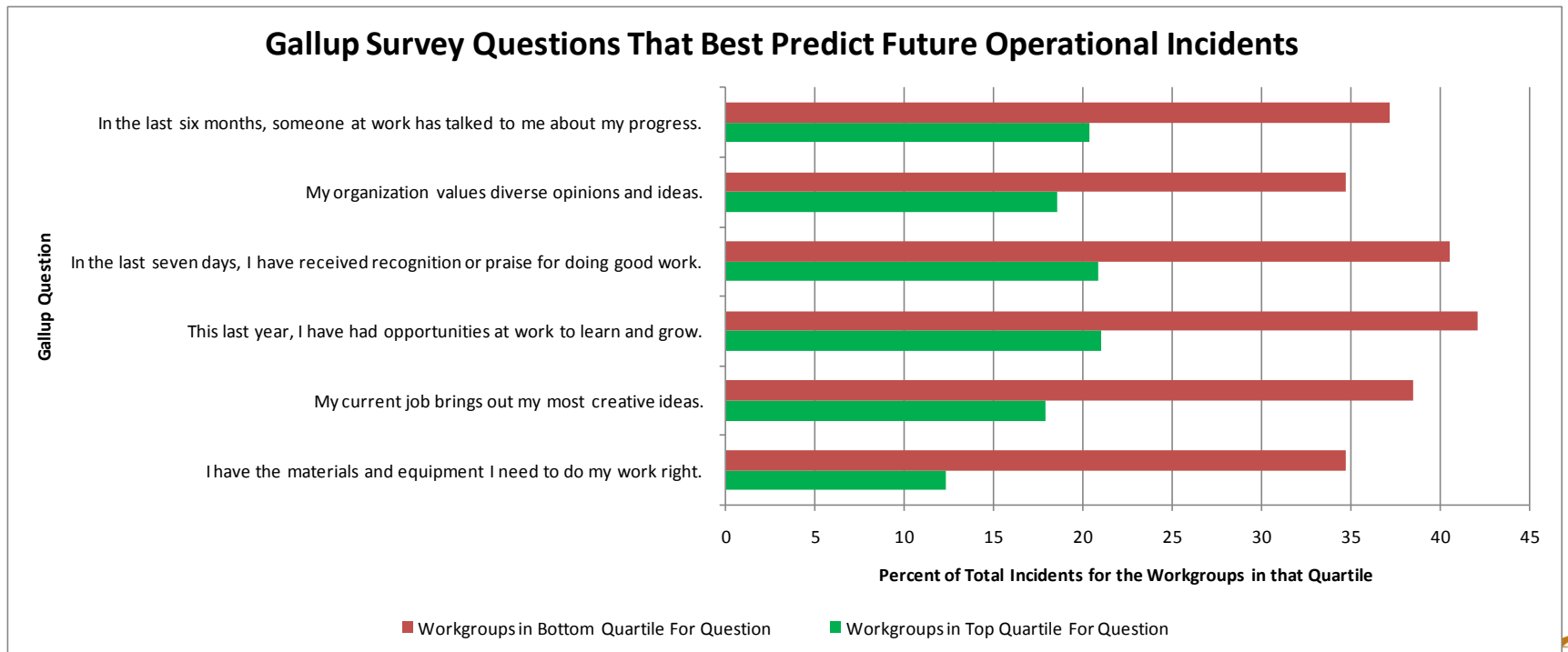


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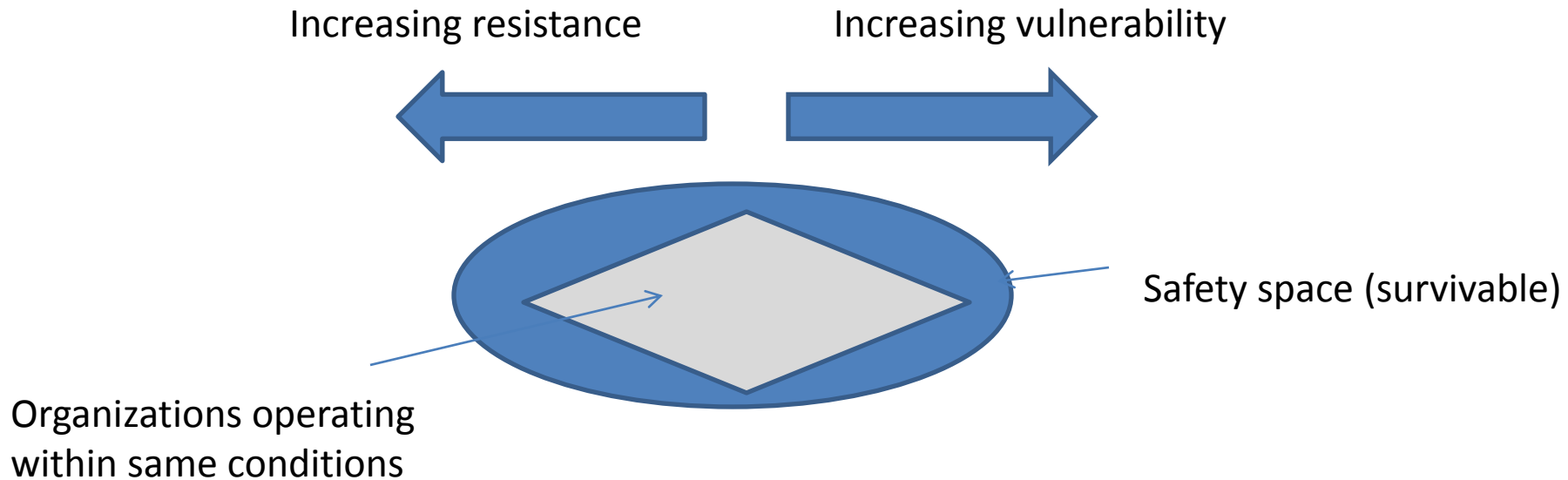
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Staff Engagement Predicts/Impacts Operational Performance

Relationship between workgroup responses and the number of operational incidents at PNNL



At Risk Groups for Staying Within the Bubble



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Focus Groups

Identify important cultural assumptions held by Laboratory staff in the areas of:

- Balancing safety, quality, cost and productivity
- Self disclosure of errors to continuously improve
- Reward and recognition
- Leadership visibility
- Accountability

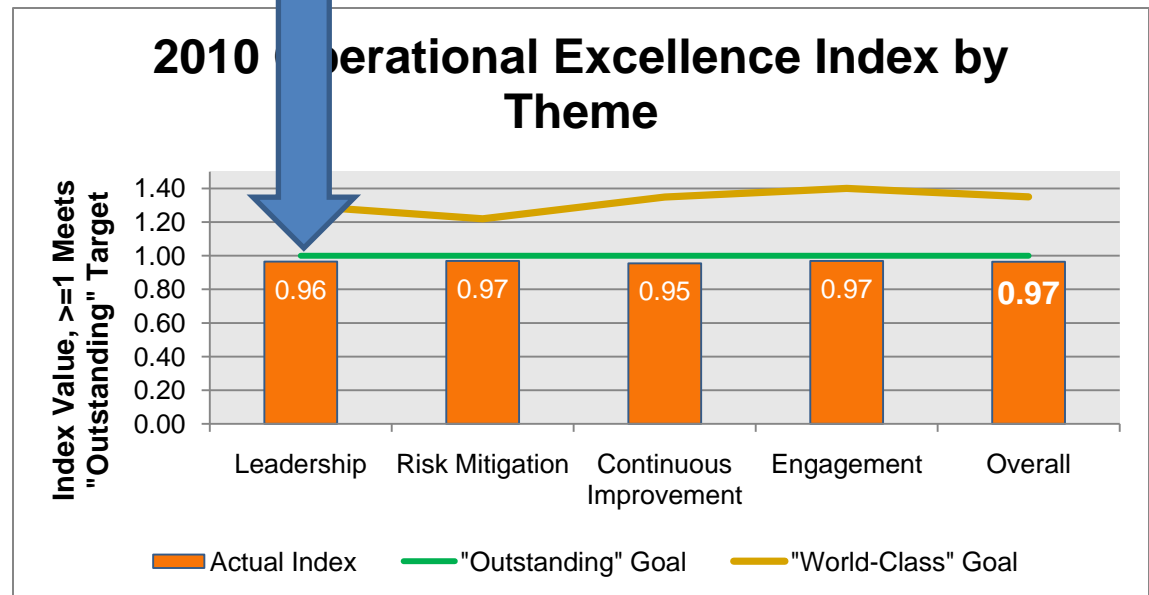


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Measuring Performance

Leadership Theme Indicators	Actual Data	"Green" Benchmark	Index*	Weight	Weighted value	"Gold" Benchmark	"Gold" Index Relative of "Green"
Safety is a core value for me (% Strongly Agree)	79%	80%	0.99	10%	0.10	94%	1.2
Safety is a core value for my immediate manager (% Strongly Agree)	79%	80%	0.99	10%	0.10	87%	1.1
At work my opinions seem to count (% Strongly Agree)	32%	33%	0.97	10%	0.10	50%	1.5
My supervisor creates an environment that is trusting and open (% Strongly Agree)	44%	57%	0.77	10%	0.08	75%	1.3
Responses to reports of hazards are timely and adequate (% Strongly Agree)	60%	43%	1.40	10%	0.14	60%	1.4
% IOPS deficiencies closed on time (% Strongly Agree)	90%	90%	1.00	13%	0.13	95%	1.1
In the last 6 months someone has talked to me about my progress (% Strongly Agree)	44%	57%	0.77	13%	0.10	73%	1.3
Management visits my workplace on a routine basis (% Strongly Agree)	38%	38%	1.00	13%	0.13	54%	1.4
My supervisor or someone at work seems to care about me as a person (% Strongly Agree)	48%	57%	0.84	10%	0.08	75%	1.3
Overall Leadership Index				100%	0.96		1.3



Analysis Identified 5 Issues to Work to Increase Engagement

- ▶ **Reporting:** Separate the noise from the signal
- ▶ **Risk Management:** Clarify risk tolerance and acceptance
- ▶ **Accountability:** Consistently communicate and manage performance
- ▶ **Continuous Improvement:** Establish a forum to surface issues beyond safety
- ▶ **Staff Engagement:** Encourage a shift in accountability to foster peer to peer feedback



Laboratory Level Strategy:

- ▶ Focus on strengthening behaviors to eliminate cultural barriers:
 - **Accountability:** Strategy will promote regular, insightful and personal feedback from managers to staff on their performance and begin a shift toward peer accountability
 - **Reporting:** Strategy will create an environment that encourages staff to make suggestions and raise issues.
 - **Risk Management:** Strategy will more clearly identify and communicate business risks during the planning and execution of work.

Summary

- ▶ Analyzing your organization's operational (safety)culture requires a comprehensive approach going beyond the traditional elements of Environment, Safety & Health.
- ▶ The applied process should be founded on attributes that are reflective of your your organization's aspirations and are embraced by senior management
- ▶ The resulting strategy that will not only reduce operational incidents but also improve most other aspects of operational performance



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Story Telling to Reinforce Culture

Lessons Learned

HDI

Topics

- EHSS Topics
- General Management Topics
- Recall Notices
- Occurrence Report Listing [↗](#)

Services

- New Tools and Services
- Custom Summaries
- Subscription Service
- Submit an Idea

Administration

- Manage Articles
- Manage Comments
- View Calendar
- View Metrics
- Writer Wiki
- List of all Articles

Project team leader shares a close call caused by multitasking

Date Published: July 7, 2010 | Contact: HDI POC - Operational Excellence | [Read Comments](#) (0)

A dimension of operational excellence you may not have considered

Summary

Following a business dinner, two researchers and their client continued a spirited discussion on the walk back to the hotel. Trying to make the best of their limited time together, the group became engrossed in their conversation but were brought back to reality when one team member barely missed stepping into the path of an oncoming bus. Listen to Dave Atkinson's 2-minute description of what happened and what they learned from their experience.



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