

# Best Practice #113

(11/29/2011)

**Best Practice Title:** Understanding, Assessing and Measuring a Culture of Operational Excellence

**Facility:** Pacific Northwest National Laboratory

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## **Brief Description of Best Practice:**

In 2010 Pacific Northwest National Laboratory (PNNL) implemented an innovative, holistic process to understand, assess and measure cultural attributes and improve operational performance. PNNL participated in the EFCOG safety culture pilot and developed the methodology using the suite of DOE/EFCOG Safety culture products available at [http://www.efcog.org/wg/ism\\_sctt/index.htm](http://www.efcog.org/wg/ism_sctt/index.htm).

PNNL's synergistic approach integrates Voluntary Protection Program, Integrated Safety Management and ISO 14001 principles into a single set of organizing principles that address the hearts, minds, and actions of staff and provide a single platform for continuous improvement that enables enhanced mission execution through **operational excellence**. PNNL's vision of operational excellence is that Environment, Safety, and Health (ES&H) functions will be embedded into the Laboratory's business processes and universally adopted. Looking beyond "safety programs" or "environmental programs," PNNL's intention is to excel in engaging all levels of operational management, resulting in outstanding research and development, while maintaining our commitment to safety, health, and environmental stewardship.

This best practice is presented as an example that other sites can tailor to meet their individual needs.

## **Why the best practice was used:**

PNNL developed the best practice to achieve the "next level" of performance through a culture of Operational Excellence. PNNL expects that the results of this holistic approach will simultaneously stimulate excellence in all business objectives (such as safety, environment, quality, productivity, sustainability, and profitability) and better position the Laboratory to continue to deliver world-class science, while maintaining our commitment to safety, health, and environmental stewardship.

## **What are the benefits of the best practice:**

The culture assessment process provides a platform to inform senior leadership of organizational strengths and weaknesses in the broad areas of leadership, engagement, continuous improvement and risk management and develop a laboratory level strategy to address cultural barriers and act upon predictive indicators.

## **What lessons learned/keys to success are associated with the best practice:**

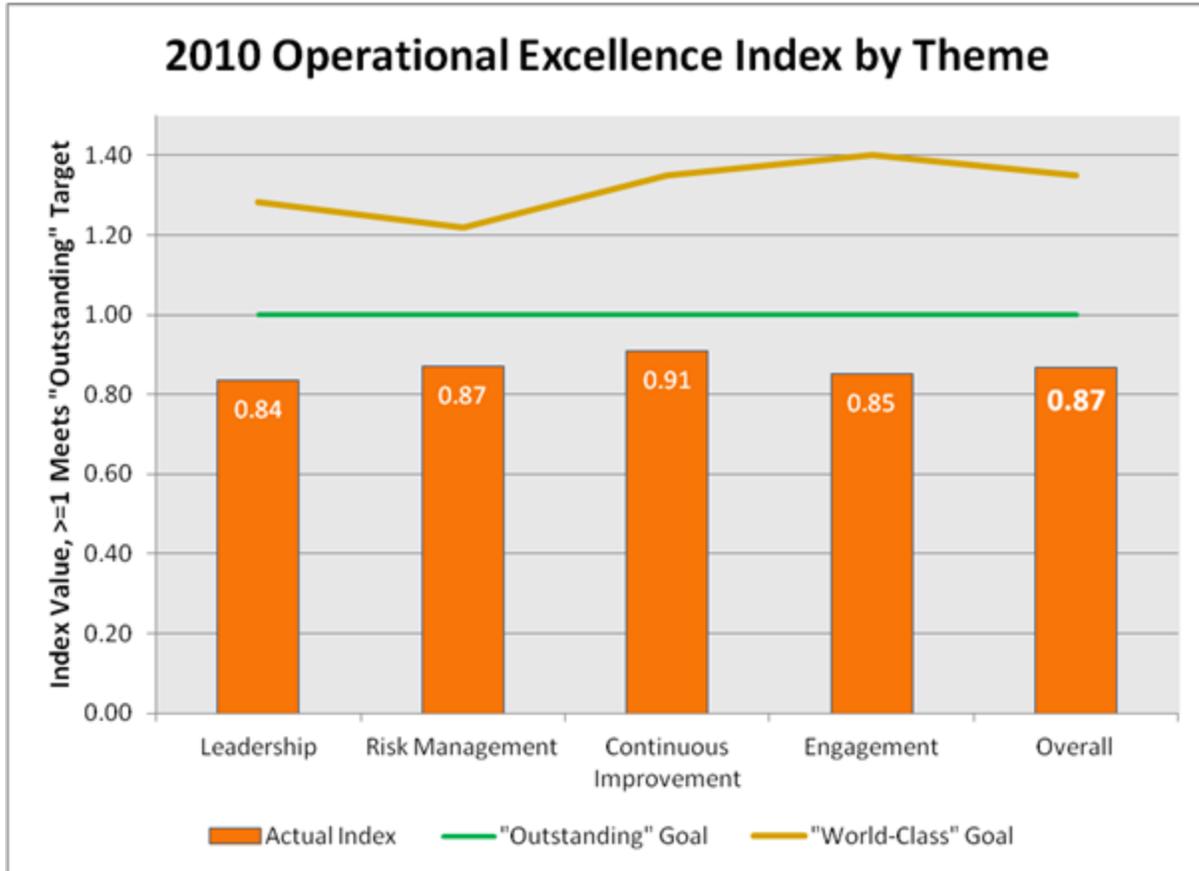
There is no simple recipe to understanding culture. PNNL's approach involved thoughtful study and preparation and was highly dependent upon establishing cultural attributes that reflected the values, beliefs and behaviors that are embraced by the Laboratory. Senior leadership commitment to setting expectations through a strong vision and providing governance of the cultural assessment process was critical to success. The process was not owned by Environmental Safety & Health and was socialized with leadership across the organization to assure horizontal integration.

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## How the success of the Best Practice was measured:

An operational culture measure was integrated into the Laboratory's performance assurance system and is used to assess Laboratory level performance and identify areas of risk.



## Description of process experience using the Best Practice:

### 1. Establishing and communicating safety culture expectations.

The first step to understanding our culture was establishing the framework of beliefs and behaviors that reflect the Laboratory's expectation for operating to achieve simultaneous excellence. This document was named PNNL's Credo for Operational Excellence. The attributes of the Credo for Operational Excellence focus on four themes: leadership, risk management, continuous improvement, and engagement.

Note: In addition to following the EFCOG guidance, a separate theme of risk management was added to the model to provide emphasis and focus on our ability to control risk and reduce the likelihood of error.

### 2. Identifying data streams and indicators based on cultural expectations

Objectives and indicators associated with each of the four operational excellence themes were further developed to facilitate analysis. The multilevel nature of culture requires a broad range of indicators, some of which may be more subjective than others. There is no simple indicator to measure the state of organizational culture. PNNL used a broad range of indicators and data, including observation, interviews and surveys, as well as workflow

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metrics and Lab-level indicators. Example indicators used to evaluate the Lab's culture include:

- **Staff survey results, including VPP.** The results from the Lab's VPP's staff survey in FY 2009, 2010, and 2011, generated more than 500 comments focused on selected themes as well as staff sentiment on 20 survey questions.
- **Focus Group Interviews.** A series of focus groups provided detailed feedback in the areas of balancing safety, quality, cost and production, self disclosure of errors to continuously improve, reward and recognition, leadership visibility and accountability.
- **Performance metrics.** Metrics and laboratory level indicators such as integrated operations concerns closed within 30 days, ES&H program risk index, project management measures of risk and quality, and lessons learned % unique readership were integrated into the model.

### 3. Analyzing the results and establishing an improvement strategy.

Input from measures, indicators and data streams were comprehensively analyzed. A Laboratory level strategy was developed to address cultural barriers and act upon predictive indicators in order to achieve the Laboratory's aspirations for operational excellence and ultimately produce outstanding Science & Technology.