Safety Management—Benchmarking Safety through the Safety Perception Survey

Mike Hewitt
Vice President, Global Workplace Safety Practice
DuPont Safety Resources
Wilmington, Delaware

Overview

Safety, health and environmental professionals are, of course, some of the strongest advocates for workplace safety. You know hard work and you know that safety is hard work, so this presentation is a conversation with you about some of the challenges and issues you face when it comes to benchmarking safety and gauging the success of your safety program.

DuPont has a 205-year history and passion for safety. Our safety practice is one of the longest surviving programs in the marketplace. Having assisted more than 4,000 clients, we have created a client base that is global in nature and covers all industries. The DuPont brand and our global reach, unique "owner-operator" knowledge and expertise in managing operational risks combine to form our major sources of competitive advantage. You may be aware that DuPont today is comprised of 5 market facing platforms. The business I represent - DuPont Safety Resources - is in the Safety and Protection platform which is the means by which we will ensure sustainable solutions that are safer for everyone.

As safety practitioners you know only too well that simply implementing appropriate procedures and training is not enough to ensure a successful safety program. But why is it that some programs are not executed effectively or simply not followed by employees? Is there a way to identify hidden pitfalls in a safety process? How does a company establish a benchmark by which to measure future safety performance?

My goal is to tell you about a tool that can help you understand your safety culture and answer these questions. It's the Safety Perception Survey. I'd like to share with you some results, trends and implications based on eight years of conducting this Survey worldwide.

Though our work with our Safety Perception Survey, it is possible to benchmark a company's performance against best-in-class and average-performing companies in target areas correlated to safety performance—areas such as leadership, structure, process and action. We can predict what

kind of injury performance a company will have based on their employees' responses to the Survey. By completing the Survey, organizations can pinpoint which areas need improvement and hone in on weaknesses that could be undermining their safety performance. I hope that by sharing what we have learned from the Survey, I will provide you with a tool to help executives, management and safety professionals focus more acutely on the improvements needed to achieve to world-class safety performance in your organization.

Achieving Safety Culture Excellence

We have found that there are three dimensions of safety excellence that must be satisfied to create a safety culture that leads to excellent performance:

<u>Leadership</u>
The first is committed leadership. Leaders must show employees they are staunchly committed to safety. They cannot waiver, no matter the business conditions. Safety excellence, at its essence, requires respect through action for the well-being of people. When a company's leaders demonstrate through their actions that the safety and health of all employees is a top priority, a cultural transformation can and will occur. More importantly, that transformation is sustainable because it becomes part of the fabric of the company and the environment in which your people operate.

Leadership, and management actions to lead employees to safety excellence, takes many forms. DuPont evaluates the strength of leadership in part by the existence of the following leadership elements: management commitment, policies and principles, goals, objectives, plans, procedures, and performance standards.

<u>Structure</u>
Proper structure is the second required dimension of safety culture and is vital for effective safety management. The structure of a company's safety organization must deploy people strategically throughout the company. For any cultural improvement effort to succeed, employees must be involved and truly engaged. Line management accountability, established safety personnel, integrated organization structure and employee motivation and awareness are all critical factors that enable a strong safety culture.

<u>Action</u>
The third requirement of safety culture involves action; it's where "the rubber meets the road." It responds to the question, What actions does the organization take on a regular basis to support and improve safety performance?

Here we are talking about activities such as consistent, clear communication among all levels of the organization, training and development, incident investigation and employee participation in audits and observations. All are actions that reveal an organization's value for safety. The regular execution of these actions echoes the belief that safety is a core value and is perceived to be as important as production, quality and cost.

Each dimension is critical to the lifeblood of a safety culture. Only when companies choose to assess their organization against these three required areas can they begin to identify improvements that will help strengthen their safety culture.

Diagnosing Safety Culture

At DuPont, we have seen over the years that the strength of a company's safety performance lies within the strength of its safety culture. And as you are well aware, there is no silver bullet to improve safety culture and enable world class safety performance. Understanding your strengths and weaknesses will help you begin to target the necessary improvements that will help you achieve your safety goals.

You can examine your safety culture using several techniques. One way is to ask a series of questions, such as:

- How consistent is the safety culture?
- How do you know it's the same across the organization?
- Have recent events changed the culture?
- Do other business goals compete with the safety focus?
- Do new employees have the same training and values as long-term service employees?
- Does the pressure to "do more with less" compete with your safety values?

This type of diagnosis can happen through use of the Safety Perception Survey as a benchmarked process for the evaluation and improvement of corporate safety culture. The process objectively taps management and employee opinions and performance drivers at every level of the organization. The Survey provides useful insights into your organization's safety culture, and we have found that these types of cultural revelations are strong leading indicators for safety performance.

The Safety Perception Survey takes qualitative information about safety behavior and culture and renders it quantitative and measurable. From this information, companies can spotlight specific opportunities and create an action plan for safety.

A Closer Look at the Safety Perception Survey

The Survey was first published by J. M. Stewart in 1999. DuPont acquired the Survey in 2000, modified it, incorporated it into our consulting methodology and turned it into a powerful tool that can be used for benchmarking and action planning.

The Survey consists of 24 core questions, capturing perceptions and attitudes toward safety that are held by a cross-section of employees, supervisors, managers, professionals and hourly workers in the organization. Data is compared across departments, levels and responsibilities.

The Survey will test whether safety is a core value held by management and whether that message is effectively transferred to the worker on the floor. It will expose whether safety rules

are followed and whether consequences and recognition are consistent across the organization. It will examine whether or not employees and managers are involved in audits, incident investigations and safety meetings. It will highlight the importance of safety versus quality, schedule and cost. And, finally, the Survey will examine attitudes about off-the-job safety.

Because the Survey involves every level of the organization, it provides leaders with an objective, data-driven process for understanding safety culture and benchmarking it. Responses are compared within the organization and to responses from employees in external benchmark companies. The benchmark companies include those with superior safety performance ("best") as well as those with very poor safety performance ("worst").

Benchmarking through the use of the Survey can identify a company's best and worst sites and make comparisons to uncover critical truths. For example, how does one site go years without recordable incidents, while others have injuries routinely? Finding the perceptual differences between best sites and worst sites can be difficult when reviewing safety performance data at face value. But by digging deeper into the values and beliefs at each site, you will find some clues in the Survey responses and comments.

The Survey in Action

The Survey becomes a powerful tool when it is used to understand the underlying pitfalls of a company's safety program and to initiate action and obtain commitment from a company's leaders. I'd like to share with you an example of how we used the Safety Perception Survey to initiate a step-change with a client organization.

The client had more than ten sites, and each site had safety policies and procedures. The managers were held accountable for safety. Each site had a safety management structure in place. Despite these consistencies, the safety statistics fluctuated from site to site, with many of the sites suffering very poor safety performance. We suspected these differences in safety performance were the result of differing safety cultures at each site.

We conducted the Survey, as well as focus groups and interviews. The Survey revealed the following: a lack of management commitment, breakdowns in communication and the perception that safety leadership was inconsistent throughout the organization.

Essentially, the data became a powerful diagnosis of the client's safety culture. Rather than focus on trailing indicators, such as injury and illness statistics or disability costs, we could examine quantifiable data that reflected employee perceptions and placed a glaring spotlight on the hidden pitfalls of the client's safety culture.

Safety culture data becomes valuable when it can be fuel for change. It can be the starting point for understanding the current reality, envisioning the future state and obtaining management commitment to reach the future state through planned actions and strategies. In the case of the example I just shared, the Survey and its subsequent output helped kick off a 15-month safety improvement process that ultimately lowered injury rates by 45 percent and significantly improved employee perception of leadership's safety commitment at all sites.
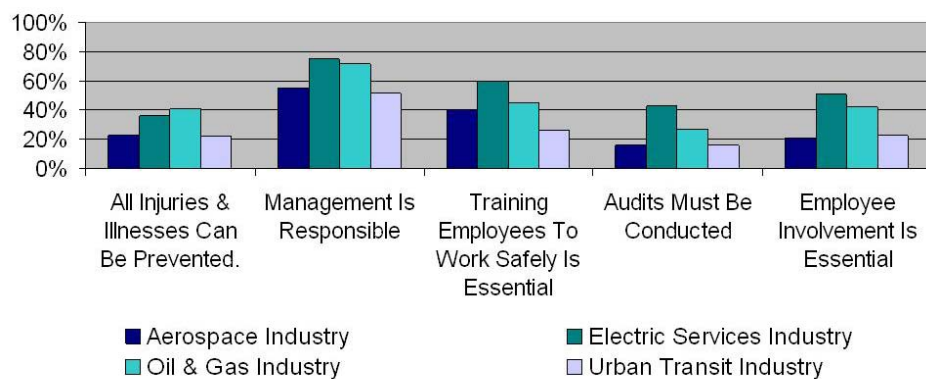
Global Competitive Benchmarking Data

Let's take a closer look at how benchmarking safety culture can positively influence an organization's culture when used as a tool to improve performance.

As you know, benchmarking is not a new concept. Benchmarking helps you understand performance standards and what constitutes good or poor performance for a particular business process. You are probably already familiar with the many reference points available to measure your safety performance against industry peer companies or best-in-class safety models. Yet none of these databases can compare employee perception of safety or serve as a leading indicator for future safety performance.

When benchmarking safety performance, companies first evaluate their progress against their pre-established goals, asking "Did we reach our overall target?" Next they evaluate whether or not their safety performance is consistent across their own plant sites or divisions. But I propose an additional critical step—analyze your company's safety perceptions against others in your industry or across industries, which will help you understand if your safety culture goals are on trend with other companies. If you are not holding yourself to standards that reflect external realities, you may be achieving your goals, yet falling behind. Ultimately, the question that management must answer is, "Are we satisfied with the culture and performance we are achieving?"

Just as incident rates can vary from industry to industry, so can the cultural perceptions about key safety principles. Our Safety Perception Survey benchmarking data spans the globe, with more than 200,000 responses covering 51 industries, 41 countries and more than 1,100 plant sites. Participant companies can access this benchmarking database to better understand their relative competitiveness. The survey helps DuPont take a closer look at beliefs that exist in each industry. Exhibit 1 is an example of how a company can check to see if their employees' safety culture perceptions are in line with those of other companies.

Exhibit 1. The bar graph shows perception differences among four industries, as related to five questions from the Survey.

Measuring your company's safety culture and comparing it against competitive benchmarking data helps create a culture that values continuous improvement to achieve excellence. It provides a tangible system to measure improvement and can help identify perceptions and beliefs that undermine safety progress.

When making comparisons that use validated and respected global data, your employees are more likely to accept the data rather than thinking it has been "manufactured" to make a point. Employees also begin to see themselves as part of a larger picture and become sensitive to the external environment.

In addition, corporate mind-sets will shift from relative complacency to a strong sense of urgency for ongoing improvement as they become aware of how the company is performing compared to its peers. Employees support the process because they have a role in establishing performance targets and focusing resources. Finally, areas that need improvement are prioritized, and there can be a sharing of best practices between benchmarking partners.

Relative Culture Strength

Safety culture and perceptions of safety are strong leading indicators for safety performance. When the Survey data is reviewed in this light, companies and industries track their performance progress relative to the changes in their safety culture.

A powerful reference point is a company's Relative Cultural Strength, or RCS. RCS equates an organization's safety culture in terms of its Survey responses as compared to best and worst response rates of the Survey benchmark companies. Using the all data response percentages for each Survey question, the formula to calculate (RCS) is as follows:

RCS = 100 × [(Organization response) – (benchmark worst response)] / [(benchmark best response) – (benchmark worst response)]

After a company's Survey data has been processed, its RCS will be a score of 0–100%, based on how its responses compare to other database clients.

NOTE: In order for a company to be considered *benchmark best*, the following factors are required:

- TRR < 1 over a 5-year period
- No fatalities
- Lost Workday Frequency Rate ≤ 0 .25 over a 5-year period
- No single year Lost Workday Frequency Rate > 0 .5 in a 5-year period
- Site population > 200 employees

Relative culture strength is not just an interesting number to help a company understand how its culture compares against that of others in their industry. It is actually a powerful predictor of a company's safety performance, here described as TRR.

Our experience administering the Survey for companies with 200 or more employees (and 160 or more survey participants) has led us to conclude that once a company safety culture reaches a strength factor of 75, its recordable rate will not exceed 2.5. That means we believe that if a company's relative cultural strength reaches 75 or more, the company will also achieve a recordable rate of 2.0 or less. And once a company's RCS meets or exceeds 80, the company can expect to achieve world-class safety performance. (See Exhibit 2).
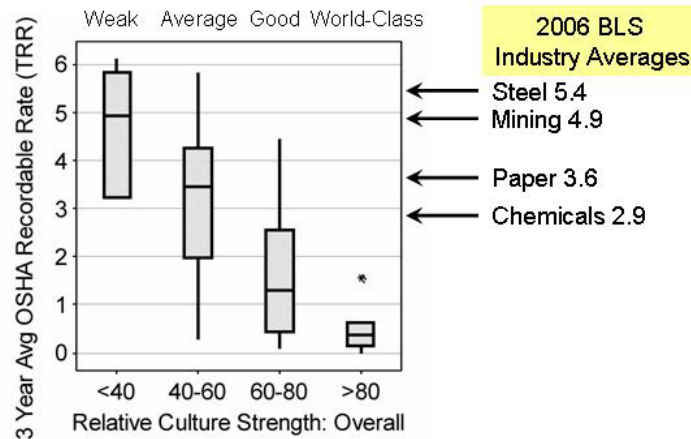
Exhibit 2. This box plot shows that safety performance improves as the Overall Relative Culture Strength increases. The data shown here is from more than 22,000 survey responses from 52 sites in the steel, mining, paper and chemicals industries. 2006 BLS Industry Averages for the chemicals, mining, paper and steel industries are included for information only.

Even though we have been referring to RCS as a single number for each company, it is important that a company achieve a high RCS in each required dimension of a safety culture: Leadership, Structure and Action. When Survey questions are grouped into these categories, we can evaluate relative cultural strength in each. We have found that each dimension is statistically equal in importance to the strength of overall culture. It is only once a company achieves a relative culture strength greater than 80 in **all three dimensions** that we can expect it will begin to demonstrate world class performance. (See Exhibit 3).
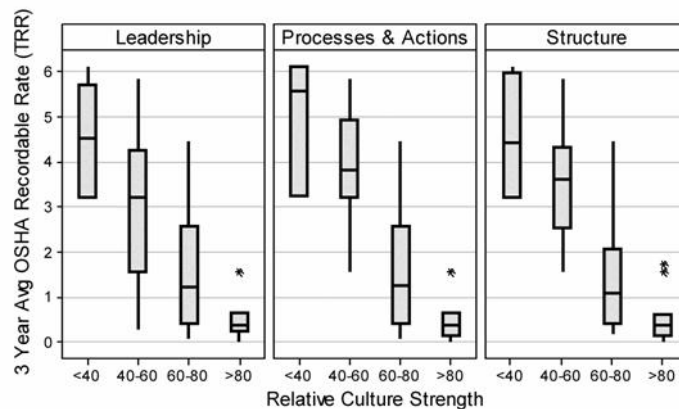
Exhibit 3. This box plot shows that safety performance improves as the strength of each dimension of safety culture increases. The data shown here is from more than 22,000 survey responses from 52 sites in the steel, mining, paper and chemicals industries.

Just as companies track improvements in their safety performance over time, it is also possible to track changes in safety culture over time. In fact, once a company has taken the Survey and committed to an improvement plan, I encourage them to retake the Survey after two or three years to determine if the culture has improved.

By measuring trailing indicators, such as TRR, companies can easily see if the improvements they put in place have had a positive impact on their safety performance. By taking the Survey, they can also tell if these actions have changed their culture. Improved safety performance does not guarantee sustainable, world-class performance. Even the safest companies must continually check the employee pulse and evaluate what underlying issues may be indicative of future incidents or injuries.

Safety culture change will not happen overnight, but companies that persistently apply strategies and actions aimed at targeted culture improvements can expect to see cultural improvements after a period of a few years.

Three clients (indicated by black triangles in Exhibit 4) took a second Survey just twelve months after their first. But the time between first and second Survey for the red diamond client and blue square client was three years or more. The RCS improvement achieved by the clients with a one-year retake was not as great as the improvement achieved by the clients with a three- or five-year retake. Making a change in safety culture takes years to achieve, while making a change in recordable rate can happen more quickly. Note that the rate of cultural change can be dependent on internal or external factors.
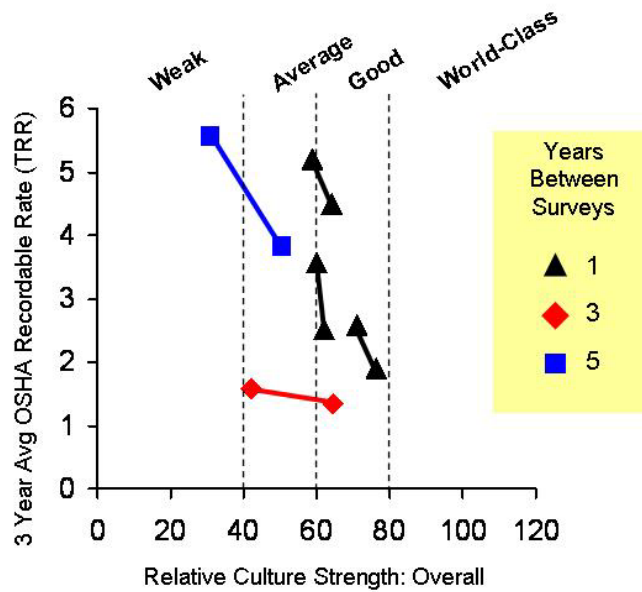
Exhibit 4. This plot shows the safety performance and overall Relative Culture Strength for five sites that have taken the Safety Perception Survey twice. The time between taking the first and second survey varied from one to five years.

Safety Perception Survey – A Key to Safety Culture Excellence

The Survey is a benchmarked, statistically-based process focused on key drivers correlated to injury reduction. Through our experience and eight years of use and analysis of its findings, we can conclude the following:

- There is no silver bullet that can fix a company's safety performance. Management commitment to all three dimensions of safety excellence is critical to improving overall safety performance and culture.
- Culture change does not happen overnight. It typically takes several years to change and sustain culture.
- Culture can be benchmarked within an industry or across a number of industries.
- Understanding your safety culture provides a different insight into your overall safety process than do other traditional forms of indicators.

Benchmarking through the use of the Survey is also an effective process for assessing and catalyzing safety culture improvement within organizations at any portion of their journey to world-class safety. And it's a focused way to rejuvenate an existing safety program through rapid penetration into all levels of an organization.

At DuPont, we believe the key to safety is committing to understand what is driving your safety performance, evaluating progress through measurement and driving continuous improvement so that safety is the number one priority of every employee.

Bibliography

Stewart, J.M. *Managing for World Class Safety.* New York: Wiley-Interscience, 2002.