CULTURAL TRANSFORMATION:
Improve Safety and Operational Performance (2018 Edition)

INTRODUCTION

It's an all-too-familiar scenario. Despite having well-designed management systems and highly trained workers, industrial organizations continue to experience significant incidents that harm people, the environment, and the bottom line. These may involve high profile process safety accidents, occupational injuries and illnesses, and property damage. In any case, the question is why are the organization's management systems failing to prevent these events?

Often, it's a matter of organizational culture. Of course, formal organizational structures, processes, and management systems are essential to Operational Excellence, including environment, health, and safety (EHS) performance. Yet, successful implementation and continuous improvement depend in large part on organizational culture: informal aspects such as values, beliefs, and attitudes that guide behavior in the workplace.

This report provides operations and EHS business leaders with an understanding of how culture can impact safety and operational performance, how to assess it, and strategies for achieving culture change that will support an organization's strategic objectives and help achieve performance targets.

Organizational Culture: What It Is and Why It Matters

The term "organizational culture" is commonly used, yet hard to define. Here, let's use the definition below from Edgar Schein, a pre-eminent researcher and author on the topic of organizational culture.

"The culture of a group is a pattern of shared basic assumptions that was learned by a group as it solved its problems…that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems."[1]

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> **—PETER BUSSEY**
> *Research Analyst*

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[1] Edgar H. Schein, Organizational Cultural and Leadership, 4th Edition. Jossey-Bass. 2010.

This definition of culture focuses on the "the correct way to perceive, think, and feel," which in turn influences individual and group decision-making and behavior in the workplace. Over time, organizations develop patterns of behavior reflecting the culture, and impacting EHS and operational performance in day-to-day operations.

Will the production worker bypass an interlock on the machine guard? Will the maintenance supervisor sign-off on a safe work permit before the inspection is done? Will the plant manager tacitly encourage falsifying records to satisfy the OSHA compliance officers?

Decisions made in these moments of truth reflect organizational culture and go a long way towards determining performance over time.

This is not to say that culture solely determines performance. Rather it's a key aspect of an organization that interacts with and influences other dimensions such as strategy, structures, systems, processes, technology and resources. How culture impacts performance doesn't depend on the culture alone, but rather on its relationship to the organizational environment it's part of.

The Gap Between Good Intentions and Execution

Most industrial organizations publicly claim that safety performance is important, and proudly tout programs to keep employees safe and operations running smoothly. LNS Research surveys of manufacturers show that nearly 49% of companies indicate that safety is viewed as a core value across all levels of their organization. It's a positive sign that protecting workers and safeguarding operations is viewed as a business priority by senior executives, operations leaders and frontline workers alike.
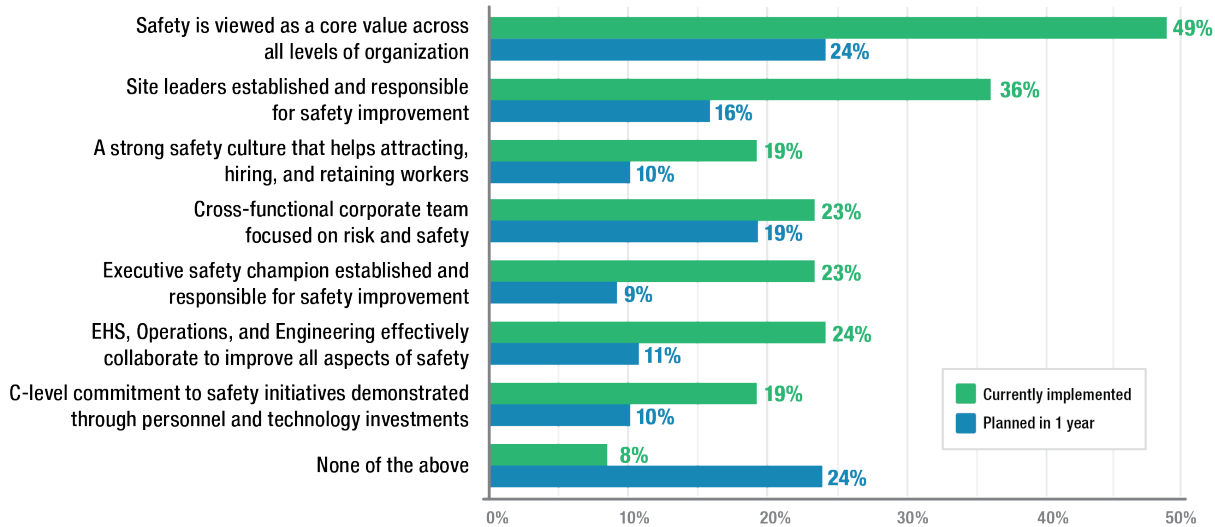
However, when it comes to implementing safety as a value, there's still a disconnect between stated intentions and execution. Only 19% of respondents report that their organization has C-level executive commitment to safety, as demonstrated by investments in personnel and technology. This gap in "walking the talk" reflects an organizational culture that is not fully supportive of safety — which helps explain why manufacturers and other industrial organizations continue to experience incidents and accidents that harm people, reduce productivity and, ultimately, stymie profitable growth.

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Safety Culture Capabilities

Safety is viewed as a core value across all levels of organization
- Currently implemented: 49%
- Planned in 1 year: 24%

Site leaders established and responsible for safety improvement
- Currently implemented: 36%
- Planned in 1 year: 16%

A strong safety culture that helps attracting, hiring, and retaining workers
- Currently implemented: 19%
- Planned in 1 year: 10%

Cross-functional corporate team focused on risk and safety
- Currently implemented: 23%
- Planned in 1 year: 19%

Executive safety champion established and responsible for safety improvement
- Currently implemented: 23%
- Planned in 1 year: 9%

EHS, Operations, and Engineering effectively collaborate to improve all aspects of safety
- Currently implemented: 24%
- Planned in 1 year: 11%

C-level commitment to safety initiatives demonstrated through personnel and technology investments
- Currently implemented: 19%
- Planned in 1 year: 10%

None of the above
- Currently implemented: 8%
- Planned in 1 year: 24%

Legend: ■ Currently implemented ■ Planned in 1 year

The Link Between Culture and Safety and Operational Performance

There's a lot of evidence linking organizational culture and operational performance. For example, many companies have implemented continuous improvement initiatives such as Lean to drive towards Operational Excellence goals. Among manufacturing operations implementing Lean, research shows that plants with certain organizational culture characteristics such a collective attitude, people orientation, continuous improvement focus and collaboration in favor of assertiveness perform much better than plants without these characteristics.[2]

Likewise, the key role of organizational culture in EHS and safety performance is well-recognized. Companies with best-in-class EHS and safety performance actively build and sustain a culture that considers EHS to be at least as important business performance. This type of culture starts with active leadership from senior management on down, with employees throughout the organization taking ownership and contributing.

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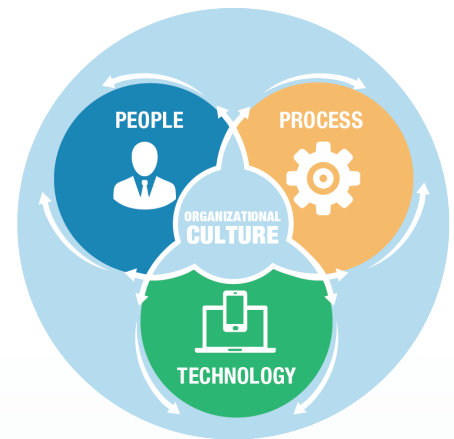
[2]   Successful lean implementation: Organizational culture and soft lean practices. Bortolotti et al. International Journal of Production Economics, Vol. 160, February 2015.

Such leading organizations frequently assess culture as a basis for continuous improvement.[3]

Given that organizational culture is closely tied to EHS and operational performance, let's look at some research on how industrial organizations view culture in their performance improvement efforts.

Culture: Barrier to Safety and Operational Improvement?

Enterprises recognize the critical role culture plays in enabling performance improvement. Results from the LNS Research Global EHS Management Survey show that improving organizational culture is one of the top objectives in undertaking EHS performance improvement initiatives, with 40% of respondents citing it as such. Closely related, alignment of EHS processes with other parts of the organization was also named as a top objective, by 39%.

What are your organization's top 3 strategic objectives for EHS performance improvement?
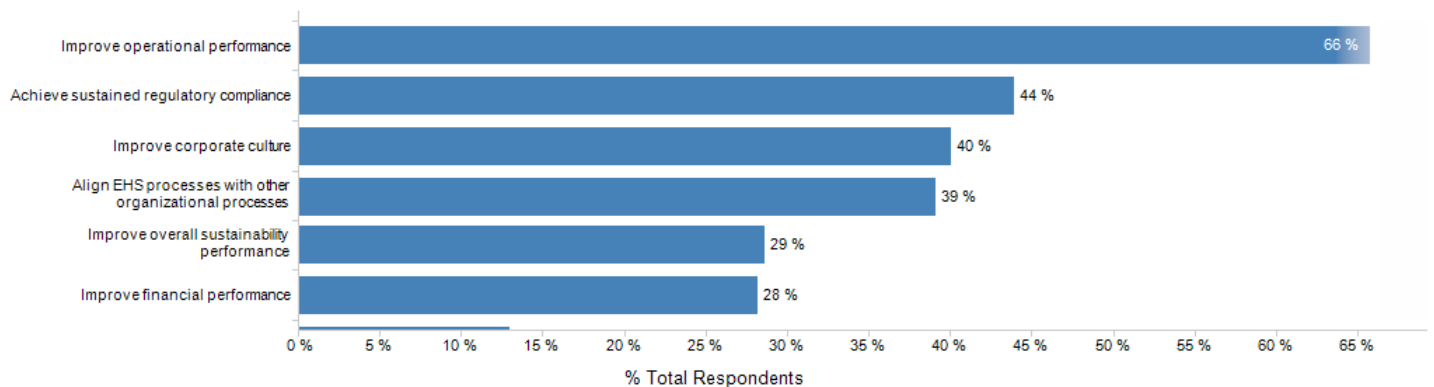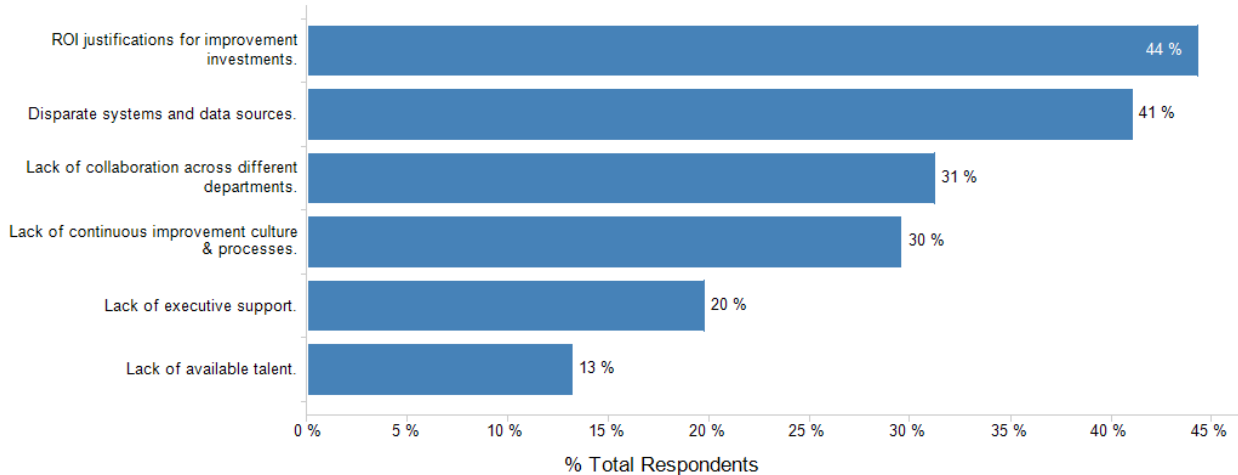

SOURCE: LNS Research EHS Management Survey; click to see full-size image.

Our survey data also show that organizational and cultural issues are prominent barriers to performance improvement. Top challenges to performance improvement include: poor collaboration across departments, lack of a culture of continuous improvement, and lack of executive support, cited by 31%, 30%, and 20% of respondents, respectively. The importance of culture in EHS and operational performance is well-recognized, but companies are still struggling with effective implementation.

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[3]   Defining World Class EHS Management. Campbell Institute of the National Safety Council, 2012.

What are your organization's key operational challenges in achieving your strategic performance improvement objectives?

SOURCE: LNS Research Manufacturing Operations Management Survey; click to see full-size image.

What Constitutes an Effective Culture of Operational Excellence?

Just as there is no standard definition of organizational culture, there is no universal agreement on what defines an effective culture for EHS and operational excellence. There are many management system standards that contain elements related to culture, but generally these standards don't address culture per se.

What elements are needed for an effective organizational culture? With a focus on the EHS and safety aspects of operational excellence, we can answer this by surveying industry guidelines. Government, industry and professional organizations such as the Health and Safety Executive (UK), IOSH, and the National Safety Council (US), have published research on the topic of culture.[4,5,6] Across the board, we see the following characteristics as essential elements of an effective organizational culture:

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[4] Promoting a Positive Culture: A Guide to Health and Safety Culture, Institution of Occupational Safety and Health, 2015.

[5] Safety Culture Checklist, Health and Safety Executive.

[6] Defining EHS Leadership in World-class Organizations, The Campbell Institute of the National Safety Council, 2013

- Senior management commitment and leadership

- EHS and safety are fully integrated into the business

- Robust, effective management systems with a risk-based approach

- Employee engagement and effective communication at all levels

- Workforce training and competency management

- Monitoring and review processes to improve performance

Having these high-level elements in place will go a long way towards enabling a culture of EHS and safety performance improvement. Among these, what's most important? The phrase "it starts at the top" applies. Effective leadership including senior management commitment and involvement is widely recognized as the most essential element of shaping, sustaining, and changing organization culture. Next, let's look at the options for assessing culture as the basis for improving it.

Assessment of Culture is the Starting Point for Change

A realistic assessment of organizational culture can be valuable for continuous improvement. There are many assessment tools available to assess organizational culture. These tools can be categorized into three main approaches:

- **PERCEPTION SURVEYS** — employees are surveyed to collect data about perceptions about topics such as management commitment to safety, supervisor and co-worker support, employee participation, and employee competence levels. The aim is to quantify the present safety culture situation in an organization. The results can be used to benchmark results over time and among organizations.

- **OBSERVATION AND RESEARCH** — this approach seeks to describe and understand the culture as the basis for change and improvement. The required data and information are collected through fieldwork using techniques such as observations, document analysis, interviews and focus groups. The combined input is used to describe the current state of the culture.

- **CAPABILITY MATURITY ASSESSMENT** — this approach focuses on assessing the current state of safety culture maturity in an organization, placing it on cultural maturity curve that has predefined levels or stages of maturity (e.g., the LNS Research Operational Excellence maturity model, right). The objective is not as much to assess the current state as it is to determine what actions should be taken to move the organization to a higher level of maturity.

Often a combined approach is used to triangulate on the current state. For example, using a combination of surveys, interviews, and observations.

An emerging method that can feed into both the observation and capability maturity assessment approaches is the analysis of risk and safety process execution data, provided the right information technology is available to do so. For example, analyzing and benchmarking the number and closure rate of corrective actions resulting from audits and inspections can shed light on the operative culture within an organization or work group.

A key consideration in designing an organizational culture assessment is that within an enterprise, culture is not uniform across various business units, regions, organizational units, and work groups (although there may be a common core culture).

The Essential Ingredient for Culture Change: Leadership

The culture assessment tools and methods discussed above can help identify opportunities for improvement. The challenge becomes how to plan, implement and sustain culture change. Many if not most culture change initiatives end up falling short of expectations, if not outright failing. The main culprits are lack of definition about what culture is, and not understanding how it is formed and how to change it.

The starting point for any culture change initiative is executive leadership. One or more key people at the top need to decide that something about today's ways of working needs to change, then develop a clear vision for the needed change. Most importantly, they need to start "walking the talk" in a visible way, and recruiting others to do so. The key is that the change initiative be more than just issuing directives and making announcements: leaders need to set a consistent example.

The approach taken by Paul O'Neil to change the culture of aluminum maker Alcoa when he became CEO of Alcoa in 1987 exemplifies a top-


INNOVATION LEADER
Drives standards and expectations
L5

AGILE
Evolved people, process, and technology across the enterprise
L4

HARMONIZED
Flexibly unified at the organizational level
L3

CONTROLLED
Repeatable within organizational, process, and/or technology boundaries
L2

AD HOC
Unstandardized with significant variation
L1

"

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Research Analyst

down leadership approach, and the results it can produce. O'Neil's first order of business with all stakeholder groups — investors, management, and employees- was to make a commitment to workplace safety THE top priority for him personally, and the company.

As recounted by O'Neil: "I knew I had to transform Alcoa. But you can't order people to change. So, I decided I was going to start by focusing on one thing. If I could start disrupting the habits around one thing, it would spread throughout the entire company."

He believed that this focus would instill a culture of "habitual excellence" that would permeate the organization. This approach worked. During his 13 years as CEO, Alcoa's lost workday incident rate fell from 1.86 to 0.2.

SOURCE: Value Capture, http://valuecapturellc.com
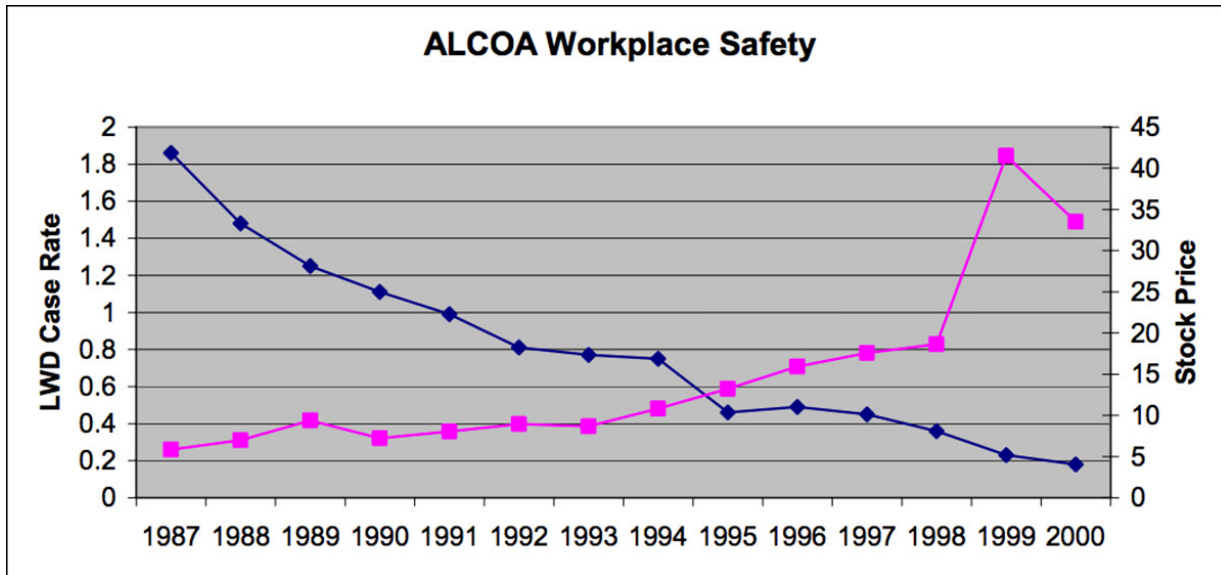
Focusing on improving safety led to improving inefficient manufacturing processes and better product quality. Net income increased five-fold during O'Neil's tenure.

Realizing a Culture of Operational Excellence

An organization's management systems are a useful vehicle to help implement culture change. Most industrial organizations have implemented some combination of management systems as a platform to drive continuous performance improvement. ISO 9001, ISO 14001, and OHSAS 18001 / ISO 45001 for quality, environmental, and occupational health and safety, respectively, are among the most widely implemented.

Management systems based on such consensus standards already have a built-in framework to help implement and sustain culture change. They have a lot to say about people and organizational topics, and therefore (at least indirectly) about culture. A look at some of the elements of ISO 14001 shows the great importance of people- and organizational-focused activities in the overall management system:

- Policy supported by senior management

- Identification of environmental aspects and impacts of the organization

- Development of objectives and, and their management programs

- Defined resources, roles, responsibilities and authorities

- Development of competence, training, and awareness procedures

- Communication process to all stakeholders and interested parties

- Development of operational control procedures

- Development of procedures for management review by senior management

How these elements are handled will have a great influence on shaping an organization's EHS culture, and ultimately performance. The 2015 revisions of ISO 9001 and ISO 14001, and the forthcoming ISO 45001 further reinforce this notion with new or enhanced requirements for leadership, business strategy, communications, operational planning and control using a lifecycle approach (cross-functional), performance evaluations, and management review.

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Evidence of Business Value: The Impact of Culture on Operational Performance

Given that organizational culture is a rather nebulous concept, it's fair to ask about the potential business value of improving it. LNS Research survey data show some interesting associations between culture and operational performance. We ask respondents to name the most important operational strategic objectives of their organization, and the top challenges faced in meeting those challenges. We also gather data on current performance on the overall equipment effective (OEE) metric, which is a commonly used measure of operational performance that incorporates quality, asset availability, and productivity.

These data show that organizations that cite "lack of a culture of continuous improvement" as a top challenge have a median OEE of 67 vs. a median OEE of 75 for all organizations in the sample. Of note, the median OEEs for those citing "lack of cross-functional collaboration" and "lack of executive support" are well below the median of overall of the sample at 67 and 70, respectively. Such differences in OEE associated with an effective culture translate to meaningful improvements in efficiency and quality.

Although these factors do not address culture per se, collaboration and executive support are both essential elements of an effective culture. In any case, these data point to a positive relationship between an effective culture and operational performance.

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Organizational Culture Challenges Impact Operational Performance
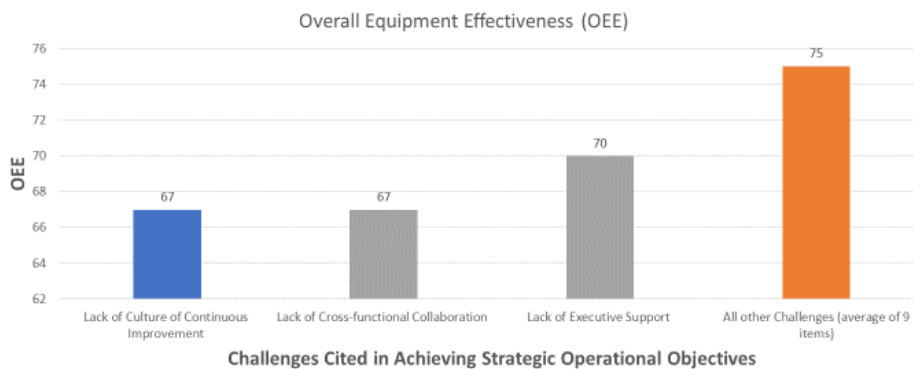
SOURCE: LNS Research Asset Performance Management Survey, click here to see full-size image.
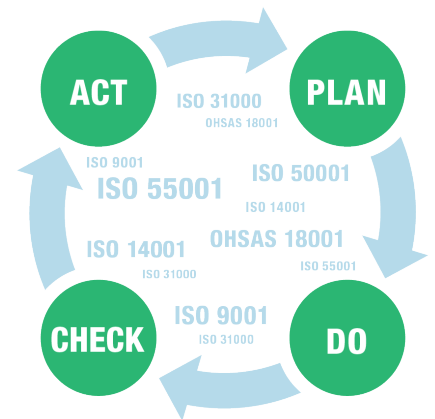
Recommendations

Organizational culture plays a key role in determining EHS and operational performance outcomes. Culture can be viewed as a set of assumptions, values and beliefs shared among a group. These can have a powerful influence on individual and group decisions, which in turn impact performance. Culture doesn't exert it's influence in a vacuum; it's part of the larger organizational system of strategy, structures, systems, processes, and technology.

Culture change can be a powerful lever to help improve organizational performance. We offer the following recommendations to incorporate culture into a holistic approach to Operational Excellence:

1. **REALIZE THAT CULTURE CAN BE WELL-UNDERSTOOD AND MANAGED.** Organizational culture is not necessarily a mysterious concept that can't be grasped. Rather, it's an organizational dimension that has been studied for several decades. It can be assessed, described and benchmarked as a basis for improvement.

2. **ESTABLISH TOP-DOWN CLARITY OF VISION.** Culture change involves fundamental organizational change. Success will depend a clear vision of the desired change coming from senior leadership, with laser-like focus on impacting one or two critical success factors.

3. **RELY ON MANAGEMENT SYSTEMS.** Management systems provide a solid framework for communicating and realizing the executive vision in day-to-day operations. They provide a practical way to instill and re-enforce a culture of continuous improvement and Operational Excellence.

4. **PROACTIVELY ENGAGE KEY STAKEHOLDERS.** As with any change or improvement initiative, getting support and buy-in from leadership, middle management, and frontline workers is essential. Show stakeholders "What's in it for me?", and how the initiative will deliver that payoff. In the case of culture change, the role of executive leadership is more critical than ever.

5. **VIEW TECHNOLOGY AS NECESSARY BUT NOT SUFFICIENT.** It can be easy to look to technology as the silver bullet to promote and sustain an effective culture. Technology is key for enabling processes and measuring their execution, but it needs to work in concert with all Operational Excellence capabilities to get the job done.

6. **BE A LEARNING ORGANIZATION.** Continuous learning and improvement is an essential aspect of any high-performance culture. This involves systematic analysis of operations, process execution, and incidents, and collaborative deployment of lessons learned and best practices throughout the organization. Such learnings help develop the "pattern of shared assumptions" that shape culture.

Presented by:

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Author:

Peter Bussey,
Research Analyst
peter.bussey@lns-global.com

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