Risk Intelligence of Leaders

Developing 'Risk Intelligence' in Leaders to Drive Safety Improvement

The importance of strong safety management systems supported by an effective safety culture is well understood by organizations internationally. However, it is challenging to measure the critical characteristics leaders need to support these elements. "Risk intelligence" is a concept developed from the emerging body of research on mindfulness and High-Reliability Organizations. We have developed a "Risk Intelligence of Leaders" tool to measure both the risk intelligence of individual leaders and that of a leadership team. This has been shown to provide guidance to leaders on how they can improve safety by challenging their perceptions and attitudes, which has led to changed behaviors. Measuring "risk intelligence" was effective in challenging leaders at a personal level and identifying organizational gaps that weakened the implementation of safety management systems and safety culture.

The role of "Risk Intelligence"

The importance of effective design and implementation of safety management systems supported by an effective safety culture is well understood by organizations internationally. However, there are few (if any) quantifiable methods to measure the critical characteristics of leaders in order to support these.

"Risk Intelligence" is a measure of the "mindfulness" required for leaders to successfully deliver safety strategy. It is recognized that leaders are critical to this delivery, as they set the direction, tone and style for the culture of safety across the organization. It has been said that "leaders create cultures - managers work within them".

The "Leadership Shadow"

International research on both organizations involved in major accidents and on High-Reliability Organizations (HROs) has highlighted the importance of "mindful" leadership, which involves being conscious of the risk issues within the organization. Therefore, leaders can, and must, influence the culture of safety through their attitudes and behaviors. Collectively, their actions and focus cast a "leadership shadow", and the safety of an organization can be changed by enhancing and focusing this.

The Leadership Shadow comes from four sets of behavior (Figure 1).

Figure 1.   The Leadership Shadow
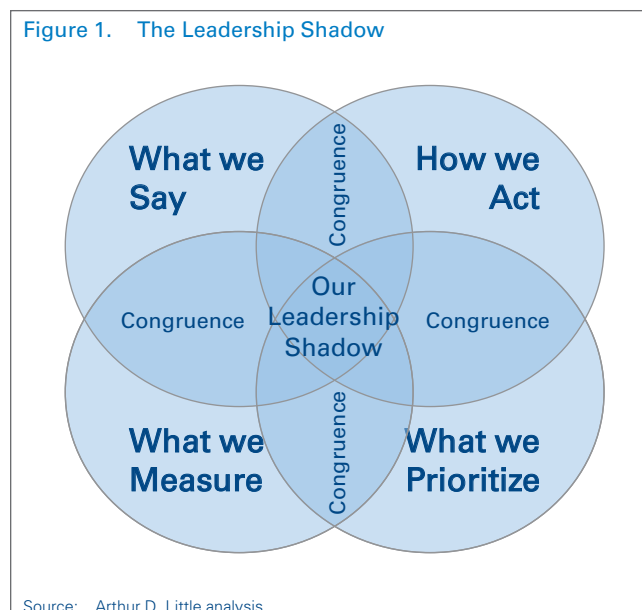
Source: Arthur D. Little analysis

There is overlap between these four sets of behaviors, so they can either reinforce or undermine each other, creating a "leadership shadow" that influences the safety in the organization.

What leaders say can set the messages that are repeated and emphasized in an organization. However, there is also an element of leading by example, as what they say can be reinforced or contradicted by how they act. These actions can communicate the importance of safety through an organization, as can the level of priority that they assign to safety. Their priorities are reinforced by how the organization measures what merits rewards and recognition, as well as accountability. For example, if the Key Performance Indicators focus on health and safety, this will motivate a greater focus on health and safety throughout the company and show that health and safety is a higher priority.

What is a High-Reliability Organization?

High-Reliability Organizations (HROs) are defined by Professor Andrew Hopkins of the Australian National University as "an organization where a single error, if not contained, could cause not one fatality but hundreds" (A. Hopkins, Learning from High Reliability Organizations). Examples cited in literature include air-traffic control organizations (such as Airservices Australia) and nuclear-powered United States Navy aircraft carriers. They provide a good opportunity to learn how organizations (and their cultures) have developed, and therefore can help organizations in other sectors to improve and develop their own health and safety cultures and management. This is particularly valuable for organizations that are already world class and can find it difficult to identify others in their sector to learn from.

"High-Reliability Organization" is a level that organizations can aspire to, but it can be difficult to define in terms of outcomes, such as an accident or incident rate. Therefore, it is more useful to think of an HRO as a "mindful" organization (K.E. Weick and K.M. Sutcliffe, Managing the Unexpected: Resilient Performance in an Age of Uncertainty). Research into HROs has identified five common key characteristics independent of industry sector, organization size and operational geography:

1. Preoccupation with failures, rather than successes, to prevent complacency.

2. Reluctance to simplify interpretations in order to create a more complete picture of operations.

3. Sensitivity to operations through engagement of frontline operators.

4. Commitment to resilience so the organization can react to deal with errors and crises.

5. Deference to expertise for high-speed decision-making. This has been subject to debate, as the advantages and disadvantages of different decision-making structures are unclear, and both bottom-up and top-down decision-making structures have been identified as causes of incidents.

Learning from High-Reliability Organizations

Research has identified a number of methods that organizations can use to implement these key characteristics of HROs. One is having well-developed systems for reporting near-misses, process upsets and small, localized failures that may be indicators of encroaching larger problems. Prompt action can then be taken based on these warning signals, thus averting future problems. Care is required to distinguish significant weak signals from background noise, as weak signals are often ambiguous and so must be thoroughly investigated to determine whether they have an innocent explanation or are a warning of danger. However, a distinguishing characteristic of HROs is that they meet a weak signal with a strong response in the early stages. To help achieve this, HROs characteristically employ people to exclusively explore the complexity of operations, double-check claims of competency and success, and collect and analyze information that will lead to the identification of weak warning signals. They recognize that this organizational redundancy is necessary for the thorough collection and interpretation of information, rather than a lack of efficiency.

Education is another key factor for HROs, as it can enable the workforce to notice more of the small irregularities in day-to-day operations that can help to distinguish the weak signals. Educating frontline operators regarding operations as a whole is also important. This education includes how operations can fail and the strategies for recovery, thus avoiding "silo" thinking in the organization, which is when employees operate solely within their small spheres of influence, with little awareness of the impact that their activity has on other areas. Employees are also given guidance on the likely precursors to accidents in their areas and asked to report these.

To gain the full benefits of these methods, frontline operators must be able to report to their managers without fear of speaking up, in order to ensure that sensitivity to operations is inherent throughout the organization and a more coherent overall picture can be developed. This is coupled with a capacity for both individuals and the organization as a whole to learn from reports and errors using a fast negative-feedback system, along with "put-back" systems to catch and correct errors without disabling the organization. This means that HROs are more attentive to the frontline of operations than other organizations. Effectiveness at implementing this characteristic can be gauged using "willingness-to-report" surveys.

The overall picture in an HRO tends to be more situational and less strategic than in other organizations.

Why measure Risk Intelligence?

Risk intelligence is an element of mindfulness that is necessary but not sufficient for being a "mindful" leader. Measuring the levels of risk intelligence in a leadership team can provide guidance on how leaders can improve health and safety throughout an organization by changing their behavior, based on the concept of the "leadership shadow". Measuring risk intelligence becomes a focus for future intervention.

We have found that within a leadership team there is usually strong agreement on areas of safety concern, but too often individually held concerns were not pulled together to drive future safety improvement plans. Through engaging leaders in open discussions on safety and their roles in it, these concerns emerge and plans can be made to address them.

Measuring risk intelligence across different leadership teams within the same group, such as for different operating companies or geographies, can provide a useful point of comparison across operations and facilitate sharing of good practice. It can be used as a benchmarking tool for safety performance and culture with other organizations in the industry.

The Risk Intelligence tool

Through projects for clients, we have identified nine key attributes of a risk-intelligent leader, which address both aspects of influencing others and the role of self, and developed a tool based around these. The tool tackles the challenge of measuring mindfulness, and therefore the current levels of risk intelligence in a leadership team, through their attitudes and behaviors.

The "Risk Intelligence of Leaders" tool engages the leadership team through a set of searching questions based around the key attributes of a risk-intelligent leader. The process is designed to be minimally disruptive, while encouraging thoughtful answers and honest evaluation from the leadership team. The data collected is analyzed to provide an overview of current leadership awareness and focus areas of concern and targeted actions to improve safety leadership. The Risk Intelligence of Leaders tool is both an assessment of how consistently leaders in an organization exhibit the attributes of risk intelligence, and an intervention through identifying development needs. The tool achieves these objectives by looking at what risk intelligence is and encouraging the individuals involved to articulate what it specifically means for them in their roles, with the analysis of these factors structured around the nine attributes.

The tool also examines the commitment of the leaders to safety through analysis of the content and quality of their answers and the response rate to the tool from the selected leadership group. The outputs recommend ways in which leaders can raise their risk intelligence and identify the key areas of health and safety risk within the organization beyond the leadership team to focus actions for health and safety improvement. The recommendations are pulled together into the next steps for the CEO to improve performance.

The impact of developing Risk Intelligence

The tool produces data and information on the critical characteristics of leaders to support safety, which can be used by CEOs and leadership teams to develop their individual and collective risk intelligence. But what is the real impact within an organization?

Our experience shows that the process as well as the results produced by the tool can provide benefit. The process of completing the tool encourages leaders to think about safety, including those leaders who did not previously see safety as part of their roles. Taking the time to assess risk intelligence also demonstrates a leadership commitment to safety and allows CEOs to reset their personal expectations of leadership behavior towards safety. In this way, the tool (and the questions it asks of leaders) has been shown to provide guidance to leaders on how they can improve safety by challenging their perceptions and attitudes, which has led to changed behaviors.

For some CEOs and their executive teams, the results "told us what we already knew", prompting global safety directors to ask CEOs "why they had not done something about this before". In reality, CEOs might have guessed at the results, but the tool delivers both the data and information that allowed them to act. Since the tool involves the leaders directly, it is difficult to ignore, especially when it shows that the executive directors are less risk intelligent than their direct reports. The process encourages leaders to think and talk openly with their peers and direct reports about their risk intelligence and their impact on safety in the organization. The safety issues that the leaders identify as part of the process can very quickly become the heart of the next annual safety plan, with very little additional work needed to generate the plan.

Conclusion

Using the concept of a leadership shadow and research into High-Reliability Organizations to assess risk intelligence can help to engage a leadership team with safety issues and provide guidance to make real changes in the leadership, management and culture of safety in an organization. It often has the most impact on leaders in non-operational/engineering functions who have historically not fully understood their personal impact on the safety culture of their organizations.

The tool has been shown to be effective in challenging leaders on a personal level, and identifying organizational gaps that weaken the implementation of safety management systems and safety culture. It provides guidance to leaders for improving their engagement with health and safety, and identifies particular health and safety concerns, both for individuals and the wider organization, for future focus.

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