



INTEGRITY MANAGEMENT CONTINUOUS IMPROVEMENT

Foundation for an Effective Safety Culture

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Foundation for an Effective Safety Culture describes the key elements of organizational culture and business processes that have led to dramatic improvements in safety performance in a range of industries where the consequences of failure can be unacceptable, including the chemical manufacturing, petroleum refining, nuclear power, aviation, and medical field. These industries have found that when people in an organization believe that safety is important, they behave with care and concern about how they do their jobs, how they protect their colleagues, how they protect their customers, and how they protect their public. They understand that what their employees believe about the importance of safety may be one of the largest determining factors in their success. When we speak of “safety”, we mean it in the broadest possible sense – safety of employees, customers and the public as well as a reliable pipeline system which delivers energy to people for heating and cooling, and to manufacturers that use natural gas as a feedstock and source of energy.

Purpose of this Document

The purpose of this paper is to describe an “effective safety culture” and to convey the extent to which INGAA is committed to helping its members achieve strong safety cultures. INGAA will assist in educating, promoting, reporting, sharing, learning, and evaluating the overall safety performance of the industry and creating an atmosphere that is conducive to technical exchange. This includes both pipeline operators comprising INGAA and the members of the organizations that serve the pipeline operators, members of the INGAA Foundation.

INGAA members strive for perfect performance in safety, a commitment made in the INGAA Guiding Principles. Our intention of focusing on safety culture is that our intention is to explicitly improve our safety performance. We recognize that we are on a journey and that this is not a short-term initiative. It has become clear that compliance with regulations, in and of itself, is not enough and does not prevent failure. We have found that we cannot simply “proceduralize” our desire to enhance our safety culture. While the application of risk management principles and advances in other management processes and systems have led to improved performance, we cannot anticipate every possible event.

We must look to shape a culture where we extend ourselves. We have to expunge the idea that safety and compliance are a tradeoff with production and profit. We must inherently understand that strong safety practices will result in the success of our business. We must instill in our employees a sense of situational awareness and a preparedness to make decisions to act in the interest of safety when adverse events occur.

The challenge is that there is no simple solution as every operator’s risk profile is different. In this document we present a working definition of safety culture, describe the role of leadership and characteristics of an organization with a safety culture, define its key elements and indicators of effective implementation.

What is Safety Culture?

Safety Culture is the sum of all safety-related assumptions, beliefs, attitudes and values displayed through the behaviors of the leaders, managers, first line supervisors and general employee population of an organization.

People are persuaded of safety as a value only when organizations and their leaders consistently demonstrate that value. When it comes to safety, there must be “constancy of purpose”. The achievement of this goal will determine the ultimate success or failure of the organization. When the employees of a company identify with safety, it is contagious – employees interact with each other and reinforce this value. Sharing it creates a sense of purpose and influences how employees conduct everyday work. The ongoing practice of caring about safety strengthens the overall organization’s belief in its value and acts as a unifying force. When the value is shared

extensively in every level of the organization, and a widespread level of commitment to overall safety performance is expected, then everyone is doing what is right, when no one is looking. Then we can say: a “safety culture” thrives.

A positive and effective Safety Culture is critical to achieving long-term sustainability in an organization and industry. Observing and understanding our (safety) culture provides a window into the inherent beliefs, attitudes and values of the employees of pipeline operators, service providers and construction companies; and ultimately our industry as a whole.

Role of Leadership

Strong leaders create organizations that are caring and responsible. To do so, they lead by example, convey a sense of ethical responsibility and practice good process, always. Leaders produce a clear set of priorities and a framework against which to allocate resources, commensurate with risk to the employees, the customers and the public. This is especially important in a technologically complex organization where the risk of failure can be unacceptable. Employees, in turn, are inspired by the climate of commitment and feel motivated to accomplish the leaders’ desired results. Safety tasks and the employees who oversee them are given a very high status by the leaders.

Characteristics of the Organization

The organization that has embarked on this journey of change aligns around the essential beliefs and actions of the leaders. Its decisions and behaviors reduce risk and have a positive and direct impact on safety performance and operational effectiveness. A mature organization will gather the right business information and use it within supporting management systems to identify, characterize and manage both internal and external risks. The empowered employee will openly report safety issues and work with colleagues and management to resolve them. When unwanted events occur, the organization determines cause and corrective measure necessary to prevent reoccurrence, utilizes improvement processes as needed to rectify the problem, and institutionalizes the lessons learned within information systems fully accessible to all. Employees have confidence that their management will respond fairly to open and honest communication and will provide positive reinforcement for reporting issues and taking action to resolve them.

What are the Elements of Safety Culture?

Each of the six elements presented in this paper is characterized by a set of indicators that describe what the element looks like when implemented in an organization. Taken as a whole, these elements and indicators provide an operational definition of an “effective safety culture.” These elements and their associated indicators will be used as the basis for a companion self-assessment tool that INGAA will develop for member companies to use to assess their safety culture and management processes and to develop targeted improvement programs. Each element includes indicators of effective implementation in operations, i.e., “what good looks like.”

The elements are:

Consistent, strategic leadership in which leaders demonstrate an uncompromised commitment to safety.

Process and results guide operational performance.

A mutually trusting organization in which a culture of openness and trust engages the workforce and safety is understood as a shared responsibility.

Continuous organizational learning, internally and externally, from adverse and positive events.

The organization manages risk systematically against a framework provided by leadership.

Workforce investment is an ongoing management focus.

KEY ELEMENTS AND INDICATORS:

1. Consistent, strategic leadership in which leaders demonstrate an uncompromised commitment to safety.

Executives and managers at all levels constantly and consistently send the message that the organization is fully committed to safety in the broadest sense, for employees, customers and the public ... and that accidents are both preventable and unacceptable.

Indicators

Leadership ...

Sets an explicit vision for the organization for safety performance excellence.

Works constantly to build trust in the workforce that the organization is fully committed to safety performance excellence; demonstrates commitment by visible, personal example and frequent, substantive contact with employees on safety and risk issues.

Understands that recognition of excellent safety performance is more powerful than punishment for poor performance; ensures that robust reward/discipline programs are in place and consistently applied; creates and nurtures a just culture where everyone understands and supports in the expected code of practices.

Assigns accountabilities; sets and communicates performance standards and objectives that will drive progress toward the safety vision.

Makes safety integral to business decisions; ensures sufficient allocation of human, information and financial resources to deliver safety performance objectives.

Communicates clear expectations for employees to report unsafe or risky conditions and stop work that they consider unsafe.

Educates managers in safety culture, vision, expectations, accountabilities and systematic management; includes safety performance in manager's job descriptions; replaces managers who do not respond to ongoing safety performance erosion and invests in preparing the organization for situational awareness.

Promotes a strategic plan and framework for risk prioritization and allocation of funds.

Adequate support systems are in place to ensure that the organization can fulfill all tasks required to achieve its goals.

2. Process and results guides performance

Business practices consistently guided and executed according to clear definition and direction, evolved from thoughtful analysis.

Indicators

Uses self assessments to sustain progress and create ongoing momentum; understands that process improvement is never-ending.

Uses the continuous improvement process to implement and make ongoing progress toward the safety vision.

Understands the proper pace of implementation of new management processes for the organization.

Processes and procedures are documented and accessible.

Roles, responsibilities and accountability are clear.

Required competencies for jobs are defined; training and development programs address identified gaps in qualifications and refreshers and other performance support is provided.

Consistent execution of well defined processes and metrics based on achieving strategically planned goals and priorities.

Disciplined management of change processes are consistently used to control the unintended consequences of changes.

Performance monitoring programs are rigorous and risk-based; use leading and lagging performance indicators and self-assessment programs; include corrective action processes that address deficiencies.

3. A culture of openness and trust engages the workforce and safety is understood as a shared responsibility.

Employees trust their management to “walk the talk” and to back them on identification and resolution of safety issues; management trusts their employees and empowers them to “do the right thing.”

Management understands that the alternative to an organization that learns rapidly from front line employees about risk is an organization that learns painfully, slowly and with great cost.

Indicators

Employees are confident that a just system exists where safety issues can be raised without fear of reprisal.

Employees have the necessary authority and resources to be successful in identifying and managing risks.

Management encourages and rewards the sharing of safety concerns, and creates an environment where employees feel comfortable “raising their hand” to identify risks; employees understand the risk reporting system and feel comfortable using it to surface risks.

There is strong emphasis on the importance of rapid communication of information on safety and risk concerns. Efficient communication channels exist up, down and horizontally in the organization.

Management provides timely response to identified issues and positive reinforcement for employees that surface major issues.

Personnel in the organization accept and carry out their responsibilities for safety for themselves, their colleagues, their customers, their public and the reliability of their pipeline system

The workforce understands the importance of work processes and procedures, and the potential consequences of risky shortcuts.

The workforce consistently maintains a heightened vigilance and sense of vulnerability regarding identifying risk and seeing through the remediation.

4. Continuous organizational learning, internally and externally from adverse and positive events.

The organization shares learnings from adverse and positive events, from observations, errors, near misses, incidents, benchmarking, and activities in trade and public interest organizations and meetings. Lessons are captured and effectively shared.

Indicators

The right information is gathered and used to manage risk;

Adequate decision support is available.

Incidents are investigated for root cause; corrective actions are defined and tracked to completion

There is a sharing of learning in a timely fashion.

Incident investigations focus on finding the causes of incidents and learning from them, not on assigning blame.

Workforce remembers the lessons from past incidents (both internal and external to the organization) to combat complacency about risk and to reinforce the need to stay engaged.

Organization is committed to benchmarking externally and applying lessons learned and actively participates in industry associations and research programs.

Organization is committed to engaging with the full range of public and private sector stakeholders and acting on learning.

5. The organization manages risk systematically against a framework provided by leadership.

The organization has sustainable, disciplined management processes to control risk and continuously improve performance.

Indicators

Planning based on prioritizing the likelihood and consequence of adverse events and allocating resources accordingly.

Processes and procedures are documented and accessible.

A systemic approach to risk management involves all employees and ensures that the process from risk identification through assessment, characterization, funding, and mitigation or no action, is a transparent process.

A long-range risk management plan exists which results in the risk prioritization and characterization, decisions regarding a treatment or mitigation, funding, execution and evaluation.

Roles and responsibilities are clear; required competencies for jobs are defined; training and development programs address identified gaps in qualifications.

Adequate resources are allocated to meet objectives.

Disciplined management of change processes are consistently used to control the unintended consequences of changes.

Performance monitoring programs are rigorous and risk-based; use leading and lagging performance indicators and self-assessment programs; include corrective action processes that address deficiencies.

Continuous improvement processes are integrated into all work processes and programs.

Regular executive review is in place to monitor organizational safety performance and that the highest priority initiatives are addressed

6. Workforce investment is an ongoing management focus

Processes to enhance the effectiveness of employee performance are embedded in the strategic plans of the organization.

Indicators

There is recognition that sustaining safety performance means the qualification, preparation and empowerment of the workforce, including situational awareness.

There is recognition that excellence requires ongoing focus on supporting employee performance with training, refreshers, tools, clear procedures and standards, exercises and drills.

Even where companies have achieved an excellent safety record, there are continuing programs to foster and improve the safety culture.

There are processes in place for continuous monitoring of learning of all employees, including use of performance indicators and culture surveys of employee perceptions regarding safety.

Secure channels for reporting of safety risks are provided.

New employee orientation includes substantive focus on the importance of safety to the organization and how safety is an essential element to “the way things are done around here.”

A long-term training strategy exists and is funded on a long-term basis.

A long-term personnel development and succession plan exists and is activated, from entry level up.

All training programs have been reviewed and requirements determined for training, through job task analysis, for all levels and implemented on a comprehensive, systematic and integrated basis.

Emphasis has been placed on assessing the characteristics required for leadership as well as other requirements for first line supervisors and appropriate programs developed and delivered to meet their needs.