

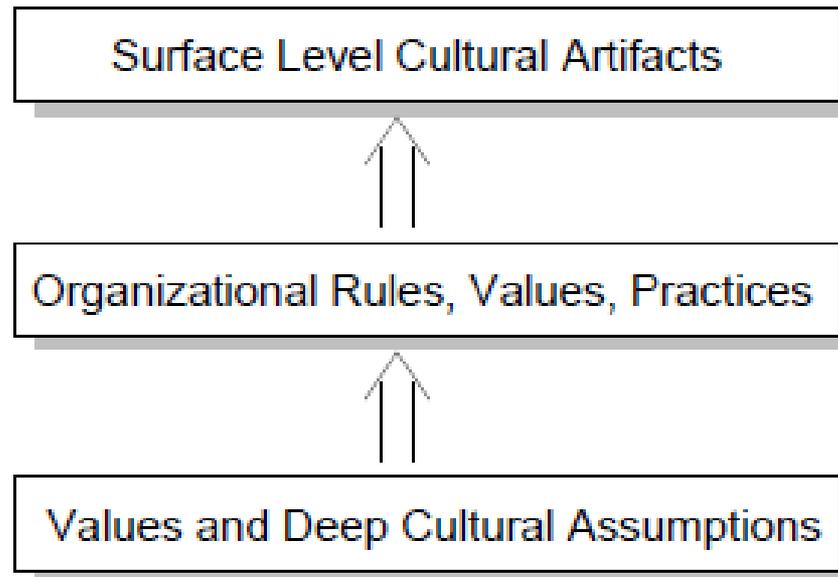
Safety in Management

Major Ingredients of Effective Safety Management

- Commitment and leadership
- Corporate safety policy
- Risk awareness and communication channels
- Controls on system migration toward higher risk
- Strong corporate safety culture
- Safety control structure with appropriate assignment of responsibility, authority, and accountability
- Safety information system
- Continual improvement and training
- Education, training, and capability development

What is Safety Culture?

Shein: The Three Levels of Organizational Culture



Safety culture is set by the leaders who establish the values under which decisions will be made.

Safety Culture

- Safety culture is a subset of culture that reflects general attitude and approaches to safety and risk management
- Trying to change culture without changing environment in which it is embedded is doomed to failure
- Simply changing organizational structures may lower risk over short term, but superficial fixes that do not address the set of shared values and social norms are likely to be undone over time.

Types of Flawed Safety Cultures

- Culture of Denial
 - Risk assessment is unrealistic
 - Credible risks and warnings are dismissed without appropriate investigation (only want to hear good news)
 - Believe accidents are inevitable, the price of productivity
- Compliance Culture
 - Focus on complying with government regulations
 - Produce extensive “safety case” arguments
- Paperwork Culture
 - Produce lots of paper analyses with little impact on design and operations

Leadership is Key to Changing Culture

- Safety requires passionate and effective leadership
- Tone is set at the top of the organization
- Not just sloganeering but real commitment
- Setting priorities
 - Adequate resources assigned
 - A designated, high-ranking leader
- Minimize blame (“Just Culture”)
- Understand that safety and productivity are not conflicting if take a long-term view

Safety Policy

- Reflects how the company or group values safety
- Should be easy to understand, easily operationalized
- States the way the company views safety: guiding principles

Example Operational Safety Philosophy (1) (Colonial Pipeline)

- All injuries and accidents are preventable.
- We will not compromise safety to achieve any business objective.
- Leaders are accountable for the safety of all employees, contractors, and the public.
- Each employee has primary responsibility for his/her safety and the safety of others.
- Effective communication and the sharing of information is essential to achieving an accident-free workplace.
- Employees and contractor personnel will be properly trained to perform their work safely.

Example Operational Safety Philosophy (2) (Colonial Pipeline)

- Exposure to workplace hazards shall be minimized and/or safeguarded.
- We will empower and encourage all employees and contractors to stop, correct and report any unsafe condition.
- Each employee will be evaluated on his/her performance and contribution to our safety efforts.
- We will design, construct, operate and maintain facilities and pipelines with safety in mind.
- We believe preventing accidents is good business.

Controls on System Migration to Higher Risk

- Adaptation is predictable and potentially controllable
- Identify potential causes and institute controls
- Perform audits and performance assessments based on safety constraints identified during system development
- Anchor safety efforts beyond short-term program management pressures

Safety Information System

- Second in importance only to management commitment
- Creating and maintaining a successful one requires a culture that values the sharing of knowledge learned from experience (learning culture)
- Important source for identifying leading indicators of potential safety problems and as feedback on hazard analysis process.
- Need communication channels for getting info to those who can understand it and to those making decisions.

Safety Information System: Contents

- Updated safety plan
- Status of activities
- Hazard analysis (HAZOP) results and hazard logs
- Tracking and status information on all known hazards
- Incident and accident tracking
 - Reports
 - Corrective Actions (status)
 - Trend analysis
 - Lessons learned

Summary: Safety Management System

- Key components
 - Management commitment
 - Management involvement
 - Employee empowerment
 - Incentive structures
 - Reporting systems
 - Organizational learning and improvement process

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