JOURNEY TO A STRONGER SAFETY CULTURE

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Outline

How do Organizations define Safety Culture? Why is it important?

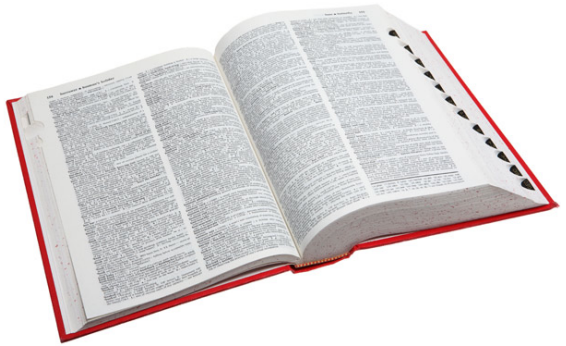
NIST Safety Policy

NIST Safety Management System

- Leadership: Commitment, Providing Resources, Communication
- Integrating Safety into Operations
- Tools to Support the SMS

Growing the Safety Culture: The Journey

Safety Culture Definitions



"The way we do things around here"

Safety 24/7

"Safety cultures consist of shared beliefs, practices, and attitudes that exist at an establishment."

OSHA

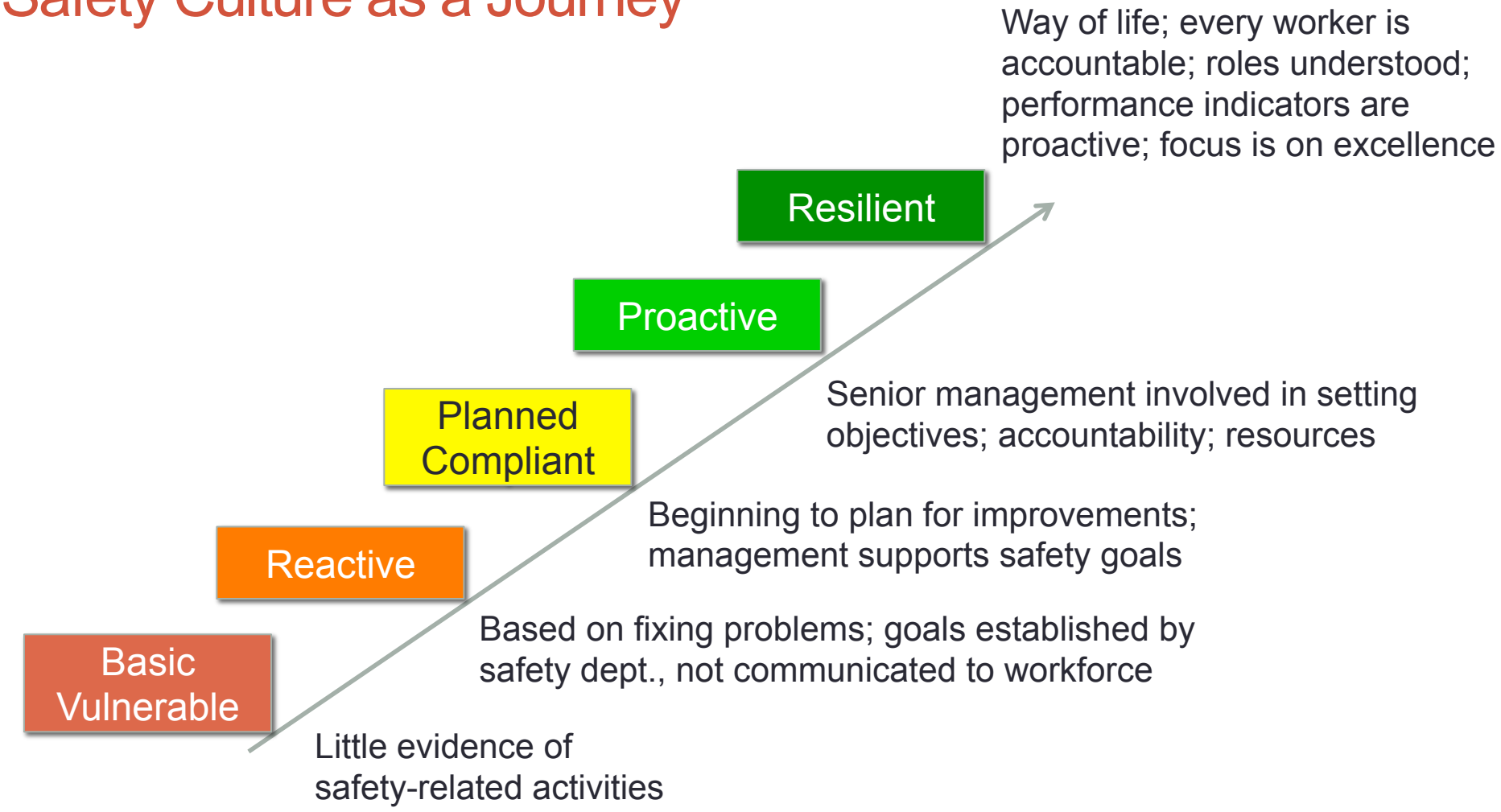
"The enduring value and priority placed on worker and public safety by *everyone in every group at every level of an organization*."

Huang, et al. Proceedings of the 46th Annual Meeting of the Human Factors and Ergonomics Society. Santa Monica, Human Factors and Ergonomics Society, 2002."

"The necessary full attention to safety matters… personal dedication and accountability of all individuals engaged in any activity which has a bearing on the safety of nuclear power plants. A strong safety culture is one that has a strong safety-first focus."

US Nuclear Regulatory Commission

Safety Culture as a Journey



From: *Minerals* **2013**, 3, 59-72; Foster P. and Hoult S.; The Safety Journey: Using a Maturity Model for Safety Planning and Assurance in the UK Coal Mining Industry.

Guiding Principles: Culture of Safety

"No regulation or guideline can ensure safe practices. Individual and organizational attitudes regarding safety will influence all aspects of safe practice, including willingness to report concerns, response to incidents, and communication of risk.

Each organization should strive to develop a culture of safety that is open and non-punitive, encourages questions, and is willing to be self-critical. Persons and organizations must be committed to safety, be aware of risks, behave in ways that enhance safety, and be adaptable.

Scientists understand that practices should be refined as observations are made, hypotheses tested, findings published, and technical progress achieved. The same holds true for safety in the laboratory, which should evolve as experience is gained and as laboratory activities change. As "*laboratorians*" gain more knowledge over time concerning how to recognize and control hazards, the level of risk that is considered acceptable should become smaller, with the goal of moving continuously to eliminate or reduce risk to the lowest reasonably achievable level."

–from CDC Guidelines for Biosafety Laboratory Competency

Why is Culture Important?

This idea is captured by the phrase “culture eats strategy for breakfast”, popularized during Mark Fields’s tenure at Ford Motor attributed to Peter Drucker.

Wall Street Journal article concluded that the biggest roadblocks for new leaders *(or new program initiatives)* include:

1. Not understanding or caring about the current culture
2. Assuming the current culture can support the new direction/strategy
3. Not articulating his/her aspirational culture for the team

“The data, the data, the data… over the years the data makes an unequivocal case for the fact that ignoring the gravitational force of culture almost always brings change initiatives to their knees and smothers or slows the ones that do manage to succeed.”

NIST Health and Safety Policy Statement

It is NIST policy to carry out all activities in a manner that protects employees, associates, and visitors from occupational injury and ill health. Considering safety to be the control of recognized hazards to achieve an acceptable level of risk, NIST is committed to making occupational safety and health an integral core value and vital part of the NIST culture by:

- Integrating safety and health considerations systematically into work practices at all levels, including all aspects of work planning and execution;
- Providing the resources necessary for employees and associates to conduct their work safely;
- Engaging employees and associates in safety and health matters;
- Fostering a work environment in which employees and associates are encouraged to report and raise safety and health issues without fear of retaliation;
- Continually improving the effectiveness and efficiency of NIST's safety and health processes, systems, and capabilities through assessments and performance and cost metrics;
- Complying with applicable laws, regulations, and other promulgated safety and health requirements; and
- Setting and communicating occupational safety and health objectives.

In addition, every individual at NIST is expected to take personal responsibility for their own safety, for the safety of others, and for making safety an integral core value and vital part of the NIST culture.

NIST Safety Management System

Use a system that is consistent with the NIST culture:

- SMS based on OHSAS 18001 similar to Quality System approach
  Plan work, document what you do; evaluate performance against document; make improvements both proactively and reactively
- Analogy to Scientific Methods– improve the approach and the based on experience and data, and keep improving
- Journey to Scientific Excellence: Measure by pace and quality of change and improvements, not numbers of incidents (when incident rates are already low; in MML there are generally 2 to 4 recordable cases for 900 staff each year)

ISO

ISO/CD 45001

Leadership Matters

Set the expectation at the top and demonstrate commitment

Fund $afety– provide time, resources, and staff

Hold people accountable for safety of their workspaces and workers

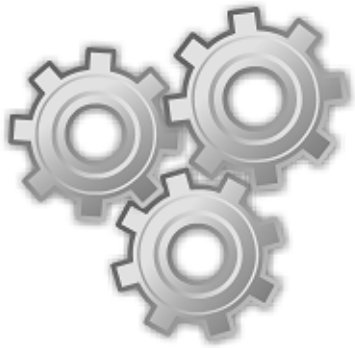
Make safety a value not just a priority– priorities change

Develop a safety management system and philosophy that is consistent with organizational goals and the existing *culture*

> “Company cultures are like country cultures. Never try to change one. Try, instead, to work with what you’ve got.” Peter Drucker, Ford Motor Company

Integrating Safety

Make it easy to Document: Online web-based tools to make it easier to report incidents, perform hazard analysis for experiments and shop work, conduct routine safety inspections



Guidance for Supervisors to Evaluate Safety

- Management by walking around
- Safety performance: plan, hold accountable

Integrating into way of doing business

- Introduce new staff to the science and safety
- Look at new research and experiments together with hazards they pose
- Be accountable, responsive, set the example, provide re$ources

Solicit Feedback– staff safety climate surveys (every 3 y) and *act* on the feedback

Training not just on safety requirements but on how to mentor new staff, how to build develop good lab techniques, etc.

Make the journey to a stronger culture part of the journey to organizational excellence

Make it easy with the right tools

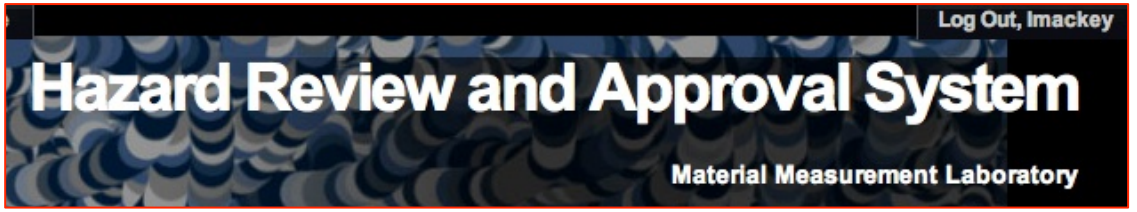
Incident Reporting and Investigation System (IRIS)

Capturing the information necessary for NIST to successfully address systemic safety issues.

Receive Incident Alerts

Inspector NIST

Gain the knowledge and skills to stay headed in a SAFE DIRECTION.



Required inventories: Chemicals, biohazards, radioactive materials

Sowing the seeds for sustainable safety culture…

DO

- Provide leadership
- $upport the safety program
- Keep an open atmosphere, encourage incident reporting
- Create an adaptable system for a changing environment
- Request feedback and creative solutions
- Integrate –make part of operations
- Educate and train
- Engage everyone– managers walk around, set the example, take the temperature, staff take personal responsibility, do practice drills, etc.

DO NOT

- Mandate safety
- Be all talk no action, provide no $upport
- Punish those who have incidents (except willful misbehavior)
- Set requirements and systems and never update, modify or improve them
- Prescribe how to do safety (some rules are needed)
- Add more, separate paperwork
- Just train without educating
- Expect safety to be the responsibility of the safety department

Making Safety "… just how we do things."

For safety to be sustainable in a changing environment (changing staff, research projects, and workplace hazards) the organization must value safety at its core– and from the top, through the middle, to the bottom.

The safety system has to be dynamic, allow change and encourage creativity; complacency and stagnation are fatal. Teach students to ask: What could go wrong? How do we prevent it? How can we make it even better, more fool-proof? Intelligent people like challenges and creativity.

When safety is fully integrated into systems and procedures and everyone is engaged in the process, the safety culture grows and is passed to the next generation of staff.

Training is important and essential, but training alone will not create safe workplaces and practices. Intelligent people want to be educated. People have a need to learn, but most don't want to be "trained".

There simply are not enough rules to cover every safety challenge or to mitigate every hazard; a systems approach is essential and personal responsibility is key.

Lessons Learned

- Keep it streamlined, simple, straightforward– don't overcomplicate it
- Don't Train-- the word "training" has a bad connotation
  - "Brief" managers
  - "Educate" scientists
- Make everything easily available
- Ask for input and use it

- Get people talking, brainstorming, creating… even complaining…
- Culture does not change overnight, work with your existing culture and build on it

Up next ….

talking
writing
giving
advice
small
revelation
talkfest
speech
commerce
notifying
transfer
debate
relationship
link
discourse
affinity
bond
articulation
comment
palaver
interrelation
marriage
gossip
hearing
association
lines
corresponding
connection
tête-à-tête
exchanging
confabulation
documents
colloquy
communion
communication
delivery
utterance
yak
publication
nexus
interchange
repartee
conference
mention
gab
converse
duologue
expression
disclosing
visit
togetherness
chat
correspondence
sides
parley
partnership
reading
questioning
bearing
transmission
remark
translating
assertion
reciprocity
intercourse
making
talk
application
observation
advisement
intelligence
conversation
script
contact
exchange
announcing
confab
discussion
jive
interlocution
known
reception
dissemination
relevance
remarks
ideas
parlance
consultation
information
telling
correlation
elucidation
declaration
kinship
ventilation
tie-in
relation