Risk management in a large industrial workplace: Occupational health and safety in the oil sands

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Frequency of derailments is decreasing

Figure 5: Derailments involving dangerous goods cars from 2001 to 2014.
Derailment risks and causes are known

Yet ...

- 80-90% of losses are caused by human (individual and organizational) failures.*

- Only 3.4% of organizations have mature processes to actively identify, evaluate, and treat their risks.**

- By focusing on technical systems and overlooking most of these latent (i.e., human) causes, we cannot foresee, know and understand, or prevent these failures.

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* European Agency for Safety and Health at Work. 2016. OSH Wiki URL: [https://oshwiki.eu/wiki/Human_error](https://oshwiki.eu/wiki/Human_error)

Objectives of this presentation

1. Describe culture, safety culture
2. Safety leadership as a journey
3. Discuss Syncrude’s safety journey
What is culture? How do we know it?

- Culture is “how we do work here”.
- It is something an organization has and is.
- Culture is manifested in social interactions and organizational elements:
  - structures, controls, reward systems,
  - symbols, language, ideology, rituals, myths,
  - human resource practices, performance criteria, location of authority, legitimate bases of power, decision making orientation, styles of leadership,
  - compliance, evaluations, and motivation...
Artifacts and organizational level 1: What we see

Social elements:
- stories, myths, symbols
- customs, ceremonies

Organizational elements:
- leadership, organizational levels
- HR practices/policies, external interfaces

Individual level: What people think and do

Social interpretations of level 1:
- cognitions, schema, percepts
- prototypes, scripts, references

Organizational elements:
- individuals’ beliefs about leadership, structures, HR policies
- (hiring, firing, promotions)

= Psychological climate

Dyad/group level shared beliefs/norms: What we think and do together

Social elements:
- basic assumptions
- shared cognitions
- higher order schema

Organizational elements:
- employees’ shared perceptions of organizations’ function/focus such as customer service, innovation, training
- safety, absences

= Organizational climate/culture

Collective organizational and supra-org level: Broader beliefs/values

Social elements:
- Organizational culture models

Organizational elements:
- Protestant work ethic
- beliefs about market mechanisms, regulation
- professional codes, ethics, standards

= Macro organizational culture
Organizational culture evolves: Maturation of safety leadership is often depicted as a journey.

**Evolution of Performance**

- **Technology and Standards**
  - Safety emphasis
  - Engineering improvements
  - Hardware improvements
  - Compliance to codes and regulations

- **Management Systems**
  - Integrated HSE-MS
  - Reporting
  - Assurance
  - Competence
  - Risk Management

- **Improved Culture**
  - Shared purpose and belief
  - Aligned performance commitment
  - Behaviours, Work Practices
  - Visible leadership / personal accountability
  - Safety delivers business value

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There are distinct phases of maturity, with differing safety & risk management tools

- No care culture
  - Apathy/resistance
  - Near misses not considered
  - Negligence
  - Dishonesty
  - Hiding of incidents
  - No or little training
  - Poor or no communication

- Blame culture
  - Accept need to care
  - Some near miss reporting
  - Some window dressing e.g. pre-inspection cleanups and light duty disciplinary action
  - Minimum / inconsistent training
  - Some communication on a need to know basis

- Compliance culture
  - Some participation
  - Near miss discussions
  - Acceptable training/awareness
  - Established and good communication channels
  - Regular people involvement and focus

- Ownership culture
  - Involvement at all levels
  - Near miss involvement
  - High level of training/awareness
  - Communication at a high level hiding nothing

- Way of life
  - Comes natural
  - Personal involvement by all to prevent incidents
  - Complete understanding
  - All informed at all times about everything

Way we do business

Accept that incidents happen

Prevent a similar incident

Prevent incidents before they occur

Improve the systems

Compliant

Proactive

Vulnerable

Resilient


As supported by differing styles of leadership and teamwork

The journey to excellence

- Natural instincts
- Hierarchy
- Individual
- Team

Reactive
- Obedience
- Safety by natural instinct
- Responsibility of Safety Officer

Dependent
- Management commitment
- Discipline
- Rules/procedures

Independent
- Comprehension/integration
- Personal commitment
- Involvement of organization

Interdependent
- Team spirit
- Recognition
- Collective responsibility

REACTIVE  PROACTIVE

Present  Objective

Assessing safety maturity

- Surveying individuals’ perceptions of their organizations’ safety culture (a.k.a., safety climate):
  1. Commitment level of workforce to HSE and care for colleagues.
  2. Balance between HSE and profitability.
  3. Workforce interest in competency and training.
  4. Work-site job safety techniques.
  5. Purpose of procedures.
  6. Repercussion and feedback after accidents.
  7. Audits and reviews.

- These cluster and align fairly well with each of these levels.

- Within group agreement can be used to determine the extent to which individuals’ safety climate represents a convergence or divergence with an overall safety culture.

"Insanity is doing the same thing over & over again & expecting different results."

Albert Einstein
How to take this journey? The change process

Precontemplative
Ignorance

Contemplative
Awareness

Preparation
Making plans

Action
Do it

Maintenance
Keep it alive

Improve on it!
Tailor interventions to drive engagement and improvement

- Tailoring intervention tools to your organizations’ maturity level would best drive engagement and improvement

- Pre-contemplation to contemplation: AWARENESS
  1. Awareness – simple knowledge of a ‘better’ alternative to current state
  2. Creation of need – active personal desire to achieve the new state
  3. Making the outcome believable – believing that the new state is sensible for those involved
  4. Making the outcome achievable – making the process of achieving the new state credible for those involved
  5. Personal vision – definition by those involved of what they expect the new situation to be
  6. Information about successes – provision of information about others who have succeeded
• Contemplation to preparation: PLANNING
  7. *Plan construction* – creation by those involved of their own action plan
  8. *Measurement points* – definition of indicators of success in process
  9. *Commitment* – signing-up to the plan of all involved

• Preparation to action – ACTION
  10. *Do* – start implementing action plan
  11. *Review* – review progress with concentration upon successful outcomes
  12. *Correct* – reworking of plan where necessary

• Maintenance – MAINTENANCE
  13. *Review* – management review of process at regular (and defined in advance) intervals
  14. *Outcome* – checks on internalisation of values and beliefs in outcome state
If safety leadership is a journey how long does it take?
Syncrude’s Safety Journey ...
Syncrude’s Safety Journey ...

Making Everyone a Leader in Safety

Innovation in Loss Management

Total Injury Frequency

1

0.5

2000

2006
In sum

- Only 3.4% of organizations have mature processes to actively identify, evaluate, and treat their risks. *

- Risk management not only serves to protect value, but it enables sustained, optimized performance. Companies with mature risk management systems are valued as much as 25% higher. **

- The journey towards a mature risk management system can take decades, but it is a significant positive differentiator for shareholders, clients, and employees.

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Thank you!

Questions? Comments?

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