Creating a Positive Safety Culture and Continuous Improvement in Alberta's Construction Industry

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“Twice as Safe, Twice as Productive by 2020”, COAA’s vision

The purpose of this survey: leverage additional improvements
1.

What is Safety Culture?
How do you measure it?
“Shared values (what is important) and beliefs (how things work) that interact with a company’s people, organizational structures and control systems to produce behavioural norms (the way we do things around here)” [1]

Culture exists at several levels

- **Artifacts** – visible objects, building layout, décor, physical “climate” that reflects who we are/want to be
- **Espoused Values** – what we say we stand for; written mission and vision statements, posters on the wall
- **Enacted Values** – what our behavior says we stand for; policies, procedures that demonstrate what **really** matters
- **Underlying Values, Assumptions, Beliefs** – shared, usually unspoken (tacit) beliefs about the world, what success is, what matters, who matters, and why


adapted from Schein, 1992, 1999
Safety culture evolves

- Vulnerable: Accept that accidents happen
- Reactive: Prevent a similar accident
- Compliant: Prevent incidents before they occur
- Proactive: Improve the system
- Transformational: Way we do business
Safety Management System

1. Management Commitment to Safety

2. Major Incident Risk

3. Communication and use of procedure

4. Operations

5. Two-way communication

6. Workforce Involvement

7. Learning Culture

8. Relationship with contractors

9. Safety Management System

10. Manager/Team Leader Respect

11. Tolerance to Risk

12. Production/Cost vs Safety
✓ Sponsored by Construction Owners Association of Alberta

✓ Survey title: Member Consultation on Safety Culture

✓ Survey platform: Qualtrics

✓ Type of Survey: Online

✓ Number of questions: 75

✓ Number of companies: 110

✓ Number of respondents: 1294

✓ Duration of the survey: 3 months

technical information
2. Survey Responders Profile
Responders’ Profile

Gender
- Female: 82%
- Male: 17%
- Other: 2%

Employment Status
- Permanent: 80%
- Part-time: 2%
- Contract: 6%
- Temporary: 12%
Age of Respondents

Responders’ Profile
Responders’ Profile

Functional Group

- Construction: 26%
- Maintenance: 18%
- Operations: 22%
- Other: 8%
- Project Management: 13%
- Safety, Health, and/or Environment: 13%
Office vs Field

Responders’ Profile

55% Office
45% Field
3. Overall, what are the industry’s strengths and opportunities?
Top two questions the responders perceive a maturity level of **Transformational**: 

**Question 1.**

**Does your supervisor ask you to do an unsafe task?**

- My supervisor engages me to review the scope of work, assess the hazards, and supports me in reducing risks
- When my supervisor asks me to do unsafe work, they take care of the major hazards
  - When my supervisor asks me to do unsafe work, they review the major hazards and ask if I can do the work
- When my supervisor asks me to do work that I consider unsafe, they pass the work onto someone else
  - My supervisor asks me to do work that I consider unsafe and threatens me
Question 2.

How do the managers and supervisors deal with plant or equipment breakdowns and failures?

They expect us to learn from problems by understanding what caused them and by looking for ways to prevent future problems.

They expect us to establish what caused the problem and try to avoid similar problems.

They expect us to understand and document what happened.

They understand what caused the immediate problem. They do not try to understand where else the same problem could occur.

They are only interested in fixing the immediate problem (no interest in its cause).
Top two questions the responders perceive a maturity level of **Compliant or lower**: Question 1.

**Does leadership prioritize safety?**

- Leadership and all employees live safety: 60%
- Safety is the highest priority: 80%
- Leadership walks the talk. Safety is a priority and they have the systems in place: 40%
- Safety is only a priority if it has consequences to cost and schedule: 20%
- They don’t even bother pretending that safety is a priority: 0%
Question 2.

If you are an Engineering, Construction, Procurement or Management company, how do you think your client selects contractors?

They select contractors after thoughtful review and assessment of safety performance data and corporate safety culture.

For our clients, safety is an important part of selection and contractors may have to modify their safety systems to get the job.

They select contractors primarily on cost, provided they meet defined minimum safety standards.

They only consider the safety record of contractors if incidents have occurred in the past.

It is based on lowest cost and how quickly they can complete the job.

Opportunities
Examples of comments

- Due to the safety training in the workplace, safety becomes a bigger part of workers’ life while at home.
- HSE is vital to the project success.
- Everyone is accountable for safety, not only managers.
- More visibility of the safety culture from very senior leaders in the company.
- Customers select the lower cost contractor instead of looking at both safety & corporate cultures.
- Workers involvement is not sufficient.

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4.
Overall, what is the safety culture of office/management versus field personnel?
Office/management versus field

Vulnerable
Reactive
Complaint
Proactive
Transformational
Tolerance to Risk

Does your supervisor ask you to do an unsafe task?

My supervisor engages me to review the scope of work, assess the hazards, and supports me in reducing risks so the work it not unsafe.

When my supervisor asks me to do unsafe work, my supervisor will take care of the major hazards for me.

When my supervisor asks me to do unsafe work, my supervisor will review the major hazards and ask if I can still do the work.

When my supervisor asks me to do work that I consider unsafe, my supervisor passes the work onto someone else.

My supervisor routinely asks me to do work that I consider unsafe, and threatens that if I don’t do it, someone else will.

Highest Maturity Level

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What is the recognition for safe behaviour?

Excellent safety behaviour is rewarded both in terms of career and recognition; having an incident is not penalized.

Good safety behaviour is consistently recognised and reinforced; having an incident is not penalized.

There is some recognition for following safety standards and procedures. Incidents caused by not following them are penalized.

There is no recognition of safe behaviour. Those who are directly involved in incidents are penalized.

There is no recognition for safe behaviour. Those who cause serious incidents are often dismissed.
5.
Overall, what is the safety culture of owners versus contractors?
Owners vs. Contractors vs. Suppliers

Mining, quarrying, and oil and gas extraction *24
Transportation *48
Utilities *22
Manufacturing *31-33

Administrative and support, waste management and remediation services *56
Professional, scientific and technical services *54
Real estate and rental and leasing *53
Construction *23

* NAICS code
Owners vs. Contractors

Compliant vs. Proactive

Total Recordable Incident Rate (TRIR)

Overall Maturity Level

Contracts

Owners
• 1,294 workers in Alberta completed the survey
• Correlation of maturity safety culture vs the total recordable incidents rate of the companies.
• The results of the survey allowed us to identify what are the safety elements with higher and lower maturity safety culture.
• 24 companies received an executive report indicating their safety maturity culture

• The article “Maturing to safety” was issued in Oilweek magazine in August 2017.

• The results of the project were presented in the Best Practice Conference, Edmonton 2017 with the title: “Safety Maturity Curve: Findings from Industry Perception Survey “

• Poster “Creating a Positive Safety Culture and Continuous Improvement in Alberta’s Construction Industry” in the XXI World Congress on Safety and Health at Work 2017. 3-6 September, 2017, Singapore.
Thank you