Safety Maturity Curve: Findings from Industry Perception Survey

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0. Purpose of this project
1. What is Safety Culture?
2. Survey response and nonresponse
3. Industry’s strengths and opportunities
4. Office/management versus field
5. Owners versus contractors
6. What's next?
• In 2014, COAA Embarked on “Twice as Safe, Twice as Productive by 2020” to foster a culture of excellence in execution amongst Alberta’s construction companies.

• Productivity can’t come at the expense of safety—they have to work in tandem.

• The industry is improving!

• The purpose of this survey is to 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

• Culture analysis must be context-specific and related to a central issue (i.e., safety) (Choudry et al. 2007)

• Safety culture is a result of interactions between people (psychological); jobs (behavioral); and the organization (situational) (Cooper, 2000), which can be triangulated:
  – **attitudes and perceptions** can be assessed through safety climate questionnaires (individual perceptions = safety climate)
  – **actual safety-related behaviors** can be assessed by checklists developed as part of behavioral safety initiatives
  – **situational features** can be assessed through safety management systems audits/inspections, peer reviews, observations
Safety culture evolves
2.
Survey response and nonresponse?
Responders' Profile

1,294 Total Responses

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

Employment Status
- 80% Permanent employment
- 12% Part-time employment
- 6% Contract / Freelance employment
- 2% Temporary employment
Responders’ Profile

**Age**

<table>
<thead>
<tr>
<th>Age Range</th>
<th>% Responses</th>
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<tbody>
<tr>
<td>&lt;20</td>
<td>0%</td>
</tr>
<tr>
<td>20-29</td>
<td>10%</td>
</tr>
<tr>
<td>30-39</td>
<td>25%</td>
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<tr>
<td>40-49</td>
<td>30%</td>
</tr>
<tr>
<td>50-59</td>
<td>20%</td>
</tr>
<tr>
<td>60+</td>
<td>5%</td>
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</tbody>
</table>

**Experience in Industry**

<table>
<thead>
<tr>
<th>Experience Range</th>
<th>% Responses</th>
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<tbody>
<tr>
<td>0-4 years</td>
<td>10%</td>
</tr>
<tr>
<td>5-10 years</td>
<td>20%</td>
</tr>
<tr>
<td>10-20 years</td>
<td>30%</td>
</tr>
<tr>
<td>21-30 years</td>
<td>25%</td>
</tr>
<tr>
<td>30+ years</td>
<td>15%</td>
</tr>
</tbody>
</table>
Responders’ Profile

**Functional Group**
- Construction: 26%
- Maintenance: 8%
- Operations: 13%
- Other: 13%
- Project Management: 22%
- Safety, Health, and/or Environment: 18%

**Office vs Field**
- Office: 45%
- Field: 55%
110 companies have taken the survey. 57 of 140 COAA members took the survey. However, 91% of the total responses are from COAA members.

Most of the companies that are not COAA members have only 1 response.
COAA has invested resources in this survey to improve the industry’s safety. What does 30% company response rate mean?

How could COAA better engage companies?

10 minute small group discussion
10 minute full group discussion
3. Overall, what are the industry’s strengths and opportunities?
Safety Elements

- Major Incident Risk
- Communication and Use of Procedure
- Operations
- Two-Way Communication
- Workforce Involvement
- Learning Culture
- Relationship with Contractors
- Safety Management System
- Manager/Team Leader Respect
- Tolerance to Risk
- Management Commitment to Safety
- Production/Cost vs. Safety
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 so the work is 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.

![Graph showing the response distribution for the question](image-url)
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. They have 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.
- Safety is the highest priority.
- Leadership walks the talk. Safety is a priority and they have the systems in place.
- Safety is only a priority if it has consequences to cost and schedule.
- They don’t even bother pretending that safety is a priority.
Question 2.

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

- Our clients 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.
- Most of our clients select contractors primarily on cost, provided they meet defined minimum safety standards.
- Most of our clients’ only consider the safety record of contractors if incidents have occurred in the past.
- Most of our clients’ selection of contractors is based on lowest cost and how quickly they can complete the job.
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.
Do these results and comments align with what you’ve seen in industry? Please elaborate.

Why or why not?

10 minute small group discussion
10 minute full group discussion
4. Overall, what is the safety culture of office/management versus field personnel?
Office/management versus field

- Management Commitment to Safety
- Two-Way Communication
- Worforce Involvement
- Learning Culture
- Production/Cost vs. Safety
- Safety Management System
- Communication and Use of Procedure
- Relationship with Contractors
- Operations
- Manager/Team Leader Respect
- Tolerance to Risk
- Major Incident Risk

Rating Scale:
- Transformational: 5
- Proactive: 4
- Complaint: 3
- Reactive: 2
- Vulnerable: 1
Tolerance to Risk

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Lowest Maturity Level

Management Commitment to Safety

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.

Field
Office
Learning Culture

How does learning from observations take place?

The improvements based on learning from our own and others’ observations are visible and tangible, as reported feedback.

Learning from our own and others’ observations in other locations is used to prevent them here.

We analyse observations with either actual or potentially serious outcomes in order to learn from them.

We track numbers but everything else is lost. When we discuss observations, the only thing we learn is: “Don’t do that again”.

We never hear anything about the results from observations. Learning from them does not take place.
Based on these elements, is there alignment across the organization – office versus field?

Why or why not?

What could be done to improve alignment?

5 minute small group discussion
5 minute full group discussion
5. Overall, what is the safety culture of owners versus contractors?
Owners

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

Contractors

- 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

Proactive

Total Recordable Incident Rate (TRIR)

Overall Maturity Level

Contractors

Owners

Owners vs. Contractors
Does this graph make sense? Are these accurate indicators?

How could safety culture and performance be better measured?

10 minute small group discussion
10 minute full group discussion
6.

What's next for the COAA Safety Committee?
What could/should be done?

What are the top strategic areas that COAA should focus on?

The Safety Committee?

5 minute small group discussion
5 minute full group discussion