

Workplace Safety North

Leading Indicators in Occupational Hygiene

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Overview

Introductions

Safety moment

Leading Indicators

How to create leading indicators

Case Study

Questions



Safety Moment – Driving in Heavy Rain

SLOW DOWN

- Increase following distances.
- Speed limits are set for ideal road conditions
- Visibility is reduced; braking distances increase.

LIGHT UP

Use low beam headlights to help others see your car.

POSITION

- When available, drive in the center to avoid standing water; the center is typically higher than the sides of the road.

- Be careful of standing water and running water.
 - It doesn't take much standing water for most drivers to lose control.
- Be a follower.
 - Driving in the tracks of other vehicles can improve traction and help avoid hydroplaning.

MAINTENANCE

- Make sure wipers are in good condition; check regularly.
- Fresh tire tread
- Keep emergency kit in vehicle.



Leading Indicators

A large yellow mining truck, heavily loaded with a pile of dark, rocky ore, is driving on a wide, dusty dirt road. The truck is viewed from a low angle, emphasizing its massive size. In the background, there are steep, rocky hillsides and a hazy, overcast sky. The overall scene depicts a busy mining operation.

Definitions

- ICMM
 - Internal organization definition
- “precursors of undesired OHS outcomes lie in areas relation to; people, organizations including culture, systems, process and plant” ICMM
- What are some current leading indicators your site or company uses a safety leading indicators?



Leading indicators evolve through the life of the organization, as your hygiene program evolves your indicators will as well.

Global Estimates of the Burden of Injury and Illness at Work 2012...

Country	Acute Fatalities Reported	Fatal Work Related Diseases
Canada	465	11,330
U.S.A.	5,214	95,808
Australia	207	6,962
Totals (Top 27 Industrialized Nations)	11,850	306,988

Takala et al., Global Estimates of the Burden of Injury and Illness at Work in 2012.

How to Create a Leading Indicator

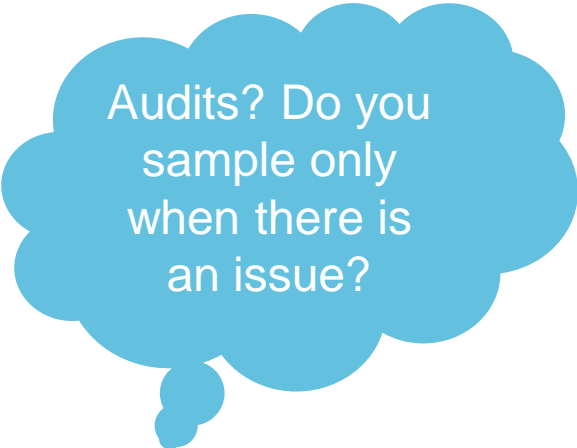
Creating a Leading indicator

- Assess where you are in levels of maturity, reactive vs proactive,
- Questions to ask your leadership
 - Are occupational exposure assessed at your site using SEG's with a sampling plan in place?
 - Do you have dedicated staff/consultants sampling yearly based on your SEG's or are you reactive?
 - When using hierarchy of controls are PPE and administrative controls often permanent solutions?



Example of a leading indicator

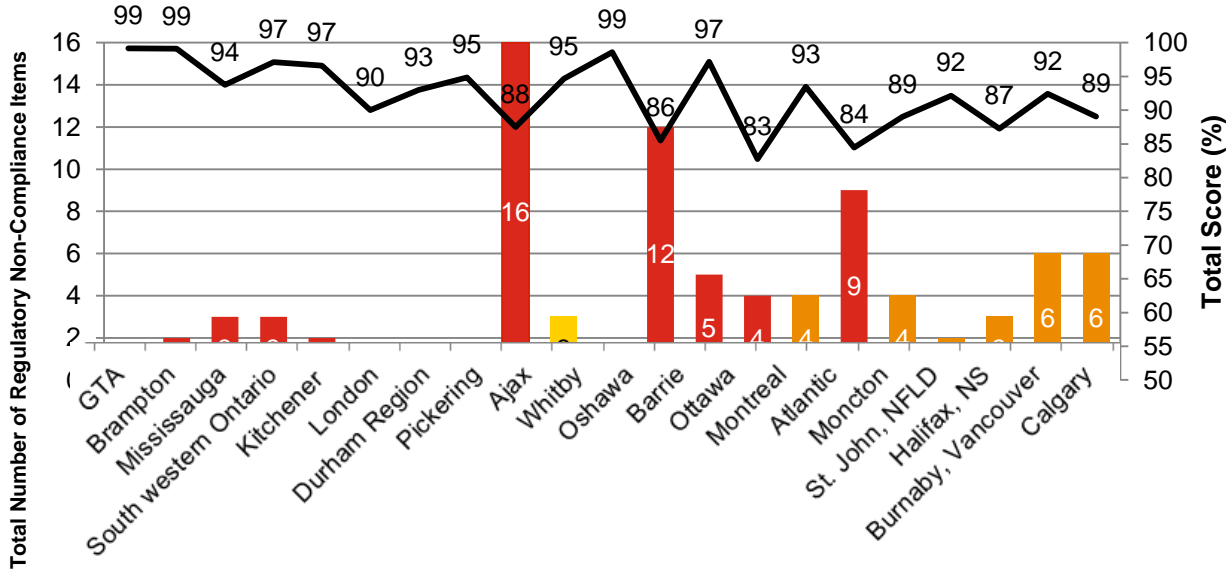
1. 100 SEG's (Similar exposure groups) and 540 samples.
2. Corrective actions, using the hierarchy of controls.
3. Medical surveillance, % to plan



Audits? Do you
sample only
when there is
an issue?

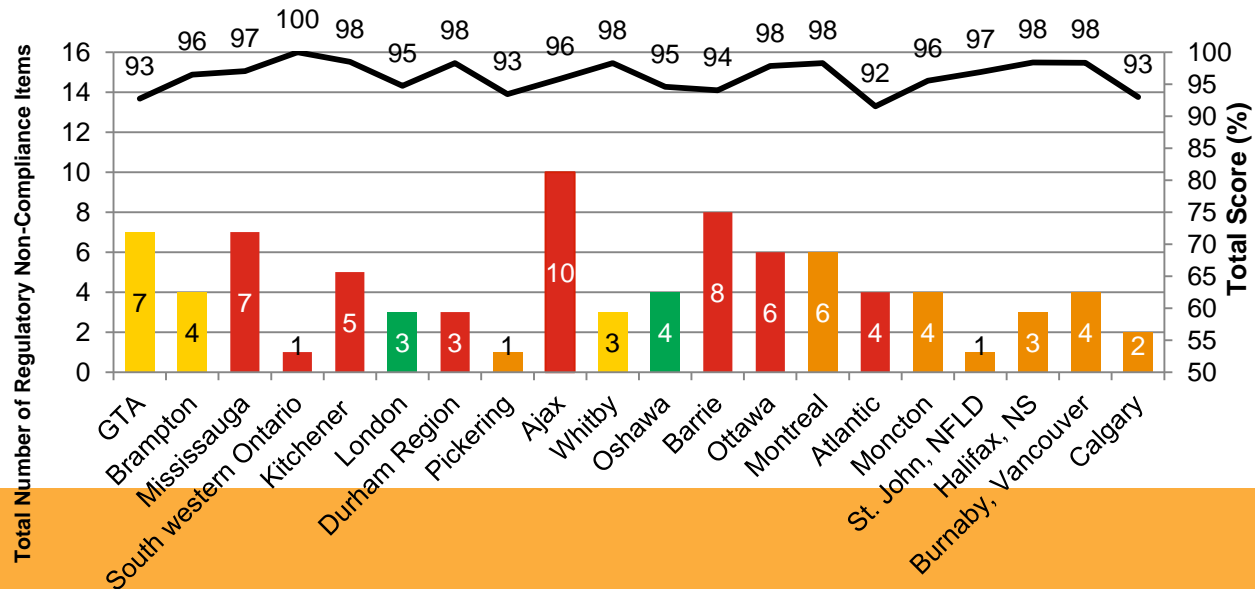
Output of using leading indicators

2016 H&S Results



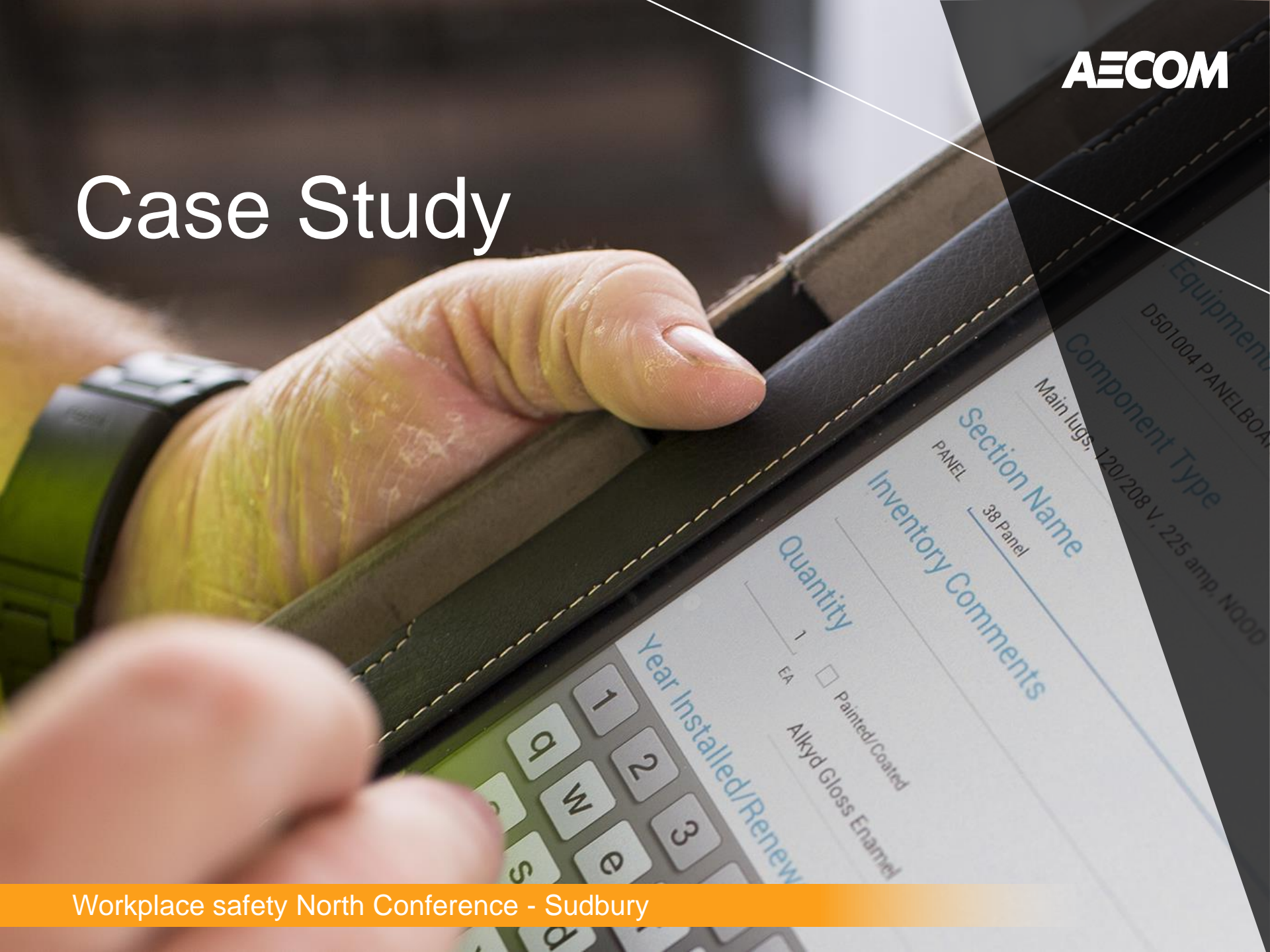
Total Score (%)
 Total Number of Regulatory Non-Compliances

2017 H&S Results



Rank	
1	Risk 1: Refrigeration and Refueling installation and UST/AST for generators or heating/used oil
2	Risk 2: Refrigeration or Refueling installation or Propane >4.5 t + UST/AST for generator or heating/used oil
3	Risk 3: No refrigeration, no refueling installation, only AST for generator /heating / used oil
4	Risk 4: No refrigeration, no refueling installation, no AST

Case Study



Mining Case Study



Mining Case Study



Mining Case Study



Thank You