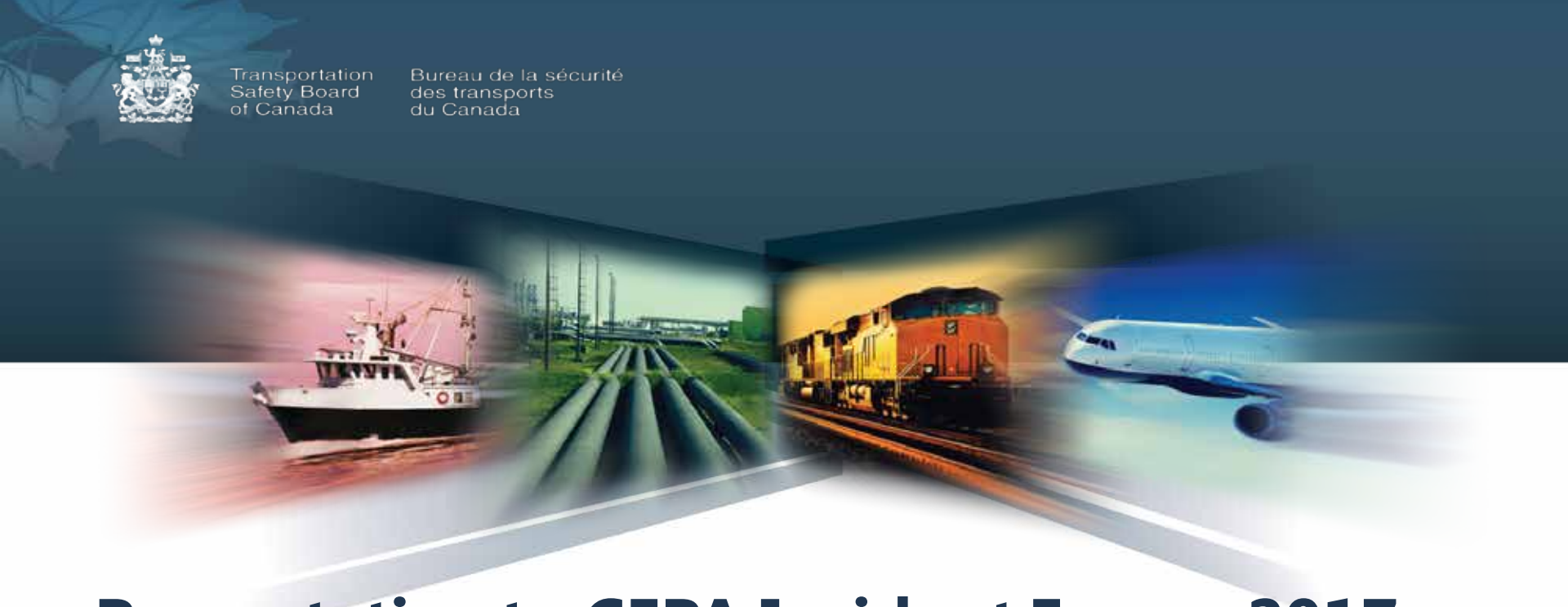


Presentation to CEPA Incident Forum 2017

Faye Ackermans
Member, Transportation Safety Board of Canada

28 September 2017 Calgary, Alberta

Canada

Outline

- Safety and integrity management
- Safety culture
- Accident investigation evolution
- Measuring progress

About the Transportation Safety Board of Canada

Mandate: To advance transportation safety in the marine, pipeline, rail, and air modes by:

- conducting **independent investigations**
- identifying **safety deficiencies**
- identifying **causes** and **contributing factors**
- making **recommendations** to eliminate/reduce safety deficiencies

- It is not the function of the Board to assign fault or determine civil or criminal liability
- TSB is not a regulator
- TSB is independent from other government departments and agencies

A bit of history

1974 Flixborough

Explosion at petrochemical facility

- First requirement for a “safety case”

1976 Seveso

Release of 6 tons of chemicals, including 1 kg dioxin

- European safety regulations

1988 Piper Alpha

Explosion/fire on North Sea oil & gas rig

- Enquiry by Lord Cullen
- Recommended: formal assessments of major hazards to be identified and mitigated (i.e., a “safety case”)
- To be updated regularly and on the occurrence of change of circumstances

NEB requirements for safety management

- Meant as a “framework” to address vulnerabilities before a failure

- Processes are used to help manage risk, but processes alone are not sufficient

Three approaches to safety management

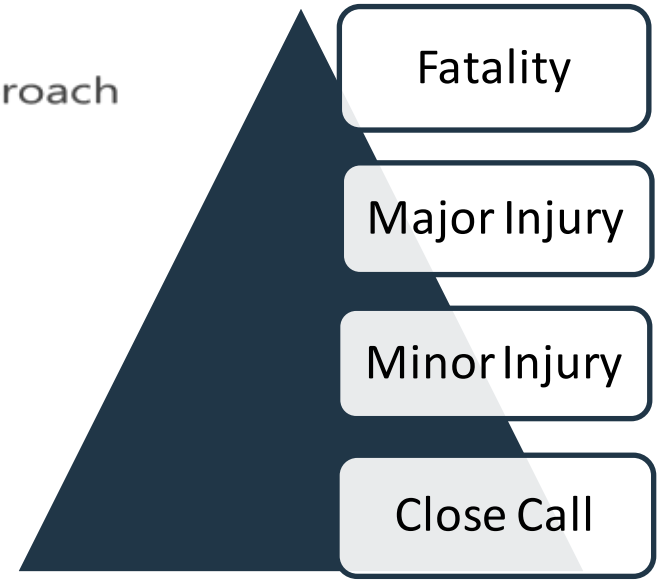
The Person Model

What it is

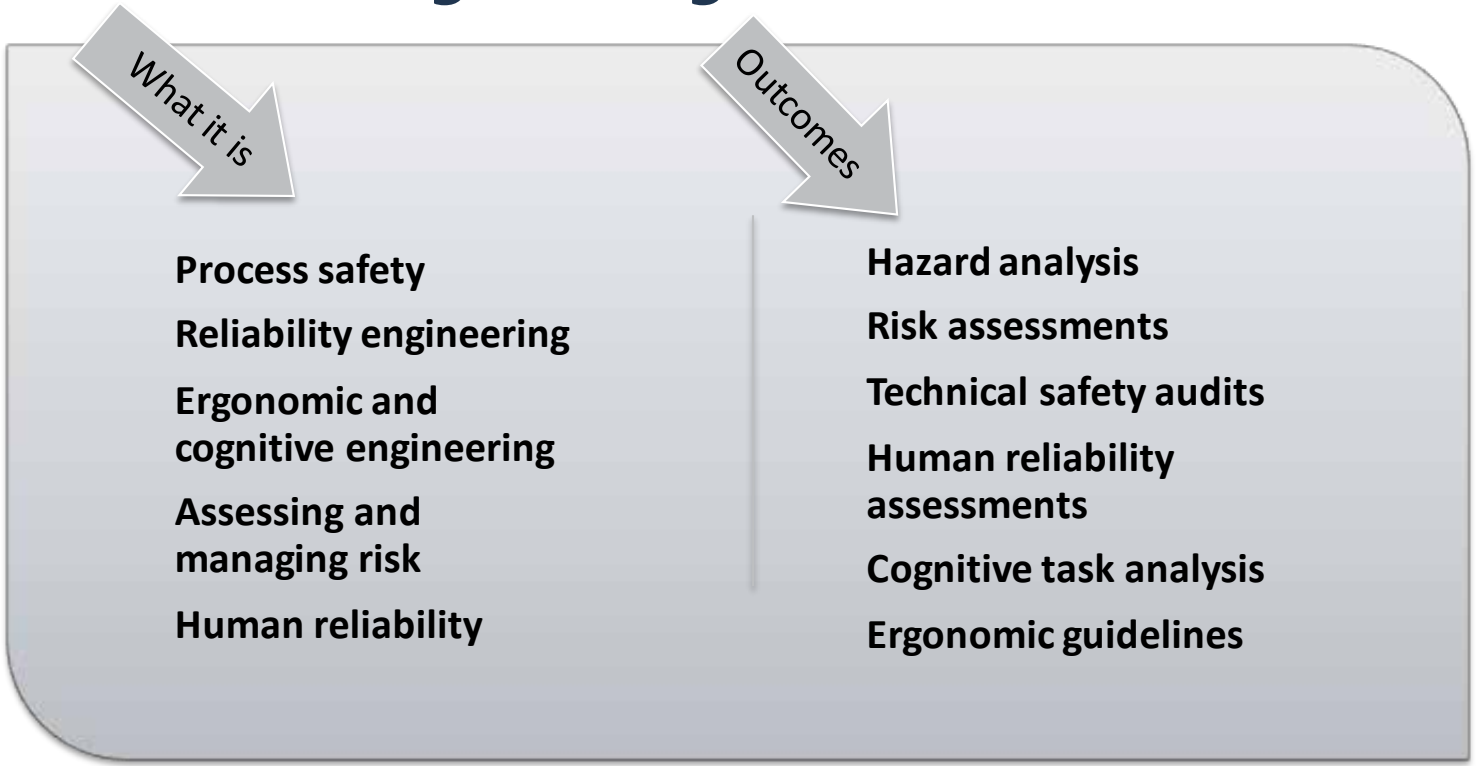
- Traditional Occupational Safety Approach
- Unsafe Acts
- Accidents/Injuries
- "Iceberg" or "pyramid"

Outcomes

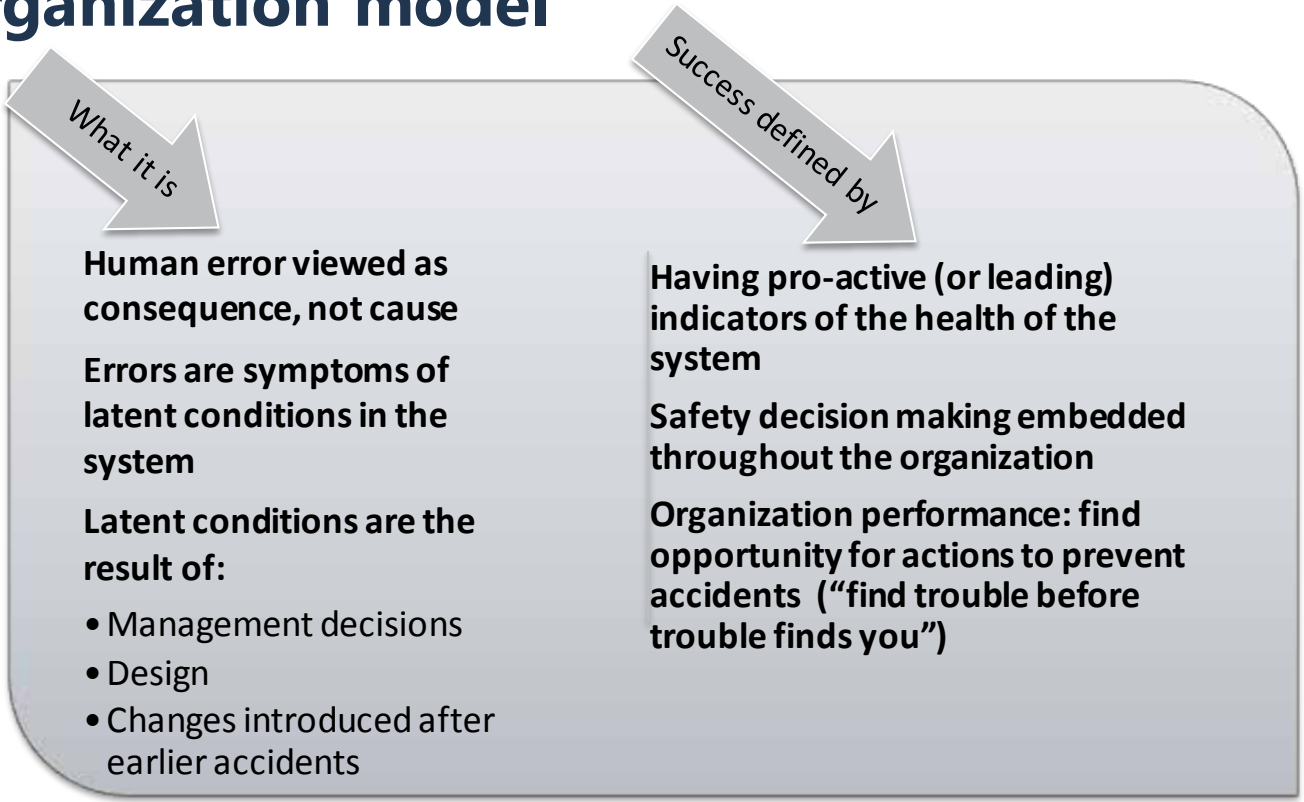
- "Blame and retrain"
- Write another procedure
- Traditional discipline



The technical/engineering model



The organization model



Safety, leadership, and culture

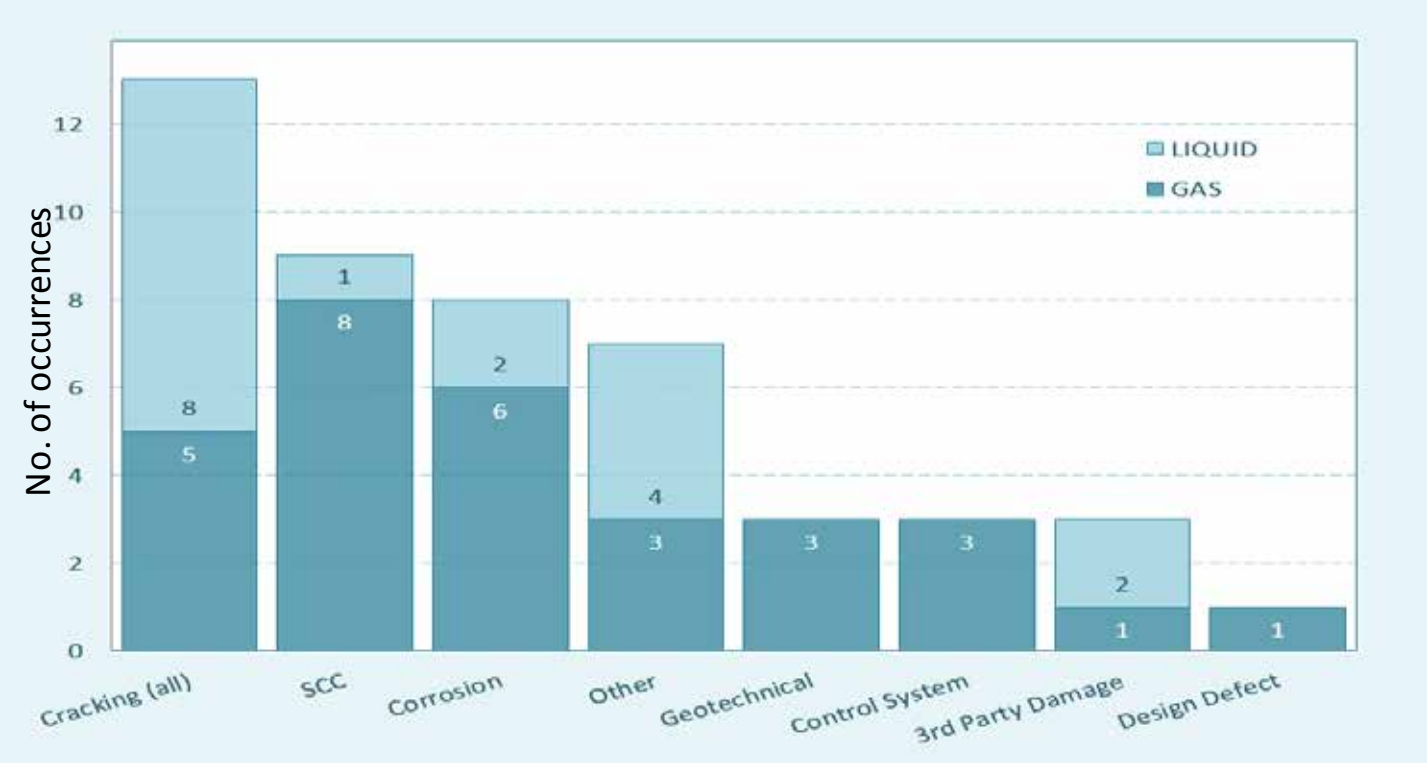
Source: *Leading with Safety*. Tom Krause, Behavioral Sciences Technologies

Accident investigation: an evolution

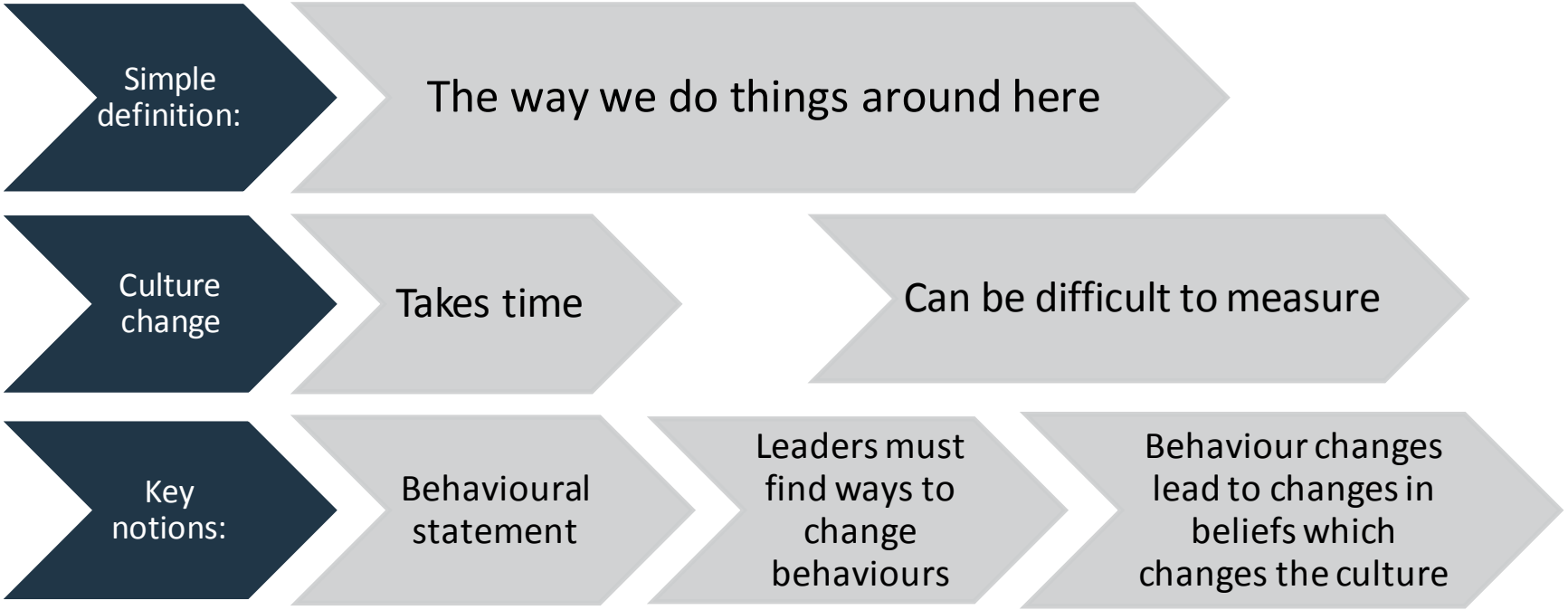
- The way we think about accident causation has evolved:
  - from: "**what broke?**"
  - to: "**why did someone make that decision?**"

- If we focus too much on "rule-breaking," we miss out on the **operational context.**

TSB findings: Causes and contributing factors for 47 pipeline accidents (1990-2014)



What is safety culture?



Competing “top priorities”

Is safety a “top priority” or a “value” in your organization?

Assessing the outcomes

- Do what you say you will do
- Just culture
- Reporting culture
- Learning culture

SMS: The regulatory conundrum

- Success of SMS enabling processes required by regulation depends upon the sustaining systems
- Evaluation of sustaining systems is subjective and beyond the ambit of the safety regulator
- Safety culture assessments provide some of the “why”
- BUT leaders’ beliefs and behaviours create the culture.
- SMS regulations do not create safety culture.
- How does the regulator change leaders’ beliefs and behaviours?

Words to consider …

"No amount of regulations for safety management can make up for deficiencies in the way in which safety is actually managed. The quality of safety management … depends critically, in my view, on effective safety leadership at all levels and the commitment of the whole workplace to give priority to safety."

Lord Cullen
2013 Conference,
25th Anniversary Piper Alpha

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QUESTIONS?


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