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Leadership & Safety Culture

PIPELINE PERFORMANCE: RAISING THE BAR

Patrick Smyth, VP Safety & Engineering

28 April 2016

Who is CEPA?

The **Canadian Energy Pipeline Association** (CEPA) represents Canada's transmission pipeline companies who operate about 130,000 kilometres of pipeline in Canada and the United States.

VISION

A safe, socially and environmentally sustainable energy pipeline industry for Canadians.

MISSION

Continually enhance the operating excellence, business environment and recognized responsibility of the Canadian energy transmission pipeline industry through leadership and credible engagement between member companies, governments, the public and stakeholders.



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CEPA members



- Access Pipeline Inc.
- Alliance Pipeline Ltd.
- ATCO Pipelines
- Enbridge Pipelines Inc.
- Inter Pipeline Ltd.
- Kinder Morgan Canada
- Pembina Pipeline Corporation
- Plains Midstream Canada
- Spectra Energy
- TransCanada PipeLines Limited
- TransGas Limited
- Trans-Northern Pipelines Inc.



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Over 800,000 km of pipelines

	Gathering	Feeder	Transmission	Distribution
Function	Move crude and natural gas from well heads to oil batteries and natural gas processing plants	Transport crude and natural gas from batteries, processing facilities and storage tanks to transmission pipelines	Energy highways transporting crude oil and natural gas within and across provincial or international boundaries	Deliver natural gas to homes, businesses and industries
Network	250,000 km	25,000 km	119,000 km	450,000 km
Location	Mostly AB	Mostly AB	50% AB, 23% SK, 13% ON, 8% BC; 1% QC	Across Canada
Operator	Producers	Producers, pipeline companies	Pipeline companies	LDCs or provincial cooperatives (AB)
Regulator	Provincial	Provincial	Provincial and Federal	Provincial



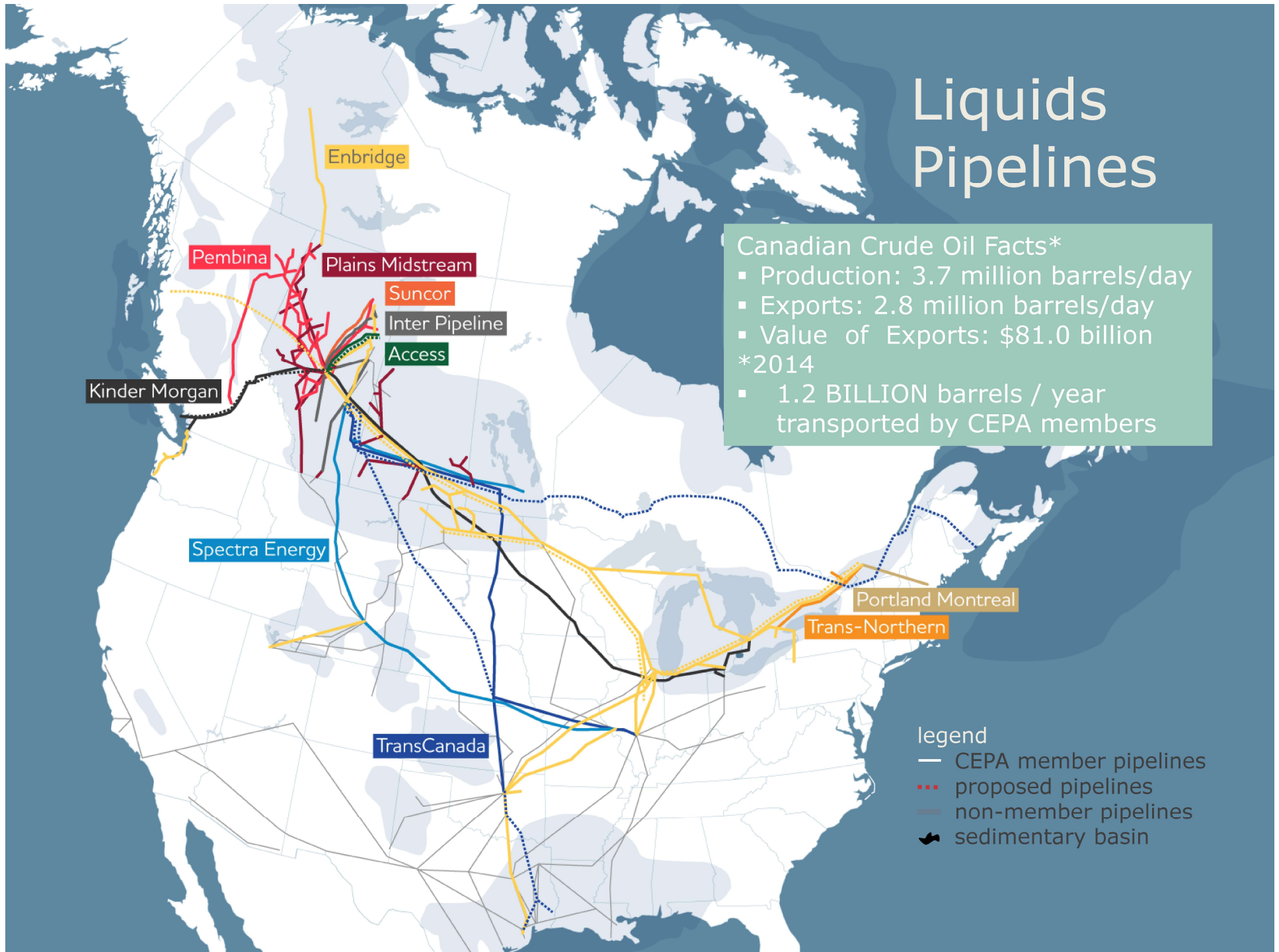
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Liquids Pipelines

Canadian Crude Oil Facts*

- Production: 3.7 million barrels/day
 - Exports: 2.8 million barrels/day
 - Value of Exports: \$81.0 billion
- *2014
- 1.2 BILLION barrels / year transported by CEPA members



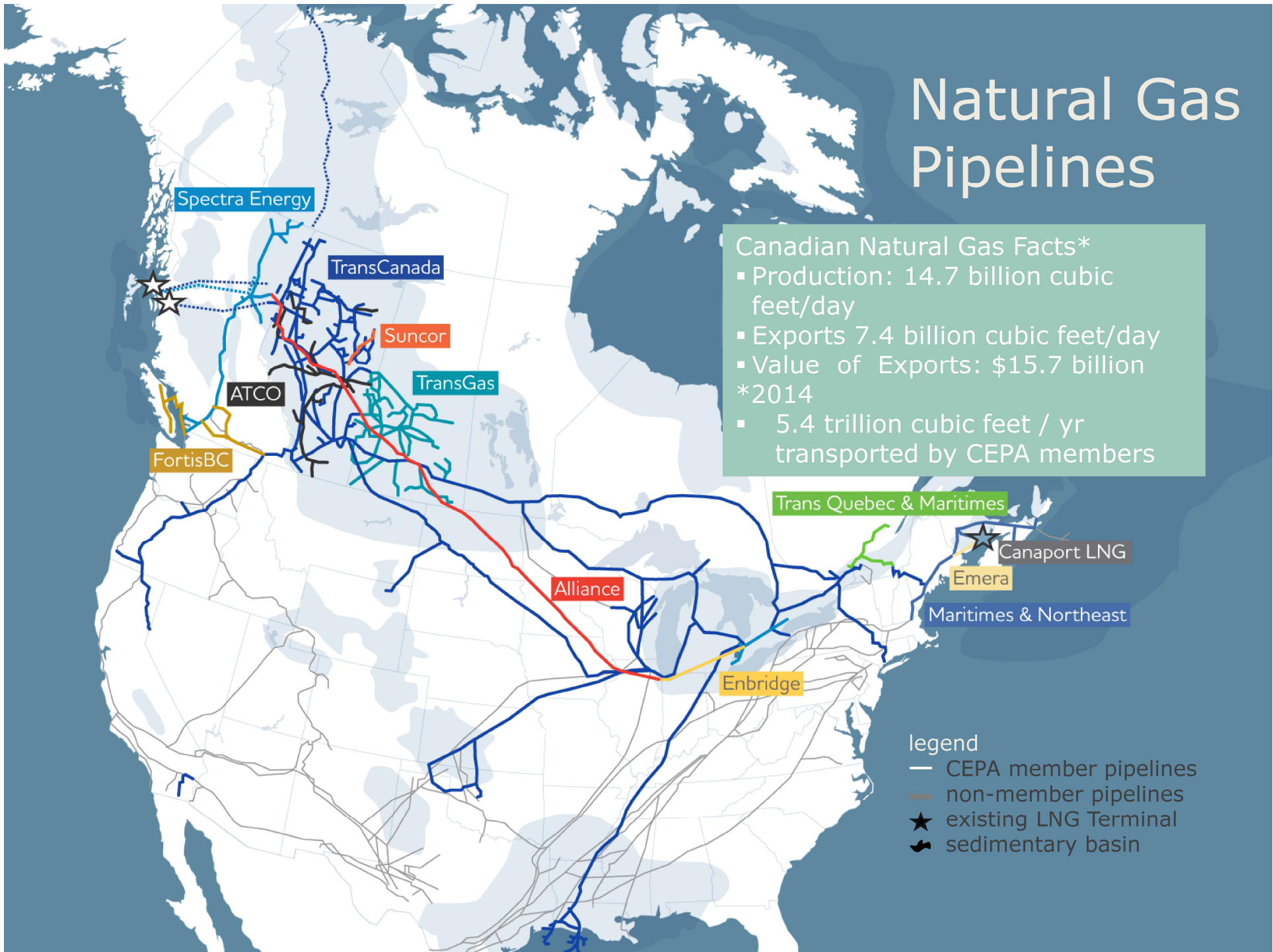
legend

- CEPA member pipelines
- ... proposed pipelines
- non-member pipelines
- ↖ sedimentary basin

Natural Gas Pipelines

Canadian Natural Gas Facts*

- Production: 14.7 billion cubic feet/day
- Exports 7.4 billion cubic feet/day
- Value of Exports: \$15.7 billion *2014
- 5.4 trillion cubic feet / yr transported by CEPA members



legend

- CEPA member pipelines
- non-member pipelines
- ★ existing LNG Terminal
- ➔ sedimentary basin

CEPA's role



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CEPA strategic priorities

CEPA members:

Taking action for continuous improvement



Improve pipeline safety



Improve trust and credibility



Improve regulatory engagement,
transparency and sustainability
of the industry



Facilitate the exchange of ideas
and best practices



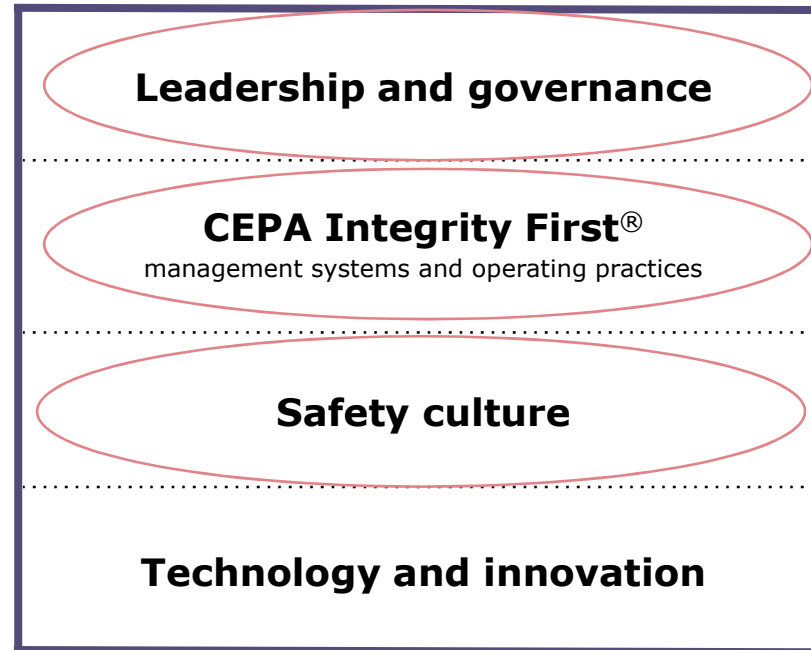
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Getting to zero incidents



Continual improvement
leading to zero incidents



ACCOUNTABILITY, PERFORMANCE AND EXECUTION



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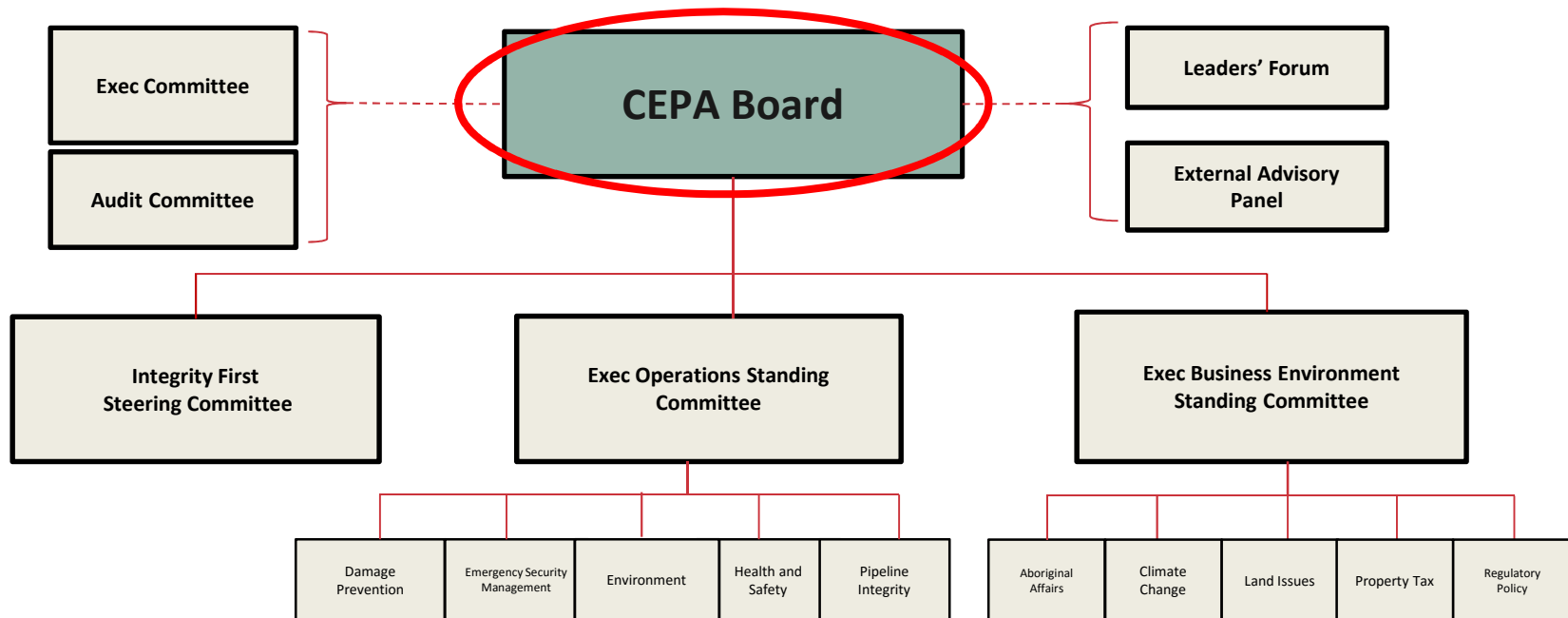
Synchronized



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CEPA governance



Leadership & Tone from the Top

- Board composition & focus; and
- Priority 1 – Improve Performance
- Clarity of Strategy & Safety Moments
- Benchmarking – Transparency & Accountability

CEPA Integrity First®

IMPROVE TRUST AND CONFIDENCE IN THE INDUSTRY



1

PERFORMANCE



2

ZERO INCIDENTS



3

ACCOUNTABILITY



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Principles and priorities



Ensuring safe communities and workplaces



Minimizing the impact on the environment and biodiversity throughout every phase of pipeline operations



Creating lasting social and economic benefits to communities, regions and countries where we operate

PRIORITIES

- Worker safety
- Damage prevention
- Emergency management
- Pipeline integrity
- Control room management

PRIORITIES

- Land management
- Air emissions
- Water impacts
- Wildlife
- Noise

PRIORITIES

- Land use and access
- Economic benefits
- Aboriginal relations
- Workforce



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Safety culture

Advancing a **Safety Culture** throughout our industry based on a **strong foundation of leadership and continual improvement** leading to **Zero Incidents**



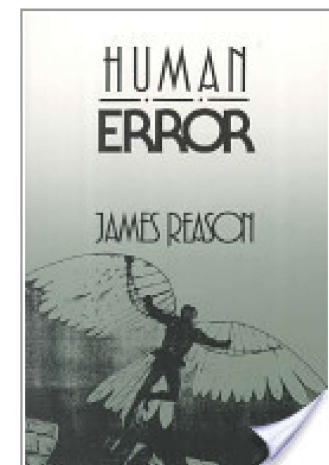
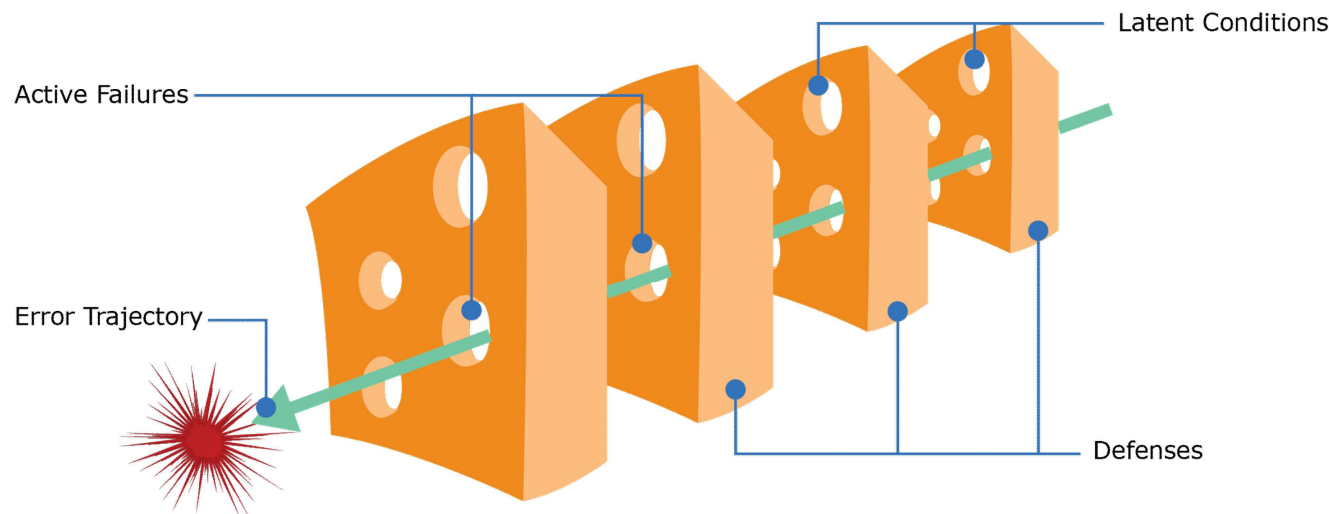
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Why safety culture?

JAMES REASON

- **Before:** Improving safety has been achieved by regulation, technology or a combination of both
- **Now:** Safety gains are a result of improvements in safety culture and the applications of Safety Management Systems



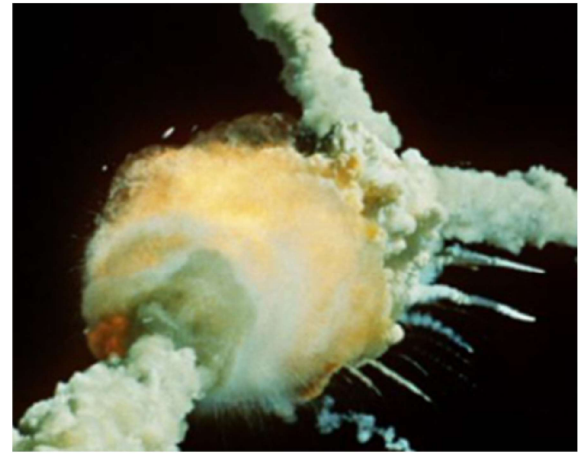
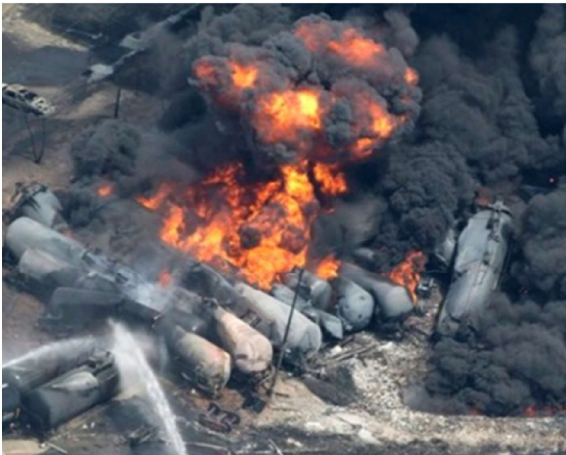
Catalyst for change

WHAT DID THESE OCCURRENCES ALL HAVE IN COMMON?

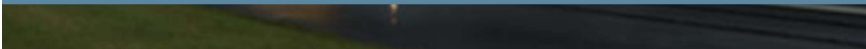


Catalyst for change

WHAT DID THESE OCCURRENCES ALL HAVE IN COMMON?



- Great technology/management systems
- Strong regulatory environment
- Flawed or absent safety cultures!

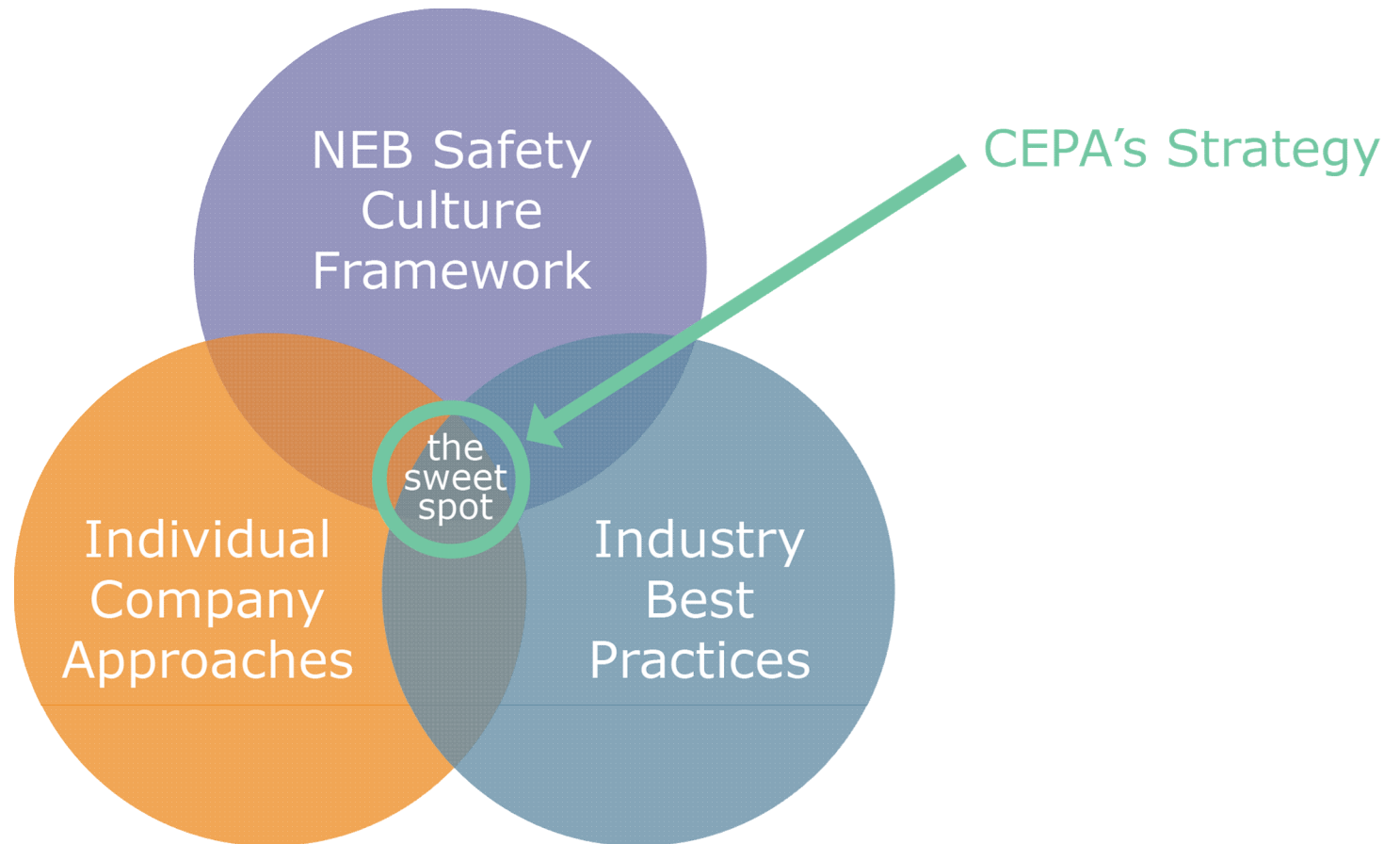




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Industry response: Raising the bar & leading the way

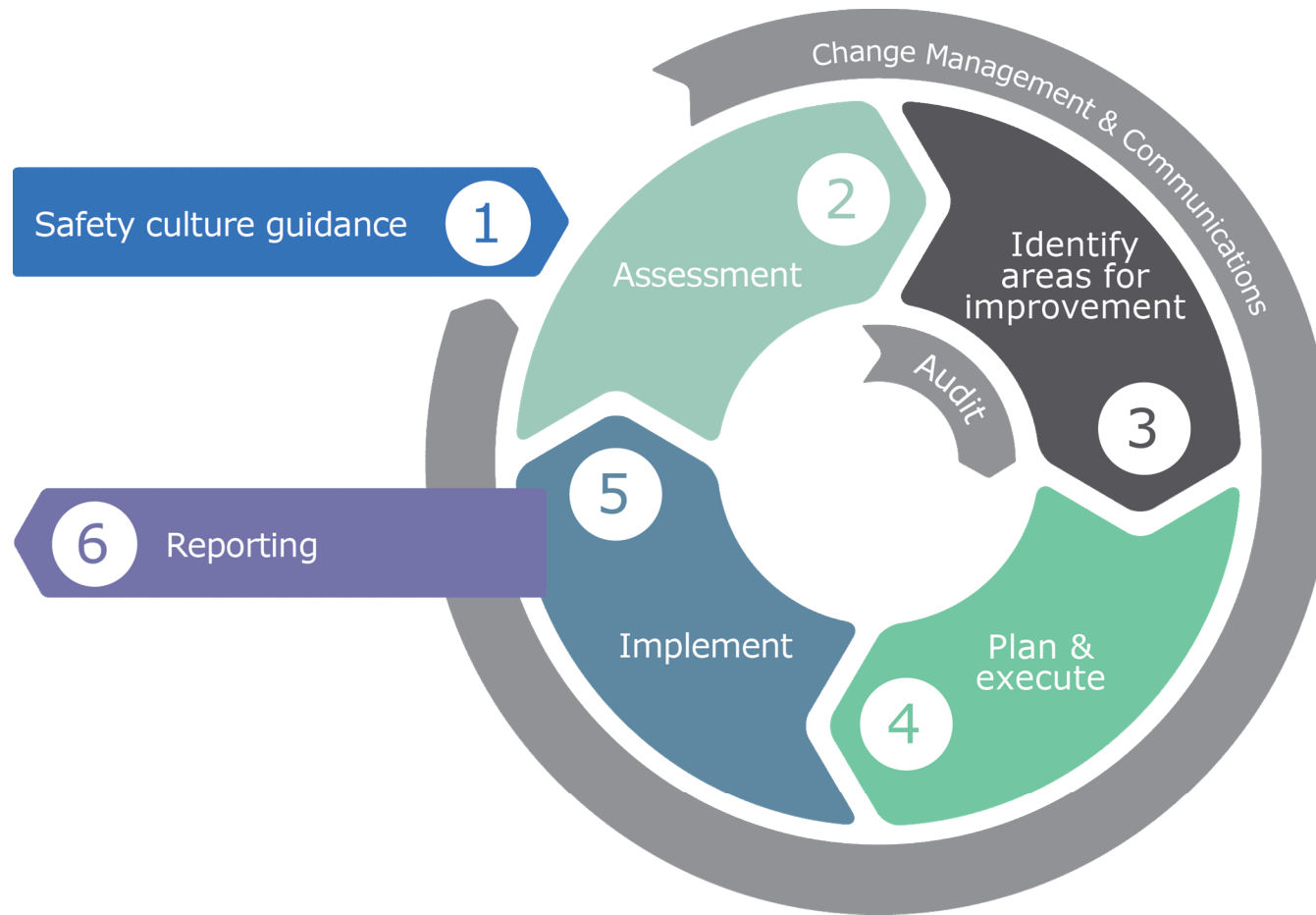
A common approach



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CEPA's safety culture cycle



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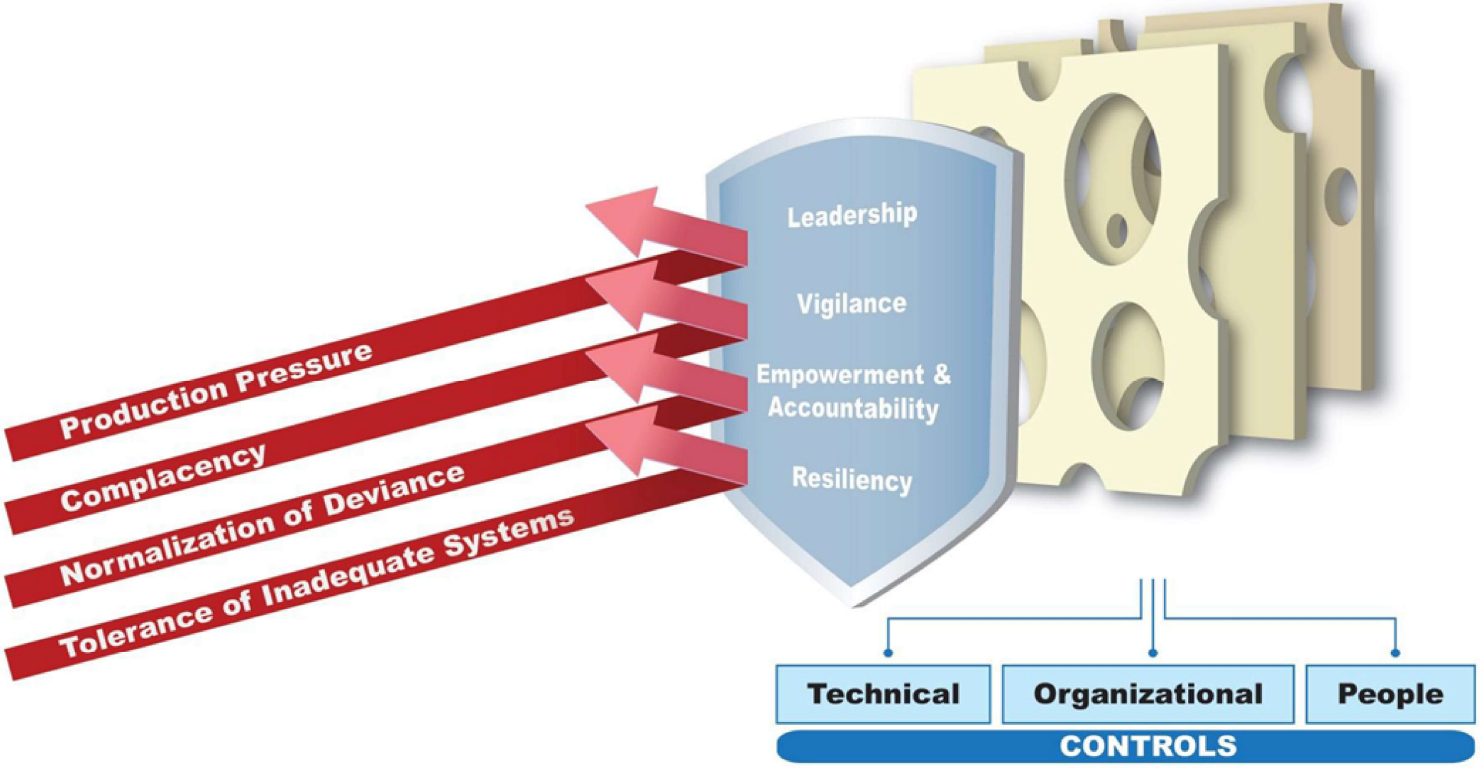
Safety culture perception survey

RATIONALE & APPROACH

Mindset - The goal is beyond compliance...

- Survey predicated on the NEB Safety Culture framework
- Every CEPA member completed the Safety Culture Survey
- 90% response rate across all 12 members (>11,000 employees)
- Established Industry Baseline - Best practice learnings & consolidated industry response analyzed in Q4 2015
- Improvement opportunities identified
 - Company-specific
 - Industry-wide

NEB Safety Culture Framework



The survey

- ◆ Survey consisted of 74 questions and takes 30 mins

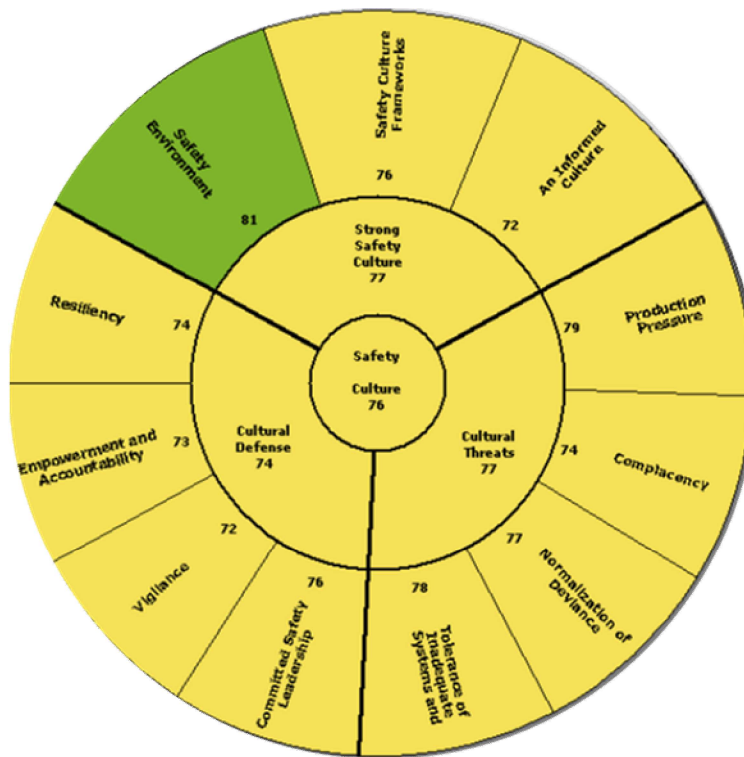
Safety Environment: Do we have an overall safety conscious environment?

1.	Our leaders often demonstrate that safety is their overriding value and priority	Strongly Disagree	0	1	2	3	4	5	6	7	8	9	10	Strongly Agree	N/A
2.	Everyone in my workgroup is highly sensitive to known hazards and vigilant to new threats	Strongly Disagree	0	1	2	3	4	5	6	7	8	9	10	Strongly Agree	N/A
3.	My immediate supervisor strongly encourages me to report safety hazards, including when co-workers have committed an error or introduced a threat	Strongly Disagree	0	1	2	3	4	5	6	7	8	9	10	Strongly Agree	N/A
4.	Members of my workgroup will always take action in response to a safety concern without fear of disciplinary action or reprisal	Strongly Disagree	0	1	2	3	4	5	6	7	8	9	10	Strongly Agree	N/A
5.	Members of my workgroup will always take action in response to a safety concern even if a supervisor is not present	Strongly Disagree	0	1	2	3	4	5	6	7	8	9	10	Strongly Agree	N/A
6.	Our organization is continually learning from our experiences and the experiences of others to ensure optimal safety	Strongly Disagree	0	1	2	3	4	5	6	7	8	9	10	Strongly Agree	N/A
7.	Describe in your own words the safety culture of the company.	<input type="text"/>													



Establishing a baseline

BENCHMARKING, LEARNING & ACCOUNTABILITY



The outside ring of The Summary Wheel measures 12 success factors, nested within 3 categories, rolling up to the overall **Safety Index** in the center of the wheel.

Summary View

Establishing a baseline

BENCHMARKING, LEARNING & ACCOUNTABILITY

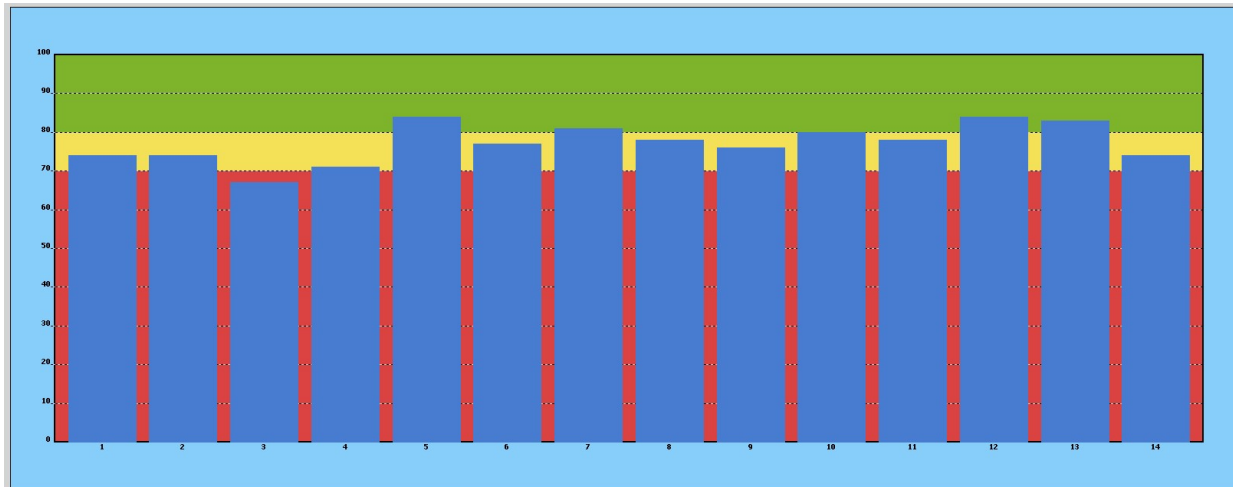
Strengths				
No. ▲	Analysis Factors		Question	Mean ◆
1	Safety Environment	5	Members of my workgroup will always take action in response to a safety concern even if a supervisor is not present	84
2	Safety Environment	3	My immediate supervisor strongly encourages me to report safety hazards, including when co-workers have committed an error or introduced a threat	83
3	Normalization of Deviance	29	When safety rules and operational procedures are not practical, I notify my immediate supervisor	82
4	Safety Environment	4	Members of my workgroup will always take action in response to a safety concern without fear of disciplinary action or reprisal	82
5	Tolerance of Inadequate Systems and Resources	39	Safety equipment needed in my daily work is always available, fit for our purpose and serviced	82
6	Normalization of Deviance	27	When there is an unexpected operational incident, my workgroup first considers safety when working around it	82
7	Tolerance of Inadequate Systems and Resources	35	We have excellent safe working conditions	81
8	Normalization of Deviance	30	Our workgroup immediately reports audit findings, other deficiencies,	
9	Safety Environment	6	Our organization is continually learning from the experiences of others to ensure continuous improvement	
10	Production Pressure	15	My immediate supervisor makes safety a priority	

Weaknesses				
No. ▲	Analysis Factors		Question	Mean ◆
1	Office Safety	79	My working group is aware of the trends and statistical information kept by the Health and Safety Department. If we want to see them, we are familiar with how to obtain them.	61
2	Resiliency	73	Contingencies are in place to fill vacated roles with competent staff	65
3	Committed Safety Leadership	44	Leaders reward and recognize safety efforts	67
4	Vigilance	49	Safety information and performance data is communicated throughout our entire organization without distortion	67
5	Vigilance	57	Lessons learned are implemented as global reforms and communicate to employees rather than done as local repairs	68
6	An Informed Culture	13	In our organization no one is punished for unintentional errors or taking justifiable risks	68
7	Empowerment and Accountability	66	My organization holds employees accountable and rewards them for a demonstrated commitment to safety	69
8	An Informed Culture	12	Leadership immediately informs us of any safety incident, how to learn from it and the appropriate actions to be taken	70
9	Empowerment and Accountability	64	Employees are encouraged to participate in the investigation of accidents and near-misses	70
10	Empowerment and Accountability	67	Our non-operational staff fully realizes that their business decisions may impact safety	70

Strength / Weaknesses

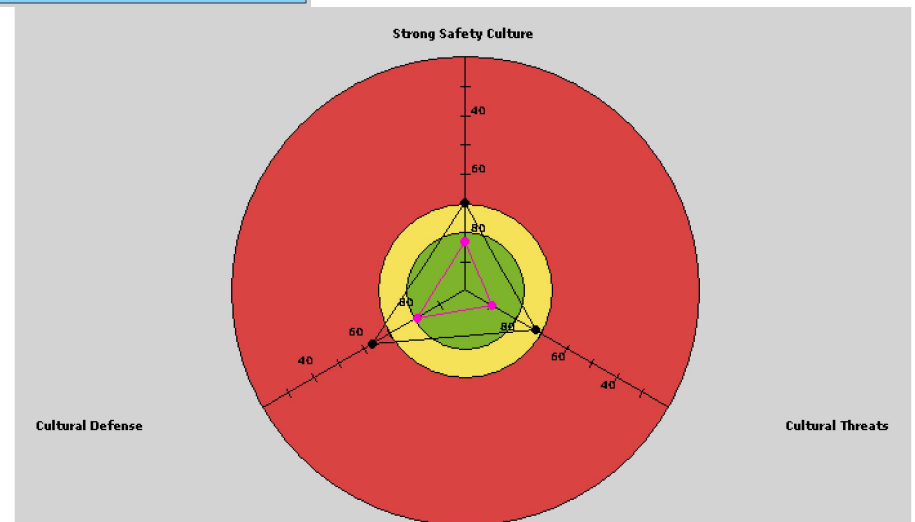
Establishing a baseline

BENCHMARKING, LEARNING & ACCOUNTABILITY



Gap Analysis

Detail Analysis



Concluding thoughts



- Committed Leadership
 - Clarity of Vision
 - Focus
 - Heightened Awareness
 - Learning & Collaboration
- CEOs
Zero Incidents
Improve Performance
Tone & Accountability
Safety Culture Survey



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Questions?