



National Energy
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Beyond Compliance: Assessing and Advancing Safety Culture

IRF Study on Safety Culture Indicators

Safety 30 Conference

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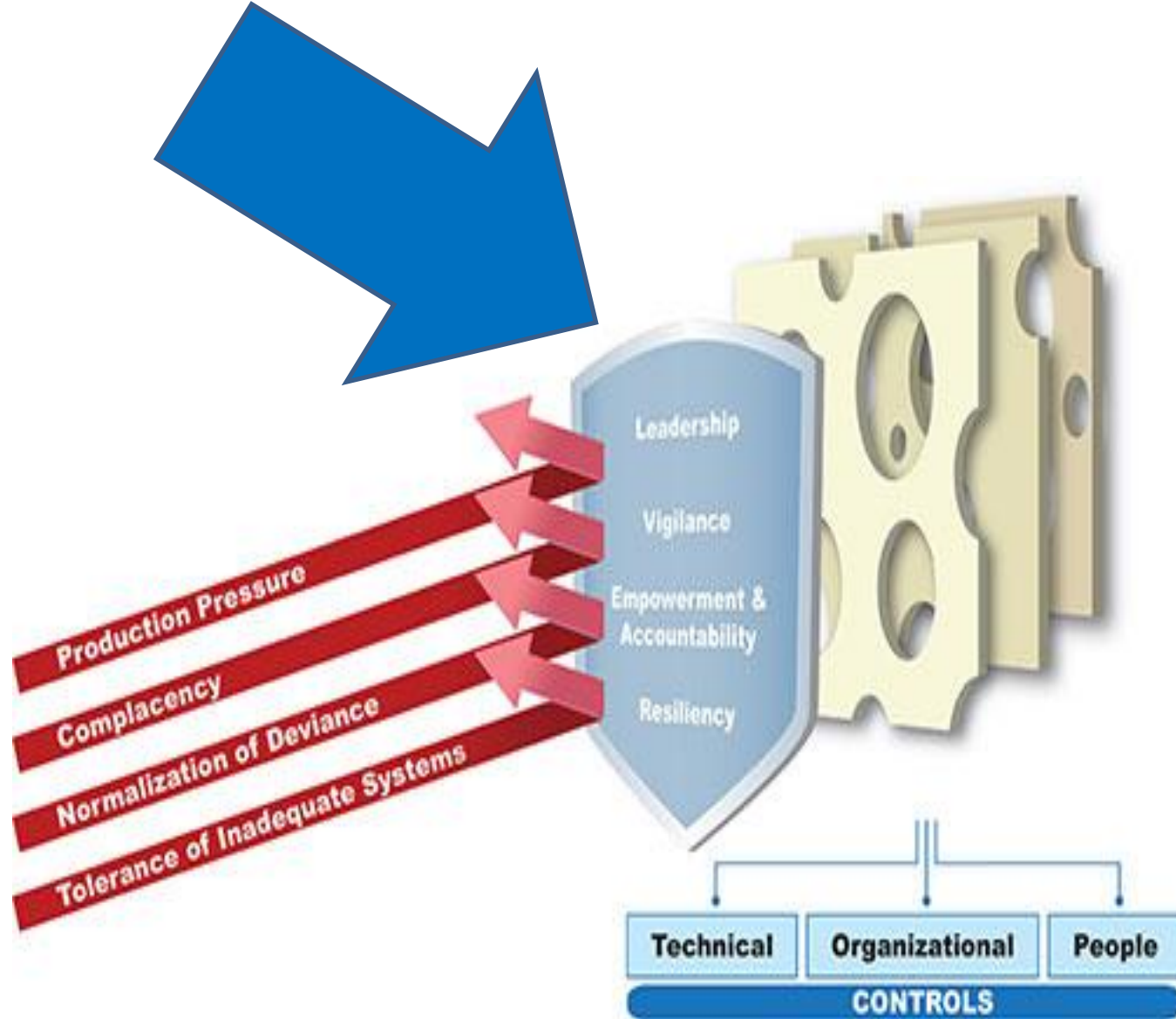


Claudine Bradley
Technical Leader Safety
claudine.bradley@neb-one.gc.ca

Canada

IRF Project Background

- Designed to study the identification of key cultural elements/indicators that impact process safety performance and contribute to major hazard incidents
- Multi-phased approach to explore the regulatory usability and validity of a suite of 90 cultural indicators
- Indicators previously developed by the North American Regulators Working Group on Safety Culture during a study of culture signals detected during regulatory interactions in the offshore and pipeline industries



Source: NEB, CNSOPB, CNLOPB Statement on Safety Culture

Sample Indicators

| Vigilance | | |
|---|---|--|
| Indicators of Significant Weakness | Indicators of Some Weakness | Indicators of Strength |
| Investigations only focus on the direct causes of the incident with no consideration of human and organizational factors. | Some investigations consider human and organizational factors. | All investigations consider the complete range of potential causes including human and organizational factors. |
| No trending of incidents and near-misses is conducted. | There is limited trending of incidents and near-misses. | Incidents and near-misses are trended on a regular basis in order to identify themes and trends that require redress based on similarities of type and repeat occurrences. |
| Empowerment and Accountability | | |
| Indicators of Significant Weakness | Indicators of Some Weakness | Indicators of Strength |
| Teams, business units, etc. work in silos with little to no interactions with other parts of the organization when making decisions or taking future actions that may impact safety (short and long term). | Some teams share information about their activities and seek feedback from other parts of the organization in order to understand the possible safety impact (short and long term) of decisions and future actions. | Teams willingly share information about their activities and seek feedback from other parts of the organization in order to understand the possible safety impact (short and long term) of decisions and future actions. |
| If operations are suspended, there is pressure to bring operations back on line or resume work regardless of whether a cause or explanation has been identified, confirmed based upon the evidence available, and remedies put in place per recommendations of individuals with the greatest expertise. | There is significant variability in pressure to bring operations back on line or resume work after a suspension of operations (e.g. by site, regions, etc.) when the situation has not yet been fully understood and remedied. There is limited reliance on recommendations of individuals with the greatest expertise. | If operations are suspended, there is no pressure to bring operations back on line or resume work until the situation has been understood (i.e. a cause or explanation has been identified and confirmed based on the evidence available) and remedied per recommendations of individuals with the greatest expertise. |
| Personnel report feeling uncomfortable reporting concerns to supervisors, managers, senior leaders and/or investigators. They are afraid that doing so may result in some form | There is significant variability in personnel's described comfort to report concerns without fear of reprisal (e.g. by site, regions, etc.) | Most personnel report feeling comfortable reporting concerns to supervisors, managers, senior leaders and/or investigators without fear of reprisal. |

Source: NARWGSC Safety Culture Indicators Research Study

Project Phases and Learnings

1

IRF Members

- Variation in current regulator SC initiatives
- More commonalities than differences between agencies' desire to consider safety culture

2

Academic and Practitioner Experts

- 90% evaluated as good or significant
- Indicators rated as poor discarded from study

3

Sample of Offshore Industry Associations

- General consistency between association and SME evaluation

General Findings

- Indicators received positive ratings regarding face validity and positive ratings of construct validity
- Subset of 39 indicators could be used as a starting point for future IRF culture research, piloting, and evaluation
- Safety Culture competency/capacity remains a key factor in safety culture advancement in the offshore industry
- Additional assessment methodologies need to be developed and tested



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