

## PSM INTEGRATION TOOL: SELF-ASSESSMENT AND ACTION PLAN WORKSHEET

### Element: Key performance indicators (KPIs)

Key performance indicators (KPIs) focusses on the use of leading and lagging indicators that are selected and monitored to target for improvement. Leading indicators are process-focussed metrics that signify the function of operating discipline, processes, or safety barriers/controls. Leading indicators are selected to provide an early signal of potential issues or degradation of safety controls so proactive corrective actions can be conducted. Lagging indicators are outcome-focussed metrics that can signify recurring issues and include events that have taken place.

For more information on the topic of KPIs for process safety, review the *CSA Z767 Process safety management* standard.

For guidance on how to use this assessment, review “Managing risks in manufacturing workplaces: How to use the self-evaluation tool.” (WorkSafeBC, 2022)<sup>1</sup>

When choosing due dates as part of the action plans for improvement, it can be helpful for determining the priority to consider factors such as:

- The anticipated effort required to close the gap and make improvements,
- The benefits expected from taking action and implementing change, and
- The urgency (e.g., perceived risk) of the improvements needing to be made.

### KPIs Self-Assessment

<p><b>1. Have you identified leading and lagging key performance indicators (KPIs) for process safety at your facility?</b></p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No   <input type="checkbox"/> Unsure</p>
<p><b>2. Are unsafe behaviours or inadequate operational discipline measured? Operational discipline is defined as the performance of all tasks correctly every time.</b></p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No   <input type="checkbox"/> Unsure</p>
<p><b>3. Are process safety near misses tracked? These may include, for example, small fires, system failures or instrumentation failure that could lead to an incident.</b></p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No   <input type="checkbox"/> Somewhat   <input type="checkbox"/> Unsure</p>

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<sup>1</sup> Customized guidance will be created by WPAC and BCFSC.

<p><b>4. Are near misses collected and used for lessons learned, enhancing awareness, and improving process safety culture?</b></p> <p><input type="checkbox"/> Yes   <input type="checkbox"/> No   <input type="checkbox"/> Somewhat   <input type="checkbox"/> Unsure</p>
<p><b>5. When selecting key performance indicators, which of the following are considered? Check all that apply.</b></p> <p><input type="checkbox"/> Not applicable - process safety key performance indicators have not been selected.</p> <p><input type="checkbox"/> Indicators refer to process safety critical equipment and items that influence system performance.</p> <p><input type="checkbox"/> Indicators advance process safety performance improvement and learning.</p> <p><input type="checkbox"/> Indicators are relatively easy to implement, measure, and understood by stakeholders.</p> <p><input type="checkbox"/> Indicators can be used for benchmarking.</p> <p><input type="checkbox"/> Other (specify):</p>

### KPIs Improvement Tools and Resources<sup>2</sup>

<b>Improvement Tool and Link</b>
<a href="#">HSE (2006). Developing Process Safety Indicators A Step-By-Step Guide for Chemical and Major Hazard Industries</a>
<a href="#">Fanelli, P. (2014). Process Safety Performance Indicators for a Fuel Storage Site: A Worked Example</a>
<a href="#">Chemical Business Association (2018). Safety Performance Leading Indicators</a>
<a href="#">Center for Chemical Process Safety (CCPS) (2022): Process Safety Metrics Guide for Leading and Lagging Indicators (Version 4.1)</a>

### Action plan for KPIs

Question number	Plans and actions needed to address gap or improve existing approach	Action owner	Due date (yyyy-mm-dd):

<sup>2</sup> Customized resources for WPAC operations will be developed.


Complete the following table after corrective actions have been implemented.

**Review of action plan for KPIs**

Improvement actions taken	
How did you ensure the controls were implemented in a timely fashion? How did you prioritize your actions?	
How will you ensure the implemented controls will continue to be effective over time?	
How are workers involved in developing and implementing controls?	
How do you know that workplace decisions related to safety are effective and sustainable?	
How do you measure change to establish a new performance expectation?	
When changes are made, how are interrelated procedures, programs, and policies updated effectively?	
Is a strategy for continuous improvement in place? How does this process work?	
If you have multiple locations, are lessons learned and continuous improvements shared with other locations? How does this process work?	
Is the safety management system self-sufficient, or does it rely on specific individuals to make it function? How do you ensure the system remains self-sufficient?	

Overall effectiveness of improvement actions	
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## References

WorkSafeBC. (2022). *Managing Risks in Manufacturing Workplaces: How to Use the Self-Evaluation Tool*. Last accessed May 30, 2023 from <https://www.worksafebc.com/en/resources/health-safety/information-sheets/managing-risks-manufacturing-how-to-use-self-evaluation>

WorkSafeBC. (2023). *Enhancing Health & Safety Culture & Performance: Self-Evaluation Tool for Managing Risks in Manufacturing Workplaces*. Last accessed May 30, 2023 from <https://www.worksafebc.com/resources/health-safety/checklist/managing-risks-manufacturing-assessing-mobile-equipment?lang=en&direct>