



Leading Safety Indicators

and allocation of resources, raising employee awareness of safety-related issues, and can identify areas of strength and weakness.

Importance of Measurement

Safety performance has traditionally been measured by 'after the loss' type of measurements such as accident and injury rates, incidents and dollar costs. Lagging indicators characteristically:

- Identify trends in past performance.
- Assess outcomes and occurrences.
- Have a long history of use, and so are an accepted standard.
- Are easy to calculate.

However, in the aftermath of catastrophes, it is common to find prior indicators, missed signals, and dismissed alerts which, if they have been appropriately managed at the time, may have averted the disaster.

Leading indicators are safety metrics that are associated with, and precede, an undesirable event such as an operational incident, near miss or personal injury. They can:

- Reveal areas of weakness in advance of adverse events.
- Be associated with proactive activities that identify hazards.
- Aid risk assessment and management.
- Demonstrate areas of strength that may be associated with positive safety performance

Leading Indicators may be the most important safety metrics for the organization as they correlate with the organization's safety performance.



IMPROVING SAFETY PERFORMANCE

Leading indicators of safety performance are particularly useful for crew, vessel, and fleet safety as they can help to take the luck out of managing safety by giving more recognition to the actions that are necessary to reduce risks and improve performance. The general use of leading performance indicators has been described in part one of this Toolkit Module. The general process for effective use of leading performance indicators can be summarized as:

- Identify where there are potential weaknesses or opportunities for improvement
- Identify what can be done to counter weaknesses or deliver improvement
- Set performance standards for the actions identified
- Monitor performance against the standards
- Take corrective actions to improve performance
- Repeat the process, using a continual improvement model

SUMMARY

The information contained in this Ergonomic Design and Safety Toolkit Module is based upon successful maritime application of the techniques discussed, as well as state-of-the-art science in a variety of peer-reviewed sources and were selected to provide a basic introduction to leading safety indicator assessment.

