



# DEFENSE BASE ACT

DBA WHITE PAPER FOR ALLIED WORLD POLICYHOLDERS

April 2020

## Using Metrics to Improve Safety Results

### What are Metrics?

Metrics are, in their simplest terms, quick indicators of progress in achieving larger company objectives. Rather than simply looking at profit or loss figures or incident frequency rates, the use of metrics allow a business to see how they are performing on the important steps that lead to job completion, customer satisfaction and ultimately profit. Properly chosen, metrics reflect activities that can be managed and controlled by management and employees; therefore, small and large bite sized changes can be implemented that can help to improve bottom line results.

Safety metrics can be divided between leading indicators, which are usually predictive, and lagging or trailing indicators, which reflect actual performance. Both are useful to not only measure results, but also help provide guidance in refining the smaller incremental improvements needed to attain the desired results.

Examples of lagging, or trailing, indicators are severity rates, incident rates and lost time cases. All of these provide concise measurements of actual safety performance. They can be applied to an overall company, a division, any given work site or even for each subcontractor at work sites. And because they can be adjusted for actual hours worked, they are comparable among sites and even among industry competitors.

Examples of leading indicators might include:

- Number of safety related audits
- Employee perception surveys
- Near miss incident reports and investigations
- Number or percentage of recommendations implemented
- Numbers of staff trained in safety issues
- Specific improvements in specific controls
- Toolbox Safety talks completed and/or number of attendees
- Numbers of safety initiatives undertaken

In short, these are measures of positive steps that are reasonably expected to have a beneficial effect on the overall safety results. They are under the control of site management and employees, who together can make noticeable improvements toward a safer work site. Employee involvement is important and easily obtained, as the immediate benefits are obvious to the employees. The incrementally small, clearly defined and positive steps involved help keep the employees engaged in the process.

### **How Metrics Lead to KPI**

Many businesses have adopted Key Performance Indicators (KPIs) to assess their achievement of business goals that directly tie to profitability, such as jobs completed per month. Metrics can best be seen as a subset of KPIs, i.e. the steps that need to be completed to achieve the larger objective. Put another way, metrics track a process, while KPIs track attainment of a larger business target. Viewed from the leading versus lagging indicator discussion above, metrics tend to be leading indicators and focus on the steps taken to achieve KPIs such as incident rates, severity rates or lost time cases, each of which is a lagging indicator.

A benefit of using Metrics tied to KPIs is demonstrating to management that safety is not a tangential issue, but is inherently tied to the overall profitability of the business.

### **How to Select and Use Safety Metrics**

The first step in choosing a metric is to look at the various underlying causes of the loss drivers at the work sites. As a common example, if trips and falls were an issue, safety managers might decide to focus on job site inspections, availability of brooms, shovels and bins to dispose of debris, frequency of debris removal, designation of cleanup personnel on-site or employee training and use of fall protection. Each of these issues can be readily measured, often on a daily basis.

If strains and sprains were issues driving employee injuries, the critical steps that could become metrics might be observations of two man lifts, having the proper material handling equipment available in convenient spots, training of lifting techniques or employee perception surveys focused on their understanding of the need for material handling assistance and their perception of management's support of these techniques.

Secondly, consider applying the same metrics to many similar work sites within the organization. This helps to compare the various efforts and attention given to the underlying issues, and should be predictive of trailing indicators, such as lost time cases.

The third step is to communicate the results to all affected employees. This helps everyone understand the importance of the actions being measured (the metrics) and demonstrates why the employees need to be involved, as well as showing that the employees' welfare is important to the organization. If they are measured on a daily basis, communicate the results daily, whether by posting the results or telling employees every morning at toolbox type safety meetings. Clarity of communication is critical, and the more frequent the communication the better.

The fourth step is trending the results on a regular basis, whether weekly or quarterly, to assess (1) do the results show any trend, positive or negative, and (2) do these trends impact the expected trailing indicator, such as lost time cases? From this analysis, the actions that yield the best results become candidates for best practices throughout the organization. This leads to the next step in this loop, Continuous Process Improvement (CPI).

## Metrics as Part of Continuous Process Improvement

Organizations of all sizes, whether 50 or 500 employees, use metrics to help change behaviors for the better and improve the overall performance, which ultimately is defined as profitability. Safety is not simply an expense, but a key issue in attaining profitability. And much as processes are measured - jobs completed, employee turnover, waste reduction, etc. – a business is continuously trying to improve those results.

In that same way, safety should be raising the bar on their metrics, and incorporate improvements into best practices and the overall corporate CPI efforts. Like KPIs, this reinforces the role safety plays in contributing to corporate success.

Safety is often the easiest thing to measure because OSHA has provided the base formula for key metrics over a long period of time. There are three specific measurements to track and use to drive improvements: Days Away, Restricted or Transferred (DART), Recordable Incident Rate and Cost per Recordable Incident which is simply Workers' Compensation Costs divided by the number of Recordable Incidents.

Please see the following link for more information regarding DART and Recordable Incident Rate:  
<https://www.osha.gov/recordkeeping/RKforms.html>.

## Conclusion

The use of measurable metrics, integrated into overall company KPI and CPI programs, helps management and employees understand, carry out and succeed in their roles in making a safer work site and contributing to company success.

## Author

**Al Himmelsteib, CPCU**

Senior Consultant

Insurance Safety Consultants

## Contributor/Editor

**Thad Whittier, CIE**

Vice President, Loss Control

AWAC Services Company,

Member Company of Allied World

**E.** [riskmanagement@awacservices.com](mailto:riskmanagement@awacservices.com)

**T.** 860.284.1305

**W:** [www.awac.com](http://www.awac.com)

This material is provided as a resource for informational purposes only. It is not intended as, nor does it constitute, legal, technical or other professional advice or recommendations. While reasonable attempts have been made to ensure that this information is accurate and current as of its publication date, we make no claims, guarantees, representations or warranties, either express or implied, as to the accuracy, completeness or adequacy of any information contained herein. Consult your professional advisors or legal counsel for guidance on issues specific to you. Additionally, this material does not address all potential risks and may contain time-sensitive information. No responsibility is assumed to update this material and there is no guarantee or representation that this information will fulfill your specific needs or obligations. This material may not be reproduced or distributed without the express, written permission of Allied World Assurance Company Holdings, Ltd, a Fairfax company ("Allied World"). Actual coverage may vary and is subject to policy language as issued. Risk management services are provided by or arranged through AWAC Services Company, a member company of Allied World. © 2020 Allied World Assurance Company Holdings, Ltd. All rights reserved.