TRC — PROVIDING THE SKILLS AND TOOLS TO KEEP EMPLOYEES SAFE

Can Safety Save Your Company Money?

Do you believe safety is just a cost of doing business, a black hole to sink financial and human resources? There are many reasons why organizations either do or do not provide financial and human resources to safety.

In 2012, $198.2 billion was spent as a result of occupational injuries and deaths: $36.5 billion for administrative expenses; $55.7 billion in medical costs; $89.6 billion in wage and productivity losses; $11 billion in employers uninsured costs; $5.4 billion in other related costs [2].

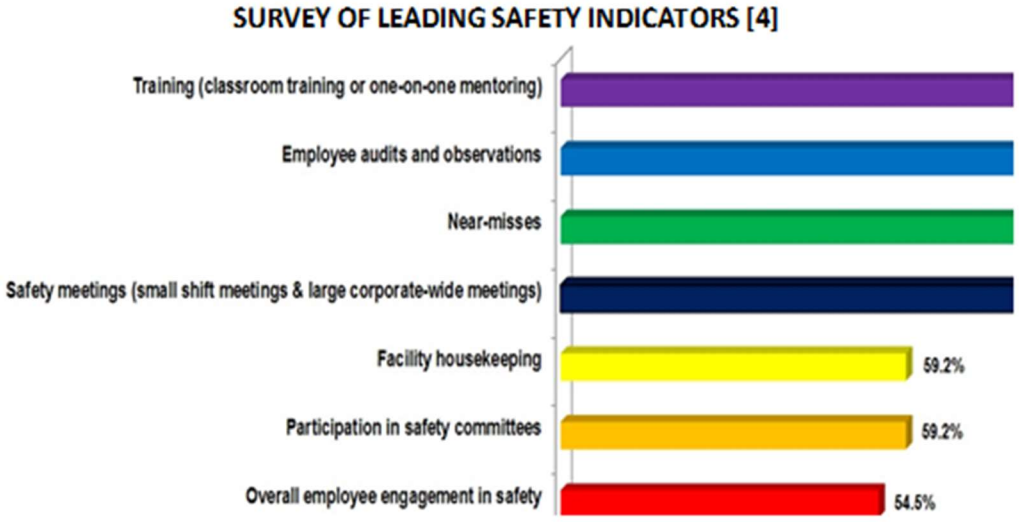
Like technology, safety management and concepts are changing. Research shows that for every $1 invested in safety returns $2 to $6 [3]. This cost savings come from lower worker's compensation costs, lower retraining costs, lower production costs, and increased productivity. By implementing a robust health and safety program, a Fortune Five company increased productivity by 13 percent [3]. A robust health and safety program helped a small 50-person plant decrease faulty products that saved more $265,000 [3].

OSHA penalties are costs that need to be considered. In 2016, OSHA increased their penalties. Serious, Other than Serious, Posting Requirements penalties are $12, 471 per violation [4]. Failure to Abate is $12,471 per day beyond the abatement date [4]. Willful or Repeated violations can be up to $124,709 per violation [4]. Increases will occur annually and will be based on the consumer price index (CPI).

SAFETY METRICS: What gets measured gets done.

This is true in manufacturing operations, from product development, to business operations, and is also true with safety. Most businesses have safety metrics. The metrics used are associated with the requirements defined by the Occupational Safety and Health Administration (OSHA) reporting requirements. Common metrics are the organizations Experience Modification Rate (EMR) and the data from the OSHA 300 log: Incident Rate; Injury or Loss Time Data. While this data is important, it is useless because

it is historical, backward looking – like driving down the highway, but only looking out your rearview mirror.



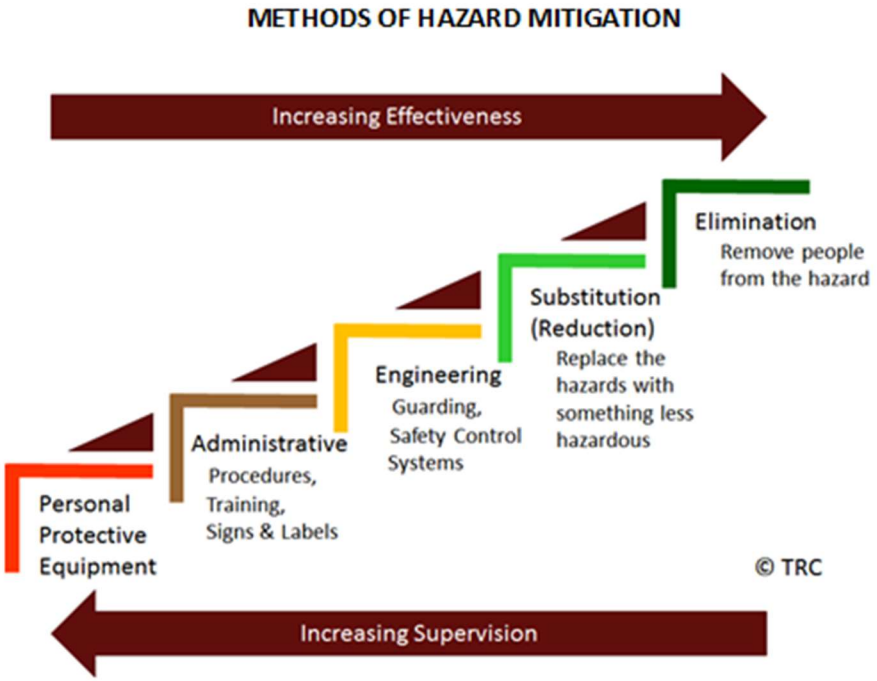
Safety metrics need to use a combination of leading indicators and reported data. Leading indicators are those activities that the organization invests in to change the organization's safety culture. Leading indicators should follow the SMART process and be:

- Connected to outcomes
- Objectively measured
- Agreed upon by stakeholders
- Applicable
- Clearly communicated

Leading safety indicators that have proven effective in reducing costs and providing a competitive ad-vantage include: training, audits, recording near-misses, safety meetings, housekeeping, safety committees, and equipment maintenance [4].

OVERALL EQUIPMENT EFFECTIVENESS: (OEE) measures the productivity of manufacturing equipment. An OEE score of 100 percent indicates that the machine is providing only good parts (Quality), as fast as possible (Performance), and without downtime (Availability) [5].

Machine safety is one component associated with OEE. All machines pose risks to operators. Identification of risks and methods of reduction are accomplished by a Hazard Identification and Risk Assessment (HIRA) process. Methods of risk reduction include elimination, substitution, guarding, safety controls, training, operating procedures, labels, and personal protective equipment (PPE).



BEST-IN-CLASS COMPANIES: Companies with the best safety programs also have the best operating margins [6]. A study conducted by the Aberdeen Group showed that organizations with the top 20 percent of financial performance where also the safest. Top companies had an average OSHA recordable injury rate of 0.1 and the number of near-misses per employee of 6.0. Comparably, the bottom 80 percent of organizations had an OSHA recordable injury rate average of 1.5 and the number of near-misses per employee was 16.9.

	Best-in-Class Group (Top 20%)	All Others Group (Bottom 80%)
Recordable Injury Frequency Rate	0.1	1.5
Operating Margin	22 %	2 %
OEE	95 %	80%
Near Misses per 100 Employees	6.0	16.9

The OEE performance of the top organizations averaged 95 percent whereas the remainder of the organizations averaged 80 percent. Financially, the operating margin of the top organizations averaged 22 percent. The average of all other organizations was two percent.

TRC – YOUR CHOICE FOR SAFETY: Technology Research Council (TRC) can help your organization use safety as a competitive advantage. We use our years of experience to develop practical safety programs that are OSHA compliant, but also leading indicators to help you manage your operations.

TRC has more capabilities that other safety companies. Our experience in equipment design and analysis allows us unique insight into reducing hazards using Engineering Solutions: Elimination, Substitution, Guarding, and Safety Control Systems.

REFERENCES.

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