

The Wrong Key Performance Indicators Can Drive the Wrong Behavior: *Identifying the Correct Indicators and Reward System to Improve Safety Performance*

By Mieke Jacobs

Global Practice Leader Operational Risk Management & Employee Safety, DuPont Sustainable Solutions

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At the end of December 2015 I was asked by a client, a global player in the mining industry, for advice on their plans to introduce a new variable compensation system for employees that relates to safety performance.

The previous bonus system was only connected to their Lost Time Injuries (LTI) performance. That kind of system has two potential drawbacks for companies that do not yet have a mature safety performance. First, when a bonus system is entirely based on LTI, or other lagging indicators, it can discourage reporting and/or make people come to work when they should stay at home. The second problem with basing rewards on LTIs is that it often does not result in any action, simply because people fail to see how this translates into daily action.

The mining company realized it needed to use a balanced mix of leading and lagging indicators. The new draft system that I was able to review included a combination of both. The main lagging indicator for the company was still LTI, and zero LTIs was the condition *'sine qua non'* for employees to be eligible for the bonus system. The bonus amount, though, would depend on several leading indicators, such as:

- 5S performance
- Execution of Safety Action Plans
- Organization of safety briefings
- Reporting of near misses
- Execution of safety audits

Making the most of KPIs through an Integrated Performance Management System

These key performance indicators (KPIs) look good at first sight, but let's look at performance management and what it is meant to achieve.

The old saying 'what interests my boss, fascinates me' is of course still valid. But a strong performance management system consists of much more than only producing a long list of KPIs.

The performance management triangle includes:

- Strategy / KPIs / Visual Management
- Regular Performance Dialogues
- Structured Problem Solving

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It all starts with defining your vision and strategy; not at a high level, but at a more tangible one which allows each level of the organization to make the right choices on a daily basis. How often do we see a vision on the wall, where you could just replace the company name with that of another company: “We want to be the safest, highest quality, lowest cost producer of ... while delighting our customers with world-class delivery and continuous innovation, and, oh yes, all delivered by the most engaged employees”?

It is essential to take a step back and rethink your actual strategy. In which areas do you really need to excel, and in which can you accept parity? A clear, prioritized strategy enables an organization to push decisions to the lowest possible level, because people at that level understand the ultimate priorities.

Once we have a clear strategy, how do we translate it into meaningful KPIs for every level of the organization? How will the shop floor worker know that, at the end of his shift, he has contributed to the business goals? A high-level KPI, such as LTI, will not do the trick. Organizations need to think about how it can be translated into one or more meaningful KPIs that are tangible on the shop floor. Seen from that angle, the new list of leading indicators proposed by the mining company is already much more meaningful than their previous focus on LTIs.

Visual display and visual management of meaningful and real-time KPIs for each department enables regular performance dialogues. The ultimate question should be: How can you get the rhythm of the whole organization ‘in sync’ to achieve these business results? How is the shift change-over discussion escalated to a daily cross-functional review between operations, maintenance and engineering? And which topics need to be escalated to the weekly or monthly longer-term management processes?

The third leg of strong performance management is problem solving at different levels. We are all familiar with long lists of action items, or a long backlog in maintenance departments, because every deviation is referred to another department, buried in a work order or on a project list. Highly effective problem-solving uses the problem-solving capabilities of the entire organization, by moving the majority of actions to the lowest level possible (1st tier). That may require a change in company culture toward a more independent or interdependent organization, so operators, mechanics, lab technicians and customer service representatives not only feel permitted, but positively encouraged, to solve the majority of problems themselves, right away. Many operators know their process and equipment so well that they

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virtually hear or sense when something deviates from the norm. Companies should not ignore that long-established familiarity with the process or equipment, but instead increase the technical and problem-solving skills at their prime value creation activity, which is, in most cases, the operations shop floor. Of course, there will always be issues that need the involvement and expertise of different departments, but that should not be the automatic first response. This should be reserved for second-tier problem-solving that brings together the right people to solve an issue in the short term. And some more fundamental problems may need to be solved in longer-term projects, Kaizens or value accelerators, led by a continuous improvement or project leader.

Questions to ask yourself when setting KPIs

Let us go back to the initial question from this mining company: can you please advise on these leading indicators for our bonus system?

Before analyzing these specific five leading indicators, it is worth taking a step back and asking a few critical questions in order to find out what the organization can realistically expect to achieve.

- How would you describe the maturity of your organization?
- Where are you now in terms of safety culture, and where do you want to go?
- What behavior are you trying to drive with this variable compensation system?

The answers to these questions matter. If an organization is not yet “mature” in its safety performance, it will need to focus on preventing fatalities and serious incidents, as well as high-potential near misses, before introducing a KPI for other more minor near-misses. With increasing maturity, the organization can select additional KPI’s, and react to more subtle signals, as well.

In an immature organization that is just starting with an auditing system, it probably makes sense to track quantity metrics like the execution of the number of audits. As the organization develops in maturity, quality metrics should be introduced, e.g. audit scores and actions completed on time. Once this is under control you can add a focus on repetitive findings, and make a connection between audit findings and actual incidents.

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Keeping KPIs fresh

In DuPont, the traditional KPIs that we have been driving – but not necessarily rewarding financially – on top of our lagging performance indicators are, amongst others:

- Audit execution and results
- Execution of inspections (specifically on process safety critical processes)
- Execution of safety action plans (including upgrading procedures, systems, investments, etc.)
- Safety Observations execution (and, if possible, quality of observations and closure of actions)
- Participation in safety training and safety meetings
- Execution of safety training plans (legally required and other)
- Permit deviations
- Safety Perception Survey results and follow-up on action items

We use the last KPI, Safety Perception Surveys, as a tool to probe and uncover safety culture performance issues that might otherwise go unnoticed and which could adversely affect our safety performance. They offer a proven and effective solution to pinpoint the “safety conscience” within the organization and allow us proactively to address issues before an incident occurs.

In recent years, though, we have added other KPIs such as the timely investigation of incidents, the timely execution of action items, and more recently also date changes to action items. We added this last one because we noticed that people were changing execution dates, often for good reasons (waiting for an investment or more investigation needed). However, we wanted to control this and therefore increased the approval authority for a date change to a higher level, and began tracking them.

We also have been focusing a lot on improving idea-generation or bottom-up innovation, tapping into the problem-solving capabilities of the entire organization. We are therefore measuring the generation of ideas and their actual implementation. The aim, as mentioned before, is to move execution to the lowest possible level, to avoid a long list of capital projects or maintenance work orders.

Another leading indicator that some of our sites (like Luxembourg, Landgraaf in Holland and Mechelen in Belgium) introduced some years ago and others have adopted more recently, is a Safety Culture Pulse Check. This consists of a targeted short list of questions which ask people how they feel about SHE, how leaders are behaving, and how they are responding to feedback

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from the teams. This is in addition to our more extensive Safety Perception Survey that takes place every other year. The pulse check was added to keep safety perception alive and was happening at regular intervals (monthly, quarterly). The pulse check is most powerful when the dialogue is more important than the recorded results. Therefore, it is key to process the results in the natural work teams right away.

Several sites have combined some of these lagging indicators into a traffic light that is positioned at different entrances, so people immediately can see how we are doing. It is a type of safety energy index, providing sites with feedback on their risk level and awareness. We also sometimes use these traffic lights to keep people alert at times of great distraction (big maintenance activities, turnarounds, high contractor ratio on site, etc.)

The aim is to keep KPIs fresh and effective. Instead of just continuing to use the same KPIs as before, it is important to monitor performance against them. If all action items are closed, if your dashboard shows green all the time, that is the time to be suspicious, not the time to relax and be complacent. It is precisely the moment to ask yourself what is going on and whether you shouldn't be re-evaluating your KPIs and digging deeper.

Review of the proposed leading indicators

As mentioned before, the right KPIs can drive the right behavior (if you include the other critical elements of a performance management system), but consequently the wrong KPIs can drive the wrong behavior.

In principle, HSE compliance and proactive behavior are a condition of employment. So it can be very tricky to reward people for behavior that is expected of them in the first place. With all this in mind, here is my response on the leading indicators that the mining company was considering:

a) 5S

It is good to make a connection between 5S and safety, and the Sustain 'S' in 5S indicates that it's critical to sustain this at all times. Adding it as a leading indicator connected to the bonus system might limit the cascading down process though. Ideally, you would like employees to own 5S themselves and do the checks/checklists themselves. Incentivizing an audit of their own area with a variable compensation system might lead to a biased view.

b) Implementation of Safety Action Plans

Strong follow-up and disciplined closing of action items is a clear indicator of the operational discipline and the workload in an organization. However, since most organizations do not use

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their 1st tier problem solving capabilities very often, not many action items are really assigned to the shop floor. Action items will mainly be allocated to engineers, supervisors, managers and professionals. And in that case, shop-floor employees might not be able to influence the implementation or closure of action items.

c) Organization of safety briefings

This should clearly be part of the job. Both organizing and attending safety briefings, trainings, toolbox meetings should be mandatory and should therefore not be rewarded additionally.

d) Reporting of near misses

This is another important indicator of the cultural maturity of an organization. Mature companies want to ensure they have visibility at the bottom of the safety pyramid, before actual injuries occur. They want people to be more proactive. Sometimes when I visit a plant, I see damaged warehouse racks and protection bars, and yet there are no reports of any internal traffic incidents. Something clearly isn't adding up. Reporting of near misses is important. However, what target should you put on near misses? You want to have a good reflection of reality without driving an excessive amount of reporting. You want 'quality' near misses, capturing those incidents that offer critical opportunities to learn. You want to validate that you have captured the 'right' pyramid ratio (between your recordable injuries and your near misses).

A more proactive way of capturing the bottom of the pyramid is to track and reward the number of safety improvement ideas generated and implemented. You might drive the same behavior with a better KPI. You should be asking yourself whether you can track the level of learning in your organization through the metrics you are using.

e) Safety Audits

Auditing your safety management system is critical. But where do you set the target? Do you focus on the audit score or on the execution of the audit plan? Execution of the audit plan is a straightforward KPI which people should be able to influence.

Putting a target on the auditing scores, however, includes some potential risks. This type of KPI might put pressure on the auditors in a less mature organization. They will know that the organization's variable compensation system will depend on how strict they are (and an audit is never fully black and white). Sometimes, people have an increased understanding of what a standard really means, and they raise the bar for themselves. Sometimes, the audit score stays flat because they are looking at it with different eyes, which is what you want to encourage to constantly raise the bar.

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So what to conclude?

A strong Performance Management System consists of several elements that need to be integrated to achieve the desired results. KPIs are just one element. You can use KPIs to drive people's behavior and, in the end, organizational performance, but it is essential to carefully consider what behavior you want to drive versus what it is that your existing KPIs will actually drive. What could be the unintended consequences?

Although variable compensation system directly linked to HSE KPIs can work, we should also consider the power of reward and recognition, beyond monetary rewards. Maintaining a strong safety culture requires the entire organization to collaborate. Other recognition initiatives could consist of: team awards/team events when reaching certain milestones, verbal recognition for extraordinary achievements (president's safety award, safety coins, safety medals) or team rewards for improvement ideas generation.

Share your experience with us in our LinkedIn discussion group <https://www.linkedin.com/groups/4617132> and join the debate on how to use KPIs to drive performance.