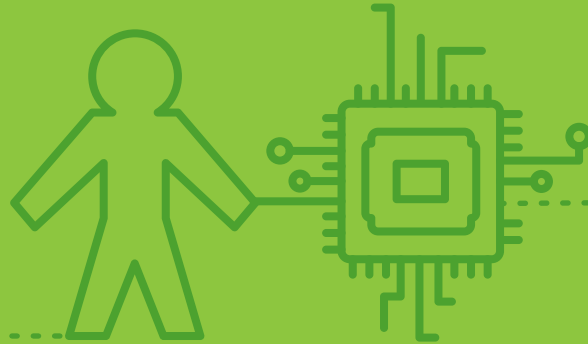


ECOMPLIANCE



# THE ULTIMATE GUIDE TO PREVENTATIVE SAFETY ANALYTICS AND REPORTING

How to capitalize on the data revolution  
and build a safety system with purpose.

# INTRODUCTION

---

No profession knows the pain of tedious paperwork, complicated Excel manipulations and clunky systems quite like safety professionals do.

While the rest of our organization's business functions like finance and project management have moved on to sophisticated systems to report performance to executives and customers, Environmental Health and Safety (EHS) has largely remained behind the scenes and behind the times.

Despite our best efforts to modernize and streamline our processes, safety leaders still run into several challenges: getting reliable data from reluctant workforces in spread out locations, limited IT resources, personnel turnover, and the list goes on.

The good news is that we're now in the midst of a data revolution. Data-driven companies are already more profitable than their competitors, and the continued evolution of EHS analytics will strengthen the divergence amongst companies that use data to their advantage against those stuck in the status quo.


This whitepaper will discuss how EHS professionals can capitalize on this new data revolution to build high performance safety systems, make better informed decisions and improve safety outcomes by following the 5 Principles of Preventative Analytics and Reporting.

## CURRENT CHALLENGES AND CONSEQUENCES

---


Health and safety professionals prove success in many areas: implementing policies and procedures, conducting new training programs, and building strong cultures, just to name a few.

However, if you had to pinpoint the Achilles' heel of the safety profession, it would be weak reporting capabilities, which have created the following set of challenges for today's EHS leader:

 1. Time away from real safety initiatives and employees

Recent surveys of EHS professionals show that 45% of their time is spent on manual administrative tasks required to report on performance across the organization.


The heartbreaking consequence of this is the time taken away from initiatives can have a real impact on safety. We're reporting on the past, but robbing our performance in the future.

 2. Missing key insights that are valuable to the organization

In many high-risk industries, the biggest risks and opportunities to mitigate them may seem obvious to most EHS professionals, but that perception is precisely why we often overlook contributing behaviors and underlying conditions that are 'below the iceberg'.

We're so busy reporting on what we need to know, we don't have enough time or data to discover what we should know (but don't).

Under these deeper layers is where the largest opportunities for improvement and change typically hide.

 3. Limited engagement and share of time with executives

Let's face it: CEOs and top executives are the only people that can drive large-scale change in our companies in the long run. Without meaningful dashboards to back our safety initiatives, it's difficult to get executive buy-in and secure resources.

This is why the first step to implementing any management system (like 45001, 9001 and 14001) is ensuring management commitment.

As EHS professionals, our success depends upon our ability to take safety performance to the next level. However, unless we evolve our data collection, analytics and reporting processes, we will fail to take safety to the next level and miss the opportunity to make an impact on our employees and the communities we serve.

## WHAT SAFETY REPORTING LOOKS LIKE

Thankfully, many forward-looking organizations have begun to embrace the data revolution and are looking to make smarter, data-driven decisions this year.

Imagine if you could stop reporting on one sliver of historical performance at a time, and instead, walk into an EHS meeting and your executive team is already aware of real-time safety performance across the company, and is eager to discuss your insights and recommended actions?

How much time could you save if you had interactive dashboards for the following metrics already at your disposal: real-time incident and near miss rates, your highest performing supervisors and top inspection trends this month by site?

The velocity of continuous improvement across EHS departments will undergo a transformation and so will our safety cultures, leading to three key changes for our EHS team, our executives, our customers and our companies:

### FULL CYCLE SAFETY

Full Cycle Safety means that our continuous improvement systems (Plan-Do-Check-Act) are operationalized at every level of our organization and actively monitored. Most organizations are currently using only 5-10% of their safety data, and missing the opportunity to uncover risk.

For Full Cycle Safety, we must think scope and velocity of information and ensure we're doing the following:

COLLECTING THE RIGHT EHS DATA FOR THE RIGHT PARTS OF THE COMPANY

GENERATING ENOUGH DATA TO GET THE COMPLETE PICTURE

LEARNING FROM THIS DATA FREQUENTLY TO MAKE BETTER DATA-DRIVEN DECISIONS

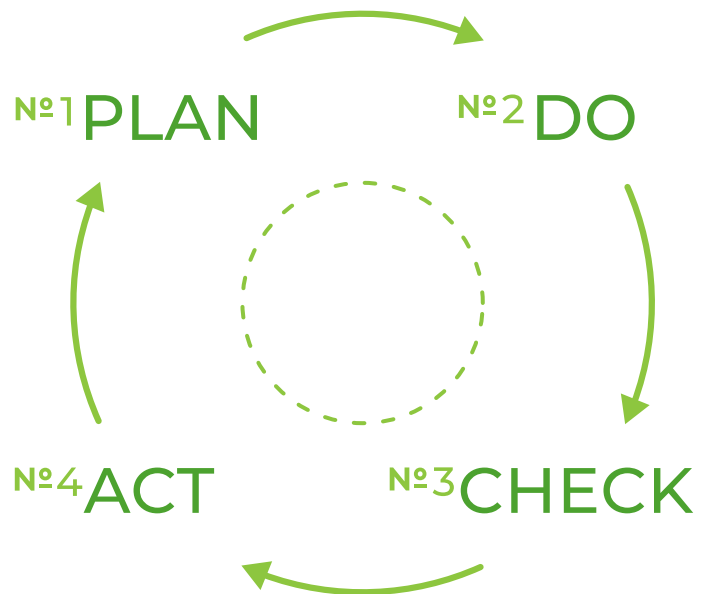
COMMUNICATING AND TRACKING OUR ACTIONS AT THE RIGHT SPEED TO ENSURE PROGRESS

### EXAMPLE

Why is flying in a commercial plane from one city to another so safe? The aviation industry continuously monitors all controls put in place and excels at the four points above.

If a plane crash occurs, the world watches as investigators identify causes and operationalize the next generation of controls. Most controls are never the result of an actual crash, but are put in place because no number of aircraft crashes are acceptable to us.

Although heavily regulated, most would agree that the success of the aviation industry is more directly tied to operationalizing and monitoring Plan-Do-Check-Act than any one specific regulation.



If we treated all operations in hazardous industries with this level of sophistication and monitoring, would we have as many falls from heights or operator rollover fatalities? Likely not.

Practically speaking, in 2017 it's not possible to operationalize and monitor safety in our industries at the same level as aviation, but embracing Full Cycle Safety can help us move in that direction.

## EXECUTIVE ENGAGEMENT

In the past, executive teams have understandably been reluctant to get involved in how our safety data is collected. We haven't given it to them in a digestible, real-time format like they get from other functions in the business.

In a perfect world, EHS professionals would have data from any site rolled up to the business unit level and distilled into a few charts that matter most to managers responsible for that division. They could instantly double-click on question areas and get the facts.

In turn, good data would roll up to executives to illustrate performance and trends at the highest level, so senior leadership is aware of the 3 or 4 leading and lagging KPIs that truly spell out and price risk across their business.

Although executive engagement and employee participation in safety activities seem to be at opposite ends of a spectrum, they're more closely tied than you may think: they actually reinforce each other.

More executive engagement in safety activities directly and indirectly affects the front-line workforce. Increasing employee participation helps to generate new data, ideas and insights that in turn, reinvigorate executives.

To create this feedback loop, we must link the actions of the workforce in the field to the KPIs executives will see on a dashboard they can easily access while they have their morning coffee.

Luckily, this perfect world is being created by many forward-thinking organizations that are leveraging two key technology trends:

- Easy-to-use mobile apps to engage the workforce in safety activities
- Advanced analytics and visual dashboards to drive real insights for data-hungry executives

## REPUTATIONAL IMPACT

Our customers, buyers and project owners are becoming increasingly concerned about their reputations and brand value. Our license to operate is based on our ability to return our workforce safely to their families at the end of the day.

In turn, extra pressure is put on our teams and executives to report regularly on safety activities. Multiply this across your many buyers or customers and we have a highly administrative and reactive process that can sometimes do more harm than good.

Many companies are already taking a different approach to reporting EHS performance to their clients. They're making it a regular part of how they do business and continuously improving this aspect of their reporting process.

In other words, if safety is important to your customers and to your company, why not use it as an opportunity to further differentiate yourself as a leader in your industry?

Does the percentage of safety reporting in your company look more like organization A or B?



## 5 PRINCIPLES OF PREVENTATIVE ANALYTICS AND REPORTING

Working with hundreds of organizations, we have distilled the actions of top performing, data-driven companies into 5 principles of best-in class safety reporting:

### 1. PURPOSE DRIVEN DATA

To drive positive outcomes and improve EHS performance, we must start by collecting the right data that can be shared with executives to better engage them in our safety initiatives.

Best practices for designing a safety dashboard for executives:

Start at a high level and then dive deeper to help executives ask questions that are closest to next actions. A good place to start is with the following base metrics you're probably already collecting:

- How many incidents or injuries did we have last period?
- How many incidents were the results of what causes?

Diving a bit deeper, we can get more granular at the next level down with key performance indicators that are actionable, hold managers accountable and are prevention-focused:

- How many unsafe conditions did we observe?
- What were the top 3 themes of these unsafe conditions?
- What percentage of controls are in place?
- Which action items identified by supervisors were completed on time?
- What was the average number of days to completion across sites on these items?

Ultimately, the best questions to ask will vary for each business and phase of EHS system maturity, but with so many data points within our reach, we should not limit ourselves to what was only possible to answer with our old processes.

To find out which phase of EHS system maturity you fall into, take our Safety Maturity Level Quiz.

## 2. UNCOVER HIDDEN RISK

Unlike other aspects of business where a few key drivers generate 80% of performance, risk generally tends to be about the unknowns as much as the knowns.

However, in the past, diving into data at this level has been complex, especially for organizations that don't have a team of data scientists on hand.

The good thing is that you likely have thousands or even tens of thousands of data points entering your management system. Start by identifying one new theme per month that you could share with your executive team.

At a minimum, this will help you assess whether these themes are part of a larger trend or just an anomaly. Here's an example to further illustrate:

### EXAMPLE

Consider you've just reviewed 52 site audits from last quarter on your safety dashboard and have found a 50% failure rate on housekeeping, a seemingly small safety matter. However, you realize this is up from last quarter when it was only 15%.

You double check the contributing factors associated with the near misses submitted last quarter on your safety dashboard and notice that 70% of them are associated with trips or falls, which seems to coincide with the increase in poor housekeeping.

Diving deeper, you identify the supervisors on site for all the near misses and discover another clue: two supervisors are present for nearly all near misses.

After following up with the supervisors directly, you discover that poor communication between those two and the contractors on site led to the poor housekeeping and several near misses that could have resulted in injuries.

After thoroughly investigating the above scenario, you decide to monitor poor housekeeping responses more closely and add them to your job sites dashboard so that you can prevent this from happening again in the future.

### 3. THINKING SMALL...AND BIG

Terms like “big data” imply that companies must be large to game-change their safety data. But you don't need vast quantities of data for it to be meaningful.

Sometimes, getting information in various formats can strengthen your view of true risk in the organization. Here's two real-life examples that highlights this fact:

#### THINKING SMALL

A Safety Manager in the energy industry was reviewing daily inspection forms submitted from a site over 5000 miles away. Part of the inspection process required the Rig Manager to take a photo of the crew from his mobile device.

Upon closer examination, the picture revealed that behind the crew, a drilling pin was not properly secured, risking the integrity of the rig and all seven personnel on site. Once the Safety Manager saw this, he was able to immediately notify the crew.

This picture served as a great reminder of something called the Swiss Cheese Effect, meaning that layers of critical controls can sometimes be missed, even during routine inspections.

#### THINKING BIG

A construction company with 100 personnel completes over 10,000 forms related to safety, compliance or quality every year. Each form had 25 different data points, which meant that over a 4-year time period, they unwittingly collected a million pieces of data.

But over those 4 years, the safety culture and type of work being performed at the company evolved, yet, the forms the foremen were submitting were still the same.

Sound familiar? To continuously improve, the company decided it was time to replace some of the old inspection questions with better, more relevant questions based on newly discovered safety themes to reflect their evolving culture.

### 4. MAKE YOUR OUTPUTS STAND OUT

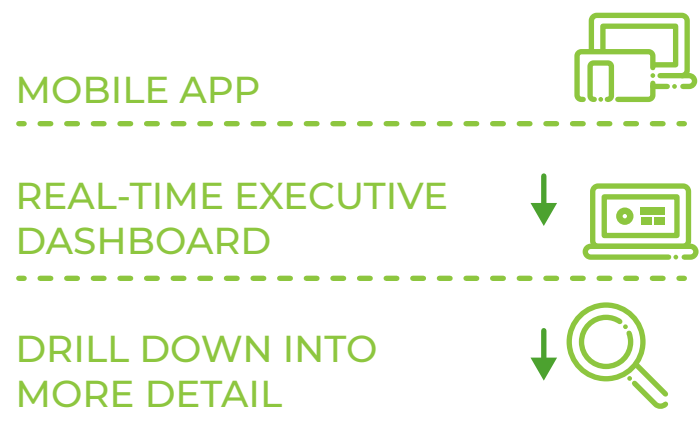
The truth is, we only have so many opportunities to try and engage our executive team, customers and colleagues before their minds are made up, so we need to ensure that our work stands out and immediately grabs their attention.

If there's that one dashboard or chart that will open an executive's eyes or drive positive change, don't waste your chance.

It used to be that data went from:



This process took many months (not to mention countless missed safety opportunities and actions in the interim). However, in this new data revolution, we can instantly do this:



This means that you can finally spend your time driving insights and delegating action, rather than wasting time organizing data and fiddling with Excel formulas.

## 5. GO FROM OUTPUTS TO ACTION

Speaking of action, how do we inspire our executives to take the best course of action with the safety data our teams have worked so hard to get us?

As an EHS professional, your data should speak for itself and your time should not be spent trying to convince an executive to act if the facts are compelling enough on their own.

With a real-time dashboard that your executive team is already regularly reviewing, there's a good chance they'll already be thinking ahead and aligned with you on next actions to take.

In the past, this process may have taken you months of analysis or even years of convincing, but soon executives will already be on the same page as you, without any persuasion on your part.



## SUMMING UP

When it comes to the health and safety of our employees and the future success of our organizations, our old, reactive reporting processes are simply no longer enough to help us eliminate risk, improve performance or make strategic, fact-based decisions.

By embracing the transformative impact the data revolution can have on the EHS industry with real-time dashboards and predictive analytics, safety leaders will finally be able to use their talents and energy to make a real impact in important safety initiatives rather than manipulating data to try and convince executives to take necessary actions.

## NEXT STEPS

Alcumus eCompliance's robust reporting capabilities are designed to help EHS professionals turn raw data into valuable insights to drive safer outcomes.

## TRUSTED BY THE WORLD'S SAFEST COMPANIES



## ECOMPLIANCE

### ABOUT ALCUMUS ECOMPLIANCE

Alcumus eCompliance Safety Software is the leader for improving worker participation in safety. The Alcumus eCompliance mobile app connects workers with head office, creating a two-way conversation so safety leaders can make faster, fact based decisions, and executives gain an unrivaled view of safety risk across their company.

With the mission to protect 5 million workers from workplace incidents by 2025, Alcumus eCompliance is the fastest growing safety software company in the world with hundreds of client success stories.