

Predictive Safety Analytics

Challenges

You've invested heavily in equipment, procedures, and training programs for workplace safety.

You closely monitor compliance.

But when incidents are relatively rare, how do you evaluate the effectiveness of your current safety programs? How do you identify other steps you can take to help predict and prevent incidents?

The answer is Predictive Safety

Analytics: taking the data sets you already have to see things you couldn't see before.

The Issue

Whether you're an employee health and safety professional, human resources professional or front-line safety manager, you care about improving workplace safety and realizing the best outcomes from your safety efforts - and so do First Analytics and SAS.

Your custom Predictive Safety Analytics solution will:

- **Help reduce individual incidents:** Which areas of operation are at elevated risk right now for an incident (reportable or otherwise), and why? PSA can help identify and quantify numerous risk factors in a statistical model, then alert managers to elevated-risk situations and even recommend action steps to help prevent an incident.
- **Help prevent major events:** Which workplace situations are at elevated risk, and why? PSA can quantify the impact of specific workplace conditions and changes (e.g., construction work) on the risk for a major event.

Our Approach

First Analytics can help you plan, build, and implement your Predictive Safety Analytics solution because:

- **We know how to turn big data into better decisions.** We have successfully taken millions of raw data points from dozens of different sources and built working predictive models to examine thousands of possible safety risk factors.
- **We work closely with you.** We help you keep doing what you do best - having a productive and safe operation. We'll do the heavy lifting on the analytics side, and help your team to be self-sufficient once we're gone.

Our Difference:

How we build your solution

- Take the records you already have – whether shift schedules, equipment maintenance notes, supply chain data, training records, even weather – to find patterns you probably didn't know about.
- Test the myths – find out whether the tribal knowledge related to incident causes is correct, and if not, identify what factors really do contribute to challenges.
- Create a Safety Data Repository, including “clean” data like records from your ERP system and “dirty” data like sensor readings and text notes from maintenance records, if you have them.

By looking at these records in combination, we can often find that multiple factors were associated with a safety problem. For example, cold weather alone might not be related to a problem, but cold weather plus a particular product on the line plus a specific piece of equipment might be strongly related to a reportable incident.

Identifying these patterns can enable you to intervene early to potentially avoid an incident.

In the spirit of continuous improvement, regularly review the results to maintain and refine the system's accuracy.

Getting started might be easier than you think

We focus first on getting the most of the data you already have; we don't come to you with fixed “requirements.”

You probably have a wealth of data that can be mined to identify risks and prioritize actions; we can draw on work histories, logs, inspections, machine generated data, operating stats, and more.

Your data doesn't have to be organized or in the same location – we take control of that. Our tools can access and ingest almost any type of data stored in almost any format.

What if you could...

- Intervene when a safety incident is likely to occur, rather than doing analysis on problems that have already happened?
- Capture only the data you need, and stop recording factors that do not really help you understand the root causes of incidents?
- Add extra levels of understanding to your “threat alerts”? For example, identify with confidence the likely risk factors for traumatic injuries vs. repetitive stress injuries vs. catastrophic events, and notify managers in a timely fashion?
- Optimize your training efforts to truly impact your safety performance, rather than providing blanket training of undetermined impact?
- Confidently determine whether trends over time are true improvements or simply random blips on your reporting. For example, can you really know if one month's change in safety statistics was due to a new equipment setup? Sophisticated analysis techniques like those provided by the Predictive Safety Analytics solution can help you narrow in on these details.
- Objectively evaluate individual safety programs.

Why SAS

SAS is the leader in analytics. Through innovative software and services, SAS empowers and inspires customers around the world to transform data into intelligence. SAS gives you THE POWER TO KNOW®.

Learn more at sas.com/firstanalytics.

Start using your data to improve workplace safety with First Analytics:
www.firstanalytics.com/safety-analytics

