



## Let the data lead

### Five ways to harness the power of product-safety and recall analytics

**How can you more effectively manage data and stay out in front of safety recalls?  
By taking these five tips to heart.**

#### The benefits of recall analytics

You don't have to be a data scientist to understand that the growing volume of data being created by individuals and companies is changing the way we live and work. This is certainly the case in the manufacturing industry, where companies are leveraging data and analytics to learn more about customers, build better and more appealing products, and reduce costs. Increasingly, this consumer-oriented analytical body of work involves product-safety issues, something that's top of mind for just about every industry, from [automobiles](#) and consumer electronics to food and pharmaceuticals. Given that emerging product-quality issues may leave faint digital fingerprints across

masses of unwieldy internal and external data—such as warranty claims and customer complaints, social media and user groups, streaming telematics, and so on—analytics are particularly well-suited to help companies get ahead of this challenge.

At a time when technology—and the pressure to innovate for competitive advantage—is making just about every product more sophisticated, staying out in front of safety recalls through recall analytics can potentially save companies millions, help protect hard-earned brand reputations, and power performance.

Still, the world of product-safety and recall calculations can be complicated and confusing. And it's changing all the time. Samir Hans and Kirk Petrie, both principals with Deloitte Risk and Financial Advisory, recently shared their top tips for managing these situations.

### 1. Don't get overwhelmed by data

More devices are generating more data than ever before. On the one hand, this is good: Businesses have a lot more information at their disposal to assist in making better decisions. On the other hand, many companies struggle to make sense of all the risk-management data they receive, often letting terabytes of information lay fallow because they don't know how to effectively derive value or insight from that data. Says Hans, "Human beings just don't have the ability to sift through massive amounts of data and, more importantly, correlate the signals that are indicative of emerging issues."

But don't let yourself feel overwhelmed. Sometimes taking a step back and looking at your product-safety data sources and channels in more detail can help you see the various datasets for what they are—and for what they may be able to contribute to solving your business problems. It's often beneficial to prioritize sources of data by their relevance and potential impact and start your analysis by incorporating data from a handful of sources with the highest priority. Considering data at different levels of abstraction (like metadata, frequencies, and distributions) can also help reduce the amount of information into a set that's more manageable and valuable to mine than when it's at the most granular level.

### 2. Don't wait for perfect data

Many companies say they're going to build a data warehouse or change the way they're using data. But they often fail to act due to the belief that the information needs to be flawless. This is shortsighted for a variety of reasons, including the fact that data always have imperfections. In many cases, safety issues can be uncovered by incorporating a handful of promising (but imperfect) data sources, such as warranty claims, consumer-call-center transcripts, and supply-chain records. Over time, the analysis can drive a more targeted data-cleansing process, and a product-safety analytics solution can include additional data sources after realizing benefits from the initial set of sources. Petrie says it's best to come to terms with these realities of recall analytics quickly. "Don't let the perfect be the enemy of the good," he says. "Data is being generated so quickly, it will inherently have some inconsistencies. But remember, with product safety, you're not trying to come up with a right or wrong answer, you're just looking for new, earlier indicators that may signify a problem and warrant a closer look."



### 3. Bet on it

Until recently, analytics in the business world primarily meant developing business rules based on some sort of professional judgment of pre-existing conditions. Consider building on a rules-based mindset by layering in data-driven techniques that use historical examples to support decision making for product safety. For example, analyzing the probability of desired outcomes for each situation refocuses the emphasis on the bottom line and allows you to evaluate potential issues based on actual likelihood, not just happenstance. Assigning likelihood values allows for safety issues to be found across multiple data sources by aggregating and “amplifying” faint signals. “If you integrate more sophisticated analytics into the process, your accuracy rate can increase,” says Hans.

### 4. Augment the intelligence

Beyond rules, machine learning and natural language processing are two important ways to make sense of the diverse data being collected. Machine learning is a method to learn from the past to help make predictions about the future. Natural language processing can be used to understand free-text data, voice data, pictures, videos, and other unstructured data in much the same way a human would.

In a recall-analytics solution, recall calculations and anomaly-detection algorithms can uncover emerging trends in field data that reflect potential product-safety issues. Machine-learning models can deliver prioritized alerts to highlight the most serious issues. “Taken separately, each of these areas are certainly helpful,” says Petrie. “Put the

two together and you can begin laying the foundation for cognitive analytics or [artificial intelligence](#)—incredibly sophisticated ways to make faster and more accurate decisions down the road.”

### 5. Remember that analytics isn't just about the tools

In the corporate world, it's easy to think that every potential product-safety problem can be solved by throwing money at a new tool. But data analysis doesn't work that way. Instead, analytics is a paradigm shift in how to find solutions that are hidden in the data, a way to get companies to start looking at data differently. It's about being smarter, more agile, and more flexible. “Nobody is buying their way out of a data crisis,” says Hans.

## More data is better; being smarter is best?

Whether you're talking about product-safety or recall analytics, when it comes to data, more is in fact better. Hans and Petrie say a key for companies trying to stay on top of product-safety analytics will be figuring out how to be smarter about the data they have. Implementing this new approach takes time, flexibility, and—in many cases—a tolerance for failure while learning. But ultimately, approaching data differently can facilitate all kinds of new-and-improved processes—processes that should improve efficiency and help you anticipate and manage risk in a way that powers business performance.

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