



Freezing out the issues

Sub-Zero halves warranty claims by employing analytics

Sub-Zero Group, Inc. has reduced service incident rates 50 percent in the past five years by using analytics to detect emerging issues and proactively resolve them. But the big ROI isn't just measured in dollars saved – it's in the confidence to innovate that a data-driven process nurtures.

“We've literally had double-digit improvements in our service incident rate, and subsequently our warranty cost year over year has decreased substantially over the past eight to 10 years,” says Bob Schroeder, Vice President of Quality, Reliability and Customer Service.

Sub-Zero, the leading manufacturer of American-made luxury refrigeration, freezer and wine storage, and sister brand Wolf, the premier maker of residential cooking appliances, are continually recognized for the highest achievements in refrigeration and cooking innovation and customer satisfaction. Based in Madison, WI, Sub-Zero Group, Inc. has been in business for nearly 70 years. Sub-Zero designs its products to last for decades, not years, with basic warranty coverage as part of the product cost. And to continue to engage with high-end customers, the company invests in R&D, adding new features and enhancing existing ones.

No more bucketeers

Before using analytics, the company invested a lot of time in trying to tease out the real reasons for service calls. “We had groups of people that would go through

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warranty claims and 'bucketize' them. They were affectionately known as the bucketeers. They would try to categorize failures and try to relate failure to parts or other types of failures," Schroeder says.

About a decade ago, the quality and reliability engineers became interested in the emerging field of warranty analytics. Working with SAS, they implemented a solution, now called [SAS® Field Quality Analytics](#). This solution combines repair technician notes, warranty claims data, call center records, and product information; categorizes the information; provides early warning of issues; and enables root-cause analysis. It eliminates the problem of a technician selecting a code to describe a failure and then writing notes that suggest an entirely different problem because the code doesn't quite match what is happening. "It gave our technicians the ability to describe, in their own words, the failure mechanisms and their observations," Schroeder says.

The benefits became clear almost immediately. "We very quickly realized that we could shave four to five months off the process of discovering an endemic problem," Schroeder says. Not only did that allow a proactive outreach to customers who might have a part on the verge of failing, it gave Sub-Zero a head start on fixing the issue before the appliance left the factory. It also frees staff members to work on solutions to potential issues, rather than trying to figure out what the issues are.

A new way of designing products

When a manufacturer has a near-real-time view of warranty issues that can be shared easily with product teams, it changes how products are designed and manufactured. If a part on an ice dispenser is failing, the Customer Care department is taking care of the customer, manufacturing and quality are looking at whether it was a part or process problem, and the design team – which might be selecting a part for the next generation of ice dispensers – is seeing the emerging issue and can decide whether to use a different part or consult with the supplier.

This approach has provided sustained savings, allowing the company to continue to find ways to improve its products that go beyond just finding faulty parts. One of the recent successes was discovering that incorrect installations accounted for up to 12 percent of service calls on some product lines. The company now offers an incentive of one year extended warranty to encourage the customer to use a certified installer. As a result, installation-related service calls have begun to drop. In addition, Sub-Zero's success has been noted by reviewers, peers and consumers. It is a repeat No. 1 in JD Power home appliance rankings for refrigerators and cooking products. From 2005 to 2011 the repair incident rate reported by Consumer Reports has significantly decreased, and this year it won an Excellence in Warranty award from the Global Warranty and Service Contract Association (GWSCA).

Insight for every level in the company

Schroeder says it is important to point out that analytics work isn't just used by workers in the trenches. The company holds regularly scheduled reliability reviews with the management team with accurate, up-to-date information on quality-related trends and potential issues.

“Our executives can review the service incident rate for the different product families, along with historical trends,” explains Schroeder. Product teams get a view of the product showing parts failing and why and have the option to drill down into the data. The quality and reliability engineers can look at the data in the most detail, pulling out information on manufacturing date, part content and customer information to determine the root cause of a failure.

Next steps: Harnessing the Internet of Things

Schroeder is excited about using analytics on products with [sensors that will stream information](#) on how the appliance is functioning back to the customer care or quality teams. “There is room to utilize analytics even more than we are today as we embark on connected appliances,” says Schroeder. “To be able to apply the analytics even more proactively prior to a service call occurring – that’s untapped. But we can see where it will be deployed in the future.”



Challenge

Increase customer satisfaction and reduce warranty costs by finding and fixing problems earlier.

Solution

[SAS® Field Quality Analytics](#)

Benefits

- Reduced service incident rates 50 percent over five years and perennial leader in customer satisfaction rankings.
- The company is poised to use analytics on sensor data to further improve quality and efficiently deal with warranty claims.

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