



ERADICATING WARRANTY COSTS

FIXES FOR FAULTY EQUIPMENT ARE NOW AVOIDABLE COSTS

Product failure warranty costs, resulting from poor quality, can often run as high as 5 percent of a manufacturer's revenue – sometimes equivalent to or exceeding the manufacturer's research and development expenditure. And when dissatisfaction with quality drives customers away, lost revenues can make that burden even heavier. Most companies, however, see these losses simply as a cost of doing business. This attitude is particularly common when they benchmark performance against others in the same industry, rather than seeing the costs as what the Japanese call *muda* – waste – that should be eliminated by lean manufacturing. Nearly 60 percent of companies say they either don't know or don't measure the financial impact of quality, according to a recent American Society of Quality report.

These attitudes are changing, as new digital techniques turn flaws – and the resulting warranty costs – into problems that can be solved. Though

product failures often appear to be isolated, one-off incidents, advanced tools and infomatics reveal them to be the result of systemic issues in the value chain. That makes warranty a close cousin to quality control, which seeks to catch defects before they reach the customer. Attacking warranty costs means delving into root causes that go back as far as the product design stage. To do this, more parts of an organization must think about warranty costs and how to reduce them.

Some tools to combat warranty expenses have an immediate impact, notably those aimed at improving its management and administration. Relevant data can be integrated in real time from external feedback, on social media for example, or from internal sources such as a call center. A few distributors can be given roles as sentinels that can sound early warnings of problems – an operation modelled on the way the United States Centers for Disease Control and Prevention react to outbreaks.

Exhibit 1: Goodbye to warranty costs?

Several innovations mean that manufacturers can now aim to eliminate quality problems



1. WARRANTY PARADIGM SHIFT

Evolving view of warranty across the value chain rather than isolated "one-off" special cause incidents



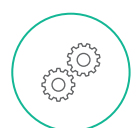
2. KNOWLEDGE CROSS-FERTILIZATION

Adoption of high-tech industry development processes and techniques across sectors



3. RISE OF BIG DATA

Analytical techniques to correlate data from disparate sources such as internal functional databases, distributor/dealers, end users



4. ORGANIZATIONAL-WIDE ADOPTION OF LEAN

Broader application of lean variation management techniques to functions outside of manufacturing

Source: Oliver Wyman

One automaker that applied this method reduced detection time by over 75 percent. These methods can help identify early warning signals for claims that are likely to be damaging. The firm can then intervene before low-cost claims swell into high-cost problems, and a single claim sets off a string of incidents.

DEEP SOLUTIONS FOR COMPLEX PRODUCTS

However, improvements like these can no longer keep up with the complexity of modern products and the increasing demands from customers. A greater impact will come from other, less direct methods, which work only over the long term. Where customers' use of a product is not well known, the cause of a recurring problem can be tracked down by applying analytics to data on warranty claims, failure, and product usage. Corrective action can then be integrated into ongoing operations.

On a more advanced level, risk-based prioritization can be built into product development. Traditionally, firms apply failure analysis techniques after a product has been designed, to try to figure out what could go wrong with it. Carrying out such analysis at an earlier stage enables a product design to take into account how it will withstand various stresses (see Exhibit 1).

These methods require different parts of an organization to work together in ways they are not used to. This is difficult, because in larger organizations, a business' complexity leads to a focus on narrow, functional objectives and metrics. Typically, marketing departments often push for increased product variation to drive sales. Procurement might push the use of a lower-cost component. And engineering, which likes to update products frequently, might make a late decision to use a relatively unproven battery design. The outcome is poorly integrated products and services, which result in warranty spills and an inability to get to the root cause.

FIXING PROBLEMS TOGETHER

Fuel lines made by one industrial supplier were breaking during normal use, leading to warranty claims on nearly 10 percent of the products. To fix this, various departments attacked what they saw as the underlying

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cause. Engineering made the tube thicker. When that didn't work, manufacturing changed how the fuel line was assembled. Then purchasing decided the problem was a component in which it was hard to detect flaws, so they found a new supplier. Eventually the service group put out an alert for more inspections.

After several years with still no solution in sight, the firm realized that the basic design was flawed. And once the different functions got together, they solved the problem. The basic design was revised. An error-proof assembly process was developed. A new field service method was adopted, in which the technician could see better and not inadvertently damage part of the fuel line.

The organizational changes for such an approach need warranty and quality to be made key metrics in different parts of a firm. Continuous warranty improvement goals can be made part of each executive's objectives, and warranty oversight should be elevated to a position reporting directly to the CEO. The result may be higher customer satisfaction, lower costs, and new sources of competitive advantage. Moreover, the release of balance-sheet warranty reserves improves asset productivity and releases capital that can be deployed more productively or returned to shareholders.

While it may not be possible to eliminate warranty costs entirely, manufacturers should set themselves the goal of reducing warranty costs to zero. Only then will organizations drop the idea that they are unavoidable business expenses.

Andrew Chien

is a Detroit-based partner in Oliver Wyman's Global Automotive and Manufacturing Industries practice