WHITE PAPER

Beyond the surface: visible and hidden costs of quality

In manufacturing, the cost of quality extends beyond what meets the eye. While visible costs, like defects or warranty claims, are easily identifiable, there's a submerged realm of hidden costs that often go unnoticed. These covert costs, ranging from reduced customer loyalty to damage to brand reputation, can quietly erode an organization's value. Understanding these visible and hidden costs is vital for any business looking to reduce the cost of poor quality (COPQ).

The true cost of quality

When considering the cost of quality, it's worth considering the obvious, visible and hidden costs you might otherwise overlook.

Visible costs

Tracking visible costs can help an organization understand the cost of quality. These costs come from inspections and could include:

- Defects
- Rejected material
- Scrapped products
- Rework costs
- Warranty costs
- Yield loss

These costs provide important data that can help an organization see how it might improve. For example, if warranty costs are skyrocketing, is there an underlying issue with the product that your team can solve during the manufacturing process?

Hidden costs

The visible costs are just the tip of the iceberg, and the hidden costs can do more damage to a business. In continuing with the iceberg analogy, the hidden costs lurk beneath the surface, making them harder to recognize and manage. These costs might include:

- Customer complaints handling
- Lost sales
- Late delivery
- Supplier issues
- Engineering change orders
- Reduced customer loyalty
- Damage to brand reputation

These hidden costs can drive up the cost of quality, but ignoring these issues can seep into the very fabric of the organization. Without a culture of quality, it can almost become normal to see these issues as a part of running a business — with processes to accommodate them rather than look for ways to eliminate them.

There's a consensus that the cost of poor quality can be 10 to 20 percent of total revenue, with the hidden costs as much as four times greater than the visible costs. These hidden costs can drain a significant amount of working capital, making it more difficult for the organization to find and retain customers.

The impact of poor quality management

Poor quality management can significantly impact an organization, especially when the hidden costs go unchecked.

Traditional manufacturing scenario

Within the manufacturing industry, the traditional scenario features an organization that has yet to automate its quality management processes and perhaps sees quality as just another cost center. This outdated way of thinking means nonconformances and other quality issues easily get lost in siloed systems.

With no clear quality management system in place and an archaic view of quality within an organization, businesses could face serious repercussions, including:

- Loss of brand reputation: With quality issues deeply ingrained into the organization, this could lead to a reputation for poor-quality products.
- Spiraling costs: The hidden costs of poor quality could soon spiral out of control as they are often difficult to identify.
- Inefficiencies in production: This could slow down total time to market (TTM) and cause customer delays.
- Compliance risks: With quality issues that get lost and improper processes and documentation in place, this could lead to regulatory fines.
- Increased safety risks: Quality and safety often go hand in hand; with an outdated view of quality practices, the risk of injury could increase.
- Strained supplier relationships: Delayed corrective actions could strain relationships with suppliers, especially if quality issues affect the materials or components they provide.

All these areas can lead to a higher COPQ and ongoing problems that become consistently harder to fix the longer they are allowed to continue.

Quality bottlenecks and organizational disconnect

Recognizing quality bottlenecks is crucial. Often, blame falls on the quality team for delays in addressing defects — impacting time, resources and customer trust. However, the real issue is systemic bottlenecks, not the quality function.

With outdated processes, bottlenecks can prevent a quality team from solving deeper issues. For example, manually recording nonconformances could lead to significant delays, while a lack of digitization could make identifying recurring issues difficult.

With a siloed quality team, communication between the production floor, quality managers and leadership is lacking. Part of this often comes down to a lack of integration and lack of support from both IT and management.

This partially comes down to the perception of quality as a cost center, but this outdated view breeds quality issues and can lead to significant hidden costs.

Implementing effective quality tools

Investing in quality management systems

Investing in a quality management system enables an organization to track nonconformances better and take corrective actions. Quality managers can track the source of regular failures with everything in one place and no outdated paper-based systems. They can then take preventative action to help avoid similar issues.

A QMS can transform an organization from constantly reacting to failures to one with the processes in place to prevent them. Even when failures occur, a QMS can automatically notify the right people and ensure corrective actions happen promptly.

The role of the quality team

The quality team should play a large role in the entire lifecycle of a product to drive reliability. This is possible with a QMS that helps them see the production process from design to final delivery. It might feel like a huge culture shift. But this approach puts quality first and leads to a culture of continuous improvement that can help not only identify hidden costs of poor quality but also put a stop to them.

To make this transition easier, integrating a Plan-Do-Check-Act procedure should be a basic requirement for companies looking to reduce COPQ. This process should include:

- Corrective action process with a purposeful problem statement
- In-depth root cause analysis
- Appropriately scoped action plan
- Effectiveness check

The goal of this is to recognize an opportunity, plan the change, carry it out and then test it. In doing so, an organization can identify areas for improvement, monitor the steps taken and measure the outcome.

Managing change and maintaining compliance

A QMS allows an organization to coordinate change management by keeping procedures and instructions current. Communication is a vital part of this process and ensures compliance with workforce training requirements while defining the scope and frequency of audits.

This is important because it's easier to stay compliant when everyone has access to the correct information. It's possible to address complex quality issues quicker, establishing a culture of continuous improvement that all employees can be part of.

Cultivating a quality culture

While a QMS is a vital tool in improving quality, there needs to be a culture shift that touches all parts of the business.

Role of management

A culture of quality must come from the top. That prevents the quality team from being seen as the bad cops when recognizing and actioning issues. With a leadership team and managers all getting behind this shift, removing the negative perceptions around quality management is possible.

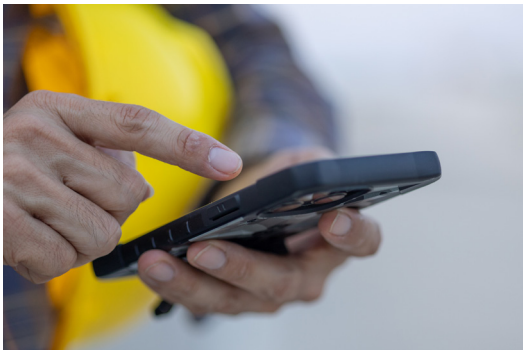
Creating this culture should be as important to managers as to the quality team because we live in a connected society where meeting customer expectations is more important than ever for maintaining a business reputation. Better products equal happier customers, leading to repeat business and word-of-mouth sales and reducing returns and warranty claims.

Benefits of quality management

Quality management systems aren't just a set of tools or processes. It's a philosophy that, when integrated into an organization's core, can produce significant results. This approach ensures operational efficiency and positions the organization competitively in the market. Here's how:

Addressing visible and hidden issues

- Real-time data and analytics: A QMS offers access to real-time data, allowing organizations to tackle quality issues before they escalate.
- Optimized operations: By streamlining time, people, equipment and inventory management, quality management boosts productivity and reduces COPQ.



Cultivating a quality culture

- Shared responsibility: Proper quality management ensures that quality isn't just the domain of one department but is everyone's responsibility.
- Culture defined: When quality goals are universally embraced and pursued, it leads to a continuous commitment to excellence.

Competitive advantages

- Brand reputation and customer loyalty: This ensures that the primary concern of customers — the quality of products or services — is consistently met, securing brand reputation and building customer loyalty.
- Consistency as an advantage: Quality management ensures consistency is maintained and pursued.

Quality management is the backbone of a successful organization. It ensures that products and services meet and exceed customer expectations and the organization operates efficiently, adapts quickly and stands out in a competitive market.

Addressing both visible and hidden costs with a QMS

The journey through the landscape of quality costs reveals a profound truth: the real expense of quality isn't just in the tangible losses we see but also in the intangible ones that lurk under the surface. Recognizing and managing these facets isn't just about cost-saving but building a resilient, trustworthy and value-driven organization. Consumer trust and brand reputation are essential for sustainable success, so understanding and addressing the visible and hidden costs of poor quality is crucial.

A comprehensive QMS is important for organizations looking to improve their quality management practices.

About Octave

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