

Quality, risk & reliability management

Best practice spotlight



The cost of poor quality (COPQ) is estimated at 5% to 30% of gross sales for all manufacturers, yet most executives believe their own company's COPQ is less than 5%.

— Shellye Archambeau
“What Is Your Company's Cost of Poor Quality,”
Quality Digest, August 23, 2004

Can you improve quality and reliability management *and* meet lifecycle target costs?

Product development success hinges on product quality and reliability. Customers expect every product to perform safely and effectively; failure often puts lives at stake. Multinational manufacturers must now design and develop products that meet a dizzying array of local quality, reliability and regulatory standards, while still satisfying customer demands for innovation and cost-effectiveness.

In an environment where failure can lead to significant risks, manufacturers often initially focus product development on quality regardless of cost. But a single-minded emphasis on quality can soon drive a company into the red. A better approach is to analyze the likelihood of failure in tandem with the severity of the risk. FMEA (Failure Mode and Effects Analysis) prioritizes part or system failures and determines whether risk-control measures are adequate to ensure product safety and reliability. High-risk industries will also require product monitoring during development, production and post-production. FRACAS (Failure Reporting, Analysis, and Corrective Action System) records product failures, traces them back to root causes, and closes the gap between field failures and improved designs of the next generation.

Along with FMEA and FRACAS, many manufacturers also have adopted reliability-analysis techniques to:

- Safeguard product performance
- Reduce risks that could threaten systems or users
- Meet lifecycle-target costs and minimize outcomes that erode product profits, including warranty costs, customer dissatisfaction and liability claims

The cost of poor quality (COPQ) is estimated at 5% to 30% of gross sales for all manufacturers, yet most executives believe their own company's COPQ is less than 5%—or they don't have a clue.¹

Leading manufacturers know their COPQ, gain early insight into risk and reliability issues, and ensure product performance. Does your company?

To learn more about what your company can do to improve quality, risk and reliability management, here are some resources:

- Quality Lifecycle Management resource center: PTC.com/go/qlm
- Windchill® Quality Solutions: PTC.com/products/windchill/quality

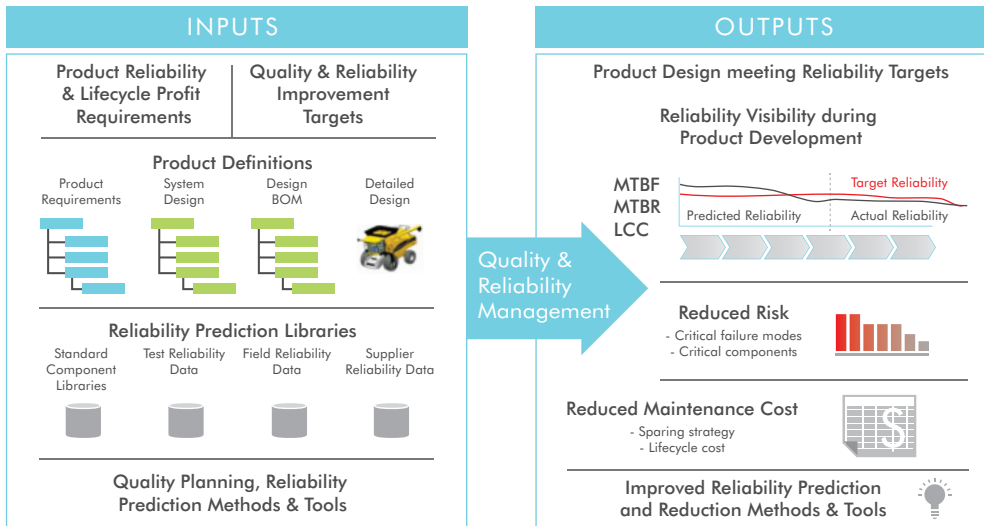


Figure 1: Quality and reliability management is the process of systematic planning, prediction and simulation to ensure designs will meet specified reliability and lifecycle cost targets under required operating conditions.

¹Shellye Archambeau, "What Is Your Company's Cost of Poor Quality," *Quality Digest*, August 23, 2004.

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