

# Addressing Three Common Quality-Related Mistakes in High Tech

by Austin Locke and John Hubert

The high-tech industry seems to continually follow the advice of fictional NASCAR legend Ricky Bobby. When Ricky was a boy, his father left him with advice that Ricky would carry throughout his entire life: "Don't listen to anyone Ricky, you're a winner. You've got the gift. Always remember, if you're not first, you're last."

Time-to-market is critical in high-tech. It's often said that if you're first, you make money. If you're second, you break even. If you're third, the money is lost. We're not here to argue that time-to-market is not vital. However, an exclusive focus on speed often results in quality-related mistakes.

Time-to-market does not have to come at the expense of product quality. Product lifecycle management (PLM) tools and processes can help correct and prevent many common quality errors, shifting the perspective from speed OR quality to speed AND quality.

Here are three common quality mistakes, along with how PLM software, supported by holistic strategy, process and culture changes, can help.

## Mistake #1: Wasting Time on Previously Resolved Errors

In our experience, we've seen that up to 20% of engineering time is spent diagnosing problems or issues that were already resolved on previous designs. Many high-tech organizations have mastered the art of firefighting. When a problem arises, someone quickly solves it and they are rewarded for their efforts, fostering a culture of heroism vs. a culture of quality. If a previously resolved problem recurs, another engineer will invest the same amount of time and effort to figure out how to resolve it. There is a lack of organizational learning.

In these situations, PLM can make a difference. The PLM tool acts as a central location for the organization to store key learnings or other information that can be documented for later use. When similar problems arise, previously captured learnings can be applied to new products or initiatives, allowing the business to move forward quickly and with minimal mistakes. It's important for the culture to shift from rewarding heroes to rewarding quality, and that processes shift to support the documentation of organizational learning.

## Mistake #2: Undoing Previous Product Fixes

Most companies need to be customer-centric to survive. This means that they work closely with their customers to resolve any issues with their product or service. We often see businesses work hand-in-hand with important customers to develop tailor-made solutions to product issues. The issue gets resolved and everyone is happy; for a time. Down the road, perhaps even years later, an employee might see an opportunity to save on cost or simplify a product, and they will have no idea that their cost saving idea is undoing a previous fix that was developed with the customer. This leads to embarrassing mistakes and worse, lost business.

In these cases, PLM can be used to provide visibility into product requirements. It also provides a detailed history of what action was taken on products and most importantly, why that action was taken. This results in sustained product quality while simultaneously saving engineering time.

## Mistake #3: Failing to Establish a Culture of Quality

When time-to-market is an exclusive focus, quality can become an afterthought. One of the great benefits of PLM is that it can formalize an organization's quality processes and harmonize them with leading new product development practices. For example, a business can track key lessons learned and incorporate them into future product development work, stopping quality mistakes before they start. This allows the business to rapidly develop new products while simultaneously ensuring quality standards are met. Once quality becomes a normal part of the process, it becomes part of the culture; and once something is part of a company's culture, it can become a competitive advantage in the marketplace. PLM can act as a catalyst to help a company transition from a culture of heroism to a culture of quality.

## Conclusion

With a holistic PLM program that includes strategy, software, processes and culture, organizations can avoid several common quality mistakes. PLM enables companies to learn from their past work and start to create a culture of quality. PLM enables both time-to-market and time-to-quality, which is a distinct competitive advantage in the marketplace. Most importantly, a joint time-to-market and time-to-quality approach will improve overall financial performance. Organizations can be first to market, and get there with exceptional quality.

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