CASE STUDY:

Finding the Final Piece of the Total Quality Management Puzzle

gsi technologies
Intelligent Printing

GSI Technologies, LLC is a manufacturer of functional printing and industrial graphic products. Founded in 1985 as Graphic Solutions, Inc., the company provides customers with the highest levels of quality, service and value for their markets.

GSI is organized into two divisions: Functional Printing and Industrial Graphics. The Functional Printing division is a leader in the emerging space of printed electronics, while the Industrial Graphics division employs printing processes such as flexography, hot stamping, web and sheet printing and fotofinish to deliver pressure-sensitive labels, aluminum nameplates and polycarbonate panels. GSI operates one facility headquartered in Burr Ridge, Ill., with 80 employees and registered to ISO9001:2008 standards.

Challenge

As a company focused on customer satisfaction, GSI has always been committed to providing the highest quality products and services to its clients. To ensure product quality and meet compliance standards, GSI relied on a homegrown Statistical Process Control (SPC) program--created with a Microsoft Access database--as part of its total quality management initiatives. However, over time the company realized that its homegrown system lacked the robust data collection and analysis capabilities necessary to meet customers' specifications, support its fact-based decision model and fuel continuous improvements. The rapid growth of GSI's Functional Printing division further emphasized the need for a new system. Because Functional Printing yields active products and components, such as medical electrodes, sensors, antennas and circuits, GSI had to not only verify that a component was fully functional after it had been printed and dried, but also demonstrate to its customers that its processes complied with the predetermined, very specific requirements.

GSI had disparate systems within its manufacturing operations that made data aggregation difficult. It was near impossible for the various systems (including CMM scales, multi-meters, Vision inspection and document control systems) to communicate with one another and deliver Manufacturing Intelligence to the organization and its customers.

Solution

In order to bring its total quality management initiatives full circle, GSI set forth numerous requirements when selecting a new SPC platform. First, the platform had to be flexible enough to grow with the company and drive continuous improvements. Second, it had to be SQL-based in order to communicate with other systems, and have the ability to both configure data for all the unique parts it produced and represent those data in various control charts customized to meet the end-user's needs. Also, the new system had to assist in adherence to industry regulations, such as ISO compliance and FDA requirements.

GSI selected the ProFicient Manufacturing Intelligence platform from InfinityQS International, Inc., the global authority on real-time Manufacturing Intelligence and enterprise quality. Powered by a centralized SPC analysis engine, InfinityQS ProFicient delivers real-time supply chain visibility at all levels of an organization, which would enable GSI to proactively monitor, analyze and report on Manufacturing Intelligence in real time to improve quality, decrease costs and make more strategic business decisions.

Solution cont.

In preparation for implementation, GSI enlisted the expertise of InfinityQS' enterprise quality experts to drive the buy-in and adoption of the software from the entire staff. It was vital that each of GSI's employees had access to the appropriate data to help them carry out their specific jobs.

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>
> - Jack Kraemer, President and COO, GSI Technologies, LLC

Results

With InfinityQS ProFicient serving as an enterprise quality hub, GSI discovered the missing piece of its total quality management puzzle.

Jack Kraemer, president and COO of GSI, said, "We have made numerous investments in technology to help support our quality initiatives, and InfinityQS ProFicient allows us to bring everything together. We can now assimilate data from different systems and device locations – whether from our ERP system, document control program, or other inspection equipment – into one, centralized hub for easy analysis and decision making."

The benefits from the total quality management solution, with InfinityQS ProFicient at the center, have been realized throughout the various levels of the company. On the plant floor, operators and quality engineers have real-time visibility into their processes, allowing them to take a proactive, rather than reactive approach when tests indicate a process shift toward out-of-spec. By automating data collection and assimilating information in organized charts and graphs, GSI can easily support discussions with customers and suppliers when developing new products. Furthermore, these data are utilized to prove regulatory compliance and meet audit requirements.

> **Achieved total quality management** to drive continuous improvement.
>
> **Enhanced customer satisfaction** to reduce customer complaint rates from 2.5% to less than 0.5%.
>
> **Manufacturing Intelligence** from real-time visibility into process data and advanced reporting capabilities.
>
> **Compliance with industry regulations** and specific customer requirements.

From a corporate standpoint, total quality management serves as a competitive differentiator, allowing GSI to enhance its brand image and uphold its reputation as a quality-minded printer. However, the final beneficiaries of GSI's total quality management initiatives are its customers. When turning to GSI, customers have confidence that they are receiving a more unified product that meets compliance standards. As a result, GSI has reduced customer complaint rates from 2.5 percent to less than 0.5 percent.

"InfinityQS was a critical component in enhancing customer satisfaction for both new and existing customers," Kraemer said. "We have found that when new customers visit our facility and they see that we have real-time SPC configured, their confidence in our product and processes increases."

Looking back, the company believes that the key to realizing success from using InfinityQS Proficient is working as a team to unlock the full benefits of the solution. Kathy Andersen, director of quality assurance, GSI, said, "You cannot improve quality without the right people, right focus, right mindset, right tools and right training. It is one thing to implement a tool like SPC, but to realize its benefits you must use it to its full capabilities across the organization."

InfinityQS®