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## Five Must Have Strategies for Enterprise Quality

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*“An organization's ability to learn, and translate that learning into action rapidly, is the ultimate competitive advantage.”*

**-Jack Welch**

# What's Possible with Total Enterprise Quality

Without an end-to-end quality management system, manufacturers are at risk for compromising product quality, brand integrity, and overall process efficiencies. Managing quality in a centralized quality hub can help manufacturers overcome the most difficult challenges of today's changing manufacturing landscape. Whether an organization is looking to achieve quality on a global scale or gain visibility into the product lifecycle, the manufacturing intelligence provided by a quality hub gives manufacturers the power to identify areas for improvement, improve quality, and increase profitability.

Total enterprise quality is the future of Manufacturing Intelligence. With an end-to-end quality system in place, manufacturers can easily overcome the challenges associated with the ever-evolving complexities of the supply chain:

**Visibility:** A cloud-based quality system offers a real-time view of data, assimilating information from disparate locations. For example, Trek Bicycle Corp., headquartered in Waterloo, Wisconsin, monitors and analyzes data collected by its suppliers in China, taking supply chain visibility to a global level for maximum cost reductions and product quality.

**Traceability:** With an end-to-end quality system, manufacturers can adhere to the most stringent compliance requirements and protect their brand's reputation. By employing a quality system, a leading U.S.-based restaurant chain has connected its supply and distribution network – from farm to fork. Now, if a recall were to occur, the company can quickly respond by identifying origins and isolating the faulty product.

**Complete Plant View:** A complete view of the plant floor allows manufacturers to predict errors *before* they occur – reducing waste and preventing costly recalls. In fact, after implementing a quality system, a mid-sized, U.S.-based snack food manufacturer saved more than \$1 million in operational costs and reduced customer complaints by over 30 percent in the first year of deployment at just one manufacturing plant.

**Quicker Improvement Cycles:** Total enterprise quality gives manufacturers the power to better allocate resources through plant-wide comparative analysis. With a single view of quality data, users can prioritize efforts to continuously enhance the quality of their product. For example, General Cable reports that it is able to choose its projects based on statistical evidence, focus on areas that need improvement, and make better decisions. The company experienced an ROI in less than six months after implementing a quality hub.

**Better Workflow Management:** A quality hub helps relieve pressure placed on busy plant operators to collect data and make quality checks. A streamlined approach allows shop floor operators to perform fast data collection and analysis, without missing a beat on their day-to-day duties. In the case of C-Axis, the company was able to use a quality system to consolidate a number of different systems and applications, making it easier and faster for plant operators to collect data.

**Million-Way Analytics:** Meaningful data can be collected, organized and analyzed with a quality hub. This data are vital in helping manufacturers improve operations, inform customers, and make strategic business decisions. By collecting meaningful data in real-time, NorthStar Battery is able to make adjustments to its processes moments after a statistically valid amount of failed data points occur, rather than a week after the fact.

# Why Quality is now an Enterprise Concern

Traditionally, a company's quality system was thought of as a department that tests and confirms finished goods against specification. Conforming product gets approved for shipping, and non-conforming product is held back for further disposition— usually scrap, rework or re-grade. Each individual manufacturing location determined its own approach to managing quality. The philosophies employed, software utilized (if any) and approaches to data management varied as much as the geography. This segmented, departmental-focused approach made sense in simpler environments; however, the quality department's role is rapidly expanding due to larger forces at play:

- › **Multi-locational production and suppliers.** Production rarely occurs at a single-site. More typically, materials and supplies are acquired from all over world. Supply chains have also become more complex. Each added step in the supply chain contains risk, increasing the likelihood that the product or subcomponents will fail to meet specifications, resulting in increased costs to address and fix any problems that arise. Due to the complexity of the environment, someone should have oversight of product quality across the whole process - inside and outside of the factory walls.
- › **Increased regulations.** Regulatory compliance no longer means just filing paperwork. Today, the ability to quickly identify any at-risk subcomponents and/or provide documentation that proper procedures were followed is critical. Today's environment requires that companies and individuals understand regulations and ensure compliance is met and upheld with intricate regulations in effect.
- › **The need for centralized data across multiple physical sites.** As companies add and expand physical locations to aide in production, the likelihood of having segmented data increases. The segmentation of data makes it harder for quality and operations executives to view quality data across the entire company and see things in the "big picture" perspective. As a result, discrepancies in related data at critical multi-site junctions may not be realized in time to prevent major reworks or recalls. It is extremely important for quality data to be aggregated and analyzed across the entire company
- › **Flexibility in data collection.** Companies that manufacture large components or companies that have large, spread out shop floors still need to collect quality data. Furthermore, these companies must be able to collect data efficiently to keep production moving at an optimum pace. For these companies, the ability to enter quality data into a quality system remotely, away from a physical workstation becomes a necessity in order to stay competitive.
- › **Standardization.** Cost and resource cutting in IT creates a greater need for corporate standards. It costs too much to deploy and manage multiple solutions. The cost of setting up customized ways to share data among systems is also under increased scrutiny from both the CIO and CFO offices.
- › **Online voice of your customers.** Customer satisfaction has always been firmly linked to a company's financial success but today, the influence of the online market and social networks are enhancing that relationship. The different avenues to 'share' and 'review' products online have enhanced the role of the customer. It has been said that consumers enjoy their products privately and dislike their products publically. With those reactions easily shared online, the need for improved quality standards and monitoring has become vitally important

As a result of these forces, quality must take a more prominent, enterprise-scale, role. The quality department has the unique advantage of owning all data needed to monitor, control and improve the end-quality of the produced piece – to deliver Manufacturing Intelligence about a corporation's products.

*“Outside finance, there is no one business discipline that touches and impacts more organizational functions than quality.”*

With this knowledge, ownership of Quality can be expanded enterprise-wide, providing a strong defense to protect the goodwill or brand of its employer and, in many cases, the lives and safety of its customers. As Gartner Inc. analysts highlight in a recent report, “outside finance, there is no one business discipline that touches and impacts more organizational functions than quality.”<sup>1</sup>

## A Realistic View of Quality

A quality system is a labyrinth of data, evolving as needed, to meet growing compliance demands and technological advances. As a result, data are everywhere. Most companies have a wide variety of different systems that house some type of quality data. Whether collected by an ERP or MES system, exported to Microsoft Excel, manually entered into paper forms, or gathered into other repositories, data are generally dispersed across a variety of different, non-communicating systems. As a result, this quality data is very challenging to coordinate and aggregate, making it exceptionally difficult to extract meaningful information.

In most cases, there are very few options for aggregating quality data so that the “big picture” of quality can be viewed. The variety of different systems forces quality experts into complicated and time-consuming tasks of importing and exporting data into digital spreadsheets, or some other system, so that they can view the complete picture. Because of the required effort and the frequent need to involve the IT department, most companies do not even bother with importing and exporting data. Therefore, they have limited insight and receive little benefit from quality data across these systems.

The bottom line is that, overall, most companies lack quality Manufacturing Intelligence, and the repercussions impact everyone from the boardroom to the shop floor. Today the technology exists to capture, retain and distribute data related to all aspects of quality across an enterprise. So, why are companies still struggling with organizing and leveraging their quality data? What’s standing in the way?

### No Global Visibility

Every plant has data, but very few companies have an efficient means of data sharing, especially when the data is housed in disparate silos. A lack of standardization can make cross-plant and global quality comparisons extremely difficult if not impossible. Without this ability, companies cannot identify and target efforts that can ultimately lead to quality improvement and cost reductions. A February 2012 Gartner report, “Redefining Manufacturing Strategy in the New Era of Optimized Product Supply,”<sup>2</sup> emphasizes the notion that the focus of manufacturing operations has shifted from single-sites to a complete network. According to analyst Simon Jacobson, “It is a result of

### Problems faced by the typical approach to quality management

- No Global Visibility
- Traceability
- Incomplete Plant View
- Delayed Improvement Cycles
- Shop Floor Overwhelmed
- Poor Analytics

<sup>1</sup> Gartner Research, *Hype Cycle of Consumer Goods*, 24 July 2012, Analysis By: Simon F. Jacobson; Ray Barger Jr.

<sup>2</sup> Gartner Research, *Redefining Manufacturing Strategy in the New Era of Optimized Product Supply*, 13 February 2012, Analysis by Simon F. Jacobson.

companies understanding their process capabilities within manufacturing and how they contribute to the end-to-end supply chain.”

## Mounting Traceability Obstacles

With the enactment of stricter traceability regulations from the FDA, including the Food Safety and Modernization Act (FSMA), which “aims to ensure the U.S. food supply is safe by shifting the focus from responding to contamination to preventing it”<sup>3</sup>, manufacturers across the United States are forced to navigate an increasing amount of obstacles to meet the specific requirements mandated by multiple governing bodies. In most organizations, a beginning-to-end data structure does not exist. Disparate data sources and siloed repositories don’t communicate, suppliers use their own quality systems and key performance indicators (KPIs), and components imported from other countries don’t require the same high-level of manufacturing standards. With this lack of standardization, it is nearly impossible to produce necessary audits or respond quickly when product recalls occur and potentially damage a brand’s reputation or worse; cause harm or death to the public.

## Incomplete Plant View

Even within a single plant, much of the data collection and analysis are done after-the-fact. Manual data entry and periodic batch checks often delay the discovery of quality issues until long after they arise and ultimately result in large quantities of scrap and rework. Because companies typically do not have forward-looking quality systems, they have no way to predict problems before they occur. One global automotive OEM lost \$85 billion to \$97 billion in sales due to the recall of two million automobiles in 2010<sup>4</sup>. Waiting to see what five-alarm fire erupts each day may keep people busy, but it is a dated and reactionary practice that is devoid of planning and extremely expensive.

## Delayed Improvement Cycles

The delay in the delivery of useful data that results from siloed repositories and manual data collection also delay improvement cycles. In order for quality, continuous improvement and six sigma teams to prioritize improvement efforts, there must be a complete view of the items to be prioritized—or a comprehensive view of quality across an entire plant. Effectively allocating improvement resources requires plant-wide comparative analysis with all the data in the same place to identify the opportunities for improvement. However, if data continues to reside in silos and is not integrated for a single, comprehensive plant view, continuous improvement efforts will inevitably fail.

## Overwhelmed Shop Floor

Operators are busy. They have many different duties and cannot afford to spend much time interacting with a computer. However, critical sources of data come from the shop floor and are typically captured by the operators. If the quality system is too complicated, too difficult to work with or fails to provide information that is valuable to the operators, the operators will not embrace the system. As a result, the entire quality initiative will fail, or at the very least, result in poor data collection habits and missed quality checks. To be successful, a quality system must be intuitive, simple, easy-to-run and fast at performing data collection and analysis duties.

## Poor Analytics

Data is power. The sheer volume of information and forward-looking insight captured in data collection can easily guide any manufacturer in the right direction for success. However, the key to unlocking this intelligence is in analyzing and interpreting the data, which becomes difficult due to various software that are deployed across the enterprise. Quality data resides in many disparate systems, creating data silos that prevent easy and quick

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<sup>3</sup> U.S. Food and Drug Administration, *The New FDA Food Safety Modernization Act (FSMA)*, <http://www.fda.gov/food/foodsafety/fsma/default.htm>.

<sup>4</sup> Gartner Research, *Cost of Poor Quality is a Component of Supply Chain, Not Just Manufacturing*, 4 May 2011, Analysis by Simon F Jacobson, Ray Barger Jr.

reporting. A significant amount of time is spent by both quality and IT professionals finding “the right data” and formatting it before it can be analyzed. Without the right data in the right place in the right format, the results of any analysis will be skewed creating inaccurate trends and patterns that could significantly alter the trajectory of any well laid plans.

We’ve looked at changing environmental factors, lack of proper, enterprise-wide technology solutions as well as internal processes and challenges that all have a dramatic impact on a company’s ability to monitor quality. Now let’s take a look at some strategies that companies can employ in order to rise to these challenges and overcome these obstacles.

## Five Must Have Strategies for Enterprise-Wide Quality

Manufacturers now realize the importance of end-to-end supply chain visibility, but have to operate in an environment without any shared approach to quality, similarity in IT environments or agreement on standards. A total enterprise quality system must ensure that quality practices are maintained throughout the entire product lifecycle. While there are many sources that contribute to product quality, not all these sources are contained within the four walls of a plant. In reality, anyone who touches any portion of a product’s design, build and test cycle plays a role to ensure quality, including suppliers, sister plants and even commodities distributors all over the world. Without a doubt, this adds to the complexity of the supply chain. In fact, in a March 2012 Aberdeen Group report on supply chain visibility, 44 percent of respondents cited the growing complexity of the supply chain as their top business pressure<sup>5</sup>.

As a result, more manufacturers are turning to technology - an enterprise quality system, or quality “hub” – to achieve end-to-end supply chain visibility, transcend these challenges and ensure the integrity of their product and brand.

*“Through this quality hub, manufacturers can bring real-time manufacturing product and process data from multiple sources into a single repository for reporting, analysis, visual summaries, and data synchronization between enterprise-level and plant floor systems.”*

Using this Manufacturing Intelligence (MI), manufacturers are able to leverage big data from batch, discrete or continuous process environments to drive strategic decision making and control the quality, consistency and cost of produced goods.

At a high level, an enterprise-wide quality system needs to provide an end-to-end quality management solution that acts as a central quality hub for the entire organization. There are many different nuances and functionalities needed in a useable system, but there are five key strategies to consider while evaluating the features and functionality of the system in order to overcome the above challenges:

1. Centralize quality data in a single, secure and easily accessible repository
2. Streamline the process for collecting data and integrating disparate plant-floor systems
3. Enable real-time monitoring and analysis for live as well as historical data from any plant or supplier in the world
4. Simplify management of workflow with automated and event-based tasks and reminders

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<sup>5</sup> Aberdeen Group, *Supply Chain Visibility Excellence: Mastering Complexity and Landed Costs*, 1 March 2012, Analysis by Bob Heaney.

5. Ensure sophisticated reporting capabilities to support the needs of users at all levels

## 1. Centralize Quality Data in a Single Repository

A centralized repository, or hub where all data are written, is an essential component of any enterprise-wide quality management system. The hub is a database that resides in an enterprise-accessible, secure data center that controls access for any number of user roles. The inner core of the hub should be highly functional statistical analysis engine that can process and efficiently manage data from any number of sources. The statistical engine delivers a wealth of tools, reports and analysis that reveal opportunities for overall quality improvement.

### Single Repository for Data

The quality hub data model creates the requirement for all data to be tagged with an enforced universal data description. At a minimum, all shop floor data includes the part, the test name and the process (or operation) that produced that test. These part, test and process names need to follow a universal naming convention as do other descriptive data that append to the measurement values. For multi-site deployments, the data must also include the site designation. Supplier data must include the supplier.

Real-time access and traceability become a reality with universal naming convention standards at multiple sites and suppliers. Each data value is tagged with a company, site, part, test, process, a time stamp, the name of the person who entered the data, and any other necessary descriptive information, all of which is instantly available for both live and historical analysis.

Data should be able to be summarized by date, shift, line, operator, lot, operation, process, plant, supplier, raw material lot, time of day, and so forth. If information is tagged to a data value, the extra information is useable as a filtering and/or categorization field. Drill-down features allow large sets of data to be subdivided into ever smaller sub-sets.

### Immediate, System-wide Setups and Changes

In manufacturing environments, any system user interface needs to be efficient and user-friendly. That is, the setups need to include live, on-the-fly selectable links to the database so a single setup can be used to access any number of parts, processes and tests from the hub.

User interfaces that are unique to a part or process serve no purpose in an enterprise quality hub because the number of setups will become too massive and unmanageable. The logic

## Fast Facts about an Enterprise Quality Hub

### What it takes to centralize quality

1. First, all information necessary to manage a company's global enterprise quality system must reside in a single repository where any user can log into the system and access the needed dashboards and report drill downs – essentially an enterprise quality "hub." This enterprise quality hub has the power to help global manufacturers leverage technology to drive product quality across the supply chain and throughout the product lifecycle, all from one, centralized location.
2. Second, an enterprise quality hub should proactively monitor, analyze and report on data and processes from disparate data sources across the globe in real time, creating a complete view of manufacturing operations – from the plant floor through multi-tiers of suppliers. Then, by viewing the manufacturing intelligence collected, users can make quality comparisons and analysis, and provide for complete traceability of raw materials to finished goods.
3. Thirdly, the hub should engage suppliers so that a user can assess a lot's quality before the shipment even leaves the supplier dock. At any time, a user should have a real-time, plant-floor view of current process states and any active quality issues.
4. Finally, the enterprise quality hub should be easy to use, especially for the operators. As for the engineers and managers, the system should provide virtually limitless means to analyze the data and make on-the-fly, ad-hoc comparisons.

of “one change, global updates” needs to permeate throughout the user interface creations.

### **Preparing for Analysis**

Bundling data and making new data available needs to be easy and intuitive—and in some cases automatic—to avoid unnecessary and time-consuming tasks. There should be no constraints on how to pull data from the system for analysis and reporting.

The centralized quality hub works in concert with and makes it easier for users to access and utilize the data that is most valuable to them.

## **2. Streamline the Process of Collecting Data and Integrating Disparate Systems**

Data acquisition is the critical link between what happens on the shop floor and the decisions made by the executives—it is the birthplace of Manufacturing Intelligence. The purpose of collecting data is to reduce current burdens, so it’s imperative to ensure that what is collected is useful for both real-time and continuous improvement decisions.

### **The End of Double Data Entry**

The practice of entering data on paper forms and then entering it into Excel must stop. Whenever possible, data entry should be automated to move data from the source of measurement *directly* into the quality hub. Some data may come through serial ports, while other data must be fetched out of a device’s on-board database or siphoned off a live data stream.

To eliminate human error and increase productivity levels, all paper forms should be converted into software interfaces that write the responses to the hub. This includes required process data such as receiving inspection, in-process, finished goods inspection and final tests. Even safety, pre-operation or compliance checks such as HACCP (Hazard analysis & critical control point) checks should all be converted into an electronic format.

No matter what it takes, systems should be put in place to capture data directly into the hub. The elimination of “data islands” can be the single largest contribution towards a true enterprise quality system.

### **Leverage Existing Plant Floor Systems**

MES and ERP systems manage master lists of information needed for the quality system. Touch points can be established that integrate the lists automatically.

For example, the quality hub can rely on the ERP system for the master part list and specifications, while the MES system can provide active lot numbers and operation steps. OPC servers can offer process data collected from PLC devices. All this information gets shared on a single platform, with no worry of duplicated lists of data or practices that require double entry.

Double-entry is prone to introducing errors and wasting time—no one likes to engage in redundant work. A streamlined data collection and system integration process will not only eliminate double data entry, but also significantly increase productivity levels and effectiveness.

### **3. Enable Real-time Monitoring and Analysis**

It is essential to stay in front of any problems that may arise on the plant floor. As live data flow into the hub, visual indicators identify when data contain information that can be used to reduce scrap and rework. Rather than reacting to recalls, customer complaints or problems in the field – after the issues have occurred and product has been shipped – quality problems are dealt with at the moment they occur.

#### **Instantaneous Updates and Access**

Charts and reports need to automatically update whenever new data arrive. These charts and reports must be accessible to anyone (given proper access privileges), anywhere and anytime. If users can access their network, they should have access to the quality hub.

#### **Statistical Control Charts and Visual Cues**

The statistical tools must model the data's personality. Don't settle on a light-weight collection of tools that quickly become inadequate. Rather, choose a software platform that supports a vast collection of tools that can perfectly communicate signals coming from a process, no matter how complex. Remember, not all data fit nicely into conventional control charts.

#### **Early Warning Signs**

Rather than hunting through charts to find opportunities, let the software bring those events to your attention the moment they happen.

#### **Automatic and Remote Monitoring Capability**

Assigning specific personnel to watch all process streams and communicate issues globally is at best, inefficient. A quality system supports the ability to monitor data streams that are being written directly into the quality hub. When non-conformances or statistical anomalies are detected, the software automatically notifies the appropriate people so they can, in turn, access the hub to visualize the data stream and take corrective action.

#### **User-friendly Dashboards**

At-a-glance dashboards with drill-downs enable users to quickly assess plant-wide current conditions.

## 4. Simplify Management of Workflow with Event-based Tasks and Automation

In order to ensure that the right people take the proper actions in a timely manner, the quality system needs to include reminders and count-down timers for when data must be collected. These workflow management functionalities need to alert users when specific data collections are needed.

### Process Alarms and Automated Alerts

When out-of-specification issues arise, workflow management features can automatically escalate data collections, validations or confirmations to be entered – even from workstations upstream and/or downstream of where the problem occurred. Quality managers and other professionals should be automatically alerted and even asked to validate that corrections have occurred.

### Dynamic Sampling Workflow

A quality system should have the ability to remind users to collect data in either pre-set or dynamically based changes in the manufacturing environment. These alerts should trigger a non-human response. Instant and accurate access to process signals and significant trends is vital to the success of any agile quality system.

## Considerations for IT

The benefits of a quality management system not only reach the C-level executives, quality managers and plant floor operators, but also affect IT departments. For IT managers, an end-to-end quality system helps simplify the data flow. A quality system that standardizes data in a single location allows IT managers to easily and more efficiently maintain multiple sites. Should an IT professional receive a request to pull data for analysis, having one, centralized hub eliminates the time and frustration of extracting data from a number of different repositories as well as the expertise required to do so.

Furthermore, a scalable system that is built to support future company growth eliminates the need for IT personnel to continuously revisit and upgrade existing technology. This gives IT managers the room to focus on more pressing projects, rather than spending time and resources updating antiquated software and searching for new solutions.

With such a system in place, quality professionals can work with IT staff instead of relying on them for only technical fixes and basic data acquisition across disparate systems and databases. An end-to-end quality hub, made possible by advancements such as cloud computing and mobile technologies, naturally offers benefits such as advanced enterprise-level security measures, built-in disaster recovery and extensive global reach.

This significantly improves the ability for IT staff to focus on strategic projects instead of putting out fires and fighting outdated, inherited systems, not only offering time-savings, but also extending technology infrastructure and quality systems beyond the four walls of a single plant, across the enterprise and throughout the supply chain.

## 5. Ensure Sophisticated Reporting Capabilities

Retained data need to be treated as historical records that describe how a process behaves under various input conditions. With a quality system's advanced reporting suite, users can leverage Manufacturing Intelligence to continuously improve operations, now and in the future.

### **Actionable Insight**

Enterprise dashboards and reports—accessible via laptop, smart phone or tablet—are essential because they provide high-level executive views into quality performance. A quality hub gives users the ability to interact with data, thus delivering insight to other parts of the organization. Ideally, data are accessible from virtually anywhere, at any time, and extends Manufacturing Intelligence beyond the four walls.

### **Customizable Reports and Visualizations**

By offering the ability to create custom reports and visualizations, a quality hub allows the user to take a more analytical role in the organization. With an infinite number of ways to organize and view data, users can utilize this information for their own purposes, or even to better, to inform colleagues and consumers.

### **Multi-Level Data Mining**

The robust analytical capabilities of a quality hub allow users to slice-and-dice data in countless dimensions, such as by line, product, geographic region and even supplier.

Reports serve many different customers and purposes, so they need to be flexible with the ability to incorporate as much detailed or high-level information as necessary for the intended audience.

## Conclusion

Manufacturers reside in perhaps a more competitive business environment than any industry. Manufacturing is about making things, it is tangible, the products have meaning and purpose in peoples' lives. There is a pride and dignity in a manufacturer's day's work, an opportunity to do something better than anyone else, to increase the margins, to create real value.

This tradition drives a need to constantly improve the processes that power the manufacturing engine. A company's products reveal exactly what they are, and in the marketplace quality, cost and service are the only things that matter. The world's most profitable manufacturers understand this concept. They don't cut corners on quality because they've seen how a higher standard of quality actually reduces costs and positively impacts service through improved customer satisfaction, less warranties and a mitigated recall risk.

The competitive advantage is in the numbers. Every organization is collecting data but without a central organizational structure, the data are just bits and bytes that cost money to collect and store but provide no enterprise-wide value. Successful companies are leveraging modern technology to gain Manufacturing Intelligence and a true understanding about what, where, when, why and how their products are being produced. They are using statistical methodology to create a competitive advantage to win business over those that believe what they are doing now is good enough. And to the victors go the spoils.

InfinityQS is the global authority on Manufacturing Intelligence and real-time enterprise quality. The company's enterprise quality hub, ProFicient, delivers real-time visibility on the shop floor, across the enterprise and throughout the supply chain, allowing top manufacturers to take control of quality. Powered by a centralized statistical process control (SPC) analysis engine, ProFicient leverages Manufacturing Intelligence to help global manufacturers improve product quality, decrease costs, maintain compliance and make strategic, data-driven business decisions. Headquartered in Chantilly, Va., and founded in 1989, InfinityQS now serves more than 2,500 of the world's top manufacturers with over 40,000 active licenses globally. For more information, visit [www.infinityqs.com](http://www.infinityqs.com).

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