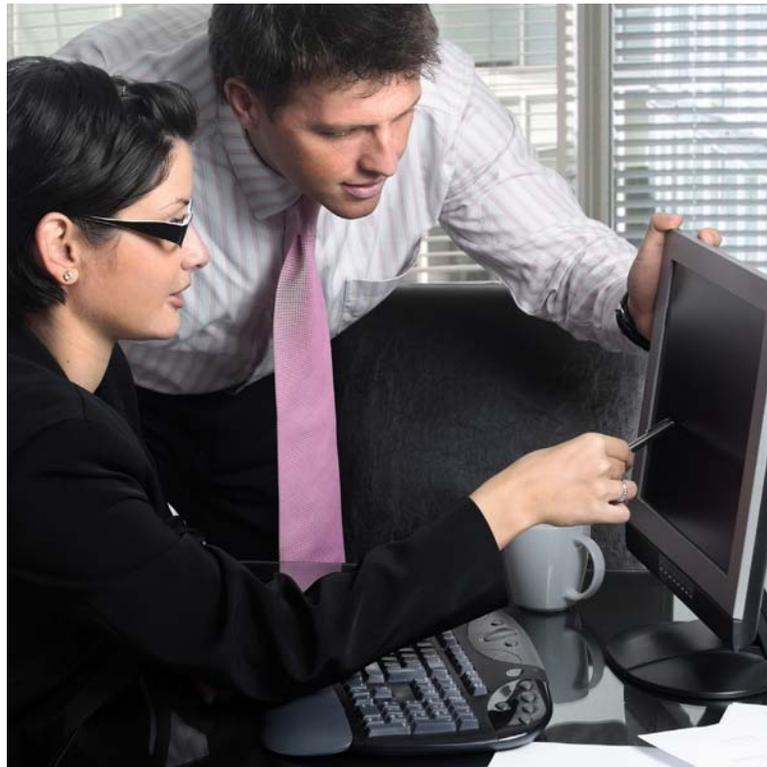


Top Ten Reasons to Automate Manufacturing Compliance

WHITE PAPER

Cincom In-depth Analysis and Review



SIMPLIFICATION THROUGH INNOVATION®



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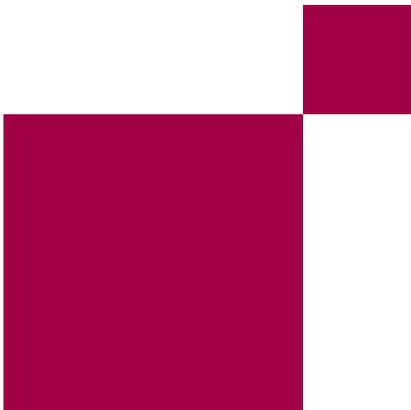
Cincom In-depth Analysis and Review

By Louis Columbus

Cincom Manufacturing Business Solutions

Table of Contents

| | |
|---|---|
| Executive Summary | 1 |
| About the Author | 1 |
| Reason 1: Improve Product Conformance at the Process Level | 2 |
| Reason 2: Create a Culture of Quality in Your Supply Chains | 2 |
| Reason 3: Synchronize Inspections and Audit Data to Supplier Rating | 2 |
| Reason 4: Develop a Comprehensive Corrective and Preventative Action Strategy | 3 |
| Reason 5: Create and Post Audit Benchmarks on Supplier Portals | 3 |
| Reason 6: Create a Compliance System of Record | 3 |
| Reason 7: Ensure Engineering Change Notice (ECN) and Drawing Compliance | 4 |
| Reason 8: Use Compliance as a Catalyst for Process Improvement | 4 |
| Reason 9: Transform Compliance Wins into Competitive Differentiators | 5 |
| Reason 10: Manage Government Regulations so They Don't Manage You | 5 |



Executive Summary

Study the top-performing companies across all manufacturing industries and a plain and simple truth emerges: the ability to produce consistently high-quality products, regardless of the forces impacting demand, suppliers, pricing, or channels, is the key to accomplishing revenue and profit goals. Manufacturing companies dominating their chosen markets have as their core strength the ability to deliver exceptionally high levels of quality in their products on a consistent basis.

Compliance is the competitive strategy of making sure every product produced every day will exceed customer expectations and, as a result, drive up sales and profits. Compliance is the fulfillment of the commitment every manufacturer makes to every customer regarding their products' benefits and value. Compliance strategies are the means through which those commitments are kept to customers, and that clear truth pervades the highest-performing companies in all manufacturing industries today.

When considering why you should join the top manufacturing companies that are automating compliance, realize that each product produced and sold creates a moment of truth for every customer you have. Making certain that your products (and more importantly, the processes used to produce them) can consistently deliver the highest quality experience for your customers is what compliance is all about. Compliance to quality standards in your products is the ultimate competitive weapon because it is critical to successfully exceeding daily customer expectations. Compliance is essential for any manufacturer that wishes to go beyond survival and thrive in an increasingly competitive and turbulent global arena.

The top ten reasons manufacturers need to consider automating their compliance initiatives and strategies are provided in the following sections, and all have as their foundation the use of quality as a long-term competitive differentiator. Complying with customers' expectations is much more difficult and it takes much more focus than regulatory compliance. However, both together are acting as catalysts to companies that choose to capitalize on change rather than avoid it.

About the Author

Former Senior Analyst at AMR Research, Louis Columbus has published 15 technology books and is currently a member of the ECQM Practice at Cincom. Mr. Columbus is also a weekly columnist for *CRMBuyer.com* and *Informit.com*, and teaches graduate-level international business and marketing courses for Webster Loyola-Marymount University. Louis has also taught at the University of California/Irvine, and California State University/Fullerton, in addition to onsite classes at Ford and Chrysler.

Reason 1: Improve Product Conformance at the Process Level

Let's face it, when products aren't regularly conforming to quality assurance or customer standards, it costs the entire company lost time in firefighting toward a workaround solution and possibly reduced customer satisfaction. Instead of resorting to the quick fix that can drain revenue, manufacturers that have turned compliance into a competitive weapon take these steps:

- First, they evaluate and in many cases re-define the supply chains, production processes, and quality-assurance standards to alleviate bottlenecks in the production areas.
- Second, entirely new approaches to measuring quality and compliance are often initiated to augment procedures already utilized. Parameters are rigorously scrutinized. These steps give the manufacturing teams insight into which processes are under-performing and the circumstances responsible for these defective processes.
- Third, enterprise compliance and quality management software is used to selectively automate those areas where manufacturers can get the best return from this IT investment.
- Fourth, benchmarking and performance analysis is completed. Corrective and preventative action at this point is no longer a firefighting exercise but one that can be handled through exception reporting and fine-tuning the process itself. The result is that when non-conformance is reduced, customer satisfaction increases and service costs drop.

Reason 2: Create a Culture of Quality in Your Supply Chains

Many manufacturers marvel at the Toyota Production System (TPS), and envision it as insular, contained within the Toyota manufacturing plants with Six-Sigma measures of production quality and efficiency. The foundation of this world-class production system is actually based on a very high level of supply-chain quality standards that Toyota suppliers need to consistently meet in order to continue shipping products to the auto manufacturer. Suppliers have said that participating in the TPS forces a culture change first in their companies, then a re-alignment of processes to better share knowledge in the Toyota Supplier Network.

Compliance to the Toyota Production System (TPS) standards forces suppliers to create a culture of quality. The same is true for any manufacturer that initiates and maintains a supplier compliance strategy that relies on a series of key performance indicators (KPIs) that indicate when any given suppliers' quality or delivery performance is trending up, staying constant, or trending downward. Creating corrective-action strategies with suppliers based on mutually agreed-to metrics produces the motivation needed for change to happen. The bottom line is that automating supplier conformance strategies — and this includes the use of alerts, self-service portals, and content management systems to provide suppliers with the assistance they need — is part of turning compliance into a competitive weapon.

Reason 3: Synchronize Inspections and Audit Data to Supplier Rating

When manufacturers rely only upon manual processes to complete inspections and audits, it is rare that these results are correlated back to supplier rating results. Maintaining the information in a centralized database, minimizing the possibility of error and automating calculations could in fact signal exceptional gains in the performance of suppliers to quality standards. The opportunity for a manufacturer to further increase the performance of suppliers to quality, delivery, and performance standards is lost because the supplier rating information is not adequately calculated and communicated to the supplier.

For manufacturers that choose to automate their manufacturing compliance strategies using an ECQM-based approach, the potential exists for motivating each supplier to continually higher quality levels with a correspondingly higher level of goals set for follow-on supplier ratings.

The bottom line is that through first defining the processes that interlink inspection and audit to supplier ratings, manufacturers can encourage each supplier to implement specific improvement strategies and rapidly see the results in new shipments.

Reason 4: Develop a Comprehensive Corrective and Preventative Action Strategy

Error detection and prevention is a hot-button issue today, and compiling accurate records of corrective actions is crucial for maintaining a good quality system and preventing the reoccurrence of defects. It is important to have a closed-loop mechanism for initiating, implementing, and verifying the effectiveness of changes resulting from the non-conformance process.

Some problems may only need simple resolution, which may be closed in an exception or non-conformance record, whereas other types of problems may require the exception to be attached to an issue or action plan to complete the investigation. This is why it is important to have a system that is customizable for your specific needs and for the requirements of your industry.

Early awareness of potential problems prevents escalation, and it saves corporate dollars and possible litigation. Additionally, integrating corrective action with other aspects of a quality system maximizes the use of all information in the decision process.

Reason 5: Create and Post Audit Benchmarks on Supplier Portals

One of the best strategies for creating and sustaining competitiveness between suppliers regarding quality is to post their relative performance on portals and internal websites where all suppliers can see who is excelling, who is staying at a constant quality level, and who is falling in terms of quality. Manufacturers that do this actively include Dell, General Electric, Hewlett-Packard, Toyota, and many others. Microsoft does this on its supplier portal called Microsoft Market, and internally this visibility into supplier performance is called "rank and spank" strategy for ensuring high levels of supplier quality.

Since the analytics required for quickly producing these rank and spank supplier reports originally comes out of Microsoft Excel, requiring an inordinate amount of time to manually generate, manufacturers are turning to ECQM suites of applications to automate the reporting process. However, typically manufacturers keep these analytics to themselves, missing out on the opportunity to motivate suppliers to higher performance through competition. Audit Benchmark performance needs to be visible often so it becomes part of both manufacturers' and suppliers' cultures. What gets measured gets done. The bottom line is that manufacturers need to look at automating

compliance and integrating analytics tools so that these reports can be quickly generated, published, and used for fostering higher levels of product quality from suppliers through competition.

Reason 6: Create a Compliance System of Record

When manual processes dominate the quality management process workflows of a manufacturer, it is common to find disconnected or totally isolated systems that contain only a small proportion of the total quality management strategic performance of the company. Manufacturers that rely extensively on manual workflows have only an anemic, fragmentary compliance system of record. The majority of the fragmented data records are in Microsoft Access, Excel or Word, or in any number of other mostly PC-based database systems.

For any manufacturer to realize the benefits of pursuing quality management strategies, there needs to be greater integration across the many fragmentary databases, data sets, historical performance data, supplier audit results, non-conformance history and, corrective-action reports. Once these are organized into a single compliance system of record, the manufacturer is able to effectively define and execute quality management strategies. One example of this involves the historical analysis of suppliers and the effectiveness of supplier management. Having a compliance system of record would show just what aspects of supplier management led to increased quality levels, that didn't, and what the trends are in suppliers and their ability to meet quality levels.

The bottom line is that the successful manufacturer must have a system of record which can be used to measure progress. The compliance system of record is critical for setting benchmarks for supplier, production, and process performance.

Compliance is a competitive strategy of making sure every product produced, every day, will exceed customer expectations and as a result, drive up sales and profits.

Reason 7: Ensure Engineering Change Notice (ECN) and Drawing Compliance

The more complex the manufacturing environment, the greater the impact of ECNs and drawing modifications across engineering, design, purchasing, production, and quality-management departments for a successful company. Many manufacturers have had their ECN processes in place for decades. However, while they operate efficiently and have well over half a dozen colored sheets with specific routing workflows designed (before Visio was ever visualized), the sheer volume and complexity of changes required is dramatically increasing. Design engineers working on the in-cockpit electronics for the Airbus A380 recently remarked that at nearly three inches thick, the ECNs for the A380 are now thicker than a large metro telephone book. Admittedly, the A380 is one of the most complex aircraft ever produced, and the in-cockpit systems rely on over two dozen integration points across dozens of onboard systems. This example, however, underscores why even the most well-worn paths of ECN process workflows in manufacturers are increasingly overburdened with ECN volume and complexity, the likes of which they have never seen before.

The effectiveness of your business depends on your ability to enforce standard operating procedures, share knowledge, and document control process. There is no easy way to properly control changes in products, processes, and master records. Change control is a complex process. Failure to have an adequate change-control system can cause equally complex results. Inadequate change control can expose a company to product liability action resulting in product recalls, internal confusion, and a violation of product, processes, and equipment regulations.

The bottom line is that the managing of change control through a more effective approach to classifying, analyzing, and responding to ECNs electronically is critical to stay competitive. Manufacturers that have grown through acquisition face the daunting task of reconciling their ECN process from two or more systems, factories, and process sets. However, by automating compliance, the ability to automate ECN workflows, including the allowance of multiple and often parallel signatures, can save hundreds of hours a year and ensure higher levels of product compliance.

Reason 8: Use Compliance as a Catalyst for Process Improvement

Creating and executing a compliance strategy has to do with redefining supplier qualification, management, incoming inspection, product non-conformance, and corrective-action processes so that a consistently high level of product quality can be delivered. The impetus for process improvement is customer-driven quality standards that need to be met in order to keep sales levels up. This is certainly the case both in commercial and consumer markets, where consistently delivering to a specific level of quality can mean the difference between retaining or losing a customer. Customer loyalty has a lot more to do with product quality than any other aspect of the marketing or sales-execution mix.

The consistency or lack thereof of product quality says everything about a manufacturer: their commitment to continuous improvement and their commitment to fulfilling the customers' expectations and delighting them. Process improvement is critical to the ability of staying aligned with customers' expectations of performance in order to deliver them.

The bottom line is that those highest-performing manufacturers are using quality initiatives as the catalyst to make their production more centered on customers' expectations first, whether those expectations are in the form of an ECN, contract, or purchase order.

Reason 9: Transform Compliance Wins into Competitive Differentiators

Consider the GE culture and its transformational effect in the Six Sigma concept or the Toyota Production System and its heavy reliance on compliance performance measurements, and the reasons for automating compliance become clear.

Once a manufacturer has chosen to automate compliance processes, one of the strategic objectives to consider is how to position quality leadership as a competitive differentiator. For many organizations, this is the culmination of a quality-management strategy that begins with business-process re-definition and progresses to supplier ratings, corrective and preventative actions, and then throughout the managing of product and process quality on a consistently high basis.

The bottom line is that instead of just relying on price, promotional activity, or channel strategies, consider turning your compliance strategies into a competitive advantage by underscoring product and service quality performance. Only by taking a more integrated view of quality management strategies can this happen.

Reason 10: Manage Government Regulations so They Don't Manage You

Quit looking at regulations for compliance as an impediment to getting your company's strategies together and think instead of how compliance to these regulations can become a competitive advantage. Responding to the intent of the regulation is critical and also leaves latitude to structure your own customer-centered compliance strategy, giving you competitive strength in the long run.

Making regulatory compliance work for your company starts with a clear definition of how you can make your product quality and product compliance strategies more aligned with customers' needs and less inwardly centric and focused only on clearing the next regulatory hurdle. Being more customer-driven from a compliance standpoint puts regulatory compliance in its proper perspective, and this is another reason why many manufacturers choose to automate their compliance strategies.

The bottom line is that responding to regulatory compliance requirements needs to be done within the context of market- and customer-driven quality initiatives. Don't comply for the sake of complying; comply to find a unique competitive advantage on which you can capitalize.

Quit looking at government regulations for compliance as an impediment to getting your company's strategies together and think instead of how compliance to these regulations can become a competitive advantage.

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