

Go Digital. Transform.™

Ensure material validations, track ongoing quality audits, maintain regulatory compliance.

Elemica

Case Study



CLIENT PROFILE

Industry: Manufacturer of primary batteries and portable lighting products

Employees: 7,500

Revenue: \$1.8 Billion (USD)

Elemica Solution: Elemica Quality



ELEMICA QUALITY COMPONENTS

Supplier Quality Management

Traceability and Compliance

e-CoA (Electronic Certificate of Analysis)

Manufacturing Quality Management

Energizer Holdings, Inc. reduces costs and improves productivity through improved communications with local and global suppliers, and via simplified supplier processes.

EXECUTIVE SUMMARY

Energizer Holdings, Inc. is one of the world's largest manufacturers of primary batteries, battery-powered devices, and flashlights. Its Energizer division markets and sells Energizer® and Eveready® branded products in 165 countries throughout North America, Asia Pacific, Europe, South America, and Central America.

One key to Energizer's financial success is consistent product quality. Consumers buy Energizer batteries because they deliver consistent, reliable power. From a manufacturing perspective, having a predictable process translates to high quality products. Product quality starts with quality suppliers who provide consistent materials that feed the manufacturing processes.

To assure product quality, Energizer had been verifying raw material specifications as shipments were received. After analyzing their processes, the company decided to simplify the supplier quality processes

associated with material tracking, testing and specification changes. If material specification data could be provided in advance of the shipment, Energizer could reduce the time from when the material was received to when it was used in production.

Energizer chose a supplier-focused platform (Elemica Quality) for communication, supplier collaboration, and verifying material conformance to enhance its existing quality processes. Energizer now has 16 plants and more than 200 suppliers globally using Elemica Quality. Delivered using a SaaS (software as a service) model, Elemica Quality helped Energizer reduce its raw material receiving process time by approximately 90%, reduced the number of receiving steps by 78%, and identify out-of-specification raw materials at the source before entering their factories. The avoided costs and time savings allowed Energizer to realize a return on their investment in just nine months.

Measurable Benefits for Energizer:

The following Elemica Quality benefits reported by Energizer represent direct dollar improvements to the bottom line:

- **78% reduction** in raw material receiving process steps
- **90% reduction** in raw material receiving processing time
- Out-of-specification raw materials identified at the source
- Cost avoidance from improved change management procedures
- Return on investment in less than nine months

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COMMITMENT TO CONTINUOUS IMPROVEMENT

Energizer is committed to evaluating and improving its processes to support higher yields, while maintaining consistent product quality. As part of its corporate commitment to improve global manufacturing operations and reduce overhead, Energizer targeted four specific areas:

- Improving material quality processes
- Reducing on-hand inventory
- Optimizing supplier communications across the supply chain
- Improving decision support tools

“Elemica Quality...has allowed us to refocus the priorities of our human resources away from time-consuming paper shuffling and into other areas of lean manufacturing that make a difference.”

*– David Bernardone
Staff Quality Assurance Engineer*

Material Quality Processes

Energizer wanted to optimize material quality processes. All incoming material had to be tested by Energizer against quality specifications. Variations were documented through a best-practices based CAR (corrective action request) process, but were manually generated and managed. The table below summarizes the major quality process issues and their effects:

ISSUE	EFFECT
Supplier material variability	Added overhead to assure material quality
Raw material inventory levels	Higher than desired because of incoming qualification testing requirements
Supplier communications	Slow supplier responsiveness
Information consistency across the supplier community	Required continuous communication

On-Hand Inventory

Energizer accumulated inventory on its dock waiting to enter its manufacturing processes. The reason for the extra inventory was the timeliness of the material quality processes, and the commitment to high material quality standards. At times, Energizer had to wait for information from its suppliers to confirm test results. Automating the quality certification process would allow Energizer to reduce its inventory carrying costs.

Optimizing Supplier Communications

Energizer wanted to streamline communication within their supplier community and communicate in a consistent manner across multiple supplier facilities. When Energizer identified a potential problem with a shipment, it was difficult to communicate corrective action requests with all the relevant supplier personnel and to present the issue data in a simple format. When an issue arose, it might not get the attention it deserved in a timely manner.

Decision Support

Energizer sought for a more effective way to monitor their supplier's ability to provide quality raw materials on a consistent basis. In response, Energizer needed to have ready access to the raw material quality data. The time associated with gathering this data could be significant and required resources across multiple departments. Energizer knew that if they could proactively track raw material quality, they would be able to improve their throughput yields and manufacture their products more consistently and at a lower cost.

Pre-Elemica Quality Processes

- Materials were tested by Energizer before being used in manufacturing
- Material variability was tracked manually
- CARs were generated manually and had limited visibility
- Communication of specification changes was time consuming

SOLUTION

To reduce its material testing overhead processes and supplier communication issues, Energizer understood that a system would have to have meet the following criteria:

- Allow suppliers to certify material quality before shipment
- Provide real-time data on material variability
- Reduce the time to process supplier corrective action requests
- Simplify supplier responsiveness
- Improve labor efficiency within Energizer’s manufacturing facilities
- Allow Energizer to re-deploy labor resources to more productive activities

After carefully researching its options, Energizer selected Elemica Quality.

Elemica Quality – Single Platform

Elemica Quality provides a platform for both integrated material variability tracking and supplier-focused quality processes. Delivered using a SaaS model, the business intelligence generated by Elemica Quality enables manufacturers to change from reactive problem management to proactive problem prevention across their global supply chain.

Elemica Quality collects incoming supplier raw material test results using its innovative e-COA capability. The e-COAs provide the basis for Energizer to consistently and efficiently measure material quality. Elemica Quality then uses that data to proactively identify potential material variances. Once identified, Elemica Quality provides a platform to manage the corrective action request processes. Elemica Quality provides both the supplier and the receiving factory the same data, providing a common platform for communication.

In addition, Elemica Quality manages both supplier certifications and ongoing material specification

changes, resulting in improved accountability and a simplified compliance management process.

Quality Process Improvements

With Elemica Quality, Energizer streamlined and improved the efficiency of its material quality processes. The following table illustrates several key benefits:

ACTIVITY	BEFORE ELEMICA QUALITY	AFTER ELEMICA QUALITY	BENEFIT
Material Variability	Tracking material variations was labor intensive.	Suppliers now enter all material characteristics, allowing material variability to be found instantly and shared between Energizer and its suppliers globally	Energizer receives more consistent material, which increased production yield
Supplier Corrective Actions	Corrective actions were issued after material variability was found	CARs are issued electronically and often proactively, allowing instant visibility across multiple supplier facilities and multiple supplier personnel	Improved CAR response from 60 days to 13, and the labor expended by Energizer to manage CARs was reduced
Material Testing	Materials were tested before they were used in manufacturing	Energizer now relies on supplier-entered COAs and spot checks to determine supplier material quality	Reduced on-hand inventory cause by streamlined receiving processes
Specification Change	Many hours were spent coordinating specification changes and their effective dates	Suppliers now know instantly when material specifications are scheduled for change, and when the change is effective	Reduced the labor and costs associated with material change activities

Rapid Implementation and Adoption

Delivered over the Internet, Elemica Quality required little input from Energizer’s information systems department. All of the relevant information was easily and quickly uploaded, including material specifications, supplier information, and testing requirements. The supplier community adapted well to the new system. Suppliers quickly found that the platform simplified their relationships with Energizer, allowing them to provide answers to Energizer’s questions faster and with less effort.

Continuously Improved Sourcing

In addition to helping Energizer extend their quality processes to their suppliers, Elemica Quality introduced strategic sourcing benefits. The data from Elemica Quality, including incoming material variability and the number and cost of supplier issues, provides the basis for strategic sourcing initiatives. With this data, Energizer’s purchasing organization can determine which suppliers provide the best material, improving production yield and enabling further supplier economies of scale. The growing volume of supplier data enables continuous improved strategic sourcing decisions.

CONCLUSION

Energizer realized a positive ROI in less than nine months of implementing Elemica Quality, and it continues to make improvements based on new data received every day. The material receiving process was slashed by 90%, materials are now certified by suppliers rather than tested by Energizer, and out-of-specification materials are identified before reaching the factory. As a result, Energizer benefits from lower inventories, more efficient manufacturing operations, and more consistent product quality — the primary driver of consumer satisfaction.

About Elemica

Elemica is the leading Digital Supply Network for the process manufacturing industries. Elemica accelerates digital transformation by connecting, automating, anticipating, and then transforming inter-business supply chain processes for the products they buy, sell, move, and comply. Launched in 2000, customers process over \$500B in commerce annually on the network. For more information, visit www.elemica.com.

How Elemica Quality Works....

Elemica Quality fills the void left by most enterprise applications. Elemica Quality collects, stores and analyzes material parameters and production settings to improve manufacturing yield. Elemica Quality's knowledgebase of raw material characteristics and process variables allows manufacturers to correlate input cause to output effect. This correlation allows manufacturers to proactively prevent disruptions, resulting in improved yield by reducing waste.

At the same time, Elemica Quality improves the relationship between the licensing company and its supply base. The supply base is managed via easy-to-access web-based portal technology for regulatory and industry certifications. Procurement professionals gain data-driven insights into supplier performance for more effective sourcing. Plant operations management exerts more control over material variability, increasing yields and return on assets.

Research and Development personnel gain visibility to supply chain compliance with material specifications (raw, WIP, finished products) and can adjust interactively as internal or market conditions dictate. Instead of focusing on interruptive issues that reduce supply chain effectiveness and profitability, quality professionals using Elemica Quality have a system resource for proactively driving process improvement that supports operational excellence.

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A System of Savings

PLANT-LEVEL SAVINGS

Reduced Testing - Reduced costs associated with testing of incoming raw materials based on supplier confidence from online Elemica Quality compliance knowledge with automatic SPC and time trends analysis. Includes reduction in test equipment and consumable savings.

Reduced Non-Conforming Material - Online shipment validation of material specification prior to materials being shipped by the supplier reduces wasted time and money dealing with out-of-spec materials.

Reduced Waste - Reduced manufacturing waste caused by supplier material quality variability. Automatic SPC, PPK and time trends analysis on incoming materials reduce unexpected results in the manufacturing process reducing defects, unusable lots and wasted materials and associated disposal and reclamation costs.

Reduced Regulatory Documentation - On-Line CAR/CAP, Supplier Development, Audit, and Statistical Analysis data reduce the manual generation, tracking, management, storage and archival of quality records required for Regulatory Compliance. Also realize a reduction in CAR/CAP, audit and quality record storage and archival.

Simplified Cost Recovery - Online Cost Recovery automation simplifies the ability to track and analyze the costs incurred due to a supplier's non-conformance and quality issues. These charges may be passed back to the supplier.

Simplified Recordkeeping - On-Line supplier-entered COA data eliminates a plant's need to manually enter, file and store COA data. Simplified record keeping and accessibility supports supplier shipment tracking and material traceability. Also realize a reduction in COA storage and archival costs.

Efficient Inventory Management - On-Line Advance Shipment Notification with On-The-Way, Shipment Received or Released Status with date produced supports first-in first-out material management increasing production efficiency.

Efficient Production Scheduling - On-Line Advance Shipment Notification provides material delivery dates supporting more accurate production scheduling; reducing line down time waiting on needed materials, providing increased production efficiency.

Reduced Specification Costs - On-Line management of supplier viewable material specifications and test procedures reduces costs associated with supplier communications and specification management.

CORPORATE QUALITY-LEVEL SAVINGS

Reduced Supplier Oversight - Corporate-wide, on-line, real time view of all suppliers, CAR/CAP summaries, supplier performance reports and audit status simplify the management of suppliers worldwide. Also results in a reduction in documentation storage and archival costs.

Simplified Supplier Ratings - Simplified supplier rating and ranking through on-line supplier quality performance summaries.

Reduced Manual Entry - On-line management of CAR/CAP, Supplier Development, Audit, and Statistical Analysis data reduce the manual generation, tracking, management, reporting, storage and archival of quality records required for ISO/QS/AS and TS-16949 compliance. Also results in a reduction in documentation storage and archival costs.

Simplified Vendor Communications - On-line message of the day and automated supplier notification of CAR, Audit and Quality Manual events reduces mailings, faxes and e-mail to suppliers.

Elemica Quality saves the Goodyear Tire and Rubber Company \$26 Million (USD) annually across 80 plants with an average of \$325K per plant