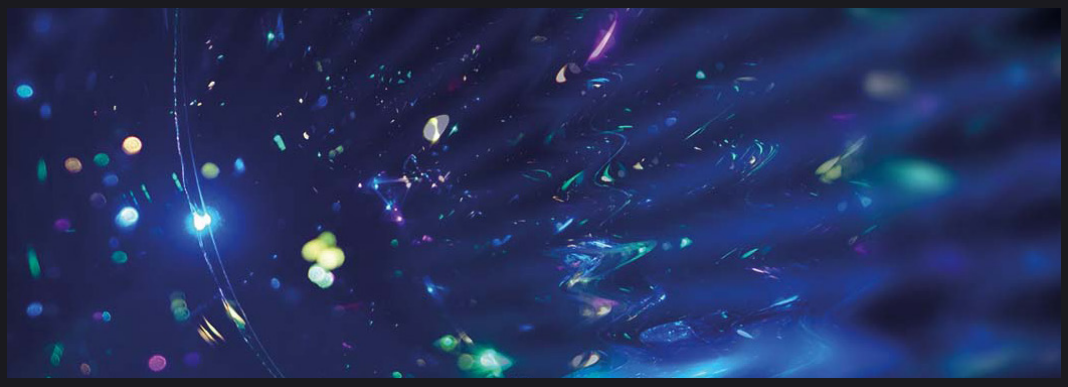
CASE STUDY

Kaizen lights the way for Lumileds



Key facts:

Company:
Lumileds

Website:
lumileds.com

Octave products used:
Octave Reliance *(ETQ Reliance)*

Lumileds is the global leader in light engine technology. The company develops, manufactures and distributes groundbreaking LEDs and automotive lighting products that help customers gain and maintain a competitive edge.

With a rich history of industry "firsts," Lumileds is uniquely positioned to deliver lighting advancements well into the future by maintaining an unwavering focus on quality, innovation and reliability.

Challenge

As a company that views itself as a hybrid of a technology firm and a manufacturer, Lumileds has historically taken the notion of product quality very seriously. Lumileds is a global company with more than 24 manufacturing sites worldwide and previously had hundreds of individual quality management applications in place around the world. These "solutions" were a devil's brew of "off the shelf" software, collections of Word and Excel documents housed in SharePoint or local standalone computers, or staff-built software applications. While this amalgam of roughly 900 individual solutions worked well enough for the company to feel OK about its quality operations, the lack of integration and resulting data siloes did nothing to help the company access, share and analyze critical quality data that could help Lumileds on its mission of continual improvement – a highly valued corporate mandate. At the same time, procuring, managing and maintaining hundreds of disparate systems was costly in terms of financial and staff resources.

Quality journey

Disparate systems

Harmonization
Document control
audit management
corrective action

Custom applications

"...started with the standard Reliance Platform Document Control and Audits Management applications. Soon, however, the power of Reliance's flexibility and ability to conform its quality systems to any customer business processes became apparent."

Sadiq Eshaq
Technical Project Manager, Business Transformation Process, Lumileds

Solutions

In order to maximize the efficiency and company-wide impact of its quality management program, Lumileds decided to consolidate and harmonize its quality management system (QMS) footprint. The company selected Reliance® to do so and initially started with the standard Reliance Platform Document Control and Audits Management applications. Soon, however, the power of Reliance's flexibility and ability to conform its quality systems to any customer business processes became apparent. From an initial deployment of the Reliance Document Control, Corrective action (CAPA), and Audits Management solutions, Lumileds has now deployed twenty applications around the world, representing an approximate 50-50 mix of standard, out-of-the-box Reliance capabilities and Lumileds-developed applications that are built on the Reliance framework.

One of the more critical areas in which Lumileds uses Reliance is in supplier quality management. Using the Reliance framework, Lumileds has develop a supplier quality module that houses all d the company's suppliers and parts data. This module is linked with the Audit Management module. At the same time, Lumileds performs incoming inspections on parts delivered from its suppliers, so for each shipment (which may include 10 different lots with thousands of different pieces), Lumileds simply inputs to Reliance a receiving record noting the size and content of the shipment and all relevant supplier records. Reliance tells the team how many pieces they need to inspect. The results are recorded in the QMS and communicated to Lumileds' supplier quality managers, who then take whatever follow up action is needed - issue a CAPA or issue a non-conformance, for example.

"As I became more familiar with Reliance, I started to realize it's not just a quality system, it's a platform that we could use to create new applications from scratch or quite easily 'translate' a lot of those older applications into the Reliance environment," said Sadiq Eshaq, Technical Project Manager, Business Transformation Process, Lumileds.

Results

Now standardized on Reliance, Lumileds has cut its QMS technology footprint by 35% and staff acceptance has been strong, especially since Lumileds rolled out the new Reliance 2019 user interface in early 2019. The company has also trimmed about $700,000 per year in operating costs for it QMS environment.

Additionally, the company takes full advantage of Academy, Reliance's online, 24/7 training program to quickly train staff around the world on Reliance capabilities from quick microlessons to full product certification tracks. With a standardized platform and rich training resources, the Lumileds quality team is more engaged in the QMS and seems to enjoy working with the system more. As further evidence, Eshaq notes that "intake meetings" – meetings in which team members meet with Eshaq to request the creation of new modules within Reliance – have increased 25%.

"So, it's a proactive approach now rather than reactive. People come to me based on word-of-mouth and say, 'Hey, I heard about this great product. Can we create something for what I do?'" said Eshaq. "So that's been pretty amazing."

Reliance has become a catalyst for collaboration and continuous improvement within Lumileds. For example, Lumileds failure analysis team works closely with its reliability team. The organization's failure analysis director came to Eshaq with the suggestion that the reliability team come onboard with Reliance so that the teams could seamlessly flow data between them, perform root-cause analysis more quickly and more efficiently return quality-based data back to the design and production teams in a tight, closed-loop ecosystem.

"We're building on this synergy that is just cascading all over the company," said Eshaq. "It starts in one area and then just explodes. We have created a landscape of reliability and failure analysis now, and in the near future, we'll see what the reliability data means as we look downstream in our product development efforts."

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Sadiq Eshaq

Eshaq came to Lumileds from the healthcare industry and does not have a background in coding. But that has done nothing to deter his effectiveness as the single point of contact for all things Reliance inside Lumileds, a result that he says is a testament to Reliance's ease of use and flexibility. In fact, the company sent him to Malaysia on his second day of work to train workers there on Reliance's document control module, despite having zero experience with the product to that point. He learned how to use Reliance while in flight and the document control training went off without a hitch.

Lumileds' culture of quality is especially strong, says Eshaq. "It's the backbone of the company. Many of the decisions the company makes are based on quality, in terms of the suppliers we choose, and the customers that choose us base their purchase decisions on the quality of products that we create."

One module of which Eshaq is especially proud and one that truly represents the culture of quality at Lumileds is the company' s Reliance-based Kaizen module (Kaizen is a Japanese term for "improvement"). This module is part of the company's "Continuous Improvement Suite" and serves as a centralized location for employee input on ideas and programs for continuous improvement across the company. Employees earn and spend points based their suggestions and the company awards a "Kaizen of the Month" for the best ideas that lead to genuine improvement. The Kaizen program has supplanted the company's annual QIC, a yearly quality competition and conference that showcased the best projects of the year. The QIC costs approximately $600,000 to run and Lumileds has found that replacing that event with a more sustainable monthly "Kaizen of the Month" award is just as effective as a conference, at far less cost.

The centralized reporting capabilities of Reliance 2019 are also key for Lumileds. Even as new solutions are rolled out – whether they are Reliance's ready-to-use or Lumileds-created – this self-service, centralized reporting tool allows Lumileds users to easily create their own dashboards that allows them to see a snapshot of the data generated by the system's activities. With the failure analysis solution, for example, the reporting tool allows managers to track the amount of work that's in the queue for various teams.

The data is not static, however. It is inherently actionable. The company can also track products that are experiencing more than the usual number of failures and then drill down on the root cause of those failures. That data is then sent back to the product development team, so developers can review the issues and see if something is flawed in the product design.

"Quality is one of our key differentiators. The entire backbone of the company is based on quality," said Eshaq. "And Reliance has really played a key role in helping us live up to our quality ideals and commitment."

ETQ, part of Hexagon, is a global leader in integrated quality management, health, safety, and environmental solutions for manufacturers. Learn more at etq.com.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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