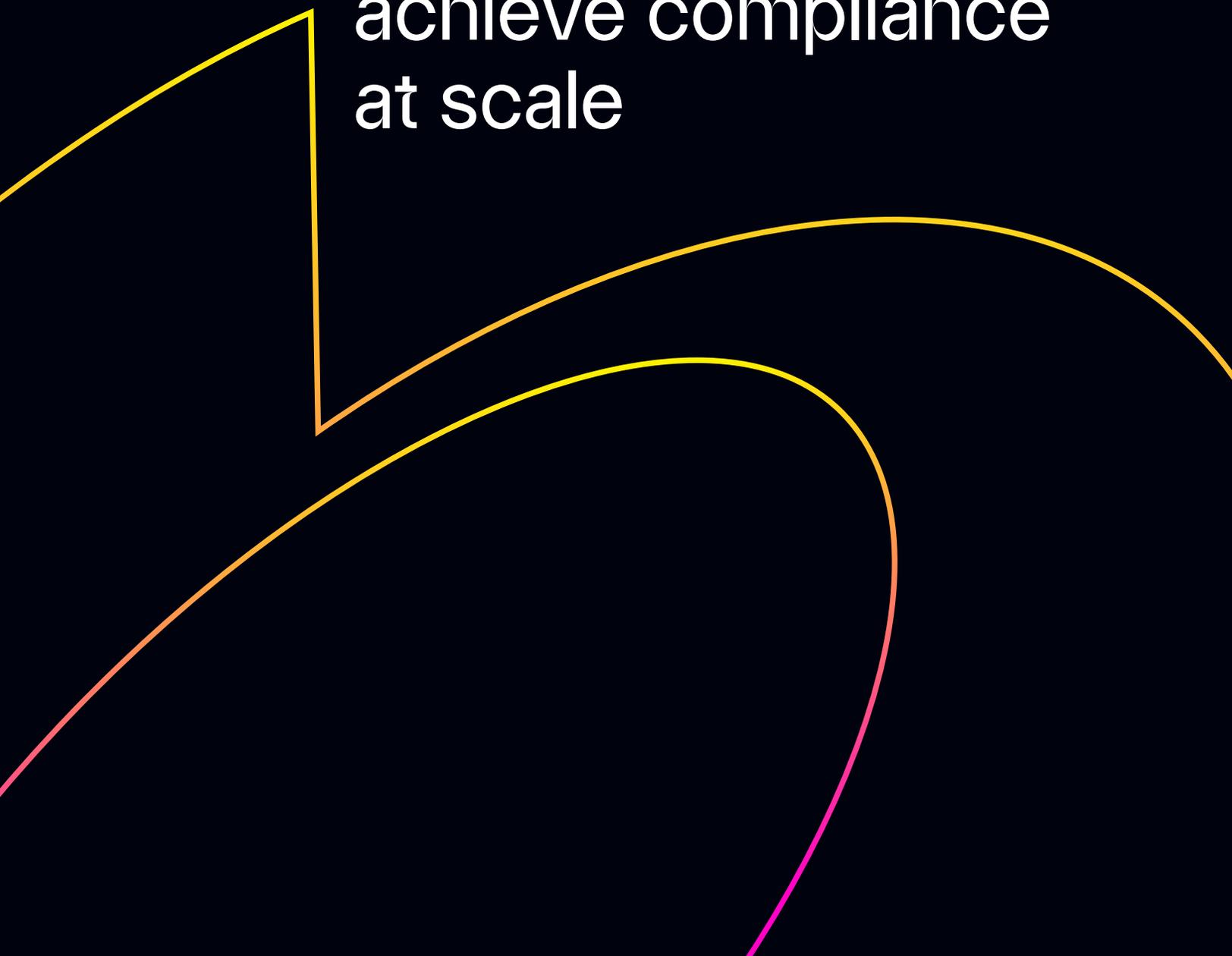
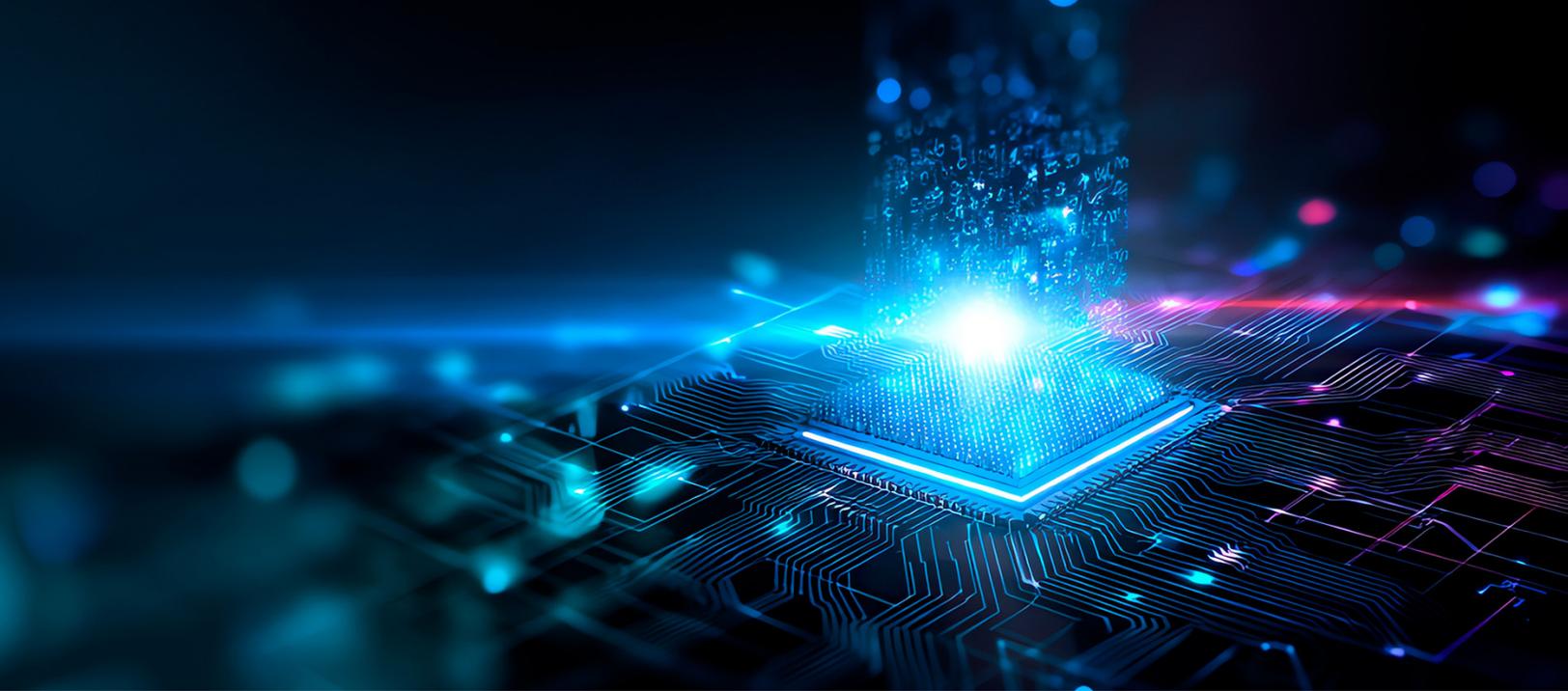




WHITE PAPER

# Top 3 ways electronic manufacturers can adapt to rigorous quality demands and achieve compliance at scale





Electronic and semiconductor manufacturers are in a bind. Rising labor and material costs, spikes in customer demand, complex compliance requirements and pressure to shorten new product introduction (NPI) lifecycles are making long-term quality management tricky. Electronics production lines are looking for a reliable solution to scaling quality management across multiple sites and geographies without compromising quality or slowing down time-to-market of new products.

Electronics companies face persistent quality challenges throughout the production lifecycle — challenges made more problematic when adding new facilities, integrating the results of M&A activity or even from just organic business growth. Increased labor, energy and materials costs, along with shortages in skilled labor and rare earth materials, are making it tough to get assembly lines what they need to meet ambitious production quotas.

Luckily, many have found success with electronic Quality Management Systems (eQMS).

# How do electronics and semiconductor manufacturers keep pace with quality despite rising production costs, rigorous expectations, and a growing number of facilities?

Electronics and semiconductor manufacturers need the right tools to help them meet this rapidly changing environment. And they need to be able to manage globally while having the flexibility to meet local needs. Many electronics manufacturers leverage eQMS to meet these challenges and so much more. With so many different areas that can have a positive impact on the organization, manufacturers need to prioritize where to start.

Here are three top ways to advance the quality journey:

## 1. Minimize waste:

Poor quality management practices in the electronics industry have also directly contributed to waste.

- 20% of every dollar spent is estimated to be wasted due to these manufacturing and quality inefficiencies, translating to nearly **\$8 trillion lost annually.**
- An eQMS helps organizations identify issues behind poor quality, answering questions such as: **are there systemic issues and nonconformances, what are the root causes, were suppliers part of the problem, how much rework is being done, what are our warranty costs?**

## 2. Comply at scale with customer demands:

Demand for electronic and semiconductor products continues to grow. In addition to consumer demands, the CHIPS Act encourages significant investments in the electronics industry, encouraging expansion of facilities and the development of new semiconductors and other emerging technologies while creating a more secure supply chain.

**The result:** A spike in new orders, more revenue and the need to scale production for anticipated growth. To ensure quality issues are not exacerbated by the need to meet market demand, comply with customer requirements and manage supply chain issues, an eQMS is essential. Tracking customer and industry requirements, being ready for the inevitable audits and collecting compliance data for analysis and decision-making are all key functions of an eQMS.

## 3. Accelerate time to market:

Electronics manufacturers expect continued labor and material cost increases along with a massive boost in customer orders and shipments. Quality failures are no longer an option for electronics manufacturers to stay competitive, meet rising demands, and shorten their NPI cycle times. Manual procedures, multiple quality systems across multiple locations and no standardization across teams can cause delays in getting products to market.

A modern eQMS streamlines the workflows between teams, maintains a single source of truth for processes and procedures, alerts individuals when they have actions to take, and provides the flexibility needed across locations while maintaining a global standard of operation.

Many electronics and semiconductor manufacturers use one of the leading eQMS solutions – Octave Reliance (formerly ETQ Reliance) - to help them address numerous key quality issues. From core features around document control, audit management, corrective actions and employee training, to more advanced functions such as supplier quality management, new product introduction, and nonconformance management, Reliance provides a robust solution for quality management.

Electronics and semiconductor brands use Reliance because of its industry-leading ease of use, built-in best practices and powerful flexibility to accommodate existing quality processes and drive new quality initiatives.

*“We’re electronics manufacturing, but we manufacture in medical, aerospace and defense, green tech, and many other fields within industry. So we needed to have a flexible solution that could adapt and grow across the many different regions as we bring on, new companies through mergers and acquisitions.”*

## Celestica

Celestica is a leading provider of electronics manufacturing services for some of the world’s biggest technology brands. With operations in 14 countries and more than 30,000 employees, the company struggled with siloed quality processes and data — leading it to seek an integrated quality management system (QMS). By implementing Reliance, the company has been able to streamline the nonconformance process, linking it to supplier management, deviations, and corrective action.

### Results:

Centralized quality processes for real-time collaboration and the ability to implement global corrective actions  
Reduced IT footprint allows the company to eliminate multiple site-based infrastructures that required valuable time and resources to maintain  
Improved data quality and efficiency through integration of QMS with other business systems, including human resources, enterprise resource planning (ERP) systems and data warehouses

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*“Reliance has been a smashing success for our end users at FUJIFILM. We load new users and documents daily, and they love it.”*

## FujiFilm USA

FUJIFILM USA is a leading global manufacturer of electronic products. The company manufactures, markets and provides service for a broad spectrum of industries including photographic, medical imaging and informatics, pharmaceutical and other life science industries. Prior to implementing Reliance, the company faced significant challenges around maintaining multiple electronic and paper-based quality processes, which represented huge inefficiency in terms of cost and time. The company used Reliance to reduce their cost of quality by centralizing document management, audits, corrective action, and change management because of the platform’s unparalleled flexibility in conforming to FUJIFILM’s existing compliance processes.

### Results:

Saved 750 hours and \$60,000 in maintenance fees annually by eliminating excess servers and QMS software Consolidated more than 200,000 documents across the enterprise for faster retrieval and better visibility overall Reduced cost of ISO 9001 and ISO 14001 compliance through integrated audits, reducing the number and duration of internal audits

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*“The ROI modeling from Reliance is phenomenal. It allowed us to show how we can streamline operations and reduce costs.”*

## **Skywater**

SkyWater Technology is a US-operated semiconductor manufacturer and DMEA-accredited supplier. Prior to investing in Reliance, SkyWater relied on antiquated document management systems and mostly managed QM processes via email and spreadsheets. They also used multiple, separate systems for employee training and environment, health, and safety (EHS), making it tough to drive quality improvements systematically. SkyWater Technology eventually adopted Reliance to deploy and track corrective and preventive actions (CAPA), manage audits in a central interface, and evaluate quality risks in real time.

### **Results:**

- Accelerated time to market of new semiconductors through more proactive QM
- Improved decision velocity by automating QM so staff could focus on value-added activities that help the business grow
- 51% reduction in non-compliance risk
- 11% increase in semiconductor production and QM efficiency
- 12% cost reduction on the production line and QM processes
- 26% increase in revenue production through robust QM

*“The entire backbone of the company is based on quality. Reliance has really played a key role in helping us live up to our quality ideas and commitment.”*

## **Lumileds**

Lumileds is an LED lighting manufacturer known for innovation, reliability, and quality, with more than 24 manufacturing facilities worldwide. Before integrating its QMS, the company used approximately 900 separate quality applications globally, blocking visibility while increasing costs. The company used Reliance to standardize its quality processes — deploying 20 applications globally that include document control, corrective action, and a custom Kaizen application to centralize improvement ideas.

### **Results:**

- \$700,000 in annual savings for QMS operating costs
- 35% reduction in QMS footprint
- 25% increase in requests for new QMS modules

*"We broke up our applications into different 'swim lanes.' Within ISO, our key focus was Audit Management, Corrective Actions or CAPA, Document Control, Employee Training, Assets and Calibration, and Meetings. Within product and material, we focused on Change Management and PLM — the Project Control application."*

### Advanced Micro Devices

Advanced Micro Devices (AMD) has been a global leader in computer processor and microprocessor manufacturing for over 50 years. Prior to beginning its quality journey with Reliance in 2018, AMD had three primary objectives: Make it easier to enter new and emerging markets, maintain ISO 9001 compliance, and make QM a long-term strategic imperative. By 2019, over 2,000 AMD users had adopted Reliance, along with 14 other Reliance apps, so they could better manage corrective and preventive actions (CAPA), document control, audits, and employee training.

#### Results:

- Reduced the cost of poor quality through embedded AI/ ML and integrations that let their team automate QM, decrease data entry errors, and save hundreds of hours on QM processes
- Achieved compliance at scale by always being "auditready" for ISO 9001 with the right data and documents
- Improved decision velocity with data and insights always available to support forward-looking business decisions

## Consult an expert

Learn more from our quality management experts

Call: +1 (844) 293-3001

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## 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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