

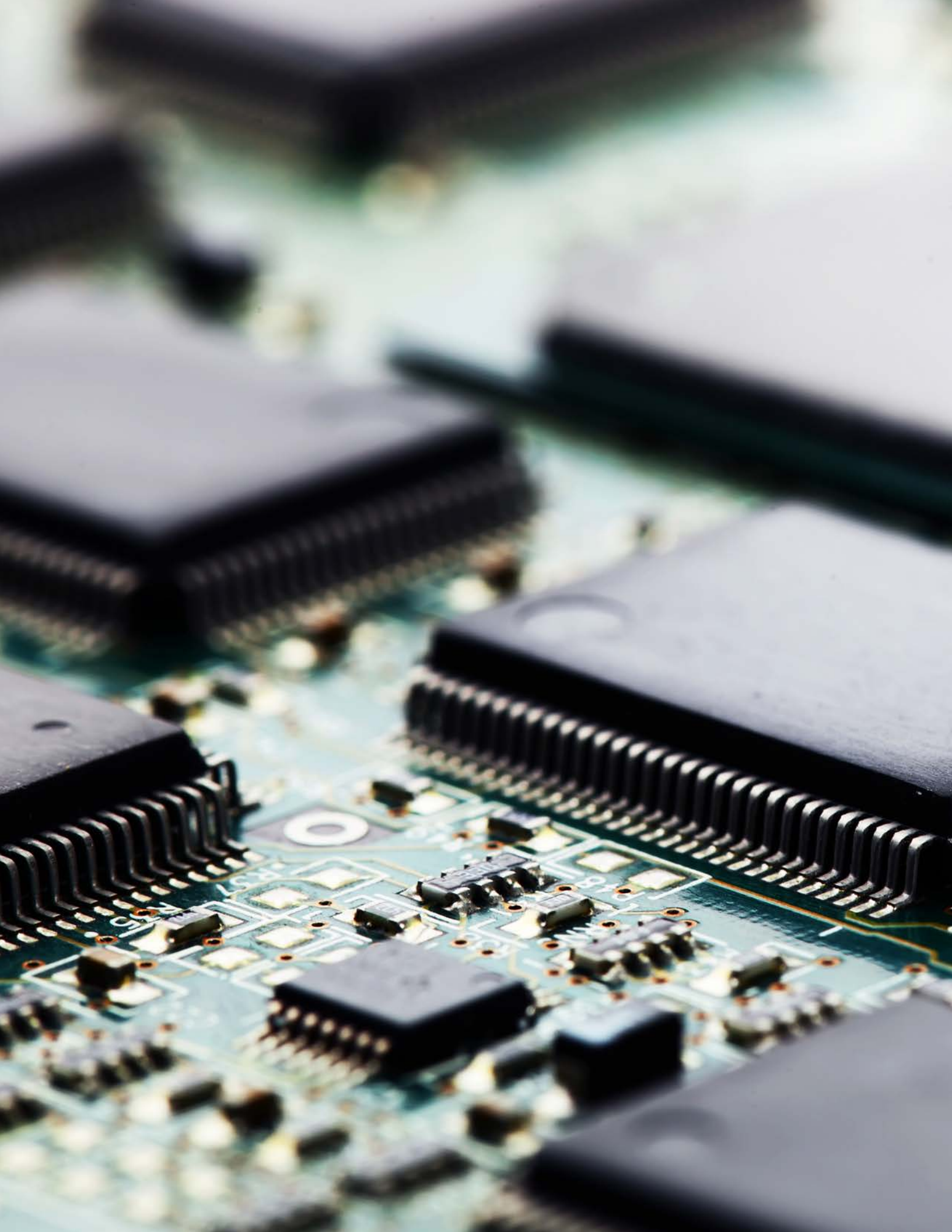


SIMPLIFY COMPLEXITY,
POWER UP EFFICIENCY

ENTERPRISE LABELING FOR THE ELECTRONICS INDUSTRY



LOFTWARE™
ENTERPRISE LABELING SOLUTIONS



THROUGHOUT THE SUPPLY CHAIN, THE ELECTRONICS INDUSTRY IS COMPLEX AND FAST MOVING

Few industries are as vast, global, complex, and competitively-intense as the electronics industry. Products are becoming more and more intricate, and more and more products not generally thought of as electronic—think pet doors and running shoes—often now contain electronic components. Electronics is an industry where change is continuous, and innovation ongoing. Each year, Thompson-Reuters publishes a report on the “State of Innovation.” One measure they look at is patent activity. In 2015, they found that more than half of all patents were granted to electronics-related industries: Information Technology, Telecommunications, and Semiconductors. All of this innovation means that products become more rapidly obsolescent; and with shorter product lifecycles, there’s more pressure on manufacturers and their suppliers to operate more efficiently, keep costs down, and keep the supply chain moving fast.

Despite the pace of innovation, it’s becoming more and more difficult to develop sustainable competitive differentiation. Yesterday’s novel wonder becomes tomorrow’s commodity.

While innovation defines the electronics industry, so does globalization. Some studies have indicated that, based on the depth and breadth of its cross-border interconnectedness, electronics is the most globalized of industries. This places numerous language and regional regulatory pressures on the industry. Factor in ongoing concerns about counterfeiting and gray market components infiltrating the expanded supply chain, and the already daunting challenges are compounded.

Companies at every node of the electronics supply chain—from raw material suppliers, to OEMs, to component manufacturers; from the warehouses, logistics companies, distributors, and retailers that support them—are finding increasing demands being placed on them. The pressure’s on to keep costs down by becoming more efficient, to improve quality and responsiveness. And the pressure extends beyond that being felt by individual partners along the supply chain. In order to survive and thrive in an environment of intense competition, all companies must increasingly operate as a part of a seamless whole, one that recognizes its interconnectedness and the need to work cooperatively.

No surprise then that manufacturers and their partners are always looking for proven solutions to help them respond to these mounting challenges. One of the areas where a standardized, enterprise-wide solution is paying major dividends is labeling.

MISSION-CRITICAL. STRATEGIC. LABELING TAKES ON A MORE IMPORTANT ROLE

Because of the intricacies and dependencies of the electronics industry's extended supply chain, it's easy to see how the right enterprise labeling solution has to assume a more mission-critical, strategic role. After all, labeling failures lead to shipping errors, higher freight costs, returns, repackaging expenses, late penalties, compliance issues, customer dissatisfaction, and—maybe worst of all—loss of customers to a competitor. For an industry already undergoing increased pressure on prices and margins, such outcomes exacerbate corporate growth and profitability objectives.

Labeling can take on a more strategic role in a number of key ways:

OPERATIONAL EFFICIENCY/COST REDUCTION

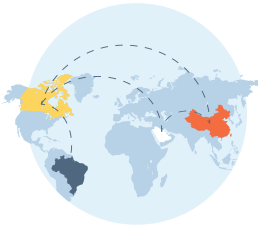
Because the electronics supply chain is so highly competitive, there is continuous pressure to keep costs low and quality high across the network. Global companies are adopting strategies to improve efficiency and lower costs. Given the pace of innovation, they don't want to take the risk of stocking up on inventory—while paying higher interest costs—for raw materials and components that will soon become obsolete. This is making the demand to be faster and more efficient especially acute. Automated labeling eliminates manual processing costs, improves accuracy and reliability, and helps companies significantly reduce lead times in the supply chain.

GLOBALIZATION

The electronics industry is truly global, and countries that were not on the supply chain landscape a decade ago—like Mexico and Vietnam—are now becoming powerful players. And as the growing middle class in emerging economies translates into heightened demand among consumers for electronics of all variety, the industry's global nature will only increase. This presents a number of concerns around consistency and quality, regulations, intellectual property, and other areas where labeling plays a role.

TRACEABILITY/PRODUCT RECALLS

Throughout the supply chain, companies need to track shipments from so many different suppliers. When each partner in the supply chain takes its own approach to labeling, traceability and the ability to quickly respond to product recalls can become problematic. In addition, relabeling efforts can cause confusion that may have dire consequences for both parts suppliers and manufacturers. In the electronics industry, counterfeiting, the sale of obsolete components, and the risk of parts that have been tampered with have become a major industry problem, resulting in critical security, telecommunications, defense, and transportation failures. Proper labeling, especially when augmented with serialization, offers better visibility into components and products as they traverse the supply chain..



Global electronics manufacturing services, from design through contract manufacture

Worldwide footprint, with 90 plants and 180,000 employees

OBJECTIVES

- Implement a labeling solution that integrates with SAP
- Increase security around transmitting data from SAP through FTP services to over 50 sites worldwide
- Provide support and file-based integration with all local MES applications
- Obtain higher efficiency in label print performance

BENEFITS

- Centralized deployment provides certified integration with SAP, reducing errors and improving efficiency
- Enhanced security through global integration of all business sites with centralized SAP platform
- Flexible deployment enables company to maintain decentralization for local MES services
- Simplified maintenance, improved the speed of creating and updating labels, and ensured labeling consistency

CUSTOMER SATISFACTION

With competition among electronics suppliers at such an intense level, suppliers need to ensure that their customers are happy. That means meeting a variety of labeling requirements: logo placement, language variations, location-specific information, country regulations, labeling that conforms to a customer's existing systems and more. For example, regional regulations may require proper format of labels, or products will be held at the border. Requirements may dictate the exact type and placement that goes on the product, box, carton, and pallet, with specifications for label size, data titles, data field identifies, and other guidelines for barcode symbologies. And requirements have to be met with fast turnaround, and are subject to rapid change as products are more quickly altered. What doesn't vary is the demand that these requirements be met consistently and in a timely fashion.

INDUSTRY STANDARDS

Electronics industry suppliers must comply with a number of government and industry regulations that govern or impact labeling. These include standards set by organizations such as the Electronics Components Industry Association, Electronics Components Association, Joint Electron Device Engineering Council, Government Electronics and Information Technology Association (now part of TechAmerica), Telecommunications Industry Association, and Consumer Electronics Association.

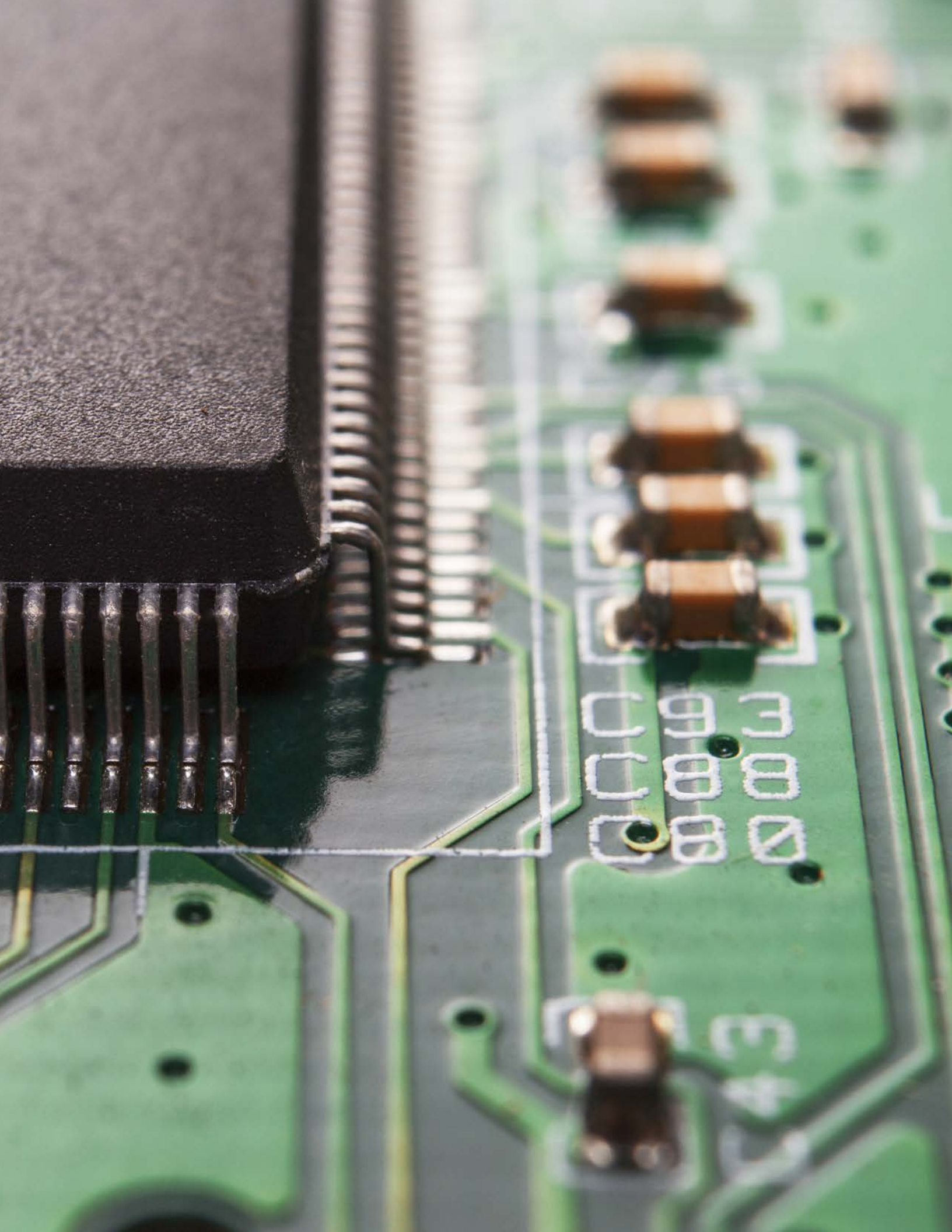
The Electronic Industry Code of Conduct is a set of best practices adopted and implemented by some of the world's major electronics and telecommunications brands and their suppliers to implement a single supply chain social responsibility code of conduct in the sector. Green Supply Chain Management has been adopted by a number of leading electronics industry companies.

Through RoHS regulation, the EU requires that electrical and electronic equipment does not contain any of six banned substances. The WEEE Directive establishes recycling and recovery targets for electric goods. The ErP Directive is aimed at reducing energy consumption of energy-using products. The EU has set other directives as well.

The cost of not addressing these strategic requirements?

With countless variations of labels, parts, and products processed each day, errors from improper labeling lead to millions of dollars in unnecessary costs and penalties each year.

Overall, labeling that's inaccurate may result in shipments stalled at customs or refused by customers, penalties incurred from governments or customers, lack of traceability, and damage to a company's reputation and its bottom line. The right labeling solution can help electronics suppliers and OEMs take on these challenges, making labeling—more than ever before—a mission-critical, strategic process.



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Global communications and information technology company

Dedicated to developing assured communications products, systems, and services for both government and commercial sectors

OBJECTIVES

- Implement a labeling solution integrated with Oracle
- Standardize labeling across multiple business units to provide greater efficiency and accommodate ability to scale
- Seamlessly support label changes to meet evolving and complex customer and geographical requirements

BENEFITS

- Able to deploy certified labeling solution which integrated with Oracle eBusiness Suite and Oracle Mobile Supply Chain Applications
- Centralized label design/maintenance function to control and distribute all label requirements across the company, reducing redundancy, assuring greater control and label integrity, and supporting growth
- Flexible business rules engine provided the agility needed to support complex customer requirements

TIME FOR A STANDARDIZED, ENTERPRISE-WIDE APPROACH TO LABELING

By treating labeling as a strategic process—and by implementing a standardized, enterprise labeling solution—companies throughout the electronics supply chain are able to make shipments more traceable, achieve consistent branding, reduce regulatory costs, eliminate data redundancy, and improve overall labeling efficiencies. The right enterprise labeling solution lets companies turn labeling into a high-value, strategic element of the overall manufacturing and distribution process

What is enterprise labeling? Enterprise labeling is an approach that integrates labeling with existing business processes to standardize and automate labeling. This dynamic, data-driven approach allows businesses to more nimbly react to evolving customer, regional, and regulatory requirements, and empowers business users to quickly and efficiently design, maintain, and share barcode labels. It also ensures consistency across a global supply chain, enabling companies to meet performance and scalability requirements with the power and flexibility to support complex, global, and high-volume labeling requirements.

Loftware Enterprise Labeling sets the standard for strategic labeling, providing a new level of visibility and control for electronics companies that delivers these benefits:

IMPROVE ACCURACY, REDUCE COSTS WITH “SOURCE OF TRUTH” LABELING

Companies have invested heavily in ERP and other systems for managing their business, complying with regulations, and preventing outright counterfeiting. Loftware sources label data directly from approved sources of truth, i.e., from key data repositories, ERP systems, and other applications. Through tight integration with systems like SAP and Oracle, you can automate and centralize labeling to improve accuracy, save time, and enable better traceability, while also reducing and often eliminating complex data replication and synchronization costs.

MEET CUSTOMER-SPECIFIC REQUIREMENTS USING A FLEXIBLE APPROACH

Organizations within the electronics supply chain are increasingly required to respond to customer and partner labeling demands for information that meets their specific needs (language, location, branding, regulatory, etc.). With Loftware’s integration with ERP, CRM, and other customer data sources, companies are able to quickly and accurately keep up with customer requirements—and ever-changing label templates—no matter how unique they may be.

DRIVE QUALITY AND EFFICIENCY WITH INTEGRATED LABEL PROCESSES

When labeling is integrated with enterprise business processes, processes are simplified and non-value-added activities are reduced. With Loftware, electronics companies can perform their critical manufacturing, packaging, and distribution tasks without having to access separate labeling systems or worry about keeping labeling synchronized with process or operational data.



Leading multinational conglomerate

With more than 330,000 employees and operations in more than 180 countries

OBJECTIVES

- Support global labeling requirements by deploying software at a single centralized location
- Implement a solution certified to work with Oracle WMS and MSCA Applications
- Enable business users to make changes to labels and support label variations due to regional, language, and customer requirements
- Deploy a labeling solution that has the reliability needed to support mission critical labeling worldwide

BENEFITS

- Trigger labeling from Oracle EBS workflow events, enabling users to leverage existing processes
- Business logic managed by different groups/regions streamlines the application languages and regulatory/customer requirements
- Support for high availability and failover meets rigorous reliability standards

RAPIDLY RESPOND TO CHANGING DEMANDS WITH BUILT-IN BUSINESS LOGIC

Loftware enables companies to rapidly respond to changing regional and international regulatory requirements for labeling, as well as to evolving demands from partners and customers. By leveraging a built-in business rules engine, you can create rules and logic that empower select users to make formatting changes quickly, in a controlled manner, without having to wait for updates to your enterprise applications. Easy-to-use design tools with a WYSIWIG interface make it that much easier for business users, not IT, to update templates as needed.

SCALE LABELING AS NEEDED

As companies expand into new markets or grow in their existing territories, they need to be able to drive a higher volume of labels. Supporting the native drivers of more than a thousand different print devices (rather than relying on Windows-based drivers), Loftware's Enterprise Labeling solutions connect directly with printers for high-speed processing that won't bog down the network. This allows customers to produce thousands, even millions, of labels faster than ever before. And because label templates are shared across the organization and changes can be made dynamically, you dramatically reduce the number of templates you need to manage—not to mention the time, headaches, and errors associated with managing so many templates.

EXTEND LABELING TO SUPPLY CHAIN PARTNERS

Full traceability requires that all nodes on the supply chain share a systematic approach to labeling.

Loftware Enterprise Labeling provides secure, remote access to label templates, so that supply chain partners can simply run off the labels as needed by the manufacturer or other supplier with the right data and information to route incoming goods more quickly. By gaining new visibility into when materials are labeled and shipped, and eliminating the need to relabel goods upon receipt, you can save thousands, even millions, of dollars on labor, material, and inventory costs.

DRIVING BETTER, MEASURABLE RESULTS WITH ENTERPRISE LABELING

In today's complex and challenging electronic supply chain environments, forward-looking companies are increasingly taking a more strategic approach to labeling. With Enterprise Labeling from Loftware, they're able to put a labeling strategy into action, and with it, they're able to reduce inefficiencies and costs, respond faster to customer and regulatory requirements, and improve the overall bottom line.

See how Loftware can help you drive similar benefits across your extended supply chain, and visit www.loftware.com and keep up with the latest industry news by subscribing to our [Blog](#).



Loftware, Inc. (www.loftware.com) is the global market leader in Enterprise Labeling Solutions with more than 5,000 customers in over 100 countries. Offering the industry's most comprehensive labeling solution, Loftware's enterprise software integrates SAP®, Oracle® and other enterprise applications to produce mission-critical barcode labels, documents, and RFID Smart tags across the supply chain. Loftware's design, native print, and built-in business rules functionality drives topline revenue, increases customer satisfaction, and maximizes supply chain efficiency for customers. With over 25 years of industry leadership, Loftware's Enterprise Labeling Solutions and best practices enable leading companies to meet their customer-specific and regulatory requirements with unprecedented speed and agility.



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