

Why Enterprise Labeling Matters

Creating New Supply Chain Efficiencies



EXECUTIVE SUMMARY

Labeling plays a critical role in every company's supply chain and is part of today's digital transformation. As business environments become more global and complex, companies need to look at labeling differently to keep pace with evolving technologies and to meet the demands of new multi-faceted, dynamic supply chains. Enterprise Labeling plays an important role in the digital transformation by creating new efficiencies both throughout the enterprise and within global supply chains by empowering companies to deal with

the nuances of today's complex labeling requirements and regulations.

Labels convey more and more critical information, such as product details, customer information, regulatory and safety information. As the number and variance of products proliferates, companies face difficulty staying competitive while still using legacy, homegrown, or disparate labeling solutions. An Enterprise Labeling approach can scale, flexibly adapt, and respond quickly to demands from customers and regulators to address the

increasing complexity in labeling.

Enterprise Labeling offers a comprehensive, standardized and integrated approach to labeling that can offer opportunities to collaborate and streamline processes, helping global companies automate, integrate and optimize their labeling with great flexibility to keep the supply chain running smoothly. Leading Enterprise Labeling Solutions allow for design flexibility, streamlining content with advanced workflow management, proofing capabilities, access to integrated data,



advanced insight into labeling activities and rapid printing across a growing global enterprise.

Companies use Enterprise Labeling to maintain brand consistency, resolve problems faster, and reduce production lags. By extending labeling processes and access to labels, enterprise can collaborate with suppliers, manufacturers, and logistics providers to eliminate relabeling, improve accuracy and drive higher efficiencies. Internally, organizations gain efficiency as Enterprise Labeling becomes a point

of collaboration across roles, including manufacturing, operations, IT, supply chain, packaging, quality control, compliance, and marketing functions.



COMPLYING WITH EVOLVING REGULATIONS

Companies need solutions that allow them to simplify the complex. Solutions to easily navigate the ever-expanding global supply chain which stretches further and connects more and more suppliers and manufacturers with an increasingly diverse portfolio of customers.

Evolving standards and regulatory requirements pose many complex challenges for today's business. Labeling regulations are an increasing concern across a broad set of industries including chemicals, food and beverage, medical





device, pharmaceuticals and many others. These requirements, which have costly consequences for noncompliance, compel companies to be precise about labeling information displayed and languages used.

Labels must reflect how products are distributed through increasingly complex supply chains around the globe. The location where a product is made and where a product is shipped further complicates labeling and determines how compliance must be achieved as each country or region has specific versions of regulatory

requirements. For example, health and safety information must be in the language of the country where a product is made and in the language of where it is shipped. Also, depending on the product, there may be requirements for a compliance logo or colored pictograms. Companies risk hefty fines, disrupting business, and may even be kept from entering new markets if they don't comply.

Enterprise Labeling allows companies to design labels that leverage business rules and dynamic labeling to support variations

in formats, barcodes, logos, languages, and content quickly and easily. It can integrate to sources of regulatory data to make sure the needs of each customer is being met throughout each part of a company's supply chain. This type of centralized label management ensures labeling consistency and that your company is adhering to regulatory guidelines throughout your company's global supply chain.

MANAGING COMPLEX CUSTOMER REQUIREMENTS

Customer requirements are also evolving rapidly as the pace of business accelerates. Labeling needs to support countless variations to manage mass label changes easily, while including more and more information on those labels. And, customers want these complex requirements met faster than before.

An Enterprise Labeling approach means automating the labeling process and using business logic to deal with extensive label variations. With this strategy, business users can leverage the labeling solution to

address any necessary changes without having to involve IT. Business leaders can deal directly with the customer to meet customer specific requirements in a timely and less intensive way, using fewer technical resources. They can dynamically manage regional, language and any customer specific requirements. Changes and updates can be made in hours rather than months so that deadlines can be met.

Centralization is really important in maximizing the value of this type of data-driven labeling. By centralizing labeling,

labeling teams use a common set of label formats across an organization, configured to be dynamically driven by label content and data. This approach drastically reduces the number of label templates, while still accounting for region, language, product, and brand information, etc. – enabling companies to move from hard coding labels to a more flexible paradigm that enables the source data to drive what's on the label.

With an integrated dynamic, data-driven approach, labels can reflect the most current content/data upstream which



does two things – enables large scale global label printing and assures label consistency. By driving labeling directly from sources of truth, companies are able to make any changes centrally and ensure that those changes are reflected in all of the appropriate labels without having to update each label template individually. The power is in the ability to refocus the time and costs spent maintaining lots of label templates towards more strategic projects.



SCALING LABELING TO MEET YOUR BUSINESS GROWTH

As global companies continue to expand their presence internationally, they must consider how to efficiently deploy and maintain labeling solutions, so they can scale seamlessly. This is essential to handle the rigors of global infrastructures, allowing users to manage outages and connectivity issues, while maintaining continuous operations using high availability, failover and disaster recovery capabilities.

As companies grow they frequently inherit labeling software that is unique to a particular location. These packaged or

homegrown applications are often siloed from each other and a central headquarters, making managing labeling on a global basis difficult if not impossible. Since these different labeling solutions do not have access to centralized content, standards or data, the result is a lack of uniformity across the organization. Unfortunately, these systems cannot address complex labeling demands and are time intensive to maintain. Although these systems might meet requirements at the local level, managing labeling across a global supply

chain becomes very difficult for a company that wants to have centralized control and labeling consistency.

While home-grown and location-specific solutions may appear cost-effective in the short run, costs and consequences can snowball over the long run. The complexity of managing these solutions combined with increasing complexities of global supply chains can result in production slowdowns, and an increased error risk.



Companies that are global in nature have different labeling requirements based on their products and the requirements of the countries and regions that they serve. These organizations face complexity related to managing printing operations across their enterprise - in different physical locations and in multiple regions. So, part of the challenge of maintaining labeling across a global operation is to understand the unique requirements in each region.

Enterprise Labeling allows companies to realize the benefits of both centralized and decentralized deployments at the same time with “multi-site” deployment capabilities. Business users at manufacturing plants, contract manufacturing sites, warehouses, and distribution centers are able to manage labeling independently when

required, while accessing standard and approved label data and templates from a company's central location. This empowers facilities to run without depending on a full-time connection to headquarters which is critical in maintaining business continuity in the case of any outages. It also helps to ensure that remote locations comply and stay current with corporate labeling standards.

One of the most substantial benefits in implementing an Enterprise Labeling Solution is the cost savings companies can achieve by not duplicating efforts across the globe. Using an Enterprise Labeling Solution allows a standardized and centralized approach with the ability to allow for localized autonomy as appropriate. In most cases, the solution can be maintained centrally but still

allow users access from around the world to log in and create a structure where they can make changes to labels as permitted, while controlling the configuration of their local label printing devices. This allows everyone to be aligned while meeting the needs for the region where they're conducting business.

When a business grows, Enterprise Labeling scales with it. By standardizing and centralizing labeling, you can add locations, increase print volume, distribute new products more effectively, and comply with new regulations quickly. Enterprise Labeling offers labeling consistency, enhances brand integrity, reduces costs and offers a single scalable solution that facilitates expansion to new global locations.

OPTIMIZING THE LABEL DESIGN AND APPROVAL PROCESS

As businesses continue to scale, new facilities, increased numbers of products, added partners and suppliers all result in an increasing number of business users needing access to labeling. And, as more users become involved, the risks of errors and the importance of accuracy reaches new heights. This makes it especially important to have visibility and control for managing labels.



Cloud-based labeling enables professionals to extend secure access to anyone in an organization or in the supply chain that needs to take part in the labeling process and business users can make changes themselves, without relying on complex IT

processes and staff. Label design is best done by the business users who understand the customer and regulatory requirements, without

complex review processes and costly IT resources involved.

With Enterprise Labeling you also can realize significant benefits by using automated workflows to manage reviews and approvals, monitor updates, and control label changes. Siloed, manual processes introduce additional cycle times and add risk to the processes of reviewing and approving labels and content. Implementing a configurable workflow framework allows you to reduce cycle times on labels from months and weeks to days. This



significantly reduces costs and increases agility when introducing new products or making major changes to labels.

Enterprise Labeling should enable high-resolution label comparison regardless

of connection speed allowing you to “proof” different versions of labels, make annotations and provide approval/rejection decisions.

Other areas to look for include full audit history of annotations and approvals and rejections for extensive KPI analysis, along with the ability to automatically compare versions and highlight the differences.

Implementing advanced workflow and label comparison capabilities is especially important for regulated industries where validation, traceability and compliance are mandated. Because users have access, organizations can automate and streamline processes across a supply chain to manage labeling smarter, faster and more effectively. By better defining and managing approvals and workflow processes, teams can eliminate bottlenecks, increase efficiencies and ensure compliance.

MANAGING LABELING CONTENT

As the amount of content (data, translations, images, etc.) and content versions required for labeling continues to increase, companies struggle with the question of where to house all of their content. Transactional and master data is most often sourced from ERP, WMS, SCM and PLM applications but many other elements that are used specifically for labels and packaging do not reside in these systems. However, these elements still need to be managed, reviewed and made available in real time for when labels

are being printed to keep the supply chain moving optimally.

Many companies are still struggling to manage content that resides in separate repositories or file systems that are not integrated with their labeling solutions. By having this data reside within the content management within an Enterprise Labeling system, companies can ensure that only approved and accurate content is being used for labeling at all times.

Enterprise Labeling with digital asset management functionality can also simplify the label design processes by providing access to pre-approved images and artwork, including regulatory items such as pictograms. A comprehensive phrase library can also be important for storing countless variations of translations offering a single source for all labeling content around the globe.

At the end of the day, whether organization's content is in an external system or in an Enterprise Labeling system, it is key





to ensure that approved content is available for real time labeling. This will help mitigate risk, improve control and compliance, and reduce the overall labeling process complexity.

A COLLABORATIVE APPROACH FOR MULTIPLE STAKEHOLDERS

As mentioned, labeling is becoming more prominent, involving multiple departments at global organizations and requiring specialized attention. Companies are standardizing on enterprise-class technologies to simplify and automate processes while improving collaboration among their many teams. When multiple departments and stakeholders all have access and can collaborate, there can be significant gains in efficiency, accuracy and time savings. Among the key areas in which labeling has a big impact:

Operations - As part of the Operations team, label professionals have a lot of ground to cover. Even the slightest delays and disruptions in one area—like labeling—quickly add up to lost productivity and lost revenue. Labeling errors slow production, shipping and receiving. Delays in label changes can lower overall productivity and a lack of insight into labeling slows response to delays and outages. Enterprise Labeling enables automation of labeling within key processes, while disparate, point-product labeling is difficult to manage and scale.

Manufacturing - As someone in charge of manufacturing, labeling professionals need to make sure everything is firing on all cylinders at peak efficiency. Any hiccups, no matter how small, can quickly add up to slower throughput and lost profits. Mislabeling or non-compliant labeling leads to extensive delays across the manufacturing space, returned product, and smaller margins. Relabeling of supplier goods impedes production changes and adds unnecessary work. An inability to adjust quickly to partner and customer

labeling needs slows downstream process. Disjointed packaging or shipping processes impede order fulfillment.

Regulatory – For those who work in a Regulatory or Compliance department, it is all about adhering to laws, regulations and standards to protect the company from fines, litigation, penalties, or worse. Strict labeling regulations are a fact of life in the chemical, medical device, pharmaceutical, and food and beverage industries. Regional requirements and increasingly global standards, which are continually evolving, affect these and other industries. Noncompliance can be costly, resulting in fines, product returns, and litigation. For companies with homegrown systems, or disconnected labeling products, managing new or evolving requirements adds complexity and increases the potential for mistakes. And, changes need to be made quickly to avoid missed deadlines.



Supply Chain – Those who work in supply chain and logistics must avoid costly delays or disruptions. And yet that's exactly what happens when a company relies on siloed, disconnected labeling solutions. Fractured processes and multiple labeling products create complexity in many ways. With Enterprise Labeling, data is integrated with other business applications and processes are simplified. Labeling changes can be made on the fly using business rules and label templates shared with suppliers and partners. One solution can be used to print packaging materials. Just-in-time goals can be achieved.

Quality - Quality and consistency are what you strive for across your global operations. And that goes for labeling, too, which has an impact on manufacturing efficiency, regulatory compliance and customer satisfaction. Centralized, integrated data



as a source of truth for Enterprise Labeling ensures both consistency and accuracy. Key stakeholders can make changes quickly and easily using business rules, which reduces or eliminates delays that can affect time to market. Label changes can be reviewed and approved using auditable workflows. An Enterprise Labeling Solution allows for collaboration with strict adherence to internal and external guidelines, resulting in fewer errors with the finished product.

IT - The team managing the IT infrastructure and applications dreads the constant phone calls, texts and alerts that interrupt and distract from the more important, strategic projects. Outdated or disparate labeling solutions create more work and inefficiency throughout IT departments. Each change by a customer or regulator, each new product introduced, and each customization means more complexity, more maintenance, and more coding updates. Ad hoc systems in different locations make it difficult and costly to maintain and scale. Using system integrators or value-added resellers takes time and resources. Standardizing on Enterprise Labeling becomes a company-wide, internal solution that reduces IT headaches, patches and costs.

Marketing - Marketing has put a lot of creative effort into creating a distinct, recognizable brand. How can you be sure that product labels—often produced

worldwide by remote plants and third-party distributors—stick to these same high standards? What does packaging say about the brand? What can a label do to enhance brand identity, from colors to consistency? Marketing teams need a labeling solution that provides consistency across regions, markets, and products, and tools that allow for input into the design and consistency of labels.

Packaging Labeling and packaging are joined at the hip, yet traditional methods of barcode labeling often fall short in meeting increased demands for speed, efficiency, flexibility and pinpoint accuracy. Labeling solutions need to keep up with automation efforts and reduce time to market while maintaining regulatory compliance. Packaging professionals also need responsive label design and review processes that meet customer expectations and are easily managed.



EXTENDING LABELING ACROSS YOUR GLOBAL SUPPLY CHAIN

Enterprise organizations operate in a global space, interacting and collaborating with business partners, distributors and suppliers worldwide. These relationships are critical and when it comes to developing a structure for collaborating across the supply chain, labeling should be considered an important component of that framework. Companies that understand this realize new opportunities, cost-savings, and higher levels of productivity.

When supply chain partners take a disconnected or siloed approach, relabeling becomes a necessity, which results in

greater downstream inefficiencies and costs. Enterprise Labeling extends labeling with partners through role-based access to a unified system that aligns processes both up and downstream. Contract manufacturers and business partners get provisioned for access and then they can remotely print labels that have been approved for their use.

This approach ensures labels are accurate and consistent while eliminating the need for relabeling upon receipt of goods. Since the data that is fundamental to labeling is securely accessible to business partners

– all participants in a supply chain can work from the same sets of requirements, content, rules, and templates.

Companies that fail to connect labeling across business partners throughout the global supply chain are missing opportunities to optimize efficiency, grow market share and increase competitive advantages. Extending secure, shared access to labeling systems can play an important part in generating value from the supply chain network.





ENTERPRISE LABELING IN THE CLOUD

Increasingly, organizations are looking for faster, less expensive ways to implement solutions like labeling software. This is why many are also looking to integrate their labeling with their cloud-based enterprise applications and, in many cases, deploy their labeling solutions in the cloud. On-premise, cloud or hybrid options give organizations more flexibility, and labeling delivered as a service, removes the maintenance time and effort that burdens an IT team, reducing costs significantly.

Businesses today are moving more of their IT infrastructures to the cloud and Software as a Service (SaaS) based deployments. This enables them to focus more on their core businesses, simplify maintenance, improve total cost of ownership and streamline their on-demand provisioning of hardware and software. Along with these benefits, a managed cloud deployment provides flexibility to scale and eliminates the need for extensive disaster recovery plans.

Cloud-based labeling simplifies maintenance and support, reduces cost and IT involvement and expands global use. However, cloud-based labeling must not sacrifice the flexibility, speed and print performance that are both essential to any labeling effort. This demonstrates the importance of deploying Enterprise Labeling Solutions that are built for cloud deployments, including remote printing capabilities that use native print drivers to optimize printing from the cloud.

With Enterprise Labeling that can be deployed on premise or in the cloud across all locations and regions, accessing centralized data and leveraging business rules, operational efficiency accelerates.



WHAT TO LOOK FOR IN AN ENTERPRISE LABELING SOLUTION

At its core, Enterprise Labeling offers a smarter, “enterprise-centric” approach to labeling. It offers the opportunity to:

Master all labeling variations – Changing customer requirements, changing regions, changing regulations and changing products all impact your labeling. These all must be met in a quick and efficient manner. Enterprise Labeling gives the power to master labeling variations by automating and applying user configurable business rules to your labeling processes. Dynamic labeling can maximize support for countless label combinations with minimum effort.

Meet customer requirements quickly - In today’s fast paced supply chain, it’s critical to be able to respond to customer labeling requirements quickly and efficiently on a global scale. Enterprise Labeling enables business users to make label changes quickly and easily, allowing you to always stay in lock step with your customers’ labeling demands.

Enable regulatory compliance - In highly-regulated marketplaces, it is critical to consistently keep pace with evolving regulations to meet global and regional requirements. Enterprise Labeling enables

compliance by dynamically generating the right labels that include the correct formats, barcodes, logos, languages, industry-specific warnings, and product information.

Integrate labeling with enterprise applications - Integrating labeling with existing business applications allows you to leverage your existing business processes and ‘sources of truth’ for label data. Certified integration facilitates automatic labeling to improve efficiency and accuracy and avoid costly mislabeling. Eliminate data duplication, streamline maintenance needs and improve the bottom line.



Empower users to create and update labels - Enable business users to create and update labels instead of relying on costly IT resources. By using browser-based and WYSIWYG (What You See Is What You Get) label design capabilities, organizations can improve the speed and efficiency of the label design process.

WHAT TO LOOK FOR IN AN ENTERPRISE LABELING SOLUTION *(cont.)*

Empower users to create custom applications

- Create browser-based applications to manage both labeling and non-labeling related business processes. Rather than creating offline or custom applications, design applications with drag and drop ease to make the development and maintenance of applications (often used for on demand printing) dramatically faster and easier.

Support high volume printing globally

- As the speed of a firm's operations increase it is key to print volumes of labels quickly and efficiently, regardless of printer or geography. Native printer drivers maximize

performance, minimize network traffic, and vastly reduce the maintenance associated with Windows drivers.

Scale labeling with ease - As business expands, look for the flexibility to scale labeling to meet new business requirements. Whether it's more locations, increased print volumes, new products, or complying with evolving regulations, corporate labeling standards must be met. Centralizing labeling helps maintain consistency, while enabling global locations to solve their unique needs.

Lean on labeling experts for success - When it comes to labeling, one size does not fit all. Labeling needs are unique whether it's your industry, regulations, customers, processes, or business applications, just to name a few. Rely on labeling experts for best practices, industry specific knowledge, tailored service and support reducing the need for costly IT resources. Look for comparable experience designing, developing and implementing the right software solutions with companies in a similar industry to address the right business situations.



THE SOFTWARE SOLUTION

The best solution starts with the right partner, and Software prides itself on being the first to uniquely address the full spectrum of labeling requirements across a broad range of industries. Software's comprehensive digital platform addresses all of your labeling needs and offers onsite system consulting, integration, product support, customer care and maintenance programs for all our customers globally. Our success over the years is a testament to our dedicated employees who maintain the expertise to quickly develop solutions to meet any customer or market demands.

Software is certified on both SAP and Oracle and has extensive experience with other ERP systems used in supply chains today. We deliver labeling solutions designed to meet the specific needs of your industry and your market. Unlike other companies, Software prefers to utilize your existing technology and to implement a comprehensive, configurable and cost-effective solution around it. Our highly trained experts have extensive industry experience in supply chain methodologies, product lifecycle

processes, Enterprise Labeling best practices, and in enterprise technologies. Over thirty years of experience with over five thousand of the largest companies worldwide means Software can fully understand your challenges and shows you how to overcome them.





Loftware is the world's largest cloud-based Enterprise Labeling and Artwork Management provider, offering an end-to-end labeling solution platform for companies of all sizes. Maintaining a global presence with offices in the US, UK, Germany, Slovenia, China, and Singapore, Loftware boasts over 35 years of expertise in solving labeling challenges. We help companies improve accuracy, traceability and compliance while improving the quality, speed, and efficiency of their labeling. As the leading global provider of Enterprise Labeling and Artwork Management, along with Clinical Trials Labeling and Content Management, Loftware enables supply chain agility, supports evolving regulations, and optimizes business operations for a wide range of industries. These include automotive, chemicals, consumer products, electronics, food & beverage, manufacturing, medical device, pharmaceuticals, retail, and apparel.



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