INTEGRATE ENTERPRISE LABELING WITH ORACLE®
TO OPTIMIZE YOUR GLOBAL SUPPLY CHAIN

WHY INTEGRATING LABELING WITH ORACLE® MATTERS
EXECUTIVE SUMMARY

Today's global supply chains are more complex than ever. To manage their dynamics, and stay ahead of the competition, leading companies have turned to Oracle® to optimize their supply chains. Oracle offers a comprehensive and fully integrated stack of cloud applications, platform services, and engineered systems to maximize efficiencies and achieve healthier top and bottom lines. These forward-thinking organizations also recognize that labeling plays a direct role in achieving these results.

Businesses choose Oracle because of its ability to meet the requirements of a global enterprise, which include a range of capabilities, scalability, reliability, and availability. Allowing organizations to drive their business processes through Oracle means that companies are better able to meet their global operations and supply chain requirements.

The best way to manage labeling in today's complex supply chain and Oracle environment, whether it's on-premise with the E-Business Suite or in the Cloud, is to integrate with an Enterprise Labeling Solution (www.loftware.com/Oracle). This allows you to leverage the power of applications such as Oracle Warehouse Management System (WMS) and Mobile Supply Chain Applications (MSCA) to source label data without having to alter your existing business processes. It allows them to standardize and offer consistency throughout their operations, while maximizing existing investments and eliminating the need to retrain users. The approach replaces multiple, disparate, locally controlled data sources with data from Oracle to prevent data replication to other sources and eliminate labeling errors. It also removes the need for countless permutations of label templates.

Still, some companies are challenged with how to manage labeling at the site level. When departments, plants and geographic locations manage labeling on their own, existing needs can be met temporarily but eventually challenges ensue. These challenges include greater potential for errors, regulatory problems, and higher costs to maintain multiple systems, language difficulties and branding confusion. However, Enterprise Labeling can provide the opportunity to standardize on a single labeling platform that supports continuous local operations, while providing central control over label data that is vital to maintaining labeling consistency and accuracy across global operations.

There are many benefits that organizations that run on Oracle realize when integrating with an Enterprise Labeling Solution. Those organizations are able to leverage the value of their Oracle deployment more fully to meet the requirements of a global enterprise while drawing on Oracle as a source of truth. Ultimately, integrating labeling with Oracle allows these companies to standardize labeling for accuracy and consistency, enabling them to respond quickly and efficiently to customer and regulatory requirements while also dramatically cutting costs, simplifying maintenance and improving time to market.
This paper takes a look at today’s supply chain pressures and explains how Enterprise Labeling can seamlessly integrate with your Oracle platform to bring your company’s labeling to the next level and make a measurable difference for your business. It also touches on some of the pitfalls of managing labeling at a local level.

LEVERAGING ORACLE® FOR A COMPLEX GLOBAL SUPPLY CHAIN

To better run their enterprise, and better manage their supply chain that is so central to enterprise success, many organizations turn to Oracle for both on-premise and Cloud solutions. Either way, they rely on Oracle to provide a unified solution that integrates their processes across a global supply chain.

Organizations that want to leverage investments in their Oracle systems are recognizing that labeling plays a critical role in the production and distribution of their products as well. Barcode labeling solutions, which today entail much more than just the printing of barcodes, can be fully integrated with key Oracle processes to effectively and efficiently manage labeling across the supply chain, and throughout the product lifecycle. Done correctly, labeling plays a big part in helping an organization meet customer and regulatory requirements, increasing time to market and cutting costs.

Throughout the supply chain, the pressure is on. In the decades since Oracle began helping supply chains run more efficiently, there have been numerous trends that have had a profound and direct impact on global supply chains. Overall, supply chains have increased in complexity. There are more suppliers to connect and collaborate with throughout the supply chain. Outsourced manufacturers are often part of the overall mix. With more nodes within the supply chain network, organizations require greater visibility and transparency into what’s happening at what location. They need access to more systems, and to more consistent sources of data.

Additionally, globalization has made a significant impact. Today’s supply chains are worldwide, which means meeting a host of customer and regulatory requirements. There also are many language requirements, which makes a significant impact on labeling and worldwide business processes. Additionally, each region may maintain different production processes and each border crossing may mean a different set of regulations for compliance. Adhering to regulations that define how products are developed, marketed, shipped, and disposed is essential to avoid fines, retain customers, enter new markets, and in some cases, stay in business.

Across the globe, these regulations are continually evolving, and may be sprung on suppliers with short notice. Industry-specific regulations are also growing in importance, and they are often directly related to labeling. Some of
the pressing regulations impacting businesses today include:

- The UN’s Globally Harmonized System of Classification and Labeling of Chemicals (GHS)
- The FDA’s Unique Device Identification (UDI) system impacting medical device suppliers
- The FDA’s Drug Supply Chain Security Act (DSCSA) requirements affecting the pharmaceutical industry
- The Global Transport Label Standard (GTL), which was designed for the automotive industry
- The European Union’s EU1169, which stipulates a variety of areas where mandatory information must be present on food package labeling
- The Restriction of Hazardous Substances or (RoHS) compliance for electrical or electronic products

Globalization and the increasing volume of regulations and standards across industries are not the only trend effecting supply chains. With heightened competition and the entry of ever-lower-cost competitors, price pressures are tremendous. Customers are demanding a higher level of responsiveness and accelerated delivery times that enable them to keep up with markets that can change in a moment’s notice. Many customers are ordering smaller (and often more customized) lots, and are more focused on being supplied on a “just-in-time” basis. The days of carrying large inventories are gone, and organizations look to reduce inventory buffers. In competitively charged markets, customers maintain significant influence and they want to work with suppliers that can address their specific needs on a timely basis.

Throughout the supply chain, greater efficiencies, more flexible support for a wider range of variability, and higher quality are being demanded. This is where Enterprise Labeling helps manage the pressure. When it comes to achieving greater efficiencies, more flexibility and higher quality, labeling plays an essential role. It results in improved traceability, the elimination of mislabeling, fewer issues encountered by customs, and fewer fines for non-compliance. However, when done correctly to begin with and integrated with Oracle business processes, accurate labeling reduces the need for time-consuming and costly relabeling.

THE VALUE OF ENTERPRISE LABELING INTEGRATION WITH ORACLE®

In addition to the overall benefits an Enterprise Labeling Solution provider can offer – the ability to respond more quickly to customer demands, the efficiencies that standardization brings, and the ability to meet compliance requirements, among others - there are many benefits that Oracle-based organizations realize when deploying an Enterprise Labeling solution that integrates to Oracle.

MEET ENTERPRISE-CLASS REQUIREMENTS

Organizations drive all of their business processes through Oracle. They choose Oracle because of its ability to meet the requirements of a global enterprise: the wide range of capabilities, scalability, reliability, and availability that Oracle
A robust Enterprise Labeling Solution that integrates with your Oracle environment enables an organization to leverage the value of their Oracle deployment more fully. This type of labeling solution drives labeling directly from your Oracle environment via an OVI certified solution that is validated with Oracle’s E-Business Suite and is designed to support a global deployment. It is able to scale easily as an organization’s needs grow, whether it’s adding new locations or increasing daily production runs to meet increasing demand. Another aspect of scale is the ability to communicate across an organization’s full printer landscape, which may include thousands of different printers – all of which need to work with a centralized labeling solution. It must be able to perform reliably on a day-to-day basis, and offer the degree of availability that will protect an organization from business interruption stemming from labeling system failures.

**DRAW DATA FROM THE SOURCE OF TRUTH**

One of the greatest single advantages to using an Enterprise Labeling Solution that integrates with Oracle is that labeling draws on a source of truth from centralized repositories including master data that an organization has invested heavily in and which is the most vetted information in the organization. Whether its transactional data from inventory, order, or shipping processes or warning data, drawing on a source of truth offers consistency and is far more efficient than having multiple, possibly duplicative, sources of data. More importantly, it eliminates many of the issues associated with local approaches to labeling (e.g., manual data entry problems).

**MEET HIGH VOLUME GLOBAL PRINT REQUIREMENTS**

Implementing an Enterprise Labeling Solution with high volume global printing capabilities allows companies to optimize their investment in printers, maximize print performance and scale globally. This means that as your global supply chain scales, your labeling infrastructure can print natively to devices and printers in as high a volume as needed, an approach that encourages consistency and reduces network traffic while allowing the required variability. Companies can extend these native print capabilities throughout their enterprise from their Oracle systems. Access to native printer drivers reduces print streams to minimize network traffic, optimizes print performance and limits maintenance to meet these high volume requirements. In short, printing natively to printers or devices enables companies to meet the performance and scalability requirements of a global supply chain.

**DRAMATICALLY CUT COSTS AND SIMPLIFY MAINTENANCE WITH LABELING BUSINESS RULES**

An Enterprise Labeling Solution with a business rules engine provides customers with ultimate labeling flexibility. A configurable business rules engine removes the need to write code or rules that can only be used within Oracle and apply to Oracle specific data. This type of dynamic, data-driven labeling also enables an organization to dramatically reduce the number of label templates required. Rather than having to develop a separate template for each labeling instance, with Enterprise Labeling, an organization can create a small number of templates that includes variables. Through these variables, an organization can dynamically alter label content to reflect differences in images, warnings, languages, etc. Business users can perform label changes and this can happen without IT involvement since there
is no coding required. Through business rules, an organization can also establish processes that print multiple and different labels from a single request, pull data from multiple data sources, and automatically select printers.

**IMPROVE CUSTOMER RESPONSIVENESS AND TIME TO MARKET**

Customers continually request labeling changes. While they want to respond quickly to their clients, Oracle business users are challenged by waiting for expensive technical resources to free up so that these resources can create needed label changes. Even if the change is made quickly, business users – and their customers - may have to wait for the next release window to update their Oracle production instance with the new label templates. With the right Enterprise Labeling Solution business users have the flexibility to easily create and maintain labels for their Oracle environment. The ability to design even the most complex labels empowers users to make changes to labels in minutes instead of weeks or months.

**THE CHALLENGES OF MANAGING LABELING AT THE LOCAL LEVEL**

Despite its potential to help organizations operate their supply chains more efficiently and effectively, labeling is often handled in the same way it has always been done: with each node on the supply chain, each department, each plant, each geographic location having its own processes, many of which are manual. Although it may seem to meet the company's existing needs, this approach generally has pitfalls. Each solution may well fit the specific, pinpoint requirement of each location. For example, Toledo, Ohio will have specific needs that differ from those in Singapore. Yet by operating in this mode, organizations are losing out on an opportunity to become more efficient and opening themselves up to significant problems.

An Oracle environment works across an enterprise, providing company-wide access to business applications and data that improve effectiveness and efficiencies. However, when labeling isn't handled in the same manner, problems occur. When organizations handle labeling on a local level, with each location being allowed to deploy its own unique solution rather than standardizing and automating across their enterprise as they’ve done with Oracle, issues always ensue. Those may include:

- Greater potential for errors: Each time data is entered manually and whenever an organization relies on tools (such as spreadsheets) not specifically built for labeling, the likelihood that errors will occur increases dramatically. Sometimes errors are introduced at the local level when someone is unaware that a change that impacts labeling has been enacted at the corporate level.
- Regulatory problems: Mislabling is a frequent cause of regulatory compliance issues even for companies using Oracle. With new regulations emerging continually, a local organization may lack the ability and compliance expertise to keep on top of all the changes required to provide accurate labeling. Adhering to
these regulations that define how products are developed, marketed, shipped, and disposed of is essential for all corporate facilities, including remote locations, but this can be challenging without access to label data that is maintained centrally.

• Higher costs to maintain multiple systems: Lack of labeling standardization means that organizations, even those using Oracle, spend more time and money on systems maintenance. Especially with legacy or manual approaches to labeling, there may be just one person with expertise with the system. If this person leaves, institutional knowledge goes with them, putting labeling continuity at risk. Additionally, legacy labeling may involve coding changes, and new labels may take considerable time to come on line, as they may have to be scheduled to coincide with release windows.

Overall, a lack of standardization often leads to mislabeling, which can be costly for any organization – even those using an Oracle environment. Shipments may be impounded at customs or refused by customers. Fines may be levied by government entities. There may be contractual customer penalties, and ultimately business may be lost.

**HOW INTEGRATING LABELING WITH ORACLE® CAN HELP**

The best way to manage labeling in today’s complex supply chain environment is to integrate an Enterprise Labeling Solution with enterprise applications such as Oracle. Enterprise Labeling means using Oracle as a source of truth, enabling customers to view the organization’s labeling process globally, taking into account the full breadth of the labeling landscape. It means replacing disjointed, often manual, processes with a standard, consistent, solutions-based approach, which triggers labeling directly from the Oracle business environment. It means replacing multiple, disparate, locally controlled data sources with data from centralized trusted Oracle sources.

The case for enterprise barcode labeling is compelling. With the right Enterprise Labeling Solution, organizations benefit from:

**1. CUSTOMER RESPONSIVENESS**

One reason why organizations select Oracle to run their supply chain is that it enables them to provide “faster-than-fast” responsiveness to their customers. These customers, as well as manufacturing partners and others along the supply chain, are also looking for immediate action to respond to their labeling requirements – requirements that are more demanding and variable today than ever. Being able to respond to customer labeling demands can give an organization a competitive edge. When an Enterprise Labeling Solution is integrated with Oracle, business users have access to the label creation or design process so any requested label changes can be made quickly.
2. COMPLIANCE WITH REGULATIONS AND INDUSTRY STANDARDS

An Enterprise Labeling Solution, employing a powerful business rules engine integrated with Oracle applications enables companies to manage the most complex, regulatory labeling requirements. This integrated solution enables companies to extend labeling across their enterprise, which adheres to global regulations that define how products are developed, marketed, shipped, and disposed. This allows these companies to avoid fines and enter new markets without lingering concerns regarding maintaining compliance and meeting industry standards.

3. STANDARDIZATION

Standardized labeling across the global supply chain provides labeling consistency and seamless IT oversight, and solves a multitude of problems — mislabeling, relabeling, and more—regardless of the number of global locations. This increases productivity, while helping eliminate the costly errors associated with ad hoc, homegrown solutions. When Enterprise Labeling is integrated with business applications like Oracle, the result is improved label accuracy. Further, this integration capability allows companies to maintain existing systems and user interactions, while automating for efficiency. Enterprise Labeling also simplifies systems maintenance and deployment, lowering overall IT costs.

4. SPEED

Many organizations are retooling with new technologies – the Internet of Things, RFID, advanced analytics, robotics – that enable them to run a fast-paced, real-time supply chain. This is speeding up production, and labeling needs to keep pace. The pressure is on for suppliers to improve the efficiency, quality, and time to market. An Enterprise Labeling Solution integrated with Oracle business process can prove to be a means to these ends. This type of integrated approach to labeling can provide organizations with the ability to rapidly and dynamically manage labeling and support the extensive variability brought on by the global complexity of products, new technologies, geographies, languages, and standards.

5. COST MANAGEMENT AND MARGIN MAXIMIZATION

Today, enterprises are attempting to streamline the flow of products and information across channel, network, and organizational boundaries to create flexible and demand-driven supply chains—while also meeting their profitability objectives. Enterprise Labeling integrated with Oracle business processes makes it easier to update labels, avoid costly mistakes that lead to relabeling and returns, and meet regulatory requirements. Also, while Enterprise Labeling can tangibly improve your bottom line by introducing greater efficiencies into the supply chain, it can help grow the topline as well. Suppliers that are able to quickly respond to customer requirements are more likely to retain their customers. They can also showcase their labeling capabilities as a competitive differentiator.
6. BUSINESS CONTINUITY

Natural and man-made disasters - whether storms, floods, fires, or geopolitical unrest - can wreak havoc with a company’s supply chain and have significant financial consequences. Organizations with manufacturing and distribution facilities around the globe need to ensure a continuous flow of goods without interruption. However, when it comes to business continuity, companies most often think about manufacturing and shipping, while frequently overlooking an essential element—labeling. Enterprise Labeling can facilitate the planning and execution of labeling in challenging manufacturing environments. Companies must be able to rapidly shift label production from one facility to another, while leveraging the correct data from their centralized Oracle application to avoid disruption to the supply chain.

The bottom line is that today’s global organizations need to manage variability across multiple customer segments and regions to meet the rigors of the customers' global requirements, including variability in languages, data, images, and formats. Enterprise Labeling can proactively and quickly accommodate the widest range of customer requests with automated, integrated, optimized, data-driven labeling. When an Enterprise Labeling Solution is specifically designed to integrate with Oracle – to have labeling triggered directly from the business application - organizations achieve an unprecedented level of speed, flexibility and power to create, manage, and print mission-critical barcode labels across the global supply chain.

LOFTWARE’S FULLY INTEGRATED LABELING SOLUTIONS FOR ORACLE®

Loftware (www.loftware.com) enables enterprise class companies to leverage a single source of truth for labeling via an Oracle pre-built, certified integration. Loftware’s solutions are specifically designed to integrate with Oracle to offer an unprecedented level of flexibility and power to create, manage, and print mission-critical barcode labels across the supply chain. These solutions, enabling customers to integrate labeling processes with business processes, allow companies to take advantage of their existing investments in enterprise applications. Loftware solutions are designed to meet complex labeling requirements across global enterprises without having to modify code or alter existing business processes.

For more information on Enterprise Labeling, including integrating your labeling with Oracle, download our free Special Report (www.loftware.com/resources) co-sponsored by VDC Research today. If you’d like to speak directly with a Loftware expert to find out how global companies are leveraging Loftware's Enterprise Labeling Solutions with Oracle visit www.loftware.com/contact.
An Enterprise Labeling Solution, employing a powerful business rules engine, integrated with Oracle applications enables companies to manage the most complex, regulatory labeling requirements.
An Enterprise Labeling Solution, employing a powerful business rules engine integrated with Oracle applications enables companies to manage the most complex, regulatory labeling requirements.
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 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.