NiceLabel

NiceLabel White Paper

Adopting Next Generation Labeling Technology Enhances Enterprise Agility and Reduces Costs

Introduction

The new generation of label management solutions gives many enterprises a strong opportunity to reduce costs, improve agility and reduce the risk of production shutdowns and non-compliance with labeling requirements. These benefits are delivered because modern label management solutions enable organizations to consolidate and automate redundant label development and maintenance tasks that today are typically carried out by a variety of developers and operations staff at each facility that produces labels.

Labeling is frequently considered a background process that doesn't get any attention until it causes a problem. As a result, bar code and RFID labeling practices and software have become dated at many enterprises, and have not kept pace with changing business needs. Migrating from decentralized labeling to a modern, centralized solution generally helps organizations in four ways:

> **Improves agility** by reducing the time needed to create, maintain and update label files, introduce new products and respond to customer requests. Enterprises that convert from decentralized labeling often find thousands of redundant label files that can be eliminated and consolidated into a few consistent templates;

> **Raises quality** by preventing inconsistency and eliminating latency from exchanges with enterprise systems; enhanced quality also helps prevent shipping delays and production line shutdowns that result from labeling errors or system failures. Tighter control prevents mislabeling, which reduces the risk of recalls;

> **Reduces direct and indirect costs** by lessening the labor, time and expertise required to maintain label formats, make changes and create new labels. Indirect savings come from reduced labeling errors, improved compliance and better brand consistency;

> **Enhances collaboration** with business partners by making the enterprise more responsive to change requests and by enabling advanced labeling techniques that can help deter diversion and counterfeiting.

Enterprises are continually looking deeper into their operations and farther across their supply chains for opportunities to become more efficient. Often, they need to look no farther than their labeling processes for opportunities to improve responsiveness and reduce costs. This white paper will identify the hidden costs, inefficiencies and risks resulting from legacy operations and explain why a modern label management platform is well suited to current enterprise needs.

The Current State of Enterprise Labeling

Enterprises don't have different accounting standards for each office or department, and do not give their salespeople the freedom to choose which CRM system they will use to support their individual accounts. Yet they often allow inconsistency in their labeling operations, and are not aware of the costs and problems that inconsistency creates.

It is common for each distribution center, factory or other facility within an enterprise to produce its own labels for shipments, inventory control and other processes. Each facility typically has several different label printers,

maintains a library of label templates for the internal processes and customers it supports, and may have its own label design and management software. That leads to thousands of possible configurations, even for labels for shipments sent to the same customer. Consistency suffers because different software packages and printers treat bar codes, fonts, graphics and other label elements differently. The enterprise may not be aware of these inconsistencies because each facility only sees the labels it produces. Customers, however, would likely notice the inconsistency from their supplier.
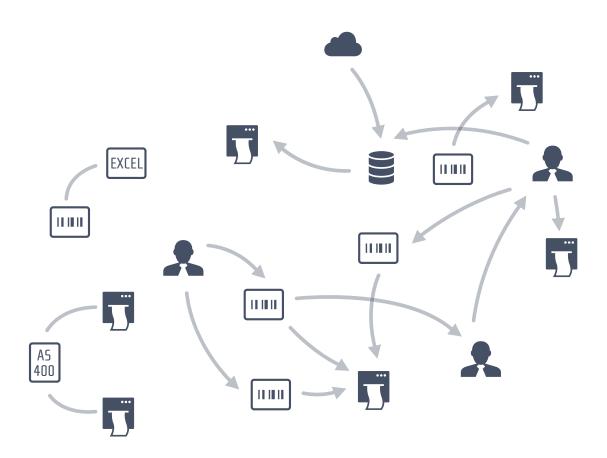

FIGURE 1

A TRADITIONAL, DECENTRALIZED ARCHITECTURE TO MANAGE ENTERPRISE LABELING. WITH DIFFERENT USERS AND PRINTER TYPES AROUND THE WORLD ALL CREATING, MANAGING AND STORING THEIR OWN LABEL FILES, AND ACCESSING DIFFERENT DATABASES AND OTHER ENTERPRISE SYSTEMS, WHAT COULD GO WRONG?

Decentralization also adds time and cost to labeling operations. Consider what would happen at a company with decentralized labeling whose customer requested a change to the labels on its shipments. Such requests frequently arise because it is common for customers to require a new data field for their shipping labels, change the size or location of a bar code symbol, or require a different font and larger point size for human-readable information.

› If the supplier company does not maintain a centralized label template library (which is likely when labeling operations are decentralized), every facility that ships to the customer would have to update its label templates. The process may need to be repeated within a facility to account for different printer types and different facilities around the world would simultaneously be working on label updates. The redundant effort drives up the labor component of total cost of ownership for the labeling system.

› As an alternative to redundant redevelopment, enterprises could opt to have each facility send their label templates to an in-house specialist for revision. This practice results in long lead times for change requests. Long lead times aren't conducive to the degree of enterprise agility that modern supply chain collaboration requires.

› Regardless of where labels are modified or created, the process may require scripting. Scripting is time consuming, requires specialized knowledge and is expensive if it is outsourced to a contract software developer or systems integrator. The more label printers and enterprise system interfaces that need to be accounted for in scripts, the more expensive and time consuming the development becomes.

› If the decentralized labeling systems are not all integrated to the enterprise resource planning (ERP) system, the organization is at risk of including inaccurate variable data or ship-to instructions on its labels.

› Without centralization it is difficult to synchronize changes across the enterprise. Organizations need to put strong processes in place to make sure changes are made and to ensure workers at every facility use the latest label revision. The more label versions that are created and stored around the world, the greater the risk of mislabeling. Mislabeled products are a leading cause of recalls.
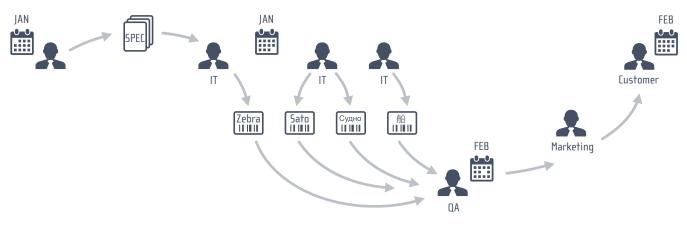

FIGURE 2
FIRST GENERATION LABELING SYSTEMS ARE INEFFECIENT AND EXPENSIVE

Inconsistency & Risk

Decentralized labeling also adds risk to production operations. An ERP system is supposed to provide "one version of the truth" to business users, however at many organizations there are as many versions of the truth as there are labeling locations. That is because in decentralized operations, each facility may develop its own interfaces to the ERP and other enterprise systems that provide the data (customer addresses, order numbers, etc.) used in labels. This approach can cause latency and introduce inaccuracies that reduce overall enterprise data quality, and could cause errors in labels.

Decentralization invites inconsistency, and inconsistency raises the risk of errors and non-compliance. See the sidebar to learn about how a medical products manufacturer improved its compliance processes by migrating to a modern labeling management system.

Consistency is important even when compliance is not a concern. In the current era where customers have more choices and less loyalty than ever before, businesses are investing heavily to develop their brand image. Inconsistent and low-quality labels, logos and other graphics undermine these efforts and do not reflect well on the brand.

There are many drawbacks to decentralized labeling and no real advantages. Enterprises don't set out to decentralize and build added cost and time into their processes. Instead, inefficient practices tend to develop over time because enterprises have not had the tools to be able to manage labeling strategically and thus do not set policies and strategies to guide their various facilities.

Benefits to Modernizing by Centralizing

The modern generation of centralized labeling solutions can give users the timely access and flexibility they need at the local level while ensuring consistency across the enterprise. Modern systems maintain a single version of each label file and make the file easily accessible to the people and systems that need it, regardless of their location. This approach eliminates inconsistency (and thus reduces errors and the risk of non-compliance) while improving control for label system administrators and convenience for users.

The following sections explain how a modern, centralized labeling system enhances agility and quality, reduces costs and promotes better supply chain collaboration.

Case in Point

A global health care company that sells internationally reviewed its operations and learned it was spending many man-hours updating its product and shipping labels in response to changing FDA 21 CFR part 11, Unique Device Identification (UDI) and Global Trade Item Identifier (GTIN) regulations in the U.S., and many other compliance marking requirements for the other countries and regions where it does business.

The company reviewed its labeling operations, saw an opportunity to consolidate its thousands of existing label files into a series of templates, and reduce the time required to customize and update labels by centralizing and automating the process. The company implemented a modern label management solution that has cut 15 to 20 minutes from the time required to set up each print job, has improved data quality by providing a single, tight integration to the ERP system, and has greatly reduced the effort needed to comply with FDA CFR part 11 and other regulations.

See the complete case study at
nicelabel.com/solutions/case-studies/
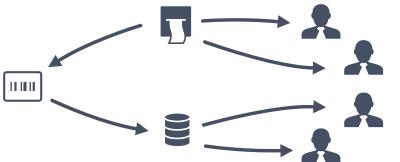healthcare-case-study

FIGURE 3:

A MODERN, CENTRALIZED LABELING ARCHITECTURE SUPPORTS MULTIPLE USERS IN DIFFERENT LOCATIONS WHILE ENSURING CONSISTENCY AND PREVENTING MULTIPLE INSTANCES OF THE SAME LABEL FORMAT.

Improved Agility

By eliminating redundancy, centralized labeling systems make enterprises much more agile for accommodating change requests and creating label templates to support new products or onboard new customers. While the time, effort and level of expertise needed to create and modify label templates depends on the specific solution that is used, there are products available that automate most of the process. Such solutions make it easy for business users without programming or ERP expertise to create labels by using wizards, drop-down menus and drag-and-drop graphical interfaces. A modern labeling system can also embed the capability to print bar code and other labels from any application like any other print job, without extra steps or specialized user knowledge. For example, when order picking is finished, the shipping label can be printed automatically without user intervention.

Unlike scripts, label templates created with modern enterprise labeling solutions are printer agnostic. That means they do not need to be redeveloped for every different make and model of printer they will be output from. Universal printer support is a valuable feature because many organizations have different brands of printers installed, especially after a merger or acquisition.

With modern label design and management solutions and the built-in controls they provide, non-technical workers can create new label templates in a few hours or less, which compares to days to develop templates when printer command scripting is required.

Centralized labeling also improves agility because in a sense it decentralizes label development responsibility. With modern systems, developing label templates and integrating the files with enterprise systems that provide the necessary data no longer have to be done by programmers or ERP system administrators. Modern systems are so easy to use that workers in the shipping, production, quality assurance, marketing and other departments can create labels as needed. That makes the IT department more available to work on higher value-added projects. It also improves responsiveness, because the enterprise doesn't have to depend on IT availability to accommodate customer requests.

Analyst View

"Because of the international expansion of companies in sectors such as food & beverage and consumer products, together with their need to meet multiple regulatory requirements in multiple environments simultaneously, it has become increasingly complex to coordinate all of the data management that is needed for efficient and compliant label management…It is essential [to] find better ways of scaling their ability to manage that data, as well as having visibility of all applicable regulations and what may recently have changed. A lot of companies have relied on home-grown applications for managing all of this data, but the use of such systems can become ineffective because the size and complexity of the data they are expected to manage simply becomes unmanageable."

JANET SULESKI Research Director for Supply Chain & PLM

Gartner.

Quoted in Logistics Handling
nicelabel.com/resources/
files/doc/MLIT-June-2014.pdf

To evaluate whether a next-generation labeling solution could improve your organizational agility, consider the following questions:

› If a customer requested a change to its shipping label format today, when would you be able to begin shipping products using a new label that had been developed, tested and delivered to all the users/locations that might need it?
› How often do labels need to be updated?
› Who does the redevelopment? Can it be done in house, or is it outsourced?
› What is the process and how long does it take to create a label to support a new customer or product?
› Approximately how many hours are spent each year developing and maintaining label files?
› If the ability to print labels is disrupted, how are production and other operations affected?

Improved Quality

One of the simplest and most powerful ways centralized labeling improves quality is by eliminating the need for manual and redundant data entry at multiple facilities. There is only one version of each label template, which is stored at a central location, maintained via a browser and shared wherever needed. This helps ensure proper integration to host systems (e.g. ERP, database, order management, etc.) and prevents the problems that result from latency and duplicate data entry. Centralizing and automation also reduce interaction with label files, which significantly reduces the chance of human error.

A multinational pharmaceutical company calculated that it saved hundreds of hours per year from streamlining the label approval process by converting to a centralized, browser-based system that eliminated redundant label files (access a complete case study about the project [here](nicelabel.com/solutions/pharmaceutical-and-medical/pharma-cases).

nicelabel.com/solutions/pharmaceutical-and-medical/pharma-cases

At the enterprise level, centralization produces consistency. There are no differences in how labels are created from user to user and from facility to facility, and how they appear when output by different printers. Consistency is essential for maintaining compliance. Consistency also helps satisfy customers that keep sup-

plier scorecards, as it helps ensure shipments are labeled according to customer specifications and can prevent other problems that can cause companies to miss shipment deadlines or perfect order requirements.

A central library also makes it easier to secure label files, which helps in the fight against product counterfeiting and diversion. Ideally, a centralized system will provide multiple levels of role-based security so users can access only the files they need and cannot make changes to templates without higher-level review and approval.

To evaluate whether a next-generation labeling solution could improve your label and data quality, consider the following questions:

› Approximately how many label formats does the enterprise currently have?
› Are there multiple versions of the same label at different facilities?
› What is your confidence level for the label data quality?
› What quality control processes are in place to ensure consistency in label quality and adherence to customer and regulatory requirements?
› Does label redevelopment require changes to the ERP software?

Cost Reduction

Improving quality and reducing redundant effort produces immediate and sustainable operating cost savings. The clearest way that centralizing labeling operations reduces cost is by eliminating the need for redundant effort. Centralization also supports business continuity. If local systems go down, the location retains access to label files as long as there is an Internet connection available – labeling operations can even be run remotely or transferred to a different location.

For midsize and larger enterprises, the ability to consolidate label files and templates at different locations presents a tremendous cost savings opportunity. It is not unusual for enterprises to have thousands of individual label files across all of their facilities, including dozens of duplicates to serve the same customer. It is also common to have label files created in different software packages, and to pay licensing fees for each. Centralization allows organizations to eliminate duplicate label files, and avoid the hundreds of hours and hundreds of thousands of dollars in costs associated with maintaining them. Eliminating unneeded files also reduces the chances of mislabeling and associated recalls. Plus, reducing the amount of label files saves time when setting up label production and enables faster printer output, which provides additional value from time savings.

Besides reducing the amount of labor required to develop and maintain label formats, modern systems can significantly reduce the rates that enterprises must pay for the effort. Some (but not all) solutions automatically manage interaction with host systems and have certified interfaces to specific ERP, WMS and other enterprise systems. Modern systems replace the customized coding associated with earlier-generation labeling management solutions with a configuration-based approach that automates the complex back-end

integration. These modern solutions can be integrated quickly and allow anyone with basic PC skills to create and update label files that may integrate with database, order management and inventory control systems. Most systems in use today require a much higher skill set to integrate and modify because they rely on printer command scripts. The IT specialists that develop these scripts and maintain these labeling systems are paid at a much higher rate than the PC operators that can run modern, automated systems.

A centralized labeling solution often also reduces enterprise costs by simplifying software licensing. Instead of having to buy and maintain licenses for multiple products used at different locations, enterprises can consolidate to a single solution and license.

Here are some questions that will help organizations determine the cost reduction potential from upgrading to new-generation labeling solutions:

› How many different facilities produce or use labels for shipping, inventory control and other processes?
› How many software applications are used to produce these labels?
› How many individual label files does the enterprise have? What is the consolidation potential?
› How many people are involved in creating, updating and printing labels?
› Approximately how many hours are spent each year developing and maintaining label files? What is the average hourly rate for this labor?
› Does the organization incur fines or deductions when labels do not meet customer requirements?
› Could mislabeling result in the need to recall a product?
› What is the competitive or customer service value of being able to deploy new labels faster?

Improved Collaboration

Centralized control over labeling supports enterprise efforts to become more collaborative with their supply chain partners. Because labels are easy to create and share, organizations can encourage their suppliers to use a standardized label format. An organization can create its preferred label templates with minimal effort, and make them available to suppliers and other trading partners through a browser interface. That promotes consistency in how inbound materials are labeled, which enables organizations to make better use of automated data capture technologies like bar code or RFID to automate their receiving, putaway and inventory management processes. The consistency and control gained by centralizing managing label formats used by suppliers also helps deter product counterfeiting and diversion in the supply chain.
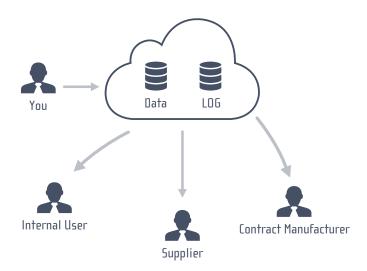

FIGURE 4:
SIMPLIFIED LABELING IMPROVES COLLABERATION

To determine if improved labeling collaboration would help the enterprise, consider:

› Could you improve customer satisfaction or gain a competitive advantage by responding to changing customer or compliance labeling requirements more quickly?
› Would it be beneficial to give suppliers secure access to a standard label format for shipments made to the enterprise?
› If you save time for developers and others that currently maintain labels, how could the time be used to benefit the organization?

Conclusion

Labeling operations are often overlooked in the drive to improve business operations. Centralizing labeling operations gives enterprises the opportunity to improve label quality, accelerate speed of execution and improve responsiveness to customers and supply chain partners. To attain these benefits, organizations need to change their processes and migrate to a modern labeling management system.

Despite the need to change, enterprises typically save money by making the migration because centralized labeling provides a lower long-term cost structure. It eliminates the need for redundant effort, lowers the cost basis for creating and maintaining label files, and by reducing the time needed to develop new labels also lowers the expense associated with supporting new customers. Modernized systems also provide supply chain benefits by giving enterprises the flexibility to extend labeling capabilities to their business partners and by enhancing brand protection. Best of all, organizations can gain these cost savings and responsiveness benefits while improving label quality, not sacrificing it.

About NiceLabel

NiceLabel, established in 1993, is the world's leading developer of bar code and RFID labeling solutions. NiceLabel provides solutions for companies of all sizes and has specific features to meet specific needs in most industries. Our solutions help companies meet regulatory and compliance standards, maintain business continuity, improve customer responsiveness, increase operational and supply chain efficiency, achieve brand consistency and protection and collaborate with their business partners.

NiceLabel's next generation technology provides a robust platform for centralizing and consolidating labeling across supply chains. It enables higher operational efficiency and accuracy that deliver significant annual savings.

The NiceLabel Enterprise platform is an all-in-one solution that includes everything organizations need to centralize label management and control, integrate labeling into business processes and harness collaboration across and beyond the enterprise. The NiceLabel Enterprise Platform includes:

› Centralized browser-based label lifecycle management.
› A 64-bit print server, business rules and business connectors.
› Client-side web printing that improves internal and external collaboration.

The world's largest organizations rely on NiceLabel solutions to consolidate labeling, collaborate with their business partners and use their supply chain to provide strategic advantage. NiceLabel has helped thousands of organizations all over the world update and improve their labeling processes. Visit nicelabel.com/enterprise to see customer case studies and download additional white papers to help you learn more about opportunities to save money and improve agility with modern labeling management solutions.

NiceLabel is a Microsoft Gold Certified Partner, Oracle Gold Partner and SAP partner. NiceLabel is also the world's leading developer of Windows drivers for thermal label, color label and direct marking printers. Most leading printer manufacturers ship NiceLabel-based software with their printers. Through its headquarters in the EU (Slovenia) and global offices in Germany, USA, Singapore and China, NiceLabel serves and supports its clients around the world.

Americas	EMEA	Germany	China
+1 262 784 2456	+386 4280 5000	+49 6104 405 400	+86 21 6249 0371
sales.americas@nicelabel.com	sales@nicelabel.com	sales@nicelabel.de	sales@nicelabel.cn