NiceLabel · **LOFTWARE**

Legacy system modernization at Domtar results in exceptional customer service, improved production uptime and an agile supply chain.

Case Study

Industry: Manufacturing

Solution: NiceLabel LMS

Challenges
- No label integration with manufacturing and sales systems
- Label and brand inconsistency
- Strict SLAs

Solution
- Seamless integration
- Centralized approach to labeling
- Streamlined workflows

Results
- Improved customer service
- New levels of accuracy and agility
- Improved production uptime
- Simplified label design

Background

Domtar designs, manufactures, markets and distributes a wide variety of pulp and paper products from copy paper to baby diapers. The company is the largest integrated manufacturer and marketer of uncoated freesheet paper in North America, and one of the largest pulp manufacturers in the world. Domtar employs 8,800 people, operates 27 manufacturing facilities worldwide and had $3.7 billion in sales in 2020.

Existing environment

Domtar has manufacturing facilities in the U.S. and Canada. Its manufacturing mills produce roll paper products and its converting locations produce cut sheet paper used in printing and publishing. Each location has laser and large format printers and its own local Manufacturing Execution System (MES). Various types of labels are printed at production time and shipping.

Through industry consolidation, Domtar had multiple mergers and acquisitions that provided the company with a portfolio of different manufacturing systems; each producing its own label formats. Two sales systems that were completely separate from the manufacturing systems captured and hosted customer order information.

Business goal

Domtar's main business objective was to modernize legacy systems to deliver consistent labeling and improve customer service.

Challenges

No label integration with MES and sales systems

Neither Domtar's MES nor sales systems were integrated for label processing. Customers would request that specific, business-critical information be included on the label. This information was captured in the sales system, while labels were printed from the manufacturing system. Because there was no integration between the two systems, customer labels were manually maintained and potentially could be inconsistent. Domtar needed a consistent way to ensure critical customer information appeared on the label.

Label and brand inconsistency

Each of Domtar's disparate manufacturing systems produced its own label formats. When customers received product from two different locations, they would have different labels. Domtar elected to centrally manage labels with a variety of mill systems publishing print requests. They also needed to centrally manage the development of the templates and have a mechanism to easily deploy changes to multiple locations.

Domtar prides itself on maintaining high levels of sustainability. The company couldn't dynamically print sustainability certifications because of the limitations of the legacy systems.

Strict SLAs

Speed and agility are important components in Domtar's supply chain. The Domtar mills set strict Service Level Agreements (SLAs). Labels needed to be produced on automated machinery in less than 15 seconds. A Wide Area Network (WAN) outage would be crippling to production so Domtar needed to ensure label printing software was centrally hosted and also available locally at each site.

Solution

> *The software is really intuitive. It's one of the best software solutions I've used in all my years working in IT."*
>
> Larry V. Ransom Jr., Senior Functional Analyst at Domtar

With NiceLabel, Domtar was able to modernize its label system without impacting its existing MES.

Seamless integration

Domtar created business rules within the NiceLabel solution to integrate its MES and sales systems to take input of label data in a variety of formats. Customer label request information from the sales systems is now available in the MES systems. Domtar can easily and efficiently print labels when a roll or skid is produced. Labels are printed as the product moves on the conveyor and robotics are used to apply the labels.

Centralized approach to labeling

Domtar has moved from a disparate labeling system to a centralized approach. They now have centralized design, review and approval of labels, version control, and the ability to track label changes.

All customer facing product labels are standardized on common label templates with the same design layout and content across all paper manufacturing execution systems. Hundreds of label templates were initially reduced to 20. In addition, product identification for rolls and skids is standardized to the North American Roll Identifier (NARI) format across all locations.

They are also able to design colorful labels that include their branding and sustainability certifications.

Streamlined workflows

Label data is merged with label templates, enabling faster turnaround for customer and business label change requests. Domtar now has support for built-in redundancy. If there is a hardware failure, labeling shifts to a secondary distribution center in another location ensuring steady production levels and business continuity.

Automation drives printing

NiceLabel's integration system drives the printing for all of Domtar's label printing. The company uses a mix of HP, Xerox, Zebra, Avery, Printronix and SATO printers. Thanks to NiceLabel's universal label templates, Domtar is able to use the same label templates across their 250 label printers.

Results

> " *We had a complicated roll wrapping equipment install at one of our pulp facilities and NiceLabel took all the challenges that we threw at it. NiceLabel was able to handle all of them."*
>
> Kelly McCarthy, Supervisor of Manufacturing Execution Systems, IT Manufacturing Services at Domtar

Improved customer service

Domtar's customers receive consistent labeling from all of the facilities that supply their product. A customer friendly label design allows a more complete product description to appear on each label. Domtar's customers are delighted with the labeling changes that have been implemented and the operational and supply chain delays have since disappeared.

New levels of accuracy and agility

Domtar is experiencing agility that they didn't previously have. Now, products can be sourced out of their various mill locations. Labels can be printed from different locations, regardless of where the product is manufactured. Standardized labeling allowed manufacturing and sales and marketing to evaluate what information should be displayed on labels. They were able to implement changes that make their customers more efficient as Domtar's supply chain exchanges information with its customers' supply chains.

Improved production uptime

Since implementing the NiceLabel Label Management Solution, Domtar maintains a high level of production uptime and meets its strict SLAs while supporting a 24x7 operation. They saw an improved delivery time for customer label demands by using a common template and label software solution. NiceLabel improves cycle times and reduces the overall time spent on labeling.

After the completion of the initial installation, Domtar continued to look for ways to improve labeling across its other business segments by further rolling out NiceLabel. This has enabled other parts of the business to improve labeling processes and efficiency.

Reducing label design complexity in the Specialty Papers Business unit

Other business segments have decided to implement NiceLabel as well. For example, the mills in the Specialty Papers Business unit had a number of complicated label templates designed in Crystal Reports for their product (roll) labels. The label templates contained a number of overlaid fields, which were very challenging to navigate when the team needed to make label changes. This made the entire label maintenance process cumbersome and time-consuming. By implementing NiceLabel, the specialty mills were able to use the same base label templates that had been developed for other mills. "NiceLabel really gave them the ability to make label changes faster, reduce complexity and simplify the number of templates. This made the whole process much easier for them to maintain," says Kelly McCarthy, Supervisor of Manufacturing Execution Systems, IT Manufacturing Services at Domtar.

Domtar has also merged the shipping or UCC 128 labels from another set of converting plants which were running a different label software into the NiceLabel solution. This allowed the company to use the UCC labels they had already implemented, and then add a few details to match the specifications for these plants' customer requirements. According to Larry V. Ransom Jr., Senior Functional Analyst at Domtar, it's the flexibility of the universal templates that enables them to easily add new business segments to their existing NiceLabel solution. "From a designer perspective, it's really just a question of copying the template and adding a few fields, and then roll it out." The usability of the software also means that they don't have to spend a great deal of time on end-user training. "The software is really intuitive," Larry observes. "It's one of the best software solutions I've used in all my years working in IT."

Solving printer challenges in the Pulp unit

Domtar also produces fluff pulp and market pulp, which is used for a variety of products including tissue, paper, baby diapers and incontinence products. They switched the roll labels for this business segment into NiceLabel as well, as they wanted to get the same business gains from installing NiceLabel on the paper-side of the business on the pulp side. "We had a complicated roll wrapping equipment install at one of our pulp facilities and NiceLabel took all the challenges that we threw at it, both regarding the printer settings and resetting print queues dynamically. NiceLabel was able to handle all of them," Kelly explains. 100% of the company's pulp and paper mills that print labels are now running NiceLabel.

Future plans

Domtar recently announced the conversion of one of their existing paper mills into the company's first container-board facility. NiceLabel is currently used at that paper mill, and they will continue to use the NiceLabel solution, once the conversion is complete. Domtar is also considering moving to SAP S/4 HANA at some point in the future. Once that happens, they will look into integrating NiceLabel with SAP.

NiceLabel and Loftware have combined. Learn more in our joint press release.