Sto AG Produces >4100 Data-driven Color Labels On Demand, Fully Localized, in 95 Locations

“Thanks to one2edit™ we now produce more than 4100 fully compliant label variations, including regional labels. We are on track to handle a fivefold increase in label variations with just 1 additional person.”

Horst Nadler, Senior IT Manager, Sto AG

Business Challenge

Driven by EU regulations, multiple product configurations and localization needs, Sto AG and their subsidiary, StoCretec GmbH, must be ready to produce 6500 versions of product labels — a fivefold increase — by 2015. Before incorporating one2edit™ in their label generation process, they could not have met these requirements.

Sto and StoCretec offer a range of products for building and construction. Over 30% of their products are subject to CLP/GHS labeling and product safety regulations. By 2015 the EU requires mandatory information to be displayed in the official languages of any region where regulated products are sold.

6500 label versions – a fivefold increase needed by 2015

By 2015 Sto must produce fully compliant labels in different sizes, layouts and media, using multiple printing techniques, for application on boxes, bags, sacks or pails. Some labels are printed for high-volume batches; others will be generated on demand for made-to-order batches at local production facilities.

Sto knew that ignoring the EU regulatory requirements was not a viable option, given the large financial penalties, the risk of exclusion from EU markets or damage to Sto’s reputation. They also wanted to ensure that compliance with these directives would not increase per-unit product costs or delay time to market.

Before adopting a solution based on one2edit, Sto could generate 1300 label versions from a set of 11 templates; however, this process did not meet the EU requirement to display mandatory information in official languages on regional labels.
It also covered only 60% of their product range. Moreover, labels required for some containers, such as sacks for cement or mortar products, had to be produced by hand with help from external agencies.

Achieving CLP/GHS compliance presented a real challenge, given the complexity:

- Product data and product safety data are managed within SAP databases, including language-specific versions of that information.
- Thousands of products delivered in different colors, forms, containers, and batch quantities — therefore, no one-size-fits-all solution would be possible.
- Given CLP directives, whenever product details or formulations change, labels must be revised to display up-to-date information for official languages.
- 30 different export markets, 20 different languages.
- Variable data driven by batch number, order number, and color name/number (up to 900,000 possible color combinations).
- Color labels that must display CLP pictograms, imagery and brand assets.
- Differing production and printing capabilities across the locations where Sto produces its products. As an additional complication, Sto AG's marketing department initiated a brand refresh, resulting in a new set of CI/CD guidelines for product labels and branding. This brand refresh was underway when Sto's IT department stepped up to the challenge of developing an automatic label generation solution using one2edit.

**Solution**

**Existing technology**

Sto had already committed to the SAP platform to manage product data and product safety data, as well as transactional data for orders and production batches. They chose Across™ language technology to handle the 20 official languages. Language-specific translations are integrated with the SAP product data repository, and retrieved as needed, depending on the export locale.

Sto relied on Adobe® InDesign® to produce price lists and product data sheets, displaying localized content for 4 primary languages, via XML data exported from the SAP product database. This localization process relied on a basic set of scripts, but was not flexible enough to meet EU-mandated requirements for labeling.
Solution requirements

After analyzing existing capabilities, technologies and process know-how, the IT team decided the ideal solution for automated label generation must leverage:

- The SAP repository for product-specific data, product safety/environmental data, including all stored translations of that information.
- Brand assets and imagery stored in a digital asset management platform.
- SAP transaction handling processes for variable data (specific process orders, batch numbers, color names and numbers, etc.)
- Adobe InDesign for CI/CD-compliant label designs and high-quality color printing across a range of sizes, formats and media types.

They scoped the project into two phases; printing variable data for make-to-order production runs was deferred to Phase 2. For Phase 1 they had to solve the core problem of creating and printing multi-language labels in a wide variety of formats, layouts, sizes and media, whilst complying with brand and EU mandates.

They envisioned a multi-region, multi-language approach that would use conditional logic to determine what would be printed on each label based on product-specific data, label size and media, and production order details.

Before selecting one2edit, they explored specialized label management tools, but rejected them because they featured built-in data handling, and could not integrate readily with the SAP product data repository – Sto’s chief requirement for the data-driven, automated solution they had in mind.
Sto AG used Adobe InDesign to create 60 templates that, with one2edit’s help, can generate thousands of label variations. Each variation is driven by a combination of factors: product/formulation, label size and layout, the container, the export region. They have now released 4142 label variations (including regional versions); 94.5% of those labels are generated automatically via one2edit.

Their subsidiary StoCretec is in the process of designing another 60 label templates to be powered by one2edit. When done, the combined companies will be generating 6500 fully compliant label variations from 120 templates.
Sto’s solution relies on connectors and APIs to export XML data from SAP, and display it within designated fields or content blocks, based on specifications for each product label template.

one2edit adds intelligence to the Adobe InDesign label templates. For each label, Sto uses one2edit to define object-specific rules that govern which product data elements and brand assets will be displayed within each specific field or frame of the label’s InDesign template layout. These rules also determine which fields or objects are locked (cannot be edited), and which ones can be updated. (Sto’s object rules are part of their purpose-built solution, for the SAP platform.)

one2edit’s object-specific rules provide the logical interconnection between product data, product safety data and translations in the SAP repository, and brand assets stored in the marketing asset database. These rule-based templates were the missing link that Sto needed to automate the labeling process.

Each unique label is generated as needed for a specific production order. SAP drives the overall process; one2edit runs in the background. This process is now operational at 95 production facilities.

Horst Nadler, senior IT manager and project champion, notes that it took about 6 months from the time they selected one2edit until Sto had completed the Phase 1 implementation. A small internal IT team performed all the necessary integrations in about 45 days.

Despite the fivefold increase in label variations, Sto has been able to meet these more demanding requirements with just one additional person in IT. Thanks to automation Sto has been able to reduce the marketing and agency resources required to produce new label variations.
When Phase 2 has been completed, Sto will print variable data on each label, whenever the SAP system triggers a new production order. (Variable data is driven by a specific transaction, such as its batch number, or a custom color tint for a made-to-order product, etc.) Automated label generation, including variable data specific to a process order, is now operational at almost 100 sales centers and smaller production facilities. In 2014–2015 Sto will extend automated label generation operations to their largest production facilities.
With software implementation largely complete, the IT department manages the label generation process on a daily basis with a tiny team: 1 person to adjust layouts or create new labels for new products, and 2–3 people to administer the product database and the XML data import process from SAP.

**Benefits & Outcomes**

- >4100 fully compliant label variations generated from 60 templates
- Early compliance with EU regulatory requirements, thereby avoiding penalties, the risk of market exclusions or potential damage to the brand
- Highly automated process that covers 90% of the product range, and handles high-volume batch runs as well as smaller or made-to-order production runs
- Higher quality color labels: fully compliant with both brand and EU regulatory requirements, highly designed, error-free
- Product labels are now displayed in all the required local languages for each export country or region, instead of just 4 primary languages
- Fast, efficient process to update product labels whenever there are changes in materials or formulations, managed by a tiny team at headquarters
- Flexibility to handle small sales orders or custom lots cost effectively