VIDEOJET®

Increase productivity and reduce costs:

Learn how implementing Code Assurance processes can virtually eliminate user errors, lower scrap and rework, and boost profits.

Correct product coding is vital to manufacturers, helping to improve supply chain efficiency, as well as providing consumers with essential product details such as allergens or ingredient information, lot numbers and country of origin. With this in mind, incorrect codes on products can have a major impact on product quality, and create unnecessary expenses throughout the business due to costly rework, material waste, regulatory penalties and product recalls. In some cases, product recalls not only have an impact on costs, but also a damaging effect on brand reputation.

Using an operator interface with Code Assurance tools embedded can help to simplify code creation, streamline job selection and restrict operator input. You can pro-actively work to prevent errors by implementing Code Assurance solutions from Videojet.

Contents

The importance of Code Assurance

Ensuring the right code is on the right product, time after time, is becoming increasingly difficult. Variations in product and packaging types means manufacturers have more codes to track than ever before.

Not only are the number of coded products growing, but there are also increased expectations for code content. Where simple date codes were once acceptable, manufacturers may now be legally obliged to include certain information on food labels such as country of origin, allergen or ingredient information, 2D codes, bar codes, product identifications and lot numbers.

 According to the European Food Information to Consumers Regulation No 1169/2011 (FIC) and the Food Information Regulations 2014 (FIR), nutrition labeling is now compulsory on most pre-packed foods. Labels must also list any key information that could affect the safety of the food to the consumer, increasing code content requirements one step further.

In a progressively more competitive industry, fast-moving consumer goods (FMCG) manufacturers must be able to keep pace with the increasing demands of supermarkets and consumers. Retailers are turning to case-ready and pre-packaged goods that are packed at a central site, and delivered to stores ready to be put directly on the shelves. The rise in demand for case-ready products also increases the number of unique product codes required, adding another level of complexity in ensuring the right code is on the right product. The packaging provides protection to the goods when transported from producer to store, helping to keep product damage and waste material to a minimum. Case-ready products are also attractive to companies, as they allow for multiple branding opportunities on the product packaging.

In addition to an increase in pre-packaged goods, it may also be necessary to handle different products on the same packaging line, at the same time. It is common for products to have the same design, with a slight change on the label artwork; hence increasing the risk of product mix up or selecting the wrong product code.

Up to 70% of coding errors are caused by operator error

The true cost of coding errors

According to a Videojet survey among a variety of FMCG manufacturers, up to 70% of coding errors are caused by operator error. Approximately half of these were caused by mistakes in code entry and job selection. In addition, the survey indicated that coding errors are not the deviation, but the norm. Nearly half of the survey respondents revealed that coding errors occur at least weekly, with 25% reporting them as a daily occurrence.

Coding errors are costly, not only to plant operations but to the entire enterprise

During a cost analysis exercise, a global FMCG manufacturer discovered that the cost of coding errors on one site turned out to be 17% of total running costs. The cost of rework, assuming that the product can actually be reworked and the plant has the capacity to do so, is just one factor. In a 24/7 production environment, re-work may not be possible, or once the product has been coded, it may be impossible to re-code or re-package it. The need to scrap miscoded product can be even more costly than re-work – but sometimes it may be the only option.

In addition to costs associated with re-work and scrapped jobs, inaccurately coded products that reach stores can result in fines and penalties, particularly when dealing with FMCG manufacturers of food and beverage products.

In the United States, FMCG manufacturers are legally required to correctly display product information, such as ingredient or nutritional data mandated by the Nutrition Labeling and Education Act and the Federal Foods, Drug and Cosmetic Act. In the EU, the European Union Directive 200/13/EC has been enacted to help ensure that consumers have access to accurate information regarding the contents and composition of food and beverage products.

A large drinks producer stated that 84% of all critical quality assurance issues are due to operators incorrectly setting up jobs on the printer

An international food company recalls 96,000 lbs of sausages as a result of wrong product labeling

Product recalls due to coding errors can also significantly affect a company's bottom line

Within the UK, the number of product recalls by the Food Standards Agency (FSA) in 2015 grew by 78% compared with the previous year.[1] The increase in product recalls, especially in the food and drink sector, highlights the need for manufacturers to have the correct measures in place for code assurance. Labels are essential for food safety, and it's crucial that the information on labels is easy to read by consumers. Missing information, especially with regard to product ingredients, can lead to consumer illness, and also leave a damaging effect on brand reputation. According to the FSA survey, unlisted ingredients such as nuts, dairy and gluten were the main cause of product recalls.
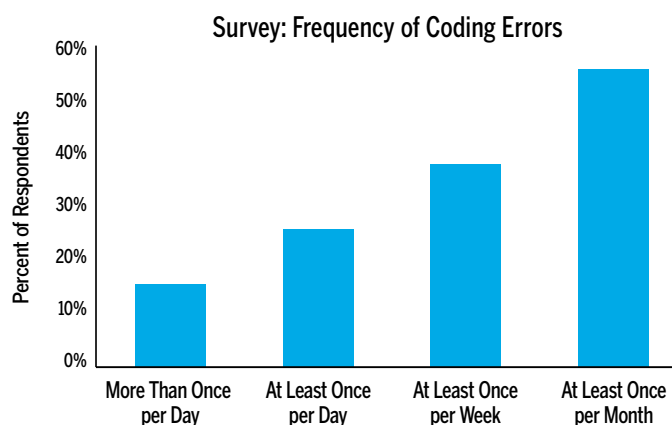
Being able to successfully track products through their lifecycle can greatly minimize the costs associated with product recalls. Implementation of clear product labeling, high-quality coding and code assurance solutions can also assist with this.

And those are just some of the consequences of coding errors. There are also costly damages to brand reputation through mislabeling or miscoded products. According to the Recall Execution Effectiveness study, a food recall can cost in total of up to $10 million dollars or more, due to consumers switching to competitor brands or refusing to purchase that product.[2] The product may also be unavailable while restocking takes place.

Many organizations struggle to quantify the actual cost of lost product and production capacity as a result of coding errors – let alone damaged reputation. Some companies tend not to highlight coding errors within their plant efficiency reporting, as often there's an assumption that coding errors are detected by regular inspection and then rectified. The specific costs associated with re-work remain entangled with general measurements of line inefficiency, so management may often be unaware of the scope of coding problems.

The true frequency of coding errors

Coding errors do happen. In fact, they're common. Videojet surveyed a variety of manufacturers using competitor coding and marking technologies, and found that all had experienced coding errors – many of them on a frequent basis. In fact, nearly half the companies surveyed were having trouble with coding errors at least once per week, with one-quarter reporting coding errors at least once per day.

Survey: Frequency of Coding Errors

Videojet found an unacceptable rate of coding errors across all manufacturers surveyed.

[1] http://www.foodmanufacture.co.uk/Food-Safety/Food-and-drink-recalls-up-80-in-2015
[2] http://www.foodmanufacturing.com/article/2012/10/food-recalls-ounce-prevention-worth-pound-cure

How does Videojet Code Assurance work?

Videojet Code Assurance solutions can help ensure that the correct code is applied in the correct location on the correct product and package. Code Assurance is focused around higher productivity and throughput, while helping to avoid product scrap and re-work.

Customer benefits

Drive productivity gains in operations by:
- Minimizing printer set-up time
- Reducing operator intervention

Reduce:
- Re-work by significantly reducing coding errors
- Recalls by consistent coding and ability to track
- Risk by delivering accurate and readable codes, time after time

Secure and streamline data management by:
- Minimizing downtime by having the right, pre-selected message available
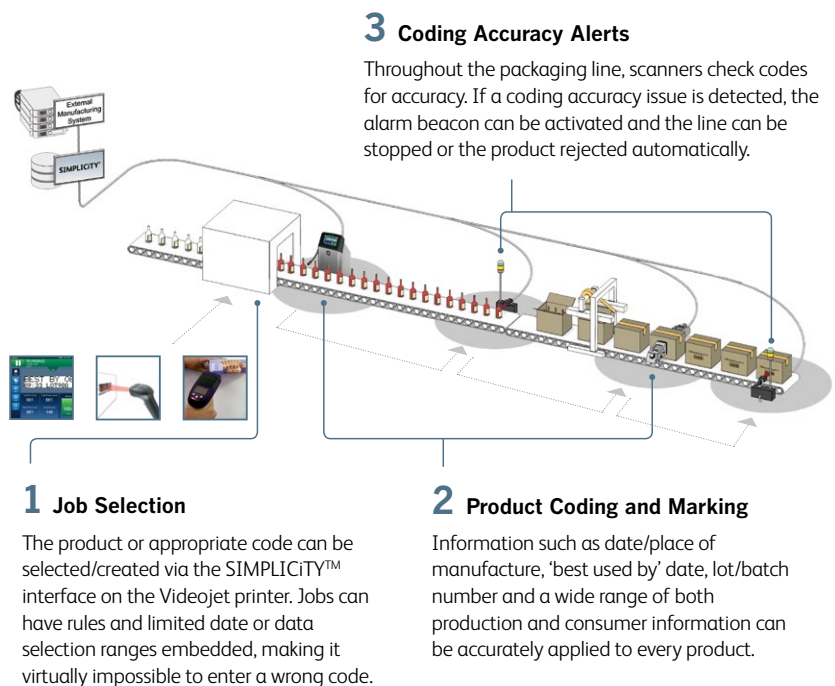- Reducing effort and time to add new product and packaging messages

Protect the brand by:
- Increasing customer satisfaction with message consistency and security
- Enhance code assurance in packaging operations by validating downstream codes with optional bar code scanners or vision devices

Videojet expertise reaches beyond printing codes to integrating the systems that help secure and streamline the management of message data.

The ideal solution for your packaging line

From simple date codes to serialized shipping container codes, Videojet Code Assurance solutions are powerful, expandable, flexible and compatible with most Videojet printers.

3 Coding Accuracy Alerts

Throughout the packaging line, scanners check codes for accuracy. If a coding accuracy issue is detected, the alarm beacon can be activated and the line can be stopped or the product rejected automatically.

1 Job Selection

The product or appropriate code can be selected/created via the SIMPLICiTY™ interface on the Videojet printer. Jobs can have rules and limited date or data selection ranges embedded, making it virtually impossible to enter a wrong code.

2 Product Coding and Marking

Information such as date/place of manufacture, 'best used by' date, lot/batch number and a wide range of both production and consumer information can be accurately applied to every product.

Videojet Code Assurance: The reality

You live in a practical world where codes need to be right day after day, time after time. Bad codes can mean product waste, re-work, fines and damage to your brand.

Videojet Code Assurance solutions help you keep your line productive, and your brand reputation strong. It is a complete approach that helps to eliminate errors in the coding and marking process.

You can help reduce costly rework and errors with Code Assurance software that minimizes and mistake-proofs operator inputs to the coding and marking process. By specifying error-proofing rules during set-up, operator inputs are limited, resulting in fewer errors.

'Poka-yoke' and its role in Code Assurance

'Poka-yoke' is a Japanese term that can be translated as 'mistake-proofing'. When applied to manufacturing operations, a 'poka-yoke' is any measure put into place during the manufacturing process designed to prevent human errors before they occur. And this is exactly what Code Assurance is all about. Videojet Code Assurance solutions don't just help prevent coding errors, they allow you to get the right code on the right product, time after time.

Intelligent interface designed with Code Assurance tools

Videojet Code Assurance solutions have 'poka-yoke' design features built into the operator interface. A key goal of Code Assurance is to simplify the process of message selection and help prevent incorrect code entries, so that operators can reliably enter the right message, and apply the right message to the right job.

For example, an operator can easily create error-proofing rules during job setup, such as whether or not fields can be edited, permissible data types, date range restrictions and more. With step-by-step guided data entry, the system can limit operators to the choices defined during job setup, helping to ensure correct entries. A preview of the message provides additional confidence that the right message is loaded.

Videojet Code Assurance: The future

Code Assurance is all about higher productivity and throughput, while avoiding scrap and re-work. This starts with the technology serving the user and meeting their Code Assurance needs.

After extensive market surveys with operators of coding equipment, Videojet has evolved the Code Assurance platform to a new level. Welcome to the new Code Assurance with SIMPLICiTY™ interface.

Code Assurance solutions made simple

Although it's impossible to eliminate operator input completely, the intelligent SIMPLICiTY™ interface can restrict input choices to substantially help reduce the opportunity for operator error. With flat menu structures and icon-based control structure, you can pre-define and customize work flows, in addition to:

Simplify message selection
Job files can be saved and searched using meaningful names, such as the product that is being coded. A preview of the message provides additional confidence that the right job is loaded.

Restrict functionality by user level
Reduce operator printer interactions, helping to eliminate potential user errors through an intuitive SIMPLICiTY™ touchscreen interface.

Avoid user errors
Built-in wizards guide you every step of the way, allowing you to customize work flows and restrict access to printer functionality and message parameters. Error-proofing rules also help to restrict and define fields so users only see what is essential, keeping operators focused on production.

Onboard video-guided operator tasks
Video instructions guide the operator through routine tasks. This helps to minimize mistakes from oversight or incorrectly performed maintenance.

Intelligent message creation
Virtually eliminate operator mistakes due to incorrect data entry by bringing manual intervention close to zero with the advanced SIMPLICiTY™ Code Assurance capabilities.

Getting started with the SIMPLICiTY™ interface

Many companies begin with the user interface when evaluating and implementing Code Assurance solutions. The goal here is to manage and enforce acceptable parameters for the coded message, and to help eliminate operator error from the job selection process.

Your goals must be achieved while making it simple and efficient for the operator to perform their role.

Benefits of the Videojet SIMPLICiTY interface include:

- **Accurate and consistent on-pack coding from line to line, and plant to plant, with centralized message creation and optional distribution to printers, labelers and scanners across the network**

- **Minimized operator input to help increase production efficiency and prevent errors from being introduced on the production floor**

- **Reduced costs, with centralized control to protect against waste, rework and recalls**

The Videojet SIMPLICiTY™ interface is being rolled out across an extensive range of Videojet coding equipment. As you add layers to your Code Assurance solution, you gain centralized, single-point message creation and the ability to push policy-compliant, quality checked codes out to all your printers.

You gain the ability to help ensure the right codes are going on the right products, reducing risk, re-work and recalls while protecting the brand reputation. Plus, you can streamline data management and simplify changeover to drive productivity gains and support your automation goals.
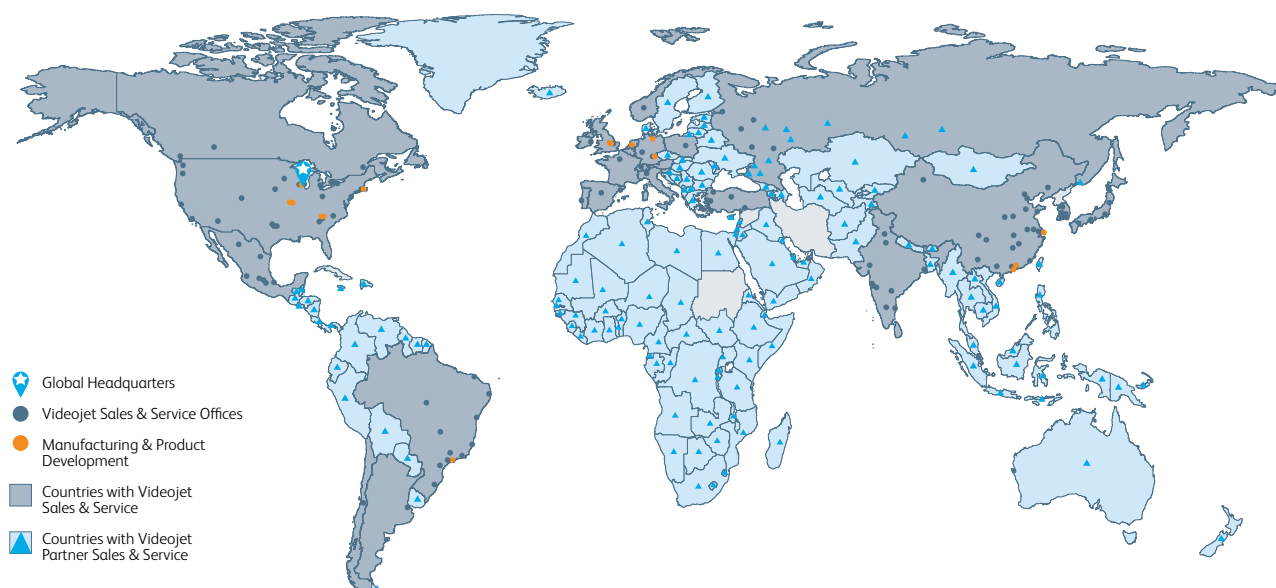
Peace of mind comes as standard

Videojet Technologies is a world-leader in the product identification market, providing in-line printing, coding, and marking products, application specific fluids, and product life cycle services.

Our goal is to partner with our customers in the consumer packaged goods, pharmaceutical, and industrial goods industries to improve their productivity, to protect and grow their brands, and to stay ahead of industry trends and regulations. With our customer application experts and technology leadership in Continuous Inkjet (CIJ), Thermal Inkjet (TIJ), Laser Marking, Thermal Transfer Overprinting (TTO), case coding and labeling, and wide array printing, Videojet has more than 345,000 printers installed worldwide.

Our customers rely on Videojet products to print on over ten billion products daily. Customer sales, application, service, and training support is provided by direct operations with over 4,000 team members in 26 countries worldwide. In addition, Videojet's distribution network includes more than 400 distributors and OEMs, serving 135 countries.

- ⬇ Global Headquarters
- ● Videojet Sales & Service Offices
- ● Manufacturing & Product Development
- ▢ Countries with Videojet Sales & Service
- ▲ Countries with Videojet Partner Sales & Service

Call **800-843-3610**
Email **info@videojet.com**
or visit **www.videojet.com**

Videojet Technologies Inc.
1500 Mittel Blvd. Wood Dale IL 60191 / USA

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