



WHITE PAPER

Protecting Your Brand Reputation With Automation
By Eliminating Label And Packaging Errors

Trusted By



Protect Your Brand...



Protect your brand from product recalls and errors:

Product recalls can have a catastrophic impact on a food manufacturer's brand and business and costs the industry £millions a year. In 2015, 277* product recalls in the UK were related to labelling and packaging errors. These errors could have been detected and resolved at an earlier stage within the manufacturing process before the incorrectly packaged and labelled products entered distribution. Not only would the manufacturer then have avoided a substantial fine, but they would also have avoided the significant damage to their brand reputation.

Labelling and packaging errors can cause cross contamination, premature spoiling, consumer illness and fatalities, especially if the error lies within the allergen information. By preventing packaging errors, manufacturers can ensure a positive brand reputation, supply chain relationships and risk-free distribution, retailing and consumption of products within the food industry.

The following white paper explains how manufacturers can protect their brands by discussing:

- The top five reasons for label and packaging errors in food manufacturing.
- How automation can prevent label and packaging errors.
- Ideas on the future development path of automation systems in food manufacturing.

About the Author:

Wayne Johnson has worked in the food industry for over 20 years, with experience on both sides of the retail fence as a technical manager for First Milk and a supermarket auditor for Somerfield. He now works for OAL helping manufacturers secure their brand reputation and eliminate label and date code errors with our market leading Autocoding system.

*FSA Annual Report of Incidents 2015 - 19% of allergens.

Why do Packaging and Label Errors Occur?



Equipment errors can also increase the risk of product recalls.

1. Human Error

Retailers pushing for all category ranges to have a unified look has created difficulties for operators ensuring the correct labels are applied to products. It is now common place for all products to have the same design with just one word different on the label artwork; hence it is very easy to select the wrong labels from a big box of labels, especially in a high speed, quick change over food factory environment.

Human error has the potential to cause a product recall in the case of a date code error. If the date code was incorrectly calculated or not changed during setup or changeover and this was not identified before production, then this could cause the whole line to be recalled.

"I have seen many errors when setting up printers. It's all too easy to change the date and not the month or put the 32nd of a date. Although quality checks seek to prevent errors when signing off labels, these can be easily missed when you are trying to check ten or more things as well as keeping an eye on the production line."

Wayne Johnson, Autocoding Product Manager

2. Equipment Errors

If a printer goes into a "fault" state then this can usually lead to one of 2 things:

1. The printer stops printing but the line carries on running. This can result in un-printed or badly printed packs. If these are not detected by the operator at the end of the line then these could go out to the customer.
2. The date code can revert to a default setting. This has been seen on a number of printers. If this change in date is not detected then this will potentially result in a product withdrawal due to an inaccurate best before or use by date.

Why do Packaging and Label Errors Occur? Continued...



Automation reduces the risk of misusing promo labels.

3. Promotional Activities

In most cases, promotions are briefed to the production team at the last minute or packaging arrives just before production starts. This increases the pressure on the team and can lead to a lack of clarity around when the promotion was meant to start and finish. Incorrectly packing products into promotional packs after the promotion has ended can lead to retailer fines and claims for loss of income due to the wrong prices being scanned at the tills. This is very damaging for the manufacturer's brand reputation.

4. Supplier Packaging Errors

Packaging suppliers make errors too! Spliced reels of labels or films are more common than most people think. The difficulty with this, especially due to similar artwork designs, is that it is almost impossible for operators to spot mistakes on the line. 30 minute quality checks (applying a label to a check sheet and signing it off) may catch some, but if the splice error occurs between a check and in some cases reverts back to the correct label, the error will not be realised until the dreaded phone call from the retailer.

These errors from the suppliers can often go undetected or incorrectly identified as operator errors which may lead to misplaced disciplinary action but without the necessary evidence and it's very hard to prove otherwise.

5. Last Minute Dot Com...

The nature of the food industry means we have to respond to changes quickly, often at the last minute. Quick decisions and high production demands naturally lead to errors. Incorrect packaging being issued to the line, coupled with quick, inaccurate checks can lead to incorrect packaging being used.

How can Automation Prevent the Errors that Lead to Product Recalls?



An HMI Screen displays real-time information.

Label and Date Code Verification:

Automation limits operator decision making, creating an automatic, systematic and sustainable process controlled by minimal but essential senior management. Autocoding is the name typically given to software systems whose main objective is to prevent product recalls and protect brand reputation by ensuring the correct packaging and labelling has been applied to food products.

OAL first developed Autocoding following an initiative between Geest PLC and Tesco PLC in 2001. The core principles have remained the same but functionality has been expanded to encompass quality assurance and factory performance modules through the Internet of Things.

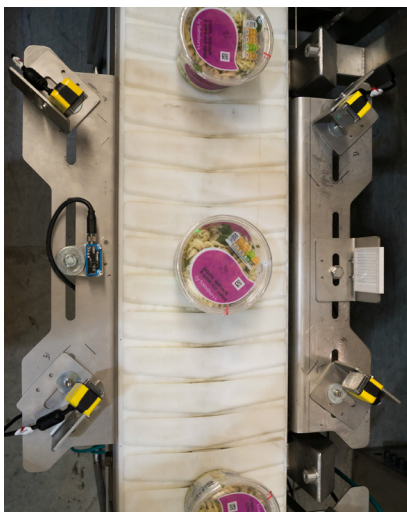
The software links a master database of products, scanners, printers and touch screen PCs on the production line. At this station, multiple product variations can be managed and automated at one time allowing for streamlined product changeovers and planned stoppage times whilst ensuring minimal disruption to production. All the information is displayed in real-time on the human machine interface line screen giving the logged-in operator full control and visibility.

Pre-production:

Before the start of production, information for every product and job for example date codes, barcodes, packaging and labelling etc. is entered into the supervisory software, verified and sent to the master database. When a product is approved on the master database, the job and product information along with the print file is sent to the touch screen PC on the line ready for production.

Factories can programme the autocoding system to request mandatory quality assurance checks before production can begin. These checks could include the scanning of tray end labels, entering of film trace codes or capturing a photo of the packaging. It is another opportunity for the factory to take control and reduce the risk of errors such as the incorrect use of promotional packaging before production commences.

What Does Automation Mean for Production?



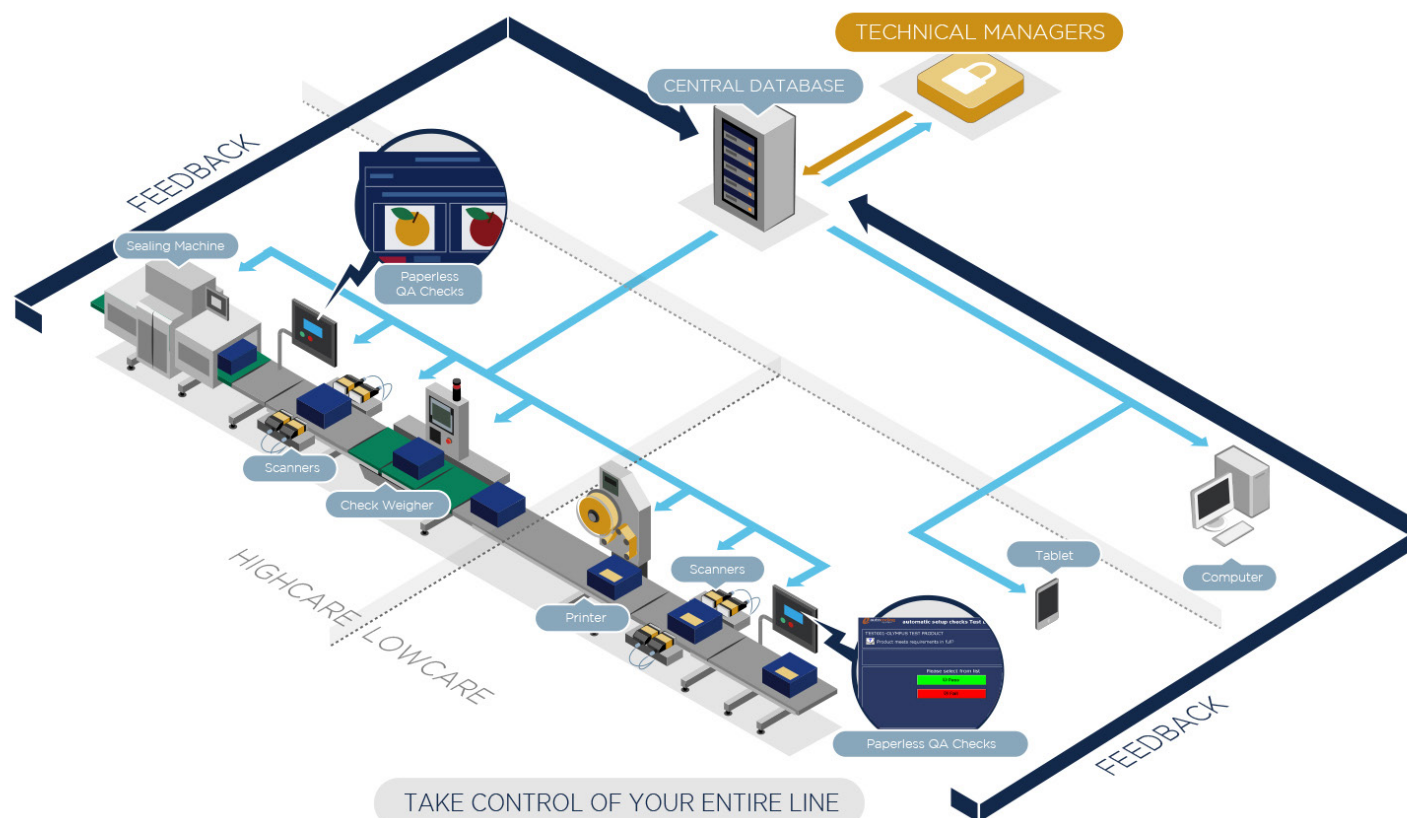
The positioning of the scanners is key to achieving a 100% read rate.

During Production:

Once the pre-production checks have been signed off and verified, production can then start. The Cognex scanner scans every 2D barcode that passes through its sensors. It then verifies the date codes, packaging and labelling using the job information downloaded from the database.

If an item passes through the scanner and the data collected does not match the data received from the job download, the alarm is automatically raised and the line stops. A higher level of authorisation will then have to carry out the specific procedure for that factory to ensure the fault is identified and resolved to avoid continuous errors.

If the Cognex scanner is set-up correctly for the product on the line, it offers a consistent and reliable read rate so defect products cannot pass through undetected. Before production can restart, the system, if programmed to do so, may ask operators to carry out additional QA checks for an extra level of verification and security. The system can also be setup to prompt QA checks on a timed basis throughout production to check nothing has changed down the line and to ensure equipment is working to full capacity (helping to avoid equipment errors).



More About the Scanners...



Scanning all barcodes eliminates the risk of label & date code errors.

Why use identity and not vision?

Identity scanners provide greater accuracy than vision based systems because they verify an exact barcode. Using a scanner that relies on vision does not produce 100% accurate results as the image only has to have 'most' elements in common with the master image it is being compared to for verification. Identity relies on the scanners reading and comparing the information and only verifying if it is a perfect match. This ensures an accurate and reliable system for you and your retailer's peace of mind.

Can you scan any packaging?

By changing the configuration of scanners on the packaging line, any packaging format can be scanned giving factories the flexibility needed. Over the years, OAL Autocoding has been used to scan many packaging formats including:

- Flow Wrapper
- Bagger
- Top & Base Labels
- C Wrap
- Sleeve & Boxes
- Pots, Tins & Jars

2D Version Control and Artwork

2D coding and scanning allows food manufacturers to scan products without a barcode so all areas of packaging are traceable. Unlike 1D barcodes, 2D barcodes provide control over the version of packaging. As the 2D barcode is not under the control of the retailer, it can be adjusted when there are any minor changes to the packaging to ensure that old packaging is not used. 2D barcodes will affect artwork and involve an extra 2D barcode being printed on packaging.

Connecting Security with Efficiency and Productivity



*Connect all functions of your factory to
improve productivity & performance.*

A touch screen terminal on a production line creates fantastic opportunities for food manufacturers to get their systems connected and embrace the internet of things. The touch screen can run label and date code verification software as a stand-alone application or be expanded to include modules for food safety, traceability, performance, productivity, recipe management and much more. These all help you get the most out of your factory.

Traceability

Trace and integrate all relevant data from raw material intake, in-process and packing, finished goods, dispatch and customer information to guarantee an efficient response to internal and external quality issues and maximise rapid response capabilities. Full, verifiable traceability and compliance to retail audits are two of the key benefits.

Paperless Shop Floor

By embracing the internet of things, factories can go paperless, ensuring accurate real-time data for the functions mentioned above e.g. food safety. All data is easy to retrieve, store and utilise; eliminating the risk of discrepancies and significantly reduces the risk of data and valuable information being lost or spoilt.

A factory auditor can retrieve all the information they need easily and efficiently with higher level of assurances than paper-based systems. A paperless system holds individual operators accountable for all their decisions; senior staff can clearly see who was operating the machine at any given moment.

Factory Performance and Productivity

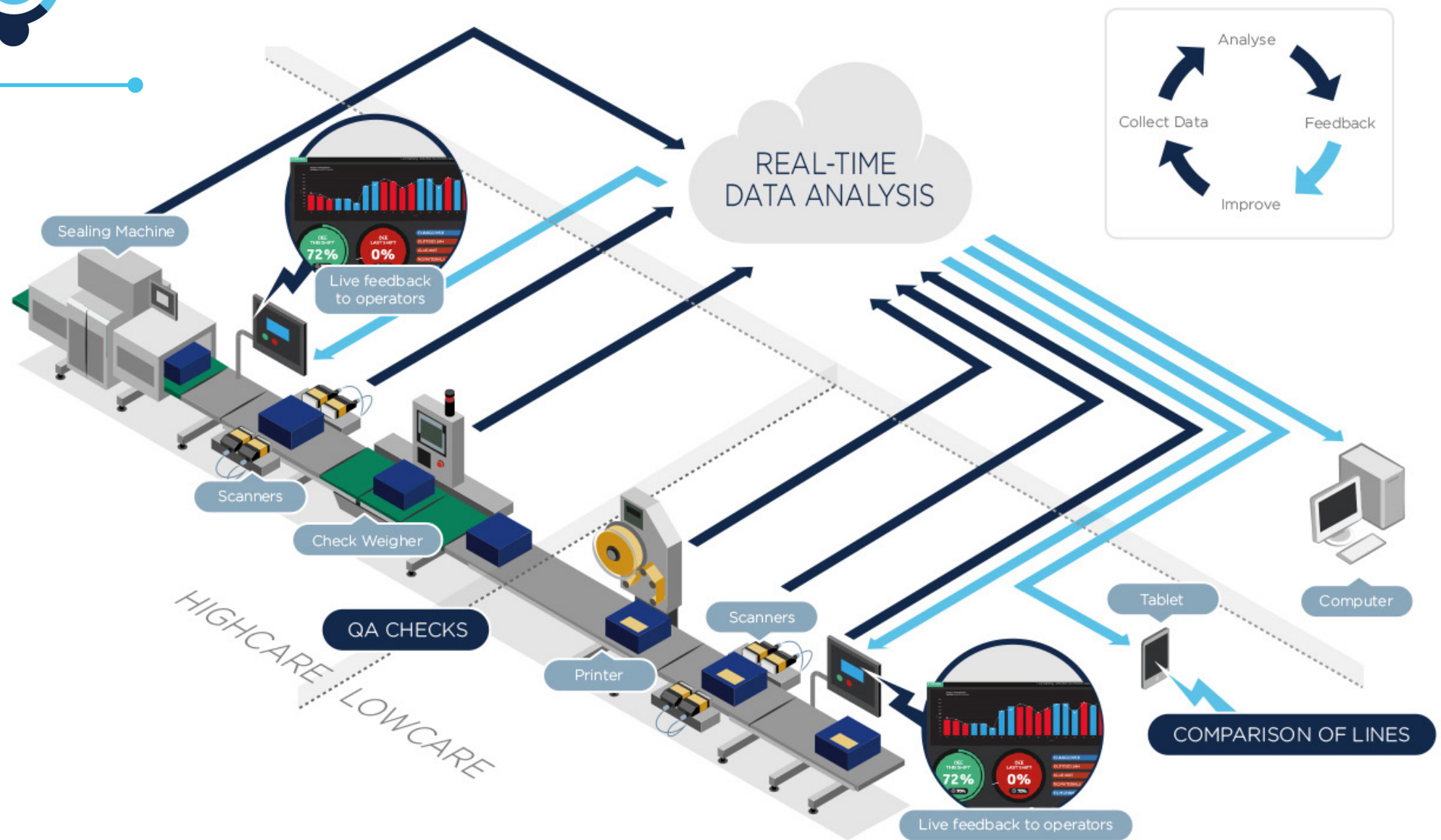
Management and operators can make informed decisions with real-time data from across the food production area. Live data can be pulled from connected devices, analysed and fed back to teams to make decisions on the go to reduce downtime.

Manage Giveaway with Checkweigher Links

For products sold at a fixed weight, live checkweigher data can be acted upon to minimise giveaway. OAL have a strong track record for integrating all types of checkweighers used within food manufacturing helping manufacturers to save money and increase yield. For a full list of compatible devices please see our website.



OAL Connected



What Does This Mean for Your Brand?



Smart labels can contribute to reducing food wastage. An Autocoding system can ensure they're used correctly.

As soon as an error occurs and it affects external stakeholders, the brand faces a level of damage to reputation and image. OAL's Autocoding system can contribute to reducing the risk of errors due to incorrect label and packaging. This accurate, real-time system provides a factory with a robust process to avoid product recalls due to label and packaging errors. This high level of guarantee could be key to having a competitive advantage within the market and/or could help build a positive relationship with the supply and distribution chain based on trust and reliability.

The Vision for the Future

Annually, OAL and the University of Lincoln host the Food Manufacturing 2030 conference, where retailers and food manufacturers discuss future technologies and developments. The following are areas particularly relevant to the packaging line:

Smart Labels:

Smart labels identify and signal to the consumer when the food is spoilt and cannot be consumed. For instance, Bump Mark uses gelatine to let consumers check by touch, so; when it's smooth - your food is fresh, if you feel bumps - then it's time for the bin. The label is timed to go 'bad' as the food spoils. It will be important to control the application of smart labels to ensure they aren't applied to the incorrect products, an area which the OAL Autocoding system can assist.

Digital Flexible Printing:

Digital flexible printing will let manufacturers add individual information and decoration to a batch down to a single unit printed onto a top film, before it is sealed to a tray. Flexible printing is a key enabler for mass customisation and will change the way packs are labelled. The printers however will still require control from a system like OAL Autocoding.





Protect Your Brand Today

Speak to an expert by calling OAL on:

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or visiting:

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What Customers Say

"Heinz chose the OAL Autocoding system because they were the only suppliers we reviewed to offer 100% read rates on products. The integrated quality checks on the Autocoding system and ability to offer 24 hour support have added significant value to the business."

Robin Sandman, Engineering Manager, Heinz



"Over a 7 year period we have had no issues which could be attributed to the system. I would rate this as my simplest implementation and yet it has also been one of the most effective."

David Cornwallis, Logistics Manager, Bakkavor Caledonian



"What the system has given us is peace of mind and allowed us to regain customer confidence."

Caroline Smales, Technical Manager, Greencore Leeds



Next Steps:

If you'd like to learn more about how automation can protect your brand, please call OAL to arrange a consultation. With systems installed globally, we can help you protect your brand in your market.

About OAL

OAL work with food manufacturers to create competitive advantages for their brands by reducing the costs (Production, Quality, Environmental) of converting raw ingredients into finished products through the use of our disruptive technologies. Designing, implementing and automating engineering solutions for over 20 years, we have built a unique team comprising of automation, design, mechanical and product and development specialists to deliver state of the art turnkey solutions and brand security. We typically work with food manufacturers to eliminate waste, improve product quality, ensure food safety and offer flexibility