7 fresh ways to tackle supply chain challenges in Food and Beverages

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Chapter 1

Are you braced for the Amazon effect?

Amazon is a Goliath among tech giants, having moved from selling books to electronics to general merchandise and, more recently, fast-moving consumer goods. So it's hardly surprising that the next logical step appears to be groceries, which are purchased with even greater regularity – one suspects with a view to increasing its Amazon Prime subscriber base.

Amazon's acquisition of upscale grocer, Whole Foods, a deal which will give the online retailer bricks-and-mortar locations as well as closer access to consumers with last-mile distribution. Faced with the combined buying power and omni-channel smarts of the Amazon-Whole Foods synergy, supermarkets will be under greater pressure than ever to reinvent themselves. The acquisition is likely to be a game-changer in terms of how the grocery model operates in the US and UK, with implications beyond the food segment for retail in general.

What makes Amazon so disruptive is that fundamentally, while many traditional retailers are wrestling with fast-evolving technology, Amazon is a first and foremost a tech company that happens to sell products. It consistently finds ways to reduce friction in the consumer journey and, by staying at the forefront of innovation, has redefined people's expectations of all B2C brands, from packaged goods to banking and telecoms.

Staying competitive and relevant

So how can manufacturers and distributors in food and analogous segments compete or collaborate in the Amazon era and remain relevant? Simply put, whether you are looking to work with or against these tech-savvy organisations, you have to change the way you do business.

That means developing a more customer-centric supply chain model which focuses on the last mile of the delivery process. Only then can you offer (and meet) narrow delivery slots, keep customers informed of delivery progress and estimated time of arrival, reconcile every delivery on site, recalculate amounts due and automatically generate a clean invoice.

To deal with consumers' expectations of competitive pricing at a time of unprecedented transparency, you need to focus on production efficiency, too. That demands greater emphasis on embedded risk management and sustainability.

To achieve commercial and efficiency benefits, rather than simply bolstering your environmental credentials. You may need to identify processing and packaging methods that extend shelf life to minimise waste, or look at process optimisation and streamlining production flow to reduce any efforts that don't directly add value to your product.

Distribution partnerships with collaborative logistic agreements will become increasingly commonplace, to reduce road miles (or indeed, kilometres) in line with growing consumer awareness. And you will need to be more proactive and adaptive than ever to keep pace with regulatory developments and maintain compliance.

The pursuit of operational excellence

Technology is central to achieving operational excellence and institutionalising best practice, with opportunities for improvement typically found in four key areas:

Business integration – to give any tech investment the best chance of delivering value, you first need to break down the informational and operational silos in raw material sourcing, manufacturing, warehousing, distribution and inventory management. This will also provide visibility into production and inventory to other departments such as sales, marketing and finance.

Productivity and efficiency – to revitalise processing productivity, you need to be able to manage inputs, control inventory and reduce waste. Information systems can give you the tools to optimise the product mix and track inventory levels and cost. Better information management and automated quality controls will also give you reliable insight into compliance, enabling you to anticipate and respond faster to regulatory changes that could impact production.

Supply chain management – in order to forge tighter relationships with customers and suppliers, you'll need to take a more inclusive approach to supply chain management: information sharing and systems integration with suppliers will become the new norm. An ERP solution will go beyond routine task automation to provide controlled information access to supply chain partners.

eCommerce transactions – you'll need to consider eCommerce integration if you're looking to enable EDI inbound/outbound transactions to/from your ERP system. This will allow you to improve transaction efficiency, reduce manual data entry and support the growth of your business without proportionally increasing back-office staff. And because you'll be accumulating analytical information with every transaction, you can use this data to identify efficiencies or deficiencies in the supply chain.

Spotlight on success

One company that has made great strides through this type of modernisation is wholesaler, Hanan Distribuciones. The Mexican food and beverage specialist had identified that shorter delivery times were key to improving customer satisfaction. However, as product expiry dates were still being recorded manually, the company was struggling to manage its FEFO picking strategy.

Hanan implemented Produmex Warehouse Management, fully integrated with SAP Business One. Now, expiration dates are captured with handheld scanners, eliminating manual data entry. This has enabled outbound logistics to be automated, improving picking, packing and shipping processes, while automated cycle counting dramatically improves the accuracy of its inventory. Hanan's management has the benefit of full visibility into vendor performance, product movement and customer orders, to support better decision-making.

Now, an impressive 99% of orders are able to be delivered within 24 hours, and the company has seen a dramatic uplift in its efficiency and productivity.

To find out how more about how we helped Hanan Distribuciones deliver customer satisfaction in short order, download the case study.

Chapter 2

ERP and WMS: integration of the common good

ERP systems really are the backbone of any wholesale or distribution business, automating a host of business processes and enabling the flow of information between functional areas. Highly specialised ERP systems may include robust supply chain execution functionality. But more typically, ERP software only offers capabilities for managing inventory, such as tracking the process of items as they're picked, packed and shipped. So many businesses – particularly those with high-volume and highly-automated distribution facilities – invest in a dedicated warehouse management system, or WMS, to digitise and automate all aspects of their inventory control.

A WMS provides more sophisticated warehouse functionality than comes as standard with an ERP system. This enables organisations to continuously monitor products' progress as they move in, through and out of the warehouse; keep the receipt, storage and movement of goods under control; and use real-time intelligence to optimise product location and shelf duration, helping them make smarter use of space.

The warehouse isn't an island: other departments, such as manufacturing, purchasing and customer service, need to access warehouse data for decision-making. That means if you have a WMS, it needs to be able to talk to your ERP system.

Interfaced vs Integrated

The trouble is, most third-party WMS applications are only interfaced, rather than seamlessly integrated, with their ERP cousin. The two applications are therefore run on separate databases, or even separate servers, and use middleware or batch export/import processes to physically shift data between systems. This leads to unnecessary complexity and data duplication, and the need for custom interface development inevitably incurs yet more expense. With two discrete sets of inventory information, it's impossible for departments to obtain a single version of the truth.

Is the distinction between an interface and integrated ERP and WMS on a single platform really so great?

Well, that depends on how important it is to your business to ensure that orders are manufactured and shipped on time…

If your ERP and WMS are only loosely coupled, you won't be able to:

Achieve the speed and agility your business needs to be competitive in today's market

Provide management with the real-time information they need to make confident decisions

Equip your sales team to only make promises that your business can deliver

Enable your **customer service team** to keep customers in the loop

Update purchasing based on what has or hasn't been delivered

Truly **implement** customer centric picking strategies such as customer driven shelf life combined with FEFO stock rotation

Eliminate human intervention (and the errors associated with data re-entry) with a straight-through transactional flow

Improve billing speed and accuracy.

With full integration, you effectively have a unified system that covers all your bases, cross-linked for visibility and control, giving you the benefit of streamlined, transparent, end-to-end business processes. Goods can be optimally organised to make best use of your physical warehouse space and employees' time. And you're able to feed the rest of the business with the single source of truth they need to make reliable, fact-based decisions and create value.

Spotlight on success

Oliehoorn, a Netherlands-based purveyor of fats and oils throughout Europe, provides a great illustration of how true integration can work in practice.

The company uses Produmex to integrate shop-floor production and logistic operations with SAP Business One, including the organisational structure of production lines and a detailed layout of the warehouse.

Warehouse and production tasks are initiated via the system, and follow-up, reporting, inventory control and delivery route planning are fully automated. Touch-screens and graphical RF terminals support shop-floor staff in receiving, putting away, picking, moving and executing production orders. Through seamless integration, administrative and operational levels are always perfectly in sync, and Oliehoorn now enjoys complete control over a fully-automated production cycle, from reception to delivery.

With a real-time overview of inventory, production processes and margins, Oliehoorn's purchasing, sales and production functions can respond faster to changing circumstances. As a result of this enviable agility, the mid-sized business has found itself able to compete and win against its larger, multinational rivals.

To find out how more about how we helped Oliehoorn oil the wheels of full warehouse automation, download the case study.

Chapter 3

Is your picking strategy past its shelf life?

It's a familiar scenario: you're in the refrigerator aisle at the supermarket, buying orange juice. You hunt towards the back of the shelf and pick the bottles with the latest expiry dates so they'll keep longer. Yet at home, you're annoyed by that family member who simply grabs the first bottle of OJ to hand, rather than the one they're "supposed" to use which expires first.

In perishable food products, large losses are incurred between farm and fork due to spoilage. So it's hardly surprising that there has been an explosion of novel technologies designed to extend the freshness and quality of food, including physical, chemical and bio-preservation methods.

But one of the most effective ways to maximise shelf life is closer management of the supply chain to try to ensure the right product is delivered at the right time in the right condition. That involves a strategic shift in warehouse operations from purely efficiency-driven order picking methods to picking products according to each specific customer's needs and replenishment policies.

It may sound like an obvious solution, but there's traditionally been a lot of emphasis on minimising travel time and maximising productivity: measured in time and money, order picking is one of the most costly activities in a typical warehouse.

But it's also the activity that plays the biggest role in customer satisfaction with the warehouse and, ultimately, the entire supply chain. If you can't optimise picking for shelf life, you risk impacting directly on the profitability of your business (through returns or expired stock on the shelf) as well as to your customer service level and therefore brand image.

From FIFO to FEFO

The trouble is, most ERP systems simply weren't designed for the dynamics of the food industry, so they lack the functionality to manage variables such as shelf life and expiry date. If you have an older warehouse management system, it may have been built primarily to reduce the cost of business operations. In pursuit of efficiency, you may have adopted a first-in-first-out (FIFO) approach – a logical choice for asset rotation.

But this assumes that all products arriving on a particular date have the same shelf life potential, which is not always the case. And if your WMS can't talk to other systems in the supply chain network, this will inevitably lead to disjointed and inaccurate transfers of information and a lack of visibility across your trading partners.

Huge value can be added with a solution that takes into account the estimated remaining shelf life of the product and matches it to the requirements of the next part of the handling chain. A first-expired-first-out (FEFO) strategy, based on a data-driven approach, will pick products depending on their shelf life potential in relation to their end destination.

Your system should have the functionality to support a definition of "freshness requirements" by customer, and to track the age, best before or expiry date of each product batch/lot. I

t should enable a picking process that suggests the oldest lots for picking which meet the customer's freshness requirements, either by age or remaining days before use by/expiration date. So for example, a customer that is local to you might be able to take older product than one that is further away, once transportation time is taken into account.

One example of a company that has embraced this process is Mexican food and beverage wholesaler, Hanan Distribuciones. The company had identified that shorter deliver times were the key to improving customer satisfaction, but the main obstacle to overcome lay in efficiently managing FEFO inventory for incoming and outgoing stock.

Product expiration dates were manually recorded – a time-consuming and error-prone process that often delayed invoicing and shipping.

Since the implementation of Preodumex Warehouse Management, when goods arrive in the receiving area, Hanan Distribuciones' warehouse staff capture expiration dates with handheld scanners, eliminating the manual data entry and errors that previously stalled inbound receiving.

Outbound logistics have been similarly automated, dramatically improving picking, packing and shipping processes. And managers have access to the insight they need to improve inventory management, with a unified dashboard that offers full visibility into vendor performance, product movement and customer orders.

To find out more about how Produmex can help you to optimise your picking strategy for shelf life, watch our on demand webinar.

Chapter 4

Why you should run towards GS1 labelling standards, not away from it

Provenance is rising up the agenda, with most consumers preferring to buy locally-sourced produce and a growing number looking for “farm to fork” assurance. Supermarkets and retailers are responding to this trend by recruiting more local suppliers – those within a 30-60 mile radius of the store – to reduce food miles and benefit local economies.

In parallel, there is growing regulatory pressure on supply chains to ensure food safety and rapid incident response, such as the FDA’s Food Safety Modernization Act (FSMA) which sets a minimal recall standard of four hours.

This is driven by various factors, from the rise in food allergies (now thought to affect around 2% of adults and 5% of children) that result in hospitalisations due to cross-contamination, to contaminates to false ingredient declarations such as the infamous 2013 European food fraud horsemeat scandal.

In the pursuit of whole-chain traceability, produce needs to be able to be tracked and traced between trading partners, as well as within companies’ own span of operations. This has given rise to industry-led efforts such as the USA Produce Traceability Initiative (PTI) to provide case-level electronic traceability

To fulfil requirements of this nature, the GS1 identification standards and barcodes were designed to create common ways of doing business, and make it quicker, easier and cheaper to trade.

Participation in GS1 may be voluntary, but it’s fast becoming a must-have to do business with certain companies, particularly retailers such as Walmart will only push more producers towards mandatory GS1 compliance. As consumers increasingly buy groceries and other perishable products online, they demand detailed visibility into these products at the point of purchase.

Chapter 4

GS1 benefits your business as well as your customers

If you're not already on board with GS1, adoption shouldn't be a case of waiting until there's no other option. Whether it's a real-life or simulated product analysis and recall, you can't afford to sift through data from a combination of proprietary internal systems, error-prone spreadsheets and paper-based processes, particularly given the speed at which products need to move nowadays.

Standardising on GS1 can help you tackle problem areas such as traceability, stock management, automated goods receipt and invoice discrepancies. And it's an opportunity to become more competitive and responsive to trading partners, support retailers' initiatives to reduce in-store food waste, and build brand loyalty.

We provide full support for GS1 product identification standards and barcodes through the Produmex warehouse management system. This enables you to easily identify product and cases throughout your inbound, internal and outbound logistics processes, and provides you with a consistent, end-to-end traceability record, so that in the event of a food safety issue, such as a recall, you can take swift, precise action.

You can also capture extended information about products, including batch numbers, best before dates and shelf life information, which are key to developing a customer-centric picking strategy.

Developing your GS1 adoption programme

Batch traceability is a complex, multi-dimensional issue which touches multiple parts of your business. GS1 adoption isn't simply a problem to solve with an IT system – it's a methodology and a new way of addressing your marketplace.

That's why we also offer education and support to implement GS1 standards as a means of business transformation, and share best practices for operational improvements.

We can also put together a training programme around how to interpret the GS1 guidelines and standards for your individual business and the steps you need to take to not only achieve compliance but create value for your customers

To find out more, how Produmex is supporting the produce industry visit Produce Traceability Initiative or watch a pre-recorded GS1 video.

Chapter 5

Reducing food waste with a FEFO enabled picking strategy

Every year, a staggering 88 million tons of food is discarded between farm and fork across Europe, at an estimated cost of €143 billion. Food waste is often symptomatic of developed countries' consumerist lifestyles beyond immediate food safety standards, with shoppers typically expecting at least three to five days of shelf life beyond purchase.

A sizeable proportion of losses is incurred by retailers, whether through inappropriate quality control, overstocking or inaccurate forecasting. But in supply chains for perishable products, all partners should share the responsibility for minimising losses and getting high quality products to the end consumer.

Preservation and packaging techniques to maximise shelf life are only one part of the equation; another is ensuring adequate warehouse management for perishables. That means adopting a strategy that takes into account both the rate of deterioration of a given product and the demand for it.

How a FEFO policy works

A 'first expired first out' or FEFO approach to inventory management takes into account the estimated remaining shelf life of a product and matches it to the requirements of the subsequent part of the handling chain. This enables manufacturers or distributors to help ensure retailers receive products well in advance of expiration to prevent premature obsolescence.

An expiration date is assigned to a batch, and the date remains associated with the batch number as products move through the supply chain. Expiration and batch information can be tracked within the inventory management system to indicate which items should be rotated out of inventory first.

This can be especially useful for businesses that receive products with expiry dates that are out of sequence with the receipt date. The use of FEFO can also be extended through the warehouse management system as a picking practice – workers are automatically directed to pick items closest to expiration first.

Overcoming the barriers

Given the changing retail landscape and consumers' appetite for more information than ever about the products they buy, why haven't more food processors, producers and distributors made the switch to FEFO already?

Chapter 5

The two major obstacles tend to be people- and system-related.

People

A FEFO strategy demands a change of mind-set, and people naturally tend to follow the path of least resistance. Space optimisation can become a problem if workers fail to put products in appropriate bins or support the proper rotation of products to customers. If an employee simply grabs the first product available, older products are at risk of expiring in the warehouse.

Best-in-class companies understand that warehouse management is a competitive advantage – for getting more out of their own inventory and for delivering longer-lived products to customers, which increases their profitability in turn. So education is required to communicate the wider benefits of a FEFO strategy and get buy-in from everyone on the shop floor.

Systems

Many inventory and warehouse management systems don't support FEFO picking methodologies; only those systems capable of tracking batch numbers can do so. Because FEFO involves a greater level of complexity, the logistical controls need to react to shelf life differences in a more intelligent way to reduce product loss and out of stock levels.

That's why FEFO is not a process that lends itself to manual work-arounds – especially where food safety is concerned or where the cost of an erroneous shipment could be punitive.

What does a FEFO-ready solution look like?

Industry focused warehouse management systems (WMS) can support a FEFO picking strategy by employing a rules engine to automatically generate a pick list based on the first product to expire.

The expiration date configuration and shelf life parameters of the product are stored in the material master record, and the WMS looks for the material with the oldest expiration date, regardless of the date of entry or acquisition.

Customers' differing shelf life requirements for the same SKU can be configured against the item master data, taking into account delivery times helping to ensure service level agreements are met.

The pick list is then made available electronically to the operator via a mobile handheld device. The operator is directed to the appropriate warehouse bin location to pick against a specific batch and/or SSCC logistics unit.

For example, a retailer stipulates that a batch must have a shelf life of at least 20 days from the date of delivery. That means the batch with the nearest expiration date within sellable days should be first to go, while any batch that will have surpassed its expiration date should not be picked up. If the quantity required by the retailer exceeds that of a batch, the next batch with the next nearest expiration date should be picked.

Only with a single piece of software tying everything together does it become possible to allocate inventory automatically to sales and even production orders on a FEFO basis. A further advantage when building the business case for change is that this allows every aspect of the warehouse operation to be measured, such as waste and inventory levels, and purchasing habits adjusted accordingly.

To find out more about how to implement a FEFO picking strategy watch this on demand webinar.

Chapter 6

Product traceability: beyond food safety to competitive differentiator

The rise in global trade has brought a wider variety of foods than ever within reach ofconsumers markets such as Europe and North America, But the tangled web that is today's food supply chain creates new challenges to protect brand value, build consumer trust and demonstrate leadership in product integrity.

The drivers of traceability

Food safety - Safety is the number one concern in the food industry – particularly instances where there is a need to notify, withdraw or recall products to prevent food-borne illness outbreaks. For example, in August 2017, food safety authorities across Europe were notified that eggs imported from the Netherlands may be contaminated with a toxic insecticide that is harmful to humans.

Food allergies - The prevalence of food allergies is on the rise, as is the number of foods to which people are allergenic. Approximately 90% of all allergic reactions come from just eight foods or food groups: milk, eggs, fish, shellfish, tree nuts, peanuts, wheat and soy. The number of hospital admissions for anaphylaxis in children across Europe has increased sevenfold in the past ten years (1) . The scale and severity of the risk explains why, in May 2017, Ben and Jerry's Chocolate Fudge Brownie Pint Slices were voluntarily recalled when suspected to contain peanut butter through cross-contamination.

Cultural compliance - For companies looking to expand into global markets, traceability is also needed for cultural and religious reasons. This might involve the exclusion of certain food groups or compliance with specific practices, such as Kosher or Halal certification.

'Fake' foods - As consumers pay greater scrutiny to the provenance of foodstuffs, particularly premium and speciality products, they're rightly concerned about authenticity. In 2015, seven of Italy's best-known olive oil companies were investigated for allegedly passing off inferior quality virgin olive oil as extra-virgin. And who can forget the horsemeat scandal of 2013, in which horse DNA was identified in processed beef products from leading brands and supermarkets. Financial gain is often the motive for food fraud and counterfeit products, and as profit margins are squeezed, there is increasing temptation to cut corners.

[1] Source: EAACI, Food allergy and anaphylaxis guidelines: diagnosis and management of food allergy, 2014

Chapter 6

Traceability for risk management, compliance and competitive advantage

Regulatory requirements naturally reflect the importance of traceability. In the US, the Food and Drug Administration's Food Safety Modernization Act provided comprehensive reform by shifting the focus from responding to contamination events to preventing them. While in Europe, the General Food Law Regulation demands the ability to trace and track food, feed and ingredients through all stages of production, processing and distribution.

However, traceability is not just a matter of public health and food safety, but should be embraced positively and proactively as a risk management tool. By providing visibility into the supply chain, it helps companies plan and prepare for an emergency situation and respond swiftly if something goes wrong. It's what allows businesses to identify the source of the problem through root cause analysis. And if a crisis does occur, it helps both the industry and regulators to maintain or rebuild trust in the safety and resilience of our food system during the recovery phase.

Ultimately, the ability to reliably ascertain a product's origin, ingredients and batch attributes across the entire lifecycle should be viewed as a competitive advantage – one that promotes quality and boosts confidence in a brand among conscious consumers.

The need for backwards and forwards traceability

Nobody wins if everything has to be pulled from the entire food supply system. Being able to isolate tainted foodstuffs and minimise the scope of a recall requires bidirectional traceability – backwards as well as forwards – which spans:

the raw materials used in your formulation or recipe, including suppliers, the date the raw material is received by your business and the batch/lot number;

work in progress, including the quantities of raw materials used to make the product, the number of units manufactured, plus any write-offs, rework or waste incurred;

the status of finished products, including customer contact details, the number of units despatched, and what batch/lot number or dated products have been sent to the customer.

There is currently is no unifying requirement for traceability, which varies by industry and even product, and this is often reflected in a lack of interoperability from one IT system to another. You may find your ERP and WMS systems don't equip you with the tools to reliably handle requirements to track data across the food chain, or it may be a challenge to aggregate and analyse the data and convert it into an actionable basis for decision-making.

Whether faced with a real-life crisis or a simulated product analysis and recall, you need to be able to respond under time pressure. Could you pick at random any batch of a raw material received and through forward traceability, account for all the finished goods it went into? If a customer made a serious complaint which had food safety implications, could you instantly trace that product back to all its ingredients? And establish where the remainder of those ingredients went?

A big data problem demands a digital solution

Since traceability is ultimately a big data challenge, it requires an electronic approach to quality management to provide real-time traceability and enable affected products to be quickly pinpointed – wherever they are, whatever the circumstances.

Produmex does just that by supporting an unlimited number of batch attributes, to allow manufacturers, wholesalers and distributors to register information that is critical to achieving electronic traceability – anything from country of origin, GMO, manufacturing dates and quality classes to fat content, moisture and age. This information can be used throughout the logistics flow in the warehouse, along with any quality status changes.

Using preconfigured reports, warehouse supervisors can track and trace products throughout the supply chain, whether by item code, barcode, batch number, production line or between specific dates. They have visibility of all information relating to ingredients used to produce the batch/lot, movements, stock levels and more, as well as whether the product has been delivered, when, to which customer, and by which operator.

To find out more about how Produmex can help you achieve end-to-end traceability to maintain the safety and integrity of your products, watch this on demand webinar.

Chapter 7

Serialisation in the food industry: outsmarting the copycats

When people think of “knock-off” goods, the first thing that springs in mind tend to be luxury products and electronics. But in reality, it’s just as likely to be food and beverages that are copied somehow adulterated by unscrupulous opportunists.

When products change hands a number of times, there is a lack of real-time transparency that can allow food fraud, falsification and adulteration to slip through the net undetected. Each process involved in creating a product, from inception through packaging and shipping, is an opportunity for foul play. Counterfeit food products infringe intellectual property rights, while substandard food products fail to comply with laws relating to production, packaging, storage and distribution.

While there have been several notable scandals in China – such as the adulteration of infant formula with melamine in 2008, when an estimated 54,000 babies were hospitalised – the problem is a global one.

Operation opsonisation, run annually by Interpol and Europol, specifically targets organised crime networks behind the illicit food trade spanning 60 countries, and involves police, customs, national food agencies, regulatory bodies and partners from the private sector. In 2017, Opson VI resulted in the seizure of 10,000 tonnes of fake or substandard foods and over 26 million litres of counterfeit drinks, with arrests made across the Americas, Asia and Europe.

In October 2017, news broke that the UK’s largest poultry supplier to major supermarkets has allegedly been altering slaughters records and falsifying kill dates to artificially stretch the commercial life of the meat. Covert recordings in the factory also indicated that chicken portions returned by supermarket distributors were repackaged and sent out again to rival grocers. These practices could potentially hinder authorities from recalling contaminated meat in the event of an outbreak of food poisoning. At the time of writing, the group is facing a parliamentary enquiry and has suspended operations at its main processing plant.

Retailers likely to mount defences

Regulations, measures and their enforcement are fragmented across International borders, and legislation is lagging behind far behind the ever-evolving counterfeiting situation.

So it's likely that retailers will increasingly take matters into their own hands to prevent fake food from entering their supply chain to avoid the potential for litigation. This could well involve the introduction of tracking and tracing capabilities and new technologies such as blockchain that become a precondition of doing business.

It's a particularly pressing problem for online retailers, who need to find ways to maintain consumer trust, since quality can't be assumed or ascertained through a picture or product description. For example, following a 2017 lawsuit, Amazon is purportedly extending its fake-fighting Transparency programme beyond its own products to third-party sellers, with speculation rife that the programme will become mandatory in future.

In early September 2017, Amazon is reported to have told sellers who have registered SKUs with the Transparency team that they will need to add its proprietary Universal Product Code to guarantee authencity, otherwise risk having inventory rejected or be removed from the marketplace altogether.

With Amazon having made a foray into grocery retail through its acquisition of Whole Foods, the food industry may anticipate similar mandates.

Serialisation: applying the successes from pharma to food

Serialisation isn't a new concept: it's the process of putting a unique number on a product to enable traceability and authentication of the end selling packaging unit, rather than batch level. The practice is established in the pharmaceutical industry, where it is used to provide drug "pedigree" to combat the $32 billion global threat posed by counterfeit medicines – particularly given the rise in online pharmacies. It's a methodology already implemented in the food sector such as Australia's powdered milk industry, and Canada's fresh vegetable sector.

With mounting pressure from consumers, governments, industry and the media to address fraud and malpractice, the food industry is ripe for serialisation. After all, ingesting harmful ingredients in fake foods and beverages can be just as hazardous to consumers as fake medicines. Other forms of deception, such as product substitution, can also lead to substantial economic and reputational damage. Serialisation of individual items, and the capability to track and trace at item level throughout the supply chain, can help growers and processors to ensure the provenance authenticity of products and provide all the necessary assurances to their customers.

Simplifying the adoption of serialisation

Produmex offers a serialisation, tracking and tracing solution, originally developed for and proven among life sciences customers with stringent requirements. Its features and functionality can be readily applied to the for industry to ensure full tracking, tracing and compliance with any country's rules and regulations, both now and in the future.

The solution captures and records all relevant information – serial numbers, batch/lot number, batch attributes and more – across inbound, internal, production and outbound logistic processes. Serialised numbers are automatically generated, either randomly of based on an algorithm, and can be aggregated under a batch number. When products are shipped, the barcodes can simply be scanned with a handheld device to determine what serial numbers are within the shipment and which customers they are going to.

Adopting serialisation shouldn't be regarded as yet another "stick" of compliance; rather, it's an opportunity to protect your brand by detecting and managing counterfeit product threats, and build customer and consumer trust with a competitive differentiator. Taking a proactive approach will als benefit your operations by enabling you to obtain more granular data, which supports reverse logistics and recalls. And with accurate visibility into items and quantities at every point in the supply chain, you can gain tighter control over inventory.

To find out more about how to implement serialisation to protect your business against food fraud, falsification and adulteration, watch the on demand webinar.