



# Food for Thought

Top 6 Trends and Challenges Facing the Food and Beverage Industry





The global food and beverage market is constantly changing, and being flexible and adaptive to change is key. When risk occurs it can extend a ripple effect throughout the supply chain – leading to lost time and money. Customers want more information about the products they are purchasing, and businesses must continue to put compliance on the forefront. Supply chains can look complicated right now. It's important to identify alternate suppliers, know where ingredients are coming from, where products are being distributed, and which alternative sales channels are available.

Understanding the industry and better managing risks and challenges can help businesses emerge from the other side of this new economy – and stand out amongst the competition. Companies are changing how they do business and serve their customers, and the companies that supply them must also pivot and change. All companies from ingredients suppliers to food manufacturers need to be aware of alternate distributor possibilities and find creative ways to get their products out in the market. Areas like inventory management, which is vital to food manufacturers and distributors, is increasingly important during these challenging times. Business owners must know lead times, limit wastage, and better manage order fulfillment.

Real business growth occurs when owners have access to critical information, respond to change, and prepare for possible challenges. Understanding emerging trends and investing in business technology to optimise areas like food safety and inventory control can help businesses stay current and competitive. The right technology offers a complete view of costs, inventory, and the supply chain to help companies plan better and make faster strategic decisions to adjust to changes in the market. With the right technology, businesses can make those necessary, swift changes to survive future slowdowns and disruptions in the industry.



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## 1. How to Nip the Growing Problem of Organic Food Fraud in the Bud with a Traceability System

When consumers pay a premium for certified organic produce and packaged foods, they should feel confident that they're getting what they pay for: a product free from synthetic fertilisers, pesticides, antibiotics, growth regulators, and genetically modified organisms. There is also an underlying ethical assumption that those revenues are going to farmers engaged in sustainable agricultural practices that promote ecological balance and conserve biodiversity. Products sold as organic must, by law, follow certain standards and must be regularly inspected and certified by approved bodies. At a global level, many countries have regulatory requirements like those in the EU and there are formal agreements covering trade in organic products between these countries.

However, because organic and eco-labelled food products command a higher price, instances of food fraud, such as adulteration and mislabelling, are becoming more commonplace. In the organic food market segment, where it is not easy to identify which products are organic or produced using conventional means, trust in a brand name is paramount. What's more, failure to enforce standards casts a shadow of doubt over the term 'organic', which should be synonymous with authenticity. To avoid eroding the grounds for premium pricing in the organic food category, more and more agriculture businesses are adopting traceability systems to avoid products falsely sold as 'organic' in the supply chain and the adverse effect these products have on consumer demand.

### Staying Competitive and Relevant

The problem is amplified with imported products that involve intermediaries, some of whom are looking to make economic gains by deliberately mislabelling foods as organic and selling them at a premium. One example is the 2016 to 2017 shipment of over 16 metric tons of soybeans that found their way to California from Ukraine via Turkey.

What started out as conventionally-farmed, pesticide-treated soybeans were sold as 'organic', which saw the consignment's value increase by nearly £3 million. This wasn't an isolated incident either, two further shipments of corn and soybeans revealed similar findings. Moreover, because these imported crops were largely destined to become animal feed, there was a cascading effect on the supply chain. Eggs, dairy, meat, and poultry raised on this conventional feed was now falsely labelled organic as well.

Retailers are finding themselves at risk as well. While consumers increasingly scrutinise labels promoting 'farm-to-fork' sourcing, not all retailers can verify organic products back to their point of origin. While tier 1 and some of tier 2 suppliers may be known to the retailer, view of tier 3 suppliers and beyond is often obscured.



## Tackling the Root of the Problem

In 2017, imports of organic products into the EU became subject to a new EU electronic certification system. As well as the goal of reducing organic food fraud, the addition of import certificates to the existing Trade Control and Expert System facilitates trade by enabling partners and competent authorities to obtain information on the movement of their consignments easily.

Forward-thinking companies, however, look beyond the 'stick' of regulation to the 'carrot' of consumer trust and are actively seeking ways to reduce their susceptibility to organic food fraud and protect their brand. They need to account for every part of the production process, which means farming practices, distribution paths, storage procedures, and product delivery must all be made visible to business managers.

External traceability is vital to validating the presence of attributes such as organic certification for the agro-food sector, which includes animal feeds. This requires all businesses in the supply chain to systematically link the physical flow of materials and products with the flow of information about them.

However, many traceability systems today were only designed for internal purposes, providing a one-up, one-down view for the company using that system. Many companies, particularly those that do business with large retailers that impose strict standards, will quickly find themselves outgrowing manual methods or standalone programmes for batch or lot tracking. At this tipping point, an enterprise resource planning (ERP) solution that supports strong batch or lot traceability features becomes essential.



## A Fresh Focus on Traceability

The Fruit Company is known for its hand-picked premium fruit. Their product offerings include premium fruit baskets and fruit boxes comprised of some of the best apples, pears and oranges on the planet. Their high-quality products are undoubtedly essential to the success of their company, and preserving that quality from farm to table was critical. While they had to manage quality control for customer service, safety and quality regulations mandated by government was becoming more complex. They had to ensure traceability across their entire supply chain. They needed an all-in-one solution that would not only manage their day-to-day, but that would also manage their traceability process.

Becky Betty, Director of Sales and Merchandising said, "SAP Business One helps us with our traceability process because if we were to have a recall we would be able to pull the data of the product that was shipped with that item in it and we would be able to have a visual window of every single person who has purchased and received that product. For traceability it really has helped us immensely to have SAP Business One. It makes it a much easier process. SAP Business One helps keep us on track every day with the product that we need to ship accurately and efficiently."

With an ERP system like SAP Business One, businesses like the Fruit Company can better manage changing food safety regulations and maintain their standard of quality. It streamlines their production, packaging, inventory and warehouse management, and offers greater visibility into all aspects of their operations. With this single software solution their data is centralised, and it offers greater quality control with the ability to track inventory anywhere in the supply chain. Scott Webster, CEO of the Fruit Company adds, "The quality process within SAP Business One allows us to manage inventory very tightly, which is essential when dealing with premium fresh fruit. SAP Business One has helped us do that much more effectively. That's been really powerful as one of the executives of the company."

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With traceability-focused programmes, the organic product's batch or lot number follows it from seed to table. By capturing the organic certification data as part of lot tracking, organic status can be tracked through the supply chain. For example, a bottle of certified organic wine can be traceable back to the exact vineyard from which its grapes were harvested. An organic apple can be traced back to the farm where it was grown, and it should even be possible to pinpoint the exact orchard from which it was picked.

Shoppers are becoming increasingly savvy about what they eat and how it's raised; supply chain traceability is what empowers consumers to trust certified organic brands. When there is an opportunity to help the consumer understand where their food is coming from, businesses can further differentiate their products. Making an investment in traceability technology will bear fruit in the form of customer trust and brand loyalty.





## 2. Country of Origin Effect: Why Provenance Matters for Food and Beverage Wholesale Distributors

Empowered by access to information, modern consumers are becoming increasingly selective about the provenance of foodstuffs. For the growing number of shoppers who believe it's important to know where our food comes from to make informed decisions, country of origin can signal quality; supporting faster decision making and serve as a competitive advantage against competitor foodstuffs whose origin is not clear.

Country of origin labelling can have a considerable influence on consumers' perception and purchasing decisions. Consumers who are concerned about human and animal rights or environmental impact look to country of origin to ensure their purchase supports economies where higher welfare standards prevail. For other consumers, interest in knowing food's country of origin may relate to a desire to reduce the carbon footprint by buying produce that isn't shipped from far away. For others, it may be about the desire to support local or national economies, or a belief that domestic brands are more trustworthy and better attuned to consumers' needs or tastes.

Country of origin is also sometimes used as a proxy measure for quality and safety standards, where certain practices, pesticides or fertilisers are used (or not used) in a country or region. In 2017 there was backlash in the UK against importing US chicken washed in chlorine as part of a post-Brexit transatlantic trade deal, while chlorination is currently prohibited in the EU.

For other consumer sub-cultures such as the foodies, country of origin has more to do with place-based branding and protected designations of origin providing assurances around distinctive local goods. Certain products have a specific quality or characteristics that are due to the geographical environment or local tradition in which they've produced, such as Champagne, Roquefort, Chianti and Darjeeling.

## Fact from Fiction

Complicating matters for consumers is that country of origin labelling on food products has become a somewhat controversial topic in recent years amid “fake foods” scandals. In 2015, Italian extra-virgin olive oil flooding the world's market shelled was neither Italian nor extra-virgin – or even olive oil in some cases. In 2017, a well-known UK grocery retailer came under fire for using controversial “fake farm” names on its own-brand produce and meat, when in fact, some of these products were not even sourced in the UK but imported from overseas.

It's not only supermarkets capitalising on deception. Under an EU labelling loophole, UK retailers – including farm shops and local butchers – are entitled to call a meat product ‘British’, even if the meat itself is sourced from abroad if the product has been processed and packed in the UK. It's not unusual to see ‘Wiltshire’ cured ham that, on closer scrutiny of the label, is made from EU pork – and it can even bear a union flag on the packaging.

What these examples illustrate is a growing demand by consumers for food provenance transparency. For food and beverage manufacturers and distributors, it is an opportunity to offer greater value than the competition to consumers that are navigating false claims in the marketplace.

## Food Traceability as a Competitive Advantage

Country of origin is not a guarantee of food safety: the horse meat scandal back in 2013 illustrated that if you believe you're buying a beef lasagna, horse meat is horse meat, regardless of where it comes from. Nor does country of origin provide any real certainty about the way livestock has been reared, slaughtered, processed, or packaged. However, country of origin is an important component in food traceability – the ability to track any foodstuff, feed, or food-producing animal through all stages of production, processing and distribution. But with globalisation, products often traverse complex global supply chains to reach consumers, making traceability a technical, logistical, and financial challenge.

Some countries have introduced legal reform, such as the U.S. FDA Country of Origin Labeling (COOL), which mandates specific labelling practices for several “covered commodities”. But private sector traceability initiatives and voluntary quality assurance systems are also emerging, often because of pressure from downstream food retailers, motivated by a justifiable desire to reduce their own risk exposure.

For both distributors and manufacturers, the ability to reliably select products based on country of origin can be a distinct competitive advantage. For example, a company making authentic passata will specify Italian tomatoes in its recipe, rather than Spanish. Or a Mediterranean supermarket may have a strict requirement for apricots grown in Turkey rather than France or Algeria.

## A Batch of Reasons to Capture Data

Whether meeting regulations or requirements, an effective traceability system is essential to solve the country of origin conundrum. A modern, food traceability system should enable every single pallet, case or item to tell its story wherever it goes, at any point in the supply chain – not just provide the bare minimum of ‘one step back, one step forward’ visibility.



### 3. How Blockchain is Set to Transform Food Safety and Integrity

The trust and transparency challenges that confront the globalised food system - such as substitution, tampering, misrepresentation, illegal production, and contamination - are compounded by a lack of supply chain traceability. One of the challenges facing growing small to mid-sized enterprises (SMEs) in the food and beverage industry is caused by traditional paper tracking and manual inspection systems; transactions are handled in disparate databases, resulting in food supply chains that aren't connected or as transparent as they could be. When it comes to food recall, this can make the difference between identifying a few contaminated bags of spinach and having the precision to recall an entire shipment from hundreds of stores.

Blockchain is positioned as the way to “provide consumer trust in an untrusting world” by transforming business management solutions such as ERP. But what is Blockchain, how does it work, and how can it be applied to solve food supply chain management challenges?

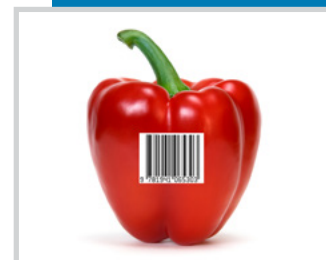
#### What is Blockchain and How Does it Work

Blockchain or (Distributed Ledger Technology) was developed in the aftermath of the 2008 recession to deliver transparency, security, and efficiency in managing transactions between multiple parties without involving banks. This gave rise to cryptocurrencies such as Bitcoin, which can be transmitted worldwide: no intermediaries, regulation or the need to know or trust the parties involved. Similarly, Blockchain is a way to structure data. It uses distributed ledger technology: a database which, rather than being stored in one place, is continuously synchronised and shared among all members of a peer-to-peer network for real-time data transparency.

When a digital transaction is carried out, it is grouped in a cryptographically-protected block with other transactions that have occurred in the last ten minutes and sent out to the entire network. Once validated, the block of transactions is timestamped and permanently added to a chain in chronological order. New blocks are linked to older blocks and contain a reference to the previous block (called a “hash, which is somewhat like a digital fingerprint).

A distributed database cannot be hacked, manipulated or disrupted in the same way as a traditional, centralised database with a user-controlled access system. The data is immutable: once it has been written to a Blockchain, nobody - not even a system administrator - can modify or tamper with it. The technology can work for almost any type of transaction involving value, such as money, goods, land ownership, work, medical records or even votes.

In other words, Blockchain technology operates as a trusted middleman - like a bank - for businesses to conduct a transaction. In the case of supply chains, Blockchain cryptography enables consumers and suppliers to connect directly removing the need for third-party involvement.





## How is Blockchain Applicable to the Food and Beverage Industry?

Today's supply chains have an inherent weakness: individual parties are using disparate digital systems, different technologies, and paper-based processes to bridge the gaps between companies. Lack of a single platform makes it inefficient to share the critical data that drives supply chain interactions, or to guarantee a high degree of accuracy of the data.

Blockchain-infused traceability systems could deliver the transparency and trust that has eluded the food industry until now. With immutable data, it has the potential to give growers, suppliers, processors, distributors, retailers, regulators, and consumers access to reliable information on the origin and state of food.

## Blockchain for Agriculture

It will become feasible for farms to create digital records for individual livestock to track the lifecycle from farm to fork, using technology such as RFID tags. This enables consumers to read the "digital history" of meat down to the individual animal, including the company who raised it, how it was raised, what it was fed, and who processed it, simply by scanning a QR code on the packaging.

As an integral link of the food supply, farmers typically have little visibility to the end consumer and could stand to gain a new voice and new distribution opportunities through participation on Blockchain. There are also exciting possibilities for creating business value with new, previously unattainable data that could be made available through Blockchain, such as how much fertiliser or water was used, as evidence of sustainability assertions.

## Blockchain for Distributors

Distributors could provide more transparency to processors and buyers regarding product type, farming practices, harvest data and Fair Trade or similar certifications. With the addition of appropriate sensor technology, valuable information could be provided to actors up the chain, such as the duration of the journey while a product is in transit, or the temperature and humidity of the truck it travels in, to demonstrate that the product is fit for use or sale on arrival.



### Blockchain for Food Processors and Producers

As food processors often struggle to validate the origin of their ingredients, Blockchain would enable the validation of information about input products without violating trust between individual entities. For food producers, the nature of Blockchain would mean that any attempt to tamper with a product as it moves through the supply chain can be identified and prevented before it ever reaches a retailer.

### Blockchain for Food and Beverage Retailers

As bricks and mortar stores face increasing competition from online food providers, supermarkets often want to provide local produce as a differentiator. With Blockchain providing trust, the information value provided by local farms could be bound to the claims made by grocers. This could effectively create a new model for providing local produce through a national chain, with the evidence of quality, transport, and freshness that consumers demand. Not only can this rich stream of information be used to create a point of sale educational opportunity, but it also bolsters the capacity for a digital recall in the event of a safety issue, such as food-borne illness. If a potentially contaminated product somehow made it onto the shelves, stores could rapidly identify, isolate and remove only the affected items without the need for a costly whole-batch recall.

### Blockchain for Catering

Restaurants have a direct relationship with the ultimate consumer, and a growing number are keen to emphasize the quality and sustainability of their food. It could prove a considerable competitive advantage be able to authenticate their menus and justify a premium for local, organic or free-range meats.

Blockchain offers many practical solutions to today's impractical system and should promote better communication between all parts of the food chain and, just as importantly, between producers and consumers.



## The Future is Already Here

The promise of Blockchain isn't a far-off utopian vision. US agricultural conglomerate, Cargill, has made an early foray into Blockchain, with a pilot through its Honeysuckle White brand. Walmart is currently piloting Blockchain technology to trace mangoes, in their US stores, and has cut the time it took to provide gate-to-plate traceability to two seconds - a process which used to take weeks. Walmart is also among several companies backing a new initiative in China focused on food safety and traceability with Blockchain as its technical foundation, following numerous high-profile fake food scandals in the world's most populous country.

A consortium including Dole, Nestlé and Unilever are working to identify opportunities for the use of Blockchain to improve data integrity and trust between large enterprise-scale agriculture companies. Meanwhile, technology vendors are collaborating with GS1, the global business communications standards organisation, to determine how the structure data stored or referenced by Blockchains can be shared across industries. Blockchain has the potential to be a game-changer for food supply chains, helping the industry to achieve the trust, transparency, and traceability. This could also be key in the current market situation, where supply chain management is critical to deal with the rapid changes taking place.

## Blockchain Further Enhances ERP

There are numerous benefits to adopting an industry-specific ERP solution. It centralises all business data, allowing for greater control of the inner operations and makes informed decisions for the future. Also, data updates in real-time, which is crucial for the seamless functioning of the food and beverage industry. Continuous communication between departments eliminates the chance for errors, while instant access makes it possible to identify potential setbacks in the current way processes are taking place. Companies have everything they need for setting the perfect conditions for business growth. Various integrations (e.g., B2B solutions) are also possible, making other software and tools redundant. So, where does Blockchain integration fit into ERP?

Blockchain pushes the existing benefits of an ERP system to the next level. These centralised business processes become accessible across multiple organisations. Integration enables the optimisation of all operations across several different organisations, as well as trusted sharing data. This is all especially important during the current challenges as having access to critical data is necessary to make swift decisions. Businesses need to be agile and pivot operations accordingly – helping them come out the other side of the COVID-19 pandemic.





## 4. Why ERP and WMS Integration is Key for Warehouse Automation

For Tolteca Foodservice, a wholesale distributor of products ranging from non-perishable to refrigerated and frozen goods, they knew they needed a system that could tie all aspects of their business together. Their more than 600 customers rely on Tolteca Foodservice for on time delivery and superior customer service. Prior to their adoption of ERP, their data was disconnected, located in spreadsheets that required manual data entry. They needed streamlined operations to ensure their orders arrived just-in-time.

Maria Gutierrez, Tolteca's Operations Manager acknowledged, "Our customers don't have a lot of storage space to house products in their restaurants. They count on us for timely delivery of products because they can't carry a two-week supply. This meant that Tolteca Foodservice needs to ensure that each order was processed accurately since the customers only have enough room to store what they consume during the week."

Tolteca Foodservice was outpacing their current system and had no control over expiry dates, and their manual spreadsheets of price and inventory comparisons hindered inventory management. Once they moved to their ERP system, SAP Business One, they were able to manage their entire business with just one system. Real-time data and inventory updates helped them better manage their warehouse, which was crucial to their business.

"Remote access to SAP Business One gives Tolteca Foodservice sales reps access to customers' information to do business with them more efficiently," says Gutierrez. "We can sit down and give them a real-time snapshot of the information they require. As a result, customer service has improved. We no longer have to wait until making a call to the head office or returning to the office to check the status of an order."

“ Our customers don't have a lot of storage space to house products in their restaurants. They count on us for timely delivery of products because they can't carry a two-week supply. ”

ERP systems are the backbone of any wholesale or distribution business, automating business processes and enabling the flow of information between functional areas. Few ERP systems, however, include robust supply chain execution functionality. More typically, quality ERP solutions focus on related, but nonetheless essential, functionality for managing inventory such as tracking products as they're picked, packed, and shipped to the customer. Many SMEs – 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 system adds more sophisticated warehouse functionality to the functionality of 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.

But, 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 an SME has a WMS system, it equally needs to have an ERP system that can talk directly, and seamlessly to it.

### Interfaced vs. Integrated: What's the Difference?

The trouble is, most third-party WMS applications are only interfaced, rather than seamlessly integrated, with their ERP solution. The two solutions are therefore run on separate databases or even separate servers and use middleware or batch export/import processes to manually move 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 difference between an interface and integrated ERP and WMS on a single platform so great? That depends on how important it is to an SME to ensure that orders are manufactured and shipped on time. If your ERP and WMS systems 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 informed decisions.
- Equip your sales team with data they need to make promises that your business can deliver upon.
- 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 first expired, first out (FEFO) stock rotation.
- Eliminate manual business processes (and the errors associated with data re-entry) with a straight-through transactional flow.
- Improve billing speed and accuracy.

### The Benefits of Full Integration

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



## 5. Is Your Business' Inventory Picky Strategy Past its Shelf Life?

In the perishable food and beverage products category, losses often occur en route from farm to fork. Temperature, moisture, and other factors affect the growth rates of organisms that cause spoilage. 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 biopreservation methods. But one of the most effective ways to maximise shelf life is closer managing of a SMEs supply chain to try to ensure the right product is delivered at the right time, in the right condition.

Maximising shelf life of an SMEs products involves a strategic shift in warehouse operations from purely efficiency-driven order picking methods to pick products according to each specific customer's needs and replenishment policies. It may sound obvious, but there's traditionally been a lot of emphasis on minimising travel time and maximising productivity.

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Order picking is one of the costliest activities in a typical warehouse measured by time and money. But it's also the activity that plays the biggest role in customer satisfaction with the warehouse and, ultimately, an SMEs supply chain. If a business can't optimise picking for shelf life, it risks affecting profitability (through product returns or expired stock on the shelf) as well as to your customer service level and therefore brand image.



## The FIFO Approach

Most business management solutions on the market such as ERP weren't designed for the dynamics of the food industry. They lack the functionality to manage perishable food and beverage product variables like shelf life and expiry date. If a business has an older warehouse management system, it may have been built primarily to reduce the cost of business operations. In pursuit of efficiency, businesses may have adopted a first-in-first-out (FIFO) approach – a logical choice for food and beverage product rotation.

But this assumes that all products arriving on a date have the same shelf life potential, which is not always the case. And if a 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.

## The FEFO Approach

SMEs can add value to their supply chain with an ERP solution that considers 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 at their end destination.

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

Just as much as managing product self-life is important, shorter delivery times are equally important to improving customer satisfaction. However, the main obstacle is to overcome lay in efficiently managing FEFO inventory for incoming and outgoing stock. SMEs running legacy systems often record product expiration dates manually – a time-consuming and error-prone process that often delays invoicing and shipping.

## The Solution

By implementing an integrated ERP solution for Food and Beverage Manufacturers/Distributors, SMEs can take receipt of products in the warehouse more efficiently. Warehouse staff can capture expiration dates with handheld scanners, eliminating the manual data entry and human errors. Outbound logistics are automated, dramatically improving picking, packing and shipping processes. SME management has 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. This is essential to the success of any food and beverage companies, and especially critical while navigating this new norm and operating during the COVID-19 pandemic.

## 6. Reducing Food Waste with a FEFO Enabled Picking Strategy

Between Farm and Fork, the economic cost of food wastage is tremendous. In Europe alone, 88 million tons of food is wasted, with an estimated cost of €143 billion. This staggering finding is shared among other countries and is often indicative of developed countries and consumerist lifestyles.

Retailers often experience a large proportion of food wastage caused by several factors such as overstocking items, inaccurate forecasting, or inappropriate quality control. Consumers expect at least three to five days of shelf life after they purchase a product, and retailers have a role to play in ensuring they meet their customer's needs. In the supply chains for perishable products, all partners have a shared responsibility for minimising losses and making sure high-quality products reach the end consumer, in a timely manner. While there are many preservation and packaging techniques to maximise shelf life – it is vital businesses have appropriate warehouse management practices in place. Companies must adopt a strategy that not only considers the rate of deterioration of perishable products, but also the level of demand for it.

“ *The economic cost of food wastage is tremendous. In Europe alone, 88 million tons of food is wasted, with an estimated cost of €143 billion.* ”

### A FEFO Solution

A first-expired, first-out, or FEFO approach, ensures products closest to the expiration date in your inventory are shipped out first. This strategy takes into account the remaining shelf life of a product; delivering to retailers well in advance of expiration. An expiration date is assigned to a batch, and this date remains associated to the batch number as products move throughout the supply chain. This method allows expiration and batch information to be tracked within the inventory management system, further identifying which items should be rotated out of inventory first.

The FEFO approach, and the process of batch number tracking, can be especially useful for businesses that receive products that are out of sequence with the receipt date. FEFO can be extended through the warehouse management system as a picking process – as workers are automatically directed to choose items closest to the expiration first.

### Obstacles to FEFO Adoption

The FIFO method for inventory management is a common approach used because it's a simpler system. It is a more common capability found in warehouse management software, however it lacks the intelligence to manage the shelf life of perishable products. The challenge with this method is that consumers' expectations are changing, and shoppers are demanding more information about the products they are purchasing. Expiration dates affect purchase decisions, and the first-in-first-out (FIFO) approach doesn't support the ability to determine expiry dates. Given the changing retail landscape, and the limitations of the FIFO approach, why haven't more food manufacturers and distributors switched to FEFO?



## Company Buy-In

Often business owners naturally tend to follow the path of least resistance, and the adoption of a FEFO strategy demands a change in mind-set. In addition, space optimisation can become an issue if workers fail to put products in appropriate bins or support the rotation of products to customers. If an employee simply takes the first product available, older products run the risk of expiring in the warehouse. Employees need to be on board and fully support the strategy for it to work correctly. Strong warehouse management can be a competitive advantage, and best-in-class companies understand this. By getting products to customers faster, they reduce their wastage, improve customer service, and increase their profitability in the long run. Companies need to be made aware of the wider benefits of a FEFO strategy and there needs to be buy in from everyone on the shop floor.

## System Support

A FEFO strategy involves systems that can support picking methodologies, and many inventory and warehouse management systems do not have this capability. Because FEFO involves a greater level of complexity, the logistical controls require more intelligence to manage shelf life and reduce product loss.

## FEFO – How Does it Work

How does a FEFO solution work for your business? 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. Customers' differing shelf life requirements for the same SKU can be configured against the item master data, taking delivery times into account to ensure service agreements are met. The pick list is then made available electronically through a mobile device. The operator is then directed to the appropriate warehouse bin location to pick against a specific batch and/or SSCC logistics unit.

During these turbulent times, limiting wastage has never been more important. A FEFO solution allows every aspect of the warehouse to be measured, such as inventory and waste levels. Legacy systems often track expiration dates manually, leaving room for error. With a FEFO system, companies are able to better manage stock levels, resulting in shorter delivery times, longer shelf life, and ultimately an increase in profitability. With an integrated ERP solution, businesses can take advantage of the FEFO approach to warehouse management through its comprehensive picking strategy. SMEs can use the automated logical processes, virtually eliminating manual data entry and human error. With an ERP solution and FEFO enabled system, businesses can better manage the complexities of the supply chain and gain better visibility into customer orders, shipping, and product movement.

## Conclusion

Whether you are a manufacturer or distributor, understanding current challenges and trends in the industry, and adopting an ERP solution can allow you to be agile and come out the other side of this pandemic thriving. It can drive your business forward and help you remain competitive in this highly competitive market. Vision33's ERP solution offers an opportunity for food industry enterprises to position their business at the forefront of the market. Through implementation, SMEs can manage customer demands, traceability requirements, inventory, and food fraud. The right ERP solution can help manage fluctuating conditions, and serve as a point of differentiation among the competition. By identifying risks, and gaining better visibility into the supply chain, businesses can better handle changes in the market and maintain customer confidence.

## About Vision33

Vision33 Ltd. is a global IT professional services consultancy that solves customer business challenges through the promise of technology and the value it delivers. We partner with growing and large organisations in both the public and private sectors to understand their vision and help them reach it with the right blend of strategy, consulting, and technology. Vision33 global team of results-driven resources provide world-class experience through our office locations in Europe and North America. For more information about Vision33, visit [www.vision33.co.uk](http://www.vision33.co.uk).



### For More Information

To learn more about ERP for Food and Beverage Manufacturers/Distributors email [contact@vision33.co.uk](mailto:contact@vision33.co.uk) to speak with a Vision33 consultant in your area.

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