

Transparency and Traceability: Digital Transformation for SMEs with global ambition

In an increasingly challenging landscape for food companies, what are the options for SMEs?

Food manufacturers are under continuous pressure from suppliers, retailers, regulators and consumers.

The supply costs are increasing due to various factors including environmental issues and inflation. Consumers and retailers are seeking more transparency on the origin of ingredients. Retailers are squeezing manufacturers on price and asking for more information on labels due to consumer demands and legislation. Manufacturers are grappling with the challenge of labour shortages and higher churn rates, which is affecting productivity and performance. These are just a few examples of the different pressures manufacturers are dealing with, which is impacting their performance, profit margins and the ability to sustainably grow the business.

Amidst all these challenges, tweaking around the edges and making slight adjustments is not going to be enough. For long-term sustainable growth, food manufacturers need a radical rethink of their business to align with where the industry is heading and how that might impact future regulations.

Food manufacturers need to transform the way they manage and run the business to meet the current and future demands of the industry.

Digital Transformation is being regarded as one of the enablers of this transformation. This means considering digitalisation, automation and access to real-time accurate information. It requires creating a digitally connected factory where data is captured, shared and analysed instantly across different functions. This would provide the capability to quickly respond to the changing demands from retailers, regulators or consumers and to future-proof the factory.



However, there is still a lack of understanding in the industry about what it actually involves and how to deliver it. Ger Perdisatt of Microsoft Ireland was mentioned in TechCentral.ie stating that Irish Enterprises are under pressure to transform but they don't know how to go about it.

So, when big businesses are finding it difficult, it is even more critical for SMEs to truly understand what Digital Transformation is and what it means for a small and medium sized business. The key

point is that it is not something to be fearful of but an opportunity to modernise and grow the business. Some large enterprises have already embraced it and others have started their Digital Transformation journey.

While SMEs may think that Digital Transformation is not for them or that it is a big-ticket project they cannot afford, the latest technology developments suggest otherwise. It is now within the reach of SMEs and they need to embrace it to strive forward, stay competitive and become a future food factory.

What does Digital Transformation mean for SMEs in the food industry?

In the context of the food industry, Digital Transformation is the deployment of digital technology that connects business functions to simplify and automate business processes, resulting in the creation of new value and experiences for customers, employees and stakeholders of the business.

There is plenty of evidence that demonstrates the far-reaching impact of Digital Transformation on businesses. This includes the elimination of manual processes and operator errors, increased control of operations, improved management information for decision making and the ability to scale the business. These are all the issues that a business typically needs to consider when planning to grow internationally, especially as a traditional SME food manufacturer.

On a broader scale, building a digitally enabled business is an important first step towards becoming a future food factory.

The industry is progressing towards a future food factory that is not just about connecting functions and equipment digitally, but also about applying artificial intelligence, simulations and

machine learning to use data in ways that optimise business operations. Such a factory will enable manufacturers to transfer human intelligence into a software program to underpin operational processes, completely transforming how factories are run and managed. Although this concept may seem to be a long way off in the food processing industry, especially for SMEs, it is the future that the industry is actively working towards.



For SMEs, it is important to consider a staged approach to Digital Transformation with the long-term aim of becoming a future food factory. In that, choosing the enabling systems along the journey becomes a key decision. It is important to make the right choices that will satisfy all stakeholders; consumers, retail customers, regulators and investors.

The need for Transparency and Traceability at the click of a button

Regulations around food traceability and transparency have gradually become tighter over the years. Food manufacturers are required to demonstrate compliance on demand, e.g. in case of a product recall or a factory audit. Similarly, the consumer and retailer demands on food traceability and transparency are increasing as they become more aware and conscious of the food intake. Some of these demands are not regulatory requirements but what the consumer or the retailer expects the food manufacturer to deliver. This continuous pressure to share more

information and show transparency is a growing challenge for SMEs in the food industry.

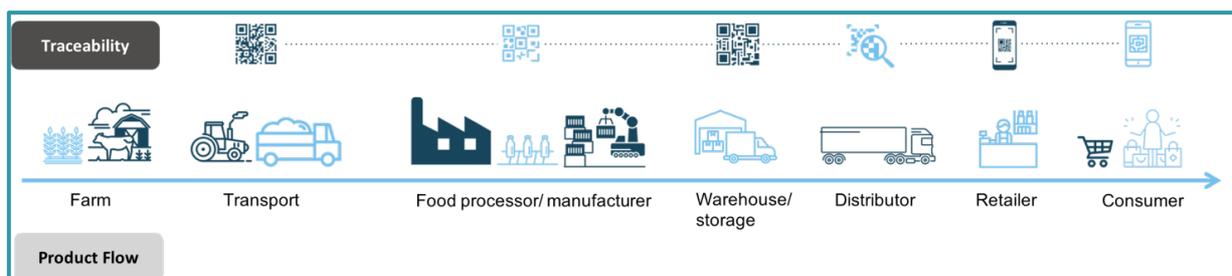
- **Consumer Demand** – In this age of the ‘informed consumers’, there is an increasing desire to make healthier food choices, to know more about the food source (what is in it, where did it come from, etc.) and the whole product journey. Consumers are demanding quick and easy access to this level of information about their food products that the manufacturers need to be able to provide.
- **Retailer Differentiation** – Retailers, on the other hand, are looking for competitive advantage, meeting their consumers’ demands and looking to continuously differentiate their offers to consumers. This is leading to innovative, yet sometimes demanding ideas to provide consumers with the ability to make more informed purchase decisions and ultimately be prepared to pay more for healthier choices.

With regards to food traceability, technology now enables labelling to go far beyond what is simply printed on the packet. It is possible to

instantly provide digital data that is accessible to both consumers/ retailers alike to deliver much more detailed information on food, its source and the whole product journey.

“For example, Bottles of Wine with a QR Code can be scanned by a consumer using a mobile phone that allows them to see more information about their bottle of wine and gives the producer the ability to engage with the consumer directly via a Web Service.”

These technology-enabled solutions empower manufacturers to provide instant traceability and transparency to meet the increasing demands of all stakeholders and demonstrate compliance. The important question for food manufacturers, however, is whether they choose to just follow the regulations or take a lead and become a front-runner among SMEs as the digitally connected business that retailers and consumers want to buy from.



Digital Traceability Map – complete traceability throughout the supply chain

Data – the driving force for the future food factory

Even from a regulatory point of view, instant traceability that a digitally connected factory can provide is crucial. The current regulation requires a business to complete a product check/recall immediately to minimise any potential damage and to inform the competent food safety agency.

In May 2019, Cow & Gate, a dairy products and baby food production company, had to recall their “Cheesy Broccoli Bake” baby food due to the possible presence of rubber glove fragments. The manufacturer was able to quickly trace the immediately affected batches to Boots retail outlets in Ireland with specific information on which stock in which stores were affected. The instant traceability limited the cost of the recall

to just those specific batches. If this was not in place, the product recall cost would have been significantly higher; having all products simply removed from retail shelves immediately due to not having specific real-time information. On top of that, there would have been additional penalties/fines and reputational damage.

This issue is real and relevant for all food businesses, whether its large enterprises or SMEs.

The days of manual paper chasing to complete a product recall within 4 hours to satisfy food safety inspectors are gone. Now it is all about digitally capturing and sharing real-time data that enables quick, informed decision making.

For SMEs in the food industry, it starts with digitally connected weighing scales and mobile scanning equipment to capture data digitally into a suitable factory management information system or ERP system. This will provide the capability to get instant information at the click of a button. There are systems that can also provide digital traceability from food source or ingredients to the manufactured batches shipped to retailers, within seconds. As a result, you can proactively take the appropriate steps to recall any affected batches and significantly limit the reputational damage and cost to the business.

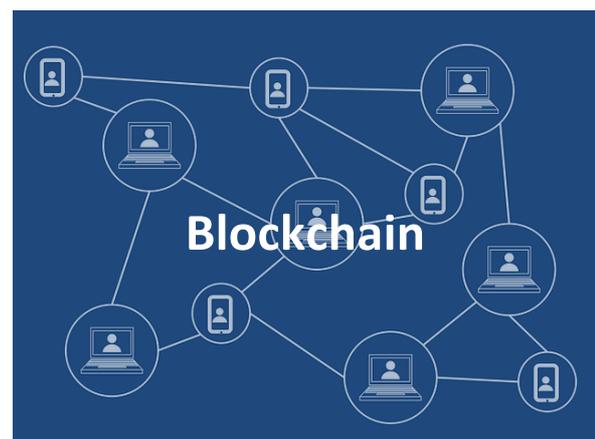
It is this Digital Transformation – providing information connectivity from the factory floor to the back office, that is the real opportunity for SME food manufacturing companies. It provides instant transparency and traceability of products, not just the physical goods but also the cost build from raw materials to finished goods. Such enabling technology is now available and within the reach of SMEs. It does not require the business to mortgage their factory to deliver it. The ultimate goal should be to get to one connected system to manage everything with full

visibility of the operational and financial performance of the whole business.

What does the future hold for food manufacturers?

So, where could this all lead to? For SME food manufacturers, there are two key areas to consider from a Digital Transformation and the Future Food Factory point of view:

Firstly, it is clear from where the industry is heading towards, that the future of the food industry lies in full supply chain data integration, from the retailer back to food processors and ultimately to the food producers. The goal for food manufacturers, both large and small, should be the creation of a seamless process that enables data sharing across the entire supply chain.



For that, a solution that is already being actively looked into is Blockchain. It is another layer of technology which essentially goes on top of the existing ERP (Enterprise Resource Planning) systems in the form of a distributed ledger. It then records transactions between the parties efficiently, in a verifiable, transparent and permanent way. Each transaction is hashed, encoded and saved securely in a 'Block' and once verified it cannot be changed subsequently. As a result, the blockchain becomes the single source of truth for everyone in the supply chain. The requirement for food manufacturers is to ensure that the system they implement is able to

connect to this new layer of technology that enables full supply chain integration.

Secondly, the future is all about the Internet of Things (IoT) and technology enablement i.e. providing automation to support the highest possible level of efficiency and quality in business operations, from idea through to realisation. Real-time factory data will play a key part in driving this forward. Potentially, once a factory starts capturing all production data digitally, it will have the ability to analyse and manage the business processes in real-time, making quick informed business decisions. ERP systems could be programmed to provide this interactive information based on continuous real-time results, such as sending an alert to a user terminal to indicate that the production yield is out of tolerance, etc.

Digital Transformation – the time to act is now

The most important thing to recognise for food manufacturing businesses cannot afford to continue to stand still.

As outlined in this paper from the outset, there are several key industry drivers for SMEs in the food industry that are forcing the decision on Digital Transformation, not least of which is the push for increased transparency and food traceability.

While the use of a combination of manual systems, spreadsheets and low-level accounting software may have been considered satisfactory to date, the next wave of change will wipe out those who cannot play a part in a digitally connected supply chain.

So, the question is not if, but when and how soon do the SMEs in the food industry embark on this Digital Transformation journey.

The choice is either to lead with a structured approach to Digital Transformation and get an immediate competitive advantage or to get pulled in that direction through regulations and play a catch-up game.

“Be a Disrupter, Don’t Become a Casualty”

Diomac – A Complete ERP Solution

Diomac is a complete ERP software solution designed and developed for the SME food and drink industry, to digitally transform your business operations and simplify product traceability by connecting factory operations, accounting and administration so you can see more, know more and make more.