



TRENDS IMPACTING FOOD PRODUCTION

What are they? How will they affect manufacturing processes?
Why is planning and optimization a priority?

ARE YOU PREPARED FOR THE UNEXPECTED?



Many of the decisions made by food companies are directly influenced by consumer and industry trends, which are exciting for shoppers but can be challenging for manufacturers.

Activities like understanding what encompasses a trend, navigating the regulations, and recipe management require close monitoring. Even if it is impossible to prepare for the unexpected, progressive food manufacturers know which trends are likely to continue for a longer period – and adjust their operations to accommodate them.

In this paper, we address the trends most likely to dominate the industry for a while and look at how food producers can plan for increased demand.



TRENDS THAT ARE DISRUPTING FOOD MANUFACTURING

1 Consumer demand for plant-based foods

A top global food trend still steadily on the rise is the plant-based diet, where more consumers are conscious of reducing their meat intake for health and environmental reasons.¹ The most popular meat alternatives are plant-based proteins and dairy alternatives, and these will continue to be prominent long-term.

Research indicates that the plant-based food market in Europe will [reach \\$16.7 billion by 2029](#), while in the United States, plant-based diets have [tripled in the last 15 years](#). It is estimated that global retail sales of plant-based food alternatives may reach [\\$162 billion by 2030](#), compared to \$29.4 billion in 2020. If so, the projected plant-based food market would make up 7.7% of the global protein market.

Since plant-based diets are a high priority for today's consumers, manufacturing needs to adapt accordingly. As new processes scale, businesses will require planning specialists to ensure that existing processes are transformed to stay relevant and drive innovation.

¹ <https://www.foodmanufacturing.com/consumer-trends/blog/22081182/the-top-food-industry-trends-to-expect-in-2022>



2 Emphasis placed on functional foods and personalized nutrition

The emphasis placed on functional and fortified foods is another trend impacting how food is produced – primarily science-backed ones that improve our physical and emotional wellbeing.

Product nutrition is no longer merely a selling point on the packaging but is expected by consumers. Manufacturers are repositioning their brands to capture the market for fortified foods and beverages that will enhance health – like improving gut health and immunity, sharpening cognition, or improving skin and sleep. As this segment is predicted to reach [\\$46.10 billion in 2026 at a CAGR of 6.12%](#), accurate information about what a product can do for one’s body will become the norm.

Therefore, food manufacturers must be more precise with managing recipes or creating functional food items like meal kits. They may even have to consider providing shoppers with nutritional knowledge support with apps that can be accessed in aisle.



3 Corporate responsibility and transparency in food sources

Despite the challenges that today's dominant food trends present, innovative brands have unlimited opportunities to capitalize on them. No longer is food simply about consumption, but rather, brands are expected to create connections and reflect consumers' personal and social beliefs and values.² For example, humanitarianism, inclusion, and ethical practices are key things that consumers increasingly want to see linked to their food choices.

Of interest to consumers are a food's origins, and they are less tolerant of marketing and labeling practices that conveniently omit certain information. But navigating labeling regulations can be tricky since laws vary from country to country for ingredients, packaging and labeling – increasing the complexity of global food manufacturing.

For example, the label may state that a food product is manufactured in the United States. Still, the ingredients may come from other countries with different standards and regulations. Thus, ingredient transparency and strict documentation on a chain of custody are more important than ever.

² <https://www.edlong.com/looking-ahead-top-10-food-industry-trends-for-2022/>



4 Increases in raw material and transportation costs

From animal feed to aluminum, the increase in raw material prices has made it necessary for manufacturers to re-evaluate their entire business to identify areas where they can save money. Additionally, dealing with rising prices of transport, freight, and other production expenses all at once further complicates things. Cost inflation of raw materials isn't expected to subside anytime soon, and food producers will either have to absorb the added charges or pass them on.³ This will impact retailers and the consumers whose living expenses are increasing, may hesitate to spend more.

Hence, cost-cutting efforts may not be enough to handle the impact of rising raw material prices. Pioneering new business models that aim to keep certain materials in circulation or creating new products to phase out the reliance on others could be the only way for manufacturers to stay competitive.

³ <https://www.fooddive.com/news/as-inflation-rages-food-and-beverage-manufacturers-pass-higher-costs-on-to/599148/>



5 Extending shelf life

Maximizing the shelf life of a product ensures that it can stay on the shelf longer and increases the chances of a purchase. Manufacturers benefit from creating food products with long expiry dates as it enables them to decrease waste and increase revenue. Some foods inevitably have a short shelf life, such as cut fruit and ready-to-eat cooked foods or salads. But there are low-risk foods and frozen foods with a longer shelf life that can be produced.

There are many variables to account for in producing such foods – moisture, pH levels, salt and sugar content, temperature, processing, storage, and transportation. Some of these variables are difficult to control. Therefore, getting things right throughout the manufacturing and supply chain stages is critical to enabling the success of products with extended shelf life.



6 Sustainable manufacturing

Paving the way to sustainable manufacturing has become a top priority in recent years.⁴ The impact of products that end with waste being sent to landfills is less acceptable by today's consumers. Manufacturers will now need to reduce their environmental impact by reclaiming waste so that it can be repurposed and reused.

In a new IBM survey, 51% of chief supply chain officers (CSCOs) indicated that they would sacrifice profit to improve outcomes on sustainability in favor of reaping benefits like compliance with environmental regulation, reducing reputational risk, and driving innovation.⁵ Across the supply chain, sustainability measures such as the following are being considered:

Operating with Leaner Resources



A critical sustainability measure is being able to reduce the consumption of natural resources.

For example, understanding the best location to produce a product and differences in clean down regimes can have a significant effect on water usage and impact total capacity.

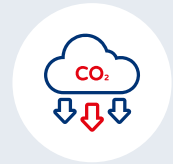
Minimizing Waste



Ensuring supplies are available based on when ingredients are required by production to meet demand, not only reduces inventory, but can reduce waste due to shelf life.

In a situation where raw materials do not meet the required standards, are there alternative products that can be produced?

Lowering Carbon Footprint



Can you reduce your overall carbon footprint by sourcing from more sustainable suppliers?

As companies move toward total supply chain sustainability, more and more customers require their supplier to provide sustainability metrics.

Where you produce a product and the environmental impact of where those raw materials were sourced will become increasingly important.

⁴ <https://www.grandecig.com/blog/top-food-beverage-industry-trends>

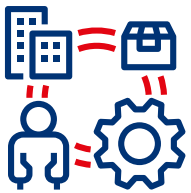
⁵ <https://www.celonis.com/press/more-than-half-of-chief-supply-chain-officers-surveyed-would-sacrifice-profit-for-sustainability>

DELMIA QUINTIQ SOLUTIONS: CREATING AGILE AND RESILIENT SUPPLY CHAINS



Anticipating future trends and disruptions helps keep the industry on top of what it should be doing next. Solutions such as optimized planning can lay the foundations for the whole process, from recipe formulation and capacity planning to execution and delivery.

Synchronize entire supply chains



Agility is a prime factor for companies to overcome disruptions as consumer trends evolve. A comprehensive planning solution should enable manufacturers to make holistic decisions across every step of the supply chain. Companies that use point solutions may be optimizing one area in isolation without considering the overall impact throughout their operations. From planning to logistics and operations, having a single source of truth is imperative for food manufacturers to succeed in synchronizing processes.

Enable business growth



DELMIA Quintiq planning solutions help food manufacturers to maximize the potential of their entire supply chain by optimizing at all planning horizons: operational, tactical, and strategic. With integrated end-to-end visibility, monitoring the impact on targeted KPIs becomes more straightforward. Moreover, DELMIA Quintiq's superior planning and optimization solutions offer a wide degree of configurability to perfectly fit with your operation's specific rules and constraints.




INTELLIGENT FOOD PLANNING FROM THE LOGIC FACTORY: IMPROVE OPERATIONS, DELIVER VALUE, AND PLAN FOR THE FUTURE

Many global food manufacturers already use DELMIA Quintiq planning and optimization solutions successfully. When manufacturing and operations are unified on a single source of truth, businesses can break down silos and improve collaboration.

Designed specifically for the F&B industry, Intelligent Food Planning from The Logic Factory (TLF) combines the expertise of TLF and DELMIA Quintiq technology to create a powerful and holistic planning solution for food producers.

Covering Master Production Scheduling (MPS), Material Requirements Planning (MRP), and Distribution Requirements Planning (DRP) as well as recipe optimization, Intelligent Food Planning offers food and beverage manufacturers access to best-in-class planning technology - with a cost-effective annual subscription instead of having to shoulder the burden of an expensive enterprise license.

With extensive experience in successful implementations and some of the highest qualified DELMIA Quintiq consultants in the industry, you have continuity of team from pre-delivery to delivery. Technical delivery is only one piece of the project so we work with your team to ensure that the following critical pillars of success are also covered:

Manage Business Change	Be Data Ready	Measure Value
 <p>Embrace change</p> <p>It's important to bring the business with you at every step and get full business ownership.</p>	 <p>Garbage in, garbage out</p> <p>Data readiness is vital to a successful implementation. This can be done either before or as a separate stream during the project.</p>	 <p>What is a good plan?</p> <p>The project needs to adhere to the defined KPIs that deliver the business goals.</p>

BENEFITS OF INTELLIGENT FOOD PLANNING

Intelligent Food Planning empowers manufacturers to increase customer satisfaction, delivery performance, and profitability by streamlining and simplifying complex planning decisions. It takes a holistic view of the supply chain that considers customer commitments, resource capacity, lead times, costs, and material availability together to suggest accurate delivery dates to customers while boosting productivity. It also highlights troubled “hot spots” where planners should take action.



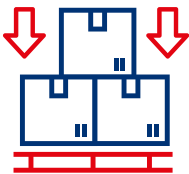
Increase profitability

Optimized scenarios help maximize fulfilment, minimize lost sales, and decide lowest cost source order to maximize profitability.



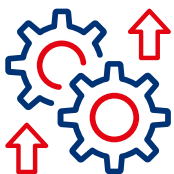
Increase customer satisfaction

Order acceptance ensures you are able to meet contractual agreements and customer expectations.



Reduce inventory

Minimize unnecessary inventory and work in progress to better utilize working capital to improve cash flow.



Increase throughput

Supply chain visibility enables early detection of disruption (e.g. supply shortage or resource availability). Maximize resource utilization by ensuring materials are available at all times.



Increase delivery performance

Determine what and when to produce to ensure customers get delivery OTIF.

READY TO GET STARTED?



Consumer trends, disruptions, and innovations will continue to change as time goes on, and forward-thinking businesses will do everything they can to remain competitive or even lead the way.

Intelligent Food Planning is delivered by The Logic Factory's planning expertise and DELMIA Quintiq's powerful solutions. We can help to optimize your planning capabilities and are dedicated to your business throughout the entire project life cycle.

From getting ready, through project execution, and long-term support, contact us if you are interested to learn how our solutions will work for your business.

info@thelogicfactory.com

Logo source: <https://thelogicfactory.com>



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IMPLEMENTATION PARTNER**



thelogicfactory.com

Reitscheweg 1 • 5232 BX Den Bosch • Netherlands • +31 (0)73-2004380

604, Shapath V, Opp. Karnavati Club • S. G. Highway Ahmedabad 380015 Gujarat • India • +91 (0)79-40142000

7 E. Lancaster Avenue, Floor 3 • Ardmore, PA 19003 • USA • +1 610-492-0790

1 Mann Island, 3rd Floor • Liverpool, Merseyside, L3 1BP • United Kingdom • +31 (0)73-2004380