

UNDERSTANDING THE CHALLENGES FACING
**MODERN FOOD AND
BEVERAGE PRODUCERS**

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INTRODUCTION

If there's one certain thing about the food and beverage industry, it's the fact that nothing is certain — not when it comes to trends, anyway. Take nutrition as a classic example. At one time, low fat was all the rage; now it's high fat, combined with low carbs. In the late 1990s and early 2000s, the all-protein diet from lean meat sources was popular. Today, plant-based protein is on more and more dinner menus.

But there is one constant in the food and beverage business: consumers' demand for top quality, originality and convenience. Thus, the heat is always on for manufacturers to deliver on Americans' high expectations.

The best way to come through is to understand what's on the menu, in terms of the challenges facing producers and developing strategies for how to overcome them. The following pages will detail some of the potential obstacles producers face and offer suggestions that can help turn sour situations into sweet solutions.



CHALLENGE: PRODUCT QUALITY

Butter. Soda. Sharp cheddar. Greek yogurt. Bottled water. There are literally dozens of options consumers have to choose from for these products. So what inspires them to choose one over another? In a word: quality. According to data from Green Hasson Janks, quality is the runaway leader in what factor inspires buyers to be loyal to one particular brand over another, with 70% of respondents indicating as much.

The problem is "quality" has many interpretations to it and even one bad experience can lead loyal consumers to seek out an alternative. For example, while manufacturers have controls in place to assure safety and compliance, contamination can still occur, such as if broken glass or metal shards wind up in packaged goods. Food-borne illness is another potential consequence, as romaine lettuce producers experienced in late 2018.



SOLUTION: LEVERAGE TECHNOLOGY

By implementing production line quality improvements, food and beverage producers can offer quality assurance that provides greater certainty that there's virtually no way that the supply chain is compromised due to contamination. Many businesses are doing this by taking advantage of technological innovation, which can minimize human error. Half of all producers in the Green Hasson Janks study said they were investing in innovation primarily due to customer demand, with 53% expecting production technology to be the main driver of innovation over the next three to five years.

Through sensors, digital auditing tools and mobile solutions that manage inspections and temperature controls, producers can install the means that can mitigate contamination. Ongoing processes should be in place to make sure that detectors and sensors are always reliable and calibrated. These may also need a maintenance schedule to guard against the effects of overuse or malfunction.

53% of producers say production technology will be the main driver of innovation over the next three to five years.





CHALLENGE: PRODUCT VARIATION

Consumers don't just want multiple brands to choose from for a certain food or beverage, but many different options for said food or drink. Milk might be the best example: In addition to regular whole, there's 2%, 1%, skim, lactose-free and antibiotic-free offerings. The same goes for sugar substitutes, as Stevia, Monk fruit, and Xylitol are increasingly found on ingredient listings in lieu of sugar.

Choices are great, but at the same time, they can introduce more opportunities for error in the manufacturing process. Some people have severe food allergies, like gluten intolerance. For example, according to CB Insights, 20% of consumers in the U.S. actively reduce or avoid eating gluten for health reasons. If signals get crossed or equipment is used that contains gluten particles, this can compromise quality and may raise red flags with health inspectors.

In short, variety introduces shop floor complexities.

SOLUTION: FORMALIZED WORKFLOWS

Predictability is crucial to food and beverage industry success. Customers don't want to speculate as to whether their favorite frozen dinner won't taste good or includes ingredients to which they're allergic. Formalized workflows can provide great certainty at every stage of the supply chain. This includes conducting random testing to certify that nothing potentially harmful is in the food or drink. Such testing should be conducted at various stages (e.g. Sourcing, production, processing, packaging, storage, distribution, etc). Developers can gain insight and increase

communication through blockchain technology, which provides enhanced traceability and transparency.

Furthermore, products should be weighted frequently. In addition to this providing quality assurance to the customer and predictability, items that come in over or underweight may suggest there are workflow issues. They could be anomalies, but they could also be systemic. Statistical process control increases production efficiency by establishing what should be and comparing it to what has changed.





*According to polling done by Food Engineering, over **3 in 4** respondents said they expected throughput to rise even further over the next 12 months, with an overall throughput increase of **13%** compared to a year earlier.*

CHALLENGE: THROUGHPUT RATES

Throughput helps to measure the speed of production. More specifically, it's the amount of material — such as ingredients, in the case of food producers — that pass through a system or process over a given period. Food manufacturers know all about throughput and have been focusing more on it due to increased production demands. According to polling done by Food Engineering, over 3 in 4 respondents said they expected throughput to rise even further over the next 12 months, with an overall throughput increase of 13% compared to a year earlier.

In a way, higher throughput is a good problem to have; it's an indication of robust demand and proof that a new flavor of cereal, ice cream or frozen waffle is selling well with the buying public. But as producers pump out product, quality can be compromised by cutting corners to enhance output and avoid the risk of shortages.

SOLUTION: TAKT TIME

The German word for "pulse," takt refers to the average amount of time it takes between the start and completion of production for one unit and the start of production for the next. It's a time management tool that can make development more efficient and root out any wasted movements and ensure that nothing slows down the slowest portion of the production cycle.

The utilization of takt time is particularly important within the context of higher throughput because it can more effectively determine how much time is needed to complete each step and meet customer demand. Utilizing takt can assess the extent to which a greater amount of material is increasing the time each step takes and what solutions to introduce that can minimize the unintended consequences of higher throughput. Investing in automation can mitigate the ramifications as well by replacing manual work processes and reducing the risks associated with human error.

Process analysis, event sequencing, and constantly looking for ways to improve upon existing workflows can help food and beverage producers refine their approach even as throughput climbs.



HOW USCCG CAN HELP

Food trends and the speed with which the latest and greatest becomes yesterday's news is proof positive life's only true constant is change. So even though work processes may have worked originally, new product lines, increased oversight and consumers' unquenchable thirst for product variation can compel manufacturers to fine-tune existing workflows or scrap them wholesale.

Challenges exist around every nook and cranny and are constantly bubbling at the surface. USC Consulting Group is keenly aware of these forces, as we specialize in improving productivity and efficiency. We'll help you find ways to improve yield and asset utilization so you can obtain and hold onto the competitive edge you need in an industry where only the strongest thrive.



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A background image of a woman with curly hair, wearing a white shirt, looking down at a red bag in a grocery store aisle. The image is slightly blurred and has a white overlay where the text is located.

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