Accelerating Business Value in your CPG Manufacturing Environment: Four Tips to Get Started Today

How CPG firms are assessing their main challenges and how they should approach investments to maximize utility and ROI.

A Frost & Sullivan Executive Brief

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CPG Facing Dynamic Challenges and an Uncertain Path Forward

Consumer packaged goods (CPG) companies are confronting a landscape where each aspect of how they imagine, produce, transport, and market their products is shifting under new stresses.

- **Consumer demands and tastes are changing fast and seem to accelerate each year.**
  - New products and labels are hitting the market at a faster clip, making shelf space more competitive and squeezing market share.
  - Consumer brand perception is more important than ever and shaping the experience and awareness around private label or commoditized products is paramount.
  - More frequent customer touchpoints and direct-to-consumer models are deepening the relationship between brands and customers. Data is the foundation of these relationships and manufacturers must capture and leverage the expanding opportunities.
  - More than ever, consumers are aware and concerned about the environmental impact and sustainability of products. They are willing to pay more for products with green practices: to know and ensure the ingredients were produced and certified ethically and to know and minimize the impact of packaging, transportation, and resource use.

- **Large and small CPG firms are feeling the pinch of rising costs and increasing pressure, ranging from specific operational issues to big-picture issues affecting the entire ecosystem across their business.**
  - In their supply chains, decision-makers are anxious about shrinking operating margins, increasing logistics costs, and increasing lead times for inputs.
  - In distribution, firms worry about managing inventory in real time, shortening delivery windows, and changing regulations.
  - In terms of production, product complexity, fast-changing consumer habits, and competitive intensity are nerve-racking issues for CPG leaders.
  - Firms recognize that these long-term challenges are part of major shifts that demand digital transformation across the full end-to-end supply chain.
- **In the years of the pandemic, CPG manufacturers have encountered new and extraordinary stresses on revenue and costs, with supply chain disruptions, factory shutdowns, and high inflation.**
  - Production challenges are especially pronounced in subsegments such as bakery, beverage, dairy, snacks, and dry goods, where ingredient perishability leads to high waste, regulations are tight and evolving, consumer preferences are ever-changing, and food safety is paramount.
  - In this turbulent landscape, many firms have deferred technology investments that could tackle issues related to cost, agility, and customer experience (many firms are still working out calculations with paper and pencil).
  - In doing so, they may be losing ground to competitors that are farther along the technology journey.

Technologies Enabling Manufacturers to Identify and Overcome Obstacles

A type of technology being readily adopted by large industrial firms is the Internet of Things (IoT). IoT is a broad term that describes the collection of high volumes of data from myriad endpoints/sensors and transferring them to a cloud or private data center, where the data is aggregated with other data points for analysis (often via AI or ML). The analysis may yield instructions that are returned to the source location for action.
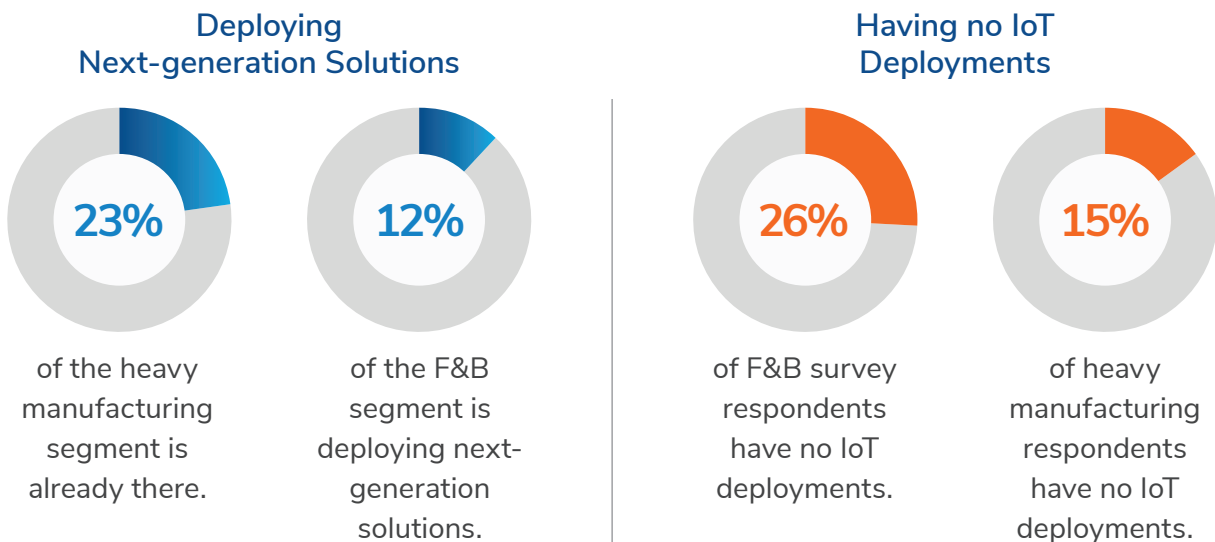
CPG Falling Behind

New solutions are not a luxury or a fringe benefit, they are vital to each aspect of the organization from top to bottom. CPG firms have been less likely to adopt IoT when compared to heavy industry, likely due to budget concerns, lack of experience deploying and maintaining IoT, and scarcity of offerings tailored to the specific vertical.

To remain competitive in a high-volume, low-margin business, CPG manufacturers must realize that their long-term viability depends on bringing together vision and enabling technology to drive a complete business value.

A recent Frost & Sullivan survey reveals the discrepancies in investing in new technologies; respondents from the food and beverages (F&B) manufacturing segment lag behind other manufacturing segments in adopting crucial technologies, such as IoT.

Indeed, Frost & Sullivan survey results find that in terms of:

Deploying Next-generation Solutions

23% of the heavy manufacturing segment is already there.

12% of the F&B segment is deploying next-generation solutions.

Having no IoT Deployments

26% of F&B survey respondents have no IoT deployments.

15% of heavy manufacturing respondents have no IoT deployments.

How to Get Started:

To ensure that you don't fall behind competitors, here are four tips to jump-start your process improvement initiatives.

> **1** **Perform a Business Assessment to Identify Your Greatest Needs**

The starting point should be to take a close look at your own business and ask yourself fundamental questions. If you begin by researching and shopping for technologies, you have already set yourself up for disappointment. You first need to honestly assess your company, and this often means bringing in fresh eyes from outside. However, this outside perspective must understand your segment, your subsegment, and the specific complications and needs of your business.

Frost & Sullivan survey results find that the top priorities of F&B manufacturing firms revolve around a few consistent themes.

- **Modernizing Business Processes:**
  Automating business processes ranked as the highest priority at **66%**. This was greater than the heavy manufacturing sector (**50%**), which is more likely to have already implemented automation solutions. Automation helps improve productivity, enhance quality, and lower costs.

- **Sustain Business Agility:**
  To meet evolving customer tastes and shifting supply, F&B firms must be able to align market data with flexible operations processes. The ability to launch new products quickly was cited as a top priority by **64%** of F&B firms, significantly higher than the comparatively static industrial manufacturing segment (**51%**). Similarly, the ability to rapidly respond to market demand and disruption was cited by **60%** of F&B respondents.

- **Connecting with Customers:**
  Consumers expect more engagement and a different kind of relationship with CPGs. Brands need to prioritize connecting with customers, and this dovetails with optimizing brand awareness and environmental and social responsibility initiatives. "Improving customer experience and satisfaction" was a top strategic priority for **62%** of respondents.

> **IDENTIFYING YOUR TOP PRIORITIES WILL HELP YOU DETERMINE WHAT IS STANDING IN THE WAY OF ACHIEVING THEM.**

2 Define and Set Feasible Key Performance Indicators

After identifying your top priorities, imagine your future. What are the measures you want to achieve?

Rather than setting a vague goal (e.g., to drive down costs), you should label and specify key performance indicators (KPIs). These KPIs should revolve around the underlying obstructions for your business and relate to your fundamental needs.

Successful CPG firms formulate KPIs around themes such as:

- **Production to gain visibility into connected machines and efficiency through scheduling and automation:**
  - Aggregate and analyze the massive amounts of information generated by machine equipment, sensors, and enterprise systems
  - Bring that data to a dashboard in real time to measure production status and condition against targets
  - Set more accurate production schedules, preset condition alerts in order to optimize inputs/ingredients use and precisely manage machinery, and develop insights from operational reports based on the data

- **Quality control to automate inspection:**
  - Capture images, video, and sensor data to find faults in real time and inform operators for immediate attention
  - Incorporate the real-time data with longitudinal operational reports on product quality and actions taken

- **Environmental improvement to quantify the true impact:**
  - Gather data across siloes and evaluate energy use against expected targets and production schedules
  - Present real-time dashboards and operational reporting on the balance of energy usage, waste, and per batch costs

- **Operational resilience to ensure fewer interruptions:**
  - Incorporate data from across the factory, organization, and supply chain into a single source of intelligence
  - Illustrate a comprehensive view of the production, distribution, performance, quality, impact, and costs

> DISTINGUISHING REAL AND OBJECTIVE MARKERS OF SUCCESS WILL SERVE AS YOUR GUIDE AND INSPIRATION THROUGHOUT THE EXERCISE.

3 Consider Technology Options Only After Aligning Your Needs and Goals

Firms are considering "what kind of technology, what kind of management platform, and what kind of cloud provider and hyper-scaler?" Any technology deployment should attempt to meet the business's priorities and hit specific KPIs, harmonizing processes so that everything feeds into the overall business value.

When considering what technology to seek out, note that successful CPG firms bring together information technology and operational technology teams. With any new deployment, aligning stakeholders around a coherent vision is key to driving business outcomes.

In a recent Frost & Sullivan survey, respondents from the F&B manufacturing segment noted that while they have new technology solutions on their radars, initiatives have been stalled or halted by both business and technology challenges.

- On the business side, operations and IT leaders struggle to get started with a solution that will meet high expectations.
  - **40%** said they were concerned about a long time-to-value (long lead time to derive value from the deployments)
  - **40%** said they were uncertain how to build a governance model
  - **38%** said they struggle to gain support from key stakeholders for their IoT initiative
  - **24%** said they had difficulty constructing an ROI-positive business case
- They also anticipate technical challenges in deploying the solution, including:
  - Ensuring adequate security and data protection (**54%**)
  - Complexity of system integration (**46%**)
  - Lack of interoperability across platforms (**36%**)
  - Large volumes of siloed data (**34%**)

> ALIGNING YOUR BUSINESS ESSENTIALS AND ACTUAL GOALS WILL HELP YOU AVOID TECHNOLOGY PITFALLS.

4 Choose a Partner Who Will Help You Meet Your Business Needs, Not Simply Sell You a Technology

You don't have to do it alone, you can engage an expert partner. The right expert in this area knows how to deliver the solution you need, more cost-effectively and faster than if you tried to do it yourself.

In looking for a partner, consider that:

- **A partner should have a business-first focus, not a technology-first focus**
  You need to focus on improving the business, not simply implementing a technology. If a potential partner starts by talking about their IoT platform, move on.

- **A partner should meet you where you are in your improvement journey**
  They should provide a range of advisory, assessment, design, implementation, and ongoing management services. Effective partners complement your team's skills and priorities.

- **A partner should have CPG experience and offer customized solutions**
  Many service providers will try to sell you their smart factory solutions, but those are geared for heavy manufacturing. They do not understand the CPG sector, and especially not the subsectors. You should test out a potential partner for how well they understand your particular issues and how they can help drive quality control, consumer engagement, and environmental impact initiatives Look for a partner that has experience and proven success with companies like yours—not generic industrial experience, simple CPG experience, exclusive global giant service, or solely repeat business with a small selection of firms.

- **A partner should have the right tech partners**
  Choosing a partner with the right tech foundation—one that is flexible, open, and able to integrate easily with your current and future systems—will help you avoid time-consuming custom integrations. An IoT technology platform designed specifically for CPG lets you benefit from best practices in modern CPG manufacturing from day one.

- **A partner should have a proven roadmap and framework in place to quickly and effectively develop and deploy a complete initiative tailored to get to value fast**
  To overcome potentially long wait times and difficulty holding on to the attention of key stakeholders, a good partner will be able to provide quick deployment options and assistance to help you get value quickly.

> **A PARTNER KNOWLEDGEABLE WITH YOUR SEGMENT SHOULD BE WILLING TO WORK TO ADDRESS YOUR BUSINESS ESSENTIALS.**

Keep Your Operational Needs and Overall Business Essentials in Mind

Many technology providers and systems integrators offer a dizzying array of technology solutions and products. The right partner for you is the one who understands your unique challenges, can help you establish a foundation, and can speed the time-to-value of your investment. Be cautious of any silver bullet proposals; the improvement journey requires an incremental approach that is designed to address specific problems, build buy-in, and target structures to reduce risk and cost.

You need a partner with the vision, expertise, and robust capacity necessary to assess, design, and implement a solution geared for your needs.

For information on how DXC Technology and AWS delivers IoT technology to the CPG industry, visit www.dxc.com/cpg-iot.

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