Automation unleashed:

From ambition to impact in food and drink manufacturing

Last month, Argon & Co and the Manufacturing Technology Centre (MTC) co-hosted Automation Unleashed: Powering the Next Era of Food and Drink Manufacturing at MTC's facility in Coventry, bringing together senior executives for a leadership forum combining keynote presentations, panel discussion and guided tours of MTC's automation and robotics labs.

The UK's food and drink industry faces mounting pressure: sustained cost inflation, persistent labour shortages, volatile markets and falling business confidence (-64% in Q1 2026, the lowest since the energy crisis). The central message from the day was clear: automation is no longer simply an efficiency lever, it is a question of resilience, continuity and long-term competitiveness.

The technology is there, the case is clear, the question is why so few manufacturers have moved from intention to impact, and what it actually takes to change that.

Context and challenges

Tanya Barringer

Industry Growth Policy Manager,
FDF

Why automation matters now

Tanya Barringer of the Food and Drink Federation set out the pressures in stark terms: 82% of manufacturers are raising prices in response to cost increases; energy exceeds 5% of operating costs for 69%; vacancy rates remain above the wider manufacturing average.

Squeezed margins and demand volatility add further strain. Over half of manufacturers report that rising costs are now accelerating investment in automation.
The FDF's ambition, to double annual business investment to £12bn and grow exports to £35bn by 2035, places technology adoption at its centre. Automation is no longer peripheral to that agenda. It is the agenda.

Agata Suwala

Product Portfolio Manager - Automation and Robotics,
MTC

Where is the UK in automation?

Agata Suwala of MTC placed the UK's performance in uncomfortable context. The UK ranks 23rd globally in robot density (119 robots per 10,000 employees), the only G7 country outside the top 20. Korea leads at 1,012 units; Germany at 429.

Had UK productivity continued on its pre-2008 trajectory, the economy would be 30% more productive today. The constraints are no longer primarily about technology availability. They are about confidence, investment readiness and knowledge.

Context and challenges

Richard Buckley

Manufacturing Director,
PepsiCo

Digital twins in automation - case study: using digital twins to de-risk automation investment

Richard Buckley, Manufacturing Director at PepsiCo, explored how digital twins transform automation decisions.

Managing high-volume, multi-SKU production across some of the UK's largest food sites, PepsiCo uses simulation to run "what-if" scenarios before committing capital, identifying where an intervention will create a new bottleneck rather than remove one, and testing layout changes that would otherwise require costly physical trials.

The key takeaway: Simulation does not replace investment decisions, but it means those decisions are made with evidence rather than assumption.

Context and challenges

James Watson
Partner,
Argon & Co UK

Why automation is hard to deliver in practice

James Watson of Argon & Co challenged a prevalent myth: that automation projects fail because of technology. Three delivery challenges recur consistently.

First, flawed business cases: resilience, quality, yield and the true cost of labour shortages are routinely excluded; cases rely too heavily on headcount reduction and rarely apply sensitivity analysis. The challenge is not only building the case, it is delivering the promised ROI within the timeframes a board expects.

Second, functional silos: operations, engineering, finance and technical teams operate independently with no end-to-end accountability.

Third, operational rigor: automation exposes underlying weaknesses, inconsistent inputs, maintenance backlogs, skills gaps, rather than solving them.

What actually unlocks scale?

Successful automation at scale requires four things simultaneously:

1. Standardisation to enable repeatable deployment (or sophisticated digital infrastructure to accommodate variability of the inputs)
2. Commercial certainty to de-risk investment decisions
3. Prioritisation and governance to sustain cross-functional alignment
4. Talent and capability to operate and continuously improve automated systems.

Key takeaways

Start with the problem, not the technology

Define the desired outcome first — reduced waste, improved line reliability, a specific throughput constraint. Automation chosen because a competitor has invested, or a vendor has presented compellingly, rarely delivers consistent value.

Build a business case that reflects full value, and that finance will believe

Labour savings alone are commercially narrow and strategically fragile. Think like Finance, not like an engineer: the question is commercial risk, payback certainty and what happens when assumptions shift, not ergonomics or operator counts.

The robust case captures quality, yield, capacity, safety and the cost of not automating. 48,000 unfilled vacancies represent a £6bn lost opportunity, that belongs in the case. Concrete examples carry weight: a £200 sensor preventing a £20,000 write-off is more persuasive to a board than a ten-year NPV model.

Targeted automation often beats full automation

Short runs, format changes and retailer-driven variety make full-line automation the wrong answer in many contexts. Knowing where not to automate is as important as knowing where to start.

Treat pre-work as insurance, not overhead

Simulation and feasibility studies are easy to cut when timelines tighten. Manufacturers that invest in understanding end-to-end impact, including where new bottlenecks will emerge, encounter fewer expensive surprises at deployment.

Design physical and digital automation as an integrated system

Automating in isolation creates new fragility. Camera-based systems that extract real-time data from legacy equipment show that integration does not always require replacing the installed base. Sometimes it means connecting what exists more intelligently.

Key takeaways

Scaling requires organisational alignment, not just operational readiness

Automation programmes fail not in the factory but in the meeting room. Cross-functional ownership across operations, engineering, finance, procurement, HR and IT must be genuine, with red lines agreed early and remembered late.

Workforce transition is a design requirement, not an afterthought

Confidence in new technology must be built progressively at every level. With the workforce ageing and the industry competing for younger talent, automation that removes physically arduous work is also part of a longer-term case for making food and drink manufacturing an attractive place to build a career.

Learn from others, including from failure

The organisations making the most progress treat peer learning as a competitive input. The industry moves faster when knowledge travels.

From automation ambition to operational impact

The UK food and drink industry does not have a technology problem. It does not have a strategy problem. What it has is an execution problem, and it is a harder one to solve than it looks.

Signed-off business cases that cannot survive a format change. Pilots that perform well and then stall when they meet the wider organisation. Governance that fragments at exactly the moment cross-functional alignment matters most.

The manufacturers that break that pattern are not necessarily those with the biggest capital budgets. They are the ones that do the harder work: building cases that capture full commercial value, designing automation as an integrated system, aligning their organisations before they deploy, and treating the workforce transition as central rather than incidental.

Get it right, and automation unlocks the productivity, resilience and sustainable growth that isolated pilots will never deliver.

The technology is ready. Now work needs to focus on making sure the organisation is too.