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food & drink federation

Future Factory II

**From Insight to Implementation
November 2025**

Foreword

A year ago, Newton's Future Factory report challenged the food and drink sector to think differently – to use technology as a tool to strengthen all our businesses, whatever they do. The report cited some standout examples of businesses transforming their products and processes through the adoption of new technologies. Since then, we've seen that ambition start to be gripped more widely. Across the country, manufacturers, policymakers and partners are learning from the best and turning insight into action.

Food and drink is the UK's largest manufacturing sector. It employs almost half a million people, spans more than 12,000 businesses, and accounts for around a quarter of total UK manufacturing turnover. It is also one of the most geographically distributed industries in the country – providing good jobs and economic resilience in every nation and region of the UK. That scale and reach make our sector uniquely placed to help drive the UK's future productivity growth and to contribute to its food security.

The Future Factory report identified a £7-£14 billion growth opportunity through greater use of automation, digital technologies and AI – with food and drink manufacturing returning £9 in value for every £1 invested over the last two decades compared to other manufacturing sectors returning £5 in value. Over the past year, we've seen encouraging progress: more businesses are engaging with national programmes, new regional partnerships are forming, and early adopters are showing what is possible when technology is applied to real manufacturing challenges. But there is still a long way to go. Many small and medium-sized businesses face barriers that make investment in innovation and productivity harder than it should be. Helping them overcome those barriers must be a shared priority for industry and government.

This report builds on the work begun in Future Factory and on the insights of the Food and Drink Technology Taskforce. It sets out practical next steps to accelerate technology adoption and support growth across every part of our sector. This report's aims sit firmly alongside the Government's growth and industrial strategies, the National Food Strategy and the FDF's own Ambition for Growth – a shared agenda to secure long-term investment, innovation and competitiveness for UK food and drink manufacturing.

Together, we can make this next phase count – ensuring our sector remains world-leading, resilient and ready for the future.

Karen Betts OBE
Chief Executive, Food & Drink Federation

Executive Summary

The UK's food and drink manufacturing sector is one of the country's greatest industrial strengths – employing almost half a million people, spanning 12,000 businesses and accounting for around 20% of total manufacturing output. It delivers value and resilience to every region of the UK and remains central to national growth, productivity and food security.

One year ago, *Newton's Future Factory*[1] set out a bold vision: to unlock a £7-£14 billion growth opportunity through greater adoption of automation, digital technologies and AI. Since then, the Food and Drink Technology Taskforce – bringing together manufacturers, technology providers, academics and finance – has translated that ambition into practical action.

This report, *Future Factory II: From Insight to Implementation*, sets out two immediate priorities designed to accelerate technology adoption and deliver measurable benefits for businesses:

Accelerate adoption of automation, robotics and digital technologies across the food and drink sector through support programmes and centres of excellence

a) Increase business engagement with Made Smarter Adoption across all regions and the government's proposals to create Robotics Adoption Hubs.

b) Explore the formation of a network of Demonstrator sites

c) Develop a targeted communications campaign to raise awareness of available support.

Develop a practical Food and Drink Technology Adoption Blueprint

a) To support: building a business case for new technology; access to finance and grant support; digitalisation pathways for start-ups and scale-ups; and selecting and implementing core digital systems (e.g. MES, ERP, or CRM)

b) Bridge the gap between manufacturers and tech suppliers to address common pinch points – such as interoperability, data sharing, and deployment of modern tech with legacy machinery and systems.

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[1] Future Factory: Supercharging digital innovation in food and drink manufacturing, Newton, 2024

Executive Summary

Together, these actions will help businesses – particularly SMEs – make informed, confident investment decisions, overcome barriers to technology integration (including with existing legacy systems), and strengthen collaboration across regions and supply chain.

This agenda directly supports the UK Government's growth and industrial strategies, the National Food Strategy for England, and the Small Business Plan – all underpinned by the government's wider drive to unlock productivity and sustainable growth across the economy. It also aligns with the Food and Drink Federation's Ambition for Growth which sets out a shared vision for a competitive, innovative and resilient UK food and drink industry.

Delivering on this agenda will require partnership between industry and government. Together, we can ensure the UK's largest manufacturing sector – diverse, distributed and deeply connected to communities across the country – continued to thrive. A strong innovative food and drink manufacturing base is essential to a strong and prosperous UK economy: driving growth, creating skilled jobs and securing out nation's food resilience for the future.

Introduction

In November 2024, FDF and Newton launched the report Future Factory: Supercharging digital innovation in food and drink manufacturing[1]. Future Factory identified a £7 to £14 billion growth opportunity in UK food and drink manufacturing, underscoring the sector's potential contribution to national productivity and economic resilience. Employing over half a million people across every region of the UK, food and drink manufacturing delivers broad-based value – returning £9 for every £1 invested over the past decade, compared with £5 in sectors such as transport and engineering.

Despite this strong performance, productivity in UK food and drink manufacturing still lags behind the UK and other advanced manufacturing sectors such as automotive and aerospace. Targeted investment in AI, digital and automation technologies will be essential to closing this gap – boosting efficiency, supporting more sustainable production, and helping to keep downward pressure on consumer prices.

Future Factory set out three focus areas for the sector:

- Proving impact today – helping food and drink manufacturers make incremental technology improvements to tackle tangible business problems.

- Achieving talent – addressing skills gaps and learning pathways to support technology adoption.

- Rewriting the rules of engagement – fostering pre-competitive collaboration to achieve transformative results together.

The Taskforce initially identified eight recommendations to accelerate technology adoption across food and drink manufacturing. As an initial phase, this report focuses on the recommendations linked to Proving impact today, where practical implementation can deliver measurable benefits for businesses in the near term.

The immediate priorities are:

1. Accelerate adoption of automation, robotics and digital technologies across the food and drink sector

2. Develop a practical food and drink technology adoption blueprint

Work under Achieving talent is being progressed through FDF's broader programmes and will remain closely connected to the Taskforce to ensure alignment across initiatives. A full overview of all recommendation and the supporting rational is available on the FDF website.

[1] Future Factory: Supercharging digital innovation in food and drink manufacturing, Newton, 2024
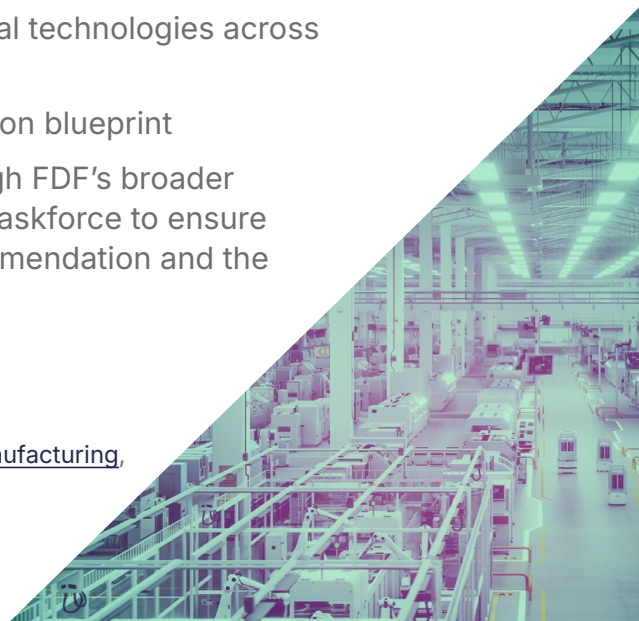
Recommendation 1: Accelerate Adoption of Automation, Robotics and Digital Technologies

Rationale:

The UK food and drink manufacturing sector comprises around 12,000 businesses across every part of the country – from global brands to specialist SMEs – together forming the UK's largest manufacturing industry. While the majority (98%) are small and medium-sized enterprises (SMEs), larger firms also face complex challenges in digitalising operations and adoption automation at scale. Manufacturing food and drink products involves unique challenges compared with other sectors: fragile, perishable ingredients, high hygiene standards and variable production environments. Many manufacturers also work with legacy production lines and equipment that were never designed to connect with modern digital systems, making integration costly and complex. The market offers a confusing array of technological options, and the challenge for many firms lies in identifying which solutions are appropriate, scalable and capable of delivering a clear return on investment. Greater access to impartial advice, demonstrators and peer learning would help companies of all sizes make informed, confident investment decisions.

Food and drink manufacturers are also navigating difficult and unpredictable economic conditions. Contracts with retailers can be short-term in nature, and profit margins are often tight given intense price competition. Higher energy, input and labour costs make it difficult for many manufacturers - particularly SMEs - to release funds for technology projects, even when the long-term benefits are clear. It is therefore more important for the sector to have the tools to make informed decisions that enable them to make the business case for investment more confidently. Targeted access to national innovation and adoption programmes can help close the productivity gaps between food and drink and other advanced manufacturing sub-sectors and bring rapid economic benefits.

Proposed Approach:

- Increase SME engagement with Made Smarter Adoption by ensuring food and drink businesses receive proportional support across all regions, reflecting their 25% share of UK manufacturing

- Engage regionally with Made Smarter and the government's proposed Robotics Adoption Hubs, creating stronger two-way communication between central programmes and local business network

- Build relationships with the seven Mayoral Combined Authorities in England, as well as with the Scottish and Welsh governments and regional business hubs to promote awareness of national technology adoption programmes, connect SMEs to funding opportunities, and gather insights on local barriers and needs.

[2] Powering Communities: UK Food & Drink Manufacturing Regional Report 2025

- Explore the formation of a network of Demonstrator Sites, building on a foundation of existing facilities, in partnerships with universities, catapults and industry. These could include a mix of food-specific manufacturing environments and more generic facilities, providing accessible locations for SMEs to trial automation, robotics and digital technologies, see real-world applications and gain impartial advice before investing.

- Develop a targeted communications campaign through regional partners and trade associations to raise awareness of available support and share success stories from early adopters and strengthen engagement with SMEs across the UK.

Impact

Enhanced SME participation in national programmes would accelerate the diffusion of proven digital and automation solutions, driving productivity gains, cost efficiency, and resilience across the sector. Stronger regional engagement would expand the reach of adoption programmes, ensuring that SMEs across the UK – not just in major manufacturing clusters – benefit from coordinated support.

Key performance indicators (KPIs) should include:

- The share of food and drink companies supported under Made Smarter Adoption relative to their manufacturing sector share (25%)

- The number of regional partnerships established with Mayoral Combined Authorities and business hubs

- The number of food and drink manufacturers accessing Robotics Adoption Hubs or Made Smarter Innovation funding

Together, these actions would help unlock the £14.3bn GVA opportunity identified by the government[3] and ensure food and drink manufacturing remains globally competitive within an increasingly automated economy.

[3] The Economic Impact of Robotics and Autonomous Systems Across UK Sector, BEIS Research Paper 2021, pg. 19

Recommendation 2: Develop a Practical Food and Drink Technology Adoption Blueprint

Rationale:

The current support landscape for food and drink manufacturers is fragmented, difficult for large firms to navigate and often inaccessible to SMEs. Many businesses are unaware of affordable automation or digital options, relevant financing mechanisms, or where to find impartial technical advice. This lack of clarity slows adoption and limits productivity gains across the sector.

A dedicated, sector-specific adoption guide would bring together the wealth of existing material into a coherent, practical resource – helping firms understand what technologies are available, how to fund them, and where to go for further support. By improving visibility and coordination, the guide would address one of the most persistent barriers to scaling innovation across food and drink manufacturing.

Access to finance is central to this challenge. Although a range of lending and grant options exist, businesses – particularly SMEs – often struggle to identify the most appropriate routes or to structure investment cases that meet lenders' requirements. The Blueprint would help bridge this gap by offering clear, practical guidance on available financing mechanisms and examples of successful investment models. In doing so, it would complement wider efforts to develop new financing solutions tailored to SME circumstances and designed to de-risk investment in digital and automation technologies, while also signposting incentives available to larger manufacturers investing in cutting-edge systems and infrastructure.

Proposed Approach:

- Develop a practical, living guide curated by the Taskforce and FDF, consolidating existing resources, programmes and case studies of best practice.

- Cover key topics including:

  - Building a business case for new technology

  - Accessing finance and grant support (with particular emphasis on bridging solutions for SMEs)

  - Digitalisation pathways for start-ups and scale-ups

  - Selecting and implementing core digital systems (e.g. MES, ERP, or CRM)

- Bridge the gap between manufacturers and suppliers through joint workshops and challenge statements to address common pinch points – such as interoperability, data sharing, and deployment of modern tech with legacy machinery and environments.

- Ensure wide dissemination through trade associations, regional networks, and business support organisations, with regular digital updates to reflect policy, technology, and funding changes.

- Initially prioritise SME adoption, while maintaining flexibility to expand guidance for larger businesses as the landscape evolves.

Impact:

A sector-specific blueprint would demystify the technology landscape, improve knowledge diffusion, and support a wider pool of businesses to take their first steps towards digitalisation and automation. It would complement Recommendation 1 by ensuring SMEs not only know what support exists but also how to access and apply it effectively.
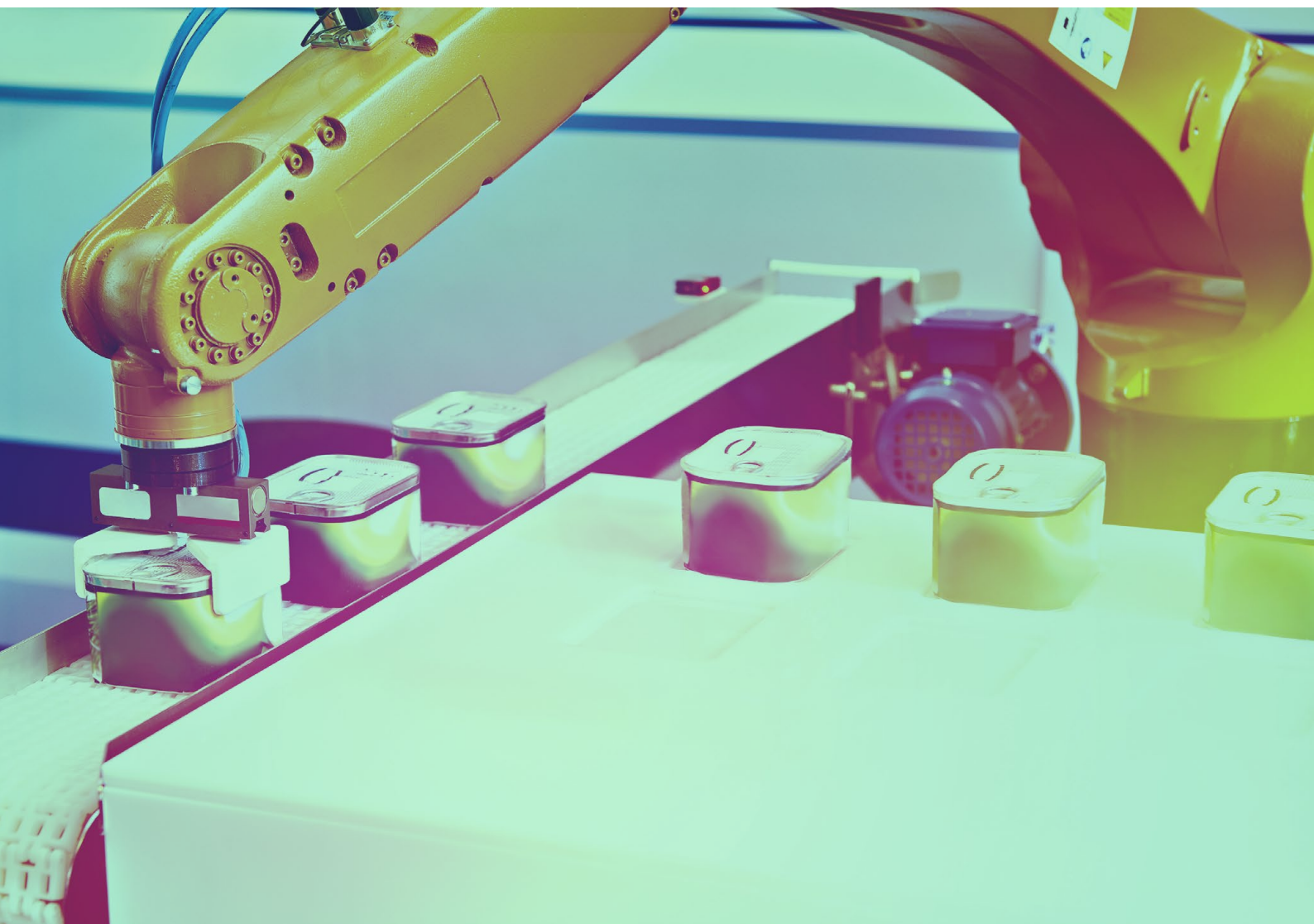
Turning Insight into Action

The Food and Drink Technology Taskforce has laid the foundation for a more coordinated and impactful approach to digitalisation and automation across the sector. The next stage will shift focus from defining priorities to delivering practical change, ensuring that the recommendations in the report translate into measurable progress on the ground.

To take this work forward, FDF will convene a new Food and Drink Technology Innovation Partnership – a collaborative group built from the strong foundations of the Taskforce, designed to lead and coordinate the implementation of the report's recommendations. Chaired by FDF or an appointed industry representative, the Partnership will bring together members of the Food and Drink Technology Taskforce, including technology providers, catapults, academia, and finance institutions, as well as food and drink manufacturers and will include regular engagement with government stakeholders from DEFRA, DBT, DSIT, InnovateUK and UKRI as strategic partners.

Structure and Delivery

The Partnership will meet quarterly throughout 2026, with a review after the first year to assess progress and determine its future scope. The group will focus on the delivery of tangible outputs aligned with the sector's growth and innovation ambitions.

FDF will provide convening and secretariat support to the Partnership, ensuring alignment across activities and maintaining close links with the wider network of industry and policy stakeholders. Partnership members will take ownership of individual work areas, ensuring shared accountability and the direct involvement of those best placed to deliver outcomes.

Focus Areas

The work of the Partnership will be structured around five core activity areas:

- **Made Smarter Engagement** – Strengthening collaboration with national and regional Made Smarter teams to ensure proportional representation of the food and drink sector.

- **Workshops and Blueprint Development** – Designing and delivering a series of practical workshops to inform the creation of the Food and Drink Technology Adoption Blueprint, sharing best practice and building capacity across businesses

- **Demonstrator Network** – Exploring partnerships with universities, catapults, and existing innovation centres to establish accessible Demonstrator Sites, initially aimed at SMEs

- **Regional and Combined Authority Collaboration** – Building relationships with Mayoral Combined Authorities and local business hubs to increase regional awareness of adoption programmes and funding opportunities

- I**ndustry Coordination with Automate UK** – Working closely with Automate UK to align efforts and share insights, ensuring that food and drink manufacturers benefit from wider advances in automation across UK industry

Engagement and Communication

A proactive communications and engagement plan will support delivery, raising awareness among food and drink manufacturers of the opportunities emerging through this work. Updates will be shared through FDF's member network, regional partners, and Made Smarter channels, helping to build visibility, encourage participation, and celebrate early successes.

Measuring Progress

Progress will be monitored through clear metrics, including engagement levels with Made Smarter, participation in workshops, the number of demonstrator collaborations established, and adoption of the Blueprint across the sector. Regular updates will ensure transparency and continuous learning as the Partnership delivers on its mission.

Methodology

A Food and Drink Technology Taskforce was established in November 2024 to build on the findings of the Future Factory report and identify practical actions to accelerate technology adoption across the sector. The Taskforce brought together expert stakeholders from across the ecosystem – including leading technology providers, manufacturers, universities, catapults, and financial institutions – all committed to increasing the pace of digitalisation and automation within UK food and drink manufacturing.

Over the first half of 2025, the group convened for two formal Taskforce meetings and a series of one-to-one interviews with all members to gather in-depth insights. In parallel, the Food and Drink Manufacturing Advisory Group, composed of senior production and operations leaders, was consulted to ensure proposals reflected on-the-ground realities and operational needs of the sector.

Following the initial phase, the Taskforce prioritised its focus areas through a structured decision-making process. From an initial set of eight draft recommendations, the group agreed to advance two broader, actionable priorities – those with the greatest potential for measurable impact in the short to medium term and which could be delivered through industry-led collaboration.

Recommendations related to skills are being taken forward separately through the FDF Skills Forum, ensuring close alignments with the National Skills Academy for Food and Drink and other key partners. Work to reduce finance barriers for SMEs, while essential, was recognised as a longer-term challenge dependent on wider shifts in retailers and supply chain relationships.

The outcome is a focused, evidence-based set of recommendations, designed to deliver early, tangible benefits for manufacturers while laying the foundation for longer-term transformation.

Methodology

The Food and Drink Technology Taskforce and the Food and Drink Manufacturers' Advisory Group brought together representatives from industry, academia, technology providers and finance to inform and guide this work. Their contributions have been invaluable in shaping the priorities outlined in this report.

Food and Drink Technology Taskforce Members

Simon Miles – Food and Beverage Account Manager, ABB Robotics UK

Mark Begbie – Senior Policy Advisor, Made Smarter Adoption, Department for Business and Trade

Mike Lewis – Group Innovation Director, Mpac Group

Mike Wilson – Chief Automation Officers, Manufacturing Technology Centre

Bhavnita Patel – Sector Development Manager: Agri-Food, Manufacturing Technology Centre

David Scott – National Head of Retail and Leisure Sector, NatWest

Max James – Director, Newton

Patrick Kelsey – Business Manager, Newton

Amanda Johnson – Co-Director, Advanced Food Innovation Centre, Sheffield Hallam University

Keith Thornhill – Head of Food and Beverage, Siemens

Food and Drink Manufacturers' Advisory Group

Steve Barton – Strategic Projects Director, Associated British Foods

Mark Thorpe – CEO, KP Snacks

Ian Noble – VP R&D, Mondelez International

Catherine Battaloğlu – Research Fellow – Process Engineering, Mondelez UK R&D

Paul Thompson – Chief Supply Chain Officer, Premier Foods

Steve West – Managing Director, The Pudding Compartment

Adam Marson – Strategic Change Director, Warburtons

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Our skilled teams of experts work with businesses, government, regulators and our members to create a business environment for the industry to thrive.

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