



# UNLOCKING TALENT

THE KEY TO DRIVING  
FOOD AND DRINK PRODUCTIVITY

Food and Drink  
Federation



Delivering Sustainable Growth

## FOREWORD

### Increasing the productivity of UK industry is a national economic priority

In July 2015, the government laid out an ambitious call to action for UK business to close the productivity gap with our global competitors, and to overtake them.

As the largest sector of UK manufacturing, food and drink has an enormous contribution to make. Since 2009, productivity performance in food and drink has increased by 11 per cent. We've got a great story to tell, but we also know we have more to do. Bringing the right people with the right skills into our businesses is central – the skills gap facing food and drink is not new, but the need to close it has never been more urgent.

So now is the time to act. This is why I have spearheaded a project to open up the pipeline of future talent for our sector. FDF and the National Skills Academy for Food and Drink, alongside Nestlé, apetito, Butt Foods, Mars, Mondelēz and Premier Foods, have identified the key actions that our sector will now take to ensure we can recruit and retain the next generation of food engineers, scientists and leaders.

Our priorities are to increase the quantity and quality of our apprenticeships, improve our engagement with schools and our collaboration with Higher and Further Education and showcase the exciting career opportunities on offer.

Of course, skills and talent are not the complete picture. With a group of senior leaders from across UK industry, I have been looking at different areas of business which drive productivity improvement. Sir Charlie Mayfield has rightly said that, for this to work, it must be a movement involving thousands of companies, large and small, from every sector of our economy.

For our part at Nestlé, we are kickstarting that movement, taking the productivity debate to our factories throughout the regions – bringing the Northern Powerhouse and Midlands Engine to life. We know we must work with local employers and government to identify what actions we must take together to close Britain's productivity gap.

I appeal to you to join us in this movement, and ensure British business leads the way in raising living standards for people right across the UK.



**Dame Fiona Kendrick**  
Chairman & CEO Nestlé UK & Ireland and FDF President



## WHAT IS PRODUCTIVITY?

Productivity is a measure of how well resources (e.g. labour, capital) are converted into goods and services. There are two commonly used measures of labour productivity: gross value-added (GVA) per employee and output per hour.

### Why does productivity matter in food and drink?

Given the size and scale of the industry, any food and drink productivity improvements will have a significant impact on the UK's manufacturing performance and that of the wider economy. For that reason, exploring where and how productivity can be improved is not only good for the sector, but good for the UK as a whole.

A substantial boost in food and drink productivity growth will also lead to investment in leading edge innovation, improved technology and the necessary advances in food production to ensure consumers continue to have access to sufficient, safe, affordable and nutritious food. However we know that skills issues, such as an ageing workforce, talent shortages, technical and scientific skills gaps and low apprentice numbers, risk undermining future productivity improvements in our sector.

### Food and drink industry growth vision

FDF has a vision for UK food and drink manufacturing to deliver 20% growth of GVA by 2020. Food and drink manufacturing's productivity has performed well in recent years compared to other sectors in the UK economy and overseas competitors. Higher levels of productivity are essential to delivering economic growth and ensuring a competitive industry in a global market.

As part of FDF's growth vision, the industry has an ambition to treble the number of apprentices in the food and drink manufacturing workforce and grow value-added food and drink exports by a third by 2020.



## FOOD AND DRINK INDUSTRY GROWTH PERFORMANCE

**Independent analysis commissioned by FDF from Grant Thornton in 2010 established five indicators to underpin FDF's 2020 Vision for Growth. Turnover represents the value of goods and services provided to customers. Turnover and GVA are both boosted by exports. Strong demand for quality British products has driven continuous growth in exports of value added food and drink since 2010, bucking an overall decline in UK exports.**

To drive continued growth, the UK must remain an attractive place for food and drink companies to invest. Since 2010, we have seen a significant rise in R&D spending in the food and drink sector from both UK businesses and from overseas. This reflects our industry's strong reputation for innovation and its capacity to deliver further growth.

Indicators	2010	2011	2012	2013	2014	Change since 2010 (%)
GVA (£m)*	20,079	20,391	19,937	21,385	21,855	8.8
Turnover (£m)*	74,395	77,084	80,500	81,690	83,667	12.5
Productivity	52,839	54,231	53,739	56,276	57,063	8.0
Employment ^ (000's)	380†	376†	371	380	383	0.8
Value Added Exports (£m)**	3,317	3,656	3,981	4,364	4,590	38.4
R&D (£m)***	306	366	364	437	430	42.8

† excludes soft drink manufacturing – ONS data withheld 2010-11

\* Annual Business Survey

\*\* Global Trade Atlas

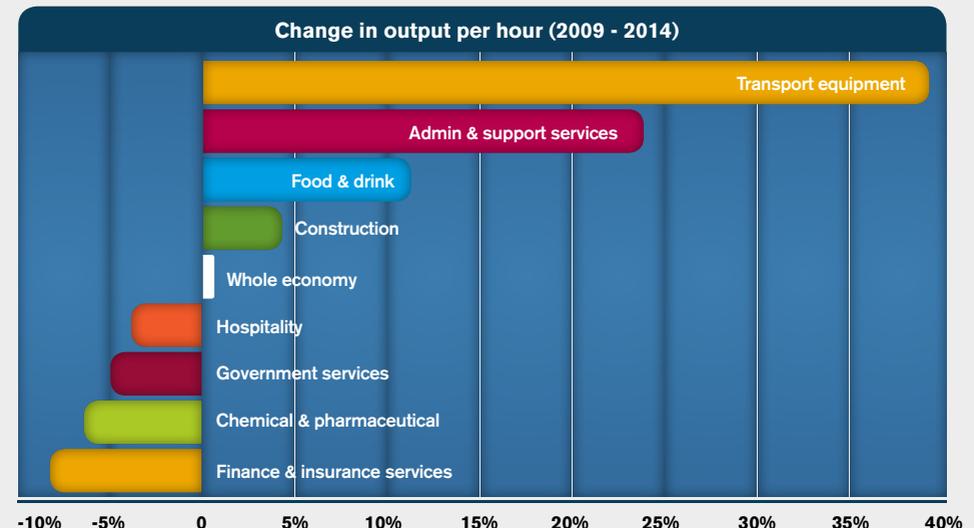
\*\*\* Business Enterprise Research and Development

## FOOD AND DRINK INDUSTRY PRODUCTIVITY PERFORMANCE

**Food and drink manufacturing productivity grew by 11% over the last five years compared to 0.5% for the whole economy.**

When compared to other industries food and drink manufacturing has seen an impressive amount of productivity growth over a five year period. Its sheer scale and geographical spread means this gain provides a significant contribution to the productivity of the UK economy.

Food and drink manufacturing is a labour intensive industry, employing more people than the transport equipment sector. Food and drink manufacturing has embraced new working practices and continuous skills development to create efficiencies in a larger workforce and recognises the interdependence between people and technology. Despite this it is still outperformed by transport equipment (which includes automotive, aerospace, shipping and rail manufacturing). More automated sectors with a smaller workforce have experienced greater growth in output per worker/per hour and as the UK is one of the world's largest exporters of services this has also helped to boost the admin and support services' productivity growth.



**Note:** Food and Drink includes tobacco as the broad sector level measure

**Source:** Office of National Statistics Labour Productivity Data Set DJL2 and Data Set A4YM

## AN INTERNATIONAL COMPARISON

**In 2013, the UK food and drink manufacturing sector did significantly better than many of its European counterparts, with the exception of Ireland. The United States food and drink industry is significantly more productive than the UK, with each UK employee contributing less than half of the GVA that US employees did at last count.**

Countries with high rates of growth, strong export demand and low inflation benefit from labour productivity. Ireland benefits because 80% of food and drink manufacturing output is destined for export markets. The US food and drink manufacturing sector also ranks highly as a result of greater economies of scale, use of automation and typically longer working hours than international competitors.

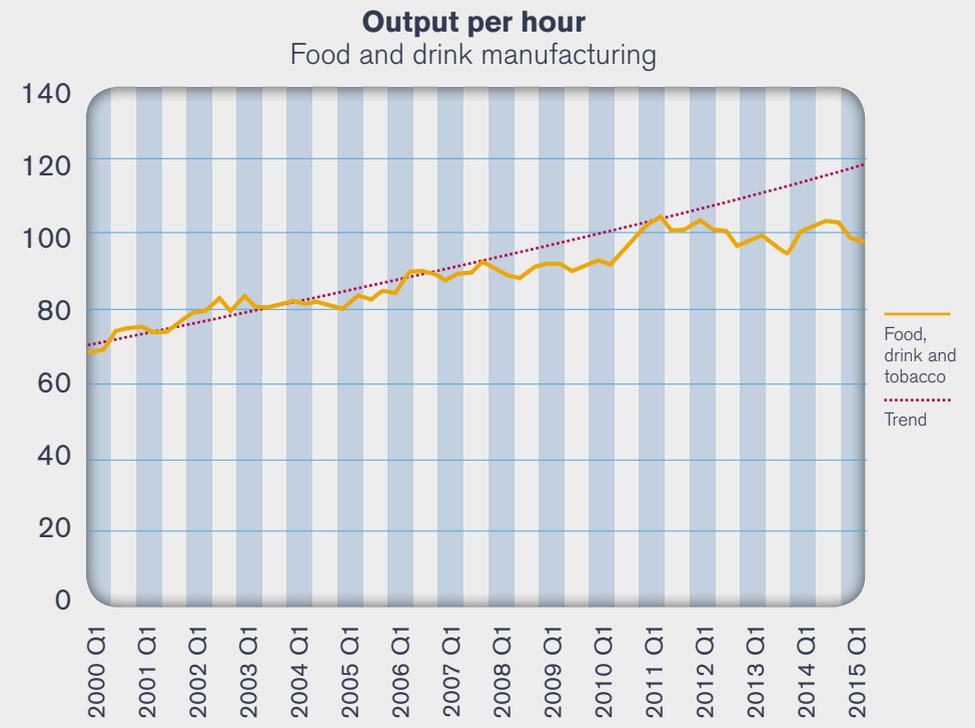


Source: Annual Survey of Manufactures, Data Set AM1331GS101 and Data & Trends of the European Food and Drink Industry 2013-2014

## POST-RECESSION PRODUCTIVITY

**In common with other industries, productivity in the UK food and drink sector has not followed the pre-recession trend (the average growth seen between 2000 and 2007 projected forward). Had productivity increased in line with this trend, it would be 20% higher than it is today, allowing for higher profitability and higher wages.**

A lack of investment in automation during the recession resulted in employees being retained with some even moving into less productive roles. These actions taken by businesses impacted on productivity growth post-2007. This slump in automation investment and 'labour hoarding' contributed to the productivity slowdown, as falling output was not matched by reductions in hours worked.



Source: Output per hour, UK Mfg food, drink & tobacco, 2012=100, seas adj, ONS Labour Productivity DJK9.

## KEY DRIVERS OF PRODUCTIVITY IN FOOD AND DRINK MANUFACTURING



### Capital Investment

Food and drink manufacturers have continued to invest in capital with an increase of 53% over the last five years (+£1.1 billion). However, the benefits of capital investment can be lost without the skills needed to embed a culture change and see a healthy return on investment.



### Innovation

This industry continues to invest heavily in UK science, technology and research and development (R&D). Three quarters of this R&D is self-funded by UK companies, large and small, who are delivering new products, adapting existing ones and providing consumers with the broadest possible choice.



### Enterprise

More and more food and drink manufacturers are exporting and demand for British products remains high. Exports of food and drink have almost doubled in value since 2004 and reached £12.3bn in 2015. Diversifying into new markets can drive growth and lead to productivity improvements as businesses seek to meet the different needs of different markets.



### Competition

UK manufacturers face a number of challenges including changing shopper habits, supermarket pricing pressures and the drive to adapt products for health to help address obesity. The tough trading conditions connected to retailing are likely to result in slow revenue growth in the next few years if consumer habits remain the same. Slower revenue growth would affect the industry's ability to invest and in turn lower its productivity performance.



### Skills

Skills shortages are a major challenge facing the industry. The challenge of an ageing workforce means that 130,000 jobs need to be filled between 2014 and 2024. Food and drink manufacturers find it increasingly difficult to recruit food engineers and scientists. Companies need to secure a high calibre, skilled workforce to drive innovation.

## WHY FOCUS ON SKILLS?

**Investment in skills of the workforce can make a significant contribution to increased productivity: as part of an effective wider business strategy, more highly skilled people produce more high value goods and services, more efficiently.**

Research shows that, at a company level, overall productivity gains associated with training were roughly twice as large as the wage incentives to employees.

There are also “spill-over” effects for the wider sector as knowledge is disseminated. One study estimates that the impact of training at an industry level has double the effect compared to company level productivity gains.

**By building a strong talent pipeline, productivity improvements in food and drink manufacturing will be delivered through a number of ways:**



### Innovative products

We need food scientists and technologists to power new product development (NPD) to meet changing consumer needs and tap into new markets.



### New processes and machinery

We need food engineers to design, implement and maintain bespoke systems to support NPD, increase efficiency and boost margins.



### Management

We need to enhance management skills within the sector to allow firms to make better use of available resources, including existing workforce skills.



### Attractiveness to investors

We need to secure availability of skills across the supply chain to boost UK attractiveness to inward investors and to retain existing investors.



### Growing UK workforce

We need to enable food and drink employers to build their apprentice numbers with individuals who have a long-term commitment to the UK.

## THE SKILLS CHALLENGE

Food and drink manufacturing faces a talent shortage, with over a third of its workforce due to retire by 2024 and insufficient skilled candidates to fill these roles. Although apprentices in this industry are typically highly qualified, numbers are low at less than 1% of the industry workforce.

**Gaps in key areas:**



### ENGINEERING

Engineering technicians; machine automation



### TECHNICAL

Food scientists & technologists; product development



### INNOVATION

including packaging technology



### LEADERSHIP

Communication, managing change, coaching, goal and vision setting

### CUSTOMER MANAGEMENT

This is increasingly important in light of the changing retail environment and shifting consumer values

**Barriers to securing these skills are often a combination of three things:**

### COMPETITION

Strong competition for STEM skills, exacerbated by the fact that the UK is not producing enough STEM graduates (especially food technologists and engineers).

### LOCATION

The remote location of manufacturing plants, with food and drink manufacturers spread across the UK.

### IMAGE

The industry suffers from low levels of awareness of how dynamic and fast paced it is and the wide range of fulfilling careers on offer.

## CALL TO ACTION FOR INDUSTRY

FDF has developed a three-to-five year plan for business-led action to deliver a real step change in skills and talent within the UK food and drink manufacturing sector. FDF will work in partnership with Government, the National Skills Academy for Food and Drink, the National Centre for Universities and Business (NCUB), The Careers and Enterprise Company and other partners to deliver this action plan with industry.



Outcome	Improving the image of the sector	Better schools engagement	Increased collaboration with Higher & Further Education	Improved Apprenticeship uptake & quality
Opportunity / Barrier	<ul style="list-style-type: none"> <li>› Make sure that potential entrants have an up-to-date impression of our sector.</li> <li>› Give millennials a career that is meaningful and consistent with their socially and environmentally responsible values.</li> <li>› Showcase career pathways into and within the food and drink manufacturing sector – both academic and vocational routes.</li> </ul>	<ul style="list-style-type: none"> <li>› Confusion around rules of engagement with schools.</li> <li>› A mixed picture of localised activity with no strategy for engagement at a national level.</li> <li>› Trained ambassadors ready to go into schools but lack of opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>› Build learner volumes to ensure sustainability of industry backed programmes and to influence training and academic provision.</li> <li>› Ensure training courses and curriculum deliver skills our sector needs.</li> <li>› Increase knowledge transfer between universities and businesses.</li> </ul>	<ul style="list-style-type: none"> <li>› Work to meet various ambitions to drive apprenticeship numbers by 2020:                             <ul style="list-style-type: none"> <li>- UK Government: 3 million apprenticeships</li> <li>- DEFRA: Trebling agricultural and food manufacturing apprenticeships</li> <li>- FDF: Apprentices representing 3% of food &amp; drink manufacturing workforce.</li> </ul> </li> <li>› Introduction of the Apprenticeship Levy.</li> <li>› Development of Trailblazer standards.</li> </ul>
Action	<ul style="list-style-type: none"> <li>› Create compelling messaging under one careers campaign for the whole food supply chain – linked to the Government's Great British Food campaign.</li> <li>› Showcase career pathways into and within the sector using the interactive Tasty Careers map.</li> </ul>	<ul style="list-style-type: none"> <li>› Develop a strategic, targeted approach to actively deploy food and drink careers ambassadors into schools across the country.</li> <li>› Pilot the Scottish Food and Drink Federation (SFDF) schools programme in one or two English regions whereby food is used as a context for learning.</li> </ul>	<ul style="list-style-type: none"> <li>› Support industry-backed courses by driving learner volumes through further sponsorship.</li> <li>› Implement the food industry kite mark in colleges and universities delivering high-quality provision or programmes.</li> <li>› Build on the success of National Centre of Excellence for Food Engineering in Sheffield to create a food hub for engineering skills and innovation.</li> <li>› Promote the NCUB innovation brokerage tool Konfer.</li> </ul>	<ul style="list-style-type: none"> <li>› Embed Trailblazer standards within the industry including degree apprenticeships for food engineering, food science and leadership and management.</li> <li>› Increase awareness of apprenticeship benefits and share best practice across industry via a toolkit and regional roadshow events.</li> </ul>

## PARTNERSHIP WITH GOVERNMENT

### ⇒ SUPPORT FOOD & DRINK MANUFACTURERS

**Promote** the strategic importance of food and drink manufacturing to UK plc.

**Avoid** increasing the cumulative burden on food and drink manufacturing which has a huge impact on the sector's ability to access and invest in skills in the future.

**Allow** business tax incentives to apply to training (not only capital investment) given the key link between upskilling staff, maximising the value of capital assets and productivity gains.

### ⇒ FOCUS ON STEM SKILLS

**Increase** the number of young people leaving school with at least the basic qualifications in English and Maths to help prepare them for apprenticeships and/or a career in food and drink manufacturing.

**Support** collaboration between universities and industry to encourage best practice models such as the industry-backed MEng/BEng Food Engineering degrees and the National Centre of Excellence for Food Engineering.

### ⇒ EDUCATION

**Commit** to a strategy to ensure that the careers system promotes and values manufacturing including food.

**Encourage** schools to build relationships with local businesses and to value the important role industry can play in terms of providing careers advice and work experience.

**Work** in partnership with FDF to develop a pilot programme to help schools in England to deliver the curriculum by using food as a context for learning.

### ⇒ APPRENTICESHIPS

**Ensure** the quality and breadth of apprenticeships by working with the Institute of Apprenticeships to ensure credibility with employers and future apprentices; and to allow progression, transferability between sectors or even within sectors.

**Allow** businesses to spend Apprenticeship Levy funding within their supply chains and sectors to drive up food and farming apprentice numbers.

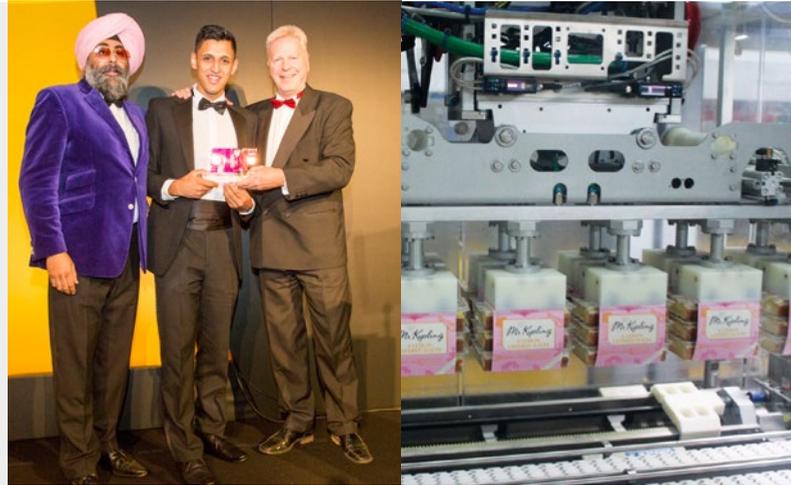
## CASE STUDIES:

**Shaheed Gul Khattak,**  
Multi-skilled Engineering Apprentice  
at Mondelez International

**Mondelez**  
International

**PREMIER**  
FOODS

Shaheed was involved in a project to modify existing parts of the wrapping machines on the Cadbury Dairy Milk Buttons line. He reduced failures with the main machine component by introducing a sturdier case, which he designed, and a 'heat shrink', preventing the wires and connections from burning and breaking. This led to less machine down time and ultimately a more efficient production line.



**An exceedingly  
good investment**

In 2015 Premier Foods completed a £20 million investment in a new automated cake slice line at its Mr Kipling bakery in Carlton, Barnsley. Around 80 new highly skilled jobs have been created to operate the new line, with operators trained to run and troubleshoot sophisticated machinery, control quality and order ingredients and packaging to meet orders. The new line includes state of the art robotics and the flexibility to pack different formats to meet different customer requirements.

**Efficiency Improvements  
through Cultural Change**

**butt**foods

**MARS**  
uk

In 2014, the Butt Foods bakery was running at 80% efficiency. To improve efficiency and generate capacity, an employee survey was used to define the company culture and team values, which were used as framework to empower staff. This allowed staff to take ownership of their work giving them the confidence to make suggestions and solutions. In just over nine months efficiency improved by over 10% and as a result the extra capacity this created enabled us to win a major new customer.



**Ryan Braddon,** Lean Coach in the Supply Chain Leadership team at Wrigley, a subsidiary of Mars, Incorporated.

Ryan joined Mars UK as an engineering apprentice in 2001. He gained vital experience working in the project engineering team before pursuing a path to become one of our factory Business Unit Leaders, responsible for our newest production line. He has since progressed to become a Lean Coach in our Supply Chain Leadership Team. This team contributes to the development and execution of supply strategy, in addition to engaging all suppliers in the lean programme to drive continuous improvement across the business.

# CASE STUDY



**Sara-Jayne Barker**  
Modern Craft Apprentice at  
Nestlé's York Factory



Sara-Jayne Barker was one of Nestlé's first female engineering apprentices, joining in 2012 after studying agricultural engineering. Her apprenticeship has given her experience across a range of disciplines, including chocolate making, high speed wrapping, machine maintenance and robotics.

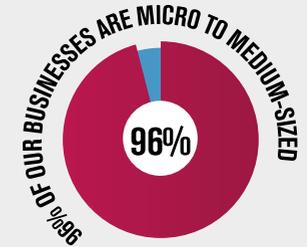
Sara-Jayne is taking on increasing levels of responsibility throughout her apprenticeship. Her training has empowered her to take a proactive approach to fault finding, diagnosis and repair, and by making improvements to the production process for both Four Finger Kit Kat and Kit Kat Chunky, Sara-Jayne has contributed to the productivity of the business.



NOW IS THE TIME TO ACT. THIS IS WHY I HAVE SPEARHEADED A PROJECT TO OPEN UP THE PIPELINE OF FUTURE TALENT FOR OUR SECTOR. FDF AND THE NATIONAL SKILLS ACADEMY FOR FOOD AND DRINK, ALONGSIDE NESTLÉ, APETITO, BUTT FOODS, MARS, MONDELEZ AND PREMIER FOODS, HAVE IDENTIFIED THE KEY ACTIONS THAT OUR SECTOR WILL NOW TAKE TO ENSURE WE CAN RECRUIT AND RETAIN THE NEXT GENERATION OF FOOD ENGINEERS, SCIENTISTS AND LEADERS.

**Dame Fiona Kendrick**  
Chairman & CEO Nestlé UK & Ireland and FDF President

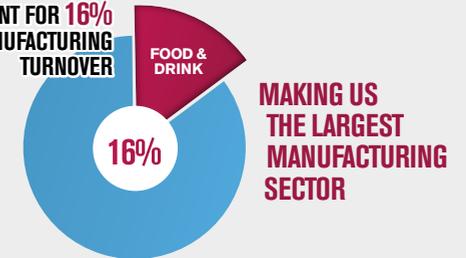
**WE HAVE 6,620 BUSINESSES**



**OUR GROSS VALUE ADDED TO THE ECONOMY IS £21.9bn...**



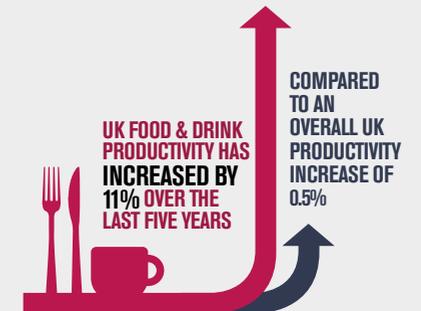
**WE ACCOUNT FOR 16% OF TOTAL MANUFACTURING TURNOVER**



**WE EMPLOY AROUND 400,000 PEOPLE**



**THAT'S MORE THAN THE POPULATION OF LEICESTER**



**WE WILL NEED 130,000 NEW RECRUITS BY 2024**



**TO MEET THE SKILLS NEEDS OF THE SECTOR**

# ABOUT FDF

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The Food and Drink Federation is the voice of the UK food and drink industry, the largest manufacturing sector in the country. Our sector directly employs around 400,000 people, it accounts for 16% of the UK's total manufacturing sector by value. Food and drink manufacturing is an invaluable partner to British agriculture, buying the majority of what farmers produce.

Our membership comprises manufacturers of all sizes as well as trade associations dealing with specific sectors of the industry. In representing the interests of our members, we are focusing on the following core priorities:

- **Food Safety and Science**
- **Health and Wellbeing**
- **Sustainability**
- **Competitiveness**

In the area of health and wellbeing, FDF's commitment is long-standing. We unveiled our action plan in 2004 to emphasise our sector's ambition to improve the health of the nation by focusing on the areas where we could make a real difference, such as nutrition labelling, workplace wellbeing and product reformulation. We have made plenty of progress in delivering on these commitments – in fact, the UK is now widely acknowledged to be leading the world in many areas – and our priority now is to continue working with members on our action plan.

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**Delivering Sustainable Growth**

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