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Appetite for Global Success:

How food and drink manufacturing through the industrial strategy can feed UK prosperity and serve global needs

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This report highlights key challenges and opportunities for food and drink manufacturing. It builds on the interim report published in May, and which was also submitted to the Government's Industrial Strategy consultation. This report is supported by Nestlé UK, a subsidiary of the world's largest food company, and a significant contributor to the UK economy. The report is editorially independent of Nestlé.

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Contents

| | |
|--|----|
| 1. Summary | 2 |
| 2. Recommendations: Putting UK F&D Manufacturing First | 4 |
| 3. Why F&D Manufacturing is Crucial for the UK Economy and the Industrial Strategy | 11 |
| 3.1 What is F&D manufacturing? | |
| 3.2 The importance of F&D manufacturing | |
| 3.3 Geographic spread of UK F&D manufacturing | |
| 3.4 The importance of the 'living' properties of food | |
| 3.5 The importance of 'place' | |
| 3.6 Challenges, opportunities and a future built on disruption | |
| 4. Institutions, Co-ordination and Places | 21 |
| 4.1 The importance of institutions | |
| 4.2 Institutional change in the UK | |
| 4.3 F&D institutions and focus | |
| 4.4 Dispersed sectors | |
| 4.5 Devolution and co-ordination | |
| 4.6 Productivity target areas | |
| 5. Science, Research and Innovation | 28 |
| 5.1 The importance of innovation | |
| 5.2 UK innovation performance | |
| 5.3 Challenges and opportunities for F&D | |
| 6. Improving Infrastructure | 35 |
| 6.1 Importance of infrastructure | |
| 6.2 UK infrastructure performance | |
| 6.3 Challenges and opportunities for F&D | |
| 7. Developing and Improving Skills | 39 |
| 7.1 Importance of skills | |
| 7.2 UK skills performance | |
| 7.3 Challenges and opportunities for F&D | |
| 8. Purposeful Companies | 43 |



1. Summary

"...a strong place within the Industrial Strategy, a mission for food leadership and a global ambition will underpin a strong sector, support a talent pipeline and help attract the brightest and best in our shores."

When Stone Age hunters placed their catch on the fire, this could be described as one of the earliest forms of food production and it has underpinned our existence ever since. It will in the future.

Food production is now a global multi-billion dollar industry worth \$8 trillion and projected to increase with rapid population growth.¹ By 2050, the world's population is expected to pass nine billion, requiring a 60 per cent increase in food production output.² Global consumption is increasing, markets are opening up and tastes are developing, particularly as emerging economies grow and middle classes expand.

At the same time the world is in the grip of a global health crisis with a third of the world's population now classed as obese or overweight - a trend likely to worsen without significant change to lifestyle as well as food consumption and production.³ In the UK £16 billion a year is spent on the NHS addressing obesity-related issues.⁴ Resource efficiency and sustainability are also huge challenges, from energy and water use to the increasing and far-reaching impact of waste, including plastics.

There is, therefore, an advantage in being able to produce sustainable and healthier food to meet growing demand in the UK and globally, harnessing and developing new technologies and innovations, and creating

world-beating products. This is the ambition and goal which needs to be set and underpin the Food and Drink (F&D) manufacturing sector through the Industrial Strategy, the Government's foremost economic policy frame. The Industrial Strategy seeks to reshape the UK's economic model and create a new industrial framework, with an orientation to places and sectors.

F&D needs a clear focus in the Industrial Strategy - it provides an important economic footprint across the UK, more so than many other sectors, anchoring wider industries and investment. It provides significant employment and jobs across many levels including highly skilled. The sector is value-creating, is productive and innovative, is a significant exporter and contributes to food security at home. With a strong economic profile in many areas that are economically less prosperous, the sector also plays a role in spreading prosperity to all areas of the country, underpinning a primary policy goal of this Government. It also offers a sector that has strength in weathering global shocks - an important economic foundation looking ahead.

Leadership in sustainability and health is about creating products across all forms of food which consumers want to buy that are healthier and sustainable with less sugar, salt and fat, and which use fewer resources and have less environmental impact. The UK is

well placed to meet this challenge with high standards of food production, a successful F&D manufacturing industry, global brands and companies, a strong small and medium enterprise (SME) presence, and strengths in science and research.

However, F&D manufacturing has been something of a Cinderella to the manufacturing sector; the largest part of the sector but with less profile and prestige than, for example, automotive and aerospace. Putting F&D manufacturing at the heart of the Industrial Strategy, with a goal of establishing the UK as a global leader in healthier, sustainable food offers a pathway to a secure future, important not just for the industry but for the UK's economic performance. It offers longevity, a powerful identity and a post-Brexit opportunity which can help deliver increased productivity, growth, investment, exports and skilled jobs.

The success of implementing a F&D manufacturing strategy has been seen in Scotland. A decade after the strategy commenced, turnover has increased 44 per cent and exports have grown 56 per cent to £5.5bn.⁵ Earlier this year a more ambitious vision was agreed to increase turnover to £30 billion by 2030.⁶

F&D manufacturing is the connector for the whole food value chain from farming and agricultural production to food retail and

services, including restaurants and catering. F&D manufacturers purchase around two-thirds of the UK's agricultural produce and more than 40 per cent of the consumer 'food pound' is spent on food outside the home - in restaurants and food services, which F&D manufacturing also supports.⁷ The UK boasts culinary centres such as London which are at the forefront of new forms of food and tastes, including the fusion from emerging markets in Asia, Africa and South America. The UK food services industry has global reach and renown, which adds weight to the goal of being at the forefront of the food industry.

However, F&D manufacturing will not achieve this ambition without dedicated focus and support to meet threats to the industry and realise the opportunities, as has taken place in Scotland. The sector is missing from the Government's Industrial Strategy Green Paper - there is no specific focus on F&D manufacturing nor any programme to address challenges for the sector including transport infrastructure and skill shortages. These impact on the productivity of factories and the industry faces a complex landscape to enable resolution of these challenges. Many of the large F&D companies in the UK are global players and multi-nationals and their UK plants compete within company portfolios. This means the need to ensure the UK remains a competitive location for future investment becomes ever more acute. Critically, health policy and the

Industrial Strategy are also not fully aligned, so the sector faces different priorities from different Government departments, adding to the lack of co-ordination.

Alongside the challenges is Brexit. The sector is hugely affected by the implications of Brexit, from the impact and uncertainty on exports and supply chains, to workforces and standards. The EU, as well as being the largest source of imports, is also the UK's largest export market and bought, by value, just over 71 per cent of UK food and non-alcoholic drink exports last year.⁸

Industry players must face questions. There is fragmentation of sector representation and co-ordination needs improvement. There are responsibilities on all parts of the sector to step up and meet the opportunities to produce healthier and more sustainable food. There also needs to be more industry leaders; F&D companies that are sector champions but also champions of the best business practices.

A new approach is both possible and necessary. A strong place for F&D within the Industrial Strategy alongside a mission for food leadership and a global ambition will underpin a strong sector, support a talent pipeline and help attract the brightest and best in our shores. Good food is the way to our hearts. It is also the way to our economic future.

1 Plunkett Research. (2017). *Global Food Industry Statistics and Market Size Overview, Business and Industry Statistics*. Available at: www.plunkettresearch.com [Accessed 20 September 2017]

2 Alexandratos N. and Bruinsma J. (2012). *World Agriculture Towards 2030/2050. The 2012 Revision*. Rome: Food and Agriculture Organisation of the United Nations Available at www.fao.org/docrep/016/ap106e/ap106e.pdf p. 7

3 Stevens, GA. and Co. (2012). *National, regional, and global trends in adult overweight and obesity prevalences, Popular Health Metrics*, 10:22. Available at <https://pophealthmetrics.biomedcentral.com/articles/10.1186/1478-7954-10-22>

4 Hughes, L. *More spent on treating obesity-related conditions than on the police or fire service, says NHS Chief. Daily Telegraph*, [online] Available at: www.telegraph.co.uk/news/2016/06/07/more-spent-on-treating-obesity-related-conditions-than-on-the-po/ [Accessed 20 September 2017]

5 Scotlandandfoodanddrink.org, (2017). *Scotland Food and Drink website* [online] Available at: <http://www.scotlandfoodanddrink.org/> [Accessed 20 September 2017].

6 Ibid

7 Technology Strategy Board and FDF (2013). *A Pre-competitive Vision for the UK's Food and Vision for the UK's Food and Drink Industries*. Available at: www.fdf.org.uk/events/Pre-Comp-Food-Booklet-Final.pdf and Defra (2017). *Food Statistics Pocketbook 2016* Available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/608426/foodpocketbook-2016report-rev-12apr17.pdf

8 Food and Drink Exporters Association (2017). *Exports Snapshot*. Available at: <http://ukfdea.com/> [Accessed 20 September 2017]



2. Recommendations: Putting UK F&D Manufacturing First

“An ambition should be set to support the UK becoming a global leader at the forefront of manufacturing healthier, sustainable food, which offers a future with longevity, a powerful identity and opportunity post-Brexit to deliver increased productivity, growth, investment, exports and skilled jobs.”

The recommendations in this report seek to develop and support the F&D manufacturing sector and make the case for creating a specific focus on it within the Government’s Industrial Strategy. These recommendations complement other studies outlining F&D’s importance but this report goes much further. It outlines a potential future direction for the industry and its key challenges, in particular seen through eyes of primes - the large companies and industry anchors that underpin the industry. The report also looks at the institutions needed to support the sector, and how to connect the pillars of the Industrial Strategy through sector and place-specific policies, drawing on ResPublica’s expertise, thought leadership and our record on place- and institution-based ideas.

The recommendations are not a series of demands from the industry - the focus is on key considerations for the Government and industry, and how to create effective structures to address these. The report also seeks to support the work between the industry and Government in developing a sector deal and approach. The recommendations connect and reinforce each other - they are not linear, as the diagram opposite

outlines. A brief description is provided for each recommendation, while the remainder of the report provides the more detailed analysis which underpins these.

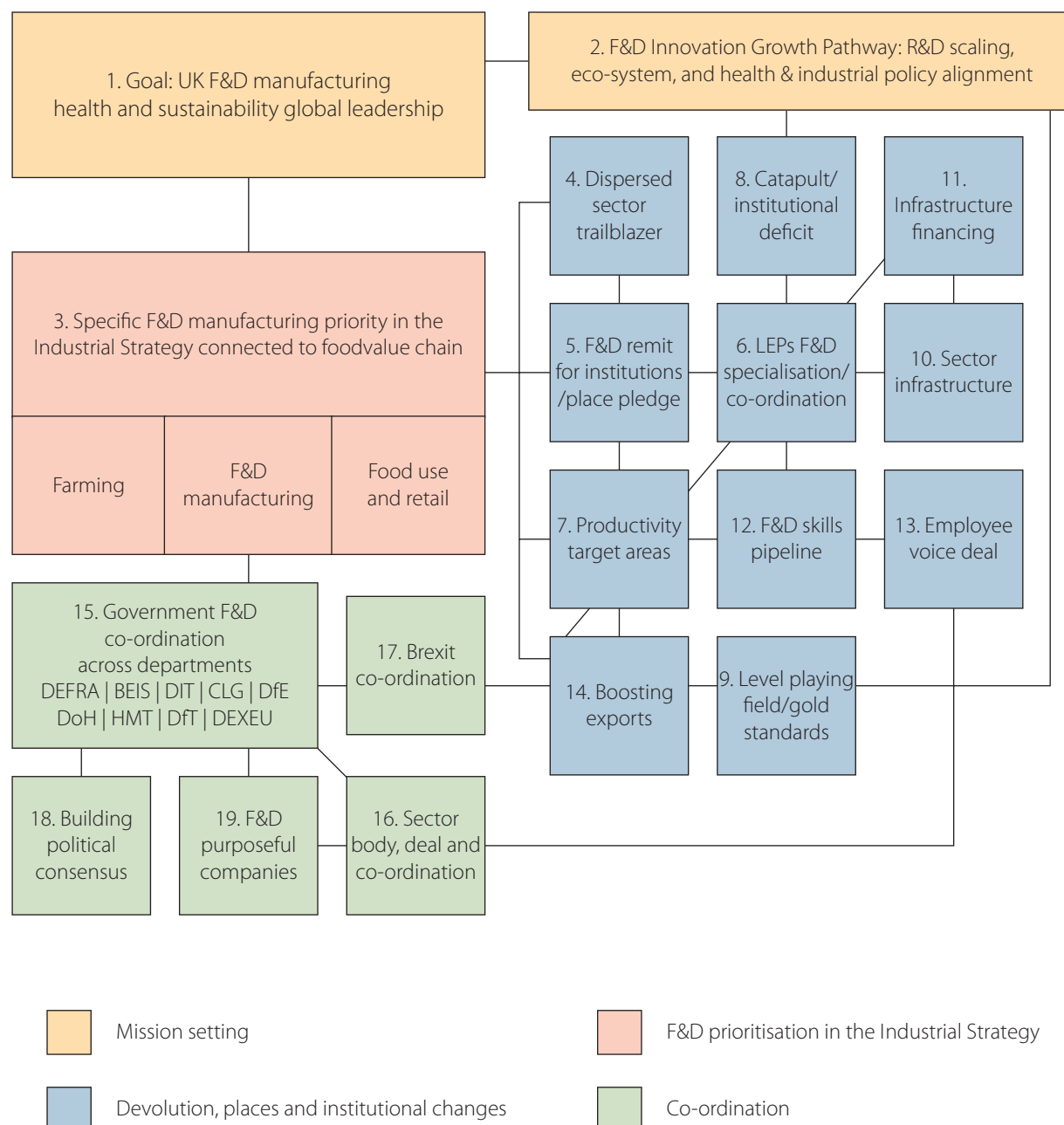
The main aim is to set a goal for the UK to be a global food leader in healthier and sustainable food to help meet future global demands.

Mission setting

1. Set a goal to be a global leader in meeting future needs for healthier and sustainable food

With population and obesity levels rising globally, there is an increasing demand for healthier food and sustainable production. The UK is well placed to meet these challenges. An ambition should be set to support the UK becoming a global leader at the forefront of manufacturing healthier, sustainable food. This would give the industry a more certain future, a powerful identity and opportunity post-Brexit to deliver increased productivity, growth, investment, exports and skilled jobs.

Figure 1. Ambitions and Recommendations: 19 Steps to Support a Stronger Sector



2. Establish an 'Innovation Growth Partnership' and integrate health and F&D industrial policy

To harness the potential of innovative F&D manufacturing and scale R&D investment, what we call an 'F&D Innovation Growth Partnership' should be established, akin to those in other sectors. These have Government support and mission-orientated industry research priorities to develop products that benefit industry and society. The Partnership would:

- Integrate health and industrial policy to create incentives to produce healthier food - and address the £16 billion cost to the NHS of treating obesity-related conditions.
- Set a goal to increase public and private R&D, increase research intensity and harness F&D as 'disruptors' through innovation including AI and 'big data'.
- Link to new gold standards and a level regulatory approach (recommendation 9).

F&D prioritisation in the Industrial Strategy

3. Set a specific priority within the Industrial Strategy for F&D manufacturing

Building on the successful Scottish F&D approach which has led to increased growth, a priority for F&D manufacturing should be established within the Industrial Strategy. A sector approach would recognise F&D as a strength and the largest single part of the manufacturing sector. It would also recognise its contribution to food security, and as a sector of significance with potential for improved productivity, exports, growth, skilled jobs and economic rebalancing. F&D manufacturing has specific needs and opportunities that will not be realised by being considered commensurate to manufacturing or farming. Equally F&D is part of, and shaped by, the food value chain which should underpin approaches.

Devolution, places and institutional changes

4. Establish 'trailblazers' in the Industrial Strategy to support important 'dispersed sectors'

F&D differs from other sectors as its economic footprint is across the country, bringing benefits to those areas. This requires a different approach to geographically concentrated industries such as automotive where support is easier to target. F&D should be a 'trailblazer' within the Industrial Strategy to support what we call 'dispersed sectors' - those with a wide geographical presence.

5. Set a F&D remit for Industrial Strategy institutions and a 'productivity prime place pledge'

In proportion to its size, the UK has relatively few sub-national institutions supporting regional growth and industrial approaches. In England, new Metro Mayors and Combined Authorities (CAs) are beginning to address this but more devolution is needed. Co-ordination across devolved areas is also essential. Factors such as infrastructure and skills shape the competitiveness of the plants of primes which underpin sector productivity; factors which take on an added importance in light of the fact that many large F&D firms are multi-nationals and their UK plants compete with those overseas within company portfolios. To address productivity issues, primes need to work in areas with varied resources or capabilities. It can be a 'post-code penalty for place-based primes' - a risk for primes, the sector and the economy as a whole. There is also no systemic collation of sector and prime needs. A sector approach should have what we call a 'prime place pledge', a remit for national Industrial Strategy institutions to assess key sector and prime needs and co-ordinate with local institutions including Local Enterprise Partnerships (LEPs), CAs and counties.

6. Incentivise LEP specialisation and co-ordination

Most LEPs' Strategic Economic Plans highlight an important F&D presence but there are few policy actions to address needs. There is also little effective link between LEPs and sector bodies, co-ordination across LEPs, or specific drivers to scale sector innovation. To address this means:

- Incentivising specific LEPs to take F&D leadership positions across LEPs.
- Giving LEPs funding and remit to support primes, and supply chain and cluster density.

7. Establish 'productivity target areas' to support areas with lower economic performance

Less prosperous areas can be held back from effectively supporting sectors due to funding and capacity constraints. Areas then face a potential loss of industry and jobs entrenching disparity. In meeting the Government's goal of spreading prosperity to all areas, F&D could be a trial sector for what we call 'productivity target areas' - areas with lower economic and social indices that also have an F&D presence. These can be given Industrial Strategy financial and capability assistance through LEPs, CAs or counties to build capacity for sector support and close the productivity gap.

8. Address the institutional deficit for F&D manufacturing starting with a new F&D catapult

In contrast to other sectors F&D manufacturing has a lack of supportive institutions. Unlike other sectors, F&D has no specific catapult, the Challenge Fund has largely missed F&D and the Manufacturing Technology Centre is less applicable to F&D production. A F&D manufacturing catapult with a health and sustainability focus should be established.

9. Set a gold standard for food and a level playing field regulatory approach on health

UK food safety and standards are an asset and should be harnessed as part of the Industrial Strategy, not weakened through Brexit. The UK should seek to mirror the success of Canada and Ireland as leading food safety regimes. However, industry voluntary arrangements on nutrition have not delivered sufficiently improved outcomes. A sector strategy would develop a path to a new global leadership and a gold standard in healthier, sustainable food - a Brexit guarantee - as well as a new regulatory level playing field. This would support the Innovation Growth Partnership, research investment and provide a USP for exports.

10. Improve infrastructure co-ordination and delivery for the sector

High-performing transport infrastructure is critical for F&D manufacturing for its supply chains, import and export of perishable materials, productivity, and for attracting investment and shift workforces. Primes and clusters are experiencing poor local infrastructure which affects productivity and shapes investment decisions for UK sites. There is no effective method of looking at challenges that primes have in common or how to meet them. Primes should articulate those shared challenges through a strengthened sector body and the National Infrastructure Commission (NIC) should be given a remit to assess the infrastructure and freight needs for dispersed sectors, such as F&D, and work with LEPs, CAs, Metro Mayors and counties to create a holistic picture.

11. Support new transport infrastructure bodies and financing models

The NIC, Network Rail, Highways England, DfT, LEPs and councils have their own assessments for developing and prioritising transport schemes and are assessed against the HMT Green Book investment case and DfT guidance. Schemes are not adequately assessed against regional transport challenges, the transformational nature of schemes, nor supporting key sectors. A new local Strategic Transport Body (STB) could

prioritise and finance projects including through borrowing powers or Tax Increment Financing. Government should:

- Reflect sector and locality impacts in transport assessments - F&D contributes to less prosperous areas and poor infrastructure risks the loss of industry, the cost of which should be considered against new capital expenditure.
- Consult on and pilot how STBs can support sector productivity and ask sector bodies and LEPs to bring forward proposals.
- Provide additional financial and capacity support for productivity target areas.

12. Improve F&D manufacturing skill pipelines

F&D manufacturing has jobs at all levels, including highly skilled, and underpins employment in services that support manufacturing. It needs a talent pipeline to raise skill levels, meet projected shortages including in numbers of technicians, and respond to Brexit implications. To support this pipeline, Government needs to:

- Reflect jobs diversity and shortages in the Comprehensive Skills Audit outlined in the Industrial Strategy Green Paper and see the sector's needs from the perspective of primes, sites and the focus of local learning institutions responding to F&D.
- Establish apprenticeship frameworks for F&D - they have not been to date.
- Encourage collaboration across institutions and firms through a sector deal such as in productivity target areas and places with F&D specialisation.
- Establish a joint Government and sector F&D careers campaign overcoming perceptions that F&D is not skilled - the food leadership ambition provides a foundation to help create industry appeal and prestige for apprenticeships.

13. Introduce 'Employee Voice' deals to improve worker engagement and productivity

The UK has some of the lowest levels of productivity and employee engagement in the OECD. A strong employee voice drives higher productivity, improves skills and spreads innovation within businesses. The Industrial Strategy, through sector deals, could expand employee engagement through what we call 'Employee Voice Deals' - partnerships with sectors with commitments to strengthen the voice of workers. As the sector has high levels of EU employees, large workforces and sector fragmentation, these deals could make the sector more attractive, enhance staff recruitment and improve the skills pathway.

14. Establish place strategies to boost exports

F&D has been a positive light for UK trade exports. A high-quality F&D reputation benefits UK exports appeal overseas, the label 'Made in Britain' inspires customers in emerging markets to spend more on food goods, and the UK has 73 protected regional and traditional foods and drinks. Alongside a global food leadership ambition, a sector approach should:

- Establish a local dimension to exports via a LEPs export strategy.
- Set a goal with industry to increase on the one-in-five F&D exporting firms.

Co-ordination

15. Establish a F&D manufacturing unit across Government departments to improve co-ordination

There are long-standing co-ordination and recognition difficulties for F&D manufacturing with challenges and opportunities straddling departments. To harness the entire food chain means a F&D manufacturing focus too, with co-ordination across departments and Industrial Strategy pillars in a unit covering: BEIS, DEFRA, DIT, DoH, DCLG, DfE, HMT, DfT and DExEU.

16. Establish a new F&D body to support a sector deal and approach

F&D is more fragmented than other manufacturing sectors, covering a diverse range of companies and supply chains. There are more than 40 industry bodies covering various parts of F&D manufacturing. F&D manufacturing needs a specific organising focus but also with connections to the food pipeline. A sector deal must drive better co-ordination including creating a more formal F&D Manufacturing Council with the Food & Drink Federation (FDF) as a foundation.

17. Commit to align Brexit and Industrial Strategy

F&D manufacturing highlights why the Industrial Strategy must be co-ordinated with Brexit to build certainty. The whole food chain is affected by Brexit and also impacts on F&D manufacturing. F&D supply chains are reliant on the EU - domestic capacity could be developed but it would need active Industrial Strategy support and industry partnership. Parliament should commit to:

- Scrutinise Brexit and Industry Strategy co-ordination for key sectors with a committee joining together the DExEU, BEIS, DEFRA and other economic Select Committees

18. Establish a 'National Industrial Strategy Advisory Commission' to build political consensus

In past decades, the UK has suffered from piecemeal and short-term policy decisions and has lacked enduring institutions that support industrial approaches and build long-term agreement and certainty. This has affected sectors such as F&D manufacturing. Political agreement must be built to provide longevity to the Industrial Strategy. A body should be established to support this - what we call the 'National Industrial Strategy Advisory Commission', with representatives from political parties, economic select committees, national governments, Metro Mayors, counties, academia and industry. The strategy should be appraised via an Office for Budget Responsibility model.

19. Create a 'Leadership Group' to support F&D 'Purposeful Companies'

Purposeful companies should be viewed as essential for a more inclusive and productive economy. The Industrial Strategy can help redefine success and cultivate purposeful behaviours through governance, taxation, procurement and regulatory frameworks. There are leaders in the F&D industry but there could be more and at a sector level. What we call a 'F&D Leadership Group' could be created to champion purposeful F&D companies and help improve recruitment and industry status with leadership on areas including health, voice, training and place.

Table 1. Actions and policy recommendation summary with lead responsibility broken down by Government, sector and sub-national institution or other non-government body.

| Action or Policy Recommendation | Government | Industry | Sub-national / non govt body |
|---|------------|----------|------------------------------|
| Commitment to be a global leader in food sustainability and health | X | X | X |
| F&D Innovation Growth Partnership | X | X | |
| Health and F&D industrial policy integration | X | X | |
| Goal to increase R&D | X | X | X |
| Specific priority for F&D manufacturing within the Industrial Strategy | X | | |
| F&D manufacturing co-ordination unit across government | X | | |
| F&D trailblazer for 'dispersed sectors' | X | | X |
| Prime place pledge - institutions sector remit | X | | X |
| Continued economic devolution and co-ordination for devolved institutions | X | | |
| LEPs F&D cluster support and density | X | X | X |
| LEP F&D specialisation | X | | X |
| New productivity target areas | X | | X |
| Institutional deficit for F&D | X | | X |
| New F&D manufacturing catapult | X | | |
| Set gold standards for F&D and level playing field regulatory approach | X | X | |
| Improved infrastructure for the sector | X | | X |
| New infrastructure bodies and financing models | X | X | X |
| Infrastructure support for productivity target areas | X | | X |
| Transport infrastructure assessment reflects impact of loss of sector | X | | X |
| Skills audit reflects F&D manufacturing | X | | |
| Incentive skills collaboration across LEP areas | X | | X |
| F&D apprenticeship frameworks | X | X | X |
| F&D careers campaign | X | X | |
| Place dimension to exports | X | X | X |
| Employee voice deals | X | X | |
| Increase number of F&D exporting firms | X | X | |
| Place dimension to exports | X | X | X |
| Aligning Brexit and Industrial Strategy | X | | |
| Joint Select Committees for Brexit and Industrial Strategy co-ordination | | | X |
| Sector co-ordination | X | X | |
| Purposeful companies | | X | |
| Building political consensus | X | | |

Snapshot of F&D



F&D manufacturing has a significant economic and jobs footprint across the UK



F&D contributes **17% of all UK manufacturing**, more than transport, chemicals and pharmaceuticals



392,000 workers are employed in F&D manufacturing with **30%** non UK EU nationals



F&D businesses fund **three quarters** of R&D, more than industry averages, to create **8,000** new products each year



20% of all F&D employees are educated to degree level against **7%** for manufacturing as a whole



F&D businesses must recruit **140,000 new workers by 2024** to meet predicted retirees and growth rates



F&D manufacturing exports were **£20.1bn in 2016**, 6.7% of all exports, while food imports were **£42.5bn**



F&D manufacturing GVA grew by over **26% from 2000 to 2015**, nearly double the rate of all manufacturing



The UK is **£52%** self sufficient in food production and the EU amounts for **one third** of food imports



F&D manufacturing includes 60 large companies, many foreign owned, as well as a large number of SMEs

Source: The above figures are referenced within the body of this report.



3. Why F&D Manufacturing is Crucial for the UK Economy & the Industrial Strategy

“The global food production industry is worth \$8 trillion... demand is estimated at growing 38 per cent by 2030 and 60 per cent by 2050. Global consumption is increasing, markets are opening up and tastes are developing, particularly as emerging economies grow and middle classes expand... These are markets the UK must be at the forefront of serving.”

3.1 What is F&D manufacturing?

While UK F&D manufacturing has characteristics in common with the wider industrial and manufacturing landscape, this overview will outline what makes this huge section of the UK industrial base unique in terms of the challenges it faces and the implications if these are not resolved, and the opportunities it presents for economic growth.

F&D manufacturing (and processing) refers to those firms and activities involved adding in value through turning raw agriculture and fishing outputs into food and drink products.

UK consumers spent a total of £203 billion on food and drink in 2016 - 43 per cent on catering including restaurants and cafés and 57 per cent on household food expenditure. On average, food equates to around 11 per cent of all household expenditure, although this varies considerably depending on income - for the 10 million people on low incomes food will be 16 per cent or more of household expenditure, emphasising the importance of food security and producing affordable and quality food.⁹

F&D manufacturing contributes uniquely to human health and well-being, as well as having strong cultural associations and social impacts. In turn, consumer and societal trends translate into a strong driver for F&D manufacturing innovation and for creating high value products: it is estimated each year the UK sees around 8,000 new products although not all endure.¹⁰

The global food production industry is worth \$8 trillion and projected to grow in line with rapid population growth.¹¹ By 2050, the world's population is expected to pass nine billion. Based on predicted population increases and rises in incomes, which affect food purchases, the demand is estimated at growing 38 per cent by 2030 and 60 per cent by 2050.¹² Global consumption is increasing, markets are opening up and tastes are developing, particularly as emerging economies grow and middle classes expand. The global middle class is forecast to expand from 29 per cent to 61 per cent of the world's population by 2030.¹³ These are markets the UK must be at the forefront of serving.

Table 2. Gross Value Added by main food sectors (2015)

| Food Economy Sector | Gross Value Added |
|--------------------------|-------------------|
| Manufacturing | £28.2 billion |
| Wholesaling | £10.5 billion |
| Retailing | £29.5 billion |
| Non-residential catering | £32.6 billion |
| Total | £100.8 billion |

Source: Defra, 2017

3.2 The importance of F&D Manufacturing

F&D manufacturing has remained dominant within the manufacturing sector. F&D manufacturing measured by Gross Value Added (GVA) contributed 17 per cent of all UK manufacturing, making it bigger than transport at 14 per cent, and chemicals and pharmaceuticals at 14 per cent.¹⁴

F&D manufacturing is also linked to three other food sectors, F&D wholesaling, F&D retailing, and F&D catering and food services. Between them these four sectors contribute £101 billion to the UK economy. The GVA of each individual sub-sector is illustrated in table 2 above.

The category 'beverages', including soft drinks and mineral waters, is the largest single F&D manufacturing sector by GVA contributing 23 per cent (£6.6 billion) to F&D manufacturing GVA. By way of comparison the whole of UK agriculture has a GVA of around £8.2 billion.¹⁵

F&D manufacturing is the connector for the whole food value chain from farming and agricultural production to food retail and services, including restaurants and catering. F&D manufacturers purchase around two-thirds of the UK's agricultural produce.¹⁶

3.21 Business make-up and ownership

The F&D manufacturing sector has very large manufacturers - primes - alongside many smaller-scale manufacturers, and a

relatively high number of medium-sized food manufacturers, compared to other European Union countries.¹⁷ Micro, small and medium sized enterprises (SMEs) account for 96 per cent of all F&D manufacturing businesses, equating to 27 per cent of employment and around a fifth of manufacturing turnover. A third of SMEs are bakery producers, while meat, dairy and drinks producers are also significant.¹⁸ The UK has a plethora of smaller F&D manufacturing businesses particularly catering for niche markets.

There is longevity to companies as well as a thriving start-up environment. Some of the top 20 F&D manufacturers in the UK today include Unilever and Coca-Cola which were founded in the late 1800s, Nestlé Group in 1905 and United Biscuits in 1948, and have provided continuous jobs and growth. Newer players making an impact include BrewDog, set up in 2007 and akin to tech start-ups such as Twitter that have grown exponentially. Indeed BrewDog is part of a huge increase in breweries, a sector which has grown 55 per cent in four years.¹⁹ The annual round-up of the UK's 1,000 fastest-growing and most dynamic SMEs published by the London Stock Exchange described F&D as one of the most innovative sectors in the UK economy. Fifty-eight food and drink companies - all of which have to show they outperform peers - made the 2017 list including producers such as Belvoir Fruit Farms, Pipers Crisps, Fever-Tree, Charlie Bighams, Artisan Finnebrogue, Crawshaws, Orchard Valley Food, Shoryu Ramen, The Foodfellas, Tomlinson Dairies and Tortilla.²⁰

F&D manufacturing is a mix of private ownership and publicly traded corporations with a high-level of foreign capital or ownership. UK F&D manufacturing has proved attractive for foreign direct investment (FDI) and needs to remain so, which the Industrial Strategy should support. Sector support also needs to recognise F&D diversity from primes to high growth SMEs.

3.22 Employment

The overall food sector is a huge employer in the UK. It employs 3.4 million people, more than 11 per cent of the UK workforce, or 3.9 million people, and 13.2 per cent if agriculture is included. Of this, 392,000 workers are employed in F&D manufacturing. These jobs are located across the country as data later on in this section outlines.

Around 117,000 workers - 30 per cent of this workforce - are from EU countries.²¹ Analysis based on Office of National Statistics (ONS) data identified 18 specialist industries where EU workers make up more than 20 per cent of the labour force and, for F&D manufacturing, includes 47.6 per cent of employees in the fruit and vegetable preserving and processing sector, 44.4 per cent in meat processing, and 37.6 per cent in fish processing.²² The level of EU workers means Brexit is particularly significant for the future workforce, including how workers would be replaced, and for meeting the UK skills gaps, and is looked at further in this report.

3.23 F&D imports and exports

The UK food system and F&D manufacturers, particularly exporters, are highly dependent on well-functioning international markets and supply chains. The UK produces around of 52 per cent of its food domestically and relies on around 20 countries for 90 per cent of all imported food with the EU accounting for 29 per cent.²³ As well as being the largest source of imports, the EU is also the UK's largest export market and bought, by value, just over 71 per cent of UK food and non-alcoholic drink exports last year.²⁴

The sector has been a positive light for overall UK trade exports, having risen 10.5 per cent in 2016 to 6.7 per cent of all UK export value.²⁵ Out of the £20 billion in UK F&D exports more than a fifth is accounted for by sales of whisky while other branded product exports reached £5.2 billion.²⁶ However, the UK has built up a large food trade imbalance with the £42.5 billion of imports more than double the £20.1 billion of exports.²⁷

Given the importance of EU exports, the continuation of frictionless trade is critical for the UK food supply, particularly for 'just in time' produce alongside good transport infrastructure. Extended supply chains highlight potential vulnerability in the food supply, not least in the supply of raw materials for F&D manufacturers which can comprise up to 65 per cent of the total costs in F&D product manufacturing.²⁸ This is compounded because since the global financial crash in 2008, world food prices have become volatile with food costs yet to return to pre-crisis levels.

The depreciation of sterling after the Brexit vote contributed to a particularly good year for exporters due to UK products becoming more competitive.²⁹ This needs to be built on. Only one in five F&D businesses engage in export and there is an opportunity to increase UK value of F&D goods, particularly harnessing the strength of their high-quality reputation overseas. An international perceptions survey, for example, found the label 'Made in Britain' motivated customers in emerging markets to spend more on food goods.³⁰ The UK also now has 73 protected

regional and traditional British foods and drinks products.³¹

Cultural and geographical traits have significance that can shape new trends and can develop quickly. Analysis by industry trade body, the FDF, showed that exports for food and non-alcoholic drinks destined for China rose more than 50 per cent in 2016 driven by the Chinese interest in 'afternoon tea' inspired by the popularity in China of TV programmes such as *Downton Abbey* and *The Great British Bake Off*!³²

Improving infrastructure, harnessing place and setting a goal to be a global leader in sustainability and nutrition are all ways to help strengthen F&D exporting.

3.3 Geographic spread of UK F&D manufacturing

The significance of the F&D manufacturing sector to both regional economies and the socio-economic fabric that underpins them has often been under-recognised, whereas the role of primary food production - agriculture - or more high-profile manufacturing sectors such as electronics, pharmaceuticals and automotive has been often highlighted by Government and given strategic focus.

Research in a recent FDF publication has highlighted the geographic and economic spread of F&D. The report underlines F&D's defining characteristic of a national presence and illustrates the cost of ignoring its businesses count and job footprint.³³ The FDF research shows, as in figure 2 (*overleaf*), that while other manufacturing sectors such as automotive have a strong regional concentration, the F&D manufacturing sector spans the whole of the UK.

The sector plays an important role at a local and sub-regional level and is a critical part of local communities. The jobs and business provide an important anchor, and cement economic activity, driving local economies. Were these strengths to be undermined or lost, there would be economic impacts in these areas. For this reason, the Industrial

Strategy must also be able to support sectors that have a dispersed nature such as F&D. How this approach can be supported is detailed in section 4 on institutions.

3.31 An analysis of the north of England

We have taken the FDF research a stage further to highlight the importance of F&D manufacturing not just across the UK but within regions too. This analysis is focused on the north of England - the North West and Yorkshire & Humber. These areas have economic challenges and the Government has said it wants all areas to benefit from growth. F&D provides a strong foundation and future on which to build.

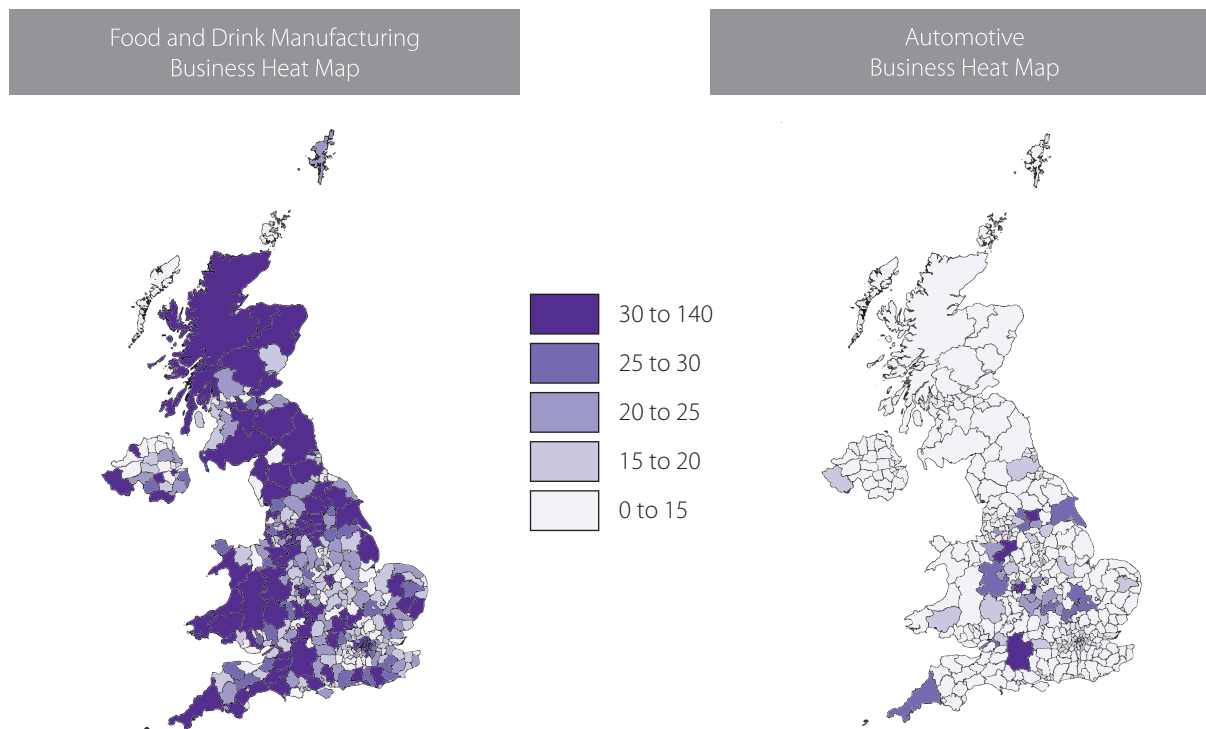
Our subnational analysis of the F&D manufacturing sector reveals a sizable, diverse and growing sector that stretches across these areas, and demonstrates the dispersed and important economic footprint. F&D manufacturing is not only a relevant economic footprint across the north but with specific and more localised concentrations within regions and localities. The research indicates that:

- F&D manufacturing has consistently grown faster in GVA terms than the manufacturing sector as a whole
- Although F&D manufacturing exists across the north, some regions are significantly stronger
- Subsector clusters can be identified in the North West and Yorkshire & Humber, with the latter having the most diverse cluster of different F&D manufacturer sectors
- Regions typically have a handful of very large 'prime' F&D manufacturers with a turnover above £500 million although the sector as a whole is dominated by SMEs in each region.

3.32 Regional contributions

A district level analysis of F&D manufacturing showing business count, employment and turnover provides a picture of how the sector contributes to

Figure 2. Geographical Spread of Businesses



Source: Grant Thornton report for FDF - *The Food & Drink Industry: Economic contribution and growth opportunities*

communities across the UK. As the business count heat map for Yorkshire & Humber and the North West shows in figure 3, at the sub-regional level there are different pockets of F&D manufacturing concentration, and business counts, employment levels and turnover tend to broadly mirror each other.³⁴

The greatest numbers of firms are in or around the large urban centres, in this case around Leeds and Bradford as well as pockets in Hull and Grimsby. This is also reflected, albeit to a lesser extent, in employment and turnover. Differences between geographically close districts can be quite wide.

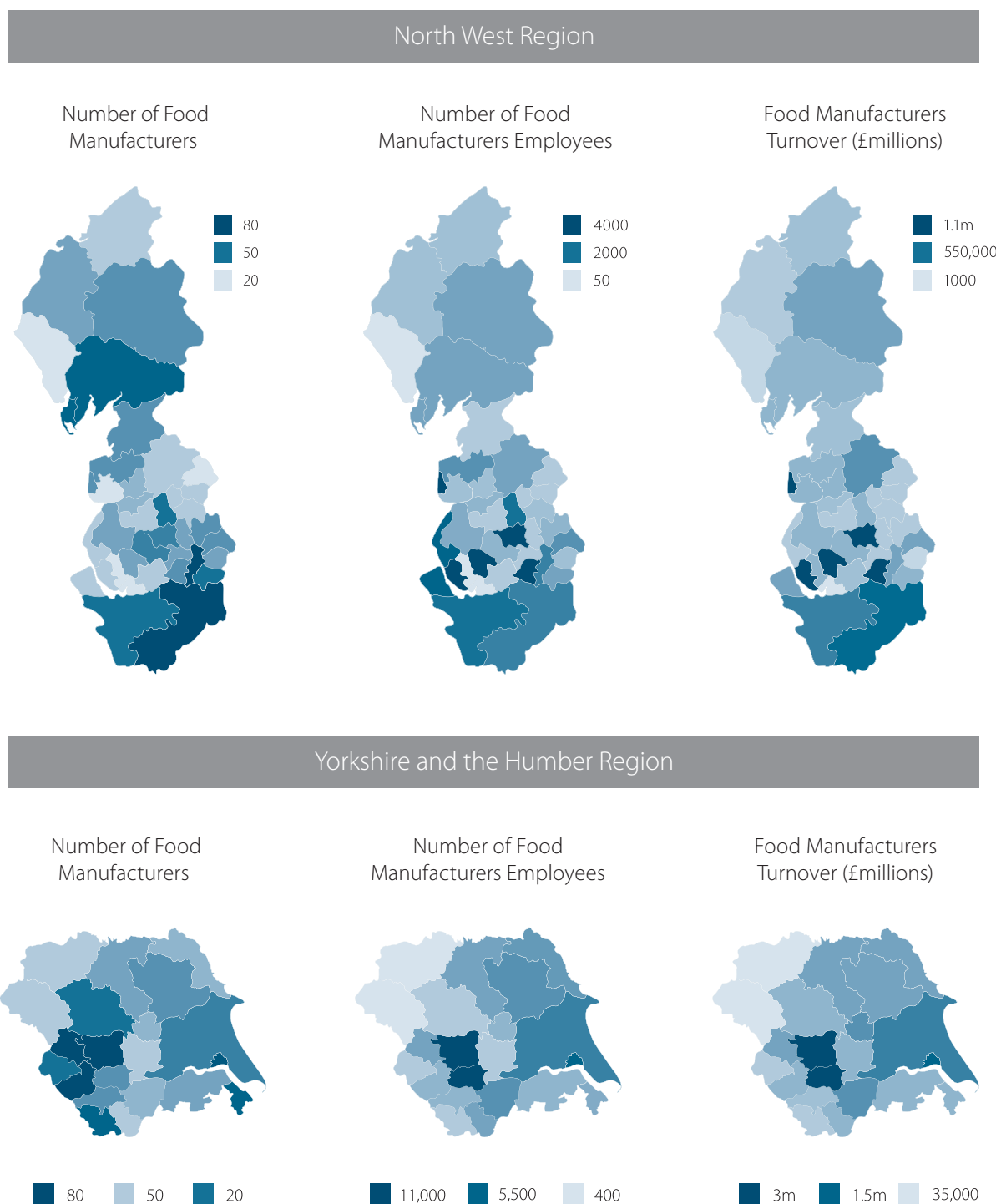
3.33 Regional subsector hotspots

Analysing data held by the Inter-Departmental Business Register gives an indication of subsector hotspots within

the F&D manufacturing sector. Table 3 overleaf (on page 16) lists subsectors for each of the UK regions that employ more than 3,000 people, have a combined turnover of greater than £500 million or have more than 100 businesses. The Government data is obtained using registered business addresses so if a business is not registered in a region it will not show up in that region's figures but it would be part of the national picture. There are some firms with a significant presence but are not in the region's figures. With this caveat the data nevertheless does outline the wide economic footprint of the sector, major players and hotspots, which should be reflected in the Industrial Strategy and approaches including the role of LEPs as outlined in section 4. A sector strategy should seek to obtain an ongoing accurate picture.

A number of subsectors are present across regions, for example meat and meat products in the Midlands, Yorkshire, Wales and Northern Ireland. Fruit and vegetable processing is similarly significant in the North West and Yorkshire. Brewers and bakers are key subsectors across the UK. Their reach shows craft skills remain important within the sector although both subsectors have managed to retain strong regional manufacturers. The rapid growth in artisanal brewers over recent years - supported considerably through the Small Breweries Relief introduced in 2002 - highlights the fact that the industry is constantly evolving and has the potential for further growth. The analysis also illustrates differences between the regions. There are no subsectors in the North East while eight subsectors are in Yorkshire & Humber.

Figure 3. F&D Key Regional Statistics



Source: ONS IDBRDS

Table 3. Breakdown of F&D Hotspot Relevant Category by Region

| Region | Businesses (>100) | Employment (>3000) | Turnover (>500M) |
|--------------------------|---|---|--|
| North West | Bread, Beer | Bread, Fruit/Vegetable Processing, Other Food Products*, Biscuits & Cakes | Fruit/Vegetable Processing, Milling, Bread, Other Food Products*, Animal Feed, Dairy |
| North East | None | None | None |
| Yorkshire and The Humber | Beer, Bread, Meat, Meat Products, Fruit/Vegetable Processing, Bread, Prepared Meals | Prepared Meals, Bread, Meat, Meat Products, Fruit/Vegetable Processing | Meat, Meat Products, Seafood, Fruit/Vegetable Processing, Bread, Prepared Meals, Pet Foods |
| East Midlands | Bread, Beer | Bread, Chocolate & Confectionary, Meat Products | Other Food Products*, Milling, Poultry |
| West Midlands | Beer, Bread | Meat, Poultry, Meat Products, Bread, Chocolate & Confectionary | Meat, Poultry, Meat Products |
| East | Beer, Bread | Poultry, Bread, Animal Feed | Milling, Bread, Animal Feed, Malt |
| London | Bread, Biscuits & Cakes | Other Food Products*, Bread | None |
| South East | Other Food Products*, Bread | Bread, Beer | Dairy, Milling, Other Food Products* |
| South West | Bread, Beer | Bread, Dairy | Dairy |

Source: ONS Inter-Departmental Business Register

*The Other Food Products category includes perishable prepared foods, typically sandwiches

3.34 GVA growth

A useful measure of the impact of F&D across the UK is GVA using ONS data. As figure 4 illustrates, F&D manufacturing GVA grew by more than 26 per cent from 2000 to 2015, stronger proportionally than the manufacturing sector as a whole, which grew around 14.5 per cent over the same period.

(See Figure 4, opposite)

The higher GVA contributions from F&D manufacturing are also reflected across the regions as figure 5 shows, looking at the F&D manufacturing in the North West and Yorkshire & Humber. This outlines the important economic contribution in these regions and the foundations on which to build economic growth.

(See Figure 5, opposite)

3.35 Regional distribution of businesses

There are around 60 very large food manufacturing businesses in the UK with an annual turnover of over £500 million. At the regional level, this translates to a handful of very large businesses alongside many small and medium sized businesses. This is shown in table 4. There are significant differences between regions, with Yorkshire & Humber having seven very large manufacturers compared with only one in the North West. Given that this data is for primary trading addresses only however, it may exclude large factories or other subsidiary activities at the regional level. Overall, however, it suggests that economic contribution of regional food manufacturing is often underpinned by the presence of a small number of very large 'prime' businesses, such as Nestlé's large manufacturing presence in Yorkshire, which the Industrial Strategy and a sector approach needs to reflect.

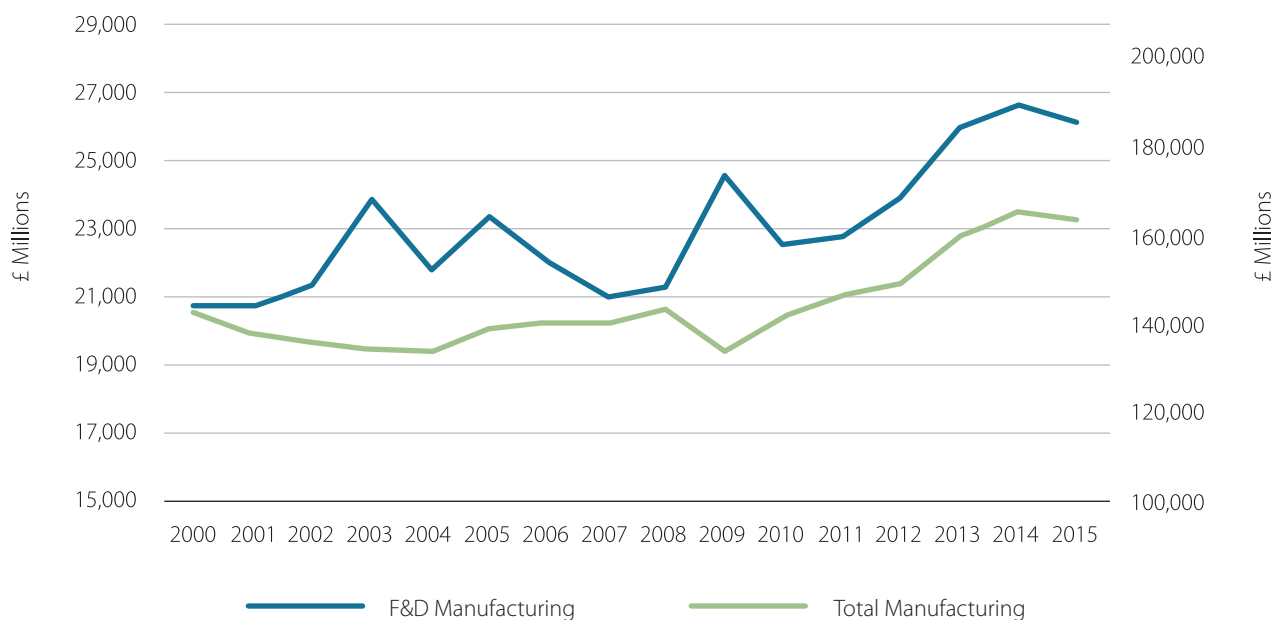
(See Table 4, overleaf)

3.4 The importance of the 'living' properties of food

F&D manufacturing is distinct from other industrial sectors such as automotive, chemicals, electronics and textiles due to its 'living' properties. These connect the sector to national and global environmental and sustainability challenges from climate change to food waste, to roles in social and cultural values, including ethical considerations such as animal welfare or religious beliefs and customs, and bring specific manufacturing challenges including safety which shape industrial approaches.³⁵

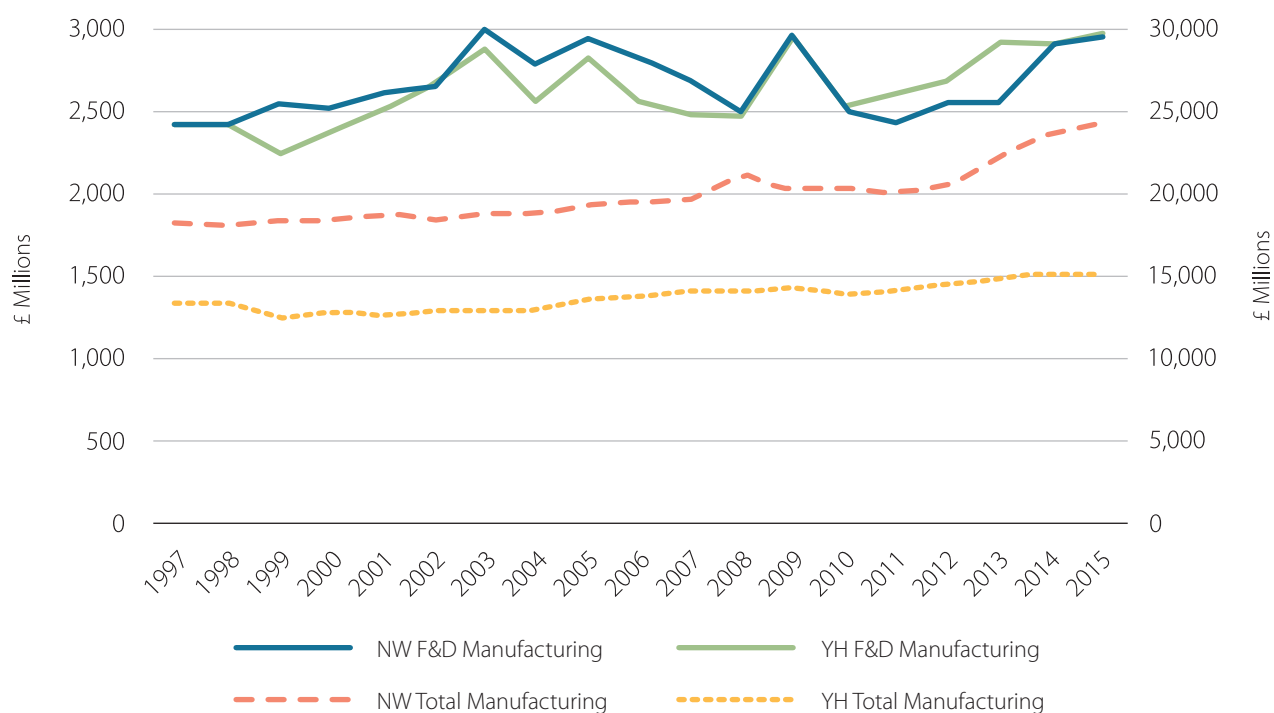
F&D's physical and biological properties bring a unique relationship to the natural world from geographies to seasonality.³⁶ Expertise is needed in handling biological

Figure 4. F&D Manufacturing Versus Total Manufacturing GVA (2000-2015)



Source: Gross Value Added (GVA) calculations from ONS data (2017)

Figure 5. F&D Manufacturing GVA in the North West and Yorkshire & Humber Versus Total Manufacturing GVA (2000-2015)



Source: Gross Value Added (GVA) calculations from ONS data (2017)

Table 4. Food Sector Demographics: Primes and SMEs

| Region | Number of Businesses | Annual Turnover | | | | |
|--------------------|----------------------|-----------------|---------------|----------------|-----------------|---------------|
| | | Less than 10 | From 10 to 50 | From 50 to 100 | From 100 to 500 | More than 500 |
| North West | 1516 | 1382 | 84 | 28 | 20 | 2 |
| North East | 458 | 427 | 23 | 4 | 3 | 1 |
| Yorkshire & Humber | 1272 | 1131 | 89 | 17 | 28 | 7 |
| UK | 17,168 | 15,951 | 739 | 207 | 208 | 63 |

Source: BvD Fame

materials - food ingredients are often highly perishable and they impact on the nature of production. If not managed correctly, they can be dangerous. Food safety and hygiene are therefore paramount and if compromised, it is not only economically costly but potentially catastrophic for food markets. BSE ('mad cow' disease) cost the UK more than £3.7 billion and the complete collapse of a meat export market worth £720 million at the time.³⁷

Food safety and standards are among the many areas to be assessed in post-Brexit trade. A foretaste of how this might create issues was the controversy over 'chlorinated chicken' which is currently banned under European Union standards. Standards underpin the industry and there is an opportunity to be at the forefront of the best standards - the UK being known as a leader in quality, healthy and sustainable products as outlined in section 5.

3.5 The importance of 'place'

A more recent business trend has been to 'reconnect' food with consumers and local communities - an important part of the future of food is around 'place'.³⁸ Large-scale manufacturing, while being global, is increasingly seeking to act local through short food supply chains or alternative food networks. For many F&D businesses, the importance of 'place' as part of manufacturing operations remains a

unique selling proposition, which is not the same for other sectors.

Place is linked to the living feature of food: F&D manufacturing and supporting services have often clustered around geographies, close to where crops grow best, such as the Greater Lincolnshire area which produces around 25 per cent of the UK's vegetable production, 19 per cent of its sugar beet, 17 per cent of its chicken, and 21 per cent of its turkey production.³⁹

Place is important for goods, services and people, raw material supplies, and the ability to serve customers and markets. The idea of 'short food supply chains' and local food economies has gained traction.⁴⁰

Innovating around the unique living properties of place such as provenance offers opportunities for export markets since it is often an important unique selling point. Two examples help illustrate this - and place is important for businesses even when they are foreign-owned. Weetabix, one of the UK's leading breakfast cereal brands and a major exporter, committed from 2010 to source the wheat it purchases each year from farmers located within 50 miles of its factory in Burton Latimer, Northamptonshire.⁴¹ It is doing this to ensure quality, transparency and sustainability for its products. Exporter and crisp producer Tyrrells, set up in 2002, is based in Leominster, Herefordshire. Part of its premium brand is using potatoes from local farmers.⁴²

Clusters of activity and a significant F&D industry concentration require skills pipelines, links to skills institutions such as higher and further education and availability of transport. In the Lincolnshire example, despite the industry concentration, the region suffers from poor road connections, skills deficits and a lack of innovation support, outlined in the following sections.⁴³

3.6 Challenges, opportunities and a future built on disruption

As would be expected the F&D industry faces factors that shape the overall business environment such as the ease of doing business and costs such as business rates. This report does not focus on these areas - industry bodies have outlined sector positions on these. This report looks at more fundamental challenges, how they can be overcome, and how they can be turned into opportunities. These factors relate to the nature of F&D including its unique living qualities and importance of place - both of which shape industrial approaches.

The industry has been guided by incremental change such as improving logistics and managing industry 'knowns', customer and supply chain relationships, and cutting and managing costs, without a race to the bottom which destroys value, innovation, product quality and customer experience. Competitive downward cost pressures on F&D manufacturing are continuous and

many businesses face slim profit margins dependent on high volume outputs.^{44 45}

The future looks to be shaped much more by 'disruptive innovation'; responding to industry 4.0 - AI, automation, 'big data', robotics and flexible and lean manufacturing - to continue developing agile and 'connected' manufacturing processes. Innovation takes many forms including product development, processing, operations, consumer markets and new business models.⁴⁶ There are new ways to reconnect food with consumers and localities, and drive nutrition and sustainability, all of which are opening up new ways of doing business, new value-added products and building new markets to meet consumers' changing tastes.⁴⁷

As well as these factors, the report focuses on four key challenges:

- Lack of specific focus within the Industrial Strategy for F&D manufacturing alongside a deficiency in co-ordination and effective institutions

- Absence of a co-ordinated mission-orientated Government research programme or pathway to scale innovation in the F&D industry
- Poor transport infrastructure affecting productivity
- Skills deficits, upskilling and recruiting future workers to enhance productivity

Across these areas are the significant impacts of Brexit. F&D manufacturing faces a period of uncertainty and business risks. Brexit shapes trade and labour markets with F&D particularly vulnerable to trade risks for imports and exports and its high reliance on non-UK workers.

Each of these challenges relates to each other and each is outlined below. The report seeks not to outline a series of demands but instead how barriers and opportunities can be acted upon to provide a flexible system and set of institutions that can respond to the changes and challenges ahead, and help improve sector productivity and competitiveness.⁴⁸

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4. Institutions, Co-ordination and Places

“Despite the size, importance and potential for the sector, F&D manufacturing is largely missing from the Government’s Industrial Strategy. . . The Industrial Strategy should build on F&D strengths as the largest part of manufacturing, its contribution to food security, employment, productivity, exports, growth and economic rebalancing.”

4.1 The importance of institutions

The UK has a checkered relationship with Industrial Strategy, suffering from piecemeal and short-term policies. It has lacked institutions that support industrial approaches and build long-term certainty and political agreement. The deficit is at a national and sub-national level.

Industrial economist Philip McCann has shown the UK is unique in the world for its size in having few meso-level (sub-national) institutions that support regional growth, economic development and industrial approaches.⁴⁹ Alongside that, local areas have lacked economic research departments which collect and can use economic data to drive local industrial strategies and business growth. The UK is one of the most centralised countries, with English local government having the most circumscribed powers of any equivalent tier internationally.⁵⁰

Where institutions - local and national - have been created they have not been enduring. The abolition of the Regional Development Agencies (RDAs) was an example of short-term political choices. While the RDAs are acknowledged to have

had flaws, an alternative approach would have been to reform their footprint, roles and make-up, instead of abolition.

The institutional deficit has undermined industry and sectors such as F&D, meaning the levers and powers needed for productivity challenges to be understood, prioritised and acted upon are deficient. These include addressing poor infrastructure and skills deficits, enhancing supply chains, developing start-ups and delivering sector-wide approaches. Whitehall, where powers are concentrated, is too remote and disconnected from the places in question and has to deal with too many decisions undermining its effectiveness. Government is often too large, not nimble and lacks effective coordination across departments.

4.2 Institutional change in the UK

Positive changes have taken place under recent Governments (including the Brown and Coalition Governments) that have begun a different approach and that seek to address some of these failings, including the institutional deficit, and to support industrial approaches. This has seen the development

of sector institutions such as the Automotive Council, strategies for certain sectors, and institutions such as the British Business Bank, and Innovate UK, (formerly the Technology Strategy Board and now being merged into a new body UK Research and Innovation).

The May Government's Industrial Strategy as laid out in the Green Paper published earlier this year builds on these approaches, and seeks a strategy that is more comprehensive, and, critically, provides a whole government approach, championed by the Prime Minister, with the cementing of important roles within the strategy for places, sectors and institutions.

Changes have also been taking place that address the lack of meso-level institutions. The election of six new Metro Mayors in May 2017 brings a degree of leadership, control and co-ordination including for infrastructure, skills, digital, business support and economic development. These mayors join the London Mayor, Combined Authorities, the Northern Powerhouse and Transport for the North as part of a move towards more effective

and powerful meso-level institutions. Local Enterprise Partnerships (LEPs), which replaced the RDAs, are now reaching their sixth year, and are also part of the sub-national landscape. Most of these institutions are in their infancy. Aside from the Metro Mayors and devolution deals, many areas are still relatively powerless when it comes to shaping their economic landscape, and this is especially true in county areas, outside the main city-regions. The LEPs have been criticised over their lack of budgets and powers. However, councils that have adopted unitary (single-tier) status have seen more success at taking on additional powers.

Equipping all cities and areas with the powers and budgets to drive their own economic success must be advanced more rapidly. Local representatives are increasingly forming alliances to advance their cause, and the recent call by northern leaders and representatives for fair transport funding reflects this.⁵¹

An exception in the UK political landscape that needs to be highlighted is Scotland.

It is perhaps the clearest example of why devolved approaches are needed and contrasts with England. Scotland has a wide range of economic powers with new economic institutions, and has established an Industrial Strategy for F&D enabling a direct focus and co-ordination. Given the size of Scotland, the connection to Ministers and officials is much greater.

There are other examples as well as Scotland to draw on. In countries such as Finland, the Netherlands, Canada and Australia, there is thinking about how to develop and implement broader 'F&D strategies' which move beyond traditional agricultural policies aimed at increasing farm productivity. They do this by recognising the importance and interdependence of food production, processing, distribution and consumption. The focus is then on the integration of sustainable food production, health, and overall food system resilience and robustness.

Ensuring certainty and consensus is also an important factor. Nations with a strong industrial approach such as the US and

CASE STUDY: Scotland's food sector vision for 2030

A decade ago Scotland's F&D industry had flat growth and a low profile. A new direction was forged with the Scotland F&D Partnership established in 2007. This brought together an industry-led partnership of the main organisations in the farming, fishing, food and drink sectors, the Scottish Government and key agencies to drive growth.

Since 2007 turnover has increased 44 per cent to £14.4 billion and exports have grown 56 per cent to £5.5bn, with Scotch whisky exports the biggest part.⁵² The success was underpinned by the Scottish Government identifying F&D as a growth sector as part of its economic strategy for Scotland in 2011. Success factors have been the industry-wide collaborative approach rather than departmental silos and nurturing Scotland's food reputation, marketing Scotland being a Land of Food and Drink in the UK and internationally.

In March 2017 Scotland F&D Partnership launched a more ambitious vision to double the turnover to £30 billion by 2030. The goal is to make these food industries collectively Scotland's most valuable industry sector by 2030, and build on the sector's strong record of exports over the past 10 years. Scotland's F&D manufacturing growth rate is twice the UK's.⁵³ It is hoped that people will see the food industry as a first choice for work and a career and the industry is recognised for its commitment to developing people.

The 2030 Vision has three core goals:

- *People and skills - making the industry a more attractive career destination and investing in the existing workforce*
- *Improving supply chain collaboration and ensuring greater profitability is shared across the industry*
- *Innovation - developing a culture that develops new products and processes to drive growth*

Germany have achieved this and built long-term success upon anchor institutions. Newer industrialised nations such as Singapore have also mirrored these approaches. Darpa and the Small Business Administration in the US were both set up in the 1950s and have more or less remained in place and command cross-party support. Germany's technical education system, much lauded, has a long history and widespread business, political, and societal backing.

To build consensus, certainty and agreement behind industrial approaches there needs to be a way to strengthen political agreement and connect economic powers across the UK. This could be supported through the establishment of what we call a National Industrial Strategy Advisory Commission with representatives from political parties, chairs of the business, trade and sector select committees, governments from the nations, Metro Mayors, counties, industry and academia. This will also help connect devolved areas and build shared agendas. A regular independent appraisal of the strategy, through an Office for Budget Responsibility model, should report to the Commission to determine progress, in a similar way to the National Infrastructure Commission's assessment of UK infrastructure and Committee on Climate Change.

4.3 F&D institutions and focus

Despite the size, importance and potential for the sector, F&D manufacturing is largely missing from the Government's Industrial Strategy which risks undermining the whole sector. F&D manufacturing has specific challenges that will not be addressed by being considered part of other sectors. F&D manufacturing shares common challenges with wider manufacturing but the sector is not identical - products are developed over months not years like automotive, with implications for production; it is also shaped by the living nature of food production and with corollaries for safety and production. Similarly, F&D manufacturing is linked to agriculture but F&D is not commensurate with farming and agricultural production. Equally, F&D does not sit in isolation but is

part of and shaped by the food chain - costs and value are derived from it.

The Industry Strategy and institutional support should reflect this and in turn build on the sector's strengths as the largest part of manufacturing, as well as F&D's contribution to food security, employment, productivity, exports, growth and economic rebalancing. The sector suffers from an institutional deficit compared to other sectors, such as lacking a specific catapult. Section 5 details this.

The lack of focus has also meant longstanding co-ordination and recognition difficulties for F&D manufacturing across Government with challenges and opportunities straddling departments. Few policies specific to F&D manufacturing have been created in contrast to other sectors, including other parts of the food pipeline such as agri-tech. Harnessing the value of the whole food chain requires a specific F&D manufacturing focus too, and co-ordination across departments and Industrial Strategy pillars in a F&D manufacturing unit with links to BEIS, DEFRA, DIT, DoH, DCLG, DfE, HMT, DfT and DExEU.

Co-ordination and organisation is a challenge for the industry itself. F&D manufacturing is more fragmented than other manufacturing sectors, covering a diverse range of companies and supply chains. The Industrial Strategy emphasises effective co-ordination and leadership. F&D manufacturing needs a specific organising focus but also with connections to the food pipeline. There are more than 10 trade associations representing the UK food industry and more than 40 bodies for different food manufacturing interests - from fine foods, craft bakers, soft drinks, dairy producers and sandwich makers. The FDF is a primary body.

The Government should use its convening power and a sector-wide deal to bring the industry together, building on the anchor of the FDF, to create more effective co-ordination, including setting up a more formal F&D Manufacturing Council. This would help deliver the goal of food leadership and a long-term vision that charts a path for growth. It would also

provide an institution flexible and adaptive enough to support F&D manufacturing.

While the F&D manufacturing sector is not currently recognised within the Industrial Strategy, it is affected by a range of consultations and reviews linked to the strategy which it must respond to. This underlines the need for more effective co-ordination and for the Industrial Strategy to provide a clearer pathway for the sector.

The impact of Brexit is another huge consideration which requires better co-ordination with the Industrial Strategy to create more certainty. All parts of the food chain are affected by Brexit, which in turn has an impact on F&D manufacturing, including through higher costs. Plastic packaging provides an example. The F&D supply chain uses packaging from the EU, an illustration of the global nature of these chains. If there are restrictions or tariffs due to Brexit, it would be challenging to meet the needs of the industry, with the quantity, quality and price of packaging outside of the EU posing a risk of higher costs. A domestic industry could be developed but would need active support through the Industrial Strategy. All this demonstrates the need for industrial approaches due to Brexit and the need for much greater alignment.

This degree of co-ordination for key sectors could be scrutinised in a systematic way through Parliament. A more formal joining of the Exiting Europe, BEIS and economic Select Committees should be established for key sectors so they can provide evidence and for Ministers to be questioned in a co-ordinated way.

4.4 Dispersed sectors

As shown previously, F&D differs from many other sectors highlighted in the Industrial Strategy as its economic footprint is across much of the country. This requires recognition and a different approach to geographically concentrated industries such as automotive, where local specialisms do occur and support can be targeted. To address this F&D could be a 'trailblazer'

Table 5. Sample of recent reviews linked to Industrial Strategy and affecting the F&D sector during the first quarter of this year

| Reviews | Department |
|--|---|
| Business Energy Costs | BEIS |
| Entrepreneurship led by Sir Tim Dafforn | BEIS |
| Industrial Digitisation led by Juergen Maier | BEIS |
| Industrial Strategy | BEIS |
| Life Sciences led by Sir John Bell | BEIS |
| Corporate Governance | BEIS |
| Small Business Research Initiative led by David Connell | BEIS |
| Ultra-low Emission Vehicles led by Richard Parry-Jones | BEIS |
| Modern Employment Practices led by Matthew Taylor | BEIS |
| FTSE 100 Female Leaders led by Sir Philip Hampton/Dame Helen Alexander | BEIS |
| Ethnic Diversity on UK Boards led by Sir John Parker | BEIS |
| Productivity Review led by Sir Charlie Mayfield | BEIS/HMT |
| Role of Local Enterprise Partnerships | DCLG |
| Digital Strategy | DCMS |
| Artificial Intelligence led by Dame Wendy Hall | DCMS and BEIS |
| Food and Farming | DEFRA |
| Post-16 Technical Education led by Lord Sainsbury | DfE and formerly BIS |
| Post-16 Mathematics Education led by Sir Adrian Smith | DfE and HMT |
| Childhood Obesity Plan | DfH |
| R&D Tax Credits | HMRC |
| Patient Capital led by Sir Damon Buffini | HMT |
| Infrastructure Cost and Performance | HMT/Infrastructure & Projects Authority |

within the Industrial Strategy to show support for what we call 'dispersed sectors' - an industry with wide geographical presence and which brings economic benefit to many areas including those that are less prosperous. Dispersed sectors include retail, construction and non-financial professional services. F&D is also a tradeable sector contributing to exports. Recognition of dispersed sectors within the Industrial Strategy means adapting, for example, how sector support is applied. If dispersed sectors are not supported then businesses in certain areas risk being lost which provides further challenges for those areas, and in turn impacts on the sector.

Competitiveness of the plants of primes - industry anchors - underpins the productivity and success of the sector. This is shaped by factors including quality of infrastructure and availability of skills. Given the global and multi-national nature of many of the large F&D companies, their UK plants compete with those overseas within company portfolios, adding to the need to address these challenges, and at the local level. There is, however, not a systemic collation of needs - particularly through the lens of primes. This is compounded through the dispersed economic footprint and fragmented F&D sector co-ordination.

4.5 Devolution and co-ordination

While local institutions (and powers to act) are important for the success of the Industrial Strategy and economic rebalancing, if they do not have resources or capabilities there is a risk of what we call a 'post-code penalty for place-based primes'. This arises from the variable levels of devolved powers available in different areas. Primes in turn have to navigate these different arrangements with the LEPs having different powers, competencies and resources; and some areas having mayors and CAs too. Outside the cities, a mixture of single-tier and two-tier local government creates confused accountability. Variability is a risk not just for primes but the sector and economy overall.

But by highlighting the risk of variability, we are not calling for centralisation - as outlined, the UK has suffered from too much centralised power. Further devolution is needed and with it, a clear programme to enable areas to drive economic growth and develop key sectors - as Scotland has achieved, as outlined. Equally, co-ordination across devolved institutions is needed - a factor that is insufficiently recognised in both devolution and Industrial Strategy agendas. By way of example, 75 per cent of the LEP Strategic Economic Plans highlight an important F&D presence but there are few policy actions to address needs or co-ordination across them.⁵⁴ There is little effective link between LEPs and the main sector body, the FDF.

Effective co-ordination is needed through the industrial approach and through the sector bodies, underpinned with a specific goal within the Industrial Strategy. A sector approach should create what we call a 'productivity prime place pledge,' placing a remit on Industrial Strategy institutions to assess and respond to sector needs and to co-ordinate with local institutions including Local Enterprise Partnerships (LEPs), Combined Authorities (CAs) and counties, connecting place, sectors and institutions in the Industrial Strategy.

A sector deal should connect a strategy across LEPs and to national institutions. LEPs should have a clear remit to respond to the needs of primes and their sites. Specific LEPs also should be encouraged, such as through additional funding, to take leadership positions for all LEPs in specific policy areas to develop specialisms and share that knowledge across LEPs - an approach that has been happening for other sectors.

Exports can also be seen through this prism. Connections between place and exports - linking the Trade Department and trade policy, with sector strengths, localities and LEPs, and place USPs - are not developed. This should be addressed and include stronger links to LEPs, working with local business groups such as Chambers of Commerce, looking at sector-wide strengths, barriers and

opportunities, including the value of local provenance and the positive international perceptions of UK food, and harnessing a new ambition of global food leadership. The need for a local dimension to exports is also linked to the goal of an improved approach on infrastructure, given its importance to exporting. Currently, one in five F&D manufacturers export. A goal needs to be set to increase this as part of the sector approach.

An enhanced role for LEPs in exports and supply chain development and cluster would stimulate innovation. This could be supported through more powers and funding. The goal would be to mirror the success and approach in France, Italy's Lombardy region and the German 'Mittelstand' band of firms with increased innovation seen across small firms and primes.⁵⁵ F&D manufacturing contrasts with other sectors in relation to the lack of specific institutions to drive innovation, which is outlined in more detail in section 5.

The challenge for primes and their sites, and their navigation of the local and national environment, is outlined in figure 6 overleaf.

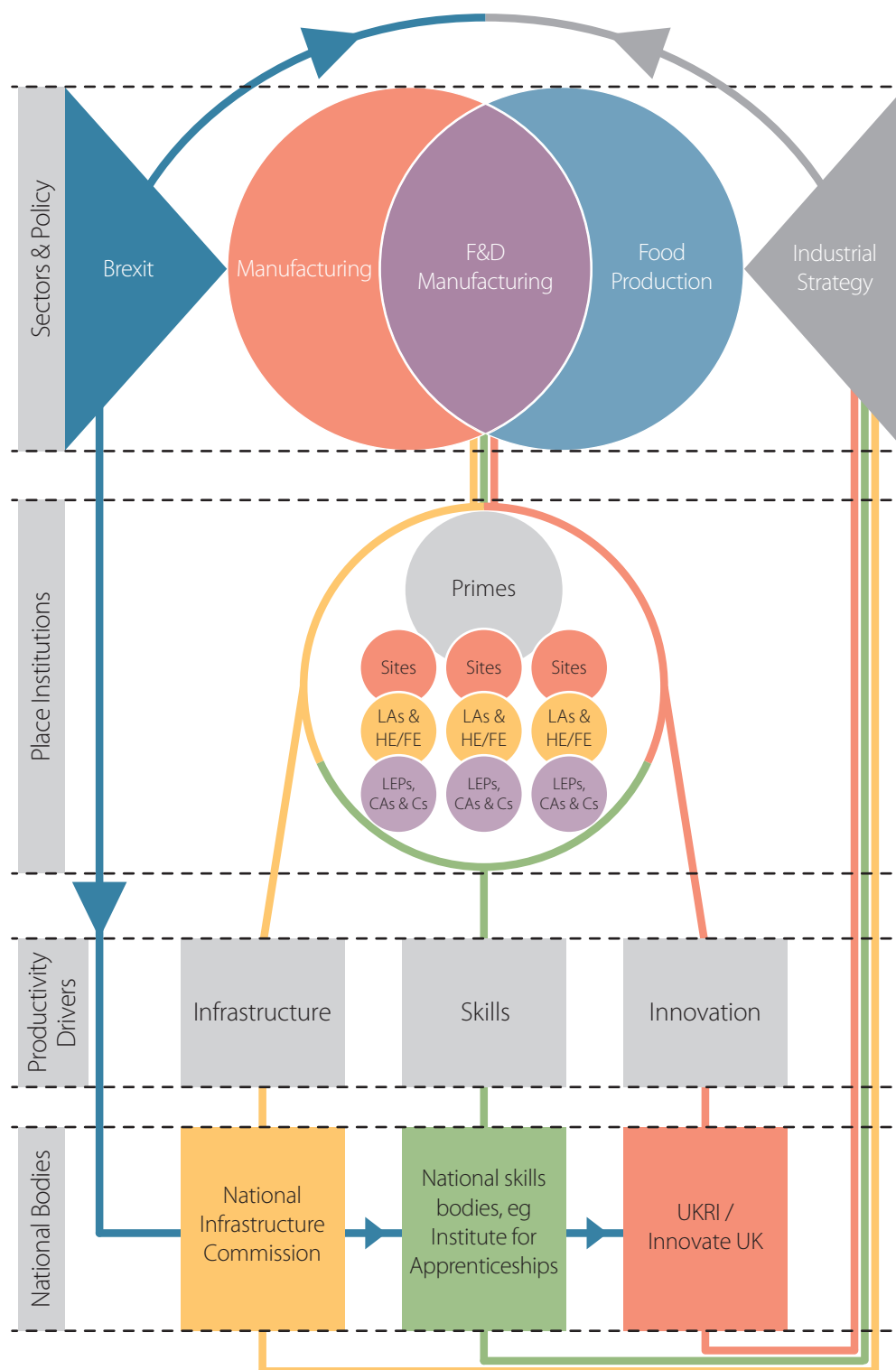
4.6 Productivity target areas

Economically less prosperous areas can be the least able to provide sector support, due to funding and capacity constraints. This means these areas could face a retraction of the industry and a loss of jobs further entrenching disparity. In meeting the Government's goal of spreading prosperity to all places, as outlined in the Conservative Manifesto, F&D could be a sector that could trial what we call 'productivity target areas' - areas given Industrial Strategy assistance, through grants and other measures, via LEPs or Combined Authorities - to build capacity to support the sector and close the productivity gap in these areas. Additional funding should be provided given the disparities in areas, but regardless, existing funding across departments and programmes should be aligned with this goal. This would involve targeting and prioritising support (such as financial and capacity building) at LEP

areas with poor economic indices such as unemployment, low productivity, low skill levels and high levels of deprivation which also have concentrations of F&D jobs and industry. The sector is one where there is an economic foundation on which to build targeted activity in these areas and it would also help raise the tail of lower productivity. There is a greater long-term economic cost to areas and to the Government and taxpayer if industry is lost in these areas, but this correlation is not sufficiently reflected in policy approaches.

The UK has some of the lowest levels of productivity and employee engagement in the OECD. Evidence shows that a strong employee voice drives higher productivity, skills uplift, worker retention and spreads innovation within businesses.⁵⁶ The Industrial Strategy has highlighted the goal of the sector deal approach. There is an opportunity to expand employee engagement through what we call 'Employee Voice Deals' - partnerships with sectors with commitments to strengthen employee and collective voice and engagement. Through a sector deal, the industry should come forward with proposals or be tasked by the Government to do so. As the F&D industry is fragmented and has large workforces including high-levels of EU employees, Worker Voice Deals could help address these challenges, support areas that are economically less prosperous and enhance staff retention and recruitment, improving the skills pathway, and make the sector more attractive.

Figure 6. The Industrial Strategy from a Place-based Prime Perspective



*LEPs: Local Enterprise Partnerships

*HE/FE Higher Education/Further Education Institutions

*LAs: Local Authorities

*CAs: Combined Authorities and Counties

*Cs: Counties

Recommendations Section Summary

- Set a goal to be a global leader in meeting future needs for healthier and sustainable food
- Set a specific priority within the Industrial Strategy for F&D manufacturing
- Establish a F&D manufacturing unit across Government departments to improve co-ordination
- Establish a new F&D body to support a sector deal and industry co-ordination
- Establish a new National Industrial Strategy Advisory Commission to build consensus
- Commit to align Brexit approaches and the Industrial Strategy
- Scrutinise Brexit and Industry Strategy in Parliament for key sectors with a committee joining together the DExEU, BEIS, DEFRA and other economic Select Committees
- Address the institutional deficit for F&D manufacturing
- Establish 'trailblazers' in the Industrial Strategy to support critical 'dispersed sectors'
- Set a F&D remit for Industrial Strategy institutions and give a 'productivity prime place pledge'
- Incentivise LEP specialisation and co-ordination: enable specific LEPs to take F&D leadership positions and give LEPs funding and a remit to support cluster density
- Establish 'productivity target areas' for places with lower economic performance
- Introduce 'Worker Voice' deals to improve employee engagement and productivity
- Establish place strategies to boost exports through LEPs and set a goal with industry to increase the one-in-five F&D exporting firms

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5. Science, Research and Innovation

"Across F&D the drivers of health, nutrition and sustainability offer on-going potential for business growth, new business practices, and disruptive new entrants."

5.1 The importance of innovation

'Science, Research and Innovation' is the first pillar of the Industrial Strategy and reflects that innovation is an important driver of economic growth. The Industrial Strategy Green Paper outlines the goal is "not to copy what others are doing...[but] to do things that others cannot do, or to do things in different and better ways." Innovation drives growth and is estimated to be responsible for two-thirds of the UK productivity growth between 2000 and 2007.^{57 58}

As the crucible of the industrial revolution the UK has "done things that others cannot", pioneering inventions that have transformed society and economy. But innovation does not stand still - the UK pioneered technologies to then be left behind; a lack of investment meant these strengths were not built on. Many more countries are now at the forefront of the innovation curve pursuing innovation strategies and increasing investment in research, talent and science.

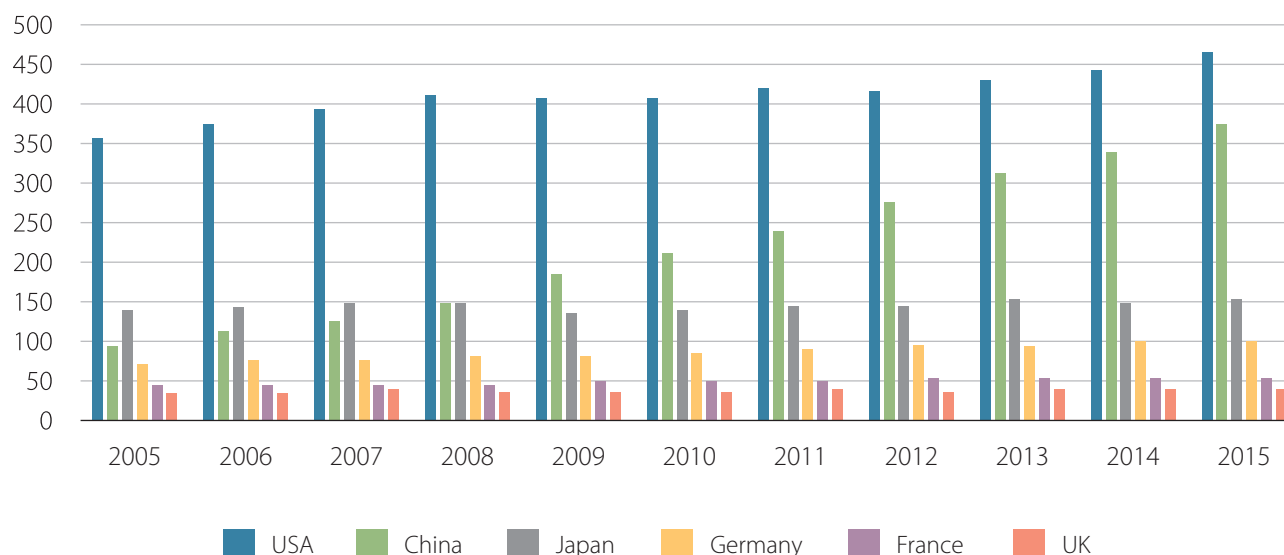
5.2 UK innovation performance

The Government seeks to make the UK 'one of the best places in the world for science and innovation'.⁵⁹ In turn Innovate UK aims to grow the economic impact of applied science, nurture high-growth markets or industries, and draw in investments for cutting-edge technology.⁶⁰

The UK benefits from a strong global position in doctoral research and the quality of Higher Education Institutions (HEIs). Three of the world's top ten universities are in the UK and, despite being home to only one per cent of the global population, the UK contributes 16 per cent of the most cited research articles internationally.^{61 62} The UK was ranked third in the 2016 Global Innovation Index with London alone placed sixth in the world for its start-up environment.^{63 64} However, the innovation ecosystem is some way from world class. Problems include lower levels of R&D investment, unequal spread of funding and STEM skill deficits.

For R&D intensity, the UK is under-performing against comparator economies and overall innovation performance sits only marginally above the EU average.^{65 66} Total

Figure 7. Gross Domestic Spending on R&D 2005 – 2015, (\$ Billions)

Source: OECD⁶⁸

R&D expenditure in absolute terms and as a proportion of GDP has flatlined for over a decade, hovering at around 1.7 per cent compared to the US at 3 per cent and France and Germany at above 2 per cent.⁶⁷ Figure 7 above outlines R&D spend by key competitor countries.

Funding for innovation is skewed towards London and the south.⁶⁹ Unequal innovation spending and access to innovation support hinders regional productivity and makes local economies less attractive to highly skilled employees looking to work in high-productivity sectors.⁷⁰ The economy also suffers from insufficient skill capacity at the technical level. Engineering UK says the deficit is over 20,000 graduates in STEM subjects and similarly at Level 3 qualifications.^{71 72}

5.3 Challenges and opportunities for F&D

The performance of the innovation system affects F&D manufacturing. In turn F&D manufacturing is also a sector that can help improve the UK innovation

performance. Innovation is a dynamic driver in the industry that sees the creation of around 8,000 products every year, and the application of new processes and technologies that enhance goods or make production more efficient. This takes many forms, including innovation in processing, operations and consumer markets including embracing Industry 4.0 and the development of agile and 'connected' manufacturing processes.

Two key drivers within the industry globally and within the UK are for innovation through sustainability and nutrition.

Sustainable production is increasing in impact and resonance. Businesses are seeking to become 'zero-waste', reducing and reusing resources, from energy to waste such as plastics. They are assessing how ingredients and resources are used or sourced, how they work with their supply chains, including managing risks in global markets, how to contribute to the decarbonisation of the economy, and examining their social impact in terms of consumers and employees, the provenance

and place, and the relationship with the communities in which a F&D manufacturing business operates.

Sustainability demands are changing the future of F&D manufacturing to enable resources to be used more efficiently, savings costs, to manage supply chain risks, and to address the social impact of business operations.⁷³ Sustainability is enabling new ways to manufacture and is driven by ideas such as the circular economy. The economic rationale and business case behind sustainability is becoming compelling especially as local, national and international consumer markets become more fragmented and diverse.^{74 75}

Figure 8 overleaf outlines the challenge of reducing food waste and what happens in each part of the production schedule. Total losses in the value chain in development economies can be as much as 40 to 50 per cent. At the consumer level 25 per cent of food and drink in UK households is waste, much still fit for consumption.

Figure 8. Waste Management and Loss During Production



Source: World Economic Forum, Driving Sustainable Consumption in Deloitte's, The food value chain: a challenge for the next century⁶

British Sugar's factory at Wissington, Norfolk, is an example of turning waste into innovative sustainability solutions. British Sugar produces 420,000 tonnes of sugar a year at Wissington from more than three million tonnes of sugar beet grown in the East of England. As well as producing sugar, they have developed innovative ways to use waste from sugar production. The factory now produces 12 saleable products from waste, including topsoil, aggregate, lime, bioethanol, betaine and food-grade CO₂ used in industrial refrigeration. A further innovation has been that the wasted heat from sugar production led to the setting up of glasshouse production and becoming one of the top five tomato producers in the UK.

Increasing R&D in sustainability, aligned with the benefits from AI, automation and 'big data' can save business costs and reduce

externalities. High-profile F&D industry examples are Unilever's Sustainable Living Plan, Marks & Spencer's Plan A, Nestlé's 'creating shared value' as part of its Nestlé in Society approach. They are part of the range of companies setting out on the sustainability path in order to 'do good' and be seen to do the right thing.

Scaling and using innovation to drive sustainability can be important wins for the sector but they are not sufficiently prioritised. This is because of a lack of industrial approach and ecosystem for the sector and the lack of a clear innovation pathway - the goal is to have many more companies following this approach and for a sector-wide strategy and commitment.

Alongside sustainability, there are growing concerns about food poverty such as

the rise in food bank use, as well as the impacts of poor diet and ill-health, including how nutrition contributes to developing sustainable health and social care systems. This has led to an international business response to healthy eating, with nutrition, health and well-being a major driver for innovation and value creation. Companies are increasingly exploring how to combine sustainability with nutrition, health and well-being objectives.

Nestlé's Global CEO Mark Schneider, in a speech earlier in the year, encapsulated this:

"When I look at the environment around us, I see an industry which is going through fundamental and unprecedented change. Many companies are focusing on radical cost cutting to deliver higher profits in the short term. They are, however, experiencing

*lower or even negative organic growth. In our view, this approach is not sustainable. Meanwhile, start-up businesses are capitalising on trends towards more local, organic or artisanal products. They innovate fast and respond swiftly to changes in the market... for the first time in the history of mankind, it is absolutely clear that in addition to sufficient quantity, food production must above all offer better nutritional quality. In future, the notion of nutritional security will be paramount. Nestlé's success is built on its nutrition, health and wellness strategy. It is now more relevant than ever as people around the globe want to lead healthier lives. They are interested in the role good nutrition plays in their personal health and wellbeing.'*⁷⁷

Across F&D the goals of health, nutrition and sustainability offer on-going potential for business growth, new business practices, and disruptive new entrants. The nutrition challenge is about creating products with less salt, sugar and fat at the same time as producing foods that people want to buy and eat. The goal is not a narrow range of health products but food that people buy in the weekly or top-up shop such as confectionery and convenience foods. Innovation is also about moving away from 'ultra-processed' to, in some cases, minimal processing - a particularly skilled and creative endeavour.⁷⁹

The goal has important public health considerations. The Health Survey for England reveals that almost a third of the country's adults are obese and a further 36 per cent classed as overweight.⁸⁰ The cost of treating obesity-related conditions in the NHS is around £16 billion a year with the obesity crisis attributed to reduced exercise and poor diets as well as higher levels of sugar and saturated fats in food.⁸¹

The F&D industry has important responsibilities and opportunities ahead. The demand for nutritious products is not just a UK goal - a third of the world's population is now classed as obese or overweight, a trend likely to worsen without significant change.⁸² Nestlé provides a useful case study.

Example: Product reformulation and innovation in health

By designing new products and investing in the redevelopment of existing ones, current F&D innovators are working to improve the quality of living. Nestlé, through its company Nestlé Health Science, for example, is engaged in developing partnerships with universities to support research into nutritional solutions for health problems including complex diseases.

Alongside this work the Nestlé F&D manufacturing business has committed to remove 10 per cent of the sugar content from its confectionery line in the UK and Ireland by 2018 using Nestlé's UK and global R&D capabilities.

Such investment in reformulation is cost-intensive to industry but does not necessarily correlate with increased consumers' purchase as there is not always a direct commercial advantage - less healthy products can be cheaper to produce. Existing voluntary arrangements on nutrition have also not encouraged industry leadership nor rewarded innovation.

Health policy and the Industrial Strategy are not effectively aligned - the industry ends up having to respond to different departments and policy agendas. Policies such as potential levies, for example a sugar tax, should be fully integrated within an innovation system to drive R&D into reformulation.

There is less Government research support in the nutrition field. Currently, F&D manufacturers self-fund three quarters of their R&D activity, some 10 per cent more than industry averages.^{83 84} The sector however, receives less government support than other industries. In the case of nutrition above it has attracted just £10 million of Government funding.⁸⁵

The 2015 Dowling Review on Business-University Research Collaborations which gathered data on 10,000 research projects from half of all UK Higher Education Institutes (HEI) found that research projects associated with 'Agriculture, Veterinary & Food Science' comprised just one per cent of all research partnerships. Both

'Communications and Cultural Studies' and 'Archaeology and Anthropology' enjoy higher levels of HEI-company research collaboration than the F&D sector.⁸⁶

There is something of a deficit of innovation institutions focused on F&D. While technologies and applied science areas singled out in the Industrial Strategy, from energy storage to autonomous driving, will benefit from dedicated research institutions, new funding and existing or soon-to-be established institutional frameworks such as the Government-backed Faraday Challenge or Battery Institute, F&D does not have this. Life-sciences, transport, medicines and space sectors are all well served by ten Innovate UK catapult centres with two dedicated to energy and four for agri-tech.

BEIS's two waves of Science and Innovation Audits commissioned to deepen the Government's understanding of potential globally competitive advantages have focused on city regions, existing knowledge-intensive university regions and technologies such as off-shore wind and bioeconomy. F&D has not had sufficient focus.

The Manufacturing Technology Centre (MTC), formed in 2010, provides important support to the manufacturing sector as a whole but the involvement of F&D companies remains more recent and is more limited due to the nature of F&D production, including shorter production schedules and living properties of food.

The creation of industry-Government collaborations in other manufacturing sectors such as automotive and aerospace mean these sectors have partnerships to agree mission-orientated research priorities, commercialise cutting-edge capabilities or technologies and co-ordinate across the industry. These include the Aerospace Growth Partnership (AGP), established in 2010, which has long-term recognition and ministerial-level representation, and the UK Automotive Council set up in 2009.⁸⁷ The partnerships receive Government financial support - the AGP has received more than £1.5bn of Government funding. Members of the Automotive Council have received critical Brexit financial assurances

and support.⁸⁸ In addition, the Agri-tech Leadership Council provides leadership and insight to improve the food production system but has only one dedicated F&D manufacturer among its members with the emphasis on the implementation of the former Coalition Government's Agricultural Technologies Strategy.

This needs to be addressed and an innovation eco-system for F&D manufacturing created. Through the Industrial Strategy and Sector Deal process, industry and Government should come together to launch an 'F&D Manufacturing Innovation Growth Partnership' focusing on aligning and driving research in a shared mission. It would:

- Align and encourage F&D innovation to support health and sustainability challenges and the goal of global leadership which will underpin the prize of reducing the £16 billion spent in the NHS on obesity, and help meet the global demand for these products.
- Adopt a mission-oriented approach to innovation and encourage and set a goal to scale R&D and intensity: investment in nutrition should be seen to partner pharma-based obesity research.
- Support the integration of Industrial Strategy with health policy so they align not work against each other.
- Support F&D as 'disruptors' through innovation and the application of new technology such as AI, robotics and 'big data'.

The UK is one of worst performing economies for automation intensity in manufacturing deploying on average just 71 robots per 10,000 manufacturing employees, compared with almost 500 in South Korea and around 300 in Japan and Germany.⁸⁹ In F&D, robotics application is an area for innovation with over half the country's F&D manufacturers prepared to increase investment in automation over the coming years.⁹⁰

In addressing the institutional deficit, a F&D manufacturing catapult with a health and sustainability focus should be established and be linked to Food Innovation Centres and the Food Innovation Network and Agri-tech Knowledge Transfer Partnership.

Innovation should also be encouraged across primes and small firms, through targeted financial and capacity support for LEPs akin to how the French and Italian Governments support SME growth and sector clustering through the Pôles de Compétitivité and interventions in the Lombardy region.⁹¹

The UK F&D industry safety and production standards are an asset and should be harnessed as part of the Industrial Strategy, not weakened through Brexit. The risks of fewer protections on food, unfavourable trading terms affecting the industry, as well as reducing UK food standards are creating uncertainty.⁹² Conversely, there is an opportunity to be at the forefront for setting a new gold standard for manufactured food, which would also provide a USP for exports. The UK can seek to mirror the success of Canada and Ireland as leading food safety regimes.

At the same time, given industry voluntary arrangements on nutrition have not sufficiently delivered the improved health outcomes needed, a fresh approach should be established. Working with industry, this would set nutrition standards in key areas including fat, sugar and salt. The Government should consult on how this could be achieved through a regulatory floor with minimum standards as well as incentives to raise the bar. Given policy is moving in the direction of levies this should also be included but these levies - such as on salt or sugar levels - should be linked to and sit within an innovation eco-system to drive standards higher across industry and reward companies investing in nutrition. It should not be a separate arm of policy not linked to industrial approaches. Tax incentives rather than levies could also be used to grow innovation in nutrition and again this should be part of a consultation. The goal is for research investment to be rewarded, underpinned through a dedicated research mission for sustainable, healthier food and linked to an effective regulatory regime that encourages this in the most effective and scalable method.

Recommendations Section Summary

- Set a goal to be a global leader in meeting future needs for healthier and sustainable food
- Set a gold standard for food and a level playing field regulatory approach on health
- Establish an 'Innovation Growth Partnership' to:
 - Integrate health and industrial policy in an eco-system to incentivise healthier food
 - Set a goal to increase public and private R&D, and align mission-oriented research
 - Link to new gold standards and a level regulatory approach
- Set a F&D remit for Industrial Strategy institutions
- Address the institutional deficit for F&D manufacturing starting with a new F&D catapult
- Incentivise LEP specialisation and co-ordination: enable specific LEPs to take F&D leadership positions and give LEPs funding and a remit to support cluster density
- Set a goal with industry to increase the one in five F&D exporting firms

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6. Improving Infrastructure

"Most F&D primes operate across multiple sites located across the country. To address specific infrastructure issues, these firms must work with and through a fragmented collection of LEPs, local government and transport bodies, whose effectiveness and capabilities can vary from place to place."

6.1 Importance of infrastructure

Infrastructure rightly features prominently throughout the Industrial Strategy Green Paper. From utilities to digital communications and transport, infrastructure sustains and enhances economic growth and living standards.

Long-term economic growth is underpinned by productivity gains where there is good infrastructure. The quality and quantity of infrastructure influences economic output and is a key catalyst for productivity and competitiveness including reducing business costs. Improving transport infrastructure can remove constraints on economic growth, increase levels of private sector investment, support the collective benefits for anchor primes, and support trade efficiency.⁹⁶

6.2 UK infrastructure performance

Responsibility for infrastructure delivery (and links to the Industrial Strategy) lies with several Government departments including the DfT, HM Treasury, BEIS, CLG and a set of public agencies, regional bodies and local authorities. Historically UK performance in transport infrastructure has been poor. The World Economic

Forum ranks the UK 24th on infrastructure competitiveness with Japan 6th, France 8th and Germany 13th.⁹⁷ Spending levels have failed to keep up with the UK annual budget, falling almost £30 billion short of OECD recommended targets.⁹⁸

Transport infrastructure has seen greater levels of strategic direction with the establishment in 2015 of the National Infrastructure Commission (NIC). It is tasked to provide the Government with independent advice and to produce the first National Infrastructure Assessment to guide the Industrial Strategy and show how infrastructure investment can re-balance growth. Highways England has also been established as an arm's length public company to oversee £15 billion worth of investment into the five-year Road Investment Strategy. New Metro Mayors and the creation of statutory sub-national transport bodies offer cities and regions additional ways to deliver and fund infrastructure. England's six new Metro Mayors will each have control over consolidated transport budgets to fund strategic road networks, bus franchising and freight strategies, while in some areas reformed counties are fulfilling this role.⁹⁹

CASE STUDY: Nestlé at Halifax

Nestlé's site in Halifax is a significant part of the company's operations and has a strong local economic footprint that has helped to cement a local supply chain. Good transport links in and out of the site are vital for moving factory inputs in and finished products out efficiently as well as for the commuting needs of the approximately 1,000 strong local workforce.

Poor transport infrastructure has a significant impact on the factory's ability to attract talent, with its graduates and apprentices in particular travelling to work from further afield, and relying on very poor public transport links. Poor commuting options can act as a disincentive for prospective employees. It impacts on factory long-term productivity, and on the attractiveness of plants for future investment for expansion due the restriction it places on the talent pipeline.

The primary road link to the Halifax factory is the M62 motorway, which is one of the most congested parts of the road network in the UK while local train services from surrounding towns are relatively infrequent. Together, these transport challenges restrict the competitiveness and potential productivity gains of the Halifax plant.

Efforts by primes such as Nestlé to address these local barriers to growth have been through a combination of working with LEPs and local authorities. The Halifax site is in Calderdale and lies within the Leeds City Region and the West Yorkshire Combined Authority (WYCA) City Deal. Successfully tackling the transport deficit at Halifax will require close coordination not only between industry, Leeds LEP and the WYCA, but also Government departments and bodies such as Transport for the North, the Northern Powerhouse Partnership, NIC and the Highways Agency. Nestlé has many sites which require navigation across a range of different arrangements.

6.3 Challenges and opportunities for F&D

High-performing transport infrastructure is critical for the UK's manufacturing industries. High-performing sea, air, road and rail networks are needed to efficiently connect businesses to their supply chains, raw materials, export markets and consumers as well as transport shift-based workforces to their workplace efficiently to ensure plants are as productive as possible.

Good transport connections allow supply chain clustering and densification which is important for securing higher rates of FDI.¹⁰⁰ Poor local infrastructure which restricts the potential productivity of plants reduces the likelihood that global manufacturing firms will commit new investments. A 2015 CBI survey of 700 business leaders found that 94 per cent of businesses view infrastructure as a decisive factor for planning future investment.¹⁰¹ Environmental sustainability and the efforts of industry to decarbonise the production and movement of its goods are also becoming important benchmarks.

Most F&D primes operate across multiple sites located across the country. To address specific infrastructure issues, these firms must work with and through a fragmented collection of LEPs, local government and transport bodies, whose effectiveness and capabilities can vary from place to place. Cities and regions inside the remit of Metro Mayors, CAs, counties, or sub-national transport bodies such as Transport for the North or Midlands Connect have additional means of financing and delivering new infrastructure. The Nestlé site in Halifax provides an example - see case study above.

F&D sites that fall beyond the reach of city regions or whose infrastructure needs are not represented by a sub-national transport body must deal with a combination of LEPs and one or more of England's 152 Highway Authorities (through local councils).¹⁰² With an average of just eight full-time staff and few resources it is uncertain whether LEPs have the capacity and powers to effectively lever in infrastructure investment or steer through key decisions to support sectors.¹⁰³ The fiscal reduction on local authorities has

seen the transport infrastructure budgets of three out of five local authorities squeezed since 2010.¹⁰⁴

Transport funding is also distributed unequally across the country. In 2016 public spending on transport needs amounted to £1,870 per person in Greater London but only £300 in the North East, £290 in the North West, and £250 for Yorkshire & Humber - with the latter's population only a third smaller than London.¹⁰⁵ F&D manufacturing generates one third of all UK F&D GVA and needs infrastructure to support this and grow further.¹⁰⁶

England's Economic Heartland (EEH), a local strategic partnership, is developing a model to improve local transport infrastructure as outlined in the case study on the next page.

Although infrastructure spend is appraised against the Treasury Green Book investment case and DfT transport guidance, the EEH argues that the criteria do not sufficiently account for regional-level transport challenges or the transformative local gains of transport schemes. The recently

CASE STUDY: England's Economic Heartland strategic alliance

England's Economic Heartland (EEH) strategic alliance was established in 2014 by Oxfordshire, Northamptonshire and Buckinghamshire County Councils to coordinate local transport spending and policy. The subsequent inclusion of Cambridgeshire, Milton Keynes, Luton, Central Bedfordshire and Bedford Borough Council mean the Alliance now presides over an area worth £93 billion in GVA which has been dubbed the 'UK's Silicon Valley'.¹⁰⁷

The EEH is seeking to form a strategic transport forum which includes four LEPs and local transport authorities to pool influence and transport investment. To increase the size of the funding envelope available to tackle transport challenges that threaten to hold back growth within the area, the STB, EEH argues, could issue bonds, implement a road user charge or workplace parking levy, seek borrowing powers, a Supplemental Business Rate, or Tax Increment Financing.

The new body would be responsible for ensuring local priorities shape national investment programmes and provide the leadership identified by the National Infrastructure Commission for meeting regional and strategic transport requirements. The exact model and remit of the body is under consultation. The potential is to provide key sectors such as F&D manufacturing with a simplified convening body to identify and tackle local barriers to productivity through better infrastructure.

announced local multi-billion pound road investment by Highways England, for example, had insufficient connection to the transport needs of key sectors.

We argue that the assessments also fail to properly capture the economic growth potential of key sectors and the infrastructure needs of place primes. Were sectors such as F&D to decline or the number of jobs in industry to reduce due to poor connectivity, the cost to these places in missed economic growth and business, and job losses, would be felt acutely. However, transport assessments do not adequately factor in the cost of lost potential sectoral gains or the loss of industry when looking at capital expenditure on new schemes. They should.

How the transport infrastructure needs of sectors such as F&D and their primes and sites are raised and addressed is an important question for the UK's F&D manufacturing industry. Unlike more concentrated industries such as automotive or aerospace which benefit from special industry and government partnerships to press their cases, F&D, with its dispersed nature and fragmented representation, is not being effectively recognised.

F&D manufacturing should articulate shared challenges through a strengthened sector body or sector leadership council. While further devolution is needed to empower areas to enable economic growth, as outlined above, so is co-ordination across devolved institutions and the ability to relate to key sectors. The NIC should be given a remit to work with dispersed sectors in assessing transport infrastructure and on a geographic basis, to work with LEPs, CAs, counties and Metro Mayors to create a more holistic picture.

The STB model could be a useful way to address sector-specific needs. The Government should consult on and pilot how STBs can support sector productivity in industries such as F&D and should ask sector bodies and LEPs to bring forward proposals to that end and look at how the financing can take place. Crossrail provides an example of key infrastructure being built through borrowing against future fare revenue and business rate growth. The Government should explore how STBs can be used to bring forward infrastructure and its financing through future business growth in key sectors such as F&D. Government could also put guarantees behind areas that want to invest to prevent economic decline and to save associated costs from industry loss. Government should channel

additional infrastructure financial and capacity support to productivity target areas, to build capacity for local delivery. Additional funding should be provided given the disparities in areas, but regardless, existing funding across departments and programmes should be aligned with this goal of supporting these areas and sector.

Recommendations Section Summary

- Improve infrastructure co-ordination and delivery for the sector
- Set a F&D remit for Industrial Strategy institutions including the National Infrastructure Commission
- Address the institutional deficit for F&D manufacturing
- Support new transport infrastructure bodies and financing models including consulting on and pilot how STBs can support sector productivity and providing additional financial and capacity support for productivity target areas
- Reflect sector and locality impacts in transport assessments

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7. Developing and Improving Skills

"...seeking to be a global leader in food, in nutrition and sustainability, could help industry attractiveness... such as for millennials, and increase prestige for apprenticeship pathways similar to other manufacturing sectors."

7.1 Importance of skills

Developing the right mix and calibre of workforce skills is critical to Britain's ability to compete globally and is at the heart of improving the UK's low productivity levels.¹⁰⁸

Highly skilled workers are more likely to adapt to change and are better equipped to implement new working practices and accomplish more complex tasks than lower-skilled employees.¹⁰⁹ The quality of the workforce determines a nation's labour productivity.¹¹⁰ Research shows European countries have benefited from a three per cent gain in labour productivity by increasing the amount of training for employees by one per cent.¹¹¹ As advanced and emerging economies seek to climb up the value chain, the presence of highly skilled workforces becomes ever more important for growth. Upskilling the workforce also has wider benefits - better skilled individuals are less likely to be unemployed and more likely to be paid more, increasing both the amount of tax revenue and purchasing power of the individual.¹¹²

7.2 UK skills performance

The goal for skills policy has been to achieve a 'world-class' position in skills attainment and to increase technical levels of workforces to reverse wage stagnation and to tackle the UK's persistently low levels of productivity.¹¹³ Successive reforms and frequent interventions have produced a mixed bag of outcomes. The UK is ranked 16th out of 20 OECD countries in the proportion of adults holding vocational post-secondary qualifications.¹¹⁴ The UK is also struggling to produce enough highly-skilled STEM specialists and technicians to meet the demands of industry, risking an even more pronounced innovation skills gap.¹¹⁵ There is also a need to upskill those with fewer qualifications or basic skills. The UK is the only country in the OECD where 16 to 24-year olds have no more literacy or numeracy skills than 55 to 64-year olds.

7.3 Challenges and opportunities for F&D

Despite increasing automation, F&D manufacturing is dependent on its human capital. F&D manufacturing employs some 392,000 people, a number more than the population of many UK cities.¹¹⁶ A major headwind is on-going workforce recruitment. F&D needs to have a 'talent pipeline' and a plan for its future skills needs to meet projected workforce shortages.¹¹⁷

The industry faces being squeezed by the twin challenges of a potential labour shortage as the supply of EU workers is reduced or even dries up after Brexit *plus* the need the industry itself has identified to recruit due to looming workforce shortages.

¹¹⁸ Over a third of employees in F&D, mainly STEM-based and technical employees, are expected to retire within the next 15 years, taking with them invaluable experience, skills and know-how. Up to 140,000 new workers by 2024 are needed to replace lost talent and fill new positions.¹¹⁹

A third of the F&D manufacturing workforce is from the EU, of which a quarter is educated to either graduate or HE level.¹²⁰

A recent FDF survey of the food production supply chain found that over a third of firms expect business to become unviable were they to be shut off to EU labour.¹²¹ ONS data shows a fall in net migration of EU citizens since the 2016 referendum.¹²²

Less recognised outside the sector is that it requires a significant proportion of highly skilled workers. F&D is a high-skill intensive sector with 20 per cent of all F&D employees educated to degree level compared to just seven per cent for manufacturing overall.¹²³

¹²⁴ A further 38 per cent of the F&D workforce possess A-Level or higher qualifications.¹²⁵

High skill is not simply about hi-tech applications, implementing sophisticated supply chain logistics, or improving factory productivity, but about management and business operations.

As the application of robotics and digitalisation grows more common in manufacturing, having the people able to apply and manage these technologies

will become ever more important. F&D manufacturing has an opportunity to be at the forefront of what is known as the Industry 4.0 or Fourth Industrial Revolution which seeks to connect employers, supply chains and logistics and apply this 'intelligence' to relevant production so manufacturing can be more responsive.

Moreover, not all food processing tasks fit conventional high-skill definitions, but are nevertheless specialist craft skills. The most desired skills identified by employers in one study based on food science and technology employees was the need for communication and new product development abilities.¹²⁶

F&D has responded to initiatives and 'action plans' to address its skills challenges. The National Centre of Excellence for Food Engineering in Sheffield and National Skills Academy for Food & Drink are, for example, working to develop the next generation of engineers and technicians. The Government has committed to an additional three million apprenticeship starts in England by 2020 by deploying an Apprenticeship Levy on employers to meet funding requirements. F&D has responded by setting itself targets to treble the number of apprentices employed by 2020.¹²⁷

While the Government has set an ambitious apprenticeship target, and the sector has agreed to treble apprenticeship places, a sector-tailored framework and curriculum for F&D manufacturers that satisfies the highly specialised needs of manufacturers has yet to be agreed. This needs to be addressed to create a clear career path for the sector.

The sector nevertheless has struggled to be seen as attractive to prospective graduates as other engineering fields. In 2015, no F&D company entered the top 20 of engineering graduates' perceptions of the top 100 companies to work for in the UK and only a handful made the list at all.¹²⁸ In qualitative data collected for this report, it was reported that the PhD landscape for food science and nutrition in the UK was a global competitive strength for the sector but industry sources

consulted in this report indicated that there has been a reduction in PhD students working in nutrition and in the F&D sector. The perceptions of the industry and lack of overall innovation mission (as in section 5) has also exacerbated this. Establishing this mission and seeking to be a global leader in food, in nutrition and health and sustainability, could help industry attractiveness. The Government and sector should form a F&D careers campaign, overcoming perceptions that F&D is not skilled and to improve sector appeal. Global food leadership can create industry attractiveness, such as for millennials, and increase prestige for apprenticeship pathways similar to other manufacturing sectors. An Employee Voice Deal as outlined in section 4 could also assist as well as address the issue of raising skill levels within the industry.

The Industrial Strategy Green Paper outlines a Comprehensive Skills Audit. This must recognise the diversity of F&D roles and the shortages ahead, the need of primes and their sites as well as the weakness in the skills system for addressing the gaps.

To address the shortage of skills and the required raising of skills levels, primes must work with a fragmented range of national and local institutions. F&D manufacturing has also not benefited from the direction other sectors have had through the Government's previous Industrial Skills Partnership initiative.¹²⁹

The Government has also placed a responsibility on business. There is now a desire from the Government for more sharing of responsibility for the provision of skills with employers.¹³⁰ In tandem with the push to develop new skills models and to encourage employers to take a greater stake in the skills system, some skills powers have been devolved to local authorities through two waves of 'city deals'. Employers across F&D manufacturing bases within the Sheffield and Leeds City Regions and Yorkshire & Humber area now have the ability to influence skills delivery through access to apprenticeship services, training hubs and Apprenticeship Grants for Employers.¹³¹

Devolved skills policy has given some responsibilities to local education institutions and LEPs to tailor national policies to meet local criteria and develop more demand-led local skills provision. Implementation, however, has been hindered by cuts to the skills budget and lacks an overarching strategy that connects places and sectors. Industry sources engaged in this report have said that the dispersed nature of F&D has also meant learning institutions have not provided specialised and tailored F&D courses and focus.

This is acute because F&D is affected by skills imbalances and is being held back.¹³² Economic data commissioned by ResPublica shows that 31 per cent of all F&D employees are based in the north.¹³³ Seven of the worst performing LEP areas for skills and qualifications are in the north and Midlands while the top 10 skill areas are in or surrounding London.¹³⁴

A sector strategy and co-ordination should seek to provide ways to enable learning institutions to collaborate to offer F&D courses. Financial support could also be provided to productivity target areas, as outlined in section 4. The idea is that areas with relatively poor skills attainment and with a prevalence of F&D can harness this key industrial sector and its large numbers of jobs and skills shortages. There would be a connection to the national Industrial Strategies and local strategies, industrial support, access-to-work schemes and local education institutions.

Recommendations Section Summary

- Set a F&D remit for Industrial Strategy skills institutions
- Improve F&D manufacturing skill pipelines
- Reflect F&D jobs diversity and shortages in the Comprehensive Skills Audit and see sector needs through primes, sites and the focus of local learning institutions responding to F&D
- Establish apprenticeship frameworks for F&D
- Incentivise collaboration across learning institutions and firms such as in productivity target areas and places with F&D specialisation through the sector deal
- Form a joint Government and sector supported F&D careers campaign
- Introduce 'Worker Voice' deals to improve employee engagement and productivity

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8. Purposeful Companies

“There is an opportunity for F&D to be at the forefront of companies that put purpose at the heart of what they do”

The way businesses should operate is a debate taking place across business, politics and public dialogue. Companies are being asked more searching questions about their purpose and contribution to society including governance, the methods by which they operate, tax practices, treatment of staff and impact on communities. Edelman’s annual trust barometer, published at the start of the year, shows faith in the business world continues to fall.¹³⁵ The Prime Minister has made one of her central ambitions to encourage more responsible business, and ensure the rewards of growth are more evenly distributed to support an economy that works for all.

This Prime Minister’s goal should not be dismissed as simply political rhetoric impinging on economic and business practice. Across the business landscape there are ideas and models that are also calling time on existing approaches and responding to these challenges. Business organisations such as the CBI have argued for the need to rebuild trust in business. Blueprint for Better Business and Tomorrow’s Company are challenging and working with businesses so firms can be much more of a ‘force for good’ and create value for the companies, staff, shareholders and society. There are increasing mission-oriented

businesses and business movements underpinning this such as the Circular Economy group, putting environment change at the heart of businesses.

Models are increasing that more fully involve employees, customers and suppliers to drive higher productivity and innovation. It has been taken up not just by new firms but by more traditional businesses too, such as the tyre manufacturer, Michelin.¹³⁶ It is true that many businesses in new tech related areas have flatter structures, greater staff involvement, are more agile and are being driven by purpose as well as profit. F&D has given the name to the way we describe part of the emerging part of the economic landscape - the ‘flat white economy’, where creative businesses are symbiotically linked to coffee shops. These, along with consumers, influence each other and encourage excellence, innovation and more ethical approaches.

The notion of companies engendering purpose, contributing to more inclusive growth, delivering social policy goals and creating shared value across their workforces, supply chains and communities in which they operate is gaining traction. What we call ‘purposeful’ in a company should not be viewed as a worthy addition but essential to

achieving a more inclusive and productive economy. Evidence suggests that companies with an express purpose understood by management, employees and stakeholders perform better. A study by EY and Harvard Business Review found that firms that prioritise a shared understanding of 'purpose' are more likely to grow at a rate above ten per cent than those that do not.¹³⁷ Inspired employees are almost three times more productive than dissatisfied employees.¹³⁸

Purposeful companies not only contribute to productivity improvements, they also improve social inclusion through anchoring jobs in localities and pay people a good standard of living. Productivity improvements should not be seen simply at a macro level but through companies that are achieving these social and economic aims. The Industrial Strategy can help redefine success and should seek to cultivate and encourage purposeful behaviour and models including through governance, taxation, procurement, business support and regulatory frameworks.

What does this landscape mean for F&D companies and the sector at large?

The F&D industry underpins our very existence - food is a necessity but also enriches our lives. Yet, the industry is not always held in the highest regard. Indeed, the industry can be in the firing line, including over the contribution to health through sugar, salt and fats.

There is, though, an opportunity for F&D to be at the forefront of companies that put purpose at the heart of what they do, through a commitment to be a global food leader and supported through the Industrial Strategy, and by establishing an Innovation Growth Partnership and gold standards.

This would be strengthened further through individual company and sector leadership. While there are leaders in the F&D sector there could be more, scaling excellent

smaller and medium size companies, and transforming larger companies to champion excellence, adopting company models that integrate purpose, create long-term value and secure great public benefit. There is a premium for this - being ahead of the curve, building customer bases, raising the status of the industry and helping improve recruitment. By 2020, millennials will be the largest part of global workforces and successful companies will need to recruit and keep the best of these. Purpose is inextricably linked to attracting and motivating millennials. As research shows, such as recent surveys by PWC and Deloitte, millennials want their work to have a purpose, to contribute to the world and be proud of their employer.¹³⁹

Champions such as Nestlé and Unilever within the F&D sector are already actively considering the role that their companies and the wider industry can play. In early 2017 Nestlé committed to reduce sugar by 10 per cent across its confectionery and chocolate portfolio. It has also initiated a public conversation, breaking from customary industry backing for voluntary approaches, on how an effective regulatory environment could contribute to domestic health policy. This approach, as outlined in section 5, would help set the bar for other businesses by instilling minimum requirements, and enabling businesses to race to the top rather than the bottom.

Nestlé is taking forward further measures in workforce health and training. Sickness-related absences have a direct impact on productivity with associated replacement and disruption costs calculated at around 2.5 times the salary of the employee involved. In 2016, the UK lost an estimated 137 million working days.¹⁴⁰ However, evidence indicates these could be prevented through better lifestyle choices. Nestlé is investing in preventative healthcare and staff awareness, and partners with healthcare provider Nuffield Health to proactively manage and

reduce the risks of sickness-related absences. This also offers transferable insights for the NHS in how it engages with businesses in addressing long-term public health challenges to improve national productivity.

In terms of skills, some of Nestlé's own factories are accredited as further education providers. Industry's role in designing apprenticeship standards recognises that engaging in education and training is critical to increasing skills supply among young people including the Government's 2020 apprenticeships target. Shaping the purpose and quality of apprenticeships also improves the quality of local workforces for entire supply chains within and beyond F&D.

Leadership is possible too at a sector level through what we call a 'F&D Leadership Group'. Akin to the Circular Economy group, it would bring together and champion purposeful F&D companies. F&D kitemarks provide foundations for excellence, industry commitments to goals and areas on which to build. But the leadership could focus on a broader set of goals and pillars of excellence. These include:

- Health and nutrition
- Regulatory approaches
- Kitemarks and standards
- Sustainability
- Workforce voice
- Training and skills development
- Tax transparency
- Supply chains
- Supporting communities

A sector approach, sector leadership and sector champions can help build an important future and mission for the F&D manufacturing industry.

Recommendations Section Summary

- Create a 'Leadership Group' to support F&D 'Purposeful Companies' and establish more industry champions

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Jake Sumner, Associate Director Industrial Strategy, has more than 20 years' experience of policy, campaigns and projects in national, regional and local government. He was Chief Political Adviser and Chief of Staff to the Shadow Business Secretary during the parliament 2010-2015. Jake worked on developing the concept of a modern Industrial Strategy, engaging with sectors and businesses in the UK and internationally. Previously, he was the Special Adviser to the Secretary of State for Communities and Local Government. He has served as an elected councillor, including as a Cabinet member and as Vice-Chair of Planning for the landmark King's Cross development. He has held positions at several councils and at Transport for London with roles including the Crossrail funding campaign and communication strategy.

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About ResPublica

The ResPublica Trust (ResPublica) is an independent non-partisan think tank. Through our research, policy innovation and programmes, we seek to establish a new economic, social and cultural settlement. In order to heal the long-term rifts in our country, we aim to combat the concentration of wealth and power by distributing ownership and agency to all, and by re-instilling culture and virtue across our economy and society.

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As part of the preliminary research for this report, ResPublica interviewed a wide variety of third party, industry and Governmental stakeholders with relevant expertise in the UK F&D manufacturing industry. The report and recommendations have benefited from the collective insight of many of our interviewees and contain references to qualitative data gathered throughout this process. The views and recommendations contained in this report are those of the authors and do not reflect in any way the policy positions or opinions of those interviewed.

Interviews were conducted through Chatham House rules. ResPublica is grateful for the input from organisations including and not exhaustively: APPG for Food and Drink Manufacturing; Aston University/University of Warwick; BAE Systems; BEIS Select Committee; Chartered Institution of Highways & Transportation; Department for Business, Energy & Industrial Strategy; Department for Environment, Food & Rural Affairs; Department for International Trade; EEF, The Manufacturers' Organisation; England's Economic Heartland Alliance; Food & Drink Federation; Grant Thornton; Innovate UK; Knowledge Transfer Partnership; Nestlé UK; Siemens; University of Cambridge and West Yorkshire Combined Authority.

Industrial Strategy Programme

The economy does not produce the widened prosperity we need. Productivity is unequal and uneven with many places lacking access to high quality jobs and social opportunity. Too much is owned by too few, stifling competition and creativity in markets. Business investment is too low and too short-term, and the UK invests less of its GDP in R&D than its competitors, restricting innovation and global trade. Infrastructure has been poorly planned and under-delivered holding back new investment and job creation. While there are strong businesses and sectors, to address the significant trade deficit, the UK needs a more productive economy and tradeable sectors.

The UK has also traditionally suffered from piecemeal actions and short-termism in industrial strategy and approaches, a lack of political consensus, and ineffective co-ordination and alignment across government departments and agencies, as well as effective connection to localities. This started to change with a new industrial approach begun under the Labour, Coalition and Conservative governments over the last decade. There is an opportunity to build on these foundations, correct past mistakes and forge a new industrial and economic path, which ResPublica advocates.

To be successful the Industrial Strategy must address the UK's systemic challenges. It must also be enduring, building political consensus and certainty, avoiding the chop and change of past interventions, and have the confidence of sectors so businesses can plan and unlock investment. It must help create opportunity for all, unlocking talent to spread prosperity. We must support races not pick winners, building on strengths and incentivising future industry and technologies. We must harness regulation to enable innovation and new entrants, boost export capacity and advance our global advantage, strengthen competition, and help create the conditions for best business practice. We must future proof our labour force and re-enfranchise communities whose skills are lacking or going to waste. Government's role must be that of an entrepreneur and an enabler, and capabilities must be devolved to the lowest appropriate level, such as councils, city regions, Local Enterprise Partnerships, universities and other devolved institutions to harness opportunities unique to each place and drive bottom-up innovation.

ResPublica also recognises that the Industrial Strategy is a way to help face the most significant economic and business challenges the UK has seen for decades. Brexit has huge implications for the UK's future trade relationships, regulatory environments, inward investment, and skill pipelines. The country faces ever stronger global competition. The devolution path continues with new economic and political agency most clearly felt in England, which has seen new combined authorities and new Metro Mayors take office with greater economic powers and scope to shape business environments and tackle strategic priorities. There are continued challenges for the corporate world over questions of trust and governance, with companies being asked searching questions about their contribution, while there are hugely transformative opportunities coming through the power of technological change, which is reshaping products and services, and employment and business models.

ResPublica has a track record in the debate over devolution, cities and place-based policy, and has an ambitious industrial strategy programme to shape thinking and direction of the new industrial and economic approaches.

In early 2017, the Conservative Government unveiled its Industrial Strategy Green Paper to reshape the UK's economic model and create a new industrial framework, with a focus on places and sectors. The strategy seeks to address historical failings of piecemeal interventions, short-termist policy, and a lack of co-ordination across Whitehall and with localities.

More ambitious than recent industrial approaches, the strategy sets out to tackle long-standing barriers to growth from poor productivity and infrastructure to insufficient R&D spending and skills gaps, as well as to spread growth around the country. To do this Government must work closely with industry and support key sectors. One sector is food and drink manufacturing (F&D), which is a sixth of all manufacturing, a major exporter and employer. While other industries have been prioritised, including with specific 'sector deals', F&D has not, which is a failure to recognise its considerable economic footprint, growth, productivity gains and employment in economically-challenged areas.

This report outlines why the sector must be given due focus and commensurate support, including co-ordinating infrastructure and skills sector needs. Unless addressed, productivity could be harmed - many F&D anchors are global and multi-nationals and their UK sites compete within company portfolios. The report looks at the need to increase R&D and apply new technology, which can bring public policy benefits such as better health outcomes and drive growth.

It outlines why an ambition needs to be created for the sector to be a global leader in more nutritious and sustainable food to meet the food and obesity challenges in the UK and globally. The obesity crisis in the UK costs £16 billion a year for the NHS.

The ambition for global food leadership would also help address recruitment and retention, given the industry has not been considered as attractive as other sectors.

Also highlighted is the need to recognise the implications of Brexit and need to co-ordinate with industrial approaches, which is not adequately taking place. The food sector as a whole, and F&D manufacturing in particular, are hugely affected by the implications of Brexit.

Given the importance of food and drink manufacturing, it is insufficient to see it simply as part of the manufacturing sector or farming food chain. F&D manufacturing needs a specific focus to address specific needs. Support for the sector should be seen through the lens of industry anchors, its place-based primes and their sites. Productivity of these sites impacts on local economies, the wider economy and the sector. Co-ordination for addressing challenges is fragmented through national and local institutions. There is a place-based penalty for primes where these are not resolved locally. This report provides unique insights from the perspective of a prime, Nestlé UK, a subsidiary of the world's largest food company. It outlines how challenges can be addressed holistically, with a remit for local and national institutions to resolve sector needs, and co-ordinated within a sector approach.

For the Industrial Strategy to be enduring and provide certainty, there must be a goal to build a political consensus behind the industrial approach and the report outlines how. The report outlines why the Industrial Strategy should be active in supporting more purposeful businesses that seek to embed and deliver a broader range of public benefits.



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