

# Potential implications of Brexit for Norfolk and Suffolk

Impacts and Implications of different Brexit scenarios on  
Norfolk and Suffolk's priority sectors

Final Report

*January 2020*

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# Introduction

The New Anglia Local Enterprise Partnership (New Anglia LEP) has commissioned Metro Dynamics to assess the potential impact of Brexit on the region's economy, focusing on the potential challenges and opportunities across four selected priority sectors. This work builds on initial analysis of Brexit implications prepared in December 2017.

This report presents the findings of a detailed analysis of the potential impacts of Brexit on four economic sectors that are particularly exposed to Brexit in Norfolk and Suffolk, as agreed with New Anglia LEP.

Following a background analysis of the key economic and policy implications of Brexit at the national level based on recent studies and the Government's position, we produced a high-level assessment of potential impacts in Norfolk and Suffolk on the four priority sectors: **Manufacturing, Agriculture, Energy, and Health and Social Care**. The analysis was complemented by research into significant Norfolk and Suffolk companies operating in these sectors.

Naturally, the impact of Brexit is not limited to the chosen sectors. As such, the sectors were selected on the basis of: (1) their particular significance to the Norfolk and Suffolk economy (both in terms of employment and value added); (2) the likelihood of their being highly impacted by Brexit; and (3) their strategic importance to Norfolk and Suffolk. This was determined in consultation with New Anglia LEP.

The analysis presented here focuses on these sectors and considers potential challenges and opportunities brought about by the impact of Brexit on:

- **Workforce** – including the EU labour force and the potential impacts of Brexit on immigration patterns.
- **Trade** – including future arrangements after the departure of the UK from the European Single Market.
- **Regulations** – in regards to the many EU directives incorporated into UK law.
- **Funding and Investment** – including the role of European funds and

subsidies and the capacity to continue to attract foreign private investment.

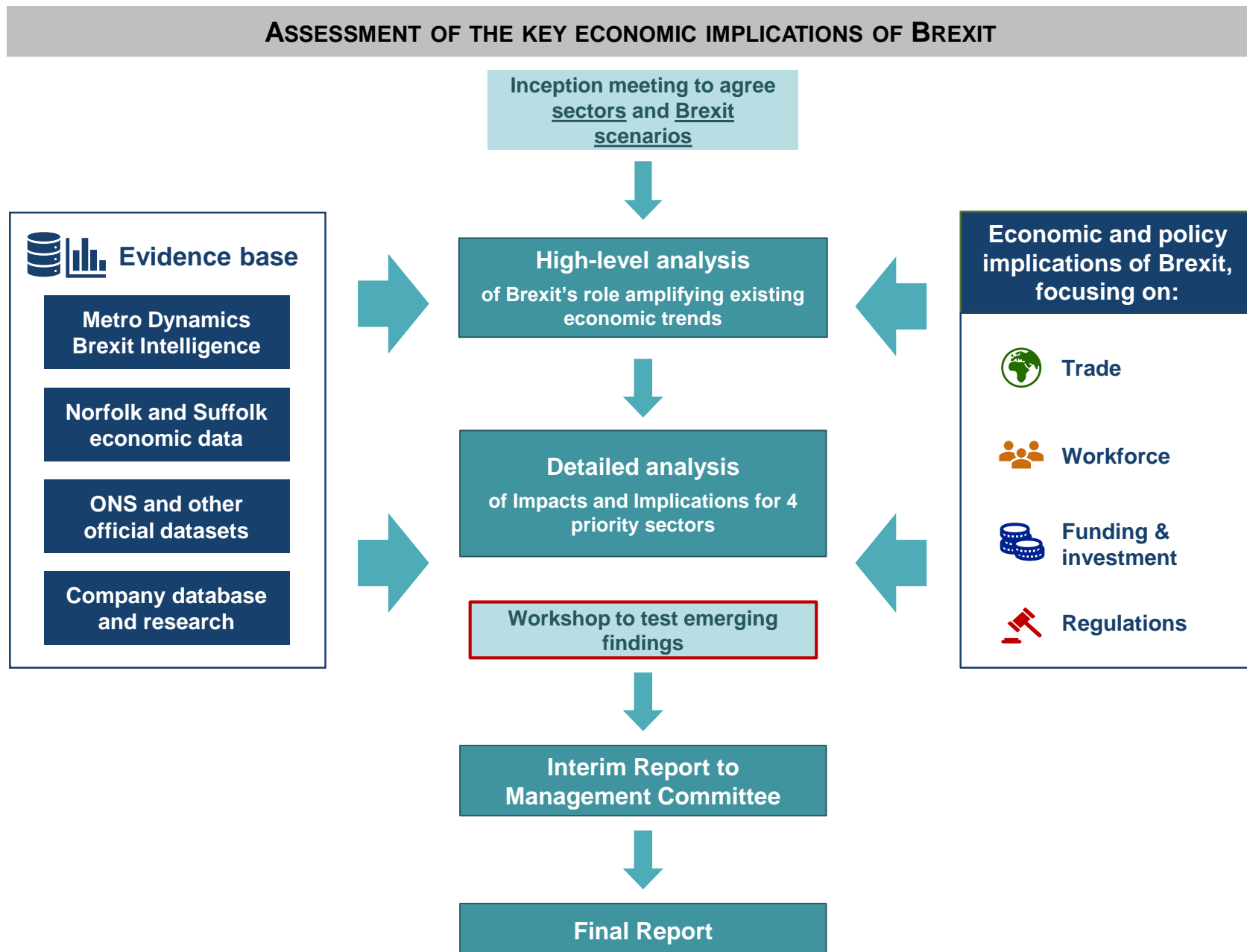
Our approach has been to identify local economic strengths, based on an analysis of Norfolk and Suffolk's employment patterns and companies, to sit alongside analysis of the sectoral impacts of Brexit, which are often reflective of national trends.

Although the final form of Brexit remains to be determined, this report identifies a set of challenges and opportunities for Norfolk and Suffolk, including:

- Retaining the current EU workforce, both low and highly skilled, who are key to the future success of the priority sectors assessed here, especially agriculture, manufacturing and health and social care.
- New opportunities to uplift the economy, using innovation and technology to upskill the workforce and create better paid jobs.
- The need for companies to adjust to new trade arrangements and potential tariffs and other barriers, while using the opportunity to increase the UK share of their supply chains and open their products to new markets worldwide.
- The importance of ensuring continued funding for research and development and innovation, as well as alternative sources of funding for agriculture and farming businesses that often rely on EU subsidies.
- The need to continue to be attractive to foreign investment.

The LEP could have a key role in this process, supporting local businesses and institutions in securing the necessary skills and funding to continue to grow, internationalise and innovate, in line with the Norfolk and Suffolk Local Industrial Strategy.

# Methodology



# Brexit Scenario Overviews

# Withdrawal Agreement Overview

## The Deal

- The Withdrawal Agreement Bill (October 2019) includes the UK's financial obligations to the EU (£33bn), the rights of EU citizens living in the UK, and arrangements to prevent hard borders on the island of Ireland. It does not cover trade and many other arrangements which will need to be agreed, such as regulatory alignment. **The UK and EU will try to establish a trade deal in 2020.**

## Departure Date

- UK begins its departure from the EU on **31<sup>st</sup> January 2020**.

## What Departing Means

- Upon departure, the UK will cease to be a member of the EU and its institutions, although EU laws and regulations will continue to apply. **The UK and EU will enter a 'transition period' as they negotiate their future relationship.**

## Transition Period

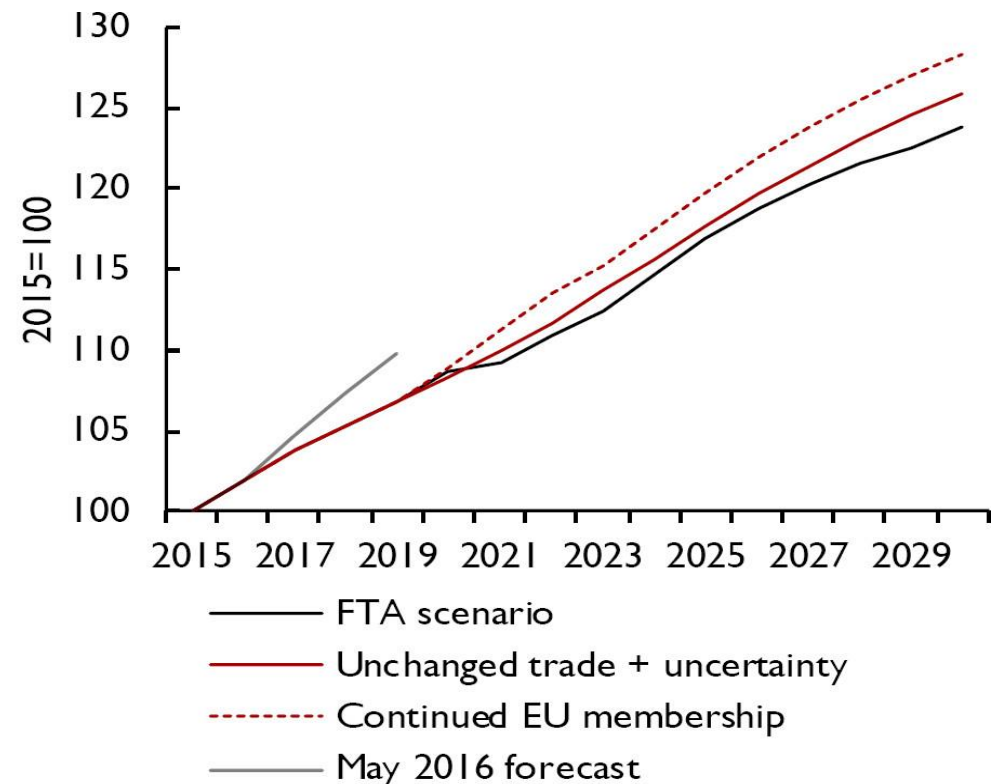
- Transition period due to last until **December 2020**, by which time the UK government expects to have agreed a new trade deal with the EU.

## No Deal is still on the table

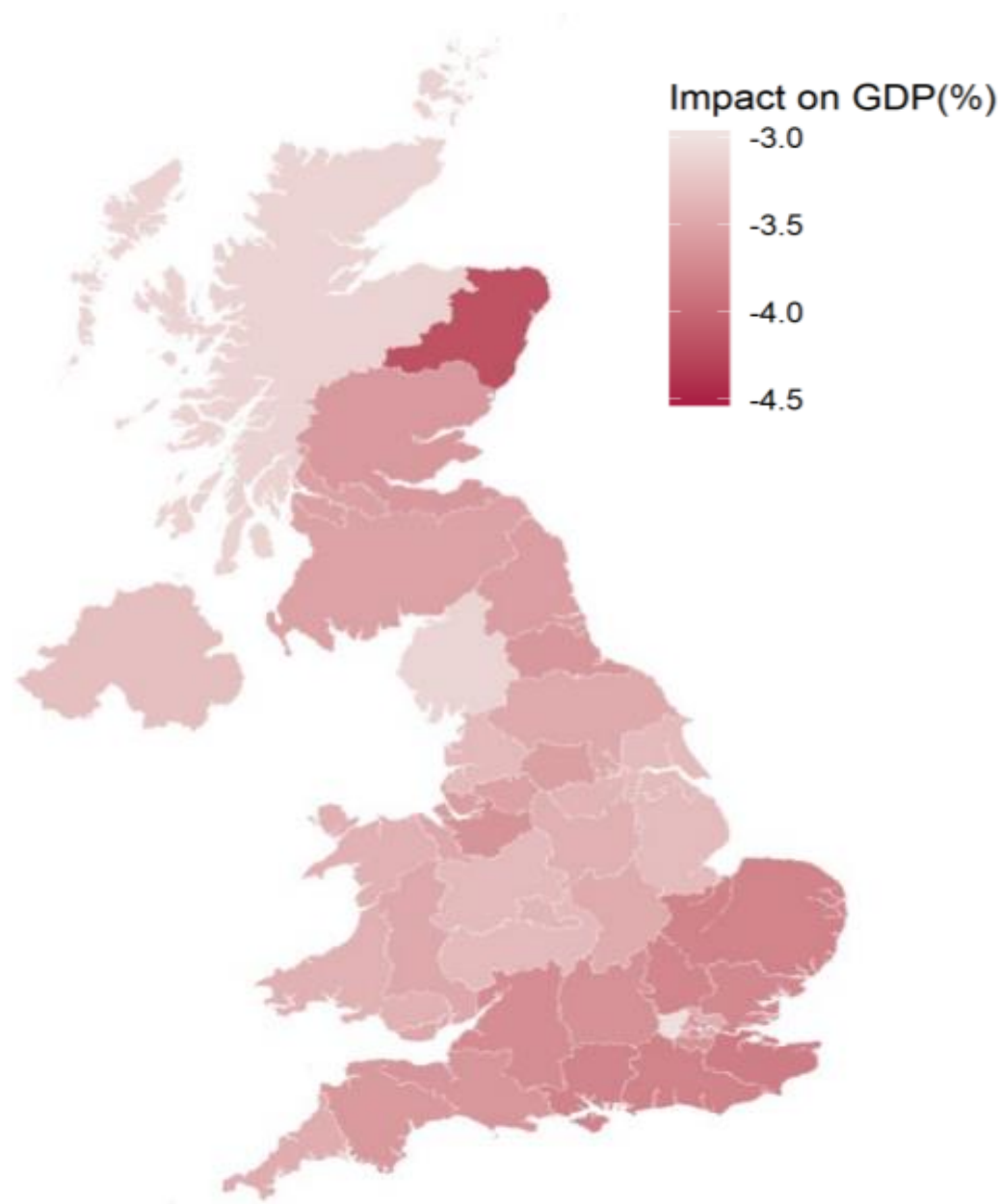
- There is a risk that no trading deal will be struck with the EU by December 2020, which would mean the UK would in effect leave the EU with no deal at the end of 2020.

## Economic Impacts

- Growth will be lower than if the UK remained in the EU, but **higher than under a No Deal exit.**
- Income per capita will be 2.5% lower each year** under the Withdrawal Agreement compared with remaining in the EU.
- National Institute of Economic and Social Research (NIESR) forecasts (left) suggest that Brexit will have a negative impact on GDP, with **output 3.5% lower** under a deal than remaining in the EU.



# Regional economic impacts of Withdrawal Agreement



- The map to the left shows the impacts on regional GDP up to 2030 resulting from the Withdrawal Agreement, relative to a hypothetical situation of the UK remaining in the EU.
- All regions of the UK are expected to be worse off relative to a scenario where the UK remains in the EU.
- Southern parts of the country are particularly affected, including Norfolk and Suffolk, where **GDP in 2030 is predicted to be 4% smaller** than it otherwise would have been.

# Withdrawal Agreement Deal – Impacts

## Workforce

- **Free movement of people will end once the UK leaves the EU.** Existing European Economic Area (EEA) nationals working in the UK are required to apply to stay in the UK through the EU Settlement Scheme, while new entrants intending to stay in the UK for longer than three months will need a European Temporary Leave to Remain permit to work and reside in the UK.
- **Migration laws will be more restrictive** to EU citizens migrating to the UK. Government has outlined 3 categories of visa based on the skill level of workers and whether they have a job planned.
- Areas with relatively low skilled workforces are likely to face disruptions while adjusting to the Withdrawal Agreement's effects due to the **requirement to retrain and reskill workers**. Workers in high-skilled occupations are less likely to be affected.

## Trade

- UK will attempt to **negotiate a trade deal with the EU** during 2020. Current trade arrangements will continue during the transition period.
- Tariffs and other **barriers to trade will impact entire supply chains**. Duties or restrictions placed on imports may cause shortages of materials, impeding businesses.
- The Withdrawal Agreement **opens opportunities to strike trade deals with other countries**, although the economic benefits of these are not expected to outweigh existing trade arrangements with the EU.
- Expected **devaluation of the Pound** will make UK exports more competitive but make imports more expensive, which will affect trade flows.

## Funding and investment

- The Institute for Fiscal Studies expects the **end of uncertainty to result in some built up, short term investments going ahead in 2020**, with a 5% boost in investment compared to continued uncertainty. However the boost would be **relatively short lived**, with growth returning to subdued levels of around 1% in 2021-2022.
- For EU funding sources such as Horizon 2020 and the ERDF, the government will guarantee to fund projects which have been agreed before the end of 2020.
- Eventually, **EU funding sources such as ERDF and ESF will need to be replaced or discontinued**.

## Regulations

- The **UK will leave the Single Market** so will be able to diverge from EU regulations around goods and services. EU tariffs and regulatory requirements will remain for goods entering Ireland.
- In order for UK businesses to access EU markets the UK will need to **maintain some regulatory alignment with the EU**, particularly regarding product safety and quality for manufactured goods and agricultural products.
- The UK will **leave EU regulatory framework such as Euratom and the Common Agricultural Policy**. In some circumstances close alignment with EU regulations will be retained; in others, the UK Government will seek to set regulations better suited to domestic conditions and objectives.

# No Deal Overview

## Departure Date

- The most likely No Deal departure date is now at **the end of 2020**, if no permanent agreement can be reached.

## What Departing Means

- The UK would leave the Single Market and Customs Union overnight.
- This would see the UK return to World Trading Organisation (WTO) trading rules.

## Customs and Terms

- There would be **no transition period**, the UK would leave all EU institutions overnight.
- New customs and regulatory borders would be raised overnight and the **EU and the UK would no longer automatically recognise licences to do cross-border business**.

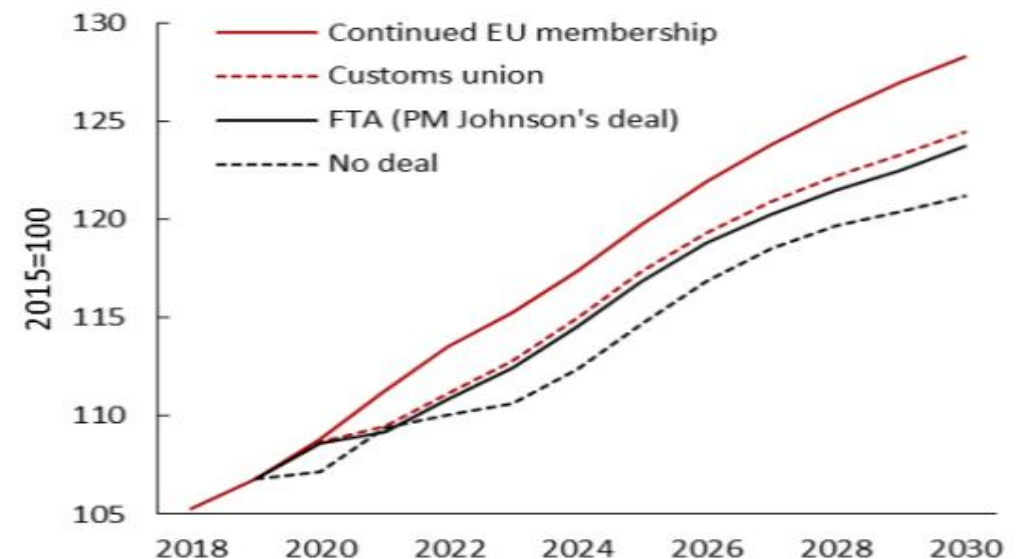
## The Next Steps

- The UK would seek to negotiate new trading deals, including outside of the EU.** Deals with large economies including the US and Japan will not be agreed in time for a No Deal exit.
- So far the UK government has agreed 20 “continuity” deals covering 50 countries or territories, including with Switzerland, Norway and South Korea.

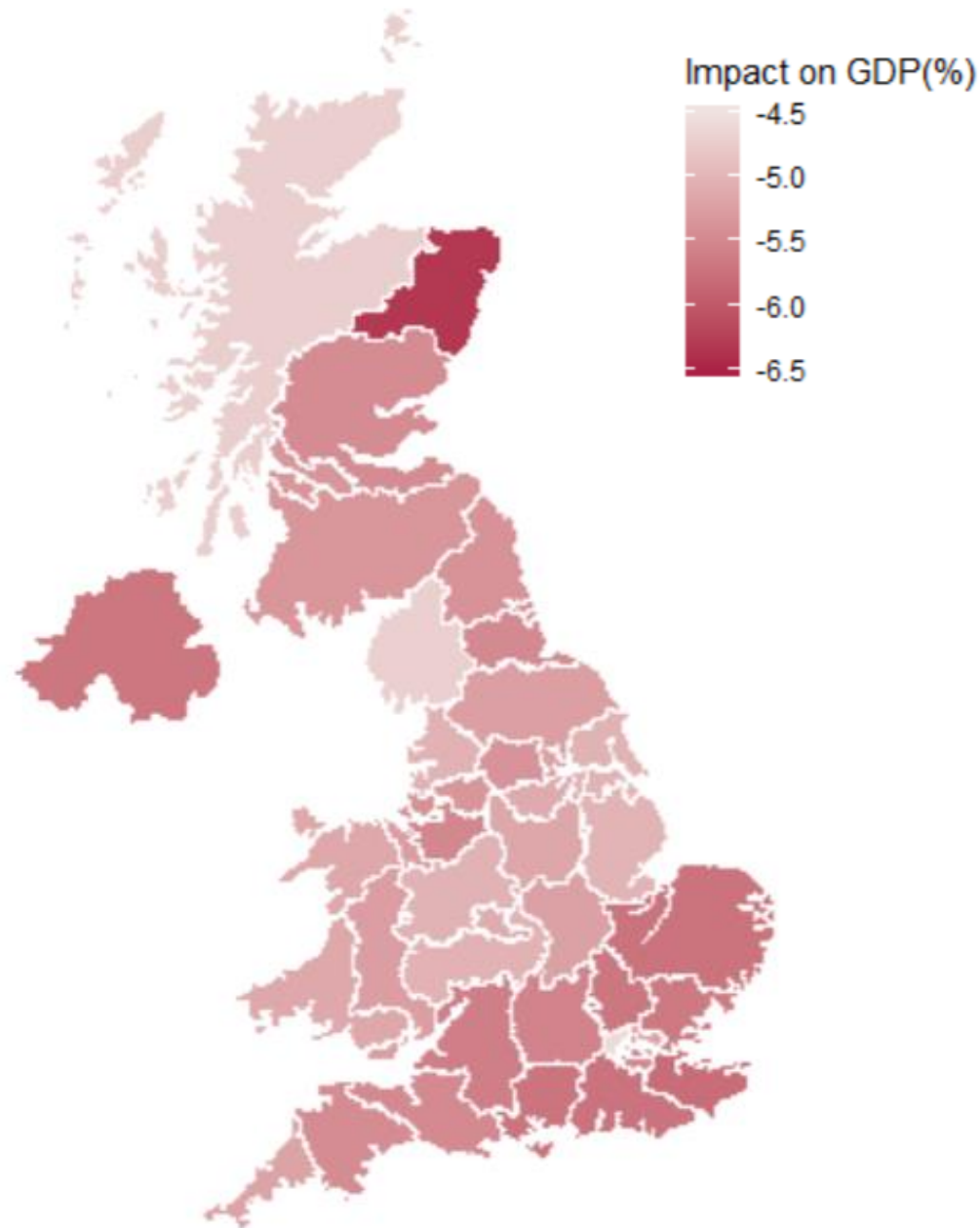
## Economic Impacts

- No Deal is the **most economically damaging** form of Brexit, with GDP expected to be 5-6% lower than remaining in the EU in 10 years time, and 2-3% lower than leaving with a deal.
- UK in a Changing Europe modelling suggests **income per capita will be 3.3% lower per year** compared to remaining in the EU under a return to World Trade Organisation (WTO) terms.
- The Institute for Fiscal Studies estimates that **GDP would be 2-3% lower over the two to three year period immediately following a No Deal Brexit**, meaning growth would be only 0-0.5% per year.
- NIESR modelling suggests that **East Anglia will be one of the areas most affected by a No Deal Brexit** – suffering a -5.7% decrease in GDP in 2030 relative to remaining in the EU.

*GDP impact of Brexit*



# Regional economic impacts of No Deal



- The map to the left shows the impacts on regional GDP up to 2030 resulting from No Deal, relative to a hypothetical situation of the UK remaining in the EU.
- All regions of the UK are expected to be worse off relative to a scenario where the UK remains in the EU.
- The impact of No Deal is greater than the impact resulting from the Withdrawal Agreement.
- Southern parts of the country are particularly affected, including Norfolk and Suffolk, where **GDP in 2030 is predicted to be 5.7% smaller** than it otherwise would have been.

# No Deal - Impacts

## Workforce

- Significant decline in EU migration; a possible rise in non-EU migration. **Overall net migration expected to decline.** Short-term UK-EU migration flows are likely to be very low, squeezing business' access to labour.
- Free movement from the EU to the UK ends the day the UK leaves the EU. A temporary 'leave to remain' scheme will allow EU citizens arriving after a No Deal Brexit to apply for temporary 3 year immigration status.
- The UK government has stated there will be **no radical changes to employment law** in the event of a No Deal Brexit.

## Trade

- **The UK will return to WTO trading terms until any new agreements can be reached.**
- There is limited clarity on what a trade deal with the EU, US or any other countries would look like, or timescales for their agreement.
- **Delays at borders and new tariffs on imported EU goods.**
- **Probable short term disruption to goods exports** due to delays in border crossings / bottlenecks at key export terminals.
- A possible second wave of export decline in the longer run due to some **businesses relocating from the UK to EU.**

## Funding and investment

- **The Institute for Fiscal Studies (IFS) expects a 4% reduction in business investment in 2020.**
- Investment occurs disproportionately in sectors heavily exposed to Brexit (e.g. manufacturing).
- Fiscal easing resulting from No Deal could result in a rise in public consumption and investment. **IFS forecasts a 6% boost to public investment** to compensate for the impacts of No Deal.
- **Projects currently funded by EU funding vehicles will continue to be funded** under a guarantee provided by the UK government. For new projects, EU funding sources will need to be replaced or discontinued.

## Regulations




















- The UK will be able to set its own regulatory provisions.
- The EU and UK would have **separate regulatory regimes for manufactured goods** in the event of a No Deal Brexit.
- In order for UK businesses to access EU markets the UK will need to **maintain some regulatory alignment with the EU**, particularly regarding product safety and quality for manufactured goods and agricultural products.
- The UK government has passed the European Union Withdrawal Act 2018, which converts EU law into UK law. This **prevents a legislative hole from opening up the day after a No Deal Brexit.**

# Brexit amplifies major trends

Brexit is just one of many issues which will affect the productivity and vitality of Norfolk and Suffolk's priority sectors. There are other issues which, even excluding the effects of Brexit, present major challenges. The most pressing of these are climate change and the global economic slowdown and, closer to home, the effect of the UK's labour market operating at or near full capacity while productivity growth remains subdued, and the effects of the ageing demographic.

**All of these trends present substantial challenges to some or all of Norfolk and Suffolk's priority sectors. Brexit will amplify the impacts of these trends** by increasing their severity and/or reducing the UK's capacity to mitigate them. Therefore, in preparing for the implications of Brexit for Norfolk and Suffolk it is also important to consider and prepare for how Brexit is likely to amplify the impacts of these other issues.

The table below summarises the information presented on the following pages about the major trends.

		Trend will result in fundamental disruptions to sector  Trend will disrupt some aspects of sector (e.g. workforce)  Trend's impact on sector likely to be relatively minor 			
Trend	How Brexit may amplify the trend's impact	Manufacturing	Agriculture	Energy	Health & Social Care
<b>Climate Change</b> The imperative to avoid the worst effects of systemic climate change and mitigate the impacts which can no longer be avoided is driving a transformation in economics and society	<ul style="list-style-type: none"> <li>UK no longer bound to EU approaches to combatting climate change, most notably the EU Emissions Trading System. Divergence from other EU environmental policies and standards likely to occur as part of a future trade agreement.</li> <li>The UK's Net Zero 2050 policy is a domestic target not directly related to EU policy.</li> </ul>				
<b>Global Economic Slowdown</b> The rise in trade protectionism, the residual impacts of past tightening in global financial conditions and domestic weakness in some large emerging market economies are combining to producing the lowest global growth rates since 2009	<ul style="list-style-type: none"> <li>Brexit exacerbates the effects of slow economic growth.</li> <li>As countries turn inwards barriers to trade may rise at a time when the UK is looking to negotiate new trade agreements</li> <li>Brexit has had to a devaluation of sterling, which increases the competitiveness of UK exports</li> </ul>				
<b>UK Full Employment / Low Productivity Growth</b> Employment and economic activity are at historic highs; productivity growth remains subdued. The UK must find a way to spur productivity gains	<ul style="list-style-type: none"> <li>Businesses have preferred to take on more workers than invest in capital because of uncertainty about the future relationship with the EU. This has contributed to the UK's slow productivity growth.</li> <li>Reduced access to EU labour may result in further inflationary pressure on wages, particularly in sectors where EU nationals form a significant part of the labour market.</li> </ul>				
<b>Ageing Demographic</b> The UK's population is growing older. The 65+ population will rise from 11.6 million in 2016 to 15.4 million by 2030. This increases demand for public services while reducing the number of working-age citizens available to pay for services	<ul style="list-style-type: none"> <li>Recruitment from EU countries is a key factor in ensuring the UK's health and social care system is capable of servicing the ageing demographic.</li> <li>EU migration helps slow the rate of demographic ageing. The UK's EU-born population is, on average, younger and more likely to be in the workforce than the UK-born population, and therefore make a significant contribution to the UK's tax base.</li> </ul>				

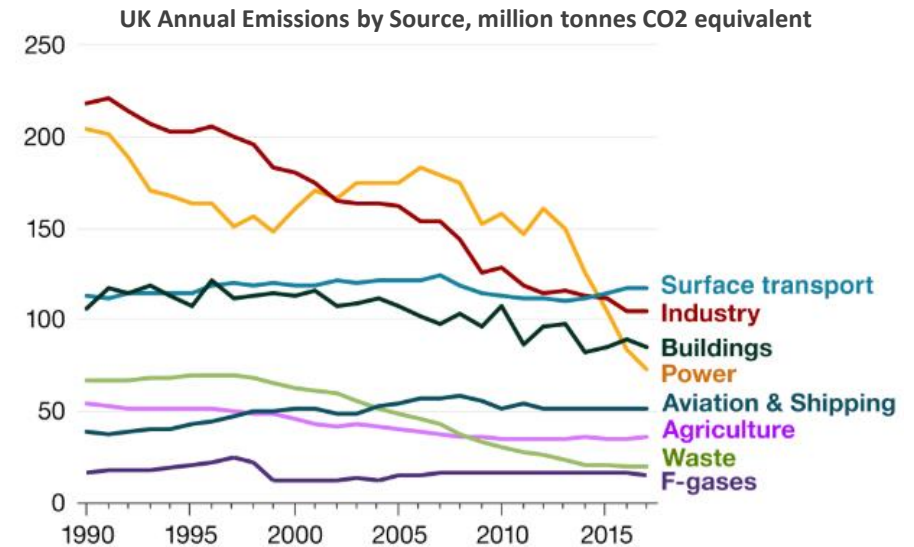
# Climate change

## Overview

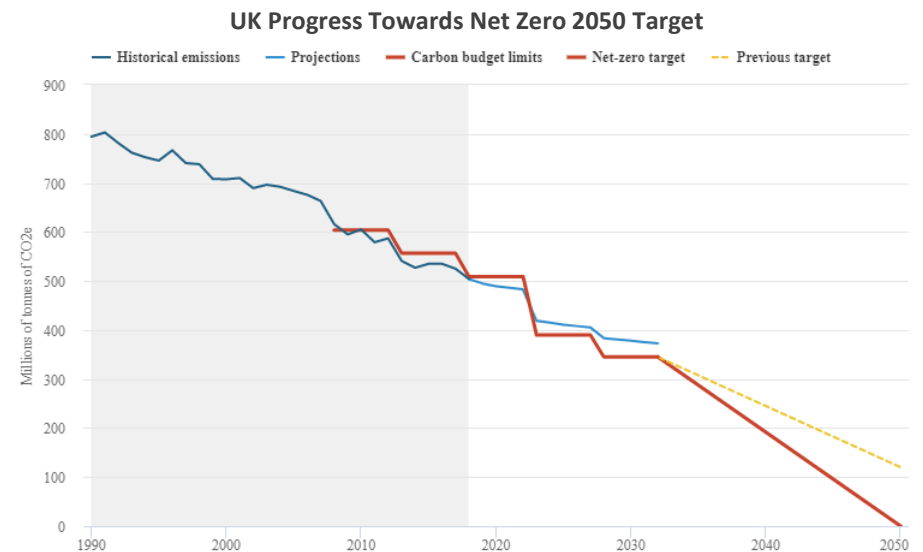
- The imperative to avoid the worst effects of systemic climate change and mitigate the impacts which can no longer be avoided is driving a transformation in economics and society.
- **Fundamental changes are occurring in the structure of the global and UK economy; energy generation and consumption; transport; food production; and ways of life in urban and rural areas.** Natural systems are becoming more volatile, leading to increased incidences and damage from natural disasters.
- Meeting the challenges of climate change is one of the most significant issues facing the UK and the world.

## Impact of Brexit

- **The UK Government has reiterated its commitment to domestic and international efforts to tackle climate change.** The UK has standalone domestic legislation in the form of the Climate Change Act 2008 which the May Government amended in 2019 to increase the ambition for decarbonisation to Net Zero by 2050. This is a domestic target not directly related to, nor affected by, Brexit.
- The UK's involvement with EU climate change efforts - in particular the EU Emissions Trading System - remains subject to ongoing negotiation. In a no deal scenario, the UK would not remain part of the EU ETS and the Government has put in place legislation for a carbon tax to continue carbon pricing in the short term.
- Leaving the EU will change how UK carbon budgets are delivered: where policies previously agreed at EU level no longer apply or are weakened, new UK policies will need to replace them. But it does not change the need to cut greenhouse gas emissions, the level of carbon budgets (which are set in UK law), or the duty on the Government to act to tackle climate change.



Source: BEIS / Climate Change Committee (2019)



Source: BEIS, Carbon Brief (2019)

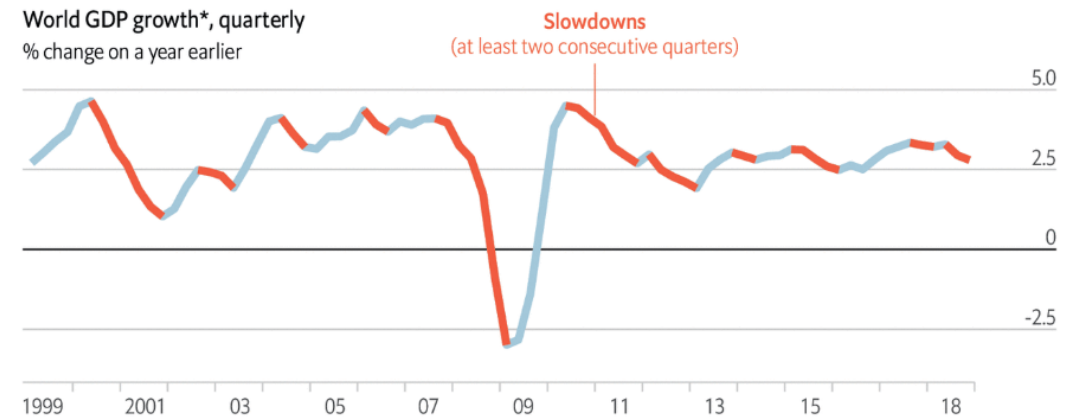
# Global economic slowdown

## Overview

- In October 2019 the International Monetary Fund trimmed its global growth forecast for 2020 by 0.1 percentage points to 3.4%. **Global economic growth in 2019 was 3%, the weakest expansion since the global financial crisis.** Growth has been slowing in rich countries in particular, most notably in Europe.
- The Bank of England identifies the principal drivers of the slowdown as the **rise in trade protectionism, the residual impacts of past tightening in global financial conditions and domestic weakness in some large emerging market economies.**
- Notably, significant trade disputes between the US and China have led to **a contraction in global trade** and are spurring a long-term restructuring of economic activity as companies reroute their international supply chains to avoid geopolitical risks, for instance by sourcing digital hardware such as microchips from manufacturers outside of China.

## Impact of Brexit

- The Bank of England expects economic growth to remain slow in the 2020s. Brexit will exacerbate this trend, but not cause it.
- As countries turn away from the global economy **barriers to trade may rise at a time when the UK is looking to negotiate new trade agreements** with the EU and other countries, including the USA. This will make negotiations more difficult and will reduce the potential value of trade for UK firms.
- At the same time, Brexit has had to a devaluation of sterling (shedding 15% of value since June 2016), which increases the competitiveness of UK exports for those companies which are able to navigate the downturn in global trade.



GBP to Euro Exchange Rate, 2015 - 2020



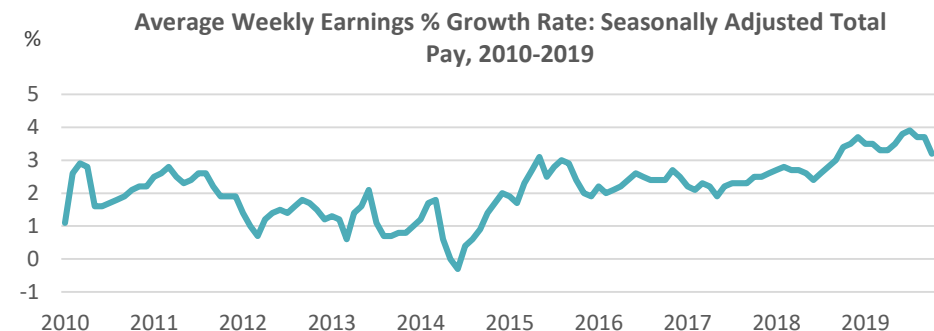
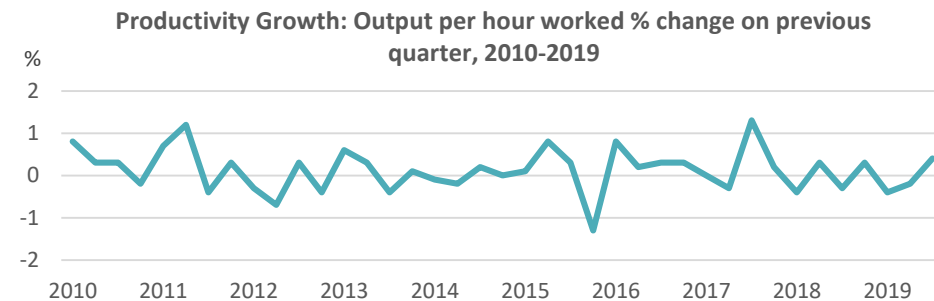
# Full Employment / Low Productivity Growth

## Overview

- Employment is at record high levels (76.2%) and **unemployment (3.8%) is at its lowest point since 1970.**
- **Employment has grown by 3.3 million since the financial crisis**, almost double the rise of 1.8 million in the working age population over the same period.
- Net migration continues to add to labour supply, though at a slower pace. Following a peak of 190,000 in the year to June 2016, the number of EU citizens arriving for work has fallen to 90,000 in 2019, the lowest level since 2012.
- High rates of employment have increased bargaining power for workers, resulting in real wage rises.
- **Strong employment growth has not resulted in strong economic growth. The UK's rate of productivity growth remains low.** Over the long-term productivity growth is a major determinant of living standards and economic prosperity.

## Impact of Brexit

- Uncertainty caused by **Brexit has resulted in companies postponing decisions about capital investment.** The Bank of England (2019) suggests uncertainty has resulted in an 11% reduction in business investment since 2016. To keep up production during uncertainty, **firms are choosing to hire and keep labour instead of investing in capital**, as investments in capital often cannot be reversed, but labour is more flexible. This approach contributes to the UK's high employment rate yet subdued productivity growth.
- Notably, **Norfolk and Suffolk's manufacturing sector has bucked this trend:** From 2016-18 jobs in the sector declined by 4.2% while GVA *increased* by 7.5%, suggesting productivity growth driven by investment.
- Reduction in access to labour from the EU may result in **further inflationary pressure on wages**, particularly in sectors where EU nationals form a significant part of the labour market, which may encourage firms to invest further in capital and technology to remain competitive.
- Following the implementation of the Withdrawal Agreement, UK firms may feel more certain about future economic conditions and be prepared to invest more in capital.



# Ageing demographic

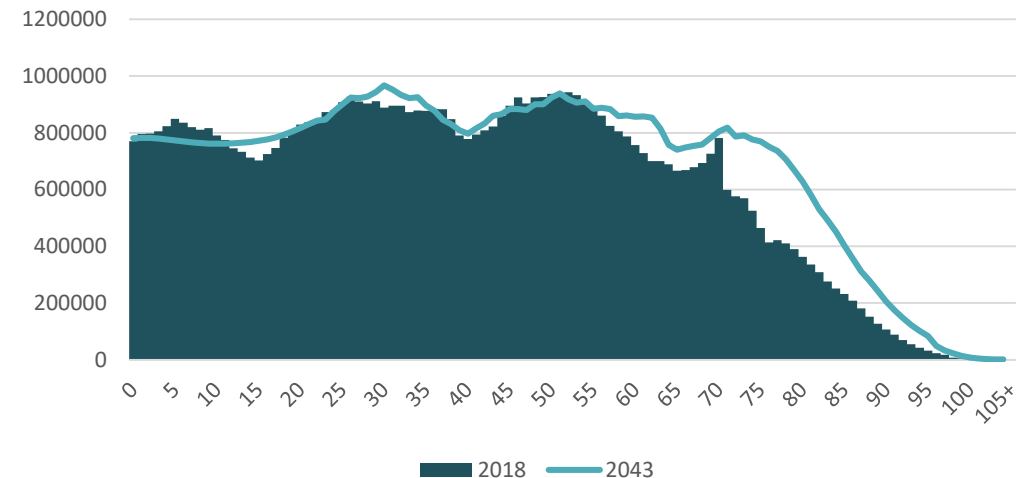
## Overview

- The UK's population is growing older. The 65+ population will rise from 11.6 million in 2016 to 15.4 million by 2030. By contrast, the working age population (16-64) will increase by only 3%.
- By 2042, the ONS projects that more than 24% of the UK population will be aged 65 or older. There will also be a surge in the 'oldest old', with the over 85s population nearly doubling by 2030.
- The population will age faster in more rural parts of the country.
- People of working age pay the bulk of taxes that support public spending, including state pensions (the largest single component of the welfare budget). **As older people have a greater need for public services, particularly healthcare, providers and institutions will need to adapt.**

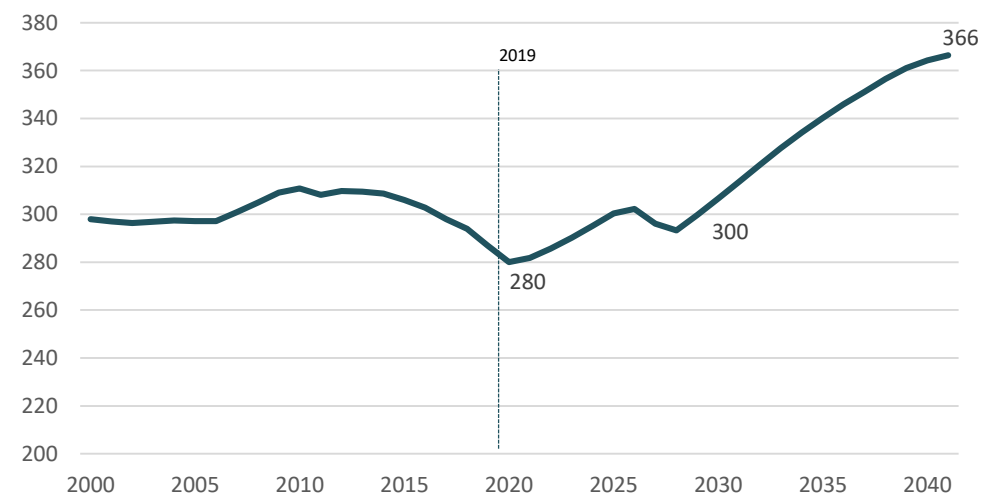
## Impact of Brexit

- Recruitment from EU countries is a key factor in ensuring the UK's health and social care system is capable of servicing the ageing demographic. EU nationals fill 5.5% (65,000) jobs in the NHS and an estimated 9% (115,000) jobs in adult social care. In both sectors this proportion has grown over time (*Kings Fund 2019*).
- Across NHS trusts there is currently a shortage of almost 100,000 staff (9%), including nurses, many types of doctors, allied health professionals and care staff. Vacancies in adult social care are rising, currently totalling 122,000 (9%) (*Kings Fund 2019*). Due to a lack of personnel, patients spent 1.8 million extra days in UK hospitals because of delays in their discharge (*KCL 2017*).
- EU migration helps slow the rate of demographic ageing. The UK's **EU-born population is, on average, younger and more likely to be in the workforce than the UK-born population**. Of the EU-born UK population in 2016, 69% were aged between 20 and 60, compared with 51% of those born in the UK. 13% of the EU-born population were aged under 20 and 18% were over 60, compared with 26% and 23% respectively of those born in the UK (*ONS 2019*). Reduced EU migration may therefore exacerbate the pace of demographic ageing.

Age Structure of the National Population, 2018 vs 2043



Old Age Dependency Ratio, England, 2000 - 2041



\*The Old Age Dependency Ratio is a ratio of the number of people over the age of 65 per 1,000 people between the ages 16 – 64. A higher value indicates more people over the age of 65 relative to those aged 16-64.

Source: ONS 2019

# **Brexit Impacts on Norfolk and Suffolk**

# Norfolk and Suffolk: EU Workforce

National insurance registrations provide an indication of the number of non-UK individuals entering the UK with the intention to work. While the level of international migration into Ipswich and Norwich is high (12,964 and 10822, respectively), other local authorities have also experienced a high inflow of international workers.

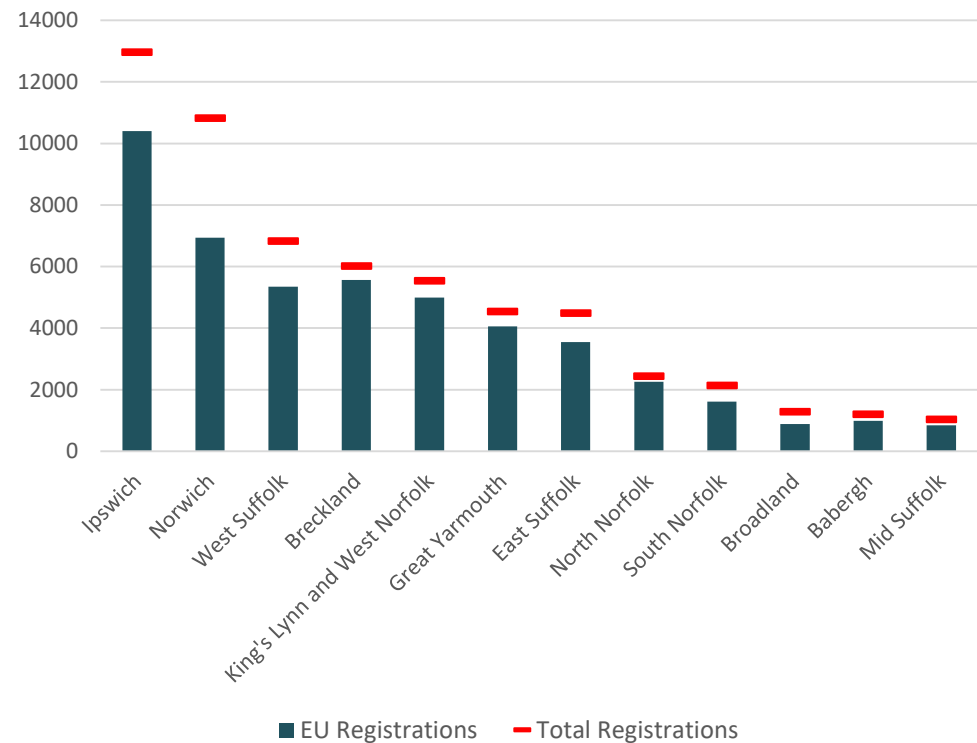
Cities accommodate higher skilled jobs which often offer higher remuneration. Economic migrants from outside the EU face more restrictions to entering the UK than EU migrants, and so many will only do so for jobs with higher pay. This is one explanation for the observed difference.

The majority of international migrants seeking employment outside of Norfolk and Suffolk's two cities are from within the EU. **In North Norfolk, Breckland, King's Lynn and West Norfolk, and Great Yarmouth, 93%, 92%, 90% and 89% of international migrants have been from countries within the EU.**

**These authorities contain a high proportion of jobs in the manufacturing, agriculture and energy sectors – often jobs that are taken by EU migrants.**

This reflects the level of demand in Norfolk and Suffolk for EU migrant workers in areas outside of the two main cities.

*National Insurance registrations by foreign nationals by local authority, 2014/15 – 2018/19*



# Norfolk and Suffolk: International Trade

International trade is a major contributor to the Norfolk and Suffolk economy. In 2015 £2.89bn of goods and services were exported internationally – 56% of which were traded with countries within the EU. For Norfolk and Suffolk, **seven of the top ten countries by export value are members of the European Union** and benefit from free trade.

Norfolk and Suffolk trade with a number of countries outside the EU but such trade relationships often generate exports with lower value. Of the top 30 export partners, 18 are Non-EU partners.

The Netherlands is Norfolk and Suffolk's largest market, with exports totalling £392m in 2015; this represents 24% of the value of trade with the EU, and 14% of the total value of trade. A change in trading conditions will not only affect this trading relationship, but trading relationships with all EU member states.

All of Norfolk and Suffolk's **top 5 sectors by export value fall under Manufacturing or Agriculture – industries which are vulnerable to changes in trading conditions from Brexit**. This vulnerability spans from the high level of trade with the EU in these sub-sectors; for example, 71% and 69% of exports enter the EU in the Chemicals and Manufactured Goods trade classifications, respectively.

## Top 10 countries by export value (2015)

Partner Country	Value of Exports (£m)
Netherlands	392
USA	352
Irish Republic	264
Germany	228
France	144
Italy	110
Spain	101
Belgium	92
Japan	84
China	71

## Top 5 trade classifications by export value (2015)

Partner Country	Value of Trade (£m)	% of value of exports to the EU
Machinery and Transport	910	38%
Chemicals	738	71%
Food and Live Animals	479	63%
Miscellaneous Manufactures	388	54%
Manufactured Goods	295	69%

# Norfolk and Suffolk: Foreign Direct Investment



The UK's current EU membership allows for free trade across most goods and services, meaning it is possible for EU-based companies to locate in Norfolk and Suffolk and continue trading within the EU. FDI doesn't just relate to business investment, but can also refer to the purchase of property.

Foreign direct investment (FDI) contributes to Norfolk and Suffolk's economic success, bringing with it more economic activity. The highest number of investment projects came from countries outside of the EU, with the U.S, China & Hong Kong and India generating the most.

**Nationally, 31% of FDI projects were initiated by EU member states. Led by the US, countries from outside the EU have a higher propensity to invest in the UK.**

Investments from outside the EU have created the highest number of safe jobs. The investment projects undertaken in the UK by countries in the EU have the potential to create a high number of jobs, however. **Current investment projects from Germany and France have the potential to create 20,450 and 16,040 new jobs** throughout the UK – the second and fourth highest of all international projects.

*Top 10 countries by number of FDI projects in all of UK (2015-18)*

Investing Country	Number of FDI projects (2015-2018)	Number of safe jobs created (2015-2018)	Projected number of new jobs created
United States	1,641	14,725	76,871
Japan	347	12,264	9,007
Canada	247	10,226	5,642
India	387	8,521	16,763
China & Hong Kong	441	6,158	8,222
France	341	4,918	16,040
Italy	285	3,221	5,302
Spain	190	2,871	6,394
Germany	326	2,552	20,450
Ireland	154	1,847	6,566

\*New jobs capture total jobs likely to be created within 3 years from the start of the project; Safe jobs include those jobs which were retained as a result of the additional/new inward investment

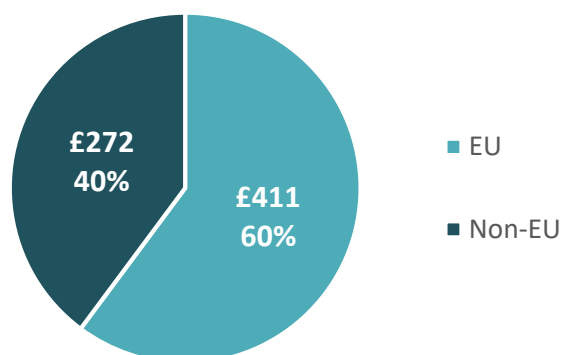
# Priority Sector: Manufacturing

	Jobs			Businesses			GVA <sup>[1]</sup>		
	Count	% of total	Growth 2016-18	Count	% of total	Growth 2016-19	£(bn)	% of total	Growth 2016-18
<b>Great Britain</b>	1,904,500	6.2%	+2.6%	109,045	4.1%	+1.4%	£179.95bn	10.1%	+2.8%
<b>Norfolk and Suffolk</b>	<b>45,500</b>	<b>6.3%</b>	<b>-4.2%</b>	<b>2,930</b>	<b>4.7%</b>	<b>-0.5%</b>	<b>£4.65bn</b>	<b>12.8%</b>	<b>+7.5%</b>

Top 5 sub-sectors by employment	Jobs
Manufacture of fabricated metal products, except machinery and equipment	7,000
Manufacture of machinery and equipment	6,500
Manufacture of rubber and plastic products	5,000
Printing and reproduction of recorded media	3,750
Manufacture of chemicals and chemical products	2,750

*Norfolk and Suffolk sector exports (2015) [2]*

The Value of Exports in Manufacturing £m



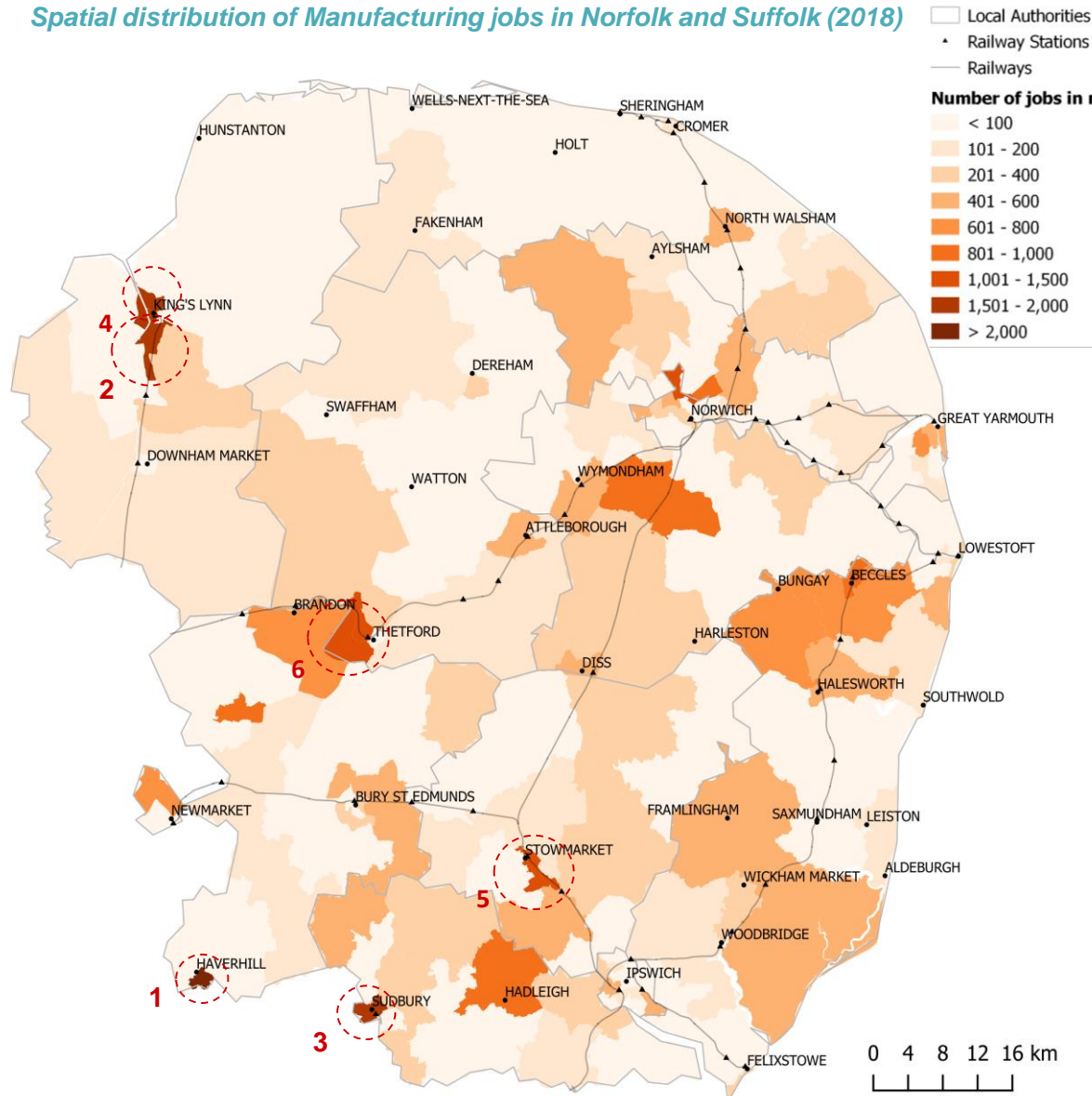
Business Base (% of sector total)	Micro (0-9)	Small (10 – 49)	Med (50 – 249)	Large (250+)
<b>Great Britain</b>	78.1%	16.4%	4.6%	0.9%
<b>Norfolk and Suffolk</b>	<b>76.5%</b>	<b>17.9%</b>	<b>5.1%</b>	<b>0.5%</b>

*Example Manufacturing companies in Norfolk and Suffolk*

Company	Location
Lotus	Norwich
Challs	Ipswich
Bosch Lawn and Garden	Stowmarket
Multimatic	Wymondham
Warren Services	Thetford
Lintott Control Systems	Norwich
Bespak	King's Lynn
Treant	Bury St Edmunds
M&H Plastics	Ellough Moor
Palm Paper	King's Lynn

# Priority Sector: Manufacturing

*Spatial distribution of Manufacturing jobs in Norfolk and Suffolk (2018)*



	Area	No. jobs	SIC-2 sub-sectors
1	Haverhill (East)	2,290	<ul style="list-style-type: none"> <li>Manufacture of fabricated metal products</li> <li>Manufacture of chemicals and chemical products</li> </ul>
2	Kings Lynn and the area to the South	1,890	<ul style="list-style-type: none"> <li>Manufacture of machinery and equipment</li> <li>Manufacture of paper and paper products</li> </ul>
3	Sudbury	1,775	<ul style="list-style-type: none"> <li>Manufacture of machinery and equipment</li> <li>Manufacture of rubber and plastic products</li> </ul>
4	Kings Lynn (North)	1,550	<ul style="list-style-type: none"> <li>Manufacture of rubber and plastic products</li> <li>Manufacture of machinery and equipment</li> </ul>
5	Stowmarket	1,210	<ul style="list-style-type: none"> <li>Manufacture of chemicals and chemical products</li> <li>Manufacture of machinery and equipment</li> </ul>
6	Thetford	1,170	<ul style="list-style-type: none"> <li>Manufacture of pharmaceutical products and preparations</li> <li>Manufacture of machinery and equipment</li> </ul>

# Brexit impact on manufacturing

## Workforce

### Overview:

- Manufacturing is reliant on EU labour. Sector-wide in the UK, between October 2017 and September 2018, **11.0% of the workforce** (318,000 people) were non-UK EU nationals (*ONS 2018*).
- Approximately **5,000 workers** in Norfolk and Suffolk's manufacturing sector are EU nationals.
- These workers are mostly **employed in low skilled jobs**, as 17.7% of plant operative and elementary workers in Norfolk and Suffolk are non-UK EU nationals compared to 10.8% in England.

### Impacts:

- **Manufacturing firms are likely to face recruitment problems** on two fronts: access to workers to fill low-skilled jobs; and access to a larger pool of high-skilled workers from the EU, who may find the UK a less attractive place to live and work.
- Underlying the need for EU workers in manufacturing in the UK is a **long-standing skills gap, rooted in disparities between the skills provided by education/training and those required by employers** (EEF, 2016a).
- The UK's **existing full employment means the cost of labour for the manufacturing sector may rise**. The long-term impact of this may be a reduction in UK manufacturing as companies move their operations abroad where labour costs are lower. Alternatively, rising labour costs may incentivise manufacturing firms to invest in capital and technology.
- In Norfolk and Suffolk, from 2016-18 employment and business numbers fell in the sector while GVA rose. This could indicate that locally **the sector is consolidating into fewer, more-productive companies** which are investing in capital and technology to drive growth.

## Funding and investment

### Overview:

- EU funding helps to maintain a dynamic and innovative manufacturing sector in the UK. In 2015, the majority (68%) of Research and Development expenditure in the UK was channelled to manufacturing (CBI, 2016).
- A number of specific schemes have benefitted the sector and driven innovation, including the EU Framework Programme (€7bn from 2007-13) and Horizon 2020 (€1.8bn).
- Locally, EU funding has been important, as the Hethel Engineering Centre is funded by the EU Regional Development Fund. Losing eligibility for these funds may damage UK manufacturing's long-term vibrancy and competitiveness.
- Manufacturing receives a relatively low share of foreign direct investment (FDI); however, it is vital to boosting productivity through efficiency improvements and the development of new products.

### Impacts:

- Current EU sources of **funding and investment will eventually need to be replaced or discontinued**. These funding sources frequently support research and innovation activity in the manufacturing sector. Without replacement sources of funding the UK's manufacturing **companies may innovate less, and therefore suffer from reduced productivity gains**.
- Lower levels of foreign direct investment may reduce potential future productivity gains.

# Brexit impact on manufacturing



## Trade

### Overview:

- Manufactured products (excluding food) account for **95.4% of goods exports** and **93.0% of goods imports** in the UK (ONS 2017).
- Nationally, the EU share of exports in manufactured products is 47.7% but rises to 60% (£411m) for Norfolk and Suffolk (ONS 2017).
- According to the latest official estimates, **non-tariff barriers for machinery would not be very high**. The additional costs of non-tariff barriers have been estimated to be equivalent to 4% with an FTA and 6% with WTO rules (House of Commons 2018).
- A short-term impact of Brexit has been the **depreciation of sterling**. The fall in the value of the pound has impacted the trade of manufactured goods. A positive outcome of this has been higher output prices (in sterling) for exported goods. Consequently, **UK exports have become more competitive**.

### Impacts:

- Manufactured goods move along complex supply chains which operate across the EU. The UK is reliant on exports to the EU, and **the interdependency of companies along the supply chain in the single market means that the any imposition of tariffs will increase costs for manufacturers** (CBI 2016). The introduction of barriers to trade would affect not only the export of final products but will significantly affect manufacturing costs (and times), making British businesses less competitive.
- **The depreciation of sterling has increased input costs for manufacturers**, due to higher costs of importing raw materials and fuels, as well as manufactured products. The challenge of higher costing imports offers the opportunity to boost the UK domestic market, as companies are forced to source nationally (ONS 2017).



## Regulations

### Overview:

- EU laws and regulations apply to many different aspects of manufacturing, including **product safety, employment, health and safety, and environmental and consumer protection** (EEF, 2016b).
- **Regulatory compliance is central to trade and investment agreements**, particularly as many EU laws (for example those concerning labour markets and health and safety) have been integrated into domestic law.
- In order to continue trading in the EU, **UK manufacturers will likely need to conform to EU product safety and product standards** (EEF, 2016b).

### Impacts:

- A major issue for manufacturing companies will be the **rules of origin**, whereby products sold in the EU market with preferential or non-tariff arrangements will have to prove that they are from the UK. This prevents countries without a trade deal from accessing the EU market through the UK and vice versa. Since a product is made of several parts produced in different places, **proving a threshold for 'local content requirements' will add significant levels of bureaucracy and border checks** (Institute for Government 2018).
- There are some market pressures for the UK continue to comply with certain regulations, such as employment and health and safety regulations, in order to maintain stability. However, **the UK might opt for a more flexible legislative and regulatory framework, which is independent of the EU**. This would be welcomed by many small firms in the sector, as 73% of small manufacturing firms surveyed by the Federation of Small Businesses (2018) stated that the burden of current regulations outweighs the benefits.

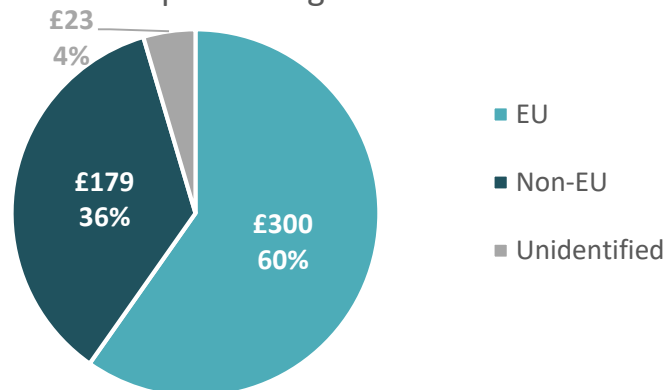
# Priority Sector: Agriculture

	Jobs			Businesses			GVA [3]		
	Count	% of total	Growth 2016-18	Count	% of total	Growth 2016-19	£(bn)	% of total	Growth 2016-18
<b>Great Britain</b>	1,896,500	6.2%	+1.2%	264,105	10%	+3.8%	£39.01bn	2.2%	+3%
<b>Norfolk and Suffolk</b>	<b>74,000</b>	<b>10.2%</b>	<b>+8%</b>	<b>9,405</b>	<b>14.9%</b>	<b>+1.9%</b>	-	-	-

Top 5 sub-sectors by employment	Jobs
Processing and preserving of poultry meat	5,000
Other professional, scientific and technical activities	3,500
Veterinary activities	3,250
Production of meat and poultry meat products	3,000
Other research and experimental development on natural sciences and engineering	2,250

## Norfolk and Suffolk sector exports (2015) [4]

The Value of Exports in Agriculture £m



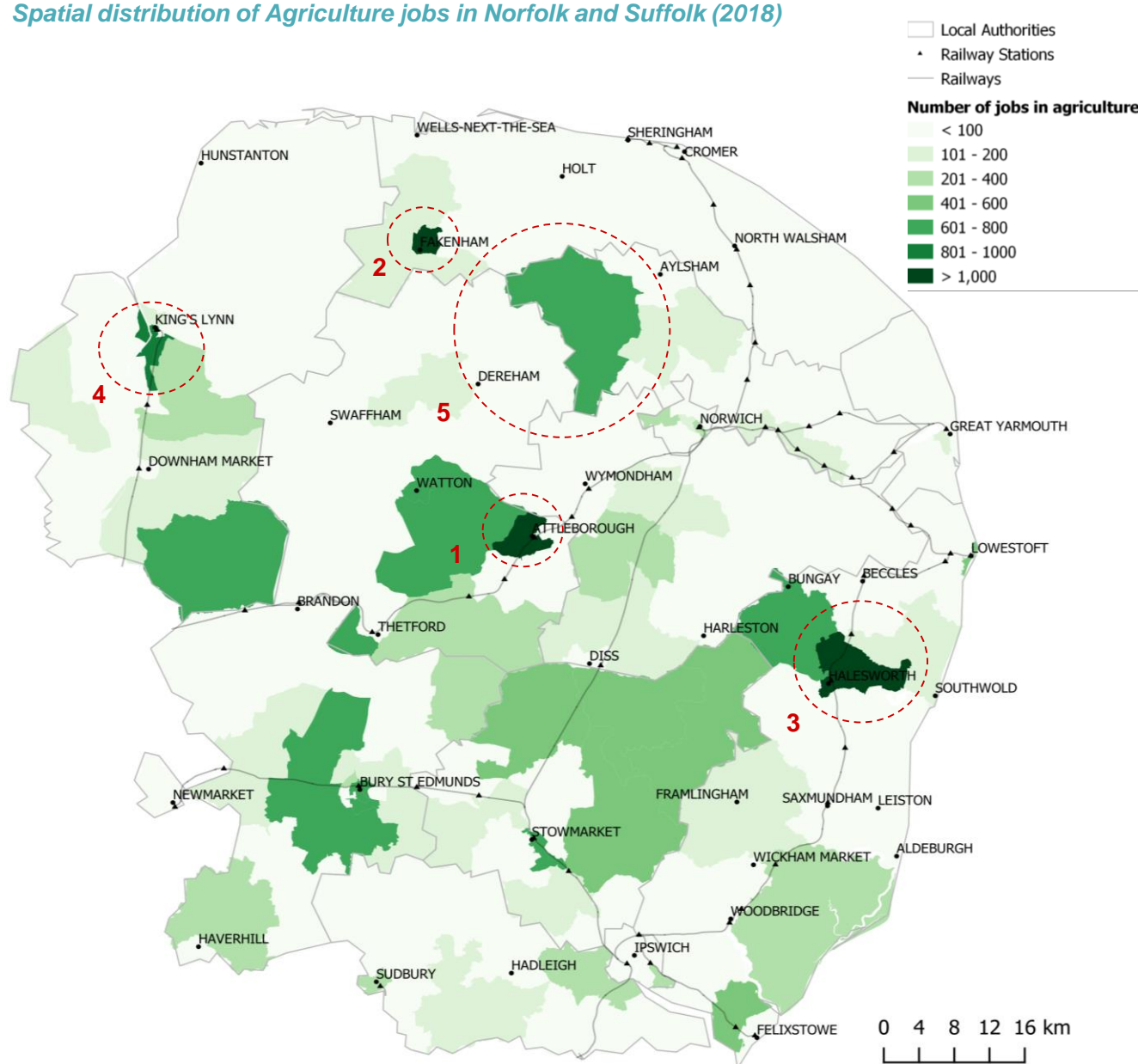
Business Base (% of sector total)	Micro (0-9)	Small (10 – 49)	Med (50 – 249)	Large (250+)
<b>Great Britain</b>	92.8%	5.8%	1.1%	0.3%
<b>Norfolk and Suffolk</b>	91%	7.4%	1.3%	0.3%

## Example Agriculture sector companies in Norfolk and Suffolk

Company	Location
Place UK	Norwich
Kinnerton	Fakenham
British Sugar	Norwich
Cranswick Country Foods	Watton, Norwich, Yaxley
Gressingham Foods	Woodbridge
Fram Farmers	Woodbridge
Bernard Matthews	Norwich
Kettle Foods	Norwich
ForFarmers	Bury St Edmunds
Muntons	Stowmarket

# Priority Sector: Agriculture

*Spatial distribution of Agriculture jobs in Norfolk and Suffolk (2018)*



	Geographic area	No. jobs	SIC-2 sub-sectors
1	Attleborough	1,045	<ul style="list-style-type: none"> <li>Processing and preserving of poultry meat</li> <li>Wholesale of dairy products</li> </ul>
2	Fakenham	1,024	<ul style="list-style-type: none"> <li>Manufacture of cocoa, and chocolate confectionery</li> <li>Manufacture of prepared meals and dishes</li> </ul>
3	Halesworth	1,023	<ul style="list-style-type: none"> <li>Processing and preserving of poultry meat</li> </ul>
4	Kings Lynn	898	<ul style="list-style-type: none"> <li>Production of meat and poultry meat products</li> <li>Manufacture of condiments and seasoning</li> </ul>
5	East of Dereham	785	<ul style="list-style-type: none"> <li>Production of meat and poultry meat products</li> <li>Manufacture of cider and other wine fruits</li> </ul>

# Brexit impact on agriculture

## Workforce

### Overview:

- Agriculture (including food processing) is a labour-intensive sector which is **reliant upon both full-time and seasonal EU labour**. Between October 2017 and September 2018, **7.3% of the national workforce** (25,000 people) were non-UK EU nationals (*ONS 2018*). This figure does not account for temporary and seasonal workers.
- It is estimated that **EU nationals make up 98% of temporary workers** in agriculture (*House of Commons 2017*).
- According to survey data from the National Farmers Union, more than **4,300 vacancies were unfilled in 2017**, causing losses to farmers.
- Food manufacturing companies rely heavily on EU migrant labour. EU workers represent **30% of the labour force in the food production sector** and **60% in the poultry meat industry**. Sourcing these jobs domestically is considered problematic due to their perceived undesirability (*Open Britain 2017*).

### Impacts:

- A restriction on free movement is likely to result in **labour shortages**, which could reduce production, and necessitate increased imports and price rises (*Carrington 2018*). **In the longer term this may encourage the UK's agriculture businesses to invest in capital and technology.**
- UK agriculture's reliance on seasonal EU labour derives from many farms' **inability to recruit sufficient domestic workers** (*NFU 2016*), due to concerns over low wages and adverse working conditions.

## Funding and investment

### Overview:

- UK farmers are highly reliant on subsidies from the **Common Agricultural Policy (CAP)**, which the UK will leave. On average, **CAP payments contribute 55% to a farm's total income**.
- The aim of CAP is to address the failure of agricultural markets in delivering fair incomes to farmers by helping farmers deal with market volatility and to buffer them against shocks. Because CAP payments are allocated partly on the amount of land under management a farm has, they have been **criticised as subsidising environmental degradation and of providing the most benefit to farmers who own the most land** (*Institute for Government 2018*).
- Beyond CAP subsidies, the **UK was allocated €5.2 billion for rural development projects between 2014 and 2020** (*NFU 2016a*). These funds support farm productivity, micro/small enterprises and farm diversification, rural tourism, rural services, cultural and heritage activities, and forestry productivity. Following Brexit these funding sources will need to be replaced or discontinued. The UK government will continue to fund all projects agreed before the end of 2020 for the duration of the project.

### Impacts:

- Removing CAP payments without a replacement scheme would result in substantial farm closures, lost output and disruption to the UK's agri-food supply chain. Although yet to be determined, the **UK Government has indicated it is likely to maintain the same subsidy arrangements as under the CAP for UK farmers following Brexit**, and would be unlikely to move to a new system of farm support until after 2024 (*House of Commons 2018*).
- Future agricultural funding schemes are likely to provide greater incentives for environmental protections and other public outcomes, such as reforestation and public access.

# Brexit impact on agriculture

## Trade

### Overview:

- The UK is a net importer of food. In 2016 the UK exported £20bn of food, feed and drink compared to imports of \$43bn, resulting in a trade deficit of £23bn - £18bn of which was with EU countries (*House of Commons 2018*).
- **60% of the UK's exports and 70% of imports are to/from EU countries.** The EU is likely to remain a major destination due to the difficulty of transporting perishable goods to markets further away.
- Given this dependence, **UK agricultural exports will be particularly vulnerable to the introduction of trade barriers such as tariffs.** On average, tariffs are 36% on dairy products, 20% on animal products and 10% for fruit and vegetables. A 2017 survey by the Federation of Small Businesses showed that 34% of small business exporters said that they would be deterred from trading with the EU if tariffs of 2-4% were introduced.
- However, **high tariffs on imports may offer the opportunity for import substitution**, as the price of UK products becomes more attractive to UK consumers, benefiting UK producers and food supply chains.

### Impacts:

- A slowdown in agricultural trade may **impact interconnected sectors**, such as food processing.
- Despite the potential implementation of barriers to trade, **Brexit is thought to offer the sector the opportunity to grow food and drinks exports**, due to global demand for high-quality British food products. In 2017, the exports of food and drink reached record levels of £22 billion with products sold to 217 markets (*Institute of Export and International Trade 2018*).

## Regulations

### Overview:

- There is **limited scope for relaxing current standards and regulations.** At present, standardised EU rules exist on products produced in the UK and sold in the EU. These standards will have to be maintained for UK products exported to the EU, which will limit the UK capacity to relax current standards after leaving the Single Market.
- **EU regulations dictate the terms of trade in many sub-sectors of agriculture**, such as poultry and meat processing. The majority of export health certificates and trade agreements have an EU dimension (*Jean-Pierre Garnier, Head of Exports at AHDB Beef and Lamb, Global Meat News, 2016*). The UK has health certification agreements with over 100 countries (*FWI 2016*), demonstrating the importance of EU regulation for trade globally, not only with other EU member states.

### Impacts:

- The enforcement of different EU and UK regulations following the UK's departure from the Single Market will most likely introduce the **need for border checks on most food products.** The extent to which border controls between the UK and the EU can be streamlined with the use of technology is still uncertain, but it will nonetheless **introduce an extra barrier to trade and the associated costs for UK businesses** (*House of Commons 2018*).

# Priority Sector: Energy

	Jobs			Businesses			GVA		
	Count	% of total	Growth 2016-18	Count	% of total	Growth 2016-19	£(bn)	% of total	Growth 2016-18
<b>Great Britain</b>	1,095,750	3.6%	+3.4%	117,790	4.5%	-0.2%	-	-	-
<b>Norfolk and Suffolk</b>	<b>26,705</b>	<b>3.7%</b>	<b>+16.5%</b>	<b>3,055</b>	<b>4.9%</b>	<b>-1.6%</b>	-	-	-

Top 5 sub-sectors by employment	Jobs
Engineering activities and related technical consultancy	8,500
Collection of non-hazardous waste	3,750
Construction of other civil engineering projects.	2,500
Distribution of electricity	1,500
Treatment and disposal of non-hazardous waste	1,000

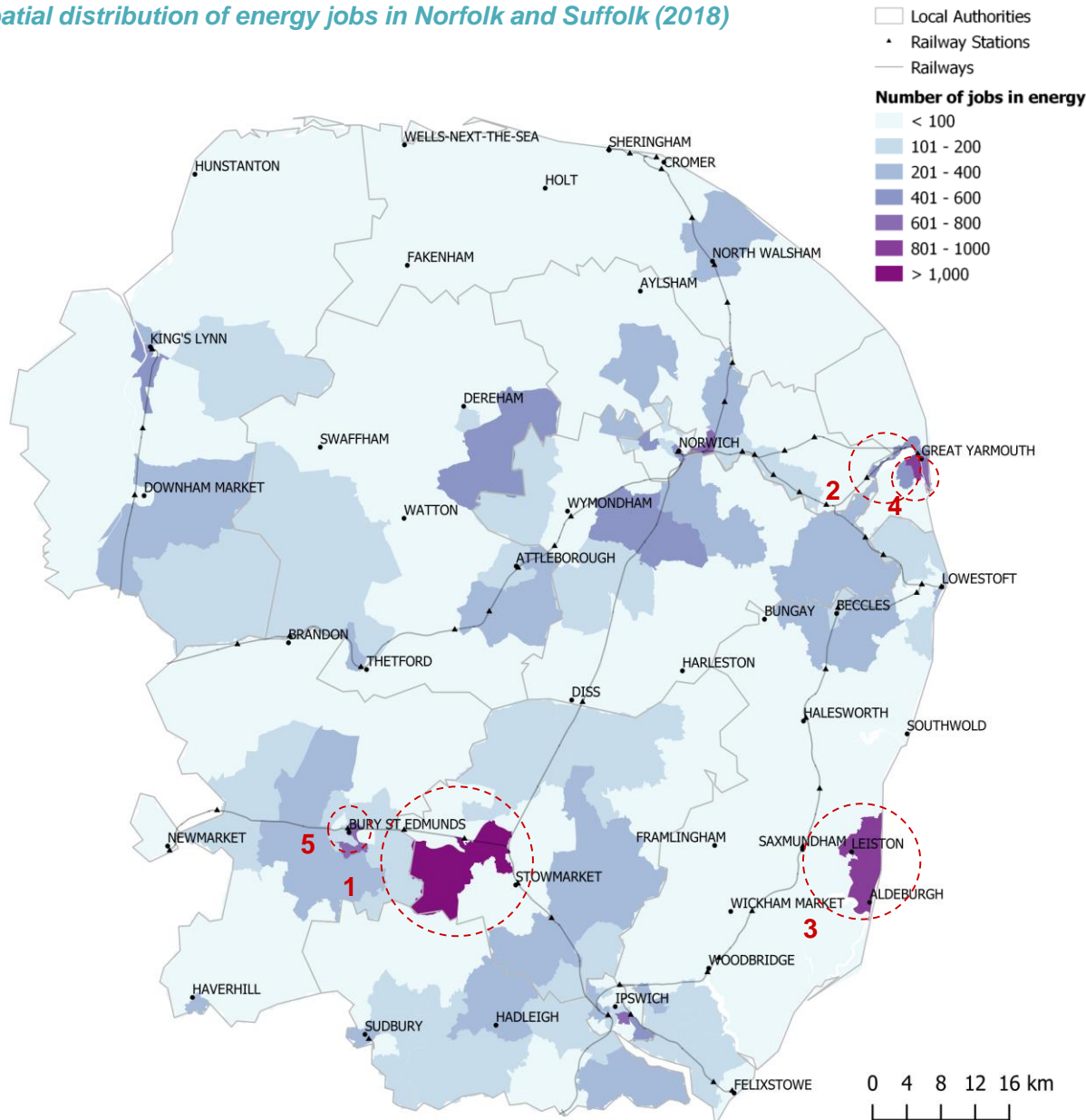
Business Base (% of sector total)	Micro (0-9)	Small (10 – 49)	Med (50 – 249)	Large (250+)
<b>Great Britain</b>	91.9%	6.5%	1.3%	0.3%
<b>Norfolk and Suffolk</b>	<b>91.7%</b>	<b>7.2%</b>	<b>0.7%</b>	<b>0.5%</b>

## Example Energy sector companies in Norfolk and Suffolk

Company	Location
ABP Ports	Ipswich, King's Lynn, Lowestoft
Aker Solutions	Great Yarmouth
EDF Energy	Leiston
James Fisher & Sons	Drayton
Peel Ports	Great Yarmouth
Scottish Power Renewables	Great Yarmouth and Lowestoft
Shell	Great Yarmouth
SSE	Great Yarmouth and Lowestoft
UK Power Networks	Ipswich, Bury St Edmunds
Vattenfall	Norfolk

# Priority Sector: Energy

*Spatial distribution of energy jobs in Norfolk and Suffolk (2018)*



	Geographic area	No. jobs	SIC-2 sub-sectors
1	Stowmarket	1,035	<ul style="list-style-type: none"> <li>Construction of utility projects for electricity and telecommunications</li> </ul>
2	Great Yarmouth (West)	915	<ul style="list-style-type: none"> <li>Collection of hazardous waste</li> <li>Engineering activities and related technical consultancy</li> </ul>
3	Leiston and Aldeburgh	910	<ul style="list-style-type: none"> <li>Production of electricity</li> <li>Treatment and disposal of hazardous waste</li> </ul>
4	Great Yarmouth (South)	765	<ul style="list-style-type: none"> <li>Engineering activities and related technical consultancy</li> <li>Production of electricity</li> </ul>
5	Bury St Edmunds	650	<ul style="list-style-type: none"> <li>Distribution of electricity</li> <li>Engineering activities and related technical consultancy</li> </ul>

# Brexit impact on energy sector

## Workforce

### Overview:

- Even without the impact of Brexit, **the energy sector faces substantial labour shortages and skills gaps**. Competition for workers with STEM skills is fierce across sectors of the UK economy and internationally. For example, the annual UK demand from 2016 – 2022 for workers with engineering skills is around 182,000, yet there is a reported annual shortfall of 69,000 workers with the requisite skills (*Energy and Utility Skills 2017*).
- 23% of all UK vacancies are classified as skills shortages; In the energy and utilities sector, 26% of vacancies are classified as skills shortages.
- Sub-sectors which are particularly reliant on European labour to fill **semi-skilled and low-skilled job roles**, such as waste management, are likely to face the greatest workforce disruptions from Brexit.
- Energy companies do rely on EU nationals to fill high-skilled jobs, however, on the whole this is considered to be less of a problem than it is for low-skilled workers because high-skilled workers can be more easily sourced from the international market and granted the right to work in the UK.
- Norfolk and Suffolk's **offshore wind sector continues to face major skills shortages**, as there is a shortage of offshore wind farm engineers in the UK (*CBI 2016*). Particular skills gaps exist in engineering, offshore skills, technician roles and roles specific to the sector, such as environmental analysis, lifting and helicopter/boat pilots.

### Impacts:

- **The impact of Brexit will vary across sub-sectors of the energy sector.** Businesses and parts of the sector which are reliant on low-skilled workers are likely to face the largest impacts, since these are the jobs EU nationals tend to fill.
- The skills shortages facing the sector are likely to persist after the UK leaves Europe. Although Brexit is exacerbating the difficulties companies face in hiring appropriately-skilled workers, these difficulties exist regardless.

## Funding and investment

### Overview:

- Foreign direct investment, much of which comes from other EU countries, provides about 40% of all financing for UK energy infrastructure (*LSE 2018*).
- At the same time, public funding for capital investment in renewable energy is relatively scarce. The 2019 UK Autumn Budget did not provide additional funding for renewables. It is currently unclear whether funding will be included in the forthcoming National Infrastructure Strategy.
- Private investment in the offshore wind sector has continued despite uncertainty caused by Brexit. Since 2010, the UK has attracted 48% of new investments globally, making it the biggest offshore wind market over the last nine years, **deploying a turbine a day in 2017** (*Offshore Wind Sector Deal 2019*).
- **The energy sector receives significant funding from EU sources, which are unlikely to remain accessible after Brexit.** European Investment Bank (EIB) loans contribute approximately £2.5 billion per year to energy-related infrastructure in the UK, climate change mitigation, and research and development, while the European Fund for Strategic Investment (EFSI) has provided the UK over €8 billion of EFSI funding, of which around a quarter has been used to fund energy projects, including offshore wind projects (*Chatham House 2016*).

### Impacts:

- Because capital investments in the energy sector typically are very large (such as the planned total £40bn of investment in offshore wind noted in the Offshore Wind Sector Deal), investors value stability in markets and regulatory environments. **Brexit has dampened investor confidence about the UK**, with the possibility of reduced investor confidence lingering beyond 2020.
- Over the longer-term, if the UK loses access or close alignment to the Internal Energy Market then this may reduce the attractiveness of the UK as a place for large scale energy infrastructure investment (*LSE 2018*).
- Current EU sources of **funding and investment will eventually be replaced or discontinued** (not before the end of 2020).

# Brexit impact on energy sector



## Trade

### Electricity and Gas Trade:

- The UK is part of the EU's Internal Energy Market (IEM). The IEM allows tariff-free trading of gas and electricity, leading to lower prices and greater security of supply. In 2018, the UK imported 5.4% of its electricity and 40.7% of its gas. The UK also exports electricity and gas throughout the year – particularly renewable energy from offshore wind farms - but is a net importer overall (*House of Commons 2019*).
- Although yet to be determined, **the UK may leave the IEM**, as remaining fully integrated would likely require the UK's compliance with current and future EU energy market rules, which are upheld by the European Court of Justice. The Government has expressed a desire to secure broad energy cooperation with the EU, including on technical cooperation, security of supply and energy generation (*House of Commons 2019*).
- It is possible that leaving the IEM will result in an **increase in the cost of energy** on the UK domestic market due to barriers to trade.
- The UK market is physically connected to the EU through five electricity interconnectors and two gas interconnectors (including the Bacton gas interconnector on the Norfolk coast), which enable the trade of gas and electricity between the UK and EU. Four more electricity interconnectors are under construction, with their completion unlikely to be affected by Brexit.

### Energy Sector Trade:

- The EU applies a zero rate of duty to most hydrocarbon products for non-EU members. Chemicals, plastics and equipment are more likely to be subject to a duty cost, which could impact energy supply chains, e.g. for energy infrastructure and spare parts.
- **The majority of the suppliers and components that enable wind farms to be built originate in the EU.** Low-cost access to these suppliers and components will depend on the shape of any future trade deal with the EU.
- The UK is the global leader in offshore wind, with Norfolk and Suffolk at the heart of that strength. The Offshore Wind Sector deal sets an ambition to increase exports fivefold to £2.6 billion by 2030. This sector is considered to have good potential for growing exports in new markets after Brexit.



## Regulations

### Overview:

- The UK will leave the European Atomic Energy Community (**Euratom**), which may impact the UK's current nuclear operations, including fuel supply, waste management, cooperation with other nuclear states, supply of medical radioisotopes, and nuclear research. The Government has already legislated to replicate Euratom's nuclear safeguards regime and negotiated agreements for nuclear trade with certain countries.
- The UK's **climate change regulations** are set out in domestic law, including the Climate Change Act 2008, and will not be substantially affected by Brexit.
- The level of the UK's involvement in the **EU Emissions Trading System** is yet to be decided. In a No Deal scenario, the UK would not remain part of the EU ETS and the Government has put in place legislation for a carbon tax to continue carbon pricing in the short term.
- In the event of No Deal the UK will leave the EU's **Regulation on Energy Market Integrity and Transparency** (REMIT), which applies to wholesale energy markets and prevents market abuse and manipulation. Ofgem has stated that REMIT prohibitions and obligations will continue to apply and be enforced (*Ofgem 2019*).
- Ofgem grants companies **licences to operate** in the energy market, which reflect EU legislation. These licences need to be updated to replace or remove references to EU legislation, which may result in administrative costs for energy sector companies.

### Impacts:

- Leaving the EU ETS provides the UK with the opportunity to set its own carbon pricing arrangements (on top of the carbon price floor which currently applies), including developing a UK ETS which may be linked to the EU ETS.
- A No Deal scenario is likely to create significant short-term disruption to the energy sector as EU regulations would cease to apply. New regulatory frameworks would need to be adopted.

# Priority Sector: Health and Social Care

	Jobs			Businesses			GVA		
	Count	% of total	Growth 2016-18	Count	% of total	Growth 2016-19	£(bn)	% of total	Growth 2016-18
<b>Great Britain</b>	3,959,500	12.8%	+1.3%	99,260	3.8%	-10.3%	£132.23bn	7.4%	+2.1%
<b>Norfolk and Suffolk</b>	<b>94,500</b>	<b>13%</b>	<b>+1.6%</b>	<b>2,310</b>	<b>3.7%</b>	<b>-7%</b>	<b>£2.95bn</b>	<b>8.1%</b>	<b>-0.5%</b>

Top 5 sub-sectors by employment	Jobs [6]
Hospital activities	35,000
Residential care activities for the elderly and disabled	7,000
Social work activities without accommodation for the elderly and disabled	7,000
General medical practice activities	5,500
Residential nursing care activities	4,750

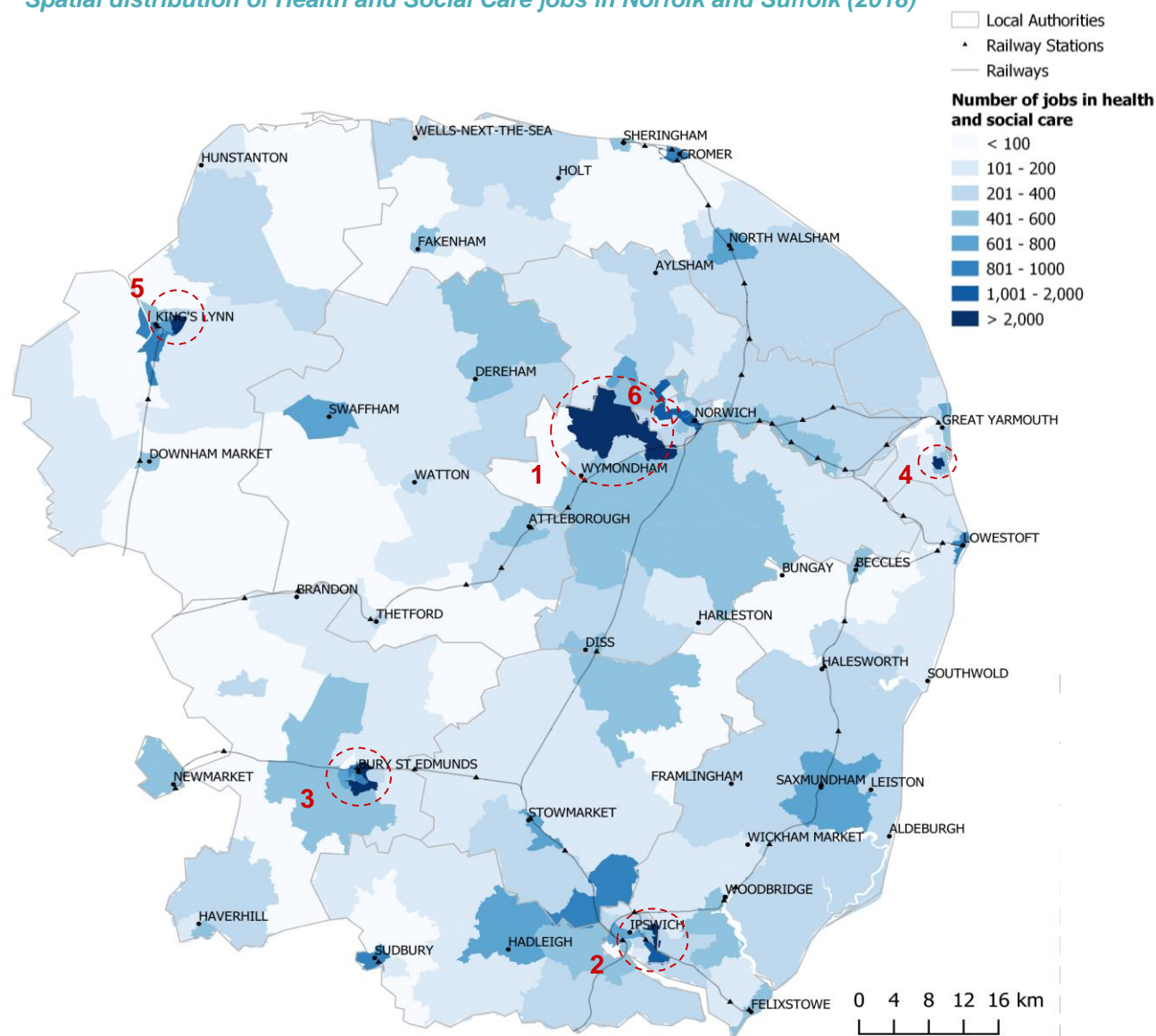
Business Base (% of sector total)	Micro (0-9)	Small (10 – 49)	Med (50 – 249)	Large (250+)
<b>Great Britain</b>	68.1%	25.6%	5.2%	1.1%
<b>Norfolk and Suffolk</b>	<b>66%</b>	<b>26.2%</b>	<b>6.7%</b>	<b>1.1%</b>

## Example Health and Social Care organisations in Norfolk and Suffolk

Company	Location
NHS	Various Locations
Norse Care	Wymondham
Baxter Healthcare	Thetford
Seckford Foundation	Woodbridge
Stowcare	Stowmarket
Headway	Norwich, Ipswich, Great Yarmouth, King's Lynn, Bury St Edmunds
Cardinal Healthcare	Ipswich
Cephas Care	Ipswich
Beeshaw Group	Norwich
Age UK	Ipswich

# Priority Sector: Health and Social Care

*Spatial distribution of Health and Social Care jobs in Norfolk and Suffolk (2018)*



	Geographic area	No. jobs	SIC-2 sub-sectors
1	Norwich (West) <i>Includes Norfolk and Norwich University Hospitals</i>	10,410	<ul style="list-style-type: none"> <li>Human health activities</li> <li>Social work activities without accommodation</li> </ul>
2	Ipswich (East) <i>Includes Ipswich Hospital</i>	6,105	<ul style="list-style-type: none"> <li>Human health activities</li> </ul>
3	Bury St Edmunds <i>Includes BMI St Edwards Hospital and West Suffolk Hospital</i>	5,510	<ul style="list-style-type: none"> <li>Human health activities</li> <li>Residential care activities</li> </ul>
4	Great Yarmouth (South) <i>Includes James Paget University Hospital</i>	4,100	<ul style="list-style-type: none"> <li>Human health activities</li> <li>Social work activities without accommodation</li> </ul>
5	Kings Lynn <i>Includes Queen Elizabeth Hospital</i>	3,590	<ul style="list-style-type: none"> <li>Human health activities</li> </ul>
6	Norwich (North) <i>Includes Norfolk Community Health and Care</i>	1,940	<ul style="list-style-type: none"> <li>Human health activities</li> <li>Residential care activities</li> </ul>

# Brexit impact on health and social care

## Workforce

### Overview:

- EU nationals are central to the health and social care sector. EU nationals fill 5.5% (65,000) jobs in the NHS, including over 10,000 doctors and over 20,000 nurses, and an estimated 9% (115,000) jobs in adult social care. In both sectors this proportion has grown over time (*Kings Fund 2017*).
- Across NHS trusts there is currently a shortage of almost 100,000 staff (9%), including nurses, many types of doctors, allied health professionals and care staff. Vacancies in adult social care are rising, currently totalling 122,000 (9%).
- **EU nationals have fallen as a percentage of those joining the NHS.** In 2015, 11% of those joining the NHS were EU nationals. In 2017 the figure was 7.9%. For nurses the percentage of EU joiners fell from 19% in 2015 to 7.9% in 2017 (*House of Commons 2019*).
- EU workers are particularly likely to fill social care positions in rural areas. Commonly cited reasons deterring the domestic workforce from working in social care include low pay and zero-hour contracts. Many EU nationals also work in **essential non-health and care roles**, such as cleaners and caterers.

### Impacts:

- **Brexit will compound the substantial workforce issues already facing the sector.** Due to a lack of personnel, in 2017 patients spent 1.8 million extra days in UK hospitals because of delays in their discharge (*KCL 2017*).
- **The scale of impacts will depend on future migration policy** and the barriers or incentives to live in the UK and work in the sector. The UK's proposed new skills-based immigration system, set to begin in 2021, proposes an annual earnings threshold of £30,000 for a migrant worker to be granted a visa, which could inhibit recruitment into a range of health and social care job roles. However, the threshold can be lowered for occupations on the Shortage Occupation List, which currently includes Medical Professionals, Nurses, and most Allied Health occupations. Essential non-care roles will still be affected.
- In the longer term, the potential economic impact that Brexit may continue to create could act as a disincentive for health and care staff to work in the NHS and social care. For example, a fall in the value of the pound would mean the money staff earn in the UK is worth less in their home country.

## Funding and investment

### Overview:

- The UK's **health and social care sector is largely funded nationally**. A potentially negative impact on its funding may arise from the forecasted slowing of the UK economy post-Brexit, which may result in cuts or lower growth in public spending.
- The sector is significantly supported by voluntary organisations. In 2014, UK charities received £200 million of funding from the EU, which may be difficult to replace when the UK is no longer eligible for these funds (*Directory of Social Change 2017*).
- **EU funding streams contribute to research and development activities** which support the UK's health and social care sector. Scientific research and development has benefited greatly from EU funding, primarily through Horizon 2020, whereby in 2015, UK university researchers received the largest share of total projects funded (over 2,000 per year) and the largest share of grants (€1.2 billion, or 16% of the total).
- Furthermore, the UK may lose access to collaborative research and innovation projects with EU partners, as certain funding streams are directed solely to cross-border projects. Depending on future agreements with the EU, the UK could experience fewer benefits from access to EU research groups and their skills and collaboration opportunities.

### Impacts:

- In the long term, **the performance of the wider UK economy is the most importance determinant of funding for the NHS and social care**. Funding for the NHS is a political decision, and economic outcomes resulting from Brexit will not necessarily lead to changes in public spending.
- Government will underwrite all funding committed in the current funding period (to 2020), however after this point EU funding sources will need to be replaced or discontinued.
- In the face of funding uncertainty, UK pharmaceutical multinationals may move their research projects outside the UK to ensure continued access to funding streams or change their lead team.

# Brexit impact on health and social care



## Trade

### Overview:

- Around **three-quarters of the medicines and more than half of the devices that the NHS uses enter the UK via the EU**. The ease of future access to medical products is heavily dependent on the outcomes of trade negotiations (*Kings Fund 2017*).
- The health and social care sector may feel the impact of changes to trade in other sectors. For instance, the EU is a substantial trading partner in pharmaceuticals, accounting for 48.2% of UK exports. Supply chains in pharmaceuticals operate across borders, so it could be problematic if trade barriers appear at various stages of production. In the EU, there are no import tariffs on pharmaceuticals; however, tariffs exist on raw materials and machinery, which, if imposed, would increase production costs. It is unclear whether the UK will be able to negotiate favourable terms of trade for these items.

### Impacts:

- Whatever form Brexit takes, it is **likely to impact the supply and pricing of medicines and medical devices**. A no-deal Brexit could cause serious disruption to supply and even shortages, meaning some people may not be able to access vital medicines. A more orderly Brexit will mitigate the risk of shortages, but looks likely to increase the bureaucratic and regulatory requirements of importing medicine, which could in turn create price increases (*Kings Fund 2017*).
- In the longer term, beyond any immediate disruption to supply, the additional bureaucratic and regulatory burdens that pharmaceutical companies will face is likely to increase the price of imported medicines and medical devices. The Nuffield Trust (2018) estimates that the annual cost of this would be £2.3 billion to the NHS.



## Regulations

### Overview:

- The UK is currently part of the authorisation system for new medical products and devices operated by the **European Medicines Agency (EMA)**. The EMA is responsible for the scientific evaluation of medicines developed by companies for use in the EU.
- The United Kingdom has its own national regulatory agency, the **Medicines and Healthcare products Regulatory Agency (MHRA)**, which deals with products intended only for the UK market. The Government's intention is for the MHRA to operate as a sovereign regulator outside the EMA, but with regulatory equivalence and working closely with the EMA and other international partners (*Kings Fund 2017*).
- Related to the health and social care sector, the EU sets **public health regulations** in a number of areas, such as food safety and nutrition, tobacco, alcohol, radiation, environment, housing standards, and chemicals. The UK Government intends to transpose key legislation into UK law to maintain these public health regulations, particularly the 'do no harm' duty of the Lisbon Treaty that means the government is required to consider 'a high level of human health' when making policy (*Faculty of Public Health 2019*).

### Impacts:

- Leaving the EMA may mean **the UK market is slower to receive new medicines and medical products**. Membership of the EMA means that pharmaceutical companies prioritise the UK market. For example, in Switzerland and Canada, which have separate approval systems, medicines typically reach the market six months later than in the EU (*Kings Fund 2017*).
- Brexit may present some opportunities, in particular the chance to go further and faster on public health regulation and remove rules on competition that are seen to present obstacles to the integration of and collaboration between health services.

# Implications and Responses

# Emerging policy responses to support businesses

This work has been commissioned to provide analysis of the potential implications of Brexit for Norfolk and Suffolk's economy, focusing on four priority sectors. The New Anglia LEP will have a key role to play in helping Norfolk and Suffolk's businesses – in the sectors analysed here and also in the broader economy – adapt to a future outside of the EU. Ongoing engagement with businesses will support them to make necessary improvements in productivity and innovation. **Businesses are likely to be impacted in the following ways:**

- Transition costs largely associated with administrative changes to trading, regulatory and employment practices.
- Increasingly complex trading relationships with EU partners and the need to expand trade to new export markets beyond the EU.
- Likelihood of continued regulatory alignment with current EU legislation to ease trade, but opportunity for more progressive domestic policy in certain areas.
- Greater need to support the provision of skills in the local labour market to compensate for skills and jobs previously filled by EU migrants.
- Uncertain post-Brexit funding and investment environment.

## Supporting local businesses to become Brexit-ready:

It will be important to ensure local businesses have adequate support to address new administrative challenges and costs resulting from Brexit, particularly for companies highly exposed to trade and EU workers. It would include both providing advice and helping secure financing for companies to deal with the issues they face, including:

- The administrative costs of implementing trade barriers, such as complying with new standards and regulations and other potential new legal requirements.
- Administrative costs and legal requirements of recruiting new EU citizens and reviewing the legal status of their current workers.
- Costs and effort required to develop training programmes for current and new employees, and in creating new apprenticeships and developing links to education institutions.

Although considerable uncertainty remains on the specific outcomes of Brexit while the UK Government negotiates the terms of its departure from the EU, this research identified a set of challenges and opportunities for the four priority sectors assessed here in detail, and Norfolk and Suffolk's economy more broadly. These challenges and opportunities will have different impacts across different economic sectors and geographical areas. The following points summarise our main conclusions, focusing on Brexit's impact on workforce, regulations, trade, funding and investment. These steps support and **align with the actions and priorities of the Norfolk and Suffolk Local Industrial Strategy**.

This list of possible responses is clearly not exhaustive, nor does it aim to provide detailed policy guidance. It should be interpreted as input into New Anglia LEP's overall strategy for economic success in the post-Brexit environment.

# Implications and responses to consider

## Workforce

- **Businesses and sub-sectors which rely heavily on semi- or low-skilled labour from EU countries are the most likely to suffer adverse consequences from Brexit**, as they are likely to face a shortage of workers in these job roles.
- EU nationals often fill hard-to-fill vacancies in **seasonal, temporary and/or low-pay** job roles, which are particularly important to the agriculture, manufacturing and health and social care sectors. A restriction on free movement is likely to result in **labour shortages**, which could reduce production, and necessitate increased imports and price rises.

- **EU nationals fill high-skilled job roles** (particularly in Energy and parts of Health and Social Care). These workers are likely to be highly-mobile and may be inclined to leave the UK if they expect conditions to be better elsewhere. Similarly, however, because high-skilled workers tend to be internationally mobile, businesses should be able to draw on international labour markets beyond the EU to recruit into these positions.
- Reduced high-skilled migration from the EU is likely to exacerbate the effects of **long-standing skills gaps** which are rooted in disparities between the skills provided by education and training and those which employers require.

- In the long term, **reduced migration from the EU may lead to persistent labour shortages** and a restructuring of the economy away from activities which are dependent on easy access to labour. This could **encourage businesses to innovate and increase productivity through investment** in automation and digitisation.
- The UK's **existing full employment places upward pressure on the cost of labour**. For companies that are internationally mobile, this could result in some firms choosing to relocate their operations overseas where labour costs are lower. For others, including companies which are bound to the UK, high labour costs may provide an increased incentive to invest in capital and technology.

## Responses to consider

- Closely monitoring / **checking in on changing skills needs in affected sectors**, and the links to local provision
- Supporting businesses to develop opportunities to **reduce seasonality of some work**
- Ensuring Norfolk and Suffolk provides **an attractive quality of place offering** which entices high-skilled labour to live and work in the area's cities and towns. Good schools, child care, hospitals, transport, green space, retail, amenities, culture and heritage offerings all help to make towns and cities better places to live.
- Advancing the LIS People objective to **close skills and labour gaps, especially in digital and technical skills**.
- **Innovation support for businesses** through local growth hubs, industry groups, and sharing of best practice.
- **Focus local skills provision on STEM skills** and other skills which will prepare the workforce to fill the higher-skilled job roles of the future.

# Implications and responses to consider



## Funding and investment

- EU funding plays a supporting role in all of the priority sectors analysed here, particularly to **drive innovation and research**. EU funding has also been important for investing in large scale infrastructure projects, directly and indirectly supporting businesses and job growth in manufacturing and energy, including offshore wind.
- Current EU sources of **funding will eventually be replaced or discontinued** (not before the end of 2020). Businesses and people may not be fully aware of the activities and infrastructure these sources support.

- In agriculture, the Common Agriculture Policy (CAP) heavily subsidises farming, without which many farms would close, severely damaging the rural economy. It is important that local businesses find alternative sources of funding – from Government or elsewhere – once they are no longer eligible for EU funding.
- **Future agricultural funding schemes are likely to provide greater incentives for environmental protections** and other public outcomes, such as reforestation and public access.

- **Brexit has dampened investor confidence about the UK**, with the possibility of reduced investor confidence lingering beyond 2020. Foreign Direct Investment (FDI) is key to raising national productivity, and, by extension, output and wages across all sectors (most significantly in manufacturing, and the energy sector where large-scale capital investment is required).
- There is evidence that EU membership has significantly increased FDI in the UK. **The extent to which FDI will be affected by Brexit depends highly on future trading arrangements with the EU**. The impacts also vary across sectors. For instance, investment nationally declined in manufacturing in the wake of Brexit. In the offshore wind sector, there has been a mixed post-Brexit reaction by foreign companies with some investments being delayed, while others continue to go ahead.

## Responses to consider

- **Providing concise, regular summaries** for businesses on funding developments and what they need to do to prepare.
- **Helping businesses to identify and prepare bids for future funding**, through information, templates, sharing best practice and other support.
- **Supporting farm businesses to improve their resilience**, including through technological innovation and thinking differently about land use and public benefits as new revenue sources.
- Exploring how future farm subsidy payments, which are expected to emphasise environmental outcomes, can **align with the clean growth ambition of Norfolk and Suffolk's LIS**.
- Advancing the LIS Place objectives to **communicate a clear, ambitious offer to the world** central to attracting the people, investors and businesses of the future.

# Implications and responses to consider



## Trade

- While new trade deals are developed and implemented (a process which can take years) there will be **ongoing uncertainty and fluctuations in business conditions**. Total UK trade (exports and imports) is expected to decline.
- Once outside the single market, trade barriers such as quotas and tariffs will make **UK exports less competitive**, particularly in agriculture and manufacturing, where supply chains frequently cross back and forth across the channel. This will be partially offset by a devalued Sterling, which will make UK exports more competitive.
- **Imports will be more expensive** due to Sterling's reduced purchasing power and because tariffs are typically passed through to consumers. Trade barriers will result in an overall reduction in economic activity and value.
- The challenge of higher costing imports offers the **opportunity to develop stronger domestic supply chains**, as companies will have an incentive to source from the local market.
- The Withdrawal Agreement opens **opportunities to strike trade deals with other countries** over the longer term, on conditions which are potentially better-suited to the UK than existing trade agreements struck with countries via the EU.

## Responses to consider

- **Continue gathering intelligence** on businesses' understanding of Brexit impacts and their preparedness.
- **Providing concise, regular summaries** for businesses on developments and what they need to do to prepare.
- **Providing support for entering new domestic markets**, alongside supporting firms new to overseas exports or getting into new overseas markets.
- Support for businesses to **incorporate local businesses into their supply chains**.
- For businesses with low barriers to trade, **capitalise on the lowered value of the Pound** to boost the competitiveness of exports.
- **Work with Government to ensure that future trade deals support Norfolk and Suffolk's sectors.**
- **Use the Local Industrial Strategy** to articulate Norfolk and Suffolk's industrial priorities and how future trade agreements can support these priorities.

# Implications and responses to consider

## Regulations

- Leaving the EU provides the UK the **opportunity to formulate its own regulatory regime**, which in many industries has been EU-directed over the past several decades.
  - **Future regulatory schemes can be created so they are better-aligned with UK-specific concerns and objectives**, and may unlock increased investment. For example, in health and social care the UK may now be able to move faster on public health regulation, and remove rules on competition that are seen to present obstacles to the integration of and collaboration between health services.
- 
- The standardisation of regulations across the EU with many EU directives incorporated into UK law means that **regulatory alignment and stability will be important across many sectors to maintain 'business as usual'**, easing trade and ensuring continued access to international funding. Consequently, in order to remain competitive, the UK is likely to have to continue conforming to many EU laws, policies and regulations.
  - The relationship between regulation and trade is particularly pertinent in agriculture and manufacturing, due to the importance of product safety standards

## Responses to consider

- Working with Government to ensure that **future regulatory arrangements benefit Norfolk and Suffolk's priority sectors while safeguarding consumers from poor quality products and behaviours**.
  - **Use the Local Industrial Strategy** to articulate Norfolk and Suffolk's industrial priorities and how future regulatory arrangements and trade agreements can support these priorities.
- 
- **Providing concise, regular summaries** for businesses on regulatory developments (either changes or continued alignment to EU frameworks) and what they need to do to prepare.

## **Appendix: Notes & Sector SIC code definitions**

# Notes

Where spaces have been left with a “-”, accurate data is not available.

[1] Data for Manufacturing GVA is taken from data using grouped SIC codes. This means that manufacturing GVA calculations include the manufacture of food and beverages. In all other cases in this document the manufacture of food and beverages is included within the ‘Agriculture’ industry definition. This applies also to SIC 33 (the repair and installation of machinery and equipment).

[2] The data for export is collated using SITC (Standard Industry Trade Classification) codes. As such, the categories are very general. The categories included in the export analysis for Manufacturing are “Miscellaneous Manufactures” and “Manufactured Goods”.

[3] Data for Agriculture GVA is taken from data using grouped SIC codes. For this calculation the SIC-12 code (the manufacture of tobacco products) has been included due to it being grouped with the SIC-11 code (the manufacture of beverages).

[4] The data for export is collated using SITC (Standard Industry Trade Classification) codes. As such, the categories are very general. The categories included in the export analysis for Manufacturing are “Food and Live Animals”, “Beverages and Tobacco” and “Animal and Vegetable Oils”.

[5] The top 5 specialisms list has omitted general SIC2 sectors, such as: “other residential activities” (9,500 jobs); “other social work activities without accommodation” (8,500 jobs); and “other human health activities” (7,000 jobs) due to lack of specificity.

# SIC Code Classifications - Manufacturing

12 : Manufacture of tobacco products	24 : Manufacture of basic metals
13 : Manufacture of textiles	25 : Manufacture of fabricated metal products, except machinery and equipment
14 : Manufacture of wearing apparel	26 : Manufacture of computer, electronic and optical products
15 : Manufacture of leather and related products	27 : Manufacture of electrical equipment
16 : Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	28 : Manufacture of machinery and equipment n.e.c.
17 : Manufacture of paper and paper products	29 : Manufacture of motor vehicles, trailers and semi-trailers
18 : Printing and reproduction of recorded media	30 : Manufacture of other transport equipment
19 : Manufacture of coke and refined petroleum products	31 : Manufacture of furniture
20 : Manufacture of chemicals and chemical products	32 : Other manufacturing
21 : Manufacture of basic pharmaceutical products and pharmaceutical preparations	
22 : Manufacture of rubber and plastic products	
23 : Manufacture of other non-metallic mineral products	

# SIC Code Classifications – Agriculture

01110 : Growing of cereals (except rice), leguminous crops and oil seeds	01440 : Raising of camels and camelids	10120 : Processing and preserving of poultry meat
01120 : Growing of rice	01450 : Raising of sheep and goats	10130 : Production of meat and poultry meat products
01130 : Growing of vegetables and melons, roots and tubers	01460 : Raising of swinepigs	10200 : Processing and preserving of fish, crustaceans and molluscs
01140 : Growing of sugar cane	01470 : Raising of poultry	10310 : Processing and preserving of potatoes
01150 : Growing of tobacco	01490 : Raising of other animals	10320 : Manufacture of fruit and vegetable juice
01160 : Growing of fibre crops	01500 : Mixed farming	10390 : Other processing and preserving of fruit and vegetables
01190 : Growing of other non-perennial crops	01610 : Support activities for crop production	10410 : Manufacture of oils and fats
01210 : Growing of grapes	01621 : Farm animal boarding and care	10420 : Manufacture of margarine and similar edible fats
01220 : Growing of tropical and subtropical fruits	01629 : Support activities for animal production (other than farm animal boarding and care) nec	10511 : Liquid milk and cream production
01230 : Growing of citrus fruits	01630 : Post-harvest crop activities	10512 : Butter and cheese production
01240 : Growing of pome fruits and stone fruits	01640 : Seed processing for propagation	10519 : Manufacture of milk products (other than liquid milk and cream, butter, cheese) nec
01250 : Growing of other tree and bush fruits and nuts	01700 : Hunting, trapping and related service activities	10520 : Manufacture of ice cream
01260 : Growing of oleaginous fruits	02100 : Silviculture and other forestry activities	10611 : Grain milling
01270 : Growing of beverage crops	02200 : Logging	10612 : Manufacture of breakfast cereals and cereals-based foods
01280 : Growing of spices, aromatic, drug and pharmaceutical crops	02300 : Gathering of wild growing non-wood products	10620 : Manufacture of starches and starch products
01290 : Growing of other perennial crops	02400 : Support services to forestry	10710 : Manufacture of bread; manufacture of fresh pastry goods and cakes
01300 : Plant propagation	03110 : Marine fishing	10720 : Manufacture of rusks and biscuits; manufacture of preserved pastry goods and cakes
01410 : Raising of dairy cattle	03120 : Freshwater fishing	
01420 : Raising of other cattle and buffaloes	03210 : Marine aquaculture	
01430 : Raising of horses and other equines	03220 : Freshwater aquaculture	
	10110 : Processing and preserving of meat	

# SIC Code Classifications – Agriculture (continued)

10730 : Manufacture of macaroni, noodles, couscous and similar farinaceous products	11070 : Manufacture of soft drinks; production of mineral waters and other bottled waters	46220 : Wholesale of flowers and plants
10810 : Manufacture of sugar	20150 : Manufacture of fertilisers and nitrogen compounds	46230 : Wholesale of live animals
10821 : Manufacture of cocoa, and chocolate confectionery	20200 : Manufacture of pesticides and other agrochemical products	46310 : Wholesale of fruit and vegetables
10822 : Manufacture of sugar confectionery	21100 : Manufacture of basic pharmaceutical products	46320 : Wholesale of meat and meat products
10831 : Tea processing	21200 : Manufacture of pharmaceutical preparations	46330 : Wholesale of dairy products, eggs and edible oils and fats
10832 : Production of coffee and coffee substitutes	28301 : Manufacture of agricultural tractors	46341 : Wholesale of fruit and vegetable juices, mineral waters and soft drinks
10840 : Manufacture of condiments and seasonings	28302 : Manufacture of agricultural and forestry machinery (other than agricultural tractors)	46342 : Wholesale of wine, beer, spirits and other alcoholic beverages
10850 : Manufacture of prepared meals and dishes	28930 : Manufacture of machinery for food, beverage and tobacco processing	46360 : Wholesale of sugar and chocolate and sugar confectionery
10860 : Manufacture of homogenised food preparations and dietetic food	36000 : Water collection, treatment and supply	46370 : Wholesale of coffee, tea, cocoa and spices
10890 : Manufacture of other food products nec	38210 : Treatment and disposal of non-hazardous waste	46380 : Wholesale of other food, including fish, crustaceans and molluscs
10910 : Manufacture of prepared feeds for farm animals	46110 : Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	46390 : Non-specialised wholesale of food, beverages and tobacco
10920 : Manufacture of prepared pet foods	46170 : Agents involved in the sale of food, beverages and tobacco	46610 : Wholesale of agricultural machinery, equipment and supplies
11010 : Distilling, rectifying and blending of spirits	46210 : Wholesale of grain, unmanufactured tobacco, seeds and animal feeds	
11020 : Manufacture of wine from grape		
11030 : Manufacture of cider and other fruit wines		
11040 : Manufacture of other non-distilled fermented beverages		
11050 : Manufacture of beer		
11060 : Manufacture of malt		

# SIC Code Classifications – Agriculture (continued)

72110 : Research and experimental development on biotechnology

72190 : Other research and experimental development on natural sciences and engineering

74901 : Environmental consulting activities

74909 : Other professional, scientific and technical activities (not including environmental consultancy  
or quantity surveying)

75000 : Veterinary activities

77310 : Renting and leasing of agricultural machinery and equipment

82920 : Packaging activities

# SIC Code Classifications - Energy

05 : Mining of coal and lignite	2530 : Manufacture of steam generators, except central heating hot water boilers	3811 : Collection of non-hazardous waste
06 : Extraction of crude petroleum and natural gas	2711 : Manufacture of electric motors, generators and transformers	3812 : Collection of hazardous waste
09 : Mining support service activities	2712 : Manufacture of electricity distribution and control apparatus	3821 : Treatment and disposal of non-hazardous waste
19 : Manufacture of coke and refined petroleum products	2811 : Manufacture of engines and turbines, except aircraft, vehicle and cycle engines	3822 : Treatment and disposal of hazardous waste
35 : Electricity, gas, steam and air conditioning supply	2829 : Manufacture of other general-purpose machinery n.e.c.	3831 : Dismantling of wrecks
36 : Water collection, treatment and supply	3011 : Building of ships and floating structures	3832 : Recovery of sorted materials
37 : Sewerage	3311 : Repair of fabricated metal products	3900 : Remediation activities and other waste management services
38 : Waste collection, treatment and disposal activities; materials recovery	3312 : Repair of machinery	4221 : Construction of utility projects for fluids
39 : Remediation activities and other waste management services. This division includes the provision of remediation services, i.e. the cleanup of contaminated buildings and sites, soil, surface or ground water.	3511 : Production of electricity	4222 : Construction of utility projects for electricity and telecommunications
0510 : Mining of hard coal	3512 : Transmission of electricity	4291 : Construction of water projects
0520 : Mining of lignite	3513 : Distribution of electricity	4299 : Construction of other civil engineering projects n.e.c.
0610 : Extraction of crude petroleum	3514 : Trade of electricity	4950 : Transport via pipeline
0620 : Extraction of natural gas	3521 : Manufacture of gas	7112 : Engineering activities and related technical consultancy
0910 : Support activities for petroleum and natural gas extraction	3522 : Distribution of gaseous fuels through mains	74901 : Environmental consulting activities
0990 : Support activities for other mining and quarrying	3523 : Trade of gas through mains	
1910 : Manufacture of coke oven products	3530 : Steam and air conditioning supply	
1920 : Manufacture of refined petroleum products	3600 : Water collection, treatment and supply	
	3700 : Sewerage	

# SIC Code Classifications – Health and Social Care

86 : Human health activities

87 : Residential care activities

88 : Social work activities without accommodation

# Metro — Dynamics

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