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Basildon – Future Economic Opportunities and Challenges Study

A Report by Hatch Regeneris and Urban Foresight
May 2019



**Urban
Foresight**



Basildon Council
BASILDON • BILLERICAY • WICKFORD

A large, white, three-dimensional sign spelling out the word 'BASILDON' in a field. The letters are mounted on black posts and are set against a background of a clear blue sky and a green field. The sign is the central focus of the image.

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Picture of Basildon

May 2019

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Contents Page

Executive Summary	1
Study Background	1
Approach	1
Findings	2
Considering a Strategic Response	6
1. Introduction and Study Context	1
Research Methodology	2
2. Policy & Literature Review: Brexit & Automation	4
Brexit Negotiations Status	4
Brexit Process – What Next?	6
Economic Development Policy Review	7
Brexit Impacts – Literary Review	12
Automation and Technology – Literary Review	12
3. Economic and Labour Market Context	15
Basildon’s Economy Today – Baseline Conditions	15
Basildon’s Economic Headlines	15
4. Economic Prospects – Brexit	23
Factors Driving Basildon’s Brexit Vote	23
Assessing the Potential Economic Impacts of Brexit	27
Brexit – Exposure to Change	32
Brexit – Business Preparedness	45
5. Economic Prospects - Automation	48
Relevant Technology Trends	48
Sectors: Healthcare, Education and Public Services	50
Sectors: Retail, Hospitality, Leisure and Recreation	52
Sectors: Wholesale, Transport and Warehousing	53
Sectors: Manufacturing	55
Future Impacts: Construction	56

Wider UK Examples – Automation in Practice	58
6. Evidence Base Implications – Brexit and Automation	61
7. A Strategic Response	65
Brexit – Priorities for Basildon Council	66
Automation – Priorities for Basildon Council	69
Appendix A - Literature Review Summary	
Appendix B - Basildon Sectors – Key Employers	

Executive Summary

Study Background

- i. Basildon is widely regarded as a success story. It has experienced significant growth, attracted investment, seen its population swell and delivered much-needed regeneration. But, **there is little room for complacency**. In a global marketplace, competition is fierce, **change is constant**, and technology continues to **disrupt how we live and work**. National politics is also volatile and driven by polarised views. Basildon needs to consider its future and reflect on the past **in order to sustain local growth and prosperity**.
- ii. This study seeks to more fully understand the economic threats and opportunities posed by two important factors which will shape Basildon: **the UK's departure from the European Union (EU)** and **automation**.
- iii. The UK's intention to exit marks a **significant step-change in the country's economic relationship with the EU**. The UK is moving away from close integration and co-operation with its nearest neighbours and trading partners, towards an as yet unknown destination which is expected to involve many more years of negotiation and uncertainty. Uncertainty hangs over the country as a Brexit agreement remains elusive. The UK's future relationship with the EU and the consequences for citizens and businesses remain unknown.
- iv. Advances in technology play an **increasingly important role in the way our economy functions**. The UK has been at the forefront of developing and adopting new technology and although this has opened up new business models, processes and international markets, it has also introduced new threats to established employment. Automation is one strand of that technology shift and has generated fresh concerns regarding job replacement, large-scale unemployment and labour force re-skilling, which could have significant negative and/or positive local impacts.

Approach

- v. This study **draws on a large body of research** to assess the possible effects of Brexit and automation on Basildon's economy. Robust and timely research sources have been used **to develop a picture, where possible, of Basildon and its key sectors**. The study also draws upon evidence which at a regional and national level to inform local effects.
- vi. Given the pace of technological change and the lack of a definitive negotiated Brexit agreement, findings are caveated accordingly. **They show the likely direction of travel and plausible economic outcomes**. The effects are also potentially very wide-ranging, and the **analysis tries to focus on the priorities** that are most relevant to Basildon Council.

Findings

Brexit

Factors Driving the Brexit Vote

- vii. **Basildon's Brexit vote outcome showed strong support for the UK's exit from the EU** and the borough has a reasonable degree of alignment with the factors that are believed to have heavily influenced the voting outcomes:

- Basildon has a **higher proportion of UK-born residents**
- Local residents tend to be less highly **skilled and qualified**
- Public services have been subject to **deep and sustained cuts in Basildon**
- Income levels have **lagged the national average**
- Local housing has become **less affordable**
- High employment shares in **retail, manufacturing, construction and finance sectors**
- The Thames Estuary Gateway sub-region has **strong export links with the EU**

- viii. These findings help to illustrate how Basildon may have been predisposed to Brexit and provide a guide to **where the public sector should prioritise policy and investment** to address the underlying factors which led to the referendum result.

Economic Impacts

- Over 90% of studies reviewed by the Institute for Government **predict that Brexit will have a negative impact on long-term GDP (over 15 years)**, with only one study suggesting the UK's departure would boost long-term economic performance. This is a point of considerable concern and has dominated political discussion.
- Changes to the free movement of people across the EU will **restrict access to skilled labour** and compound skills shortages. However, evidence suggests this may be partially offset by **gaining greater control over regulation**, leading to the potential for some economic gains among local businesses.
- Research suggests **economic output in Basildon will be reduced under a 'soft' Brexit scenario and even more so under a 'hard' Brexit agreement**. Whilst other locations, such as Reading, may be more exposed to such losses, projections imply that Basildon's economy **could shrink by as much as 2% (£83m) over a 10-year period**.
- The expected impacts are largely driven by the impact on sectors in which local businesses trade. Sectors **which trade in EU markets and rely on EU labour are expected to be most affected**.
- **Basildon's sizeable Business Activities and Financial Intermediation sector is likely to be particularly exposed**, based on forecasts which suggest that, nationally, the sector could see a 6%+ reduction in its output over a 10-year period. However,

projections suggest more encouraging prospects for the Manufacturing sector, which may see GVA increases of up to 2.5%, under a ‘hard’ Brexit scenario.

- Evidence produced by the UK Migratory Advisory Committee suggests that **inflows of non-domestic migration have led to limited negative consequences for local areas**. Employment, wages, productivity and innovation are either largely unaffected or have been boosted by immigration and at the same time made positive net contributions to public services. Brexit will inevitably destabilise this position and arguably already is.

Exposure to Change

- Studies indicate that as a result of Brexit, the **UK’s exposure to economic fluctuation is considerably greater than other comparator EU nations**. Around 12% of UK and Essex economic output is likely to be exposed due to Brexit and the UK as a whole is thought to be nearly five times more exposed than the EU. Although some counties have a higher level of relative exposure, **Essex is mid-ranking among local authority counterparts**.
- **Sectors with stronger trade ties to the EU are inherently likely to be most exposed**. The manufacturing sector is a prime example – in Essex the sector is expected to be most adversely affected, with ~35% of its GDP is exposed to Brexit effects.
- Business across Basildon serve markets across the globe and **Brexit is likely to change the basis upon which this trade occurs**. The CBI has predicted that under WTO Most Favoured Nation rules, average export tariffs for UK businesses to the EU would rise to 4.3%, while the average import tariff would be 5.7%.
- In a local context, **transport-related services and telecoms businesses could face substantial rises in trade costs**, with SMEs most likely to find it difficult to weather challenges associated with such an uplift in costs. This is a key consideration for Basildon’s small enterprise economy and base of start-ups.
- The Thames Estuary Gateway region trades extensively with countries beyond the EU, with 53% of its exports bound for markets beyond Europe. This represents **a good base from which to further develop global market relationships**. That said, **the Gateway is also heavily reliant on foreign imports**, of which 80% comes from the EU, highlighting the sub-region’s trade deficit.
- **Private and public investment is at risk as a result of Brexit – uncertainty over the terms of the withdrawal have undermined businesses confidence** leading to companies (large and small) pausing investment commitments. The sub-region has secured over £160m of investment from the 2014-20 EU Structural Fund programme and details on how it will be succeeded remain scarce, leaving a potential investment void.
- Some sectors such as Human Health and Social Work and Public Administration **have become increasingly reliant on EU migrant labour** and are therefore threatened by Brexit-related changes to immigration. This will only add to skills shortages and recruitment challenges already affecting these industries and is likely throw a greater spotlight on the need to address domestic labour market inadequacies.

- **Brexit presents a significant and complex challenge as the UK withdraws from an EU legal framework which has evolved over the last 40+ years.** Businesses trading in Finance, Manufacturing and Transport/Logistics-based sectors are expected to be most exposed to ongoing uncertainty and reharmonisation, as the regulatory regime that governs their operations evolves over the coming years.
- However, there is also evidence to suggest that some **economic gains could be achieved as a result of the UK having greater environmental and financial regulatory autonomy**, with research suggesting a gain of 0.7% in GDP may be achievable.

Business Preparedness

- ix. In the absence of an agreed withdrawal plan and the future UK-EU relationship being fully mapped out, **businesses have been unsure about how to prepare for Brexit:**
- Nationally, business leaders have been candid about their struggles with planning for Brexit, which has led to **resources being diverted away from growth/expansion investment and channelled into stock-piling, or simply put on hold.**
 - Investment is a leading-edge driver of growth and the ongoing uncertainty around the Brexit deal **will only deepen and extend local economic consequences.**

Automation

- x. Automation creates **opportunities and threats** for Basildon's most prominent sectors. There are four key technological trends that are driving the shift to greater automation in the economy:
- **Immersive Technology and Augmented Reality**
 - **Blockchain**
 - **Artificial Intelligence (AI)**
 - **Internet of Things (IoT)**

Healthcare, Education and Public Services

- Automation and technology is and will increasingly **help public agencies meet demographic challenges and deal with increasing paucity of resources.** There is strong evidence to suggest the public sector is taking a progressive lead in Basildon, where **AI could create an additional 3,500 jobs in the sector by 2037.**
- Improvements in data access and transferability from internet-enabled devices will **improve the quality of both clinical and non-clinical care** and offer more efficient and transparent delivery of services.
- **Digital solutions and technological disruption are also widening scope for access to education, training and civic participation** and helping the public sector deliver innovative, efficient and responsive services.

- **Challenges around data security, upskilling of staff, service-user digital literacy and funding for innovation** all need to be addressed if the public sector is to fully capitalise on the opportunities presented by technology.

Retail, Hospitality, Leisure and Recreation

- Technology is having a significant impact on **consumer experiences** and research suggests that **AI could reduce retail employment by 3% and increase hospitality employment by 6% in Basildon, by 2037.**
- In the retail sector, online platforms will continue to drive transactions, administration processes and increasingly shape user experience and content. Basildon must be prepared to **re-skill workers in service industries to ensure they have the capabilities to flourish in digitised jobs.** This includes accessing the council helping secure resource from the government's National Retraining Scheme, which aims to help workers re-skill with a focus on AI and automation.

Wholesale, Transport and Warehousing

- **The impact of technology and automation on these sectors has been rapid and visible,** particularly as warehousing and distribution processes have become more reliant on just-in-time methods. **Up to 1,150 jobs are thought to be at risk in Basildon by 2037** as transport and warehousing are exposed to further technological shifts.
- The benefits of in these industries automation are facilitated through **improved efficiency, shortened delivery times and reduced customer costs,** but these drivers have also led to rapid shifts in skill requirements and triggered significant job losses.
- Increasing consumer demand for faster, more frequent deliveries will **increase the scale and complexity of logistics services and lead to a greater role for technology.** Basildon can leverage its road, rail and shipping links to be well-placed to gain from wider industry trends, but it will require a long-term commitment to change and deep investment in technology and skills.

Manufacturing

- Basildon's industrial heritage is based on its automotive, food, drink and other consumables industries and **is home to globally significant assets** such as Ford's Dunton Technical Centre (one of the UK's largest automotive R&D centres).
- Manufacturing industries have embraced innovation and invested heavily in R&D **leading to the widespread deployment of technology and automated processes.** During the next wave of industrial evolution, **AI is expected to reduce employment in the sector overall by up to 25% by 2037** – equivalent to 1,850 employees in Basildon. On the other hand, **the sector could create up to 25% more jobs in the near term** (i.e. by 2025), by harnessing automation if sufficient infrastructure and skills are in place.

Construction

- Latest economic forecasts suggest that the construction sector will undergo significant growth in Basildon. Construction activity is **an integral component of physical growth and Basildon’s regeneration agenda**, yet overall productivity levels remain poor.

SMEs in the construction sector **lag larger counterparts by up to 40% in productivity terms and should be a focus for targeted growth through better adoption of digital technology**. Modern methods of construction rely on digital technologies, such as virtual and augmented reality (VR/AR), 3D printing and autonomous vehicles. **These tools can boost productivity and make the sector more attractive to young people**.

- **Basildon might be able to help fill the capacity shortfall experienced by London construction businesses**, especially as development moves East along the Thames Estuary and in conjunction with an ambitious South Essex growth agenda.

Considering a Strategic Response

- xi. Study findings **balance a series of potential opportunities and threats** as a consequence of Brexit and automation. These findings inform key research implications, categorised as follows:
- **Areas of Concern:** aspects which are likely to have a significant effect on the economy and warrant prioritisation or pre-emptive attention.
 - **Points to Watch:** aspects which are somewhat unclear yet expose some key issues that the Council should monitor closely and be ready to act, where necessary.
 - **Opportunity to Explore:** emphasising emerging opportunities where the Basildon economy could secure economic advantages which should be embraced and pursued.
- xii. These implications have subsequently been used to inform and shape a number of priorities for Basildon Council to consider and take forward. **They reflect the need for the public sector to be proactive, work in partnership and make effective use of the levers and intervention tools and its disposal.**

Brexit Priorities:

1. Work closely with businesses in the most exposed sectors to better understand their Brexit plans and associated concerns/needs (local specific).
2. Raise awareness among local businesses of likely Brexit implications and support offer.
3. Assertively continue to progress planned regeneration and investment in Basildon.
4. Ensure ongoing upskilling of local residents and workers in order to safeguard inclusive growth and mitigate against perpetual skills shortages.
5. Develop programme of support for SMEs and entrepreneurs that are most exposed to Brexit impacts.
6. Monitor Whitehall to gain further clarity on the government’s response to Brexit and successor investment to EU programmes.

7. Outwardly promote Basildon as a centre for global trade and as logical choice for inward investment and FDI.

Automation Priorities:

1. Map out and monitor innovation among Basildon businesses to identify challenges and implement support to secure appropriate technology investment.
2. Establish collaborative partnerships outside of the LEP area and wider region to help key sectors exploit technology and automation.
3. Review training provision to identify how local colleges and providers can work with businesses to deliver digital skills particularly around exploitation of data analytics, AI, AR/VR and robotic technology.



1. Introduction and Study Context

Introduction

- 1.1 **Hatch Regeneris** and **Urban Foresight** were commissioned by Basildon Council to undertake an in depth and forward-looking review of key drivers which are and will influence the future shape of the Basildon economy. This report sets out a base of evidence and analysis which looks at the consequences of two key economic factors in particular:
- 1) **Brexit** – the impending departure of the United Kingdom from the European Union (EU).
 - 2) **Automation** – the disruptive effects of technology which are changing the way industries function, trade and grow.
- 1.2 The report addresses these topics in the context of the prevailing policy imperative, Basildon’s existing economic performance, base of industry and sectors, its assets and the challenges that are currently inhibiting growth and citizen prosperity.
- 1.3 **The report has been developed to provide Basildon Council with a clearer sense of what the future may hold, outline the opportunities and challenges associated with Brexit, automation and technical disruption and articulate what the implications may be for local the local economy.**
- 1.4 The report draws upon **a broad base of research published by authoritative sources, subject experts and academics** and where possible, draws out the implications at a local level. The report also references the latest data presented within the **Basildon Economic Baseline Tool**, where statistical indicators set the scene, have a strong relevance to the research topics and help to develop a fuller picture of Basildon’s relative economic exposure¹.

Study Context

- 1.5 **Basildon Council** plays an important role in supporting the wellbeing and growth of the economy, helping to establish the conditions that allow businesses to thrive and enabling local people prosper. Through a combination of policy setting, regulation, investment and delivery, **the Council is a key economic actor.**
- 1.6 **Its Economic Development function is positioned at the core of the Council’s growth and productivity agenda**, setting the strategic imperative and directing Council resources for maximum economic impact. The basis for the Council’s policy prioritisation is a robust and transparent evidence base, which links to local economic characteristics, benchmarks performance and looks to understand the implications of trends and drivers of change.
- 1.7 As part of a wider research and intelligence gathering exercise, **Basildon Council is eager to learn more about the local economy and the extent to which this is exposed to factors driving change.** In doing so, this will enable the Council to develop proactive and ambitious policies which will allow Basildon to capitalise on technological transformation and the prospect of new global trading relationships. An extensive knowledge base will also give the Council the tools to ensure that local businesses and people are prepared for such change.

¹ The Basildon Economic Baseline Tool can be accessed [here](#)

- 1.8 Improved intelligence will mean the Council is **well-placed to deliver the objectives set out in the UK’s Industrial Strategy, South East Local Enterprise Partnership’s (SELEP) Strategic Economic Plan (SEP) and an emerging Local Industrial Strategy (LIS)**. Moreover, Basildon is an integral member of the Association of South Essex Local Authorities (ASELA), which is facilitating growth at scale across the South Essex Corridor. A transparent evidence base will support the Council’s contribution to these broader strategic partnerships.

Research Methodology

Research Approach

- 1.9 The methodology employed within this report is briefly summarised below. **The adopted approach makes use of primary and secondary research to develop an understanding of potential implications at a localised level, where data allows.**
- 1.10 In order to set out a comprehensive review of the opportunities and challenges presented by Brexit and automation in Basildon, the report uses the following sequential structure:
- 1.11 **Literary Review** – sets the scene in terms of prevailing national, sub-regional and local economic development policy and introduces a baseline of research sources which are used to assess the possible impacts of Brexit and the consequences of automation and technological advancement on business.
- 1.12 **Economic and Labour Market Context** – baselines the key economic characteristics of Basildon across five domains, setting out the Council’s relative strengths and weaknesses, thereby acting as a reference point from which to review the local consequences of Brexit and automation.
- 1.13 **Economic Prospects** – a forward-facing analysis, looking at the consequences of Brexit for Basildon through the lens of the factors driving the Brexit vote, potential economic impacts and the Council’s broader economic exposure. Also sets out key technology trends and reviews the implications of automation for key employment and growth sectors, summarising observed challenges and opportunities for each.
- 1.14 **Strategic Response** – an outline action framework which seeks to address the opportunities and challenges highlighted within the evidence, with an emphasis on identifying where the Council should prioritise its influence and resources.

Figure 1.1 Study Methodology



Source: Hatch Regeneris, 2019



***Economic Development Policy,
Brexit and Automation Literary
Review***

2. Policy & Literature Review: Brexit & Automation

Brexit Negotiations Status

Brexit – Current Position



- 2.1 As we the country moves closer to an extended Article 50 deadline, signalling the UK's departure from the EU, **the terms and conditions of Brexit remain in a state of flux.** Whilst progress has been made with regards to the negotiation of a mutually agreeable exit agreement, **a legally binding position, underpinned by political consensus, remains elusive.** Key sticking points remain, and a sense of intractability perpetuates, as the UK government, political parties and the European Commission all maintain an entrenched stance.
- 2.2 In the midst of this lies extreme political division, public apathy and frustration from large parts of the business community, who are withholding investment and seek reassurances over the practical consequences of Brexit. Whilst some remain optimistic as to the economic opportunities created by an autonomously governed UK, **a lack of information and defined strategic direction continue to deviate resources away from progressive policy making.**
- 2.3 **Set against this background, it remains difficult to ascertain what will happen next,** with a compromised exit settlement or 'no deal' scenario looking most likely. As a result, it is challenging to speak with a great deal of certainty as to what the final terms of Brexit will be and, therefore, the implications for local economies.
- 2.4 That being said, the current Brexit agreement, which has been endorsed by the EU, **provides an outline for the general direction of travel** (and reflects the favoured position on behalf of 27 EU states), with the exception of the issues that continue to suppress unilateral political approval in the UK (chiefly customs arrangements and a proposed Irish 'backstop').
- 2.5 The key principles of the draft exit agreement remain:
- **Transition period** – calls for the UK to stay inside the single market and remain subject to EU laws and regulations until December 2020, subject to a new trade relationship.
 - **Irish border/customs union** – aimed at preventing a hard border between the Republic of Ireland and Northern Ireland, consisting of a single customs territory between the EU and the United Kingdom.
 - **Citizens' rights** – protections for EU citizens in the UK and UK nationals in EU countries to continue to live, work or study as they currently do, subject to a final agreement.
 - **Divorce bill** – the UK will honour all existing commitments to EU programs until 2020, expected to total £39 billion in payments.
 - **Competition and State aid** – the UK will maintain commitments on competition and state aid, as well as employment and environment standards and tax.

- **Future trade agreements** – the development of a close relationship on services (including financial services) and investment as well as sectoral cooperation.
- **Governance** – the final withdrawal agreement would be policed by a structure based on a joint committee taking decisions by mutual consent and whose verdicts would be binding, in including possible adjudication by the European Court of Justice.
- **Financial markets** – London’s financial centre will have basic level access to the EU’s markets, akin to the US and Japan.

Continued Brexit Uncertainty

- 2.6 In light of more recent political events and following the repeated failure of the House of Commons to agree the Prime Minister’s Brexit Deal, **the likely outcomes of the process are perhaps even more unclear**. Certainty around next steps, democratic process and the extent to which Article 50 can be extended all remain volatile, with the EU’s position no less pivotal to determining next steps and the likelihood of a ‘hard’ Brexit.
- 2.7 Indeed, the type of Brexit deal that will ultimately be negotiated has permeated new headlines for some time, with a series of outcomes spanning the ‘soft’/‘hard’ Brexit continuum. Variation in such scenarios is broadly articulated in the diagram below.

Soft	Scenario	Other Countries in Similar Position	Headline Changes
	Remain in the EU	<ul style="list-style-type: none"> • Germany • France • Other EU Members 	Status quo Continue to be a member of the: <ul style="list-style-type: none"> • EU • Single market • Customs union
	Single Market	<ul style="list-style-type: none"> • Norway • Iceland 	Free movement of goods, services, investments and people <ul style="list-style-type: none"> • UK is no longer an EU member • UK must continue to accept immigrants from other single market countries • UK must continue to pay into EU budget and abide by European Court of Justice rulings • No Irish border controls
	Customs Union	<ul style="list-style-type: none"> • Turkey 	Common external tariff on imports, and no tariff on goods circulating inside customs union <ul style="list-style-type: none"> • UK cannot make bilateral free trade deals with 3rd countries • Excludes trade in financial services • No Irish border controls
	Free Trade Deal	<ul style="list-style-type: none"> • South Korea 	Prioritises sovereignty and immigration control over close economic ties <ul style="list-style-type: none"> • May take years to negotiate all trade deals needed • Requires border controls between Ireland and Northern Ireland
	No Deal	<ul style="list-style-type: none"> • N/A 	Leave the European Union with no transition period or agreed framework in place <ul style="list-style-type: none"> • Revert to the trade rules set out by the World Trade Organisation
Hard			

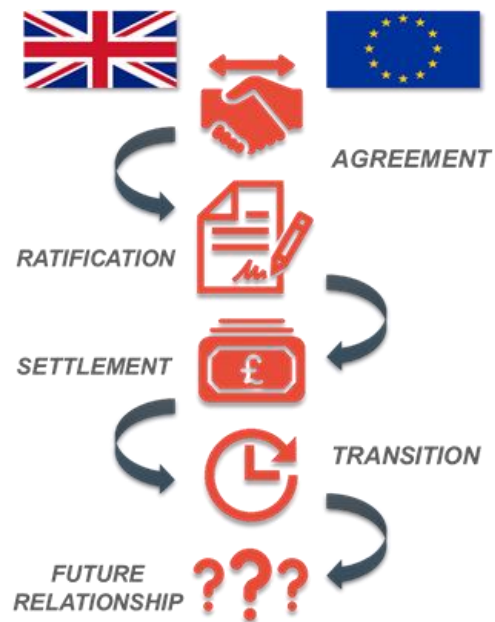
- 2.8 With the government ceding control to the House of Commons and recent steps taken by the Conservative and Labour parties to collectively negotiate a supportable deal, **there is an even greater degree of urgency to conclude Brexit**. Current indications suggest, however, that an extended negotiation process is forthcoming, leading to a lengthy period of debate, democratic process and engagement with European negotiators. Concrete outcomes are therefore liable to take some time to materialise, **leading to further political and economic uncertainty, which may be more exaggerated assuming a possible ‘no deal’ scenario**.

Brexit Process – What Next?

Brexit – Next Steps and Moving Forward

- 2.9 As Brexit negotiations reach a critical point and the future of a UK-EU relationship is yet to be prescribed, **procedural next steps are reasonably well-defined and can be mapped out accordingly**. At present, the issue is one more of timing than the steps to be taken.
- 2.10 Broadly, the stages needed to ratify a unilateral Brexit deal are set out below:

- **UK sign-off Brexit agreement** – deal agreed in the UK through a majority parliamentary vote.
- **UK legislature sign-off** – deal is passed in UK Law, with the process of enshrining this into statutory documents initiated.
- **EU approval** – EU member ratification through a parallel democratic procedure, via an EU Parliament plenary route.
- **Transition and trade talks** – subject to UK and EU parliamentary process, the next phase of the relationship will be defined, and a longer-term negotiation will progress. The focus for this will be on the future trade relationship and what the cornerstones of economic activity will be beyond the transition.
- **Backstop initiation** – should the transition period conclude with unresolved issues; backstop arrangements will be initiated. This is a highly contentious process that would see the UK remain in a permanent customs union arrangement and lies at the core of the current negotiation process.
- **Beyond Brexit** – a new era of UK-EU relations commences, establishing new norms of legislation, trade and the movement of goods and people. It is expected the UK will redefine its global trading role and agree new trade deals with key international markets, no longer bound by EU single market and customs union restrictions.



Economic Development Policy Review

- 2.11 Delivering sustained economic growth, which is inclusive, improves productivity and builds on the distinctiveness of places, **sits at the core of the prevailing economic development agenda**. The local policy imperative is therefore influenced by this and shaped by a number of strategies which provide a focus for decision-making and the prioritisation of investment.
- 2.12 **The strategies outlined below are of particular relevance to Basildon** and each acknowledges the need to address known and unknown consequences of Brexit. They also reflect on the growing influence and disruptive effect of technology across the economy, introducing new services, processes and products, with varying implications for industry. Importantly, these strategies also reinforce the need to understand more about the implications of Brexit and automation, at a local level.

Industrial Strategy – Building a Britain fit for the future (2017)

Her Majesty’s Government



- The Industrial Strategy is the government’s flagship strategy, aimed at delivering sustained economic growth, closing regional performance disparities and boosting the earning power of people across the UK.
- The strategy is rooted in ‘five foundations’ which are the focus for boosting national productivity and harnessing the economic value of innovation and research. The five foundations are:
 - **Ideas** – making the UK the world’s most innovative economy
 - **People** – creating good jobs and greater earning power for all
 - **Infrastructure** – a major upgrade to the UK’s infrastructure
 - **Business Environment** – making the UK the best place to start and grow a business
 - **Places** – creating prosperous communities across the UK
- The strategy notes the importance of automation as both a challenge and opportunity to economic growth. This is in the context of digital skills and ensuring people are prepared for new types of work, shifting public transport towards electrification and autonomous vehicles, developing a training ecosystem that can react to rapid technological evolution and the substitution of low-skilled labour.
- The strategy notes the importance of the UK being globally competitive as a consequence of Brexit, with opportunities associated with economic autonomy and showcasing the country’s innovative capacity, specialisms, reinforcing EU trade relationships and developing new global export markets.
- The strategy notes the importance of retaining close ties with Europe, the need to compete on levels of productivity and respond to the implications of shifting labour flows, through upskilling of the domestic labour force and launch of the UK Shared Prosperity Fund.

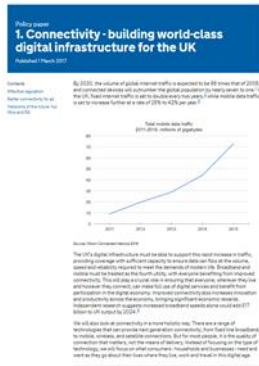
Export Strategy – Supporting and Connecting Businesses to Grow on the World Stage (2018)

Her Majesty’s Government



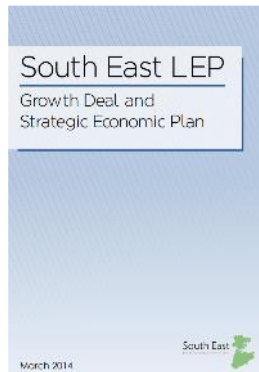
- The report sets out Britain’s ambitions to be a global trading partner, capturing economic growth potential in rapidly growing international markets and beyond the EU.
- The strategy pushes for the UK to grow the contribution of exports as a proportion of national GDP, pushing beyond competitors and capitalising on the growth of digitisation.
- The strategy outlines the key factors holding back export growth and sets out the role of government in response to support businesses to develop new markets:
 - **Finance** – finance and insurance backing
 - **Connect** – link UK businesses to overseas markets
 - **Inform** – providing businesses with access to information, advice and assistance
 - **Encourage** – address attitudinal and awareness barriers
- The strategy illustrates the role of the national Industrial Strategy in delivering growth through international trade and cites the sector deals which have been struck to develop areas where the UK has competitive advantages. This includes investment in Artificial Intelligence, Automotive, Construction, Creative Industries, Life Sciences, and Nuclear sector deals.

UK Digital Strategy (2017)
Her Majesty's Government


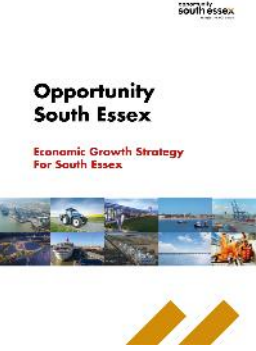


- Links to the government’s Plan for Britain, building an economy that works for everyone, and ensures that wealth and opportunity are spread across the country.
- Part of a policy framework which is designed to secure Britain’s future economic success and competitiveness, post-Brexit, with government backing businesses to invest for the long term.
- Applies the principles set out in the Industrial Strategy, building on the UK’s legacy of excellence in innovation and pioneering ground-breaking technologies.
- The strategy is founded on seven key strands:
 - **Building world-class digital infrastructure for the UK**
 - **Giving everyone access to the digital skills they need**
 - **Making the UK the best place to start and grow a digital business**
 - **Helping every British business become a digital business**
 - **Making the UK the safest place in the world to live and work online**
 - **Maintaining the UK government as a world leader in serving its citizens online**
 - **Unlocking the power of data in the UK economy and improving public confidence in its use**

Strategic Economic Plan (2014)
South East Local Enterprise Partnership



- The Strategic Economic Plan (SEP) acts as the strategic growth framework for SELEP – an extensive sub-regional economy.
- The strategy sets out ambitious growth ambitions and forms the basis for a series of Growth Deals, securing multi-million pound investment from government and private sector. These are driven an overarching aim to, by 2021:
 - **Generate 200,000 private sector jobs**
 - **Complete 100,000 new homes, increasing**
 - **Lever investment totalling £10 billion**
- The SEP prioritises investment in boosting workforce productivity, infrastructure, developing local skills capabilities, the construction of new homes and Thames Gateway regeneration.
- The SEP notes the importance of boosting innovation and the potential of technology to stimulate new forms of economic growth, increase productivity and for the labour force to be ready to meet the needs of employers in the future.

<p>Strategic Economic Plan Strategy Statement (2018) South East Local Enterprise Partnership</p> 	<ul style="list-style-type: none"> • Consultation draft of a new Economic Strategy Statement produced by SELEP, intended as a bridge between the SEP (2014) and a new Local Industrial Strategy. • The statement emphasises several key features of the area that are central to the strategy: <ul style="list-style-type: none"> • Rapid population growth over the next 20 years. • Recognition of the region’s nationally significant infrastructure assets. • Strong connections with London and major growth areas including Thames Gateway, London-Stansted-Cambridge corridor, Haven and Gatwick Diamond. • Strong innovation assets including the region’s universities and FE colleges. • The need to upskill the workforce. • The need to boost productivity, in line with the national productivity agenda. • The document sets the tone for a new SEP which will reflect contextual changes such as Brexit, the productivity challenge, skills shortages, an Increasing emphasis on international trade, slow wage growth and tighter public finances.
<p>Opportunity South Essex – Economic Growth Strategy (2016) ASELA</p> 	<ul style="list-style-type: none"> • The strategy responds to the need to support the growth of the Thames Gateway, as one of the most significant sub-regional economies, with a key role to play in the UK’s international competitiveness. • The strategy notes the importance of South Essex as a gateway to global trade, particularly European markets, characterised by large ports, dynamic economic centres and strong road and air connectivity. It also articulates the role the area plays given its proximity to London, as a contributor of skilled labour and chosen location people migrating from the capital. • The document sets out its priorities for intervention to address key challenges and accelerate productivity, including securing investment, supporting businesses to grow, improving connectivity, enhancing the quality of place, developing existing workers and attracting new talent and re-shaping the housing market. • The strategy forms the basis for prioritisation, sets out a framework for delivery and also establishes a commitment to ongoing performance monitoring and review. It also highlights potential investment routes, including those which focus on reaping the economic benefits associated with innovation, research and development.

Basildon Economic Development Strategy (2018)

Basildon Borough Council

Executive summary

In 1982, with a population of 20,000, Basildon was a small town. Today, with a population of 100,000, it is a major urban centre. The town has grown rapidly since the 1980s, and is now one of the most densely populated towns in the country. The town has a long history of industry, and is now a major centre for the chemical and oil industries.

Over the years, Basildon has grown from a small town to a major urban centre. The town has a long history of industry, and is now a major centre for the chemical and oil industries.

- The town is now one of the most densely populated towns in the country.
- The town has a long history of industry, and is now a major centre for the chemical and oil industries.
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Major challenges facing Basildon

Basildon is a long-term town of high quality of life and excellent infrastructure. The town has a long history of industry, and is now a major centre for the chemical and oil industries.

Conclusion

Basildon is a long-term town of high quality of life and excellent infrastructure. The town has a long history of industry, and is now a major centre for the chemical and oil industries.

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- The strategy provides the basis for economic development policy within the Borough, informing local planning policy and setting the direction for council decision-making.
- It sets out a baseline of evidence from which priorities and have been developed, informing the thrust of four key economic development policies:
 - **Sustain the Borough’s strong economy by supporting local businesses.**
 - **improve the employment prospects, education and skills of local people.**
 - **Promote sustainable economic growth by ensuring the provision of essential strategic infrastructure and connectivity.**
 - **Strengthen the “Basildon Brand” to attract inward investment and work to bring about an economy that can adapt to global trade and competition.**
- The strategy references the relevance of the Brexit outcome to Basildon’s economy, outlining the potential opportunities to businesses, including improved trade deals, lower export prices and the diversification of markets.
- The strategy also notes the potential threats of automation and the transformative impacts on locally important sectors, with implications for labour skills and training.

Brexit Impacts – Literary Review

- 2.13 **There is a wide variety of published research looking at the proposed and actual consequences of the UK’s Brexit vote in economic terms.** This includes reports authored by global consultancies, academics, think tanks, universities and by the UK government. The veracity and relevance of the evidence base is somewhat variable, with some reports limited by their research scope, their timeliness and also the extent to which they observe localised effects. That said, collectively they provide a comprehensive review of potential Brexit outcomes and help to calculate localised effects.
- 2.14 **The publications referenced below are those that are most relevant to this study,** provide authoritative insights and also the opportunity to consider implications at a Basildon level. They are subject to caveat, particularly given the detail of a negotiated Brexit deal has yet to be agreed and the reaction of industry to continued political instability, remains dynamic.
- 2.15 A summary of each report can be found in the appendix.

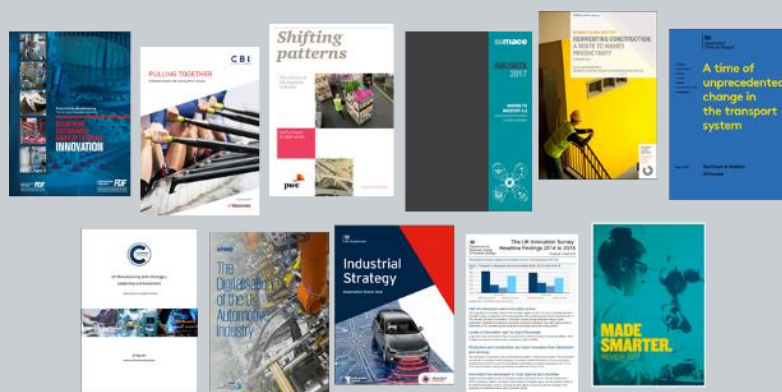


- **EU Exit – Long-term economic analysis (2018)**, Her Majesty’s Government
- **The Local Economic Effects of Brexit (2017)**, London School of Economics
- **Brexit and the UK Automotive Industry: Understanding the Impact (2018)**, Birmingham City University (Centre for Brexit Studies)
- **Understanding the economic impact of Brexit (2018)**, Institute for Government
- **Who Voted for Brexit? A Comprehensive District-Level Analysis (2017)**, Sascha O. Becker, Thiemo Fetzer and Dennis Novy
- **EEA Migration in the UK (2018)**, Migration Advisory Committee
- **The Continental Divide? Economic Exposure to Brexit in Regions and Countries on both Sides of the Channel (2017)**, University of Birmingham

Automation and Technology – Literary Review

- 2.16 **There is also comprehensive collection of published literature which looks at the importance and impact of technology, through an economic lens.** This includes government-backed reports and papers which acknowledge the relevance of technological disruption, the most prevalent trends and the need for a strategic response, to maximise economic capital and secure the UK’s competitive advantages. These underline the government’s commitment to adaptation, evolution and infrastructure investment to harness the power of technology to raise productivity and tackle the grand challenges set out in the National Industrial Strategy.
- 2.17 These reports are augmented by a number of other relevant research publications, which address the opportunities and challenges presented by technology and automation, with reference to specific industries, sectors and the labour market.

2.18 Key literary sources are set out below. A summary of each report can be found in the appendix.



- **Made Smarter Review (2017)**, Her Majesty's Government
- **The UK Innovation Survey: Headline Findings 2014 to 2016 (2018)**, Department for Business, Energy & Industrial Strategy
- **Automotive Sector Deal (2018)**, Her Majesty's Government
- **The Digitalisation of the UK Automotive Industry (2016)**, KPMG & SMMT
- **UK Manufacturing Skills Shortages, Leadership and Investment White Paper (2017)**, Cranfield University
- **Future of Mobility (2019)**, Government Office for Science
- **Reinventing Construction: A Route to Higher Productivity (2017)**, McKinsey Global Institute
- **Moving to Industry 4.0: A skills revolution (2017)**, Mace
- **Shifting Patterns: The Future of the Logistics Industry (2016)**, PwC
- **Pulling Together: Strengthening the UK's Supply Chain (2014)**, CBI
- **Delivering Sustainable Growth Through Innovation (2018)**, Food & Drink Federation



***Economic and Labour Market
Context***

3. Economic and Labour Market Context

Basildon’s Economy Today – Baseline Conditions

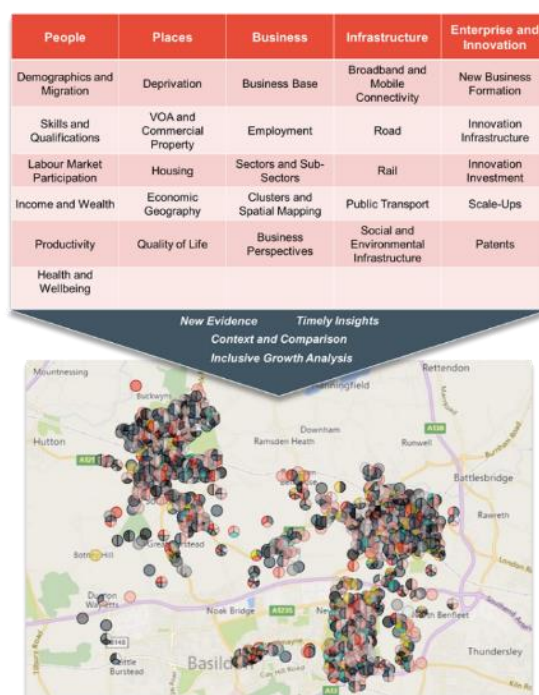
3.1 In order to understand the potential implications of Brexit, automation and technological disruption in Basildon, **it is important to set the scene and outline the performance of the local economy, as it stands presently.** The relative competitiveness of the Basildon economy and its exposure to Brexit can be explored through the lens of a number of economic indicators, whilst also helping to develop a stronger narrative around what automation means for businesses and the local workforce.

3.2 A comprehensive review of the Basildon economy and its relative strengths and weaknesses has recently been undertaken as part of an evidence baselining exercise, captured under five thematic areas:

- 1) **People**
- 2) **Place**
- 3) **Business**
- 4) **Infrastructure**
- 5) **Enterprise and Innovation**

3.3 **This data forms the basis for summarising Basildon’s economic Strengths, Weaknesses, Opportunities and Threats (SWOT),** pinpointing where the Borough is excelling, has comparative advantages and also where the economy is showing signs of underperformance. Certain indicators are particularly relevant and can therefore be used as a reference point for Brexit and automation analysis, including sector composition and labour market data.

3.4 An overview of local economic conditions is provided below. A summary of the key policy implications arising from this evidence base is also included, for completeness².



Source: Hatch Regeneris, 2019

Basildon’s Economic Headlines

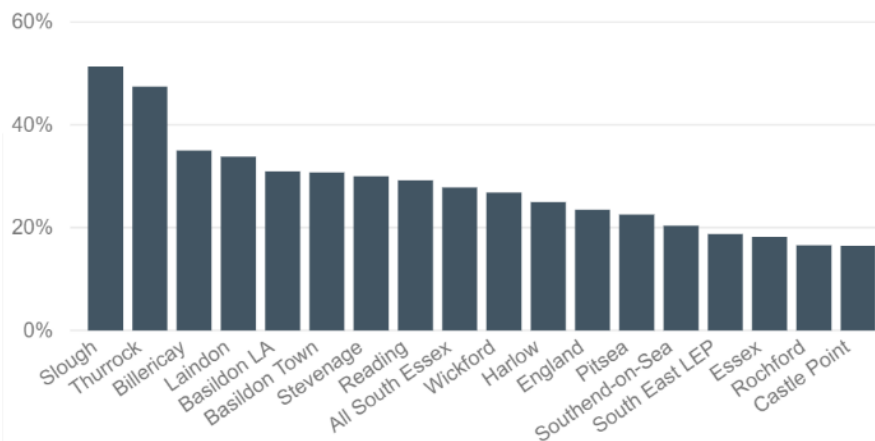
The Basildon Economy

3.5 Overall and as of 2018, there are over **8,700** businesses in Basildon. Together, these sectors employ nearly **90,000** people.

² Note – data is summarised here and is presented in full as part of the [Basildon Economic Baseline Tool](#).

- 3.6 Between 2010 and 2018, the number of businesses has grown by **31%**. This is more than **7 percentage points** greater than the average in England and **12 percentage points** greater than the South East LEP area. The most pronounced period of growth has been between 2014-18, representing a strong and sustained recovery from the recession.

Figure 3.1 Business Growth – 2010-18



Source: Basildon Economic Baseline Tool, 2019

- 3.7 Though employment growth was relatively stagnant between 2010 and 2013, there has been strong and **resilient growth since 2014**. Over the whole period, the number of individuals employed in Basildon grew by **14%**. This was **3 percentage points** greater than the England average **4 percentage points** greater than South East LEP.
- 3.8 Basildon’s economic employment composition is varied **but there are certain sectors which are dominant in terms of their relative size**. The top five sectors by total employment are **Public Admin, Education and Health, Financial and Professional Services, Retail, Manufacturing** and **Business Support Services**.

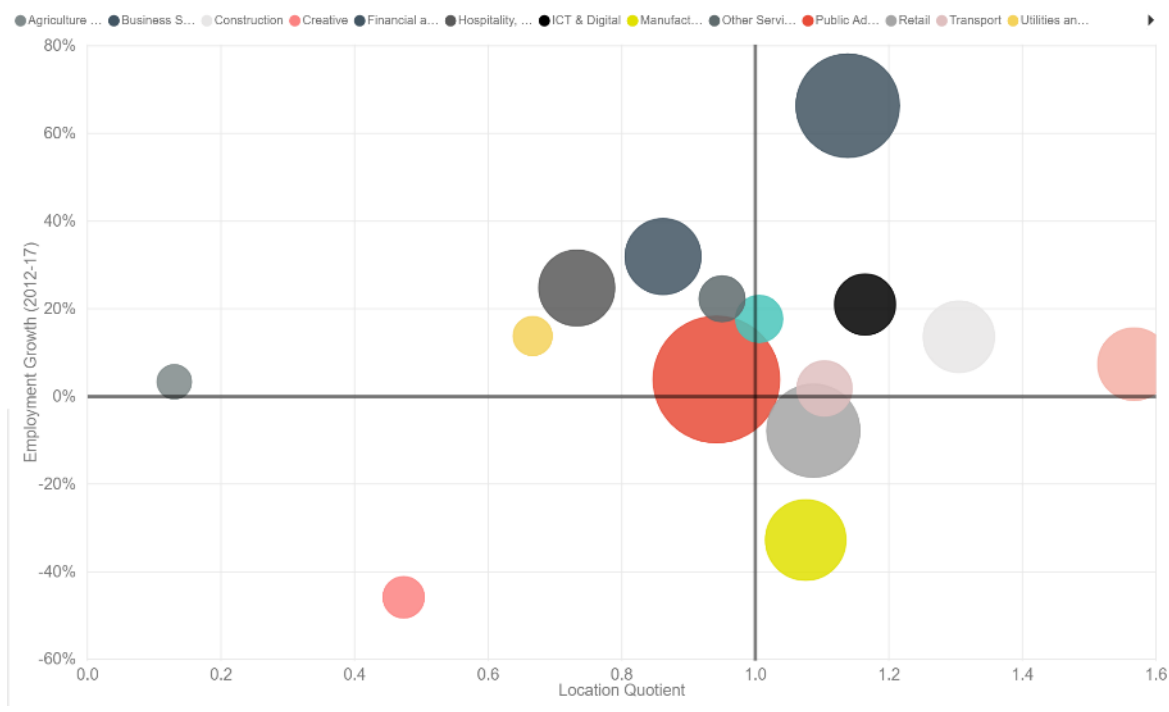
Figure 3.2 Basildon’s Key Employment Sectors



Source: Basildon Economic Baseline Tool, 2019

3.9 Looking comparatively at Basildon’s breakdown of sector employment, this shares some hallmarks of the UK economy, but also exhibits relative distinctiveness in certain sectors.

Figure 3.3 Sector Employment Performance and Specialisation



Source: Basildon Economic Baseline Tool, 2019

3.10 Key points of note include:

- Sectors such as **Financial and Professional Services, ICT and Digital and Construction** have grown significantly and are specialised (overrepresented versus England).
- The **Wholesale sector** is Basildon’s most specialised, with a concentration of businesses which is **1.6 times greater** than the national average, employing nearly **6,000** people, but with a **lower rate of growth** than the all employment in Basildon over 2012-17.
- The local economy is **heavily reliant on public sector employers**, accounting for over **20,000** jobs, whilst still growing in the face of public sector cuts and austerity policies.
- Several **large sectors are shrinking**, despite having concentrations of greater than 1, including **Retail (-8%) and manufacturing (-33%)**.

3.11 The characteristics of the Basildon economy are further defined by its sub-sectors and their relative prominence. The largest sub-sectors by employment are:

- **Hospital Activities (6,000)**
- **Retail Sale in Non-Specialised Stores with Food Beverages/Tobacco (3,500)**
- **Engineering Design Activities for Industrial Process and Production (3,000)**
- **Computer Consultancy Activities (2,500)**
- **Primary Education (2,500)**

- 3.12 Collectively these contribute approximately **20% of total employment** across the Borough. Broadly, these sub-sectors underpin Basildon’s sectors which are growing, specialised and contribute large overall levels of total employment.
- 3.13 Within the sectors identified above, **there are a broad variety of trading businesses**. The top 10 largest businesses within these sectors are set out in the appendix.³ These form the basis for economic exposure and impact review, later in the report.

Basildon’s Economy is Evolving

Basildon is Investing to Grow

- 3.14 The Borough has significant growth ambitions and is **working to build a stronger, inclusive and more resilient economy**. However, the evolution of Basildon is not occurring in isolation and competitors, both local and international, **are also transforming their economies and pursuing competitive advantages, underpinned by progressive economic development strategies**. A prime example of this is Harlow, which is undergoing significant regeneration-led growth.
- 3.15 In the context of local economic performance and relative positioning amongst competitors, **the Council, with the support of strategic partners including SELEP and ASELA, continues to invest in Basildon’s future**. This is helping to address key growth barriers, create new and improved employment opportunities for local people and better exploit Basildon’s distinctiveness and locational assets.







Source: Association of South Essex Local Authorities, 2019

- 3.16 With SELEP and ASELA playing an important role and as conduits for funding, the Council is making strategic investments across a number of priority areas, including:
- **Transport schemes**
 - **Broadband and digital connectivity**
 - **Skills and employability initiatives**
 - **Inward and foreign direct investment**
 - **Business support programmes**

³ Note: Employment has been used as a proxy for business size, due to the presence of more complete data. Businesses have been categorised by sector, using a best fit approach based on SIC code definitions within the database. These cross-reference to later chapters in the report, where the impact of Brexit and Automation is explored at a sector level and offer a best-fit approach in order to assess the relative exposure of Basildon’s economy.

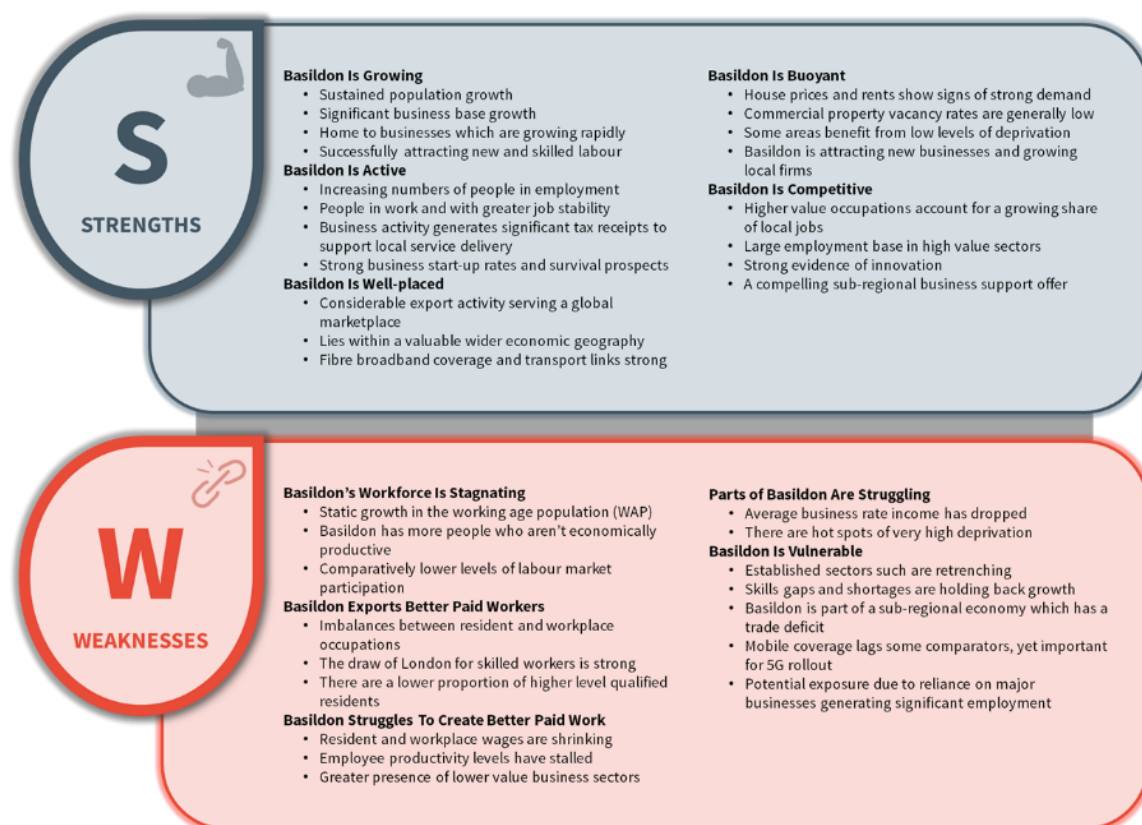
- 3.17 **Many of these investments will have a role to play in reinforcing the competitiveness of Basildon in an increasingly globalised economy.** They will also help the Council to address potential challenges posed by Brexit and the disruptive influence of technology. Some of the most recent and higher profile projects are summarised below.

Table 3.1 Flagship Basildon Projects	
Activity	Summary
<p>ASELA Connectivity Programme</p>  <p>Improving connectivity and transit links between major growth areas</p>	<ul style="list-style-type: none"> • Programme of connectivity projects aligning local economic performance with effective and efficient public service delivery. • Framed by ASELA’s collective strategic direction and vision to establish South Essex as “the place to live, the destination to visit and the place for businesses to thrive”. • Projects are centred on areas of key opportunity and six growth corridors – Thames Estuary, Southend Airport Area, A127 Corridor, Crossrail Connectivity, Lower Thames Crossings and Junctions and Purfleet, Tilbury and London Gateway Port Areas • Within each of these areas, are a pipeline of projects which are expected to unlock significant economic benefits and agglomeration across South Essex. • The programme will help to set out a delivery roadmap tied to a 2050 economic vision.
<p>South Essex Full Fibre Project</p>  <p>Extending world-leading full fibre connectivity across South Essex</p>	<ul style="list-style-type: none"> • Recently confirmed to have received government funding support worth £4.5m, which will deliver full fibre broadband connections across Basildon, Brentwood, Castle Point, Rochford and Thurrock Council areas. • Subject to a procurement process, will initially connect 200+ public sites to full fibre, with over 40,000 adjacent businesses and homes to benefit from access by 2025. • Will provide a platform for the digitisation of commerce, globalisation of markets and rollout of complementary technologies, including 5G.
<p>South East Business Boost</p>  <p>Boosting the competitiveness and growth potential of local businesses</p>	<ul style="list-style-type: none"> • An EU funded business support programme delivered across the SELEP area. • Offers growth grants to small and medium sized businesses, with funding up to £10,000 available at a maximum grant rate of 30%. • Covers costs associated with premises extension and improvement and capital costs associated with equipment and machinery.
<p>South Essex College Digital Campus</p>  <p>Delivering digital courses which are in demand by tech-focused businesses</p>	<ul style="list-style-type: none"> • Delivered through SELEP funding, aimed at enhancing the College’s digital curriculum offer to support economic growth in target sectors and meet employer skills demand. • Led by South Essex College and in conjunction with local partners, entails the development of a wider course offering at the Southend campus. to enhance the skills base of the local workforce. • Courses include tiered degree level qualifications (digital photography, animation), diplomas (digital technologies, creative media production) and also apprenticeships.

Basildon: Strengths Weaknesses Opportunities and Threats

3.18 Beyond its business employment and sector base, the Borough exhibits a wider variety of economic strengths and weaknesses. Drawing from the Basildon Baseline Tool, broader indicators of economic performance have been assessed, helping to determine the Borough’s exposure to the consequences of Brexit, automation and technological advancements. These are summarised diagrammatically, below.

Figure 3.4 Basildon’s Economy – Strengths and Weaknesses



Source: Hatch Regeneris, 2019

Figure 3.5 Basildon Economy – Opportunities and Threats



Source: Hatch Regeneris, 2019



Economic Prospects – Brexit

4. Economic Prospects – Brexit

Factors Driving Basildon’s Brexit Vote

- 4.1 In the EU referendum, **69% of voters in Basildon opted to leave the EU⁴**. This was significantly greater than the Essex (56%) and national (52%) average. This made Basildon the local authority with the **18th largest leave share** nationally and was a strong and clear indicator of voter sentiment. This **followed the pattern of neighbouring local authorities in South Essex and areas across the East of England**, where the share of the leave vote was distinct and proportionally strong.
- 4.2 To some, the voting result was a surprise and **has been subject to a significant amount of discussion**, attempting to better understand what drove the voting patterns, especially the extent to which this was impacted by socioeconomic factors.
- 4.3 In one particularly comprehensive analysis, Becker et al. assessed the vote share across the UK’s local authorities, looking at voter tendencies and correlation with other local indicators⁵. They hypothesised four broad categories of factors that drove the leave vote:
- **EU exposure through immigration, trade and structural funds**
 - **Local public service provision and fiscal consolidation**
 - **Demography and education**
 - **Economic structure, wages and unemployment**
- 4.4 This section reviews their findings and looks at how these factors affected the vote and analyses how they relate to Basildon through the lens of local socioeconomic conditions.

EU Exposure Through Immigration, Trade and Structural Funds

- 4.5 Immigration was a key topic during the referendum campaign, with many politicians arguing for more control over immigration. This drove a perception that EU migrants suppressed wages for British born workers and made it harder to access efficient public services. **Yet, statistical findings show that the higher the share of migrants in an area, the lower the leave vote.** However, this is partly a reflection of the decision of immigrants to move to urban areas, which were more likely to vote to remain. This relationship is largely reflected in Basildon, therefore, where **9% of the local population was not born the UK** compared to 15% across England.
- 4.6 However, research also showed that leave votes tended to be higher in areas **where there had been a large growth in the share made up of migrants, particularly those from EU Accession countries**. This could reflect the view that large migrant inflows could significantly affect the area culturally and economically. These effects are not necessarily borne out in the data for Basildon. Between 2008 and 2018, the **share of residents born outside of the UK increased by 1 percentage point** compared to a 3 percentage point increase across England. This smaller change in migrant share is not in line with Basildon’s large leave vote.

⁴ Electoral Commission, EU Referendum Results, Accessed March 2019

⁵ Becker, S. O., Fetzer, T., Novy, D., Who Voted for Brexit? A Comprehensive District-Level Analysis, Economic Policy, Vol. 32, Issue 92, October 2017

- 4.7 **Trade was also a highly contentious issue during the campaign.** Some voters saw the free movement of goods and services as a threat, with unwanted competition challenging their businesses and threatening local jobs. However, others saw the importance of unrestricted access to EU import and export markets to their businesses. Findings show that **a greater degree of trade integration with the EU was linked positively to a propensity to vote leave.** This can partly be explained by the type of sectors that are the most integrated with the EU, such as manufacturing in the North East.
- 4.8 While immigration and trade were key issues put forward during the referendum campaign, research illustrates that, of the four groups of factors, **these have lesser explanatory power.** This indicates that there may be more underlying factors driving the vote.

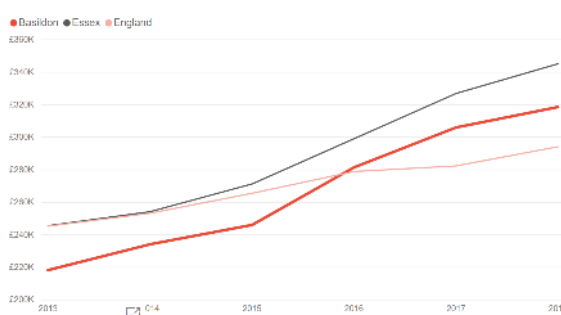
Local Public Service Provision and Fiscal Consolidation

- 4.9 Following the 2010 General Election, the coalition government introduced significant austerity measures in an attempt to reduce the budget deficit. While local authority **spending per person fell by 23% on average**, there was substantial variation across local authorities ranging from **46% to 6%**. In fact, Basildon saw a **28% decrease in council spending per person**, at the middle of this range⁶.
- 4.10 Councils that saw **larger budget cuts were more likely to have a higher leave share.** This is a pattern observed in Basildon given the nature of voting results. However, it is worth noting that the more deprived the area, the greater the impact of cuts, so this finding could partly be explained by existing deprivation hot spots and areas within Basildon where poverty and inequality levels are highest (i.e. areas within Basildon Town).
- 4.11 The leave campaign frequently referenced pressure on public services, with a particular emphasis on the NHS, arising from EU immigration. Research suggests that **concerns around local services were associated with increased leave vote share.** Shorter NHS waiting times as well as a larger share of the workforce in public sector employment, indicating availability of public services and public jobs, were negatively correlated with leave votes. A correlation with Basildon’s large (and growing) share of public sector employment is therefore observed here.

- 4.12 Housing market pressures were also seen as key determinants of the leave vote, given a shortage of supply and rising prices. The **share of the population in rented council housing had a strong positive correlation with the leave vote.** This is possibly because it is the type of housing that comes under the most pressure from lower paid migrants.

- 4.13 **Basildon has seen significant increases in house prices (46% since 2013)** and has not met its housing supply targets. This indicates that there could be pressures on the Basildon housing system, leading to disaffection and a greater tendency to vote in favour of Brexit.

Figure 4.1 Mean House Prices (2018)



Source: Basildon Economic Baseline Tool, 2019

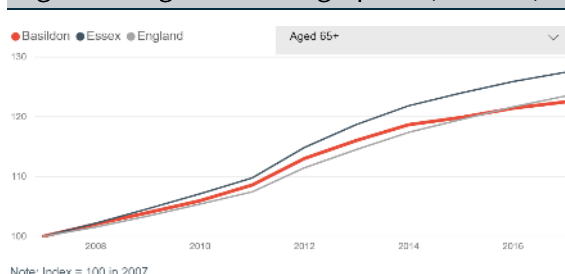
⁶ Financial Times, Austerity State: How Has Your Council’s Budget Changes, Accessed March 2019

Demography and Education

4.14 A large degree of commentary on the breakdown of the Brexit vote has focused around **age profile and education levels**, with many commentators acknowledging that the elderly and less qualified segments of the population were more likely to vote to leave.

4.15 Research shows that both a higher share of the population being age 60 and over and a faster growth of this proportion are associated with a greater leave vote. **However, this is not reflected in Basildon, where the proportion of residents aged 60 or above is 22% compared to 23.5% nationally**, albeit this represents a reasonably small difference.

Figure 4.2 Age 65+ Demographics (2007-17)



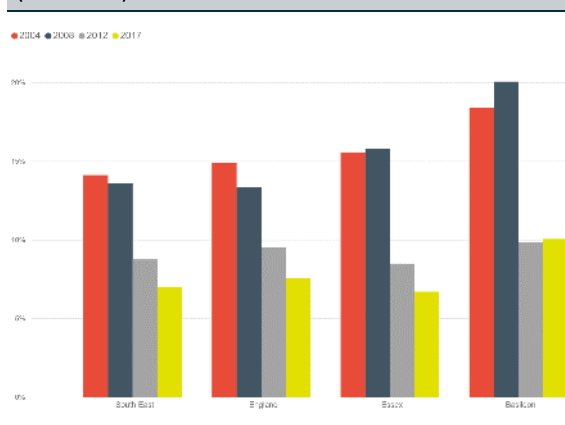
Source: Basildon Economic Baseline Tool, 2019

4.16 **Education levels strongly predict the referendum result.** The proportion of residents with no qualifications, as well as the growth of this proportion, are associated with a leave vote tendency. Indeed, research shows that this is the variable that **has the most explanatory power of votes across local authorities.**

4.17 This is reaffirmed by economic baseline data with respect to Basildon, **where education is observed as a key issue.** Circa **10% of the population has no qualifications** compared to 8% in England. This reflects poor secondary school performance where only **58% achieve A*-C in both English and Maths GCSEs** compared to 63% in England and where Basildon lags behind the national average Attainment 8 score per pupil.

4.18 Basildon has seen **improvements in the proportion of residents with no qualifications** in recent years and rates fallen slightly quicker than in England as a whole. However, no qualification rates in Basildon still significantly lag behind and are **likely to have been a key driver of the Brexit vote locally.**

Figure 4.3 Residents with No Qualifications (2004-17)



Source: Basildon Economic Baseline Tool, 2019

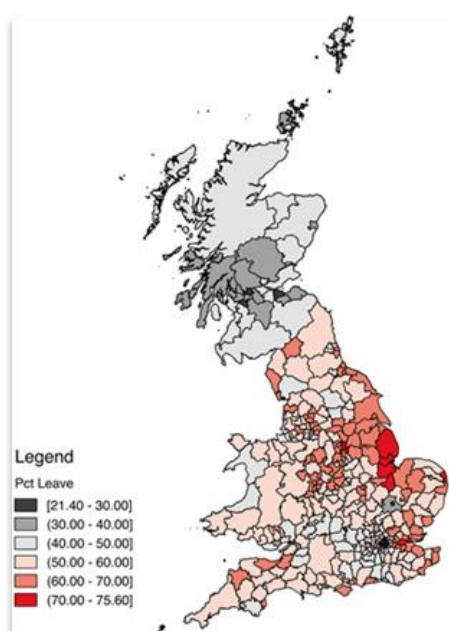
4.19 Equally the data shows that a **higher proportion of residents with at least degree level qualifications** in an area is positively correlated with a remain vote. Again, Basildon lags behind the national average with **28% of residents holding NVQ Level 4 or above qualifications** compared to 38% nationally.

4.20 While demography and education have been considered separately, many commentators have discussed the link between the two. With increased university enrolment over recent decades, **the proportion of younger people holding degrees is significantly greater than that of older people.** Nevertheless, this group of factors holds the most explanatory power of voting nationally and across local authorities. Indeed research suggests that **demography and education can explain nearly 80% of the variation in leave vote at a local level.**

Economic Structure, Wages and Unemployment

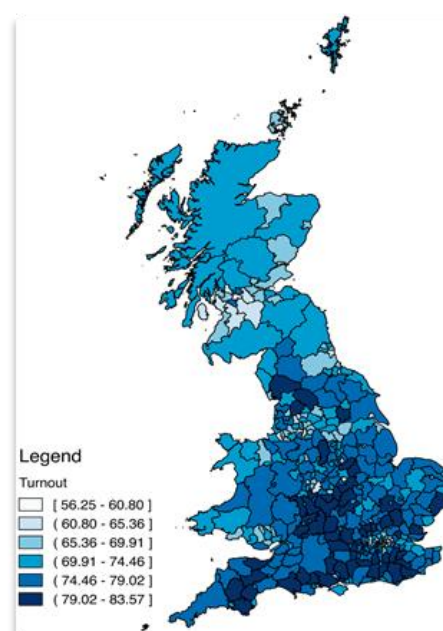
- 4.21 Some have argued that **the leave campaign was particularly persuasive in areas that have experienced prolonged economic decline**, especially in locations with a high dependence on the manufacturing sector. Linked to this, areas with low wages and low wage growth may be more exposed to competition from Eastern European migrants, with the effect of leading to more entrenched Eurosceptic views.
- 4.22 Research has shown that a **higher employment share in retail, manufacturing, construction and finance sectors was associated with a greater leave vote**. Likewise, growth in these four sectors (apart from retail) has a positive correlation with the leave vote.

Figure 4.4 Brexit Leave Vote (%)



Source: Becker et al., 2017

Figure 4.5 Brexit Voter Turnout (%)



Source: Becker et al., 2017

- 4.23 Basildon reflects this finding as **all four sectors have a relatively large employment share**. In fact, **all four sectors have a greater employment share than the England average** (they are more specialised or concentrated). The challenges faced by these sectors (such as the disruptive effects of technology and expansion online trading platforms) and their employees could partly explain the leave vote in Basildon, as a result.
- 4.24 While findings show that lower salaries did not significantly affect the vote, there is evidence that **lower salary growth was positively associated with the leave vote**. This is consistent with the narrative of worries about significant migrant inflows providing cheap labour and suppressing wage growth.
- 4.25 This finding is reflected in the Basildon data where **workplace salaries were higher in Basildon in 2013 compared to England**. However, **these salaries have fallen by 4% since then**, while England has experienced a 9% growth. This may have fuelled perceptions that EU membership was not helping residents and, in the case of migrant inflows, harming them. Basildon resident wage level growth have also been relatively stagnant, growing at a rate of 3% over this period.

Assessing the Potential Economic Impacts of Brexit

- 4.26 Despite significant uncertainty around the outcome of UK-EU negotiations, **there is agreement that Brexit, in some form, will have a fundamental impact on the UK economy.** It is unsurprising therefore, that many researchers have devoted considerable time to understanding the potential impacts under a variety of scenarios, including a so-called ‘hard’ or ‘soft’ Brexit.
- 4.27 There is an **extensive body of theoretical and empirical economic research** showing that stronger links in terms of trade, investment and migration lead to greater economic growth in all involved economies. In recent years, many studies have looked to apply these findings to Brexit a series of scenarios **to develop a fuller understanding of what the future may hold.**
- 4.28 This section looks at the **economic impacts at a national level**, followed by a more detailed look at the **impact on local authorities and sectors**, where data allows. It then discusses the impact of **EEA migration on the economy**, as a result of changing labour flows.

National Economic Impacts

- 4.29 Many researchers have attempted to estimate the potential long-term impact of Brexit on the UK economy, assessing scenarios ranging from membership of the European Economic Area to unilateral free trade. The Institute for Government reviewed fourteen of these studies conducted by academics, think tanks and governments⁷. **In general they found the vast majority of these studies predict that Brexit will have a negative impact on long-term GDP** (typically measured over 15 years), with **only one study suggesting Brexit would boost long-term economic performance.**
- 4.30 The extent of the reduction in economic growth is expected to **depend on the trading arrangement negotiated with the EU.** However, most studies expect **greater tariffs and/or disruption to trade flows**, therefore impeding economic growth, but the evidence base also suggests that these impacts **will have a further knock on effect on reduced investment and productivity.**
- 4.31 The studies note that changes to the rules around migration (free movement of people) could affect the **number of workers and the mix of skills available and would lead to lower economic output (GDP).** On the other hand, there may be some benefits arising from gaining more control over regulations; **potentially making businesses more cost-effective.** Certain studies suggest the UK economy will exploit slight economic gains from this, while others suggest the benefits will be more significant.

Local Economic Impacts

- 4.32 While much of the research into potential economic impacts has focused on the national picture, a number of papers have studied the impacts at finer level of detail, assessing impacts on local authorities or sectors specifically. **This enables the potential economic consequences of Brexit to be explored, with specific reference to Basildon Borough.**
- 4.33 A key study produced by researchers at the London School of Economics (LSE) assesses how UK **local authorities and business sectors will be affected by Brexit**⁸. This uses a world trade

⁷ Institute for Government, Understanding the Economic Impact of Brexit, October 2018

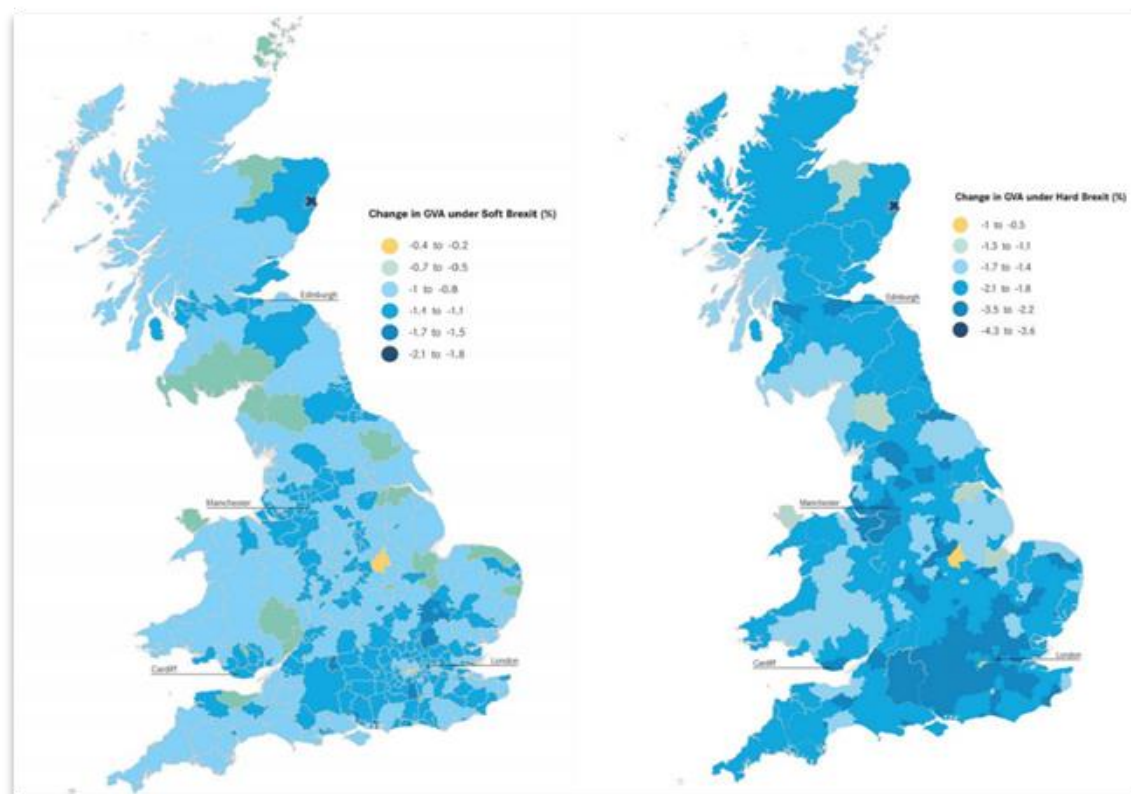
⁸ Dhingra, S., Machin, S., Overman, H., The Local Economic Effects of Brexit, October 2017

model to **estimate the change in GVA in ‘hard’ and ‘soft’ Brexit scenarios at a sector level compared to a baseline of the status quo arrangement.** The modelling approach applies local employment sector shares to these sectoral effects in order to estimate local authority impacts. This allows assumed effects to be observed at a Basildon level, considering impact in terms of economic output (GVA £) variation.

Geographic Impact Estimates

- 4.34 LSE researchers found that Brexit **will reduce GVA over the next ten years in every UK local authority.** This is the case under both (‘soft’ and ‘hard’) scenarios, **with a ‘hard’ Brexit having a greater effect** – perhaps to be expected given the shift this would present from existing EU trade regulations and as a more fundamental shift from existing single market arrangements.
- 4.35 This is articulated by the mean effects nationally, where there is projected to be a **-1.14% change in GVA over the next ten years**, and a **-2.12% mean change** in a ‘hard’ Brexit scenario.

Figure 4.6 Local Authority GVA Change in ‘Hard’ and ‘Soft’ Brexit Scenarios



Source: LSE, 2017

- 4.36 Looking across the UK, ‘hard’ Brexit impacts **range from -0.5% in Hounslow (due to its proximity to Heathrow) to -4.3% in the City of London (as the UK’s primary finance centre)** over ten years, while ‘soft’ Brexit impacts **range from -0.2% in Hounslow to -2.1% in Aberdeen City.** The key message is that there is significant variation in the effects geographically, but the overall pattern is consistent – **a shrinkage in economic output.**

Considering local effects and from a Basildon perspective, the **Borough is also predicted to see a fall in GVA as a result of Brexit.** The analysis found that Basildon would see **-1.1% lower GVA due to ‘soft’ Brexit and a -2.0% fall in GVA due to a ‘hard’ Brexit.** At today’s prices and based

on the latest published data, **this would equate to reduction in GVA of £46m (a ‘soft’ Brexit scenario) and £83m (a ‘hard’ Brexit scenario)**. While this is a significant reduction in economic output, comparatively Basildon it is not expected to experience a heavier decline in economic activity than the national average.

Local Authority	‘Soft’ Brexit GVA Impact	‘Hard’ Brexit GVA Impact
Basildon	-1.1%	-2.0%
Castle Point	-1.2%	-2.2%
Rochford	-1.0%	1.9%
Southend-on-Sea	-1.2%	-2.3%
Thurrock	-1.2%	-2.3%
Harlow	-1.4%	-2.4%
Reading (3 rd most affected LA)	-1.4%	-2.8%
Slough (5 th most affected LA)	-1.4%	-2.8%
Stevenage	-1.3%	-2.4%

Source: LSE, 2017

- 4.37 The table above presents impacts for neighbouring local authorities and selected comparator local authorities. **The four other local authorities in South Essex are anticipated to face broadly similar effects to Basildon.** Southend-on-Sea is expected to be worst hit, with a **1.2% fall** under a ‘soft’ Brexit outcome and a **2.4% fall** under a ‘hard’ Brexit scenario.
- 4.38 A number of comparator areas are expected to see **significantly greater declines in GVA compared to Basildon.** This is particularly the case for **Reading and Slough**, which are predicted to be in the five worst affected local authorities, driven by their sector composition.

Sectoral Estimates

- 4.39 Brexit will, depending on the outcome of negotiation, **lead to a realignment between sectors due to their varying exposure to Brexit impacts.** The future performance of sectors will depend on the extent to which they are involved in international trade and rely on migrant labour, as well as how they can cope with a shift towards a more domestic-based market.
- 4.40 **Research suggests that Brexit will have a predominantly negative impact on UK sectors,** with greater impacts under a ‘hard’ Brexit scenario than ‘soft’ Brexit, consistent with local effects. However, there are some sectors that may experience a boost due to Brexit.
- 4.41 Nationally, **the most concerning finding is the impact Brexit is likely to have on Business Activities and Financial Intermediation,** given the country’s strength in this high value sector. This goes some way to explaining why much of the South East and London is expected to be worst hit by Brexit, with its dependency on service sectors and as a global centre for finance and associated supply chain services.

Table 4.2 Modelled Sector GVA Impacts

Sector	'Soft' Brexit GVA Impact	'Hard' Brexit GVA Impact
Retail Sale of Fuel; Wholesale Trade, Commission Trade, including Motor Vehicles & Motorcycles	-0.8%	-1.6%
Health and Social Work	-1.3%	-2.4%
Business Activities and Financial Intermediation	-2.8%	-6.2%
Manufacturing, nec; Recycling	0.9%	2.5%
Public Admin, Defence, Soc. Security & other Public Svc	-1.1%	-2.3%
Construction	-1.4%	-2.6%
Education	-1.2%	-2.2%

Source: LSE, 2017

- 4.42 The table above shows the seven most common employment sectors in Basildon (note sector definitions are defined by the LSE researchers and don't map perfectly to ONS SIC codes). It highlights that **six of these six key sectors are likely to be negatively affected by Brexit**, in both 'hard' and 'soft' scenarios.
- 4.43 The effects are most significant in **Business Activities and Financial Intermediation**, with a 'soft' Brexit leading to a GVA reduction of nearly 3%. On the other hand, the study suggests that the **Manufacturing sector could see a moderate increase in GVA**. These effects are likely to be more exaggerated under a 'hard' Brexit scenario, which is consistent with all of the other sectors modelled as part of this research.
- 4.44 Considering the businesses trading in the sectors most affected by a 'soft' and 'hard' Brexit in Basildon, there is the potential for these to experience considerable negative consequences. For instance, the businesses trading within the Business Activities and Financial Intermediation sector face the sceptre of significant productivity challenges. Local firms who could be particularly exposed include:
- **FDR Ltd** – ~2,000 employees, banking and finance business focus
 - **First Data** – ~2,000 employees, business to business point of sale systems
 - **Family Mosaic Housing** – ~150 employees, turnover £1-5m, housing association
- 4.45 These firms provide significant employment (more than 4,800 jobs across the ten largest sector employers) and a weakening local economy as a result of Brexit could result in a marked reduction in employment and lesser economic activity within Basildon.

Wider Effects

- 4.46 This study also attempts to quantify how **Brexit could affect trade flows and therefore GVA**. However, due to a lack of clarity on the final negotiated outcome, the extent of the impacts are very uncertain. The two scenarios are based on **approximations of potential trade deals**. Ultimately, it shows that **the weaker the trading relationship between the UK and the EU, the larger the likely reductions in GVA across the country**.

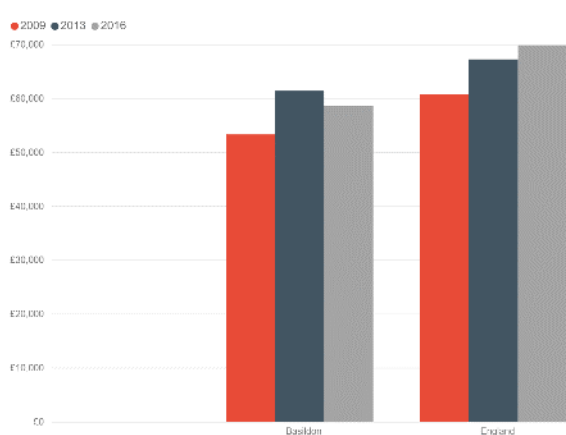
Migration Impacts

- 4.47 Following the withdrawal from the EU, **migration rules, particularly those concerning EEA migrants, are likely to change**. It is probable that rules will be stricter, with more checks on EEA migration, leading to smaller immigration flows. The Migration Advisory Committee was

commissioned to assess the impact of EEA migrants on the UK economy and society⁹. They did this by reviewing academic literature, conducting internal analysis and commissioning external research to develop a fuller and more accurate picture.

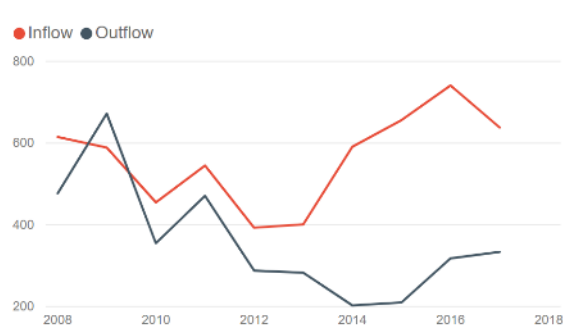
- 4.48 They discovered that **migrants have limited or no impact on the overall employment and unemployment outcomes of the UK-born workforce**. They found that the increase in the ratio of EU immigrants to working age UK-born population slightly decreased the employment rate and slightly increased the unemployment rate compared to a scenario with no EU immigration. However, it should be noted that these impacts were very small. These modest findings can be explained by the fact that **immigration increases the demand for labour from employers as well as the supply of labour from workers**.
- 4.49 Similarly, **migration is not a major determinant of the wages of UK-born workers**. The research found some evidence that lower-skilled workers face a negative impact from migration, while higher-skilled workers benefit. **However, the size of these impacts is generally small**. The research also notes that the findings on variation between low-skilled and high-skilled groups are imprecise and subject to uncertainty.
- 4.50 These findings indicate that **reduced EEA migration is unlikely to substantially affect employment rates and wages in Basildon**. Other factors, such as productivity growth and the level of qualification obtained by local residents, **are likely to be more significant determinants of employment and wage growth in the future**. Indeed, the productivity of workers Basildon has remained on a positive trajectory over the 2009-16 period, in the context of considerable international migration flows into the Borough, since 2008.

Figure 4.7 GVA Per Worker (2009-16)



Source: Basildon Economic Baseline Tool, 2019

Figure 4.8 International Migration (2008-18)



Source: Basildon Economic Baseline Tool, 2019

- 4.51 Further analysis found that **EEA migration had a positive, but somewhat inconclusive impact on productivity**. Studies showed that **higher-skilled migrants have a greater impact on both productivity and innovation**. They also found **no evidence that migrants impact the availability of training for the UK-born workforce** and even showed that higher-skilled migrants have a positive impact on the quantity of training available.
- 4.52 There is also evidence to suggest that **migration has led to increased house prices**. However, research suggests that these effects are greater in areas with more restrictive planning policy, indicating that they should not be seen in isolation from other government policies.

⁹ Migration Advisory Committee, EEA Migration in the UK: Final Report, September 2018

- 4.53 In general, **EEA migrants make a net contribution to the UK’s public finances**. However, the net contribution is greater for migrants from countries that joined the EU before 2004. Their analysis suggests that the **level of household income where EEA migrants make a net contribution is around £30,000**. This formed the basis of the suggestion for a more selective approach to EEA migration based on a view that this would lead to greater public purse benefits.
- 4.54 In terms of public service impacts, the study found that **EEA migrants are net contributors to the health service and provision of social care both in terms of financial resources and through work**. Jobs in these sectors are increasingly being filled by workers from other EEA countries. This is particularly the case for health and social care, where the profile of the work is not very attractive. If migration rules are tightened, **it is likely to be tougher to find workers for these hard to fill sectors**. This is an important consideration in the context of demographic (ageing population trends) and continued pressures on the NHS and social care.

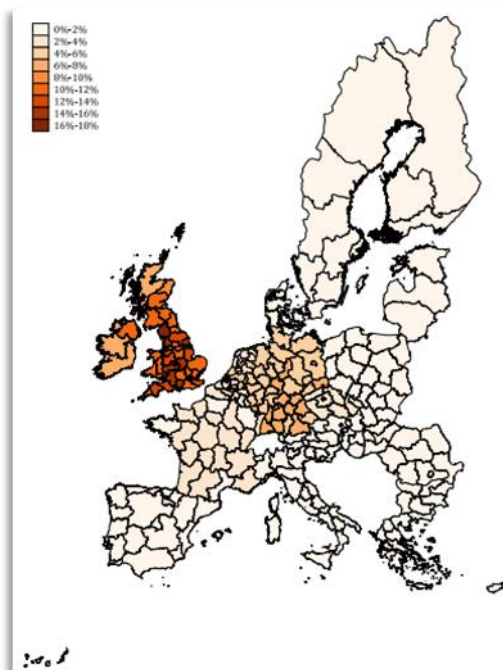
Brexit – Exposure to Change

The UK’s Relative Exposure to Brexit

- 4.55 It is possible to understand the exposure of the UK’s economy and by association, Basildon, by looking at this in relative terms. Helpfully, the University of Birmingham has published research which **positions the UK’s economic exposure versus the effects that of EU member states, both at a national level and regionally**¹⁰.
- 4.56 The accompanying report takes this a step further and quantifies the **shares of regional and national GDP and labour income that are at risk due to Brexit**. This takes into account the nature and scale of trade linkages, although the research is somewhat limited due to it not reflecting the detailed composition of supply chains, relying on input-output data as a proxy for actual flows of trade.
- 4.57 As a headline finding, the research suggests that the **UK is considerably more exposed to the negative economic effects of Brexit versus counterpart countries within the European bloc**. This is reflected in both relative share of national GDP and in terms of labour income. Quantitatively, the results make for stark reading, illustrating the UK’s vulnerability as a consequence of its departure from the single market and customs union. The UK’s share of GDP is predicted to be up to **4.6 times more exposed** than remaining EU countries. **This equates to approximately 12.2% of national GDP being vulnerable to negative effects associated with Brexit**.
- 4.58 **Similar patterns are observed when looking at labour income as a measure of economic output**, with the UK disproportionately affected by Brexit. Indeed, many areas of the UK demonstrate high levels of vulnerability – **circa three times more exposed than comparator areas with within the EU**, which includes areas in industrialised nations such as Belgium, Germany, the Netherlands and Ireland (the latter being exposed by up to 10% of its total GDP, due to its particularly strong UK trade links).

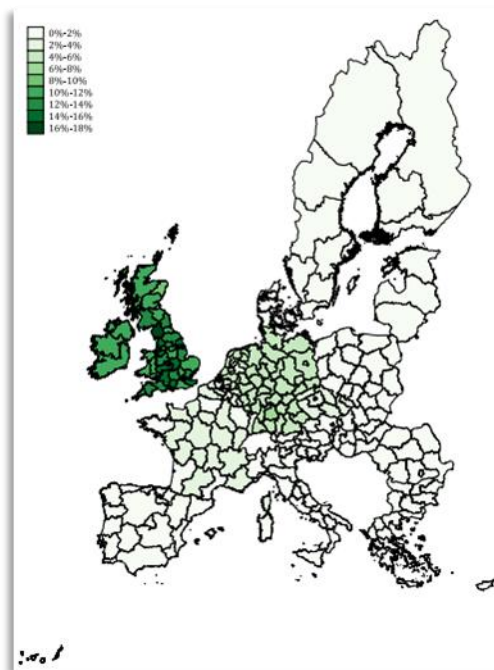
¹⁰ University of Birmingham, The Continental Divide? Economic Exposure to Brexit in Regions and Countries on both Sides of the Channel , 2017

Figure 4.9 Share of National GDP - Exposure



Source: University of Birmingham, 2017

Figure 4.10 Labour Income - Exposure



Source: University of Birmingham, 2017

- 4.59 Looking at these effects at a regional level, patterns of vulnerability are accentuated further. Generally, **UK regions are more exposed to negative economic effects than their European counterparts**. The data also shows that regions that **voted strongly in favour of Brexit are those which have some of the strongest dependencies on the EU**, in investment and consumption demand terms.
- 4.60 As such, there is a **broad correlation between voting patterns and economic exposure** – regions which voted in favour of Brexit are generally more predisposed to negative economic effects. **The strength of this correlation is most prominent in the Midlands and North of England**, with trade-related risk exposure estimated as being **as much as 18% of regional GDP**.
- 4.61 Looking at Essex as the closest geographic proxy for assessing Basildon’s exposure to Brexit trade effects, the results are **largely in line with the national average – 12.1% of total GDP**. This places Essex **roughly midway amongst comparator UK regions**, with 16 regions less exposed to Brexit trade effects. Essex’s performance relative to neighbouring regions is set out in the table below. **This highlights that only Kent’s trade flows are expected to be more exposed than Essex**, at more than 14% of total GDP.

Table 4.3 Regional GDP Exposure

Region	Share of GDP Exposure
Bedfordshire & Hertfordshire	11.30%
East Anglia	11.90%
Essex	12.10%
Kent	14.30%
Outer London	10.20%

Source: University of Birmingham, 2017

- 4.62 The research also looks at how sectors are likely to be impacted at a regional level. This suggests that **there is likely to be considerable variation**, accounting for the differing levels of EU trade dependency between each of these sectors.
- 4.63 Within Essex, **the most exposed sector is predicted to be Manufacturing, with 34.4% of regional GDP exposure** attributed to the sector’s EU trade flows. This is followed by **Primary Industries (23.2%), Service Industries (8.6%) and Construction (2.5%)**. Considering the sectoral composition of Basildon’s economy, this would suggest that **its relative economic exposure based on EU trade flows may be considerable**, given the importance of service-based sectors (over 24,000 people employed in Professional and Financial Services and Retail combined) and Manufacturing (nearly 7,500 employed).
- 4.64 Putting these results into context, **Essex’s Manufacturing sector Brexit trade exposure is twice that of the most exposed German region (Hamburg)**, three times more than the most exposed French region (Ile de France) and nearly thirty times more exposed than Vienna. Given the strong geographic and trade ties which Ireland has with the which UK, **its relative exposure to the effects of Brexit is more pronounced**. Unsurprisingly, this is driven by its Primary Industries, with an average trade exposure of 27% of national GDP.
- 4.65 Whilst these findings are based on predictive assumptions and draw on macro-economic trade patterns, the research suggests that **Basildon will need to be prepared for significant local economic impacts as a consequence of Brexit** and shifts in the pattern of trade flows.
- 4.66 Whilst quantifying economic impacts is complex, there is a broader body of research that helps to explore Basildon’s potential exposure to economic change. This section looks at how the economy will be exposed to changes in the **business environment**, with reference to **investment opportunities** and the **labour market**, with a focus on the Basildon.

Business and Trade

- 4.67 Over recent decades, UK business has become increasingly internationalised. Since the UK joined the European Economic Community in 1973, **trade (imports plus exports) as a share of GDP has risen from 46% to 62%**¹¹. Lower barriers to the movement of goods, flow of labour and access to capital have **facilitated greater trade links, stronger international supply chains and a more globalised economy**.
- 4.68 The single market has **further reduced trade barriers for its members**, with a continued push towards the harmonisation of regulations. Free movement of goods has **facilitated the rise of just-in-time supply chains**, driving up the productivity of British firms. It has also introduced **increasingly sophisticated and complex supply chains**, with many products relying on both imports and exports in production. This complexity means that **small changes in the business environment could have significant implications**.
- 4.69 While there remains uncertainty regarding the outcome of negotiations between the UK and EU, the impact on business will **heavily depend on the changes to tariff and non-tariff barriers**. At present, it is likely that these barriers, in a UK-EU context, **will be larger than before Brexit**.
- 4.70 The CBI has produced a note assessing the trade costs of a no deal exit¹². It laid out that, under WTO Most Favoured Nation tariffs for various sectors, **the average export tariff for UK businesses to the EU would be 4.3%, while the average import tariff would be 5.7%**.

¹¹ World Bank, Trade (% of GDP) Accessed March 2019

¹² CBI, Sector by Sector: The Trade Costs of “No Deal”, October 2017

However, there is significant variation between sectors, with particularly high tariffs on agriculture and food and drink. These tariffs would lead to **higher prices for consumers and reduce competitiveness of British exports.**

- 4.71 However, even if the UK secures a deal with tariff-free trade in goods with the EU, **UK businesses will face higher non-tariff barriers.** Without membership of the single market, firms will face **new requirements and restrictions when trading internationally.** Though difficult to estimate at present, conservative approximations suggest that average **non-tariff barriers with the EU could amount to 6.5%.** It is estimated that **food and drink could see non-tariff barriers equivalent to a tariff of 30%,** due to the significant regulations in this sector. As such, it is evident that businesses will be more concerned by a deal's impact on non-tariff barriers.
- 4.72 Looking at the impact of tariff and non-tariff barriers on individual sectors, this offers further clues as to the potential effect Brexit could have on the Basildon economy. The sectors most at risk of significant change and an increase in costs are **activities attributed to food, drink & tobacco and the production of transport vehicles, chemicals, aerospace and defence.** This could have **significant implications for key local employers,** particularly those operating in manufacturing-based industries, such as those focused on the **production of agricultural machinery, defence/weaponry and food and drink sale.**

Table 4.4 Sector Tariff and Non-Tariff Exposure

Sector	Average MFN import tariff	Average MFN export tariff	Estimates of non-tariff barriers for exporters to EU
Aerospace and defence	2.6%	2.7%	11.1%
Agriculture, forestry and fishing	17.7%	16.4%	N/A
Chemicals (ex. Pharma)	3.8%	3.5%	15.1%
Electrical machinery	2.6%	2.0%	2.7%
Financial services	N/A	N/A	5.5%
Food, drink & tobacco	13.4%	10.3%	30.1%
Insurance	N/A	N/A	5.6%
Machinery and equipment	2.7%	1.8%	N/A
Metals and metal products	2.0%	2.3%	7.4%
Motor vehicles	9.0%	8.5%	11.7%
Non-motor vehicles transport	1.8%	1.3%	11.7%
Pharmaceuticals	0.0%	0.0%	6.4%
Post and telecoms	N/A	N/A	8.2%
Scientific goods	1.3%	1.6%	N/A
Textiles, clothing and footwear	10.4%	10.5%	9.6%

Source: CBI, Sector By Sector: The Trade Costs of "No Deal," October 2017

- 4.73 Considering businesses operating in the most exposed sectors in Basildon, **the impact of raising trade tariffs and non-trade barriers may incur a substantial cumulative effect, increasing the cost of doing business and trading with European markets, considerably.** Taking the Transport sector, by way of an example (and as a proxy for Motor vehicles and Non-motor vehicles transport), the impact of non-tariff barriers could well be considerable. This has implications for key local employers in Basildon who are at significant risk:

- **Argos Distributors Ltd** – ~350 employees, national distribution services

- **TNT Express (UK) Ltd** – ~250 employees, global courier service
- **Royal Mail** – ~200 employees, turnover £1- £5m, national postal service

- 4.74 To the extent that such businesses rely on UK-EU trade, whether it is export destinations or the importing of products, **this will raise costs of production, decrease efficiency and make UK exports less competitive.** These costs will likely affect smaller businesses the most, **which is of particular relevance to Basildon** with over 95% of trading businesses employer fewer than 50 people (categorised as micro and small-sized enterprises).
- 4.75 Potential barriers will be most problematic for **businesses that have a greater reliance on EU markets.** Firms that engage in significant international trade may therefore need to adapt their offer. **New opportunities for domestic businesses could develop,** for instance, in the case where businesses previously had large supply chains abroad and may be **looking for alternative suppliers and consider on-shoring.** Equally, businesses could place greater focus on domestic consumers, tailoring their products more closely to their needs.
- 4.76 While trade with EU countries could become more complex and costlier after Brexit, **there could be opportunities arising from new and improved trade deals with non-EU countries.** As these deals would be negotiated by the UK, they have the opportunity to **better reflect the needs of British business and be designed to accelerate access to new export markets.**

Figure 4.11 Essex Net Exports (2017)



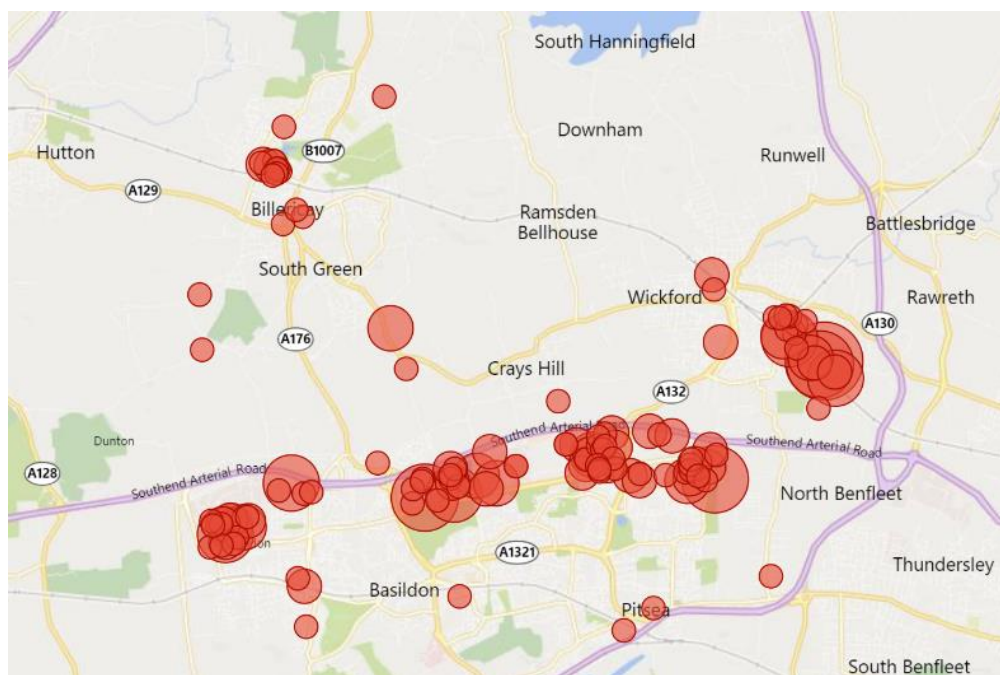
Source: Basildon Economic Baseline Tool, 2019

- 4.77 Though these issues affect the whole of the UK, **Basildon and wider Essex are perhaps more exposed than other areas.** The average NUTS 3 region **exported £846m and imported £1,158m** worth of goods and services in 2017. However, Essex Thames Valley (which contains Basildon, Castle Point and Rochford) **exported £1,854m and imported £4,036m.** The fact that the area exports over twice as much as average and imports nearly four times as much as the mean, **demonstrates the area's heavy reliance on foreign trade.**
- 4.78 The proportion of Essex Thames Gateway's trade that is tied to the EU is further evidence that the area is exposed to Brexit. Some **47% of Essex Thames Gateway's exports go to the EU,** compared to the average of 49%. However, **79% of imports to Essex Thames Gateway come from the EU** compared to an average of 58%. **This highlights the relative the importance of**

UK-EU trade to Basildon and also shows the extent to which the area’s economy is underpinned by a trade deficit.

- 4.79 Some businesses in Basildon may struggle if it becomes **more difficult to trade internationally and it will be important to be aware of potential risks to business and employment**. Basildon is home to a significant number of businesses who are actively exporting (over 205 are exporting goods to non-EU countries), **specialising in the sale and distribution of a wide variety of products**. Underlying data is, however, **less successful at capturing the trade of services and online content, which makes up a significant proportion of the UK’s service-based economy**. Based on national and regional trends, it is reasonable to assume that Basildon firms who are reliant upon online trading platforms are plentiful and increasingly reliant on this as an important source of revenue from a globalised network of customers.
- 4.80 It is also difficult to match these firms back to recognised sectors (i.e. SIC defined), which would assist in understanding their relative exposure more definitively. However, looking at the five largest exporting businesses (based on the total number of non-EU exported products), **it is clear that these firms are exporting a variety and large number of goods to foreign markets**.
- 1) **Leonardo UK** – over 300 registered exports, aerospace, defence and security solutions
 - 2) **Alpi UK** – ~100 registered exports, freight forwarding, transportation and logistics
 - 3) **Whitehouse Leisure International** – ~70 registered exports, wholesaler
 - 4) **PMS International** – over 50 registered exports, wholesaler, importer and distributor
 - 5) **MRS Scientific Ltd** – over 50 registered exports, laboratory equipment suppliers
- 4.81 The extensiveness of business level trade to markets beyond the EU, **further highlights the opportunity for existing trade relationships to be strengthened and new markets pursued**, should Brexit lead to inflated costs and trade barriers with the EU.

Figure 4.12 Basildon Exporting Businesses (Non-EU)



Source: Basildon Economic Baseline Tool, 2019

Investment

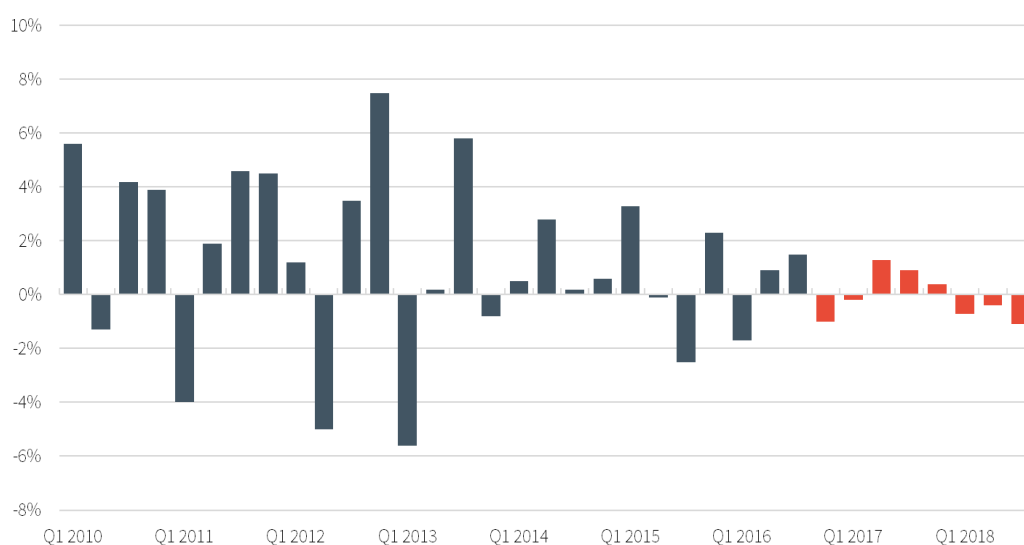
- 4.82 There has been a **significant decline in business investment following the vote to leave the EU**, with quarterly business investment falling consistently in the first three quarters of 2018 – with **Brexit often cited as a key reason**. While uncertainty around the outcome of negotiations is clearly causing businesses to delay investment, **pessimism around the terms of a final deal is also driving reduced investment**.
- 4.83 **This is the case for both domestic firms and foreign firms**. To date, several multinational firms, such as Sony, Panasonic and Honda, have already put investment on hold or diverted it abroad, partly driven by Brexit concerns. More generally, the CBI reports that businesses are **reluctant to commit to capital investment in the short-term, preferring to wait for future trading relationship clarity**¹³. Some 80% of surveyed businesses said Brexit had hit investment.
- 4.84 More certainty around the outcome of negotiations **would enable businesses to plan more effectively and a breakthrough could lead some of this delayed investment to be brought forward**. However, a deal which damages the close ties between the UK and EU **might harm the overall attractiveness of the UK offer**. More specifically, it could damage the ability to develop efficient supply chains, reduce access to a broad and significant skilled labour pool and impose barriers on access to large export markets.
- 4.85 A ‘harder’ Brexit is likely to lead to a **reduction in private investment from the EU**. However, the potential for the UK to develop its own trade deals with non-EU countries **could promote positive relationships and may incentivise foreign direct investment into the UK from these countries**. That said and given the absence of a finalised Brexit agreement, there is minimal evidence of this materialising at present and optimism levels remain low.
- 4.86 As a member of the EU, the UK has access to a number of EU funds. **Over time, these have amounted to millions of pounds being distributed across the UK**, with greater investment in locations with poorer performing economies and pervasive social challenges. The majority of these are channelled through five European Structural and Investment Funds (ESIF). Nationally, this has been allocated over the 2014-2020 period with **SELEP receiving an allocation of £160.3m (2%) of a total €10.6b allocated to the 38 LEPs**¹⁴. The Government’s White Paper detailing the proposed future relationship suggests that the UK would cease its contribution to ESIF after Brexit, **meaning the UK would lose access to this investment source**¹⁵.

¹³ CBI, 8 out of 10 Businesses Say Brexit Hits investment, October 2018

¹⁴ South East LEP, European Structural and Investment Fund Strategy, March 2016

¹⁵ HM Government, The Future Relationship Between the United Kingdom and European Union, July 2018

Figure 4.13 Business Investment Growth, 2010-2018



Source: Office for National Statistics, 2010-18

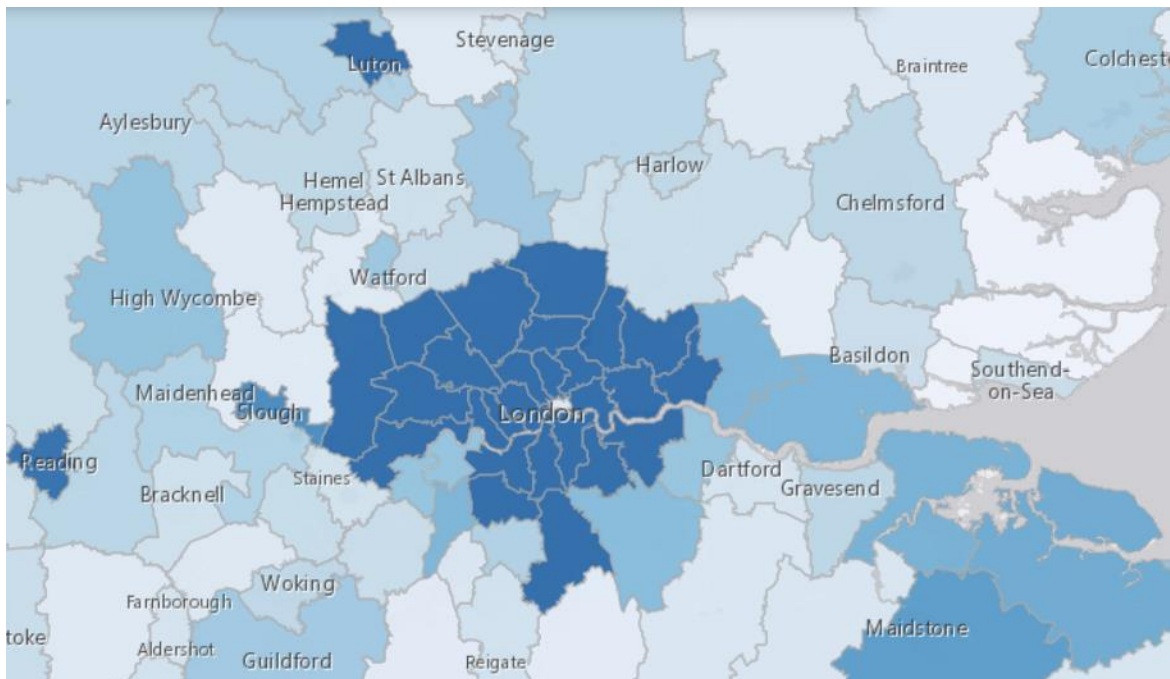
- 4.87 A significant focus of ESIF funding is to improve employment opportunities, promote social inclusion and invest in skills and to support research and innovation and SMEs. As investment is weighted towards more deprived regions and they would suffer should they lose access to funding, **Basildon and the East of England may be comparatively less exposed, given its relatively strong economy (GDP per capita performance)**. Also, losses are likely to be mitigated if the government continues with its plans for a Shared Prosperity Fund, **which may be better suited to local needs and rebalance the distribution of funding to areas which have significant economic growth potential**. Details on replacement funds remain scarce, as the government considers the specification and administration of the Shared Prosperity Fund.
- 4.88 In other instances, **businesses should be able to pursue pre-existing domestic investment opportunities**. For example, a number of Basildon businesses have accessed Innovate UK funding in recent years (£6m over the 2013-18 period), **which has enabled new commercial opportunities and value chains to be exploited through innovation**. A range of other domestic funding schemes also exist, including the British Business Bank, which will remain as important investment sources.

Migration

- 4.89 Under current rules, as part of the single market, there is no restriction on workers from the EEA moving to the UK. This has meant there has been **significant net inward migration to both the UK and Basildon, particularly since the EU expansion in 2004**. In fact, **15% of the growth in population between 2008 and 2018 was due to international migration** in Basildon. However, it is worth noting that this growth includes migrants from non-EEA countries. There has been positive net migration from these countries, despite the UK's desire to better control the flow of these migrants.
- 4.90 Other data provides an alternative view of inward migration and allows the origin of people moving to Basildon to be identified. The map below shows the number of National Insurance registrations attributable to EU nationals at a local authority level. Over the period 2017/18, there were **687 new registrations from EU nationals, accounting for 74% of all overseas applications**. This implies the Borough has maintained a **strong reliance on EU labour**, albeit

at a comparatively lower level than some neighbouring authorities, such as Thurrock (1,633) and Chelmsford (881).

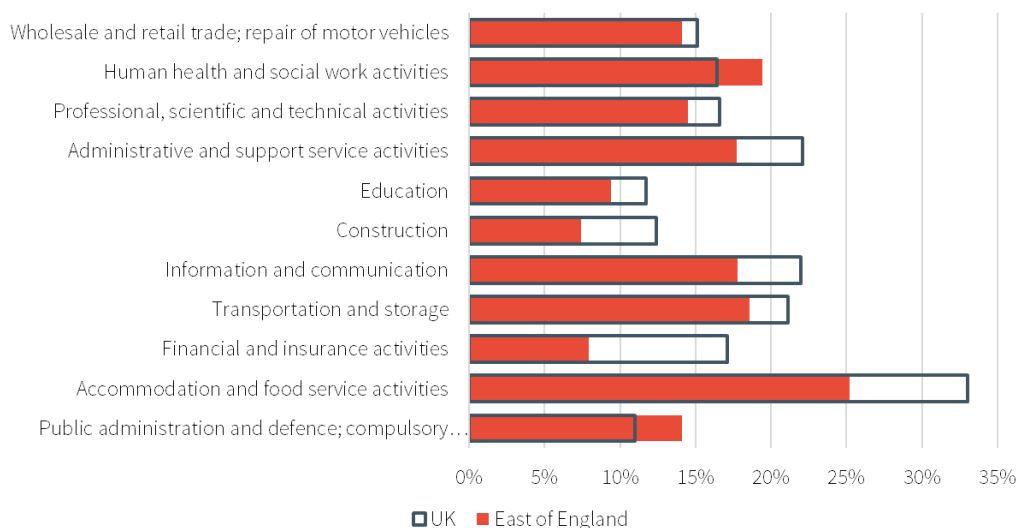
Figure 4.14 National Insurance Numbers Registered to Adult Overseas Nationals (2017-18)



Source: Department for Work and Pensions, NINo Registrations, 2018

4.91 While negotiation outcomes remain uncertain, **it is likely that it will become harder for people to move to the UK after Brexit.** This will restrict the ability of firms to **attract workers from overseas**, particularly if strict migration rules are set. Analysis by the Migration Advisory Committee is presented in the chart below, which sets this out in more detail.¹

Figure 4.15 Sector Reliance on EEA Workers



Source: Migratory Advisory Committee, 2018

- 4.92 Figure 4.15 shows the proportion of workers in each sector that are from other EEA countries for the East of England and the UK as a whole (note: the chart is sorted by the sectors' employment shares in Basildon). In total, **the proportion of workers born in other EEA countries is slightly lower in the East of England (16%) compared to the UK (17%)**. However, it is worth noting that London skews these totals slightly.
- 4.93 The East of England's largest sector, Wholesale and Retail, is **slightly less exposed to migration changes compared to the UK (14% of workers compared to 15%)**. In fact, **many of these sectors have a smaller proportion of workers from EEA countries**, indicating that the East of England may be **less exposed to reductions in EEA migration than the rest of the UK**. The exceptions are **Human Health and Social Work and Public Admin and Defence**, where EEA workers are proportionately overrepresented in the East of England. Indeed, public service labour supply remains a concern in the context of **austerity policies, demographic trends and large-scale regeneration and infrastructure funded through public sector investment**. Each has pressing needs with regards to an accessible and skilled labour force.
- 4.94 **The most exposed sector in both the East of England and the UK is Accommodation and Food Services**. Some 25% of workers in this industry in the East of England were born in other EEA countries. However, **this sector only makes up 4% of Basildon's economy**, lessening this finding's importance and lowering Basildon's relative exposure to change. Further investment in Basildon's visitor economy and cultural offer, may alter this dynamic, however.
- 4.95 Considering some of the key firms operating within Accommodation and Food Services sector-based activities in Basildon, **a reduction in non-domestic migration is liable to have a significant impact**. The top three largest businesses (employing nearly 500 people locally) will need to respond quickly to shifts in labour supply and sourcing skilled employees, in order to maintain their service proposition and consider scope for future growth:
- **Stock Brook Country Club** – employs ~300, country club and wedding venue
 - **KFC UK** – employs ~100, global fast food restaurant chain
 - **Holiday Inn** – employs ~100, international hotel chain
- 4.96 It is also important to consider these findings **in the context of economic forecasts**. Basildon is expected to see considerable employment increases in food manufacturing, telecommunications and land transport sectors, **which have a greater reliance on EEA labour**.
- 4.97 These findings show that, depending on the outcome of negotiations, businesses may have to look for alternative sources of labour, particularly domestically. **This could present challenges for firms that require workers from abroad to fill specific skills gaps**.
- 4.98 Results from the UK Employer Skill Survey show that **10% of Essex businesses have at least one vacancy that is hard to fill (with particular gaps in Public Admin and Health and Social Work), despite access to these EEA labour markets¹⁶**. If these firms operating in these sectors cannot easily access EEA migrant labour, **vacancies are likely to become more common and skills gaps may be accentuated**. In some cases, these skills gaps could become persistent, making **Basildon businesses less efficient and suppress their ability to grow**.
- 4.99 Some have argued that there should be **stricter controls on migrants with salaries below a certain threshold¹⁷**. This should be of **particular concern for lower value sectors with a high proportion of EEA migrant workers**. An example of this is the **Health and Social Work sector**

¹⁶ Department for Education, Employer Skill Survey, 2018

¹⁷ Migration Advisory Committee, EEA Migration in the UK: Final Report, September 2018

which has a relatively low GVA per worker, high EEA migrant worker share and a high job post vacancy rate. Under certain conditions, this could create a ‘perfect storm’ type dynamic, **putting employers within these sectors under extreme operational pressure.**

- 4.100 Restrictions to the sector’s access to EEA migrants **could make it even harder to fill vacancies (given the unpopularity of some roles) and lead to worsening economic and social performance.** In the context of growing pressures on Health and Social care services driven by demographic trends, the outcomes of skills gap and shortages are perhaps more concerning still and have generated considerable media coverage subsequent to the Brexit vote.
- 4.101 While stricter migration rules will impair access to EEA migrants, **they could provide greater opportunities for local people.** Locals may face less competition for jobs, **whilst firms may put a greater focus on attracting local residents** if it becomes harder to hire workers from abroad. This would require a **response from the education and training ecosystem however,** with a closer alignment between employer needs and education provision, to ensure Basildon residents are aware of local opportunity and able to fill job openings.

Regulation

- 4.102 The EU legislative system is both **complex and comprehensive.** Its reach is encompassing and wide, covering areas of **law from fisheries to freedom and justice.** The role of regulation is to organise society and protect its citizens by establishing rights and responsibilities and ultimately, **provide the legal framework to underpin the UK economy’s economic and social activities.** In development economics, rule of law is considered a vital institution which is **critical for enabling and sustaining economic growth.**
- 4.103 The UK is subject to the EU legislative system through **directives and regulations.** The House of Commons library themselves state it is impossible to accurately calculate the number of EU laws which the UK have adopted. Broadly, they state, **between 1993 and 2014, 62% of UK law had been influenced by EU law** (13% through directives). The point on inaccuracy arises from the fact that not all EU regulations apply in the UK.
- 4.104 However, other sources like the European Law Monitor estimates there are just over **18,000 EU legal instruments which the UK have adopted** or will be, once the Withdrawal Act 2018 becomes active. A break down by legal area is presented in the table below. **This clearly demonstrates the diversity of regulation,** much of which will have relevance to businesses trading in Basildon.
- 4.105 Open Europe (2015) argues that the existing EU regulatory framework **could benefit from deregulation.** By doing so, and assuming a politically feasible deregulation agenda, **the UK could achieve a permanent gain of 0.7% in GDP.** This would primarily be driven from deregulating social employment and financial services laws and eliminating environment and climate change targets.

Table 4.5 EU Legislation and Directives Reflected in UK Law

Area of Law	Total number of EU acts relating to that area of law
Economic and monetary policy/free movement of capital (these laws substantially affect the City)	527
Environment, consumers and health protection	1,965
Science, information, education and culture	424
Agriculture	2,729
Free movement of goods/customs union	1,093
Free movement of workers/employment law/social policy	646
Freedom to set up a business in another EU country/freedom to provide services	357
Fisheries	1,410
Transport	651
Competition	575
Taxation	173
Relations with the rest of the world	3,994
Energy	361
Industrial policy and internal market	1,364
Regional policy	322
Law relating to undertakings (businesses)	113
Foreign and security policy	622
Area of freedom, security and justice	705

Source: Hatch Regeneris, 2019

- 4.106 Whilst not all regulations are equally applicable in a Basildon context, **some will have a greater impact than others**. As things stand, the European Union (Withdrawal) Act 2018 will ensure that all past and presently enacted legal EU instruments leading up to Brexit **will remain in place after the UK leaves the EU**. It is the decisions of government, using powers from the Act, which will shape the effect of regulation on Basildon in the future. The **five most pertinent economic and social regulatory areas which are likely to have a meaningful impact on Basildon businesses** and institutions, are set out below.

Table 4.6 Regulatory Impact of Brexit

Passporting	Passporting rights enable UK firms to trade with other EEA countries without needing to gain authorisation from each member state. Basildon's economy is home to multinational companies, particularly who trade globally and benefit from simplified transactions. Brexit negotiations and the final deal will determine the future of passporting, with the financial sector particularly exposed to change.
Goods and services standards	Currently, the EU common rulebook ensures goods in circulation meet regulatory requirements, providing suppliers clear and uniform instructions to abide by for trade and also ensuring consumers are protected. To ensure frictionless trade, the UK Government envisions maintaining the common rulebook for goods but to strike special arrangements for services and digital to provide regulatory freedom. However without, there would be regulatory checks at borders (a contentious Brexit issue surrounding the Irish Border) which would lead to higher costs and possibly product and supply chain issues.

Employment rights	Much of the existing UK regulation on workers right’s (i.e. health & safety, leave) and protection (equality & inclusiveness) derive from EU law. Central to the Brexit deal are workers’ rights and maintaining parity with EU standards. This remains subject to debate and decision, and deviations will have an impact on Basildon’s growth ambitions.
Consumer rights	<p>Many of the existing consumer rights are based on EU directives, the current Consumer Rights Act 2015 ensures rights in the UK extend to the EU. A no-deal scenario will see rights reduced in some cases and redress harder with the key areas affected being:</p> <ul style="list-style-type: none"> ● Flights – until a bilateral agreement is agreed, the UK will no longer benefit from access to the Common Aviation Area including aviation safety standards, access to fly to and from the EU and third countries ● Car travel – if travelling by car in the EU (excluding Ireland), drivers will need an International Driving Permits ● Card surcharge – purchases from the EU will no longer be exempt from retailers charging a fee to use credit or debit cards ● Shopping – more difficult to exercise rights to return goods bought in another EU country ● GDPR – the Information Commissioner’s Office (ICO) will no longer be able to effectively co-ordinate complaints from EU member citizens and shape future digital policy in the EU. ● Alternative-dispute resolution – unchanged for businesses but UK citizens will not be able to access the Online Dispute Resolution platform run by the EC and UK based ADR organisations will not be obliged to act on cross border disputes.
Intellectual property	Considered a fundamental institution for sustainable economic growth and innovation. With or without a deal, the UK will continue to protect and preserve existing rights and laws on trademark, copyrights and patents after the UK leaves the EU. However, EU rules on recognition and enforcement of judgments across member states will cease to apply in the UK. It is expected that the UK will participate in a Unified Patent Court and system with the EU going forward.

Source: Hatch Regeneris, 2019

- 4.107 Whilst it is difficult to determine the precise effects of regulatory change on Basildon’s firms and thereby, its economy, **businesses and public sector institutions should consider preparing for change**. Some sectors will be more affected than others and **forward thinking and the development of contingency plans will play an important role in insulating firms from any negative effects**. Industries trading in Financial, Professional and Business Services, Manufacturing and Transport and Logistics sectors and are likely to be subject to considerable volatility.
- 4.108 Indeed, in time, **regulatory change may facilitate the introduction of new standards, procedures and norms** which introduce greater efficiencies, see a deeper integration of technology and offer a platform from which global markets can be exploited and administrative costs reduced.

Brexit – Business Preparedness

- 4.109 In early 2018, the CBI surveyed 300 businesses on their preparations for Brexit¹⁸. While this survey is somewhat out of date, **many of the key findings can still be applied today, hinting at how Basildon businesses have been affected by Brexit and the steps they are taking in reality.** Given the current state of Brexit negotiations, it's increasingly difficult for firms to make informed decisions as to how best to prepare for Britain's departure from the EU and is a point of continued consternation.

Companies are diverting time and resources to Brexit that could otherwise be dedicated to growth...

- 4.110 The survey results showed that **57% of businesses had examined the different Brexit scenarios and the potential impacts on their business.** Some had devoted leadership time to this issue, while others created internal groups or hired external consultants to help them. **Over half had sought to get greater information about possible risks from government and other stakeholders.** Around half of the companies surveyed had looked for potential opportunities from Brexit, **with half of these businesses successful in finding opportunities.**

Preparation is difficult due to uncertainty...

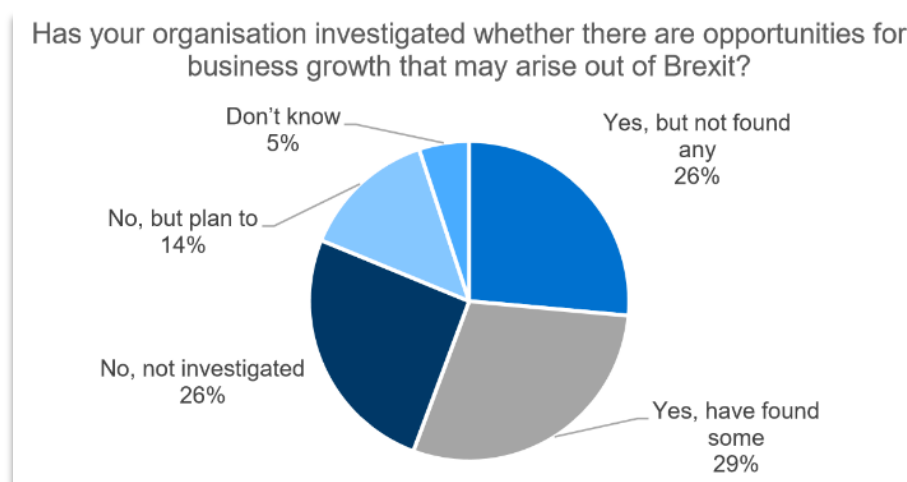
- 4.111 Some **94% of respondents said that scenario planning was difficult because of lack of information available.** They noted that there were lots of different potential scenarios with numerous issues to understand. This is a **challenging and costly process** as firms have to consider how Brexit scenarios might affect every area of the business. In fact, 48% said the cost required to make contingency plans was prohibitive.

Businesses are having to prepare for a no deal scenario...

- 4.112 **Circa 61% of businesses surveyed were developing a contingency plan for a no deal scenario.** The CBI argued that no deal planning was prevalent for two reasons. Firstly, because it was seen as a serious and realistic scenario. Secondly, the scenario is relatively clear compared to others, making it easier to prepare for. The CBI argued that **the response to no deal would be disruptive and planning would have a negative effect on the economy.**

¹⁸ CBI, How Businesses are Preparing for Brexit, November 2018

Figure 4.16 Sample Business Responses to Brexit



Source: CBI, 2018

Transitional arrangement would help companies...

- 4.113 Some **36% of respondents said investment had been negatively affected by Brexit**, while **41% said Brexit had negatively impacted recruitment and retention of staff**. The agreement of a transition would give businesses greater certainty about the future and 75% said it would halt the implementation of their contingency plans. However, **60% said they were going to implement their no deal contingency plans by March 2018**.
- 4.114 The importance of a transition period is emphasised by findings from the Bank of England Decision Maker Panel survey¹⁹. Respondents said they expected **that output would fall by between 2.5% and 6.9% over the following twelve months** (survey conducted in November 2018) if there was no deal and no transition. Conversely, they expected **output to rise by between 0.8% and 2.7%** under a deal and transition period.

Ongoing Risks of Uncertainty...

- 4.115 Until there is more clarity over the UK's future relationship with the EU, **there remains a significant amount of uncertainty within the national and Basildon economy**. This is already reducing confidence, investment and immigration and such trends looks set to continue.
- 4.116 **The longer this period of uncertainty continues, the greater the impact this will have on the Basildon economy**. Particular risks associated with this include:
- Businesses putting off investment, harming their long-term potential and productivity.
 - Businesses employing more people in the short-term rather than in capital investment.
 - Stockpiling of supply chain products to protect against a no-deal Brexit. This ties up valuable cashflow, which could be invested and also increases business' exposure to other (unexpected) costs in the future.

¹⁹ Bank of England, Agents' Survey on Preparations for EU Withdrawal, November 2018



Economic Prospects – Automation

5. Economic Prospects - Automation

- 5.1 Advances in technology play an **increasingly important role in the way our economy functions**. The same is true within Basildon, as the local economy evolves, businesses invest in research and innovation and a global network of customers and supplier is developed.
- 5.2 **The UK has and remains at the forefront of developing and adopting new technology and although this has opened up new business models, processes and international markets, it has also introduced new threats to established employment**. Automation is one strand of this technology shift and has generated fresh concerns regarding job replacement and labour force re-skilling, which could have significant negative and/or positive local impacts. It also offers a platform from which industry will evolve, new products and services are designed, and new forms of employment created.

Relevant Technology Trends

Key Technology Influencing Basildon's Key Sectors

Immersive Technology and Augmented Reality

- 5.3 Virtual Reality (VR) and Augmented Reality (AR) devices are widely applicable as **communication tools and can support many industrial applications where the visualisation of complex scenarios or models is required**. It is being applied in industries where processes can be transformed, and the training of staff can involve costly resources. For example, medical procedures or construction training can be carried out at a larger scale with these immersive technologies.
- 5.4 As a high profile example, **Tideway are in the process of delivering £3.1billion of new infrastructure in London and invested £20,000 in a project to develop a cost-effective VR training system** for the Thames Tideway Tunnel Boring Machine with immersive technology specialists Hobs Studio²⁰. The pop-up system **reduces training time by 20%**, whilst providing employees with the opportunity to familiarise themselves with the work site and the dangers present in a live engineering/construction setting.

Blockchain

- 5.5 Distributed ledgers enabled by blockchain technology will **provide data-sharing industries with a new method for managing reliable data bases**. Fragmented databases and the cumbersome processes that come with managing them will be greatly reduced and efficiencies increased as a result.
- 5.6 **Supply chain management and auditing will increasingly utilise blockchain technologies**. Traceability and data provenance are more secure, allowing of better sustainability and quality monitoring. This step-change in the security and efficiency of supply chains will be an important

²⁰ KTN, Virtual reality used for underground construction: Tideway invests in VR training programmes for tunnelling, March 2018

development in the logistics and transport industry in particular, with **90% of industry experts seeing data and analytics as being of high importance to the future of the sector**²¹.

Artificial Intelligence

- 5.7 Increasingly visible in business, **advanced human machine interfaces (HMIs) and robots will be used to automate service provision**. Customer-facing roles will be scaled back as intelligent machines are able to efficiently complete repetitive and process orientated service tasks.
- 5.8 By way of a practical example, London start-up Bloomsbury AI has developed a chat bot that uses **deep learning and machine reading to advise care workers on the care requirements of individuals** and will, over time, be able to recognise and predict health deteriorations²².

Internet of Things (IoT)

- 5.9 Business processes can be fully monitored, and business development informed by information from connected devices. In the manufacturing industry in particular, **IoT is enabling the Fourth Industrial Revolution (Industry 4.0)**. In this context, every process for every component is monitored and controlled by a central data analytics platform, the resulting control will **support advances in component complexity, process efficiency and reliability and levels of product customisation**.
- 5.10 In the Food and Drink sector, large manufacturers with nationwide sites, such as Unilever and AB Sugar, are leading the way in **improving food safety and sustainability** by using IoT technology to monitor refrigeration systems. That said, necessary upskilling is potential constraint on the widespread deployment of IoT – a survey of construction industry firms concluded that AI and automation were identified as the **technology area with the most severe skills gap** out of the 12 innovation areas underpinning IoT adoption²³.

²¹ PWC, Shifting Patterns: The future of the logistics industry, 2016

²² Bdaily News, Cera has partnered with a London AI start-up for its new social care chatbot, May 2017

²³ Mace, Moving to Industry 4.0, October 2017

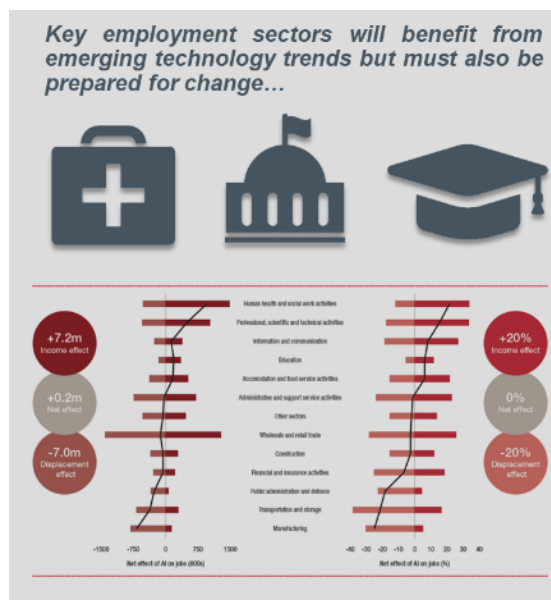
Sectors: Healthcare, Education and Public Services

In Basildon, nearly 21,000 people are employed in healthcare, education and other public service sectors²⁴...

5.11 Largely focused on the delivery of public services, these sectors have been **heavily impacted by government austerity policies**, in the context of demographic pressures and growing demand for services.

5.12 Key considerations for these sectors and the opportunity to deploy technology include:

- Efficiencies in data access, transferability and further flexibility gained through internet-enabled devices **will improve the quality of both clinical and non-clinical care**. It will also offer **more efficient delivery solutions**, including remote care and diagnostics, augmenting traditional labour-intensive care services.



Source: PWC, UK Economic Outlook, July 2018

- These are prescient for Basildon, as the **Borough is facing an ageing population**, in common with national trends, that will be **increasingly reliant on care provision and access to appropriate public services**.
- Technological disruption is already **having an impact on education and public service provision**. Both have benefitted from online delivery platforms, widening access to education, training and stimulating inclusive civic participation. The accelerated rollout of digital solutions will play a key role in delivering **more cost effective and transparent public services, driven by innovation**.
- Challenges in achieving these efficiency benefits include **overcoming data security concerns, the upskilling of staff to required digital literacy levels, and funding the development and roll-out of solutions**. Innovate UK have announced up to £5 million to invest in new digital health technologies, by way of example²⁵.
- Across the UK, AI could create an **additional 3,500 jobs in these sectors by 2037**, with similar impacts expected across Basildon²⁶.

5.13 Automation poses a **series of questions and offers opportunities to firms operating in this sector within Basildon**. The largest organisations operating in this sector are largely focused on healthcare and home-based services:

- **Basildon & Thurrock University Hospitals NHS Foundation Trust** – employing ~2,500 people across the Borough

²⁴ Basildon Economic Baseline Tool, 2019

²⁵ gov.uk, Digital health technology catalyst round 4: collaborative R&D, accessed Feb 2019

²⁶ PWC, UK Economic Outlook, July 2018

- **London Care PLC** – employing 600 people in homecare based services
- **First Call Care Services** – employing 500 people in homecare based services
- **South Essex College of Further & Higher Education** – employing 500 people in Post 16 education, training and development

5.14 **Automation and technology are and will have a significant role within these organisations,** increasing the efficiency of treatment, enabling arm-length diagnostics and care, whilst also introducing scope for improved preventative medicine and screening. There is evidence that technological adaptation is already gaining a firm hold in Basildon’s public sector institutions. An example of this is set out below:

Basildon & Thurrock University Hospitals NHS Foundation Trust – System C Software

The NHS Trust launched a new System C Medway Emergency Department software package in 2019, designed to enable nurses and clinicians to collect clinical data throughout a patient’s Accident & Emergency (A&E) journey.

The software tracks key patient information including medical history, incident triage details, diagnoses, medications, investigations and treatments. This means real time tracking can occur as patients move through the department and externally for investigations. GPs are also electronically notified of discharge summaries.

The software brings a host of benefits to the Trust in terms of efficiency, accuracy, timeliness and the fact that the workflow is paperless, which contributes towards environmental sustainability targets. The software is also integrated with other software and will increase the visibility of patient care and treatment activity across the Trust’s hospitals.

Source: Digitalhealth.net, 2019

Sectors: Retail, Hospitality, Leisure and Recreation

In Basildon, approximately 17,000 people are employed in retail, hospitality, leisure and recreation sectors²⁷...

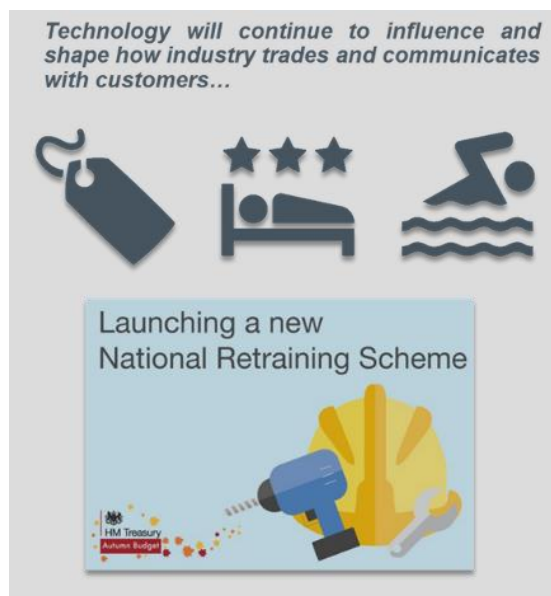
5.15 Technology is and will have a significant impact on these sectors, **changing the nature of their focus, the way by which services are delivered and how digitisation defines consumer experiences**. The prospects for each are mixed, reflecting a balance of opportunities and threats, with significant implications for the local labour force.

5.16 Key considerations for these sectors include:

- Digitally-enabled consumer trends and an uptake in the resourcing of service provision by intelligent interfaces **will see employment in these sectors shrink**. Technology-driven automated processes will continue their shift towards **online transaction and administration processes, act as important hubs for information and as a platform for experiential consumer content**.
- Basildon must be prepared to **re-skill workers employed in service industries**, to ensure that they have the capabilities required to transfer into an alternative, increasingly digitised industries. The Council must be prepared to **make use of local intelligence and active engagement with employers to access new funding and resources** being introduced to support this transition.
- Within the Industrial Strategy, the government introduced the National Retraining Scheme, **which aims to help workers re-skill and up-skill in a changing economy**. Some £100 million has been allocated to the project so far, with **artificial intelligence (AI) and automation among the first digital skills that are taking priority**²⁸.
- In keeping with national level forecasts, AI could **reduce retail employment by 3% in Basildon, and increase hospitality employment by 6% by 2037**²⁹.

5.17 Retail has a substantial presence in Basildon and many traders, including national chains, **have been forced to adapt to disruptive technologies, explore new routes to market and embrace the emergence of ecommerce**. Prominent examples within the Borough include:

- Martin's Newsagents** – employs ~500 people, general convenience store
- Primark Stores Ltd** – employs ~400 people, national fashion retailer



Source: gov.uk, Government support to boost skills and prosperity, October 2018

²⁷ Basildon Economic Baseline Tool, 2019

²⁸ gov.uk, Government support to boost skills and prosperity, October 2018

²⁹ PWC, UK Economic Outlook, July 2018

- **Partyman** – employs ~150 people, children’s amusement centre

5.18 Whilst automation and technology pose a significant threat to traditional retail models and have been blamed for the downturn in high street activity, observed in the worsening fortunes of retailers across the country, it also introduces **new commercial opportunities**. A prime example of this is ecommerce, which has become **increasingly popular with consumers and in some cases, overtaken traditional retail models as the primary source of revenue**.

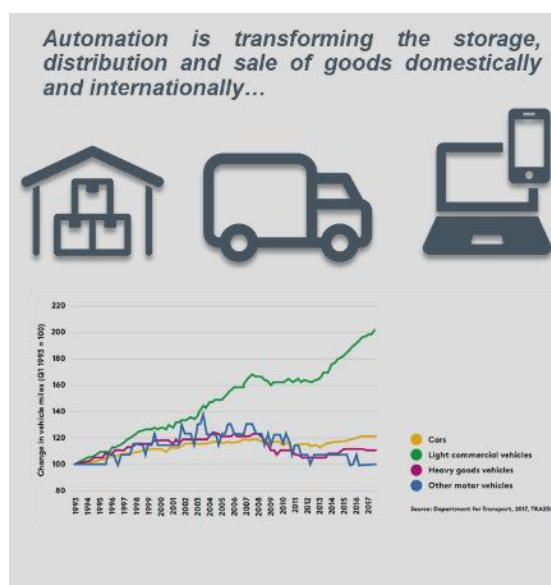
Sectors: Wholesale, Transport and Warehousing

In Basildon, over 10,000 people are employed in wholesale, transport and warehousing and sectors³⁰...

5.19 The impact of technology and automation on these sectors has been well-publicised, as **warehousing and distribution processes have become increasingly reliant on technology**. This has improved efficiency, shortened delivery times (just-in-time) and reduced customer costs, but has also **led to rapid shifts in required skills and also significant job losses**.

5.20 Key considerations for these sectors include:

- Transport and logistics industries will see **significant potential for productivity gains** in the application of intelligent and automated technologies, with **digital skills becoming increasingly important**.
- Increasing consumer demand for faster, more frequent deliveries will **increase the scale and complexity of logistics services**, placing greater emphasis on the **role of technology to deploy solutions**.
- Globally, an estimated **US\$4.6 trillion of additional revenue can be generated if transport and logistics industries innovate** to capitalise on growing demand, presenting significant local opportunities³¹.
- At a firm level, **transport and warehousing are anticipated to see 22% of jobs replaced by AI and automation, and wholesale 3% of jobs**. In Basildon, this would equate to a **reduction of around 1,150 jobs by 2037**, presenting a significant risk to the local economy³².



Note: Chart showing the increase in light commercial vehicle use across the UK as businesses meet growing demands for the more granular distribution of goods.

Source: Source: Government Office for Science, The Future of Mobility, January 2019

³⁰ Basildon Economic Baseline Tool, 2019

³¹ PWC, Shifting Patterns: The future of the logistics industry, 2016

³² PWC, UK Economic Outlook, July 2018

- Basildon benefits from good road, rail and shipping links to London and the greater South East; **leveraging these effectively will see the area well-placed to gain from wider industry trends.**
- **Cultural shifts are required in incumbent businesses to innovate, to support the creation of a more productive cluster.** Combining increased business competitiveness with Basildon’s locational strengths could lead to more wholesale, transport and warehousing locating in Basildon, mitigating firm level job losses.

5.21 Within Basildon, key firms operating these sectors are having to respond to changes in the industry and are **embracing the new processes and technologies to enhance the way by which goods are stored, processed and transported to customers.** The most prominent employers in warehousing and logistics sectors in the Borough include:

- **Vanguard Logistic Services** – employs ~50 people, self-storage
- **Clearance Marshalls** – employs ~15 people, home-cleaning service
- **Safestore Self Storage Basildon** – employs ~10 people, self-storage

5.22 Whilst employment levels within these firms is relatively low, **scope for introducing automation is considerable.** In a real world setting, this has translated into the deployment of new equipment which has increased efficiencies, opened up new models of customer interaction and raised levels of security applied to personal storage units.

Gunnebo – SafeStore Auto

Gunnebo has developed a fully automated system of safe deposit lockers located in a high-security vault. This allows customers to access storage space from a self-service terminal in a secure room.

The system makes use of robotics – a robot delivers the locker to the terminal once customer identification has been verified. With high levels of security, the system is ideal for customers who wish to deposit or retrieve valuable items.

The benefits of an automated system are numerous and include an enhanced customer experience, reduced overhead costs, more secure storage and more flexible staff employment.

Similar technologies are likely to become prevalent across Basildon, which hosts a number of self-storage businesses.

Source: Gunnebo, 2019

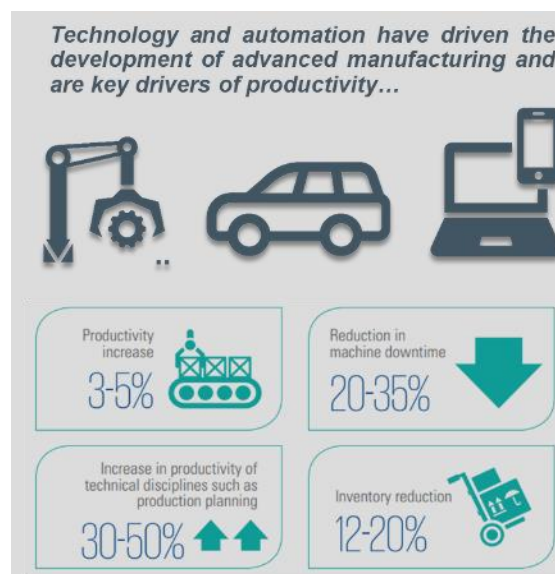
Sectors: Manufacturing

5.23 In Basildon, approximately 7,400 people are employed in the manufacturing sector³³.

5.24 Manufacturing industries have embraced innovation and invested heavily in R&D leading to the **widespread deployment of technology and automated process**. These are intrinsic to the UK's competitive advantages in advanced manufacturing and are a focus for the government's Industrial Strategy, **with significant productivity and growth potential**.

5.25 Key considerations for this sector include:

- Basildon's industrial heritage is based on the **automotive, food, drink and other consumables industries** that located there when it was constructed as a New Town in the 50s & 60s.
- The Dunton Technical Centre, an automotive R&D facility owned and operated by Ford, **employs around 3,000 staff and is one of the UK's largest automotive R&D centres**³⁴.
- The manufacturing industry is set to be **overhauled by the introduction of Industrial Digital Technologies** (or Industry 4.0) including of automation, robotics, connectivity and data analytics.
- Automation has the potential to **boost the UK's productivity by 22%** and accelerated levels of investment in robotics **could raise manufacturing GVA by 21% in the next 10 years**³⁵.
- But, AI and automation present significant threats to the sector. Applying PWC's analysis to Basildon, this would see a **decrease in employment of 25% by 2037 – equivalent to 1,850 employees**³⁶.
- However, the Made Smarter review estimates that if efforts are made to rapidly adopt Industry 4.0, **UK-wide 25% more jobs will be created through growth than lost to automation by 2025**³⁷. This would equate to a **gain of 471 jobs in Basildon** if infrastructure and skills are in place to enable businesses to innovate and grow.



Source: Her Majesty's Government, Made Smarter Review, 2017

5.26 At a firm level, Basildon has a number of large employers operating within the manufacturing sector. **These businesses are at the front-line in terms of thinking smarter, applying new technologies and harnessing the power of automation to increase competitiveness**. The

³³ Basildon Economic Baseline Tool, 2019

³⁴ Daily Gazette, Ford Dunton turns 40, October 2007

³⁵ Her Majesty's Government, Made Smarter Review, 2017

³⁶ PWC, UK Economic Outlook, July 2018

³⁷ Her Majesty's Government, Made Smarter Review, 2017

following companies are prime examples of this, manufacturing products on a large scale, for international consumption:

- **Ford Motor Company** – employs more than 3,000 people, automotive manufacturer
- **Drinks Cabin** – employs ~750 people, food manufacturer
- **Konica Minolta** – employs ~250 people, photography and printing manufacturer

5.27 **Within the Borough, firms are putting automation into practice.** Not only that, some local employers have also developed their product and service proposition, helping businesses operating across a broader base of sectors to maximise commercial opportunities afforded through process automation.

Konica Minolta – Business Process Automation

Konica Minolta, which is headquartered in Basildon, offers a variety of business process automation software solutions, which aim to automate manual business processes. The software applies this automation through the use of bespoke business rules with built-in decision-making capabilities.

Their offer includes the automation of accounts and finance processes as well as workflow systems, orientated around the use of dedicated software.

The deployment of process automation can yield a number of benefits. This includes eliminating inefficiencies, being more client/user focused, lowering of costs, error reduction and gaining greater insight.

Source: Konica Minolta, 2019

Future Impacts: Construction

Looking forward, construction will be a key growth industry for the area, with 50% of Basildon’s rapidly growing businesses being part of the construction value chain³⁸...

5.28 Construction activity is an **integral component of physical growth and regeneration**. In the context of South Essex’s ambitious growth agenda, **construction will take place on a large scale**. Yet, the construction sector **lags global average productivity by 30%**. There is significant scope to improve this position.

5.29 Key future considerations for this sector include:

- By adopting digital technologies, the UK’s construction sector can **create an additional £89.2 billion GVA over the next ten years³⁹**.
- **The sector is typically split into two types of businesses:** large-scale companies engaged in the heavy-construction of civil and industrial programmes of construction, and smaller firms engaged in fragmented, specialised trade-based services.
- The first group of businesses is **more productive than the second by 20 to 40%⁴⁰** – contributing significantly to the “long-tail” effect of underproductive smaller companies.

³⁸ Basildon Economic Baseline Tool, 2019

³⁹ Her Majesty’s Government, Made Smarter Review, 2017

⁴⁰ McKinsey&Company, Reinventing Construction: A Route To Higher Productivity, February 2017

- Boosting productivity in this sub-sector of small to medium businesses engaged in the construction industry through the **application of digital technologies** is key to accelerating growth.
- London is experiencing a skills and capacity shortage in construction **which Basildon can help fill**, especially as this type of industry moves East along the Thames Estuary. An ambitious South Essex growth agenda will also need to be serviced appropriately by a construction sector that can deliver at scale and harness the power of technology.
- Modern Methods of Construction such as producing off-site modular buildings, using more digital Virtual Reality (VR) and Augmented Reality (AR) tools for integrating design, planning and construction can **boost productivity and make the sector more appealing for young people to work in**. Similarly, on building sites using autonomous vehicles, 3D printing and digital visualisation **can have the same impact**.
- Capitalising on nearby facilities such as the planned Havering Innovation Hub can **help construction businesses overcome barriers to innovation**⁴¹.

5.30 Automation has implications for construction-orientated firms operating in Basildon, with **considerable scope for a role to be played in delivering physical growth, regeneration and enabling the delivery of large-scale infrastructure projects in coming years**. The most prominent construction firms operating in Basildon are:

- **Brown & Carroll Ltd** – employs ~80 people, building and design company
- **Saving Energy** – employs ~60 people, insulation contractor
- **A B S Preservation (U K) Ltd** – employs ~50 people, water drainage restoration

5.31 Basildon benefits from construction firms who have embraced technology and are at the forefront of deploying increasingly automated approaches. As a result, quality and efficiency has increased, sustainability improved, and reputational benefits also reaped.

Brown & Carrol Ltd – Committed to Technology

Brown & Carroll is a high-growth business based in Basildon. They provide bespoke manufacturing, joinery and fitting services for the built environment.

Their growth is in part due to Basildon’s geographic location and transport connections. Their factory is 30 minutes from Central London, providing the company with access to the wealth of multi-million-pound construction and redevelopment projects happening there.

The company also cites a focus on investing in emerging technologies, coupled with their traditional joinery skills, as a factor in their growing success. There is a particular emphasis on the use of ‘green technology’, helping to reduce the environmental impact of the factory, lower power consumption and shift towards renewable sources of heat energy.

Source: Brown & Carroll Ltd, 2019

⁴¹ Mayor of London, Good Growth Fund: supporting regeneration in London, accessed Feb 2019

Wider UK Examples – Automation in Practice

Public Service Automation

HMRC

Customer Service Contact Centre



In a high profile public sector setting, HMRC is making effective use of automation through the deployment of robotics and machine learning. This is being used in two settings – contact centre dashboards and as part of the employer registration process.

For the purposes of the dashboard, robotics are used to enable customer advisers to navigate menus and access information more efficiently, reducing the number of user clicks by up to 85%. By using robotics to open files automatically, advisers are able to focus on the customer, avoid errors and cut call times significantly.

The HMRC is also employing robotics to manage the employer registration process, speeding up the validation of online applicants. In cases where verification fails, a case handling team takes over, with this required in only 15% of all cases. This system has meant that registering employers are able pay staff quicker and have reduced HMRC's processing costs by 80%.

Source: [HMRC](#)

Manufacturing Automation

Eakin Group

Medical Product Manufacturer



As a manufacturer of high quality manufacturing products, Eakin has invested heavily in automation to increase efficiency and drive up productivity. In doing so, production levels have increased and turnover has risen too.

Nearly £8m has helped to fund the installation and adoption of automation to support the manufacturing of the Pelican Healthcare products. A fully automated process line combines production with packaging, creating a seamless integrated system, with the further adaptability for new products. Approximately 85% of all products are manufactured using automation.

The result of these investments has been the development of new overseas markets, increasing relative competitiveness, the retention of manufacturing processes in the UK, lowered product cost prices and to develop strong relationships with technology providers. The company has made significant investments in staff training and upskilling, driven by machine-based operations.

Source: [Barclays](#)

Hospitality Automation

Pizza Express

Nationwide Pizza Restaurant



With over 400 restaurants across the UK, Pizza Express has a major presence across cities and towns and has been omnipresent for some time. In order to facilitate growth and maintain competitive advantages, the chain has been investing in automation and technology.

A number of projects have been implemented focusing on customer booking interfaces and responding to changing consumer preferences. This entailed offering phone booking customers 24 hour access to services and being able to track booking behaviours to customise restaurant experiences. A liveRES booking system was implemented, creating a fully connected platform.

The result of this automatization has been the transformation of operations, as staff are able to manage reservations directly from the restaurant floor, enabling a greater focus on the business. Greater access to real-time customer data has also allowed the chain to deploy more agile marketing solutions.

Source: [CXM](#)

Warehousing Automation

Ocado

British Online Grocer



Ocado is the world's largest online grocer, delivering circa 200,000 orders to UK customers on a weekly basis. This is reflected in the scale of its warehousing operations, the wide choice of products and commitment to quick delivery turnaround times to customers across the whole of the UK.

To improve efficiency and support its growth ambitions, Ocado has invested heavily in large-scale automation, harnessing the power of robotics and communications systems. Using Altran technology, a vast network of automated systems can communicate in real time, safely and with an exceptional degree of accuracy.

Through the implementation of 4G wireless technologies, Ocado has developed an automated solution which is repeatable across its network of warehouses, whilst also being scalable to suit different locations. Over 1 million grocery items can be managed in real time and the technology can be adapted for other purposes across Ocado sites.

Source: [Altran](#)



Research Implications




6. Evidence Base Implications – Brexit and Automation




6.1 The following tables outline the **key implications from the Brexit and automation research contained within this report**, with a focus on the meaningfulness of the results relative to the Basildon Council area. Where this isn't possible, findings reflect on the key messages and trends emerging from a UK wide evidence base. These implications are categorised under the following headings:

- **Areas of Concern**
- **Points to Watch**
- **Opportunity to Explore**




6.2 The tables seek to highlight the most important research findings, isolate where public sector attention should be focused and form the basis for the **structure and prioritisation of actions** (which can be driven and delivered by the Council and its partners) in chapter 7.

Brexit

Areas of Concern 	Points to Watch 	Opportunity to Explore 
<ul style="list-style-type: none"> • A body of national level evidence paints a consistently negative view of Brexit outcomes, including economic shrinkage, reduced competitiveness and a tarnished global reputation/attractiveness. 	<p>Suggestions that local electorate and voting patterns are sensitive to Basildon's economic performance – be aware of impact of further Brexit referendums and the possibility of more exaggerated outcomes.</p>	<p>On some measures, Basildon is less exposed to change as Brexit concludes, meaning there are opportunities to change the focus of policy and leverage investment at a quicker pace.</p>
<p>Academic evidence suggests hard and soft Brexit scenarios could lead to a reduction in Basildon's economic output, harming employment and relative competitiveness.</p>	<p>Voting result reaffirms the need to address root causes of inequality, such as low wages and poor skills outcomes, which are holding back the prospects of local people.</p>	<p>Basildon has considerable positive momentum that can be capitalised upon, driven by growth ambitions, regeneration, flagship public sector projects and business investment (FDI, relocations).</p>
<p>Some sectors are expected to be more affected than others by a reduction in output and a more constrained supply of skilled and accessible labour.</p>	<p>Details of final agreement will have a considerable impact on actual outcomes for the local economy, driven by trade tariffs and the relative exposure to change within locally-important sectors.</p>	<p>New UK immigration policies may help Basildon to attract skilled labour which is most likely to address local skills gaps, support growing sectors and increase productivity levels.</p>

Areas of Concern 	Points to Watch 	Opportunity to Explore 
<p>Potential for sector retraction may compound existing economic and labour market challenges and require a realignment of local economic strategy direction and focus.</p>	<p>Small businesses are likely to be particularly exposed to tariff changes and the loss of support from EU investment programmes and will need to be monitored and assisted accordingly.</p>	<p>The extensive of Essex Thames Gateway’s global trade links, particularly its share of exports from non-EU markets provides a platform from which to reinforce and develop new international trading relationships.</p>
<p>Essex Thames Gateway is comparatively reliant on foreign trade and international export markets, heightening its exposure to new trading conditions and the associated costs to businesses.</p>	<p>Brexit delays and continued uncertainty are likely to perpetuate and accentuate challenges, with certain issues becoming more pronounced in the short-term.</p>	<p>There is an opportunity for the public sector and partners to play a leading role in addressing business uncertainty and providing assistance to local employers unsure of Brexit impacts.</p>
<p>Nationally, businesses are holding back investment, pausing expansion and continued to be concerned by policy instabilities, damaging local growth prospects, market confidence and the UK’s relative attractiveness on a global scale.</p>	<p>The government has yet to commit in detail to the replacement of EU investment funds, but hopes remain that new programmes will be announced with a greater focus on UK business needs.</p>	<p>Basildon Council, ASELA and SELEP have levers that can be pulled to mitigate Brexit impacts, reduce business costs and promote the sub-regional economy in a positive and progressive manner.</p>
<p>Some economic weaknesses will make it harder for Basildon to mitigate Brexit exposure, with issues such as the supply of affordable housing a constraint on attracting new and skilled people to the area, domestically and from abroad.</p>	<p>In some cases, it will take businesses time to readjust to a new trading, regulatory and policy environment, before they can refocus on growth with clarity and confidence.</p>	<p>There is collective strength in adopting a consistent strategic approach in a post Brexit era across Basildon, the South Essex Growth Corridor and SELEP.</p>

Automation

Areas of Concern 	Points to Watch 	Opportunity to Explore 
<p>There is a tangible threat of employment loss in sectors most exposed to process and service automation, where the deployment of new technologies and more efficient use of data is happening apace.</p>	<p>The rapid pace of technological change means that the public sector must maintain active engagement with local employers to understand how sectors are evolving and their prospects for growth.</p>	<p>The digitisation of industry offers opportunities for all sectors in Basildon to innovate, increase efficiency and drive up productivity levels.</p>
<p>In some cases, the transition to a more digitised and automated economy will require widespread and rapid workforce reskilling, needing a timely and proactive response at scale from the public sector and employers.</p>	<p>The Council and partners will need to maintain a close eye on the dynamics of technology and actively adopt innovative practices to understand and develop policies to support local businesses.</p>	<p>Basildon has strong representation in sectors which are well-positioned to reap the benefits of automation and disruptive technologies, such as AI/VR, IoT and more advanced use of data.</p>
<p>In certain sectors (such as manufacturing), the effects of automation and process change are occurring very quickly, with limited opportunity for the public sector to inform employer decision-making.</p>	<p>Competition amongst comparators is fierce as the UK economy becomes more technology orientated – Basildon must work hard to maintain and extend its competitive advantages and provide the foundations for automated and digitised businesses to succeed.</p>	<p>The national and sub-regional policy environment is well-placed to support industry to exploit automation and secure investment to innovate and re-skill employees as the nature of work changes.</p>
<p>Brexit and other external macro/economic factors threaten the evolution of local businesses and the adoption of digitisation and automated operations.</p>	<p>There are examples of success stories in Basildon, where companies are driving rapid growth and increasing productivity as a result of automation, which can be used to inspire other businesses.</p>	<p>The Council and ASELA are investing in infrastructure (such as full fibre broadband) which will be an important foundation for new technologies and innovation.</p>



A Strategic Response

7. A Strategic Response

- 7.1 Building on the findings outline in chapter 6, here we set out how Basildon Council and partners can take action.
- 7.2 The tables below set out **a series of priorities which the Council could seek to focus on**, in order to mitigate negative economic impacts and maximise opportunities arising.
- 7.3 Two tables set out these priorities from a Brexit and automation perspective, with each assigned a series of **actions, suggested delivery partners** and **desired outcomes**.
- 7.4 A **range of stakeholders** will need to be brought together to deliver the recommended actions, including partners within government, neighbouring local authorities and SELEP.

Brexit – Priorities for Basildon Council

Priority	Key Actions	Suggested Delivery Partners	Desired Outcomes
1. Work closely with businesses in the most exposed sectors to better understand their Brexit plans and associated concerns/needs (local specific).	<ul style="list-style-type: none"> Establish Council Brexit working group Host roundtable to understand latest business position and consider role of Council/public sector Consider administering a bespoke Brexit survey 	<ul style="list-style-type: none"> Chamber of Commerce Business representative organisations SELEP Growth Hub Department for International Trade 	<ul style="list-style-type: none"> Council develops fuller knowledge of local business concerns Develops key actions to assist exposed businesses
2. Raise awareness among local businesses of likely Brexit implications and support offer.	<ul style="list-style-type: none"> Develop and issue regular communications to local businesses on Brexit Signpost to existing information designed to support businesses through Brexit and associated change 	<ul style="list-style-type: none"> Chamber of Commerce Business representative organisations SELEP Growth Hub Government agencies 	<ul style="list-style-type: none"> Local businesses are fully abreast of Brexit implications Local businesses have knowledge of/access to Brexit support and information Connect firms with other agencies who can assist
3. Assertively continue to progress planned regeneration and investment in Basildon.	<ul style="list-style-type: none"> Actively promote high profile projects and investments which are being made in Basildon Showcase the Council's role in delivering new jobs, homes and public realm improvements Harness the full spectrum of Council activity and investments to maximise Basildon's attractiveness 	<ul style="list-style-type: none"> Chamber of Commerce SELEP ASELA 	<ul style="list-style-type: none"> Local firms and major employers reassured by local trajectory Commitments established regarding retention and expansion of business activity in Basildon

<p>4. Ensure ongoing upskilling of local residents and workers in order to safeguard inclusive growth.</p>	<ul style="list-style-type: none"> • Develop business cases to address skills gaps/shortages, working collaboratively with education providers and employers • Secure investment through new developments and S106/CIL to deliver improvements to critical economic infrastructure (including skills and training provision) 	<ul style="list-style-type: none"> • SELEP • ASELA 	<ul style="list-style-type: none"> • Business cases and bids are submitted for funding • Priority projects are endorsed and access investment
<p>5. Develop programme of support for SMEs and entrepreneurs that are most exposed to Brexit impacts.</p>	<ul style="list-style-type: none"> • Identify and develop business support solutions aimed at growing and scaling SMEs • Explore opportunities to access the final wave of SELEP EUSIF programme funds • Engage with delivery partners to consider sustainability options and access to new finding sources 	<ul style="list-style-type: none"> • ASELA • SELEP • Government departments 	<ul style="list-style-type: none"> • Stable business support offer which is accessible to SMEs and entrepreneurs • Start-up culture nurtured and flourishing • Scale-up numbers increase and choose to remain in Basildon
<p>6. Monitor Whitehall to gain further clarity on the government’s response to Brexit and successor investment to EU programmes.</p>	<ul style="list-style-type: none"> • Push for clarification on how the government intends to replace EUSIF funds and the focus of the National Prosperity Fund • Seek more information on the likelihood of devolution 	<ul style="list-style-type: none"> • Government departments (particularly MHCLG) • SELEP • ASELA 	<ul style="list-style-type: none"> • Increased certainty on post Brexit government position • Preparations made in terms of accessing new public sector investment streams

	and additional powers being transferred to sub-regions		
7. Outwardly promote Basildon as a centre for global trade and as logical choice for inward investment and FDI.	<ul style="list-style-type: none"> • Further explore extent of non-EU trade links and the opportunity to expand/access new global markets • Develop refined inward investment and FDI proposition and mobilise trade missions • Promote collective strengths and assets within the South Essex Growth Corridor 	<ul style="list-style-type: none"> • Chamber of Commerce • SELEP • ASELA • Department for International Trade 	<ul style="list-style-type: none"> • Global markets with greatest opportunity for trade identified • Significant inward investment and FDI secured • Local firms secure contracts and develop new global supply chains

Automation – Priorities for Basildon Council

Priority	Key Actions	Suggested Delivery Partners	Desired Outcomes
1. Map out and monitor innovation among Basildon businesses to identify challenges and implement support to secure appropriate technology investment.	<p>Establish cross-sector partnerships to:</p> <ul style="list-style-type: none"> • Showcase latest technologies • Hackathons and innovation sprints • Improve links with Universities and colleges • Provide funding advice and support • Coordinate collaborative project grants • Help commercialise new products and technologies • Provide the context and information needed to show businesses the benefits of taking part in open innovation. • Co-ordinate innovation futures activity, horizon scanning to ensure the cluster is aware of new knowledge sources and crossovers between organisations and sectors. 	<ul style="list-style-type: none"> • Business representative organisations • SELEP • Essex Construction Training Association • CITB • Growth Hub • South Essex College • University of Essex 	<ul style="list-style-type: none"> • More businesses aware of the need to innovate and the potential of automation • Targeted support to different cohorts of businesses grouped by different levels of innovation capability • Funding bids submitted and funding secured for innovative projects • A positive reputation for Basildon as a place where businesses are capitalising on automation and technology, leading to increased start-up rates or inward business migration
2. Establish collaborative partnerships outside of the LEP area and wider region to help	Co-ordinate visits for Basildon business to meet with organisations or use facilities outside of Essex, to	<ul style="list-style-type: none"> • Catapults (High Value Manufacturing Catapult, Digital) 	<ul style="list-style-type: none"> • More opportunities for Basildon businesses to sell into London and the Greater South East

<p>key sectors exploit technology and automation.</p>	<p>compliment rather than compete with the wider regional economy:</p> <ul style="list-style-type: none"> • Test innovations and / or view demonstrations of new technologies in action to prove the commercial viability of new technology • Capitalise on the UK’s digital capabilities by engaging the best organisations to develop digital solutions to challenges, following open innovation principles 	<ul style="list-style-type: none"> • University of Greenwich, University of Kent, University of London • Plexal (at Here East, London) • The London Innovation Gateway • Havering College (Mayor’s Construction Academy) • Barking and Dagenham College 	<ul style="list-style-type: none"> • A growing role for Basildon in the eastward shift of London’s economy along the Thames Estuary, especially in construction and logistics • Partnerships between companies in Basildon and organisations / companies around London and the Greater South East
<p>3. Review training provision to identify how local colleges and providers can work with businesses to deliver digital skills particularly around exploitation of data analytics, AI, AR/VR and robotic technology.</p>	<ul style="list-style-type: none"> • Adult and career-long digital skills training • Work with local FE/HE colleges • Consider University Technical College type activity • Digital and technology design competitions for school/college students • Over-skilling employees and develop more flexible and agile skills, preparing their workforce for when new technologies arrive 	<ul style="list-style-type: none"> • SELEP • South Essex College • Training providers • Sector bodies • University of Essex 	<ul style="list-style-type: none"> • More young people enthusiastic about the opportunities in Basildon’s key sectors - especially construction, logistics and administrative roles • Higher skills in the current and future labour market to enable innovation amongst current and new businesses in Basildon • More opportunities for young people in the tech economy to help ensure inclusive growth

Appendix A - Literature Review Summary

Brexit

Research	Description
<p>EU Exit – Long-term economic analysis (2018) Her Majesty’s Government</p> 	<ul style="list-style-type: none"> Government produced an analysis of the impacts of four trading relationship scenarios on long-run economic performance. Included the position set out in the Government White Paper (July 2018) – a hypothetical free trade agreement with zero tariffs and average non-tariff costs, an EEA-type scenario; and a no deal scenario based on average non-tariff barriers between countries trading on WTO terms and applying EU Most Favoured Nation tariffs. The trade effects were assessed measuring long term GDP impacts compared with today’s arrangements and against the no deal scenario. All modelled scenarios lead to a reduction in GDP compared to today’s arrangements and all scenarios are better than the no deal scenario.
<p>The Local Economic Effects of Brexit (2017) London School of Economics</p> 	<ul style="list-style-type: none"> This study assesses the local impact if an increase in trade barriers arise from Brexit. These impacts are presented under hard and soft Brexit scenarios. Both scenarios are predicted to reduce GVA compared to the baseline, with the hard Brexit scenario causing greater economic harm. The geographical distribution of local authorities less affected by Brexit is more varied and driven by the sector base of local economies. Nine of the ten local authorities most affected under the hard Brexit scenario are located in the South of England, largely due to their high employment shares in Business Activities or Financial Intermediation.
<p>Brexit and the UK Automotive Industry: Understanding the Impact (2018) Birmingham City University (Centre for Brexit Studies)</p> 	<ul style="list-style-type: none"> As part of their research, the Centre for Brexit Studies interviewed senior managers in the automotive sector. They noted that automotive supply chains are international and that Brexit, potentially bringing new border rules and tariffs, would harm these supply chains (particularly just-in-time distribution). Trade barriers are particularly problematic for firms who import parts and labour, but export the finished product, as they will be hit by these issues twice. At WTO thresholds, there could be a 10% tariff on finished cars. The research also noted issues around the cost and availability of skilled workers in an industry that already has a relatively old workforce.
<p>Understanding the economic impact of Brexit (2018) Institute for Government</p>	<ul style="list-style-type: none"> A review of 14 studies on the potential long-term impact of Brexit, produced by UK Government, Dutch Government, academic researchers and City institutions. Most expect Brexit to have a negative impact on long-term GDP across various trading scenarios. Overall impacts are driven by assumed effects on: <ul style="list-style-type: none"> Trade Barriers – new barriers to trade with the EU (tariffs and non-tariff barriers) constraining economic growth. Foreign Direct Investment – a reduction in the UK’s attractiveness to foreign investors as companies have



historically based investment decisions on being close to supply chains and markets.

- **Migration** – rules affecting migration of skilled/unskilled workers can have a significant impact on economic growth, limiting labour supply and innovation potential.
- **Regulations** – these govern how cost-effectively businesses can produce output, but also regulate competition, health and safety and environmental protection, with a suggestion that the UK may benefit significantly from Brexit changes.
- **Productivity** – predicated on the relationship between trade and productivity growth, with both being negatively affected as a result of Brexit.

Who Voted for Brexit? A Comprehensive District-Level Analysis (2017)

Sascha O. Becker, Thimo Fetzer and Dennis Novy



- This study analysed the **variation in vote share across the UK's local authorities**. They assessed a basket of around 30 indicators and the extent to which these could help to explain the vote, grouped accordingly:
 - **EU exposure through immigration, trade and structural funds**
 - **Local public service provision and fiscal consolidation**
 - **Demography and education**
 - **Economic structure, wages and unemployment**
- Their analysis showed that **demography and education were the biggest determinant of leave vote share**, as opposed to the extent to which areas are exposed to the EU through immigration and trade.

EEA Migration in the UK (2018)

Migration Advisory Committee



- Assesses the impact of migration on **the UK economy and society**. Key findings are:
 - EEA Migrants have had **limited or no impact** on employment, unemployment or wages of the UK-born workforce.
 - Impacts differ depending on the **skill level** of the UK national.
 - EEA migration, particularly higher-skilled migration, has a **positive impact on productivity** and does not harm the availability of training for UK workers.
 - Increased migration was associated with **rising house prices**, although not in isolation.
 - EEA migrants make a **positive net contribution** to the UK's public finances.
 - The household income where migrants start to make a **positive net contribution** is around £30,000.
 - EEA migrants are **net contributors** to the health service and provision of social care.

The Continental Divide? Economic Exposure to Brexit in Regions and Countries on both Sides of the Channel (2017)

University of Birmingham

- Paper looks to quantify the **shares of regional and national GDP and labour income that are at risk due to Brexit**, taking into account the nature and scale of trade linkages (but not the composition of supply chains).
- Results show that the **UK and its regions are far more vulnerable to trade-related risks of Brexit compared to other EU member states and their regions**.
- Also analyses regions at the NUTS 2 level and notes that **many of the UK's economically weaker regions are especially exposed to Brexit**.



- Of all EU nations, research finds that the Republic of Ireland was most exposed, followed by industrialised countries in North Western Europe.

Automation

Research	Description
<p>Made Smarter Review (2017) Her Majesty's Government</p> 	<ul style="list-style-type: none"> • Review was completed as part of the development of the Industrial Strategy and summarises how the adoption of Industrial Digital Technologies (IDTs) can transform UK businesses to become global leaders in the field by 2030. • It estimates that introducing IDTs can create an additional £455 billion in GVA over the next 10 years, increase sector growth up to 3% per year, and generate 175,000 jobs. • Illustrates the potential for IDTs to reform the culture of the UK's industrial landscape to be more innovative and productive. • In the construction sector, it estimates the IDTs can create an additional £88.9 billion through productivity gains.
<p>The UK Innovation Survey: Headline Findings 2014 to 2016 (2018) Department for Business, Energy & Industrial Strategy</p> 	<ul style="list-style-type: none"> • Survey was conducted to assess the use of innovation by UK businesses and is intended to be used by the Government to inform policy decisions, with over 13,000 businesses providing responses. • The findings cover the profile of innovation activities and headlines include: <ul style="list-style-type: none"> • Innovation has fallen in most industries from 53% in the two years to 2014 to 50% in the two years to 2016. • Larger businesses are more likely to introduce product and process innovation than smaller ones. • Various cost factors were the most important constraint on innovating, with knowledge factors the second most important.
<p>Automotive Sector Deal (2018) Her Majesty's Government</p> 	<ul style="list-style-type: none"> • Forms part of the 4 sector deals announced as part of the Industrial Strategy, which provide information on funding and what the Government will do to stimulate productive and innovative business environments. • Automotive sector deal was one of the first and is representative of the growth direction that will influence the wider manufacturing sector. • Presents potential funding programmes through stimulating market demand and through supporting advanced manufacturing R&D and uptake. • The programmes are arranged around the five foundations for productivity. • The funding distributed by this deal will mostly be delivered in partnership with industry.

The Digitalisation of the UK Automotive Industry (2016)

KPMG & SMMT



- Report is similar to the Made Smarter Review and Automotive Sector deal but was developed by an industry body (Society for Motor Manufacturers and Traders) in conjunction with KPMG).
- It presses for the acceleration of funding and support for the rapid uptake of digital technologies in the automotive industry.
- It predicts that this would result in an **annual benefit of £8.6 billion**, totally a **cumulative benefit of £74 billion by 2035**.

UK Manufacturing Skills Shortages, Leadership and Investment

White Paper (2017)

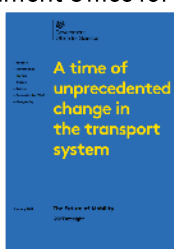
Cranfield University



- White Paper informing government policy, published by Cranfield University.
- Paper concludes that **digital technology skills** (i.e. robotics & artificial intelligence, data analysis, electronic & electrical engineering, software and machine operative skills) are the most at risk of short supply, nationwide.
- It makes recommendations that focus on the **need for collaboration between multiple stakeholders**, including businesses, industry bodies and schools, colleges and universities.

Future of Mobility (2019)

Government Office for Science



- Publication is an advisory foresight report looking at the **trends, challenges and opportunities** the UK transport system will face in the next 20 years, to 2040.
- It covers all mobility in the UK and includes a section on the development of road freight – a key section of the UK’s transport and logistics industry. It finds that:
 - **Road freight will continue to dominate** as the main mode of transport for logistics, as consumer trends demand faster, more accessible access to products.
 - Currently **89% of goods** are moved by road transport.
 - Road freight has the potential to **make huge savings from automation**.

Reinventing Construction: A Route to Higher Productivity (2017)

McKinsey Global Institute



- Report looks at the productivity and efficiency improvements in the construction sector and makes a series of recommendations.
- Shows that productivity growth in the construction industry has averaged **1% per year for 20 years**, compared to **2.8% for the world economy** as a whole and **3.6% in manufacturing**.
- It finds that productivity levels are a result of **management decisions, insufficient skills, inadequate design processes, and underinvestment in skills development, R&D, and innovation**.
- A key finding is that **large firms tend to be 20-40% more productive** than small ones.
- The report predicts that **productivity could be increased by a factor of 10** by adopting technological innovations as seen in manufacturing, including modular construction and automation.

Moving to Industry 4.0: A skills revolution (2017)

Mace

- Publication looks at the **causes and solutions for low productivity in the construction sector**, specific to UK industry.
- States that UK **construction output per worker has remained flat with no growth over the last 10 years**, compared to growing 30%/50% in the service/manufacturing sectors.



- It suggests that to capitalise on **Industry 4.0** opportunities, the UK will need to **re-skill over 600,000 construction employees** over the next two decades.
- The three technologies that businesses believe will be most impactful are **advanced data and analytics, augmented and virtual reality, and advanced energy storage and creation.**
- Mace recommends that the construction sector must **work with training and education providers and with government** to improve how skills demands will be met.

Shifting Patterns: The Future of the Logistics Industry (2016)

PwC



- Report reviews how the transport and logistics (T&L) industry will change in light of **evolving market expectations and emerging enabling technologies.**
- It identifies four areas as having significant disruption potential:
 - **Customer expectations (faster, more flexible and cheaper deliveries)**
 - **Intelligent technology applications**
 - **New entrants**
 - **Collaborative, sharing economy business models**
- States that technology and digital innovations can improve supply chain transparency and the efficient use of resources.
- The biggest challenge to building digital operations capabilities in T&L companies is a **“lack of digital culture and training”**.

Pulling Together: Strengthening the UK’s Supply Chain (2014)

CBI



- Report looks at what can be done to extract maximum value from future supply chains and the scale of impact of improvements.
- Estimates that improving the security of supply through a stronger domestic supply chain could add **£30 billion to the UK economy** and create more than **500,000 jobs by 2025.**
- They recommend **fostering an innovative culture** in the UK supply chain to achieve this.
- This can be achieved by encouraging and enabling business to benefit from **investing more in R&D** and **proving the value of new technology to businesses** by quickly moving technological innovations through Technology Readiness Levels.

Delivering Sustainable Growth Through Innovation (2018)

Food & Drink Federation



- In 2011, FDF released a vision to deliver **20% sustainable growth by 2020 in the food and drink manufacturing sector.** It identified that the key drivers of this growth are **exports, skills and innovation.**
- This updated report recognises that innovation is a challenge in an industry where over **80% of companies are SMEs.**
- As such, it recommends **communication and knowledge transfer solutions** as a priority to enable industry growth through innovation.

Appendix B - Basildon Sectors – Key Employers

Company Name	Employees
Business Activities and Financial Intermediation	
1. F D R Ltd	2,000
2. First Data	2,000
3. Family Mosaic Housing	150
4. Aspect Contracts	100
5. Ground Control Ltd	100
6. Lets Rent	100
7. Musto	100
8. P R G Security Ltd	100
9. J W Froehlich UK Ltd	80
10. Highway Insurance	72
Construction	
1. Brown & Carroll London Ltd	80
2. Saving Energy	60
3. A B S Preservation (U K) Ltd	50
4. CRL Contracts	50
5. Well Defined Paving	47
6. P I P Electrics Ltd	40
7. S G M Window Manufacturing Ltd	40
8. Wernick Building Ltd	40
9. K S Diamond Drilling	35
10. Smith & O'Sullivan Ltd	35
Hospitality, Leisure and Recreation	
1. Stock Brook	288
2. K F C	106
3. Simply Blues Restaurants Ltd	100
4. Holiday Inn	90
5. Pizza Hut	77
6. Ashworth U K Ltd	75
7. David Lloyd Leisure	70
8. Fish'n'chick'n	57
9. Club Kingswood	50
10. Quays	50
Manufacturing	
1. Ford Motor Company	3,200
2. Drinks Cabin	750
3. Konica Minolta	250
4. 2 Sisters Food Group	150
5. Merson Group	150
6. Gardner Aerospace	120
7. P I P	120
8. The Finishing Line	120
9. Michelin	96
10. M K Electric	94

Public Admin, Education, Health	
1. Basildon & Thurrock University Hospitals NHS Foundation Trust	2,500
2. London Care PLC	600
3. First Call Care Services	500
4. South Essex College of Further & Higher Education	500
5. Selex Es (Projects) Ltd	350
6. South West Essex Community Services	100
7. St Luke's Hospice	100
8. Brooks Care & Nursing Services	60
9. May Flower Community Hospital	60
10. South Essex Partnership University N H S Foundation Trust	60
Retail	
1. Martin's Newsagents	500
2. Primark Stores Ltd	402
3. Partyman	150
4. Matalan	120
5. Marks & Spencer PLC	103
6. Bare Escentuals UK Ltd	100
7. Ironmongery Direct	100
8. Wilko	94
9. Choice Discount Stores Ltd	93
10. Iceland	91
Transport	
1. Argos Distributors Ltd	350
2. TNT Express (UK) Ltd	250
3. Royal Mail	200
4. Lorrford Eurospan Ltd	160
5. Royal Mail Group Ltd	146
6. Alpi UK	100
7. D B Schenker	94
8. D X	60
9. Atlas Courier Express	50
10. F S Mackenzie Ltd	50
Warehousing and Logistics	
1. Vanguard Logistic Services	50
2. Clearance Marshalls	15
3. Safestore Self Storage Basildon	8
4. Clark Clearance Co	6
5. J W B Transport Services Ltd	6
6. Capital Car Parks	5
7. Essex Link Ltd	5
8. Crondon Storage Services Ltd	4
9. Jerrys Clearance Co	4
10. Billericay Clearances	3
Wholesale	
1. P M S International	250
2. Waymade Health Care PLC	230
3. Epay Ltd	100

4. P G R Builders & Timber Merchants	70
5. Metsawood	50
6. O S G UK Ltd	50
7. W C M	50
8. Whitehouse Leisure International Ltd	45
9. Bi-folds 4 U	30
10. Nelson Anderson & Sons	30

Source: Basildon Council Business Database, 2019



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