SOUTH EAST
LOCAL ENTERPRISE
PARTNERSHIP

South East LEP (SELEP) Strategic Economic Plan Evidence Base

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1.0 Introduction

1.0.1 This Evidence Base has been produced as part of a process for preparing the next Strategic Economic Plan for the South East Local Enterprise Partnership (SELEP).

About SELEP

1.0.2 The South East Local Enterprise Partnership (LEP) is the business-led, public/private body established to drive economic growth across East Sussex, Essex, Kent, Medway, Southend and Thurrock.

1.0.3 SELEP is one of 38 partnerships set up by the government to be the key body determining strategic economic priorities while making investments and delivering activities to drive growth and create local jobs. More details about Local Enterprise Partnerships can be found here.

1.0.4 As well as being the biggest LEP outside of London, SE LEP is also one of the most local. The LEP operates a fully devolved model with increased reach into local communities through local delivery partnerships in East Sussex, Kent & Medway, Essex and Thames Gateway South Essex.

About the Strategic Economic Plan

1.0.5 The SEP will be a Strategic document, which is intended to provide a broad framework for investment in the SELEP economy, which will be underpinned by partner's action plans. Given some of the challenges the region, the country and individual localities face it will also seek to inspire government about how we intend to improve the productivity of our regions businesses, deliver greater impact and rise to the delivery challenge that all LEPs are currently facing.

1.0.6 It will not be a document that directs partners or organisations to do certain things, but be a document that draws in partner priorities into a coherent strategy. it will need to excite government about what the region could deliver.

A bottom up consultation process

1.0.7 The development of the Strategic Economic Plan has been driven by a bottom up process of consultation, collaboration and local idea generation.

1.0.8 Phase one of the consultation process has involved extensive engagement with local partners asking 3 high-level questions and 9 supplementary questions. To date, this process has resulted in SELEP receiving feedback from Federated Boards; Chambers of Commerce; local business partnerships; Government departments; thematic working groups; education providers (colleges, universities); sub-regional groups; London and other LEP neighbours; upper tier authorities, districts and boroughs; senior local authority officers; Enterprise Zones; and many others.

1.0.9 In parallel with this consultation process, we have developed this evidence base, which is largely intended to be a data-driven document, which is designed to;

- Gain a clearer picture of the current state of the economy of the area, what the future challenges are and where the opportunities are to stimulate increased growth; and
- Ask some key questions of partners about what interventions partners feel should be used to address some of the current challenges and exploit the emerging opportunities.

1.0.10 In the next phase of the development of the Draft Strategic Economic Plan, we are interested in hearing from federated areas about what projects, interventions and activities they feel will deliver a step change in the performance of their local economies.

A note about the findings of the literature review and the analysis of different datasets

1.0.11 Recognising the SELEP region is large and incredibly diverse, in developing this evidence base, we have sought to try and utilise a wide range of datasets and existing reports as possible to try and develop as granular a picture of the region's economy as possible. In many cases, if information is available at a NUTS3[1] level, this allows us to drill down into the subtle differences between the performance of different districts, wards and/or parliamentary constituencies in the SELEP area.

1.0.12 If the individual geographies of SELEP have used common bases to present information about the performance of their areas, and these datasets are comparable, we have tried to use these wherever possible. However, certain datasets are only available at a pan LEP level, others at a regional level and others are only available for certain parts of the SELEP region. Where we have only been able to access pan LEP level data – and no more detailed information is available - we have continued to use this information, if it helps to paint a picture of the performance of a particular part of the SELEP economy.

1.0.13 Generally speaking, where information is only available at a NUTS2 level, we have not really placed a lot of credence on it, as it does not accurately describe the performance of the SELEP region, or its federated areas (but covers a wider geography). Similarly, where data is only available for part of the region – or is presented in such a way which makes comparison difficult - we have tended not to utilise it, for fear of not being able to present a comparable picture of the performance of the entire region. This may be a mistake, but ultimately adopting this approach ensures we are objective about what the data tells us and equitable to all parts of the region, in terms of how we present the data.

2.0 The scope of this evidence base

2.0.1 As far as the scope of the evidence base is concerned, this has largely been driven by feedback from partners during the consultation process and a literature review which has shown that partners major strategic aspiration – perhaps rather unsurprisingly – is **to create a more prosperous, skilled, connected and resilient region.** For example, here are just a few comments from the consultation process about people's aspirations for the economy;

- ***"To perform at a much higher level internationally, punching above its weight on trade and export indicators – provision of specialised assistance to 'scale up' companies could be helpful here. An economy that is built on high value productivity (manufacturing), providing support to 'companies and moving some part away from a consumerism and credit economy to avoid the 'see saw' fluctuations of the last ten years. An economy that recognises supports already well established bespoke, high end manufacture above mass produced, lower value goods"*** - Thanet District Council

[1] See https://en.wikipedia.org/wiki/NUTS_statistical_regions_of_the_United_Kingdom

- ***"A focus on strategic investment in areas and sectors of potential – particularly in the infrastructure that will enable them to connect to markets, stimulate innovation and create new jobs – will turn around those areas where isolation, low jobs density and poor access to markets are disincentives for private sector investment."*** *– Hastings Borough Council*
- ***"An economy where businesses can grow and thrive, with an emphasis on the sectors that will deliver real growth in the future, but which does not ignore established sectors"*** - Eastbourne Borough and Lewes District Councils

2.0.2 Whilst this may not come as such a massive surprise to many, there was a sense in much of the feedback that we received from partners that people recognised the current socio-economic conditions were such that many partners felt that actually achieving this goal was likely to be a significant challenge.

2.0.3 Many of the responses to the SEP consultation contained many of the usual references to phrases like **'highly skilled'**; **'well connected'**; and **'open for, and welcoming to, business'** – broadly indicating that partners felt that a focus on the three 'factors of production' of **Skills, Infrastructure and Business** should continue to be a major focus of the next Strategic Economic Plan. For example;

- ***"Our people are key strategic assets – but insufficient focus on education that will equip them with the skills and adaptability to meet the changing demands of a globally competitive economy. Vocational education needs to be far more tailored to the needs of industry than to the funders' requirements. Early vocational education should encourage/facilitate workplace based learning, rather than institutional based learning, involving engagement with employers in the planning and delivery of vocational learning"*** – Hastings Borough Council
- ***"Improved infrastructure and built environment where people and businesses can access the amenities and services they need"*** - Eastbourne Borough and Lewes District Councils
- ***"Support and invest in innovative urban development and smart technologies. Invest in supporting local SMEs to take advantage of technological innovations and creating corporate spin offs. Ensure employment land and quality facilities are available especially grow-on space. Attract world class HE-offer aligned to industrial strengths Invest in infrastructure both transport links and superfast broad band"*** – Basildon Borough Council

2.0.4 However, a considerable number of respondents also referred to the need to be **'more resilient to external threats'.** For example;

- ***"More resilient to external threats (linked to greater diversification & rebalancing). This will be particularly important in a post-Brexit environment"*** - Eastbourne Borough and Lewes District Councils
- ***"An economy whose prosperity is inclusive of the entire population"*** - Hastings Community Network

2.0.5 These kind of priorities and challenges are also highlighted as key priorities in a range of partner strategy documents like 21st Century Kent: A blueprint for the County's future. (January 2010); Kent and Medway's Growth and Infrastructure Framework (Sept 2015, updated 2017); The Economic Plan for Essex (April 2014); Enterprising Essex: Opportunities and Challenges (2017); The Southend on Sea Economic

Development Strategy (2017); Thurrock Economic Development Strategy (2016); Opportunity South Essex Economic Growth Strategy For South Essex (2016); East Sussex's Economic Development Strategy (2012); and East Sussex's Growth Strategy (2014). The table overleaf summarises the core priorities of the different federated areas of SELEP.

2.0.6 On the whole, during the consultation process partners also felt it was important for the new SELEP Strategic Economic Plan to recognise the **spatial differences that exist between distinct parts of the region** whether it be in terms of prosperity (for example, as in East and West Kent) or spatial characteristics (for example, between coastal, urban and rural) and for localities to be empowered to be able to **deliver placemaking initiatives at the local level.**

2.0.7 In a number of our face to face meetings, partners highlighted concerns about some of the future macro-economic 'challenges' that will impact on the UK over the next economic cycle and stressed **the vital need to improve business productivity if we are to maintain and/or increase prosperity and retain a strong public-sector investment model.**

2.0.8 A number of organisations we spoke to also articulated a desire to want to see **various national bodies adopt a slightly different approach to trying to deliver local growth** (for example, the Higher Education sector suggested the targeting of local growth initiatives needed further examination, as they felt the current process actually acted against universities developing a stronger role as an anchor institution). Linked to this discussion, a number of partners also expressed a desire to want to see much **stronger cross sector (public-private-academic-community) collaborations emerge at the local level to drive growth and productivity improvement in key sectors, supply chains and localities** (echoing the comments in Volume 2 of the Essex Horizon Scan[2], which makes the case for *"Using the purchasing power of the major public employers and the university to foster a more stable eco-system of local small business and working with business organisations, networks, and university to heavily support the spread of business skills throughout the county"***.** For example;

- ***"SE LEP partners need to continue to look at further models of integration of services, activities, devolution of powers and responsibilities from central government across many funded programmes to enable more local flexibility to focus the resources on the priority requirements of the areas"*** – East Sussex County Council.
- ***"Regular communication with businesses at the local level - share information with them, keep them informed, consult them beyond the strategic board approach – tie them into the economy by making them feel valued"*** - Thanet District Council
- ***"The SEP must state the high-level ambitions which unite the federated areas"*** - Thames Gateway Kent Partnership

[2] Essex Horizon Scan: Volume 2, Framing an Essex Response, August 2016

High-level strategic priorities of most recent economic strategies

Partner	Vision	Objectives/Priorities
Kent and Medway like 21st Century Kent: A blueprint for the County's future.; Kent and Medway's Growth and Infrastructure Framework	21st Century Kent will help to unlock the massive potential of the county's economy, environment and people	Priorities 1. We will open discussions with Government on the shortfall in capital funding growth and work collaboratively to find 'new innovative ways' of closing the funding gap. 2. We will work with Medway Council and the Kent district authorities to explore the feasibility of producing a single Infrastructure Delivery Plan for Kent and Medway reflecting the robust partnership working with the district authorities and Medway. 3. We will open a conversation with South East Strategic Leaders and the County Councils in the South East on strategic issues and priorities, in particular transport, including linkages to London and radial routes to better connect the wider South East. 4. We will engage Government, using existing networks such as the County Councils Network where appropriate, to explore means of refining the current CIL and developer contribution mechanisms to better take account of varying viability in different areas of the country, to maximise the potential of CIL . 5. We will open discussions with the private sector including the development, pension and insurance sectors, and other investment sectors to explore the feasibility of establishing an 'Institutional Investment' pot for infrastructure. 6. We will collaborate with the utilities sector to seek improved medium to long term planning aligned to the County's growth plans. 7. We will use the One Public Estate pilot commencing across Kent to seek to ensure we are maximising opportunities to lever in investment opportunities to fund and support growth. 8. The GIF will be regularly refreshed to reflect the ongoing development of the Kent and Medway Local Plans and to enable refinement of many of the areas of evidence within the framework including costs and future funding assumptions. 9. We will monitor annually on a district-by-district basis: ○ Progress of Local Plans; ○ Delivery of housing and employment space; ○ Receipts from developer contributions and CIL ; ○ Public and private sector investment in the county including into the health and social care sectors, and; ○ Utility company capital investment. 10. We will also consider how we can build on and refine current activity in the county aimed at ensuring high quality design, including working with Kent Planning Officers Group and Design South East and updating the Kent Design Guide where required
Essex Economic Plan for Essex and ENTERPRISING ESSEX: OPPORTUNITIES AND CHALLENGES	We want to secure sustainable economic growth for businesses and communities across Essex.	The key challenges include: 1. Raising skills and qualifications. 2. Developing opportunity sectors and technologies. (advanced manufacturing, low carbon and renewables, life sciences and healthcare, digital and creative, financial and business services, logistics, automotive, engineering and advanced manufacturing. 3. Improving transport Infrastructure. 4. Expanding availability of suitable workspace and commercial premises. 5. Supporting coastal districts.
Opportunity South Essex Economic Growth Strategy For South Essex	To have one of the fastest growing, and most sustainable economies in the UK which provides opportunities for businesses, is attractive to inward investors and benefits local communities.	• Priority 1: Driving Growth – Securing resources for priority projects and supporting business growth with a strong integrated offer • Priority 2: Outstanding connectivity – Improving connectivity locally, nationally and internationally • Priority 3: Quality of Place - Creating places and spaces that improve lives and secure investment • Priority 4: Skills for Growth – Developing, attracting and retaining talent • Priority 5: Housing – Stimulating and reshaping our housing market
Southend on Sea (ECONOMIC GROWTH STRATEGY 201717-22)	By 2022, the Southend economy will have addressed all areas of economic underperformance to emerge as the leading economy in South Essex. The benefits of our efforts will be reaped	1. Whole Council impact on growth; 2. Sectoral Focus • Growth Sectors: Creative and Cultural Industries, Health and Social Care, Specialist Construction, & Specialist Manufacturing. • Strategic Sectors: Aviation & Engineering, Financial Services, Medical Technologies, Retail & Tourism.

	by businesses and residents as they thrive in the new economy. Key characteristics of this success will include: - Job growth in key sectors and strengthened local supply chains - Increased average income and productivity - Improvement in educational attainment - High business start-up and survival rates - A resilient and diverse economy	3. Priority Ares; • Business and Strategic Partnerships • Business Support and Accommodation • Inward Investment • Workforce Development • Key Infrastructure Improvements • Create Successful Places • Support Key Growth Sectors 4. Resilience.
Thurrock Thurrock Economic Growth Strategy	To provide a basis for securing investment and economic diversification, including the identification of new and exciting opportunities for Thurrock. This also fits with the community priorities of the council , in particular to "encourage and promote job creation and economic prosperity".	An essential focus is the need to diversifying the business base and increase the number of high skilled, high wage jobs in Thurrock. Reducing the existing pockets of deprivation work must also be achieved to support the wider place-making agenda through the delivery of new homes, new businesses and improve perception. 1. Create a great place for learning and opportunity • Ensure that every place of learning is rated "Good" or better • Raise levels of aspirations and attainment so that local residents can take advantage • of job opportunities in the local area • Support families to give children the best possible start in life 2. Encourage and promote job creation and economic prosperity • Provide the infrastructure to promote and sustain growth and prosperity • Support local businesses and develop the skilled workforce they will require • Work with communities to regenerate Thurrock's physical environment 3. Build pride, responsibility and respect to create safer communities • Create safer welcoming communities who value diversity and respect cultural heritage • Involve communities in shaping where they live and their quality of life • Reduce crime, anti-social behaviour and safeguard the vulnerable 4. Improve health and well-being • Ensure people stay healthy longer, adding years to life and life to years • Reduce inequalities in health and well-being • Empower communities to take responsibility for their own health and well-being 5. Protect and promote our clean and green environment • Enhance access to Thurrock's river frontage, cultural assets and leisure opportunities • Promote Thurrock's natural environment and biodiversity • Ensure Thurrock's streets and parks and open spaces are clean and well maintained
East Sussex East Sussex Growth Strategy 2014 - 2020	A more innovative, productive and faster growing East Sussex economy. We believe the county has a unique offer to make to investors, businesses and skilled workers; one that blends inspiring coastline and countryside and a business base of likeminded companies in growing sectors of the economy.	1. BUSINESS: Enabling business growth, particularly of 'high value' businesses 2. PLACE: A significantly valued asset to the East Sussex economy 3. PEOPLE: Meeting the skills needs of business and supporting residents to reach their full potential

2.0.9 As far as SELEPs perception was concerned, numerous respondents suggested they felt it was important to;

- **Dispel the myth of SELEP being a highly prosperous area** – i.e. to emphasise that 'we have prosperity, with challenges'. This is an approach which is consistent with the strategies cited previously; and
- **Strengthen the narrative around investing in the South for the benefit of London, the North and Midlands.** This is also an approach which is consistent with the business case for investing in the Lower Thames Crossing, the Freight Action Plan for Kent, the Essex Local Transport Plan (Freight Policy) and the Kent Transport Plan. It is an approach which is also widely supported by the private sector transport and logistics sector (including the ports).

2.0.10 Through the consultation process, at a more operational level, respondents have generally stressed the need to prioritise;

- **Skills: Investing in young people's career aspirations; and re-training and re-skilling adults;**
- **Broadband: Delivering 100% broadband and mobile coverage;**
- **Transport: Investing in better road and rail links with future use in mind (growth corridors);**
- **Innovation: Science, Research and Innovation hubs, clusters and centres of sector excellence** – in creative industries, construction, social and medical care, manufacturing and engineering and digital;
- **Commercial Property: More employment and grow-on space for businesses to land, grow and work together;**
- **Housebuilding: Building homes faster, utilising innovative building techniques** and linking housing growth areas to job creation opportunities;
- **Spatial: Investing in coastal and rural economies;**
- **Energy: Investing in energy solutions to improve the efficiency, resilience and use of resources;** and
- **Improving business support and cross sector working** (public-private-academic-community) to support business productivity improvements;

2.0.11 In some cases, partners also felt that – given the wider socio-economic challenges that currently exists (which we will set out in the next section of this evidence base) – there was a need for the partnership to discuss how it was going to work together more effectively to address some of the big looming challenges that presently exist.

> **"The SEP must show HOW we are going to GROW the economy and not just be focussed on housing. Housing isn't the complete answer to growth"** - Thames Gateway Kent Partnership

2.0.12 Given the importance of all this feedback, we will use this structure as the core framework of our data analysis for this evidence base. However, before deep-diving into the characteristics of the SELEP economy, we felt it would be worthwhile clarifying why delivering improvements in business productivity is so vitally important for UK Plc. and SELEP; analysing the current challenges that make delivering this goal somewhat challenging; to provide a rationale for thinking very carefully about how to structure future interventions, to deliver the best returns.

3.0 Why addressing productivity is more important than ever before

3.0.1 We are currently living in a period of considerable economic uncertainty. In the UK, the two major determinants of a growing economy - productivity growth and working age population growth – are both currently following a fairly flat-line trajectory.

3.0.2 Between the late seventies until relatively recently the impact of the post-war baby-boom and subsequent falling birth rates largely combined with productivity improvements to create an economic 'sweet spot' which resulted in a rising share of the population being of working age and a large part of that population benefitting from year on year increases in prosperity.

3.0.3 However, many of these baby-boomers are now reaching retirement age and living longer, meaning a reduced working age population and more people potentially 'taking out' of the system than 'paying in'.

3.0.4 In addition, slowing population growth and weaker expected productivity growth rates have led the Bank of England to recently revise their estimates of the UK growth rate downwards, from to 1.7% in 2017, 1.6% in 2018 and 1.8% in 2019 (down from the 1.9%, 1.7% and 1.8% outlined in their May Report).

3.0.5 Because of this situation – when combined with other wider uncertainties - forecasting the precise nature of the growth trajectory of the UK economy at this particular point in time is probably more challenging than it has ever been before (for example, a recent study by Opera into the potential impact of Brexit on the UK's screen sector[3] found that under 5 different UK-EU trading scenarios the best-case scenario was that the sector was likely to grow by 5,000 employees or – worst-case - shrink by 14,100 employees).

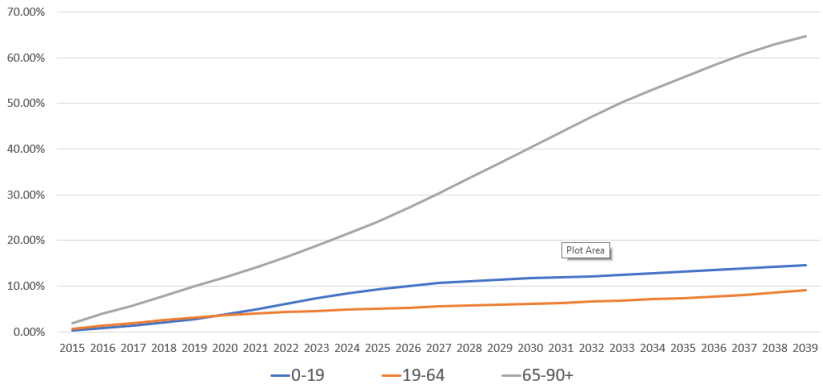

Fig.1: SELEP % Real Term Growth in Population (2014 based)- ONS

3.0.6 Faced with these challenges, the one thing many commentators universally agree on is that we can ill afford a slump in productivity, a deeper downturn or the increased social security costs that might come with that. They also generally agree that if productivity remains low then difficult choices lie ahead – with many suggesting we will need a substantially smaller state with less generous social security, or higher tax revenues as a share of the economy. One answer to this conundrum would be increase public investment, but many argue this alone won't fundamentally solve the underlying productivity problem. In reality, tackling the UKs low productivity levels and boosting corporate investment looks like a much more desirable goal - albeit somewhat harder to deliver in such uncertain times.

[3] Impacts of leaving the EU on the UK's screen sector, prepared for The Screen Sector Task Force 6 January 2017, www.oxera.com

3.0.7 According to the OECD, the UKs current situation is particularly unique because;

- There has been a noticeable decoupling between productivity and average wages in the UK, which has seriously impacted on material living standards in recent years; and
- There is currently a wide spatial divergence in the levels of productivity between the different sub-regions of the UK (hence the current emphasis on rebalancing);

3.0.8 Because the contribution of labour utilisation (hours worked per head of population) to GDP growth has risen markedly in the UK in recent years, the OECD argues that this reflects two opposing effects: higher employment rates but lower average hours per worker - pointing to more part-time working, often in low productivity jobs. Whilst higher employment rates are welcome, the fact that they - rather than increases in labour productivity - have been the key driver of growth in GDP per head of population in recent times is a concern for the UK's long-term economic prospects.

3.0.9 Indeed, "working smarter" rather than "working harder" (or improving 'multifactor productivity', as measured by GDP per hour worked) should be a key objective for developed economies going forwards, as this reflects firms' ability to produce more output by better combining inputs through new innovation and technology, as well as by way of process and organisational innovations, such as new business models.

3.0.10 However, the OECD also observe that in the pre-crisis period, labour productivity continued to slow in many economies as a consequence of weaker investment in machinery and equipment, which slowed further across all G7 economies in the post-crisis period. Although spending by businesses on intellectual property products - particularly research and development - has been more resilient, this too has slowed from pre-crisis rates.

3.0.11 Whilst there is a broad consensus across a range of authors about what the issue is, there is slightly less consensus about what has driven the fall in productivity and therefore even less consensus about how to solve it. The productivity slowdown is broad based and happening across most sectors of the economy. There is some evidence to suggest the UKs situation is partly structural, with falls in the productivity of the Oil and Gas and Financial Services sector since the heady years of the 80's and 90's being partially to blame[4]. Lower levels of corporate and public investment than in the past almost certainly explains some of the shortfall. It has also been argued that low wages are allowing low-skill, low-productivity business models to expand and dis-incentivising corporate spending on capital machinery. A number of economists have identified that many UK businesses are delaying capital investment plans ('capital life lengthening') and hanging onto staff, rather than investing in new kit[5] – something that is doubtless exacerbated by political uncertainty.

4 The UK productivity puzzle – a sectoral perspective, Ian McCafferty, June 2014
5 Accounting for the UK Productivity Puzzle: A Decomposition and Predictions, Peter Goodridge, Jonathan Haskel, Gavin Wallis November 2015

4.0 Other structural issues that could further impact on our future productivity

4.0.1 In addition to having to deal with the basic structural challenges of low productivity and low working age population growth, a number of reports, have also identified a range of secondary factors that could also have a further detrimental impact on our economic performance, unless we plan and prepare for them.

4.0.2 A number of these factors are also identified in a few key partner forecasting reports, like, for example, the Essex Horizon Scan: final report – RSA: Volume One: Top 20 trends affecting Essex (August 2016).

4.0.3 We only raise them here because we believe these risks can be planned for and mitigated against and because they illustrate the need for the adoption of quite innovative solutions to traditional problems.

Deepening Consumer Debt

4.0.4 According to data from UK Finance[6], a financial trade body, consumer debt in the UK has grown by almost 10% in the past year. Unsecured consumer credit topped £200bn in June, prompting the Bank of England to warn about the potential threat of growing debt to the economy. Unsecured consumer credit is made up of personal loans, overdrafts, credit cards and car loans.

4.0.5 The average consumer debt per person in the UK stood at £603, while the average household debt was £1,441 at the end of 2016 and the most indebted place per capita is Northampton at £749. As far as the SELEP region is concerned;

- In the Dartford postcode area, the per capita value of consumer credit at the end of 2016 was £708;
- In the Colchester postcode area, the per capita value of consumer credit at the end of 2016 was £604;
- In the Chelmsford postcode area, the per capita value of consumer credit at the end of 2016 was £695;
- In the Tonbridge postcode area, the per capita value of consumer credit at the end of 2016 was £672;
- In the Rochester postcode area, the per capita value of consumer credit at the end of 2016 was £697;
- In the Canterbury postcode area, the per capita value of consumer credit at the end of 2016 was £576;
- In the Romford postcode area, the per capita value of consumer credit at the end of 2016 was £688;
- In the Southend-on-Sea postcode area, the per capita value of consumer credit at the end of 2016 was £595.

The Shrinking Supply of Tech Talent

4.0.6 Demand for people with STEM skills is increasing across the Globe. Many STEM workers are approaching retirement age. Some forecasts suggest around 7million technical job openings will emerge between 2016 and 2025[7]. Whilst demand for technical people continues to increase, the number of people choosing to pursue technical careers continues to fall.

4.0.7 Whilst demand for tech professionals continues to increase exponentially, the number of people choosing to pursue tech careers continues to diminish. Whilst the share of STEM University graduates has increased in 15 Member States and at European level since the mid-2000s, the number of STEM Technicians has

6 UK lending by postcode sector – Q1 2017, UK Finance, October 2017

[7] Encouraging STEM: Comparison of Practices Targeted at Young People in Different Member States, DG for Internal Policies, March 2015

decreased over the same period. Skills shortages are particularly acute in technological occupations (Engineering and ITC) and for professionals.

4.0.8 Because of these issues, the unemployment rate for STEM skilled labour across Europe has been very low and well below the total unemployment rate since the beginning of the 2000s, even in countries hit particularly badly by the crisis (such as Greece, Portugal and Spain).

Global population shifts

4.0.9 These developments are playing out in the context of an increasingly global tech-talent marketplace, which is characterized by an increasingly mobile population of skilled workers and young people.

4.0.10 Data coming from Indeed shows that Computer and Mathematical web based job postings are between two and three times more likely to be clicked by international jobseekers than the average job in the US and UK. As they recognise, *"Europe faces fierce competition from US tech hubs: San Francisco, San Jose and other US tech hubs such as Seattle, WA and Austin, TX have international pull".*

4.0.11 According to Indeed salary data, the typical Java developer is paid 47% more on average in the US than in the UK, a fact they attribute to 'thicker' tech labour markets, the higher density of tech firms, higher levels of competition for talent and better job-to-person matches. To a lesser extent, Europe also faces competition from emerging tech hubs in Asia and the Pacific region which are becoming more aggressive in trying to attract top tech talent.

4.0.12 According to Indeed research, *"Jobseekers who search for tech jobs in Europe are attracted to a few centres of tech employment, and that interest is becoming more concentrated over time. In 2013, interest in those centres was 1.9 times greater than interest for other cities in the countries considered. By 2015, it was 2.2 times greater"*.

4.0.13 Indeed also analysed employer demand and jobseeker interest for tech jobs in the main centres of tech employment in each country. Munich and Berlin were found to have the highest level of tech jobs concentration, followed by London and Dublin. However, London and Dublin have higher levels of jobseeker interest for tech roles

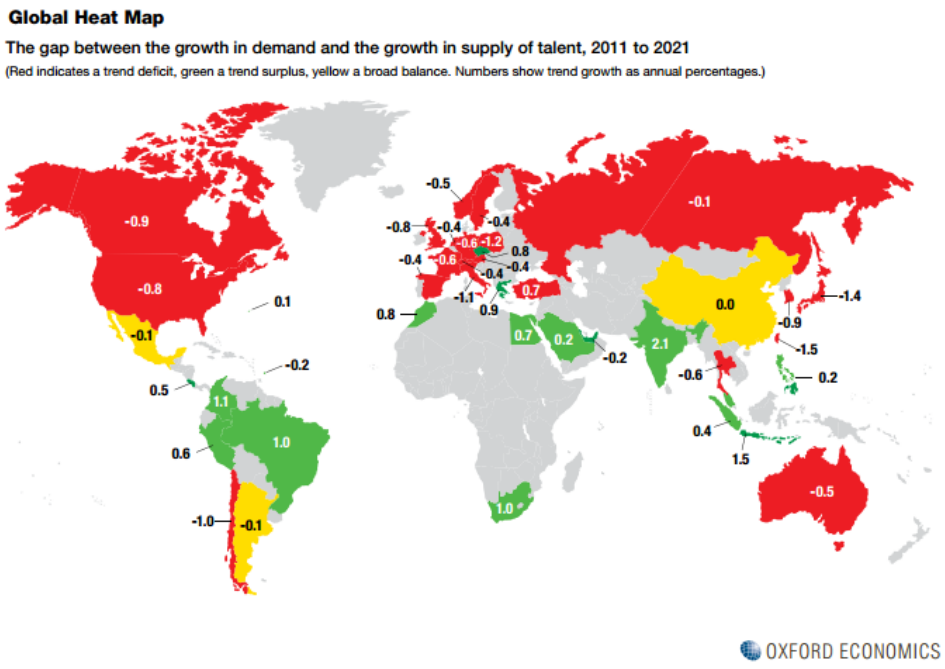

Fig.2: Global heat map showing talent surpluses and deficits

compared to the two German cities - something that Indeed attribute to the fact that Munich and Berlin do not enjoy the "competitive advantage" in attracting foreign jobseekers interested in high-skill tech roles that the UK, Ireland and the Netherlands enjoy.

4.0.14 Looking further forward, Oxford Economics has found that the situation is forecast to worsen for many cities across Europe, with many suffering from a talent deficit by 2021, meaning they will increasingly need to recruit from countries such as India, Indonesia, Colombia, South Africa and Brazil – all of whom were likely to be experiencing a talent surplus.

4.0.15 This same study also forecasts that the most dramatic jump in future demand for workers will be in emerging Asia, where the need for new employees will rise by 22%; closely followed by Latin America (13%); the Middle East/Africa (13%); and Eastern Europe (10%). By contrast, demand for talent in North America, is forecast to rise by 6.1% over the next 10 years and Western Europe is only projected to grow by a much more modest 3.5%.

4.0.16 The greatest mismatches between supply and demand for talent in Europe in 2021 are likely to be found in various countries (including Spain, Switzerland, Austria, Netherlands, Sweden, Norway, Germany, France, the UK, Greece, Italy and Poland).

The changing nature of work & the potential impact of automation

4.0.17 Many researchers have recognised the changing nature of work, with an increasing number of people working part time, being self-employed freelancers or working on zero-hour contracts.

4.0.18 Many recognise that this poses significant challenges for some people in more elementary professions, with many people trapped in low-paid part time work[8]. Similarly, at the other end of the labour market, this situation has given rise to more 'digital nomads' and freelancers, many of whom are looking for stimulating places in which to live with strong creative milieu's.

4.0.19 This In addition, the trend towards lifestyle migration (where more and more people are making location decisions based on lifestyle preferences and flexible working arrangements) is also driving the attractiveness of different places amongst the 'creative class'.

4.0.20 Those places that are successful at developing, attracting and retaining the best creative technical talent will be more successful in developing, stimulating and attracting high-value firms than those that don't. If cities genuinely aspire to attract the high value tech businesses of the future, they need to think very carefully about what kind of places these young creative-tech people want to live in and make sure they develop their localities accordingly.

4.0.21 The employment patterns described above are combining to lead to some authors to predict that by 2050 the word 'employment', its processes and the very concept will have disappeared. In its place will emerge a new concept, characterised by the rise of a new type of entrepreneur – the 'micro-multinational'. For these authors, in the economically developed world, the bondage of command-and-control employment is being

[8] See references to 'The Precariat' in the URBACT 'More Jobs' reports http://urbact.eu/sites/default/files/state_of_the_art_job_generation.pdf

replaced by self-employment. People are increasingly controlling themselves. Underpinning this shift is the demand from more young people to control of their own working lives and its being further enabled by technology.

4.0.22 In 'The Rise of the Micro-Multinational: How Freelancers and Technology-Savvy Start-Ups are Driving Growth, Jobs and Innovation'[9], The Lisbon Council describes how dramatically the world of work is changing. According to the authors, all net job growth in the US between 1980 and 2005 came from firms that were less than five years old and in each year between 1997 and 2008, more than 2.5 million people simply created their own job by becoming entrepreneurs (and also created more than one million additional paid employment positions each year).

4.0.23 In other words, 65% of all jobs created in the US during that period were jobs that entrepreneurs created for themselves, making self-employment an increasingly important source of employment. In Europe, the numbers are similar. Some 32.6 million people are classified as self-employed, which accounts for more than 15% of total employment. This data is reinforced by a study conducted by EY[10], which found that the vast majority of Europe's self-employed are freelancers, meaning they work for or in one-person companies.

4.0.24 In parallel with this shift towards more self-employment, many authors are predicting that the increasing uptake of automation and digital technologies will also have a potential significant disruptive effect on a number of key sectors, most notably those that rely on elementary an elementary skills base (i.e. autonomous vehicles, retail banking, fast food restaurants etc.). For example, The World Economic Forum's Future of Jobs[11] study predicts that 5 million jobs will be lost before 2020 as artificial intelligence, robotics, nanotechnology and other technologies replace the need for human workers as the Fourth Industrial Revolution[12] gathers pace. However, the same study also reveals that those same technological advances will also create 2.1 million new jobs, although the skills people will need to thrive in the workplace of the future will be very different.

Potential downside risks from Brexit

4.0.25 As we have already discussed, it's currently a little bit difficult to predict what the precise nature of the UK economy will look like post-Brexit. It's also a rather difficult topic of conversation to get into. That said, during our discussions with local partners, as part of the consultation process, a number of respondents expressed concerns about the impact of potential borders delays on the SELEP economy, arising from potential congestion and the possible need for additional security checks.

4.0.26 The other thing which respondents to our consultation universally agreed on was that they were concerned about the potential impact of a loss of EU Funding, Post Brexit, on a range of local agencies that are needed to support the transition to a more productive economy.

[9] The Lisbon Council (2011) The Rise of the Micro-Multinational: How Freelancers and Technology-Savvy Start-Ups Are Driving Growth, Jobs and Innovation
[10] 'The EY G20 Entrepreneurship Barometer 2013 – the power of three: governments, entrepreneurs and corporations'
[11] http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf
[12] https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/

Growing global competition from emerging markets

4.0.27 According to PWC[13] we are likely to see the growth in a number of emerging economies over the next economic cycle, which is likely to open up potential export opportunities, but also heighten the scale of global competition. According to their analysis, *"The world economy could more than double in size by 2050, far outstripping population growth, due to continued technology-driven productivity improvements. Emerging markets (E7) could grow around twice as fast as advanced economies (G7) on average. As a result, six of the seven largest economies in the world are projected to be emerging economies in 2050 led by China (1st), India (2nd) and Indonesia (4th). The US could be down to third place in the global GDP rankings while the EU27's share of world GDP could fall below 10% by 2050 and the UK could be down to 10th place by 2050, France out of the top 10 and Italy out of the top 20 as they are overtaken by faster growing emerging economies like Mexico, Turkey and Vietnam respectively"*

5.0 The UK Government's strategy for tackling these issues and our low productivity

5.0.1 In response to these issues, this government has developed a framework for developing an industrial strategy to try and stimulate the productivity of the UK economy which is built around ten thematic pillars;

- **Cultivating world-leading sectors:** build on our areas of competitive advantage, and help new sectors to flourish, in many cases challenging existing institutions and incumbents.
- **Investing in science, research and innovation:** become a more innovative economy and do more to commercialise our world leading science base to drive growth across the UK;
- **Developing skills:** helping people and businesses to thrive by ensuring everyone has the basic skills needed in a modern economy; building a new system of technical education to benefit the half of young people who do not go to university; boosting STEM (science, technology, engineering and maths) skills, digital skills & numeracy, and raising skill levels in lagging areas;
- **Upgrading infrastructure:** upgrading our standards of performance on digital, energy, transport, water and flood defence infrastructure, and better align central government infrastructure investment with local growth priorities;
- **Supporting businesses to start and grow:** ensuring that businesses across the UK can access the finance and management skills they need to grow; and we must create the right conditions for companies to invest for the long-term;
- **Improving procurement:** using strategic government procurement to drive innovation and enable the development of UK supply chains;
- **Encouraging trade and inward investment policy:** increasing competition and helping to bring innovative ways of doing things to the UK;
- **Delivering affordable energy and clean growth:** keeping costs down for businesses, and securing the economic benefits of the transition to a low-carbon economy;

[13] The Long View. How will the global economic order change by 2050? PWC, February 2017

- **Driving growth across the whole country:** creating a framework to build on the particular strengths of different localities and address factors that hold places back – whether it is investing in key infrastructure projects to encourage growth, increasing skill levels, or backing local innovation strengths;
- **Creating the right institutions to bring together sectors and places:** considering the best structures to support people, industries and places.

6.0 The characteristics of the SELEP economy

6.0.1 Given the above situation, in order to develop strategies to advance and invest in the SELEP Economy - and its distinctive components - we need to better understand what the starting point is of the different localities is; where partners want their localities to go; what the strategic assets are that can be further built upon; which investments are going to generate the greatest returns, whilst also being compliant with the prevailing regulatory framework etc.

6.0.2 In this section of the evidence base, we try and identify the current performance of the different geographies of the SELEP Economy; examine national and international comparisons; and set out some of the potential measures SELEP might use to understand its starting point; set its future goals; and monitor the performance of the economy, going forward.

6.0.3 In line with the governments approach, we will try and examine the performance and structure of the SELEP economy in relation to the general economic performance and the ten pillars of the Industrial Strategy Framework, as set out above. We will also bring in some additional considerations, which are more spatial or thematic in nature, like the Rural and Coastal Economies, Commercial Floorspace etc.

The largest LEP outside London … which is growing at a rate above the national average

6.0.4 The SELEP area is large, encompassing Essex, Southend, Thurrock, Kent, Medway and East Sussex. With over 4.2 million residents, the SELEP area currently accounts for 6.5% of England's total population, and is the second most populous LEP area in England[14].

6.0.5 Over 270,000 people work in London and live in the SELEP area - some 10.7% of our working age residents - and the proportion is much higher in those SELEP districts closest to London.

6.0.6 According to ONS statistics, this population is set to rise to 4.7 million by 2030 (11%) and 5 million by 2039 (18%), a figure which is forecast to represent 7.8% of England's total population by then.

6.0.7 As far as the age structure of the SELEP economy is concerned, the population is currently more aged than the South East of England and becoming increasingly more aged. By 2039, it is forecast that the resident population over the age of 65 will have increased by 80%, whilst those over the age of 15 are forecast to have grown by 9% and those under the age of 15 by 15%.

[14] ONS (2016) Subnational Population Projections for Local Authorities in England

Total population of SELEP (2016)			
	South East LEP	Great Britain	% of Great Britain
All People	4,170,400	63,785,900	6.54
Males	2,041,900	31,462,500	6.49
Females	2,128,500	32,323,500	6.58

Population aged 16-64 (2016)			
	South East LEP	South East LEP (%)	Great Britain (%)
All People Aged 16-64	2,538,900	60.9	63.1
Males Aged 16-64	1,256,100	61.5	63.8
Females Aged 16-64	1,282,800	60.3	62.4
Source: ONS Population estimates - local authority based by five-year age band			
Notes: % is a proportion of total population			

Fig.3 Population of SELEP

6.0.8 As far as the individual geographies of the SELEP area are concerned, the breakdowns are illustrated below. Whilst the population figures vary quite considerably, the proportion of working age residents is broadly consistent, with East Sussex generally having a slightly more aged population that the rest of the region.

Total population (2016)						
	Kent	Medway	Essex	Southend on Sea	Thurrock	East Sussex
All People	1,541,900	278,500	1,455,300	179,800	167,000	547,800
Males	756,600	138,300	711,700	88,000	82,400	265,000
Females	785,300	140,300	743,700	91,800	84,700	282,800

Population aged 16-64 (2016)						
	Kent	Medway	Essex	Southend on Sea	Thurrock	East Sussex
All People Aged 16-64	940,300	178,600	887,500	110,700	106,000	315,800
Males Aged 16-64	465,700	89,600	438,500	55,100	52,500	155,000
Females Aged 16-64	474,600	89,100	449,200	55,500	53,500	160,900

Population aged 16-64 (2016)						
	Kent	Medway	Essex	Southend on Sea	Thurrock	East Sussex
All People Aged 16-64	61.0	64.1	61.0	61.6	63.5	57.6
Males Aged 16-64	61.6	64.8	61.6	62.6	63.7	58.5
Females Aged 16-64	60.4	63.5	60.4	60.5	63.2	56.9
Source: ONS Population estimates - local authority based by five-year age band						
Notes: % is a proportion of total population						

Fig.4 Population of SELEP's federated areas

A major contributor to the UK economy, with pockets of deprivation and so much more to give

6.0.9 As far as the overall size of the economy is concerned, the SELEP economy was worth £92bn in 2015 (6% of England's total output).

6.0.10 According to PWC, the UK economy will be worth £2173 million in 2030 and £3208 million in 2050, up from £1666 in 2016[15]. Assuming the SELEP economy grows at the same rate as the overall UK rate, it's reasonable to assume the SELEP economy would be worth £130m in 2030 and £192m in 2050.

Fig. 5: Net fiscal balance FYE 2016, Office of National Statistics

6.0.11 As part of the Greater South East of England, the SELEP region is part of the only genuine 'Engine Room' of the UK economy, with London, the South East & East of England being the only net contributors to HM Treasury in 2016, whilst all other countries and regions of the UK took more money out than they paid in.

6.0.12 In 2016, the South East of England had the lowest public-sector expenditure of any region in the UK, at £10,582, followed by the East of England at £10,591. From this, the Treasury generated £12,249 in the South East of England and £10,833 in the East of England.

6.0.13 London had the highest net fiscal surplus per person at £3,070 and raised the most revenue per person, in FYE 2016, at £15,750.

6.0.14 However, too many government policies assume that prosperity

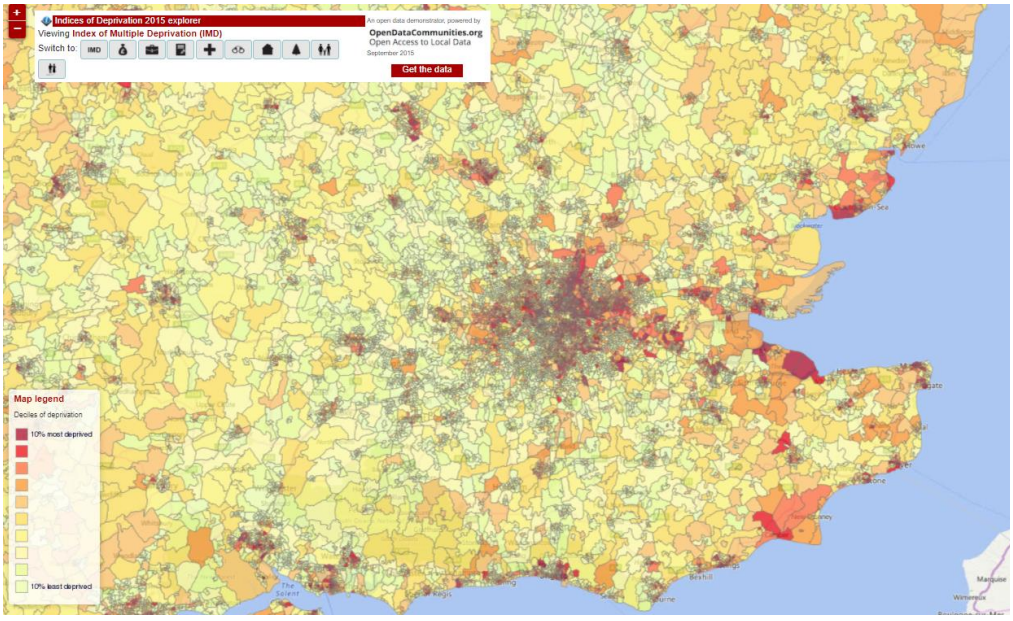

Fig.6: Indices of Multiple Deprivation across the Greater South East, showing pockets of significant deprivation.

[15] The Long View. How will the global economic order change by 2050? PWC, February 2017

and economic benefit is spread equally and uniformly across the South East. It is not. There are disparities in wealth and productivity within the South East that are greater than the disparities between the South East as a whole and the North East and the Midlands.

6.0.15 According to the Department for Communities and Local Government's (DCLG) published Indices of Multiple Deprivation for England[16], last published in 2015, certain parts of the districts of Tendring and Thanet are ranked as **the most** and **the fourth most deprived parts of the country**, respectively. Parts of South Essex and North Kent do not enjoy the economic prosperity and benefit of other parts of the South East of England.

6.0.16 Whilst the issue is particularly acute in the Thames Gateway, the coastal nature of the SELEP region means other pockets of deprivation can be found across the whole area.

6.0.17 A recent report by The Social Market Foundation has identified that the UK's coastal communities are among the country's worst off for earnings, employment, health and education. For example, of the 98 local authorities on the coast, 85% had pay levels below the UK's average in 2016. Castle Point in Essex is one of two authority areas in the country with the smallest proportion of over-16s holding level four and above qualifications. The report found the economic gap between coastal and non-coastal areas has widened from 23% to 26% from 1997 to 2015.

> **"In some areas - particularly in the South East of England - pockets of significant deprivation are surrounded by affluence - meaning their problems are often overlooked by policymakers"**
>
> – Living on the edge: Britain's coastal communities, SMF, Aug 2017

6.0.18 Rather than simply comparing the economic performance of London and the South East of England to other parts of the UK, one way of assessing how much more the SELEP economy could actually contribute to the UK economy would be to compare the GVA per head of the G7 economies, the best performing EU countries, the best performing Local Authorities and LEP's in the UK with the different geographies of the SELEP area.

6.0.19 This task has identified that, in 2015, Dartford was the best performing part of the SELEP area at £29,495 per head of population, closely followed by Brentwood, at £29,451. However, every part of the SELEP economy lags behind the best performing EU country, Luxembourg (at £63,702 per head), the best performing UK Local Authority, West Berkshire (at £45,736 per head); London (at £43,629 per head); and the best performing LEP, Thames Valley Berkshire (at £40,248 per head).

6.0.20 As far as the performance of various parts of the SELEP area are concerned, a number of the coastal areas of the region are clustered together at the lower end of performance, with Hastings (£17,763), Southend on Sea (£17,524) and Medway (£17,338) all having performance that is comparable with the Black Country

[16] https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015

LEP area (£17,339) and Rochford (£16,718), Dover (£15,715), Tendring (£15,308), Gravesham (£15,082), Thanet (£15,021) and Castle Point (£14,523) performing considerably worse than this.

6.0.21 What is also noticeable is how similar the productivity spread is between Essex (Castle Point @ £14,523 – Brentwood @ £29,451) and Kent (Thanet @ £15,021 – Dartford @ £29,495), although East Sussex has slightly less disparity between the worst and the best performing districts (Hastings @ £17,763 – Lewes @ £19,361).

6.0.22 As far as generating additional contributions to UK Plc are concerned, if every part of the SELEP economy performed as well as the best performing part of the region (Dartford), the SELEP economy could contribute a further £36bn to the national economy. Similarly, if every part of the region performed as well as London, the SELEP economy would contribute a further £94bn and if every part performed as well as the best performing part of the South East (West Berkshire) it would contribute a further £588bn.

6.0.23 Collectively, this data illustrates how inappropriate it is to compare the performance of the SELEP economy to the best performing parts of London and the South East and how much more the SELEP economy could contribute to the UK economy, given the appropriate support.

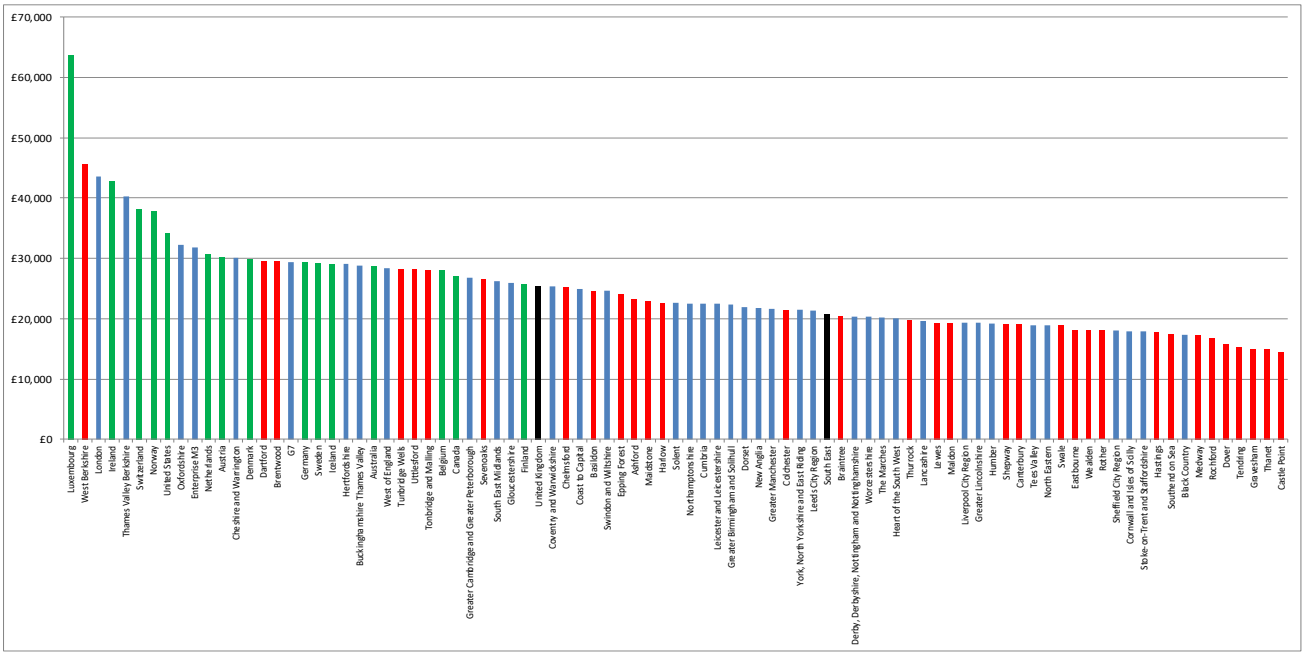

Fig.7: GVA per hour worked of the G7 economies compared to the best performing LEPs and Local Authorities and the various parts of SELEP.

Conclusions and key questions about delivering improvements in GVA per hour worked

6.0.24 Nearly all SELEP's partner strategies recognise the need to address the issue of multifactor productivity – or GVA per hour worked - if the area is to achieve growth in the next economic cycle. For example;

- *"Long term forecasts for Greater Essex are produced by Cambridge Econometrics in its East of England Forecasting Model (EEFM). As matters stand the predicted growth rate for Greater Essex at around 2.0% a year over the next 20 years is closely aligned with that of 1.9% for the UK (Table 2). So, the county will*

need to address the broad range of factors influencing competitiveness, as set out in this report, in order to raise its long-term growth trajectory" - Enterprising Essex: Opportunities and Challenges.

- *"In light of the reduction in the value of the finance sector, it is important to continue to attract high wage workers from London to live in Southend to maintain and increase the productivity of employees in the borough in order to increase the GVA level. Similarly, it is also imperative to attract and grow new businesses locally in both high growth and high wage sectors. This activity will focus on those industries that are recognised as having above average productivity levels, including: creative and cultural industries, knowledge intensive business services, and medical technologies" - Southend-on-Sea Economic Growth Strategy*.
- *"Productivity is a key driver of economic competitiveness; more productive economies generate higher output for a given population. While East Sussex has many highly productive, well-paid workers, GVA per hour worked is on average 17.5% below the regional level. This partly reflects the high concentration of employment in sectors that are generally lower paid, such as hospitality, leisure and social care. By contrast, East Sussex has relatively fewer jobs in finance, insurance, business services, and professional, scientific and technical sectors, which tend to generate higher income per head"* - East Sussex Growth Strategy

6.0.25 In addition, many of the above statements also recognise the need for 'an industrial renaissance', or a drive to secure higher-value-added business activity if growth goals are to be achieved. However, only one or two strategies make explicit reference to **how** this goal – of delivering a step change in economic performance of business - might be achieved.

6.0.26 Ultimately, as LEPs move into the next stage of developing LEP Strategic Economic Plans and Local Industrial Strategies, they will need to think very carefully about what key interventions are that they can deliver to drive this change in our 'industrial' structure.

6.0.27 Whilst some regions may opt to adopt fairly traditional inward investment or high growth start up interventions, it's unlikely that – in isolation – these interventions will deliver sufficient a step change. What is clear though is that government is looking for this next stage of LEPs to be focussed on more integrated capital and revenue interventions.

6.0.28 In this context, being clear about how LEP partners will deliver productivity improvements is becoming increasingly important, as it provides the government with confidence that the partnership recognises the scale of the challenge, that they have something different to offer; that they can deliver; and that government should invest in the area.

6.0.29 Some LEPs are focussing on much more cross sectoral, integrated investment models, which try and draw the private sector into helping to deliver public service missions, trying to use these new-found projects to deliver more innovative public services and improve the productivity of the private sector. One such example is the i-construction project, in the Haven Gateway, which is trying to develop greater supply side

capacity in the local SME construction sector, by drawing them in to work with Universities to help deliver the North Essex Garden Community Programme.

6.0.30 Another strategy that recognises the potential opportunities that stem from forming closer collaborations between the public, private, academic and community sectors to overcome societal challenges and explore new business opportunities/processes for doing things differently is the Essex Horizon Scan, which puts forward a number of collaborative policy interventions, to try and address the productivity challenge in business and diminishing public sector funding. For example, this strategy recommends;

- The development of a bespoke offer for home workers and freelancers to build capacity and exploit economic the benefits they offer;
- Using the purchasing power of the major public employers and the university to foster a more stable eco-system of local small business. Work with business organisations, networks, and university to heavily support the spread of business skills throughout the county;
- Developing and fund new models of housing investment and design such as community land trusts, shared living and working;
- Investing in smart transport solutions – using big data analytics to develop cross-modal systems that are flexible and reactive to system conditions;
- Developing smart energy infrastructure – micro-generation, renewables plus intelligent systems;
- Develop a county-wide strategy for healthy living that would ensure that all local powers (e.g. planning, licensing and leisure), expenditure, services, housing (including social housing) were assessed for their contribution to a healthier Essex;
- Delivering a total transformation of social care – shifting resources into community, prevention, and patient led services. Invest in training community practitioners and give local, nurse-led teams autonomy to meet patient needs;
- Major strategic investment to secure benefits and efficiencies from internet of things, e.g. in assistive healthcare and public health linked to institutional redesign and voluntary support services.

6.0.31 The key question arising from this analysis is what kind of interventions do partners believe will deliver the step change in business productivity we need to maintain, or even improve, current levels of public sector investment? How comfortable are partners setting some 'higher order' interventions, to tangibly demonstrate to government the significant advantages of locally-led delivery?

7.0 Cultivating world-leading sectors

7.0.1 One of the first priorities under governments emerging Industrial Strategy is to cultivate the UKs world leading sectors. By this, the government has suggested they aspire to build on our areas of competitive advantage, and help new sectors to flourish, in many cases challenging existing institutions and incumbents.

7.0.2 Whilst certain sectors may receive a stronger emphasis when the government publishes the Industrial Strategy White Paper in early December, current indications are that government sees **sector deals** being at the heart of their strategy for cultivating world leading sectors.

7.0.3 The government has suggested sector deals need to have:

- **Strong and identified leadership.** One leader/ champion, supported by a range of players and stakeholders in the sector;
- **Clear Rational as to why the sector required specific intervention**;
- **Clear list of policy proposals which are split between asks of Government and industry proposals.** The proposals should be clearly defined and thought threw proposals are preferable.
- **Implementation Plan**. It was advised that funding proposals should be set out within the implementation plan and the governance arrangements for each of the proposals.

7.0.4 Currently 5 deals are identified in the industrial strategy, including life sciences; ultra-low emission vehicles; industrial digitalisation; the nuclear industry; and the creative industries, although their presently appear to be some mixed messages coming out of these about the likely resources that might be available through sector deals and the role of localities (personified by LEP's) in shaping them. Other sectors have also expressed an interest in securing a deal.

7.0.5 In order to understand in which sectors SELEP might be able to reasonably exert some influence in sector deals, it's worth developing a good understanding of the business base in the SELEP region.

A strong elementary sector employment base … with concentrations of knowledge activity

7.0.6 In this section of the evidence base, we start to examine some of the key sector priorities of the SELEP area, and its sub-regions, based on a number of different analytical perspectives. This is a subject which will be built on in subsequent sections of this evidence base, particularly the skills and research, science and innovation sections.

7.0.7 In many cases, it's clear that individual analytical perspectives vary in their level of sophistication (for example, Standard Industrial Classification codes are a rather blunt instrument, insofar that they don't really enable us to drill down into sub-sectors very easily). Because of this, we suggest the different analytical perspectives need to be taken together, to create a holistic picture of the sector priorities of the area.

High employment sectors

7.0.8 As far as the high employment sectors are concerned – many of which tend to rely on a more elementary skilled workforce – demand for staff in some of these sectors is forecast to continue to grow, whilst others will wane. For example, demand for staff in the care and construction sectors is forecast to grow, in response to the increasingly ageing population and the need for more homes, whilst retail, food services and retail banking will decline - in response to more automation in the sector. The challenge with the care and housing sectors though is they are inextricably linked to public sector funding (whether related to

social care, social housing or infrastructure costs), so pressure is also increasing on these sectors to improve their productivity.

Employee jobs (2015)			
	South East LEP (Employee Jobs)	South East LEP (%)	Great Britain (%)
Total Employee Jobs	1,552,000	-	-
Full-Time	1,033,000	66.6	69.1
Part-Time	520,000	33.5	30.9
Employee Jobs by Industry			
B: Mining and Quarrying	500	0.0	0.2
C: Manufacturing	103,000	6.6	8.3
D: Electricity, Gas, Steam and Air Conditioning Supply	3,000	0.2	0.4
E: Water Supply; Sewerage, Waste Management and Remediation Activities	15,000	1.0	0.7
F: Construction	98,000	6.3	4.6
G: Wholesale and Retail Trade; Repair of Motor Vehicles & Motorcycles	284,000	18.3	15.8
H: Transportation and Storage	79,000	5.1	4.7
I: Accommodation and Food Service Activities	114,000	7.3	7.2
J: Information and Communication	49,000	3.2	4.2
K: Financial and Insurance Activities	42,000	2.7	3.6
L: Real Estate Activities	25,000	1.6	1.7
M: Professional, Scientific and Technical Activities	109,000	7.0	8.4
N: Administrative and Support Service Activities	128,000	8.2	8.9
O: Public Administration and Defence; Compulsory Social Security	57,000	3.7	4.4
P: Education	152,000	9.8	9.2
Q: Human Health and Social Work Activities	222,000	14.3	13.3
R: Arts, Entertainment and Recreation	36,000	2.3	2.4
S: Other Service Activities	33,000	2.1	2.0

Source: ONS Business Register and Employment Survey: open access
- Data unavailable
Notes: % is a proportion of total employee jobs excluding farm-based agriculture
Employee jobs excludes self-employed, government-supported trainees and HM Forces
Data excludes farm-based agriculture

Fig.8: Employee Jobs in the SELEP region compared to Great Britain

7.0.9 Collectively, this data indicates SELEP has a higher concentration of employment in the more elementary sectors of **Construction, Wholesale and Retail Trade; Motor Vehicle Repair;** and **Transportation/Storage** than the national average. In addition, a higher proportion of people are also employed in **Education** and **Health and Social Care**, than nationally.

7.0.10 However, as far as these latter two sectors are concerned, cross tabulating this information with data on the proportion of civil service jobs in SELEP would seem to refute the idea that SELEP is over dominated by public-sector employment in the health and education sectors, as the proportion of civil service jobs in SELEP is actually less than the UK averages. Implicit in this analysis is that the proportion of private sector employment in the Education, Social and Health sectors ins higher in the SELEP region than it is nationally – something which probably shouldn't come as a great surprise, as the number of 'self-funders' in the South-East of England is known to be higher than other parts of the country.

Civil service jobs as a proportion of employee jobs (2017)			
	South East LEP (Headcount)	South East LEP (%)	Great Britain (%)
Total civil service jobs	14,840	1.0	1.4
Full-time	11,100	0.7	1.1
Part-time	3,730	0.3	0.4

Source: ONS Annual Civil Service Employment Survey
Note: Percentages based on % of total jobs in area that are civil service jobs

Fig.9: Civil service jobs as a proportion of all jobs in SELEP, 2017, ONS

7.0.11 Other points to note from this simple sectoral employee analysis is how the Manufacturing, Information and Communication, Financial/Insurance and Professional/Scientific sectors employ less people in SELEP as a proportion of all employees, compared to the UK as a whole. Similarly, the slightly larger employee base of the Construction and Transportation sectors is also worthy of note.

7.0.12 Breaking this data down into more detail, to look at the geographies that make up the SELEP area in a more granular way illustrates further spikes of local employment concentrations, although it could be argued that the scale of analysis is a little questionable (insofar as critical mass is often considered important at a pan-regional, rather than very local level and some of the key sectors this analysis considers are actually key enabling technologies – like digital and advanced engineering – which you would ideally want to see significant concentrations of across the entire sub-region, as they are the processes by which product and service innovations are commercialised). That said, as far as those concentrations are concerned;

- **Advanced Manufacturing:** Braintree (13.2%), East Maldon (13.2%), Swale (12.5%) and Rochford (10.7%) possess a higher proportion of people that are employed in Manufacturing than other parts of SELEP (and above Great Britain's average, at 8.3%);
- **Construction:** Epping Forest (12.5%), Dartford (11.3%), Brentwood (9.7%), Rochford (9.5%) and Maldon (9.2%) possess a higher proportion of people that are employed in Construction than other parts of SELEP (and above Great Britain's average, at 4.6%); and
- **Transportation & Logistics:** Uttlesford (18.4%), Thurrock (14.3%), Dover (11.8%), Swale (9.4%), Gravesham (8.9%) and Dartford (8.1%) possess a higher proportion of people that are employed in the Transportation and Logistics Sector (and above Great Britain's average, at 4.7%);

7.0.13 It's also perhaps interesting to note that;

- **Digital/ICT:** All areas of the SELEP region have a lower proportion of people employed in the Information and Communication Sector than the Great Britain Average (4.2%) apart from Basildon (7.3%), Brentwood (6.2%), Sevenoaks (5.0%) and Colchester (4.4%); and
- **Professional % Scientific:** All areas of the SELEP region have a lower proportion of people employed in the Professional and Scientific Sector than the Great Britain Average (8.4%) apart from Tunbridge Wells (19.7%), Brentwood (12.5%), Sevenoaks (9.0%), Basildon and Harlow (both 8.5%);

7.0.14 However, an employee analysis of sectors is a little simplistic. It only assesses the sectors which employ the most staff. It doesn't assess the contribution of different sectors to the SELEP economy; their growth potential; their productivity impact; the sectors which offer the greatest potential, going forward.

Business Concentrations

7.0.15 In order to look at where SELEP has particular 'industry' concentrations, we have sought to look at Office of National Statistics (ONS) Inter-departmental Business Register (IDBR) data on the number of enterprises and local units in different sectors. This data is illustrated on the next two pages.

7.0.16 At an upper tier Local Authority level, this indicates;

- There are 352,705[17] businesses in the SE LEP area, with the majority (99.7%) being SMEs and only 1,055 large employers, 550 of which are head office operations;
- The largest sectors in the SELEP region, by number of enterprises and local units, is the **Professional, Scientific and Technical** (at 15.71%); **Construction** (15.08%); **Retail** (8.54%); **Business administration & support services** (8.25%); and Information & communication (at 6.70%). The high incidence of professional and scientific and information and communication enterprises/local units – when taken with the lower proportion of people employed in these sectors across the SELEP area – potentially points towards a dominance of self-employed and micro-businesses in these sectors.
- **Construction** is the only sector which has more businesses across the whole of the SELEP Region (i.e. in every region) above the national average;
- **ICT/Digital and Professional/Scientific** sectors (which are often considered to provide some proxy for the potential of an area to engage in process innovation and produce higher value products and services) are below the national averages across the whole of the region, apart from Southend-on Sea, whose digital sector is above the UK average;
- One potentially surprising issue is the fact that the **agricultural sector** is below the national average in every sub-region of the SELEP region, apart from East Sussex;

7.0.17 Looking at the data in more granular way, by comparing the distribution of enterprises/local units at a district level within each tier 1 Local Authority Area indicates that East Sussex has a much more even spread of businesses from different sectors across its entire geography – meaning it is less diverse as an economy than some other parts of the SELEP sub-region. This probably explains why there is less disparity between its best and worst performing GVA numbers than other parts of the region;

7.0.18 In addition, whilst ONS SIC code data has some significant limitations, it reveals that the following sectors are particularly strongly represented in the following areas;

- **Agriculture, Forestry and Fishing:** Wealdon, Rother and Ashford;
- **Manufacturing and Production:** Basildon and Braintree;

[17] Inter Departmental Business Register (ONS), 2016

Employee jobs (2015)

	Sevenoaks	Maidstone	Tunbridge Wells	Swale	Ashford	Canterbury	Shepway	Thanet	Dover	Dartford	Gravesham	Tonbridge and Malling	Medway	Harlow	Epping Forest	Brentwood	Basildon	Castle Point	Rochford	Maldon	Chelmsford	Uttlesford	Braintree	Colchester	Tendring	Southend on Sea	Thurrock	Hastings	Rother	Wealden	Eastbourne	Lewes
B: Mining and Quarrying	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
C: Manufacturing	6.0	5.5	5.7	12.5	9.3	2.8	4.9	7.3	8.8	4.0	6.2	5.4	8.1	8.5	3.6	5.6	8.5	6.2	10.7	13.2	4.9	6.6	13.2	5.1	6.6	5.5	4.0	8.3	5.6	7.4	4.5	5.7
D: Electricity, Gas, Steam and Air Conditioning Supply	0.1	0.3	0.0	0.1	0.6	0.1	1.7	0.3	0.0	0.4	0.1	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.1	0.2	0.1	0.0	0.3	0.0	0.0	0.1	0.1	0.3
E: Water Supply; Sewerage, Waste Management and Remediation Activities	0.5	0.3	0.3	1.9	0.3	0.6	1.1	0.5	0.7	0.6	0.2	2.2	0.8	0.7	2.6	1.4	0.6	0.2	1.4	1.8	1.1	0.6	1.9	1.0	2.6	0.5	1.6	0.2	0.4	0.6	0.1	1.1
F: Construction	9.0	5.5	2.5	6.2	4.2	3.6	4.2	4.3	3.7	11.3	7.1	6.2	5.8	5.5	12.5	9.7	7.3	8.8	9.5	9.2	7.4	6.6	8.5	5.1	5.9	4.7	5.6	4.2	5.6	7.4	3.8	5.0
G: Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	16.0	16.4	18.0	16.7	22.2	19.4	16.7	19.5	14.7	22.6	17.9	19.6	16.3	19.5	14.6	11.1	20.7	22.5	19.0	18.4	17.3	15.8	18.9	19.0	21.1	17.2	30.2	16.7	14.8	19.1	20.5	14.3
H: Transportation and Storage	1.8	3.4	1.6	9.4	4.6	1.6	6.2	3.7	11.8	8.1	8.9	7.1	5.2	3.0	3.1	2.8	4.9	4.0	4.8	4.7	3.7	18.4	3.8	2.5	6.6	2.3	14.3	3.3	2.6	1.7	2.3	3.6
I: Accommodation and Food Service Activities	7.0	6.8	5.7	7.3	7.4	9.7	8.3	8.5	8.8	6.5	7.1	5.4	7.0	4.3	7.3	6.9	4.9	6.2	7.1	9.2	6.2	9.2	5.7	7.6	10.5	7.8	6.3	8.3	13.0	10.6	10.3	8.6
J: Information and Communication	5.0	3.1	4.1	2.1	2.8	2.8	2.2	1.7	1.3	2.8	1.8	4.0	2.6	3.0	3.1	6.2	7.3	2.2	2.4	1.8	3.7	3.3	2.8	4.4	1.2	2.3	1.3	2.3	1.9	3.7	1.5	3.6
K: Financial and Insurance Activities	2.5	2.4	7.4	1.0	1.3	1.1	4.9	2.0	1.5	1.0	1.2	4.5	3.5	2.2	2.1	6.9	3.7	1.2	1.4	1.3	3.7	1.6	4.2	2.2	1.1	2.7	0.7	2.0	7.4	1.5	1.5	0.7
L: Real Estate Activities	2.5	1.7	1.6	1.7	1.1	1.5	1.4	1.5	1.3	1.3	1.8	2.2	1.7	0.6	1.7	1.0	1.5	1.2	1.7	1.1	1.5	0.9	1.7	1.9	0.9	2.0	1.0	2.0	2.2	1.9	1.5	2.3
M: Professional, Scientific and Technical Activities	9.0	5.5	19.7	6.2	7.4	5.6	4.2	4.3	6.6	3.6	4.5	7.1	4.1	8.5	7.3	12.5	8.5	6.2	7.1	7.9	6.2	7.9	7.5	7.6	3.3	7.8	3.6	5.0	5.6	7.4	5.8	6.4
N: Administrative and Support Service Activities	16.0	13.7	6.6	8.3	7.4	5.6	11.1	6.1	5.9	12.9	12.5	8.9	5.8	14.6	14.6	12.5	6.1	10.0	7.1	9.2	6.2	6.6	6.6	7.6	5.3	7.8	9.5	4.2	4.6	4.3	4.5	4.3
O: Public Administration and Defence; Compulsory Social Security	1.4	9.6	1.0	3.6	3.2	3.2	6.2	3.0	6.6	0.8	6.2	3.6	4.7	1.7	2.1	2.2	3.0	2.5	2.4	2.4	5.6	3.3	3.8	2.8	3.3	5.5	2.0	6.7	2.2	1.9	2.6	7.1
P: Education	8.0	6.8	7.4	9.4	7.4	19.4	9.7	14.6	11.8	5.6	10.7	8.9	12.8	7.3	8.3	6.2	6.1	12.5	10.7	6.6	9.9	9.2	8.5	11.4	10.5	10.9	7.9	10.0	11.1	10.6	10.3	10.0
Q: Human Health and Social Work Activities	9.0	16.4	13.1	10.4	14.8	16.1	13.9	19.5	13.2	14.5	10.7	8.0	15.1	17.1	9.4	8.3	13.4	11.2	8.3	9.2	18.5	6.6	9.4	17.7	15.8	17.2	7.9	23.3	16.7	12.8	23.1	20.0
R: Arts, Entertainment and Recreation	3.5	1.7	1.1	1.9	1.9	2.8	2.8	2.4	2.6	1.3	2.5	2.2	2.9	2.2	3.1	2.2	1.8	3.0	2.9	2.6	1.9	1.8	1.9	2.8	2.4	3.5	1.1	2.0	2.2	3.7	3.2	2.6
S: Other Service Activities	2.0	1.7	2.3	1.9	2.8	2.8	1.4	1.7	1.5	0.8	2.1	2.2	1.7	1.2	3.1	2.8	2.4	2.5	2.9	1.8	3.1	1.8	1.9	1.9	1.8	2.3	1.6	1.3	2.6	3.2	1.5	2.3

Source: ONS Business Register and Employment Survey: open access

\- Data unavailable

Notes: % is a proportion of total employee jobs excluding farm-based agriculture

Employee jobs excludes self-employed, government-supported trainees and HM Forces

Data excludes farm-based agriculture

Fig. 10: Employee Jobs by District and Sector

- **Construction:** Basildon, Braintree, Brentwood, Castle Point, Chelmsford, Colchester, Epping Forest, Medway, Maidstone and Wealdon;
- **Information and Communication:** Southend, Medway, Chelmsford, Colchester, Wealdon and Tunbridge Wells;
- **Professional, Scientific & Technical:** Southend on Sea, Basildon, Braintree, Chelmsford, Colchester, Wealdon, Maidstone, Sevenoaks, Tonbridge and Malling and Tunbridge Wells.

7.0.19 However, as we have already stated, this kind of ONS based data analysis is somewhat of a blunt instrument, when analysing the incidence of key sectors in the local economy. This is because the broad category definitions mask specific specialisms, but also because of a the SIC framework has been fairly slow to adapt to emerging sectors.

7.0.20 In light of this situation, it's worth looking at a number of secondary bases for considering priority sectors.

Innovate UK Grant Awards

7.0.21 According to Innovate UK[18], between 2010/11 and 2016, Innovate UK awarded £71.5 million to 580 businesses that they classified as being in the SELEP area for innovation projects, including:

- £19.7m to Materials & Manufacturing (94 businesses);
- £16.5m to Health and Live Sciences, incl. £5.5m to Agri-Tech (102 businesses);
- £7.5m to Infrastructure Systems (72 businesses);
- £5.8m to Emerging & Enabling tech, incl. digital, electronics & space (79 businesses); and
- £11.8m to the Advanced Propulsion Centre at HSSMI (which is actually based in Stratford, East London, but has strong links to Ford Motor Company, which is based in Essex

7.0.22 However, different researchers suggest that the SELEP economy has slightly different research capabilities, depending on the time frame being analysed. For example;

- In Mapping local comparative advantages in innovation: framework and indicators[19], the Department for Business, Innovation and Skills analysed Innovate UK's Innovate R&D Expenditure (in terms of £s per FTE by Sector and found the SELEP performed best in **Sustainable Agri-Food**; **Buildings**; **Transport**; **Healthcare**; and **Nano-Technology** (with only Agri-Food ranking in the top 10 regions nationally and many of the other sectors come well down the league tables);
- In order to support the production of this evidence base, The UK Smart Specialisation Hub[20] analysed Innovate UK grant awards in the SELEP Region between 2013 and 2017 and found that the SELEP region has high innovative business strengths in the Space Sector and in Food supply and moderate to high innovative business strength in Transport; and Electronics, Photonics & Electrical Systems.

7.0.23 Our own analysis of ALL grant awards up to the end of 2016, and attempting to classify businesses according to the descriptions on their websites found specialisms in;

[18] Taken from Innovate UK presentation
[19] Mapping Local Comparative Advantages in Innovation, Department for Business Innovation and Skills, July 2015
[20] http://smartspecialisationhub.org/

Number of Enterprises (2015)

	SIC07: 01-03 : Agriculture, forestry & fishing	SIC07: 05-39 : Production	SIC07: 41-43 : Construction	SIC07: 45 : Motor trades	SIC07: 46 : Wholesale	SIC07: 47 : Retail	SIC07: 49-53 : Transport & Storage (inc. postal)	SIC07: 55-56 : Accommodation & food services	SIC07: 58-63 : Information & communication	SIC07: 64-66 : Finance & insurance	SIC07: 68 : Property	SIC07: 69-75 : Professional, scientific & technical	SIC07: 77-82 : Business administration & support services	SIC07: 84 : Public administration & defence	SIC07: 85 : Education	SIC07: 86-88 : Health	SIC07: 90-99 : Arts, entertainment, recreation & other services	SIC07: Total
Southend-on-Sea	20	355	945	180	240	675	145	445	560	165	255	1060	560	5	105	350	415	6480
Thurrock	40	285	970	225	220	345	555	245	365	55	110	680	375	0	90	270	235	5065
Essex	2205	3860	10390	1960	2775	4050	2215	2785	4385	1075	2035	9865	4840	220	1035	2290	3590	59575
Medway	70	460	1430	255	290	595	345	475	490	95	190	1135	630	10	155	410	450	7485
East Sussex	1335	1280	3110	695	870	1765	435	1335	1535	290	715	3620	1770	65	380	1040	1620	21860
Kent	2275	3270	8550	1780	2555	4110	1905	3370	3865	1170	1705	9815	4730	245	1055	2455	3600	56455
Total	**5945**	**9510**	**25395**	**5095**	**6950**	**11540**	**5600**	**8655**	**11200**	**2850**	**5010**	**26175**	**12905**	**545**	**2820**	**6815**	**9910**	**156920**
As a % of total	3.79%	6.06%	16.18%	3.25%	4.43%	7.35%	3.57%	5.52%	7.14%	1.82%	3.19%	16.68%	8.22%	0.35%	1.80%	4.34%	6.32%	
England Total	**98,565**	**121,960**	**245,615**	**61,490**	**92,350**	**164,290**	**72,215**	**121,150**	**178,030**	**43,960**	**78,340**	**387,455**	**173,425**	**6,200**	**36,780**	**91,990**	**142,480**	**2,116,295**
As a % of total	4.66%	5.76%	11.61%	2.91%	4.36%	7.76%	3.41%	5.72%	8.41%	2.08%	3.70%	18.31%	8.19%	0.29%	1.74%	4.35%	6.73%	
Southend-on-Sea	0.31%	5.48%	14.58%	2.78%	3.70%	10.42%	2.24%	6.87%	8.64%	2.55%	3.94%	16.36%	8.64%	0.08%	1.62%	5.40%	6.40%	
Thurrock	0.79%	5.63%	19.15%	4.44%	4.34%	6.81%	10.96%	4.84%	7.21%	1.09%	2.17%	13.43%	7.40%	0.00%	1.78%	5.33%	4.64%	
Essex	3.70%	6.48%	17.44%	3.29%	4.66%	6.80%	3.72%	4.67%	7.36%	1.80%	3.42%	16.56%	8.12%	0.37%	1.74%	3.84%	6.03%	
Medway	0.94%	6.15%	19.10%	3.41%	3.87%	7.95%	4.61%	6.35%	6.55%	1.27%	2.54%	15.16%	8.42%	0.13%	2.07%	5.48%	6.01%	
East Sussex	6.11%	5.86%	14.23%	3.18%	3.98%	8.07%	1.99%	6.11%	7.02%	1.33%	3.27%	16.56%	8.10%	0.30%	1.74%	4.76%	7.41%	
Kent	4.03%	5.79%	15.14%	3.15%	4.53%	7.28%	3.37%	5.97%	6.85%	2.07%	3.02%	17.39%	8.38%	0.43%	1.87%	4.35%	6.38%	

Number of Local Units (2015)

	SIC07: 01-03 : Agriculture, forestry & fishing	SIC07: 05-39 : Production	SIC07: 41-43 : Construction	SIC07: 45 : Motor trades	SIC07: 46 : Wholesale	SIC07: 47 : Retail	SIC07: 49-53 : Transport & Storage (inc. postal)	SIC07: 55-56 : Accommodation & food services	SIC07: 58-63 : Information & communication	SIC07: 64-66 : Finance & insurance	SIC07: 68 : Property	SIC07: 69-75 : Professional, scientific & technical	SIC07: 77-82 : Business administration & support services	SIC07: 84 : Public administration & defence	SIC07: 85 : Education	SIC07: 86-88 : Health	SIC07: 90-99 : Arts, entertainment, recreation & other services	SIC07: Total
Southend-on-Sea	20	385	955	195	275	920	175	520	580	210	295	1090	640	25	160	495	505	7445
Thurrock	40	345	995	260	290	690	670	350	375	80	125	725	465	35	120	365	295	6225
Essex	2275	4080	10500	2170	3105	5970	2555	3440	4505	1450	2350	10215	5515	690	1535	3365	4220	67940
Medway	75	525	1460	300	365	920	410	640	510	160	250	1185	745	50	240	630	560	9025
East Sussex	1360	1365	3120	780	1040	2450	530	1685	1565	400	840	3720	1960	180	615	1580	1845	25035
Kent	2335	3600	8685	2075	3045	6460	2305	4445	3985	1580	2050	10155	5515	555	1640	3815	4190	66435
Total	**6105**	**10300**	**25715**	**5780**	**8120**	**17410**	**6645**	**11080**	**11520**	**3880**	**5910**	**27090**	**14840**	**1535**	**4310**	**10250**	**11615**	**182105**
As a % of total	3.35%	5.66%	14.12%	3.17%	4.46%	9.56%	3.65%	6.08%	6.33%	2.13%	3.25%	14.88%	8.15%	0.84%	2.37%	5.63%	6.38%	
England Total	**101,380**	**135,105**	**253,285**	**70,015**	**109,610**	**244,900**	**86,130**	**155,630**	**184,970**	**59,870**	**90,405**	**403,585**	**205,385**	**19,830**	**59,940**	**141,365**	**168,420**	**2,489,825**
As a % of total	4.07%	5.43%	10.17%	2.81%	4.40%	9.84%	3.46%	6.25%	7.43%	2.40%	3.63%	16.21%	8.25%	0.80%	2.41%	5.68%	6.76%	
Southend-on-Sea	0.27%	5.17%	12.83%	2.62%	3.69%	12.36%	2.35%	6.98%	7.79%	2.82%	3.96%	14.64%	8.60%	0.34%	2.15%	6.65%	6.78%	
Thurrock	0.64%	5.54%	15.98%	4.18%	4.66%	11.08%	10.76%	5.62%	6.02%	1.29%	2.01%	11.65%	7.47%	0.56%	1.93%	5.86%	4.74%	
Essex	3.35%	6.01%	15.45%	3.19%	4.57%	8.79%	3.76%	5.06%	6.63%	2.13%	3.46%	15.04%	8.12%	1.02%	2.26%	4.95%	6.21%	
Medway	0.83%	5.82%	16.18%	3.32%	4.04%	10.19%	4.54%	7.09%	5.65%	1.77%	2.77%	13.13%	8.25%	0.55%	2.66%	6.98%	6.20%	
East Sussex	5.43%	5.45%	12.46%	3.12%	4.15%	9.79%	2.12%	6.73%	6.25%	1.60%	3.36%	14.86%	7.83%	0.72%	2.46%	6.31%	7.37%	
Kent	3.51%	5.42%	13.07%	3.12%	4.58%	9.72%	3.47%	6.69%	6.00%	2.38%	3.09%	15.29%	8.30%	0.84%	2.47%	5.74%	6.31%	

Fig.10: Number of enterprises and local units in SELEP

- **Big Data, Smart Systems & Industry 4.0:** Troika International (Tunbridge Wells, Kent); Shearwater Systems (Canterbury, Kent); Smart Networked Environments (Colchester, Essex); Sipsynergy (Ware, Essex); Stonehaven Technology (Colchester, Essex); Visionmetric (Canterbury, Kent); I3D Robotics (Tonbridge, Kent); AND Technology Research (Theydon Bois, Essex); BlockBuilders (Hailsham, East Sussex); Digital & Future Technologies (Colchester, Essex); Bubblephone (Brighton, East Sussex); Met arc (Canterbury, Kent);
- **Automotive Engineering:** Ford UK (Brentwood, Essex); Revolve Technologies (Brentwood, Essex); AVL Powertrain (Basildon, Essex); Visteon Engineering Services (Chelmsford, Essex); Controlled Power Technologies Limited (Basildon, Essex); Aerodynamic Test Equipment (Heathfield, East Sussex); Aquafuel Research (Ashford, Kent); Vortex Exhaust Technology (Grays, Essex); Elektromotive (Shoreham-by-Sea, East Sussex); Tevva Motors (Chelmsford, Essex);
- **Electronic, Electrical & RF Engineering:** Raytheon (Harlow, Essex); Teledyne e2v (Chelmsford, Essex); Selex ES Limited (Basildon, Essex); Application Solutions (Lewes, East Sussex); Leonardo MW Limited (Basildon, Essex); BAE Systems Applied Intelligence (Chelmsford, Essex); CML Microcircuits (Maldon, Essex); IS-Instruments Limited (Tonbridge, Kent); Alphasense (Braintree, Essex); Hollycroft Associates (Sevenoaks, Kent); FLIR Systems (West Malling, Kent); APC Technology Group (Rochester, Kent); The Institute Of Circuit Technology (Tonbridge, Kent); Minnitron (Ramsgate, Kent); Printech Circuit Laboratories (Chelmsford, Essex);
- **Advanced Engineering:** Kurt J. Lesker (Hastings, East Sussex); MEP (Aylesford, Kent); TCS Micro-pumps (Faversham, Kent); Molecular Products (Harlow, England); Advanced Fuel Systems (Saffron Walden, Essex); Kingsnorth Engineering (Ashford, Kent); EBM-PAPST UK (Chelmsford, Essex); Surrey Nano-systems (Newhaven, East Sussex); SS Scientific (Eastbourne, East Sussex);
- **Process Engineering:** Phoenix Scientific Industries (Hailsham, East Sussex); NVP Energy (West Malling, Kent); Intensichem (Sandwich, Kent);
- **Marine Technology:** Tension Technology International (Eastbourne, East Sussex); Bruntons Propellers (Southend-on-Sea, Essex); Petticrows (Burnham on Crouch, Essex); Jee (Tonbridge, Kent);
- **Agri-Tech:** East Malling Research (East Malling, Kent); Cobb-Europe (Colchester, Essex); Driscoll's Genetics (East Malling, Kent); Farm Advisory Services (Faversham, Kent); Hellenic Systems (Chelmsford, Essex); Trails Equipment (Braintree, Essex); AlgaeCytes (Sandwich, Kent); Berry Garden Growers (Maidstone, Kent); Avalon Produce (Maidstone, Kent); Flo-Gro Systems (Gravesend, Kent); The Asplins Producer Organisation (Faversham, Kent); Fruition PO (Whitstable, Kent); Richard Hochfeld (Borough Green, Kent); A.C. Goatham and Son (Rochester, Kent); MM Global Citrus (Paddock Wood, Kent); Suncrop Produce (Harlow, Essex); Hugh Lowe Farms (Maidstone, Kent); Tethys Aquaculture (Saffron Walden, Essex); Evogro Limited (East Malling, Kent); Cranbrook Conserves (Cranbrook, Kent); Seedlynx (Maldon, Essex); PlantWorks (Sittingbourne, Kent); Stourgarden (Colchester, Essex); Adrian Scripps (Tonbridge, Kent); S'cargo (Canterbury, Kent);

- **Health & Medical Technologies:** Levicept (Sandwich, Kent); Isogenica (Little Chesterford, Essex); CellCentric (Little Chesterford); Contamac (Saffron Walden, Essex); Isomerase Therapeutics (Little Chesterford, Essex); Michelson Diagnostics (Maidstone, Kent); Illumina UK (Little Chesterford, Essex); Skylab Bio (Ashford, Kent); Diagnostics for the Real World (Little Chesterford, Essex);
- **Scientific Instruments:** Ancon Technologies Limited (Canterbury); Cairn Research (Faversham, Kent); Horizon Instruments (Heathfield, East Sussex); Sirius Analytical Instruments (Forest Row, East Sussex); Aquaread Limited (Broadstairs, Kent); Naneum (Canterbury, Kent);
- **Energy Systems**: Kite Power Systems (Chelmsford, Essex); Energy Solutions (Rochester, Kent); Silicon CPV (Harlow, Essex); Ventech Systems (Bexhill-on-Sea, East Sussex); Energise Sussex Coast (St Leonards on Sea, East Sussex);
- **Construction:** Laing O'Rourke (Dartford, Kent); United Living (Swanley, Kent); Helionix Designs (Hailsham, East Sussex); Waterloo Air Products (Aylesford, Kent); Sontay (Edenbridge, Kent); and
- **Logistics:** Santova Logistics (Hounslow, Essex); DSV Road (Harwich, Essex);

7.0.24 However, it's probably also worth noting that the actual take-up of Innovate UK grants in the SELEP region is well below the national average, with BEIS ranking SELEP 28th out of 39 LEPs for the total Innovate UK funding secured in different LEP areas (rankings based on £s per FTE, 2010-2015). This ranking is broadly consistent with Innovate UKs own data.

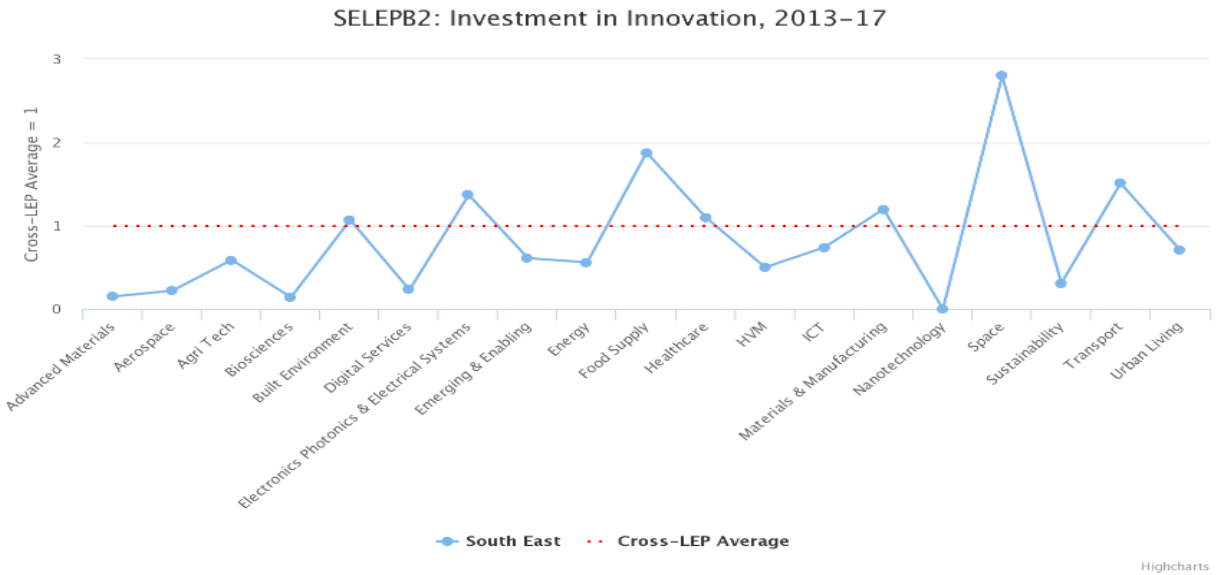

Fig.12: Investment by Innovate UK in SELEP, UK Smart Specialisation Hub 2017

Patents

7.0.25 Another way to analyse potential business specialisms in the SELEP economy is to look at registered patents, although this too has some limitations, insofar that patents do not present a universal picture of innovation in the economy (they tend to over represent product innovation) and they tend to be registered against a head office operation, rather than reflecting the full geography of the registrant's business operations.

7.0.26 That said, analysing UK Intellectual Property Office data supplied to us specifically for this evidence base illustrates that between 2005 – 2016, the highest number of patents registered at the IPO came from Civil engineering (810 patents); Furniture, games (671); Electrical machinery, apparatus, energy (451); Other consumer goods (444); Transport (442); Medical technology (374); Handling (354); Thermal processes and apparatus (346); Measurement (345); Other special machines (310); Engines, pumps, turbines (275); Mechanical elements (235); Audio-visual technology (229); Control (191); and Machine tools (186).

7.0.27 Whilst some of the above categories are slightly difficult to analyse, it suggests the clear leaders in product innovation in the SELEP Region are the **Construction, Machinery, Transport** and **Med-Tech** sectors.

Sectors that are key to placemaking

7.0.28 In addition to the above sectors, two additional sectors often fail to be picked up by a heavily data driven analysis of sectors which are important to the local economy, namely the **Creative and Cultural Industries** and the **Visitor Economy**.

7.0.29 These two sectors are important to the creation of attractive, dynamic and vibrant places – something which will become increasingly important in tightening labour markets. **Creativity and Design** is also a (cross cutting) key enabling capability – together with **Digital** and **Advanced Manufacturing** – which every place needs if it is to be successful at developing and commercialising innovation.

7.0.30 As far as SELEP is concerned, it is recognised that In the SELEP area;

- The **Creative Industries** employ 30,000 people and generate £2.5 billion in GVA – the largest GVA contribution of any LEP outside of London. Creative talent and innovation that originates in this sector has become indispensable to other areas such as health, IT and the services economy. The talent pool in London, the world's leading centre for creative industries, continues to move eastward into the Thames Gateway and towards the coast. As there is limited headroom for growth within the capital itself, establishing a mutually beneficial talent pipeline relationship with London is paramount. One that also enables risk taking and R&D activity is essential for the sustainable growth of the sector[21].
- The Creative industries and the **Visitor Economy** have a mutually beneficial relationship. Creative industries play a key role in increasing local attractiveness and in turn drive business to the tourism sector. The visitor economy is enhanced by creative industries with cultural venues, events and festivals that attract repeat visits. Complementary to this, the tourism industry provides business opportunities to creative firms[22]. For example, Kent's visitor economy welcomed a record 60 million visitors in 2015[23].
- As a partnership SELEP recognises and values the major contribution and the economic impact of the work of the **Social Enterprise** sector. With a combined turnover exceeding £1.5 billion across the LEP

[21] Towards a national prospectus for the creative economy in the South-East, SELEP, 2017
[22] Togni, Lara. GLA Economics. The creative Industries in London. 2015
[23] http://www.visitkentbusiness.co.uk/library/PR031_-_Kent_visitor_numbers_soar_to_60_million_a_year.pdf

area, the sector is a major provider of local employment for local people, a deliverer of key local and strategic services, and an important sector to leverage in additional external resources[24].

Partner Priority Sectors

7.0.31 In addition to adopting the methodologies set out above, highlighting partners Priority Sectors is another way of categorising the key sectors that require backing in the local economy. The table below sets out those sectors that partners have stated are key priority sectors;

Partner	Priority Sectors
Kent and Medway Kent and Medway Growth Deal	• Life sciences • Creative and media • Low carbon • Land - based • Manufacturing • Construction • Tourism and leisure • Higher education
Essex Economic Plan for Essex and Enterprising Essex: Opportunities and Challenges	• Advanced manufacturing • Low carbon and renewables • Life sciences and healthcare • Digital and creative • Financial and business services • Logistics • Automotive • Engineering and advanced manufacturing.
Opportunity South Essex Economic Growth Strategy For South Essex	• Construction • Advanced Manufacturing and Engineering • Transport and Logistics • Environmental Technologies • Energy and Digital Culture and Creative
East Sussex Locate in East Sussex	• Manufacturing • Creative industries • Education • Health • Financial and business services • Tourism

Conclusions and key questions about sector priorities

7.0.32 Through the consultation work we have undertaken as part of the review of the Strategic Economic Plan, it is clear that many respondents see the challenge of 'cultivating world leading sectors' as being about more than simply focussing on international excellence in high-value economic sectors.

7.0.33 Indeed, many respondents recognised that productivity is a 'whole economy' issue and with 80% of our business base being made up of services, many felt achieving improvements in this sector of the economy was just as important as production and manufacturing.

7.0.34 They also recognised that one of the key benefits of a locally-led approach was the potential for localities to establish strong value chains across the public-private-academic-community sectors to establish projects and initiatives which collectively sought to collectively address societal challenges, transfer knowledge through value chains; and improve the productivity of key sectors. However, a number of respondents also recognised that if we are to systematically address these issues locally, Whitehall needed to address the

[24] SELEP ESIF Strategy, February 2016

current 'silo', 'initiative-led' approach which currently dominated the funding and targeting of local economic development, to develop a more strategic approach which better empowered localities to lead this transformation process.

7.0.35 Similarly, many respondents felt that some of the potential changes that were likely to impact on some of our more elementary skilled sectors (including care, construction, logistics etc.) warranted a similar level of focus on supporting some of these sectors, in order to avoid increasing levels of unemployment. For example;

- In their analysis of the UK's Productivity Puzzle[25], Peter Goodridge and Jonathan Haskel of Imperial College and Gavin Wallis of the Bank of England suggest that 35% of the UK's productivity puzzle can be explained by the structural weaknesses in the Total Factor Productivity growth in the oil and gas and financial services sectors; 15% can be attributed to capital life lengthening; and 17% could be accounted for by cyclical variation in factor utilisation.
- PWC's analysis of the impact of automation suggests that up to 30% of UK jobs could potentially be at high-risk by the early 2030s, with the risks appearing highest in sectors such as transportation and storage (56%), manufacturing (46%) and wholesale and retail (44%), but lower in sectors like health and social work (17%)[26].
- Experian's recent sectoral analysis suggests future growth in the high-skills areas is reasonably assured; finance and real-estate face a somewhat more uncertain future; consumer sectors will be marginally affected by slower wage growth and the prospect of rising interest rates;
- In Kent and Medway: Making a Success of Brexit, the Centre for European Studies at Canterbury Christ Church University identifies that *"within the rural economy sector, greater support for key innovations has emerged as key, from enhanced research and development to more fully explore the links between climate change, environmental stewardship, food and water security, and rural stewardship to 'smart farming' developments designed to improve yield (e.g. hybridization; drone-scoping fields; digitization; cost-saving machinery). Finally, improved public and private sector links could facilitate new forms of agri-finance (loans, investment, etc.) to benefit those across the entire rural economy spectrum"*[27].

7.0.36 The potential impact of the growth of London and the ageing demographic might have on some of the more peripheral coastal towns is something that many respondents also felt required intervention, to attract more young people and freelancers to the coastal areas.

7.0.37 Key questions arising from this analysis include;

- **Intervention Design:** What are the key interventions that partners consider being important to foster the growth of key sectors? Stimulating sectors and networks is one of the historically weakest areas of

[25] Accounting for the UK Productivity Puzzle: A Decomposition and Predictions* Peter Goodridge, Jonathan Haskel, Gavin Wallis November 2015
[26] http://www.pwc.co.uk/services/economics-policy/insights/uk-economic-outlook.html
[27] https://www.canterbury.ac.uk/social-and-applied-sciences/psychology-politics-and-sociology/cefeus/docs/Making-A-Success-of-Brexit-20-July-2017.pdf

public policy intervention - with a significant number of past initiatives struggling to sustain their work beyond the initial seed funding. What is that partners see as being vital?

- **Elementary Sectors impacted on by Automation:** Wherever you look automation is impacting on the transportation, storage, manufacturing, wholesale and retail sectors. Where should we be actively promoting automation and investment in capital machinery to ensure businesses in the South East LEP area lead the productivity charge? How can we integrate skills development and retaining programmes into this approach, to minimise the chances of long term unemployment?
- **Logistics and Transportation:** Are there commercial opportunities likely to emerge from the changing nature of the automotive, logistics and transportation sectors, where a closer collaboration between the public and private sector might enhance the competitiveness of our indigenous firms? Do we need to encourage investment in the sector to support the maintenance of a frictionless border, post-Brexit?
- **Health and Social Care:** Recognising the growing older population, increasingly challenging public sector finances and the increasing difficulty the sector is having accessing labour, should we explore the potential of bringing together the public-private-academic Health and Social Care sectors in each of our federated areas to establish local Precision Medicine Centres to explore how Big Data and Technology can help improve the productivity of the sector, support the growth of private sector Health and Med-Tech businesses and improve patient outcomes?
- **Construction & Infrastructure:** Because the large volume house builders are building to their bank covenants (not market need), many RSLs are fully geared and Local Authorities are constrained by their HRA Debt Caps - but we have significant targets to build new houses - should we look at strengthening pre-collaborative procurement arrangements and research partnerships with our indigenous SME housebuilders to deliver our ambitious housing numbers and accelerate the adoption of 'game-changing' technologies like offsite manufacturing, Building Information Modelling (BIM)?
- **Creativity & Design, Advanced Engineering and Digital:** How do we ensure that these three key-enabling technology sectors – which are so vital to being able to improve the productivity of an entire range of other sectors are sufficiently prioritised going forward? How do we invest in them to become more pervasive and transformative?
- **Creative and Cultural Industries and the Visitor Economy:** Given the changing demographic structure of our economy, are their advantages to be gained from investing in our creative, cultural and tourism sectors as part of a plan to regenerate our town centres, to create more vibrant places?
- **High-Tech Sectors, including Med-Tech, Agri-Tech, Automotive, Electric and Electrical:** How do we ensure that these sectors have access to the skills they need to compete more effectively on a global scale. Recognising the significant skills shortages that might impact on these sectors, is there more that can be done to help them compete more effectively?

- **Social Enterprise and Community Entrepreneurship:** Do opportunities exist to work with the social enterprise sector to develop new models of community ownership and support the development of grass roots projects to overcome local growth and regeneration challenges?

7.0.38 These are just some of the potential opportunities that exist to form closer collaborations between the public, private, academic and community sectors at a local level to address the UK productivity challenge and address a number of emerging societal pressures.

8.0 Developing skills, employability & business capabilities

8.0.1 An essential component to improving the UKs productivity is to ensure that we improve the skills performance of our people. The government's Industrial Strategy Green Paper references the need for our young people to be able to develop skills required for the highly paid, highly skilled jobs of the future

8.0.2 However, recent changes to the education system have resulted in localities having less influence over the mainstream education system and more emphasis being placed on encouraging businesses and individuals to invest in their own development.

8.0.3 In addition, given the fact that some of the skills issues that the UK faces are fairly long standing, LEP's and their partners will need to be extremely demanding with central government, or more imaginative and creative if they are to deliver the scale of change that is required.

8.0.4 In parallel with the production of the Strategic Economic Plan, SELEP is also developing a detailed skills strategy. This strategy has a comprehensive evidence base and will cover in much more detail what SELEPs skills priorities are. This evidence base is designed to ask some of the more challenging questions around how we improve the future supply of skills, improve business capability and ensure no-one drops out the bottom of the system.

Future Jobs Growth

8.0.5 Forecasts[28] show that there will be an increase of 105,000 jobs in the SE LEP area by 2020. The majority of jobs growth will be in professional occupations (+45,000); managers, directors & senior officials (+38,000); and associate professional & technical occupations (+33,000). When "replacement demand" is included over half (50.3%) of openings will be in high skilled jobs.

8.0.6 Across the UK, there is unmet demand for science technology engineering and mathematics qualified workers with nearly two in five firms requiring STEM employees facing difficulties in recruitment.

8.0.7 Figures show the SE LEP area has high demand for programmers, software development professionals (1,517) and IT Business Analysts, Architects and systems designers (1,458).

8.0.8 Over half of the employers with vacancies in the South East are seeking degree level candidates. 55% of employers in the South-East report workforce skills gaps in technical, practical or job specific skills and predictions show the number of jobs in skilled occupations typically requiring a higher-level qualification is expected to continue to grow.

[28] SELEP Website, retrieved September 2017

8.0.9 The proportion of residents with higher level (4+) qualifications is relatively low despite an increase in Level 4 qualifications attained in recent years. In the SE LEP area 28.1% of residents aged 16-64 have level 4 or above qualifications compared with 34.2% for England.

8.0.10 The proportion of businesses with skill shortage vacancies increased across the UK between 2011 and 2013. In the SE LEP area more than one in five (21%) establishments reported a skills gap or skills shortage vacancy in 2013, 23.7% of vacancies were due to skill-shortages, compared to 22.3% across England.

Work readiness of young people

8.0.11 In July 2017, the CBI/Pearson Educational and Skills Survey[29] found that;

- Real progress has been made in improving standards by many of our schools, but addressing pockets of lower performance and a focus on all young people is needed;
- Businesses are positive about young people's teamwork (71% satisfied) and attitudes to work (67%) – but businesses remain concerned on skills of analysis (51% dissatisfied) and behaviours such as resilience and self-regulation (48%);
- Employers would also welcome primary schools increasing their engagement with business (27%) to fire pupils' interest in subjects like science and technology and help inspire them about possible future careers;
- After the age of 11, businesses think there is scope for greater focus on work awareness and future possibilities, with more than a third (37%) highlighting the case for more engagement with business to boost young people's understanding and inspire them about future options and a third (33%) looking for careers advice to be improved as a priority;
- Businesses believe that as well as helping young people after 11 to develop core competences of self-management (37%) and literacy and numeracy (36%), schools and colleges could be doing more to enable them to develop technical skills (25%) by applying science, technology, engineering and maths (STEM) knowledge;
- Only a third (34%) of businesses rate as satisfactory the foreign language skills of school and college leavers entering the jobs market, with the major EU languages of French (51%), German (47%) and Spanish (45%) most commonly mentioned as in demand;
- Three quarters of businesses (75%) are willing to play a greater role in delivering careers advice in schools and colleges; and
- More than four out of five businesses (84%) across the UK feel the quality of careers advice young people receive is not good enough.

8.0.12 These findings are supported by Research by the Kent Charity CXK[30], which found that a lack of social networks, in the form of family and friends, was a key barrier to young people being able to seek and secure meaningful work, with 90% stating that they had no contacts relevant to their career aspirations.

[29] Helping the UK Thrive, CBI/Pearson Education and Skills Survey 2017, July 2017

[30] Kent Charity CXK Examines the Barriers to Youth Employment in Thanet, retrieved September 25th, 2017

8.0.13 A lack of access to careers guidance between the ages of 14-17, and minimal or irrelevant exposure to employers, was found to have had a detrimental effect on the work readiness of those surveyed. Many young people reported that school work experience placements had been insignificant in terms of their duration and frequency; and were unrelated to their personal career aims.

8.0.14 Researchers also found that a lack of confidence was a key issue; with many young people struggling to build the confidence to make calls and manage interviews. 88% of respondents cited a lack of self-esteem and personal confidence as significant hurdles to finding and sustaining employment. Furthermore, young people's confidence in their local area was weak, with the majority of respondents uncertain or nervous about their future in Thanet. Only 19% indicated a confidence in the future employment prospects available in the area. Most notably, mental wellbeing was identified as the prime barrier to EET (Education, Employment or Training), and researchers found that there was little evidence to suggest that mental wellbeing was being directly addressed. 60% of those interviewed scored lower than the national average on the Warwick-Edinburgh Mental Wellbeing Scale.

Poor skills attainment and high levels of worklessness

8.0.15 The detailed evidence base which accompanies the SELEP Skills Strategy clearly points to the fact the SELEP region has lower productivity, more 'workless households', more benefit claimants and poorer skills levels than other LEP areas and on a much larger scale.

Qualifications (Jan 2016-Dec 2016)

	South East	South East	Great Britain	
Individual Levels				
NVQ4 And Above	834,400	33.2	38.2	
NVQ3 And Above	1,324,400	52.8	56.9	
NVQ2 And Above	1,820,400	72.6	74.3	
NVQ1 And Above	2,168,800	86.5	85.3	
Other Qualifications	149,900	5.9	6.6	
No Qualifications	189,200	7.5	8.0	

Qualifications (Jan 2016-Dec 2016)

	Kent	Medway	Essex	Southend on Sea	Thurrock	East Sussex
Individual Levels						
NVQ4 And Above	36.9	30.3	31.7	28.2	22.8	34.1
NVQ3 And Above	54.4	50.8	53.4	47.2	43.1	52.9
NVQ2 And Above	73.2	73.2	73.5	68.7	62.3	72.9
NVQ1 And Above	86.6	87.0	86.6	82.7	81.4	88.9
Other Qualifications	6.5	5.5	5.6	7.0	7.3	4.6
No Qualifications	6.9	7.5	7.8	10.3	11.3	6.5

Source: ONS annual population survey
Notes: For an explanation of the qualification levels see the definitions section.
Numbers and % are for those of aged 16-64
% is a proportion of resident population of area aged 16-64

Fig 13. Qualifications in SELEP compared to the South East of England

8.0.16 SELEP's qualification levels are failing to keep up with the national average and are well below those of neighbouring and similar LEPs such as Hertfordshire, Coast to Capital and London. With UK skills levels falling internationally (ranked 25th for intermediate skills), this will continue to impact on the competitiveness of the SELEP area.

8.0.17 FE participation for all ages across SELEP has fallen as has English and Maths participation and attainment.

8.0.18 Across the SELEP area there are considerable numbers of workless households (83,000) and out of work benefit claimants (over 40,000). These numbers are higher than most other LEP areas.

8.0.19 Claimant counts are particularly high in Pier (9.7%), Golf Green (8.0%), Rush Green (6.1%) and Kursall (4.8%) in Essex; Central St. Leonards (6.2%); Gensing (5.2%); Castle (4.8%); Baird (4.5%); and Tressel (4.2%) in East Sussex[31]; and Margate Central (8.2%); Clintonville West (7.6%); Sheerness East (6.2%); Castle (5.9%); Dane Valley (5.3%); Sheerness West (5.2%); Newington (4.9%); Stanhope (4.6%); and St. Radigunds (4.6%) in Kent & Medway[32].

Weak business engagement in skills

8.0.20 One of the key challenges in managing a transformation in the skills market from one dominated by subsidy and grants, to one built on individual and corporate investment is that it can take time, there is the danger that individuals and businesses don't invest in updating their skills.

8.0.21 Apprenticeship starts across the SELEP area have stayed fairly static over the last few years, remaining at around 32,000, in comparison to a population of nearly half a million 15-24-year olds. The government has a target of 3 million apprenticeships to 2020, which proportionately would equate to SELEP contributing 6.5 times as many as it currently does, at 210,000.

8.0.22 The SELEP area has had nearly 368,000 job vacancies in the past 12 months, with large numbers in priority sectors. This is a much higher number than any other LEP area outside London. Jobs range from entry-level jobs to highly technical roles. Across most sectors, employers require digital skills.

A desperate shortage of creative-tech (STEAM[33]) talent

8.0.23 As we have already identified, there are forecast to be 7m tech job openings across Europe by 2026, because of the number of retiring technical baby boomers. In addition, few people are undertaking higher-level training (of the 75,000 individuals participating in Advanced Learner Loans in 2014/15, only 5,000 were at Level 4[34]) and the UK fares poorly in comparison with international competitors for L4-5 STEM skills (only 10% of people hold higher level technical qualifications, placing England 16 out of 20 countries and every year the UK only produces around a third of people trained at technician level compared to Germany[35]).

8.0.24 By 2020, DfE estimates we will need around 300,000 trained technicians to enter the labour market annually[36].

Conclusions and key questions about skills priorities

8.0.25 From the consultation work we have undertaken as part of the development of the Strategic Economic Plan, it's clear that respondents recognise the need to improve the educational outcomes in SELEP; create

[31] Claimant Count, East Sussex in Figures, retrieved June 2017
[32] Kent County Council Business Intelligence Bulletin, June 2017
[33] Science, Technology, Engineering, Arts and Maths
[34] SFA/DFE (Oct 2016) Further Education and Skills Statistical First Release
[35] OECD (2014), Skills Beyond School: Synthesis Report
[36] DfE estimate based on OECD and IPPR data

more STEAM technicians; invest in improved careers information, advice and guidance; better prepare people for the likely impact of technology on employment; and potentially re-skill them to work in some of the emerging employment opportunity areas.

8.0.26 In addition to these 'Skills' challenges, a number of respondents also identified the need to address some key employability challenges, including addressing worklessness and the potential impact of automation on some of the more elementary professions.

8.0.27 Lastly, recognising that encouraging businesses to invest in improving their 'industrial' capabilities is something that will need to underpin any attempt to stimulate an 'industrial' renaissance in the country, the issue of encouraging businesses to invest in enhancing their capabilities will be key to our future success. This is particularly true of many of the small and medium sized businesses that are not currently covered by the apprenticeship levy.

8.0.28 Key questions arising from this analysis include;

- **Work Readiness of Young People:** Whilst there is a lot of activity going on to influence young people's career choices (Enterprise Advisers, Enterprise Co-ordinators, EBP's, Careers Services etc) and help prepare them for the world of work, there is some evidence to suggest that young people would benefit from richer and more regular experiences of the world of work. How can we achieve this goal?
- **Inspiring young people into creative-tech careers:** We desperately need more young people to think about pursuing technician apprenticeships and technical degrees and develop skills in Design, Digital and Advanced Engineering (as cross cutting enabling technologies). However, many young people's experiences of these careers are limited and/or that they perceive that they are not that exciting. How can we work together to overcome these issues to create a pervasive programme of STEAM inspiration activities to inspire more young people into creative-tech careers?
- **Improving skills attainment:** How can we improve skills attainment levels in mainstream education across the SELEP area?
- **Addressing worklessness:** How can we overcome the structural worklessness issues that appear to affect some parts of the region?
- **Improving business engagement and investment in skills:** How can we encourage businesses to invest in renewing their capabilities – for example, investing in new machinery and the people skills to operate that machinery?
- **Improving the delivery of Technician Education:** How can we plug the gap in our technical education system and/or take advantage of the Government's plans to launch a series of Institutes of Technology;
- **Making sure everyone is able to participate fully:** How can we re-skill those people that are displaced by the advent of automation and/or that find it difficult to participate in mainstream education?

9.0 Science, Research and Innovation

9.0.1 In order to understand where there are opportunities to strengthen the region's regional innovation system, we need to try and understand what the current knowledge base of the region is, what the potential is for improvement and how different sectors of the economy (business – academia – community and public sector) might work together better to improve the impact of science, research and innovation on the region.

9.0.2 Building on the analysis of Innovate UK grant awards and patents undertaken in an earlier section will enable us to better understand the Science, Research and Innovation strengths of the region, and its constituent parts, and where opportunity exists to secure investment to further build our science and research capabilities.

9.0.3 However, such an analysis is not without some challenges. Some of the publicly available data only concentrates on institutions that are based within a particular LEP area. Regions and localities are not totally isolated from the outside world and businesses and universities work across administrative boundaries.

9.0.4 Some of the publicly available data on the HE sector in SELEP is based on an analysis of the 3 universities with head offices within the SELEP region, but SELEP actually works with nine universities that operate across the area, through the U9 group (which includes the University of Essex; the University of Greenwich; the University for the Creative Arts; the University of Kent; Anglia Ruskin University; University of Brighton; University of Sussex; Canterbury Christ Church University; and Writtle University College).

The general science, research and innovation picture in SELEP

9.0.5 Wherever you look for data about the science, research and innovation capabilities of the SELEP region, you are generally left feeling that it is not one of the top performers in the country, but is considered somewhat of a moderate performer. For example;

- In 2015, the Department for Business Innovation and Skills undertook a piece of research entitled Mapping Local Comparative Advantages in Innovation[37], which identified;
  - Business Enterprise R&D Expenditure in the South East LEP Region averaged circa £1000 per FTE in 2012, ranking the area in the second tier of innovative regions (behind many of the LEPs across the Oxford to Cambridge Arc, East Anglia and the North West);
  - SELEP ranked 23rd out of 39, in terms of volume of publications from the HE-sector, against the 11 'old' industrial strategy priority sectors; 25th against the number of publications on the 8 great technologies; and 23rd in terms of Innovate UK's priority sectors;
  - Knowledge Assets in the area included Anglia Ruskin University; Canterbury Christ Church University; the University of Essex; the University of Kent; Writtle College; Kent Science Park; The Bridge, Dartford; Chesterford Research Park, Saffron Walden; the University of Essex Knowledge Gateway,

[37] Mapping Local Comparative Advantages in Innovation, BIS, July 2015

Colchester; CEME Innovation Centre, Rainham, Essex; Discovery Park - Sandwich Kent; Nucleus Business and Innovation Centre, Dartford, - Discovery Park (AgriFood; Business Services; Energy; Industrial Biotechnology; Pharmaceuticals & Healthcare); and Enterprise West Essex @ Harlow South (Advanced Manufacturing/Engineering; Aerospace; Creative Industries; Pharmaceuticals & Healthcare)[38];

- SELEP was ranked 28th out of 39 LEPs in terms of Innovate UK - Total Grants, £s per FTE, 2010-15;
- SELEP ranked 27th out of 39 LEPs for % of all in employment who are in 'science, research, engineering and technology' professions and associated professions, July 2013 – June 2014;
- SELEP was ranked 26th out of 39 LEPs in terms of % of residents qualified to level 'NVQ 4+', 2013;
- SELEP was ranked 20th out of 39 LEPs for number of STEM Doctorates (that meet criteria for a research based award), 2013-14
- SELEP was ranked 20th of 39 LEPs in terms of % of FTE in 9 of the 11 'old' Industrial Strategy Sectors, 2012;
- SELEP was ranked 33rd out of 39 LEPs in terms of % of FTE in the 5 Science & Technology Sectors, ONS definitions, 2013;
- SELEP was ranked 14th of 39 LEPs in terms of Net Business Birth and Death Rate, 2012;
- SELEP was ranked 18th out of 39 LEPs in terms of UKCIS – Product or Process Innovation, % of enterprises, 2008-10

- In the same year, the Enterprise Research Centre (a partnership between Warwick Business School, Aston Business School, Imperial College Business School, Strathclyde Business School and Birmingham Business School) produced a report entitled Benchmarking Local Innovation: The innovation geography of the UK[39], which identified;
  - 18% of firms in the SELEP area are engaged in Product and Service Innovation (ranking the LEP =22nd out of 39 LEPs);
  - 49% of businesses in the SELEP area introduced new to the market innovations between 2010 and 2012 (ranking the LEP =21st out of 39 LEPs);
  - 9% of firms were engaged in Process Innovation in the 2 year period between 2010-2012 (ranking SELEP =31st out of 39 LEPs);
  - 28% of firms were engaged in some form of strategic and marketing innovation between 2010-2012 (ranking the LEP =16th out of 39 LEPs);
  - 15% of firms were engaged in R&D over the same period (ranking SELEP 27th out of 39 LEPs);
  - 18% of firms were collaborating for innovation between 2010 and 2012 (ranking SELEP 30th out of 39 LEPs);

[38] NB. This report predated Round 2 Enterprise Zones
[39] Benchmarking Local Innovation: The innovation geography of the UK, ERC, 2015

- Overall SELEP ranked 30th out of 45 LEPs and devolved administrations, in terms of innovation performance;

9.0.6 However, on a more positive note;

- Mapping Local Comparative Advantages in Innovation identified;
  - SELEP was ranked 6th out of 39 LEPs, in terms of the number of STEM first degrees with honours, qualifiers, 2013-14;
  - SELEP was ranked 4th out of 39 LEPs, in terms of Inventor population (with patents 5 to 10 years old), (up to October 2014) – based USPTO and Espacenet data;
  - SELEP was ranked 15th out of 39 LEPs in terms of Total Reported Income per HE Academic FTE - 2010/11 - 2012/13;
  - SELEP was ranked 12th out of 39 LEPs in terms of Halifax Quality of Life Survey, 2014, ranking based on median rank of each LEP's constituent Local Authorities;

Key Science, Research &Innovation Strengths in SELEP

9.0.7 Initial data supplied U9 group indicates that the Higher Education sector in the SELEP region feels like it has particular strengths in;

- **Medical and Digital Health Technologies**;
- **Digital Technologies**;
- **Creative and Cultural Industries;**
- **Future Cities**

9.0.8 In addition to these core capabilities, the data supplied by U9 also suggests some expertise in **High Value Manufacturing**; **Business and Marketing**; **Mathematical Sciences**; and **Environmental Biology**.

9.0.9 In addition to these nodes of potential science and research capability, other centres of excellence in or on the border of SELEP include;

- **Automotive/Advanced Propulsion** (HSSMI and the University of Brighton);
- **Agri-Food** (East Malling Research, Natural Resources Institute, NIAB/EMR and Agri-Tech East);
- **Health and Social Care** (Public Health England Relocation to Harlow, South East Healthcare Technology Alliance, Kent Surrey Sussex Academic Health Science Network & Eastern AHSN, One Nucleus, Med City and Kent County Council's plans to establish a Kent Medical Campus)
- **Data/ICT/Cyber** (the Institute of Analytics and Data Science; ESRC Business and Local Government Data Research Centre; the Research Institute in Automated Program Analysis and Verification; Cambridge Wireless; and Tech East);
- **Manufacturing** (CEME/Harlow College/Procat); and
- **Creative and Cultural Industries** (the National College for Creative and Cultural Industries & High House Production Studios)

9.0.10 In addition, data from the 2014/15 HEFCE Higher Education business and community interaction survey[40], indicates that;

- The University of Brighton was ranked 56th, the University of Essex 68th, the University of Sussex 84th, the University of Kent 87th and the University of Greenwich 100th out of 170 UK universities for income generated from research related activities - collaborative research involving public funding by HE provider 2015/16 (£ thousands);
- The University of Essex was ranked 23rd, the University of Sussex 28th, the University of Greenwich 31st, the University of Kent 64th and the University of Brighton 67th out of 170 universities for income generated from research contracts;
- The University of Kent was ranked 42nd, the University of Brighton 60th, the University of Sussex 79th, the University of Greenwich 81st, the University of Essex 85th and Canterbury Christ Church University 92nd out of 170 universities for income generated from business and community services;
- The University of Greenwich was ranked 26th, the University of Essex 27th, Canterbury Christ Church University 85th, the University of Brighton 101st and the University of Kent 123rd out of 170 universities for income generated from Income from regeneration and development programmes;

9.0.11 As far as IP generation is concerned, the tables below show the volume of licences and patents generated from the U9 university members that record data as part of the interaction survey (although the large disparities in volumes may also point to some differences in how the data is recorded).

	No. of new patent applications filed in year		No. of patents granted in year		Cumulative patent portfolio		No. of patents filed by external party naming the HEP as inventor	
HE provider	2015/16	2015/16 overseas	2015/16	2015/16 overseas	2015/16	2015/16 overseas	2015/16	2015/16 overseas
The University of Greenwich	**15**	**14**	**35**	**30**	**133**	**118**	**1**	**0**
The University of Sussex	**16**	**14**	**5**	**4**	**92**	**83**	**1**	**1**
The University of Kent	**9**	**5**	**4**	**3**	**51**	**24**	**79**	**43**
The University of Essex	**6**	**3**	**1**	**1**	**21**	**13**	**0**	**0**
The University of Brighton	**1**	**0**	**1**	**0**	**46**	**39**	**1**	**0**
Canterbury Christ Church University	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

	Licence numbers (including patents, copyright, design, registration and trade marks)												
	Non-software licences granted							Software only licences granted					
	SMEs	Other (non-SME) commercial	Non-commercial organisation	Total number (non-software)		Total number (of non-software) generating income in the period		SMEs	Other (non-SME) commercial	Non-commercial organisations	Total number (software only)		Total number (of software) generating income in the period	
HE provider	2015/16	2015/16	2015/16	2015/16	2015/16 overseas	2015/16	2015/16 overseas	2015/16	2015/16	2015/16	2015/16	2015/16 overseas	2015/16	2015/16 overseas
The University of Greenwich	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**35**	**16**	**67**	**59**	67	59
The University of Sussex	**2**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**1**	**21**	**22**	**4**	0	0
The University of Kent	**0**	**2**	**2**	**4**	**0**	**1**	**0**	**226**	**3**	**571**	**800**	**0**	113	0
The University of Essex	**1**	**0**	**5**	**6**	**5**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	0	0
The University of Brighton	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0
Canterbury Christ Church University	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0

Fig.14. Patent Applications and Licences granted by Universities in the SELEP region

[40] HE-BCI record 2015/16, January 2016

A weak prevailing culture of innovation

9.0.12 When one looks at some of the best science, research and innovation performers around the world and in the UK, you generally find there is a strong prevailing culture of innovation in the geography with strong investment by business, higher education and government in research activities. This is largely because there is a view that investment from government and the academic sector in R&D generally 'crowds-in', or 'pulls through' investment from the private sector.

9.0.13 In order to measure the prevailing culture of innovation in a locality, researchers have developed a classification for assessing the amount of funding invested in R&D by a range of different sectors of the economy, which encompasses gross domestic expenditure on R&D (GERD); business enterprise expenditure on R&D (BERD); government expenditure on R&D (GvERD); Higher-education expenditure on R&D (HERD); and Private non-profit expenditure on R&D (PNPRD).

9.0.14 If one looks at the most research-intensive parts of the globe, they generally have high levels of HERD, BERD and GovERD, to create a really strong innovation culture locally.

9.0.15 As far as SELEP is concerned, data from BEIS and the Smart Specialisation Hub indicates that;

- Business Enterprise expenditure on R&D (BERD) investment per resident population in the SELEP area is below international comparisons, but above the national average;
- Government Expenditure on R&D (GovERD) investment in the UK is significantly lower than international leaders, but better in SELEP area than the cross-LEP Average;
- Higher Education expenditure on R&D (HERD) investment in SELEP region is significantly lower than Cross LEP Average;
- Private non-profit expenditure on R&D (PNPRD) investment in the SELEP region is relatively non-existent;

9.0.16 Collectively, all sectors in the SELEP region need to look to do more to become a more innovative economy, create a stronger local innovation culture and commercialise our world leading science base to drive growth across the UK;

9.0.17 In 2015, total expenditure on research and development (R&D) performed in UK businesses, in current prices, increased by 5% compared with 2014, to £20.9 billion. In March 2012, as part of a publication The UK R&D Landscape[41], it was reported that *"the business enterprise component of R&D expenditure in the UK is low by international standards, even after adjusting for structural difference between countries. It is also concentrated in the hands of a few very large firms and the small number of industrial sectors in which they are based".*

9.0.18 On an annual basis, the 400 largest R&D performers accounted for approximately 75% of the 2015 total R&D expenditure estimate. The South East and East of England continue to dominate where R&D expenditure takes place in the UK. These 2 regions combined accounted for 43% of UK business R&D

[41] The UK R&D Landscape Enhancing Value Task Force, Revised March 2012, Alan Hughes and Andrea Mina

expenditure in 2015. These regions combined also employed 79,000 full-time equivalent (FTE), which made up 38% of total R&D employment in 2015.

Low take up of national innovation programmes

9.0.19 One of the ways to stimulate more business based science, research and innovation activity is to try and encourage more firms to take full advantage of national innovation programmes, operated by Innovate UK.

9.0.20 Many of these programmes operate around the broad principle of trying to encourage collaborations between research bodies (like Universities and Research Bodies), private sector firms and/or public bodies to solve specific industrial / societal research problems.

9.0.21 According to Innovate UK's own data, the £ grant per business in the SELEP area is lower than the UK average (with SELEP ranked 29 out of 39 LEPs in 2014 for the amount of funding awarded to the area).

9.0.22 That said, there are likely to be massive additional opportunities to draw more of this kind of funding into the area (remembering of course that a substantial proportion of the £4.7 billion Industrial Strategy Challenge Fund[42] is built around similar principles). This funding is available to support innovation in its broadest sense and can support the public sector to develop new business models for delivering public services, as much as it can the private and academic sectors. So where are the opportunities?

Business-HE collaborations

9.0.23 There are three ways we can consider where the real opportunities are to encourage collaboration between the private sector and academia on joint research challenges. One of the ways to do this is to simply map where universities in the SELEP region have particular research competencies and where these overlap with private sector capability.

9.0.24 Looking at past Innovate UK awards in the SELEP region and the material supplied by the U9 universities about where they have particular research strengths, it is possible to identify a number of potential domains for creating large scale collaborative R&D programmes in the SELEP region, to strengthen business productivity. These include;

- **Agri-Food;**
- **Transport & Logistics** (Marine, Low Carbon Vehicles, Powertrain, Digital Opportunities);
- **Life-sciences & Med-Tech** (Precision Medicine, Pharma, Digital Health);
- **Construction** (BIM, Future Communities, Smart Buildings);
- **Low carbon environmental goods and services** (Energy Systems)

9.0.25 In addition to these key sectors, **Design and Creativity**, **Advanced Manufacturing** and **Digital Technologies** are cross-cutting enabling technologies/capabilities that are important capabilities for all these sectors, insofar that they support businesses to innovate.

9.0.26 In addition to these established research areas, there will also be more niche or emergent opportunities.

[42] The Industrial Strategy Challenge Fund aims to bring together the UK's world leading research with business to meet the major industrial and societal challenges of our time

9.0.27 Another way is to look at the findings of the two Science and Innovation Audits (SIAs) that were produced recently, covering the East of England and Innovation South geographies (although it should be noted that it is not uncommon to find SIA's covering a narrower agenda that the total innovation potential of a region, in an attempt to maintain a strong actionable approach).

9.0.28 That said, the priorities of the two Science and Innovation Audits 's covering the SELEP geography are shown in the table overleaf.

9.0.29 The third and final way is to understand what innovate UK funding the HEIs have secured in the past, and for what projects (although it's probably worth recognising that this is only one channel of funding for such research activities). Our records indicate the following;

- **University of Brighton: (Low Carbon Vehicles and Med-Tech):** LOOP hEat pump ciRcuit (LOOPER); Validation of protein biomarkers to diagnose the early onset of sepsis; CoolR split cycle engine; Reporter Tissue Engineering Scaffold for Wound Healing; Preclinical control of stem cells using functionalised self-assembling hydrogels; HeatWave II; Libertine waste heat recovery unit; University of Brighton and Building Sustainability Limited; CryoPower; and FlySafe - Flywheel-hybrid safety engineering
- **University of Kent: (High Value Manufacturing, Med-Tech and Agri-Food)** Developing a Responsive InTeractive Advocate ('RITA'); Pig IVF and genetics: a route to global sustainability; Epilepsy Networks - Joined Up Thinking for Better Care; A Functional Optical Coherence Tomography Ophthalmoscope; Authenticated Self - The "aS" Platform; SmartCare Caller Id; Translation of Step-changing Bioprocesses and Expression System Technologies for Next Generation Protein Biologics Production in CHO Cells; Enzyme co-localisation and aggregation for enhanced metabolic activity for commodity chemicals; and Optimising the Delivery of Superior Genetics through Advanced Genomic Selection of Bovine Embryos.
- **University of Essex: (Transport, ICT and Electronics, Photonics & Electrical Systems)** Active Distributed & Dynamic Optical Network Access Systems; TFCloud, assuring the provenance of Cloud based Web Services; Seamless Mobility App; Data Analytics Driven by Ontologies; and Innovative tools to enable exploration of complex and specialised data sets;
- **Anglia Ruskin University: (ICT and Future Cities):** Independence for people with age related problems; Using real time rainfall data to predict weather conditions in order to increase the prevalence of cycling and walking trips around the City of Peterborough
- **University of Greenwich (Agri-Food, Electronics, Photonics & Electrical Systems, Sustainable Energy & Low Carbon Vehicles):** Interactive Self Health-Monitoring Embedded System; Bioactive predator refuge to reduce waste in apple and pear production & processing; Design of re-usable biomaterial packaging systems for the chilled meat and fish industry; Grid-shift and peak reduction through Distributed Storage, Smart DC and VPP models; Redox Batteries for Balancing Urban M; Agent-based controllers for electric vehicles and micro-generators; Reduced pesticide contamination of groundwater
- **Natural Resources Institute at the University of Greenwich:** New biofumigation-based approaches to sustainable control of soil-borne pathogens

	Innovation South Exploiting world class assets in Digital Enabling Technologies	East of England Innovation Region
Themes	Applying Digital Enabling Technologies in; • Connected digital • Marine and maritime • Bioscience • Advanced engineering	• Life Sciences • Agri-tech • Advanced materials and manufacturing • ICT
Strategic Assets	• University of Kent: Interdisciplinary Centre for Cyber Security • Canterbury Christ Church University: KM Edge Engineering Hub • Brighton: Digital Catapult Centre • Brighton: 5G testbed • Natural Resources Institute at the University of Greenwich at Medway	• Ford's major research facility at Dunton • Anglia Ruskin University: Med-Bic (Chelmsford) • University of Essex: Smart Enabling Technologies Testbed
REF specialisms	• University of Kent: Computer Science and Informatics • University of Kent: Marine Environments • University of Kent: Biological Sciences • University of Kent: Psychology, psychiatry and neuroscience • University of Kent: Physics • University of Sussex: Quantum Technologies • University of Sussex: Computer Science and Informatics • University of Sussex: Marine Environments & Marine Engineering • University of Sussex: Biological Sciences, Allied Health Professions and Psychology, psychiatry and neuroscience • Sussex: General Engineering • Canterbury Christ Church University: Communication, Cultural and Media Studies, Library and Information Management • Canterbury Christ Church University: Agriculture, veterinary and food science • University of Brighton: Communication, Cultural and Media Studies, Library and Information Management • University of Brighton: Computer Science and Informatics • University of Brighton: Aeronautical, mechanical, chemical and manufacturing engineering (low carbon internal combustion systems) • University of Greenwich: Agriculture, veterinary and food science • University of Greenwich: Aeronautical, mechanical, chemical and manufacturing engineering • University of Greenwich: Computer Science and Informatics	• University of Essex: ICT & Data Analytics • University of Essex: Politics and International Studies • University of Essex: Psychology, Psychiatry and Neuroscience • University of Essex: Modern Languages and Linguistics • University of Essex: Robotics and AI • Anglia Ruskin University: Communication, Cultural and Media Studies • Anglia Ruskin University: Environmental Sciences •
Networks and Clusters	• Kent, Surrey and Sussex ASHN • Bio-Gateway • Wired Sussex • West Sussex Health and Life Science Cluster	• Southend: SouthendTechMeet • Essex: M11 Health Enterprise Forum
Industry Concentrations	• North Kent: Manufacturing • Brighton: Gaming • Kent & East Sussex: Marine & Maritime	• South Essex: Med-Tech • Essex: Building and Construction • Essex: Offshore Energy

Fig.15. Summaries of the two SIAs that cover SELEP

Civic-Tech and Community-Tech Research and Development

9.0.30 In addition to considering business-academic collaborations, two opportunities to establish wider research collaborations - to address societal issues – include Civic Tech (involving Public-Private-Academic Partners) and Community-Tech (Private-Academic-Community) Opportunities.

9.0.31 With the limited number of large firms in the SELEP region, large public-sector bodies can potential play a very positive role in working with businesses and universities to help them develop innovative technologies, products and services.

9.0.32 Some examples where the public/community sector in the SELEP area has bid for innovation funding to feed their own R&D programmes in the past include;

- Smart Cities
  - **Kent County Council:** Digitising the High Street: Beyond 'Clicks and Bricks';
  - **Thanet District Council:** 'Design for Future Climate Phase 2 Programme: Dalby Square, Cliftonville'
- Health & Social Care
  - **Thurrock Council:** Animate (Ambient Assisted Living)
- Transport
  - **Southend on Sea Borough Council:** Utilising EMobility Hubs to Enhance the End to End Journey;
  - **Southend on Sea Borough Council:** INTELLIGENT CITY: Future on Sea
  - **Freight Transport Association:** Collaborative and AdaPtive Integrated Transport Across Land and Sea

Conclusions and key questions about science, research and innovation priorities

9.0.33 During the course of our consultations about the SEP, the higher education sector suggested they felt that funding for local growth could be better targeted and more could be done to improve the incentives for Universities to work with local partners more coherently on local growth initiatives;

9.0.34 Similarly, a number of partners raised questions about the current effectiveness of the cross-sector research partnerships. An analysis of the prevailing innovation infrastructure would seem to indicate there is a shortage of sector based support mechanisms that operate across the LEP area (or ones with real critical mass in the federated areas for that matter). This may because of the region's proximity to London, and the significant amount of networking that goes on in London;

9.0.35 Increasingly going forward, Industrial Strategy Challenge Funding, Innovate UK Funding and the UK Shared Prosperity Fund provides a significant opportunity to support firms, public sector bodies and research institutions to collaborate on research projects which overcome common problems, but that also help the private sector to innovate and improve their productivity.

9.0.36 Key questions arising from this analysis include;

- **Intervention Design:** What are the key policy interventions partners feel they should target to improve the scale of research, science and innovation in the area?

- **Current take up of national innovation programmes in the business community in the SELEP region is not as high as other parts of the Greater South East:** Why is this and what more can be done to encourage more take up?
- **There appears to be a lack of sector networks across the LEP Area:** Whilst the public-sector track record in stimulating and encouraging 'clusters' is patchy, specialist networks like the Cambridge Network, Wired Sussex or OBN provide valuable opportunities for businesses in key sectors to network with each other, develop research consortia and find out about new funding opportunities. The management guru responsible for conceiving the concept of clusters - Michael Porter - has suggested clusters need a minimum of 400 firms if they are to be successful. What more can be done to stimulate these kinds of sector based networks?
- **Fostering a stronger innovation culture.** Areas with a high BERD, high HERD and high GovERD generally have a stronger innovation culture in wider society than those that don't. Is there more partners can do together to drive up interest in innovation?
- **What are the priority research domains for SELEP:** Evidence would suggest some common industrial-academic areas of interest for joint research programmes in the fields of Agri-Food; Transport & Logistics (Marine, Low Carbon Vehicles, Powertrain, Digital Opportunities); Life-sciences & Med-Tech (Precision Medicine, Pharma, Digital Health); Construction (BIM, Future Communities, Smart Buildings); and Low carbon environmental goods and services (Energy Systems). Are these the right priorities?
- **Opportunities to promote collaboration between Universities, the Public Sector, Private Sector and Community:** You can't move in dynamic metropolitan areas these days without tripping over 'Smart-City' initiatives - collaborations between city administrations, private sector firms and universities to pilot and testbed new innovations to make the city operate more effectively and efficiently. In general, societal needs appear to map strongly against business capabilities in the fields of Health and Social Care (demand management, tele-care, monitoring etc); Infrastructure Systems (Border crossing, integrated energy solutions, condition monitoring); Integrated Transport (particularly big data solutions to reduce congestion, improve rural transport solutions, improve journey times and reliability); Built environment (Offsite manufacture, BIM, SMART Garden Communities, Energy Systems, Smart Factories); and Energy systems (offshore, renewables etc.). Are there any opportunities to collaborate on joint research programmes around these domains in the SELEP area?
- **Enhancing Creativity/Design, Advanced Engineering and Digital Capabilities:** Universities possess significant STEAM expertise and can often play an active role in helping to inspire young people to develop their careers in this direction (through their links with Science Centres, Fab Labs, Coding Clubs etc). Is there more the LEP should be doing to draw businesses, universities and the public sector to organise more STEAM inspiration activities?

10.0 Business Start-up and Growth

10.0.1 There are 352,705 businesses in the SE LEP area, with the majority (99.7%) being SMEs and only 1,055 large employers, 550 of which are head office operations.

10.0.2 Generally speaking, the economy of the SELEP region is fairly consistent with the structure of the national economy, in terms of size and scale of businesses. Thurrock generally has a slightly larger proportion of medium and larger businesses than other parts of the region, where small and micro firms dominate.

UK Business Counts (2016)						
	SELEP (Numbers)	SELEP (%)	SE of England (Numbers)	SE of England (%)	East of England (Numbers)	East of England (%)
Enterprises						
Micro (0 To 9)	147,480	89.9	352,060	89.8	227,690	89.7
Small (10 To 49)	13,795	8.4	32,690	8.3	21,560	8.5
Medium (50 To 249)	2,290	1.4	5,875	1.5	3,755	1.5
Large (250+)	505	0.3	1,460	0.4	945	0.4
Total	164,070	-	392,085	-	253,955	-
Local Units						
Micro (0 To 9)	161,005	85.4	385,755	85.2	249,255	85.1
Small (10 To 49)	22,715	12.0	54,375	12.0	35,460	12.1
Medium (50 To 249)	4,365	2.3	10,960	2.4	7,230	2.5
Large (250+)	550	0.3	1,615	0.4	1,010	0.3
Total	188,635	-	452,705	-	292,955	-

Source: Inter Departmental Business Register (ONS)
Note: % is as a proportion of total (enterprises or local units)

An entrepreneurial location

10.0.3 As far as start-up activity is concerned, data from Counts of births, deaths and active enterprises for 2015 indicates all parliamentary constituencies in the SELEP region experienced a net gain in business stock apart from Rochford and Southend East which saw a net loss of 10 businesses, making it one of only two areas in the country to experience a lower birth rate that death rate that year.

UK Business Counts (2016)						
	Kent	Medway	Essex	Southend on Sea	Thurrock	East Sussex
Enterprises						
Micro (0 To 9)	52,740 (89.5)	7,190 (90.1)	55,875 (89.9)	6,135 (91.0)	5,215 (91.2)	20,330 (90.1)
Small (10 To 49)	5,110 (8.7)	650 (8.1)	5,245 (8.4)	505 (7.5)	395 (6.9)	1,895 (8.4)
Medium (50 To 249)	890 (1.5)	120 (1.5)	825 (1.3)	80 (1.2)	95 (1.7)	285 (1.3)
Large (250+)	195 (0.3)	25 (0.3)	190 (0.3)	20 (0.3)	15 (0.3)	50 (0.2)
Total	58940	7,980	62,135	6,740	5,720	22,560
Local Units						
Micro (0 To 9)	58,295 (84.6)	8,020 (84.6)	60,155 (85.9)	6,630 (86.6)	5800 (84.2)	22,105 (86.1)
Small (10 To 49)	8,700 (12.6)	1,160 (12.2)	8,170 (11.7)	845 (11.0)	835 (12.1)	3,005 (11.7)
Medium (50 To 249)	1,650 (2.4)	270 (2.8)	1,550 (2.2)	160 (2.1)	220 (3.2)	510 (2.0)
Large (250+)	235 (0.3)	30 (0.3)	195 (0.3)	20 (0.3)	25 (0.4)	45 (0.2)
Total	68,880	9,480	70,065	7,665	6,885	25,665

Source: Inter Departmental Business Register (ONS)
Note: % is as a proportion of total (enterprises or local units)

Fig.16. Business Counts in the SELEP region

10.0.4 In fact, the SELEP sub-region is the 12th most entrepreneurial LEP area in the country, with 45 firm births per 10,000 residents (compared to London, which leads the way at 89 per 10,000 residents)[43]. Similarly, the SELEP sub-region is ranked 17th in terms of 3-year survival rates.

10.0.5 Top performers in the region in terms of in year growth in stock were Thurrock, Dartford and Gravesham which experienced a net growth of 12.44%, 7.90% and 7.01% in overall stock respectively.

High Growth Start-ups

10.0.6 When considering the level of start-up activity in a particular locality, it's always worth trying to look data for high growth start-ups, as these potentially provide an opportunity to boost the scale of growth in a particular area.

10.0.7 According to the 2017 ERC Local Growth Dashboard, SELEP is ranked joint 6th out of 39 LEPs (at 2%) for 'scaling start-ups', as measured by UK-owned firms born in 2013 and surviving to 2016 that grow to £1m+ turnover in 2016 and had a turnover of less than £500k in 2013. This indicates that

10.0.8 As far as Graduate Enterprise is concerned, data from the 2014/15 HEFCE Higher Education business and community interaction survey, indicates that the University of Brighton and the University for the Creative Arts appear to be the most active in graduate start-up creation, with UCA in particular being quite successful at sustaining these businesses beyond the three-year period. However, one may need to be slightly cautious about some of the data, as some universities appear to have registered a nil return.

10.0.9 Looking at data for the number of active graduate start-up firms indicates the University of Brighton, the University for the Creative Arts, the University of Essex, the University of Kent and the University of Sussex have all been active in graduate enterprise in the recent past.

10.0.10 That said, data from the Smart Specialisation Hub indicates that the graduate start-up activity generated through the indigenous SELEP Universities (i.e. those with a base in the region) is below the national average and opportunities may exist to encourage more graduate start-ups in the area.

10.0.11 Looking at HEFCE data[44] for the number of HE students studying in the South East LEP Area (at HE, FE and Alternative Provider) indicates that there are 64,575 students that study in the area annually, with 48,120 HEI registered and HEI taught, 2,730 HEI registered and studying at a Further Education College (FEC), 3,300 FEC registered and studying at a Further Education College, 470 taught by alternative providers and 9,050 registered with the Open University.

10.0.12 As far as major subject areas studied are concerned Subjects allied to Medicine leads the way, with Anglia Ruskin and Canterbury Christ Church being the main providers; followed by Business Admin, led by Anglia Ruskin, Canterbury Christ Church, the University of Essex and the University of Kent; Biological Sciences, led by Canterbury Christ Church, the University of Essex and the University of Kent; Social Studies, led by the University of Essex and the University of Kent; and Creative Arts and Design, with a very even spread across a range of providers.

[43] UK Local Growth Dashboard 2017. ERC
[44] Local HE profiles 2014-15, HEFCE

	Number										Number still active which have survived at least 3 years									
	Spin-offs with some HEP ownership		Formal spin-offs, not HEP owned		Staff start-ups		Graduate start-ups		Social enterprises		Spin-offs with some HEP ownership		Formal spin-offs, not HEP owned		Staff start-ups		Graduate start-ups		Social enterprises	
HE provider	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15
Anglia Ruskin University	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The University of Brighton	0	0	0	0	0	0	31	27	3	0	0	0	0	0	0	0	5	3	0	0
Canterbury Christ Church University	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
University for the Creative Arts	0	0	0	0	0	0	47	30	0	0	0	0	0	0	0	0	102	81	0	0
The University of Essex	0	3	0	0	0	0	0	16	0	1	2	2	0	0	0	0	19	0	1	0
The University of Greenwich	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0
The University of Kent	1	0	0	0	2	3	9	11	0	0	4	4	0	0	14	2	14	11	0	0
The University of Sussex	0	0	0	0	0	0	0	2	0	0	2	2	1	0	9	9	22	21	1	1

	Number of active firms										Estimated current employment of all active firms (FTE)									
	Spin-offs with some HEP ownership		Formal spin-offs, not HEP owned		Staff start-ups		Graduate start-ups		Social enterprises		Spin-offs with some HEP ownership		Formal spin-offs, not HEP owned		Staff start-ups		Graduate start-ups		Social enterprises	
HE provider	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15
Anglia Ruskin University	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The University of Brighton	0	0	0	0	0	0	36	30	3	0	0	0	0	0	0	0	42	37	4	0
Canterbury Christ Church University	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
University for the Creative Arts	0	0	0	0	0	0	197	165	0	0	0	0	0	0	0	0	394	330	0	0
The University of Essex	3	2	0	0	0	0	28	17	1	1	22	22	0	0	0	0	9	7	0	1
The University of Greenwich	2	2	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0
The University of Kent	5	4	0	0	18	12	30	27	0	0	19	27	0	0	50	33	43	50	0	0
The University of Sussex	3	3	1	1	9	9	24	24	1	1	9	12	22	2	33	33	95	98	30	30

	Estimated current turnover of all active firms (£ thousands)										Estimated external investment received (£ thousands)									
	Spin-offs with some HEP		Formal spin-offs, not HEP		Staff start-ups		Graduate start-ups		Social enterprises		Spin-offs with some HEP		Formal spin-offs, not HEP		Staff start-ups		Graduate start-ups		Social enterprises	
HE provider	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15
Anglia Ruskin University	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The University of Brighton	0	0	0	0	0	0	330	295	20	0	0	0	0	0	0	0	25	30	15	0
Canterbury Christ Church University	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
University for the Creative Arts	0	0	0	0	0	0	9850	8250	0	0	0	0	0	0	0	0	0	0	0	0
The University of Essex	230	199	0	0	0	0	80	73	3	8	1850	1750	0	0	0	0	0	0	0	0
The University of Greenwich	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
The University of Kent	998	499	0	0	1846	1750	692	263	0	0	0	1750	0	0	0	0	20	0	0	0
The University of Sussex	5940	850	432	382	2800	2550	7410	7310	0	0	4000	120	0	0	0	0	100	10	0	0

Fig.16. Graduate Enterprise figures for Universities in SELEP

10.0.13 Given the black line on the graph opposite represents the sector averages, it may be interesting to note that the number of undergraduates studying Physical Sciences, Mathematical Sciences, Computer Science and Engineering and Technology in the SELEP region are below the national averages.

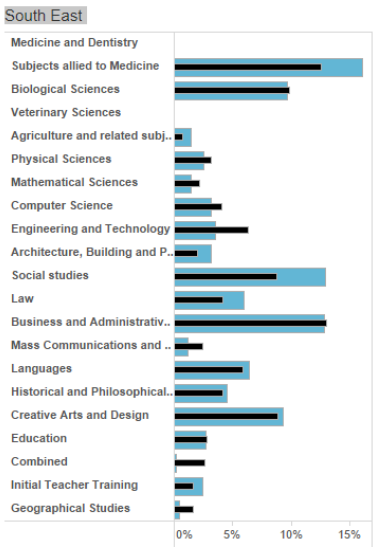

Fig.17. HE Curriculum offer in SELEP

Enterprise Zones

10.0.14 In addition to University start up activity, Enterprise Zones have a strong part to play in delivering 'added value' growth in the region. In the area, there are presently four key zones;

- **Newhaven Enterprise Zone:** covering advanced engineering, marine and environmental technologies linked to recent major developments, including the £1.3 billion Rampion Offshore Wind Farm and the £13 million University Technical College, specialising in marine and environmental engineering.

- **North Kent:** Centres of excellence for medical and life sciences, engineering and digital technologies. The Enterprise Zone's six sites, in Ebbsfleet Garden City, Medway and Maidstone, will offer state-of-the-art commercial space and a supportive environment that will help businesses to connect, collaborate and compete.
- **Discovery Park:** Occupying the former Pfizer site, Discovery Park has been host to five decades of ground breaking pharmaceutical research and development. Iconic drugs such as Viagra and Diflucan were discovered and developed here, and Pfizer retains a significant presence on the park. The Zone's extensive world-class laboratory facilities are designed around the concept of 'integrated research' for chemical, pharmaceutical and analytical research that will help meet today's and tomorrow's therapeutic and manufacturing needs.
- **Harlow:** Harlow Enterprise Zone is capitalising upon two of the town's existing strengths – Advanced Manufacturing and Life Sciences. The Anglia Ruskin Med-Tech Campus, to be located on the Enterprise Zone, will provide one of the world's largest health innovation spaces for companies of all sizes. It will also have a focus on IT with the establishment of a new business park and data centre complex.

10.0.15 In addition to these large-scale areas of industrial specialisation, two other important opportunities to promote greater industrial specialisation in the area are;

- The Thames Estuary Production Corridor, which has developed a vision for the area, built on creating a world class centre for production – leading global innovation, developing talent and cultivating world changing ideas.
- The proposed new Public Health England Science Hub which will be located on the vacant GlaxoSmithKline (GSK) site on Pinnacles Industrial Estate, west of Harlow town centre

High Growth Businesses & Scale Up Rates

10.0.16 In addition to examining spatial concentrations of businesses, it's also useful to look at the ambitions of the existing business base in the area and the number of high growth start-up firms. Again, according to the 2017 ERC Local Growth Dashboard;

- SELEP ranks 34th out of 39 LEPs, in terms of the Small High Growth Firm Incidence Rate (2013-16) at 1.5% compared to the UK at 1.7%;
- SELEP ranks 26th out of 39 LEPs for the High Growth Firm Incident Rate (2013-16) at 5.6% compared to the UK at 6.1%;
- SELEP ranks 25th out of 39 LEPs in terms of Survivor firms (born <2013) with £1-2m turnover in 2013 scaling to £3m+ in 2016 at 6.0% compared to the UK at 6.8%;

10.0.17 Similarly, the Scale Up Institute[45] ranks the SELEP area 25th out of 39 LEPs in terms of Scale-up Growth 2014-15 expressed per 100,000 of population and 21st in terms of Scale-ups expressed per 100,000 of population in 2015.

[45] The Scale-up Review on Economic Growth 2016, The Scale-up Institute, November 2016

10.0.18 The 2016 Scale-up Review on Economic Growth seems to suggest there are 582 Scale-ups in the SELEP area (based on 2015 ONS data). The overall Scale-up Growth Indicator (SGI) score for SELEP is 23 out of 39 LEPS, the Business Inventory Growth & Revenue Indicators (BIGRI) score for SLEP is 11 (this collates data on 12 indicators of growth and revenue of local companies as proportion of overall business population, with 12 being the lowest possible score). Collectively, this data suggests there is more that needs to be done by the collective partnership to stimulate more high growth/scale-up oriented businesses in the area.

Conclusions and key questions about business start-up and growth priorities

10.0.19 Whilst there is clear evidence that Growth Hubs deliver significant benefits to the local economy[46] and SELEP scores reasonably well in terms of the current levels of Enterprise, there is also considerable evidence to suggest that the SELEP region performs less well in terms of high growth start-ups and Scale - ups/High Growth Businesses. Graduate Entrepreneurship presents somewhat of a mixed picture.

10.0.20 At present, investment in the core business support offer appears to focus predominantly on maintaining 3 Local Growth Hubs, with ERDF being used to support more specialised services (although its perhaps a little too early to assess the success of these programmes). Post-Brexit, whilst the UK Shared Prosperity Fund might have a role to play in supporting this agenda, it's a little unclear at present about how and when this new funding arrangement will start to impact on localities.

10.0.21 Key questions arising from this analysis include;

- **Intervention design:** All the current evidence suggests that buoyant business support eco-systems are characterised by a range of public and private sector partners working together to stimulate greater take up of business support services, inspiring businesses to work on their business. Do we have the current arrangements right?
- **Local Growth Hubs & the One-Stop-Shop Model:** Given the government's desire to want to see Local Growth Hubs deepen the level at which they intervene (i.e. more face to face support) and the current local debate about funding the next phase of Local Growth Hubs, are there any benefits to be gained from pooling resources to create a shared web/telephone channel (which could automatically route calls based on location of the call) to allow more investment to flow into front line resources? How do the existing three Local Growth Hubs integrate into some localities aspirations to want to create separate 'Apprenticeship Hubs' offering a first-stop-shop for Apprenticeship support;
- **High Growth Start-ups & Graduate Entrepreneurship:** What can be done to increase the number of High Growth Start-up businesses in the SELEP region? Is there any value in looking at how a SELEP and partners might work with the regions Universities to promote and encourage increased levels of entrepreneurship?
- **Business Productivity and Growth:** As an area that appears to have a business community that is less 'growth orientated' than other parts of the UK, is there anything that can be done to encourage the

[46] For example, see BEST Growth Hub Economic Impact Assessment, EBS Consulting 10th August 2017

region's businesses to be more ambitious/growth orientated? There is some evidence to suggest that increasing the scale and number of business support providers in a particular locality (with the growth hub acting as the first stop shop) can increase businesses growth aspirations, as 'business improvement' becomes more widely embedded in the culture of the community.

11.0 Encouraging trade and inward investment

11.0.1 In addition to growing new businesses and helping those that are here to grow more, significant value can be achieved for the SELEP economy from encouraging more businesses to trade overseas and foreign owned companies to locate in the UK.

The UK's Global Gateway

11.0.2 SE LEP is home to the nation's largest concentrations of ports, transport and logistics firms and advanced manufacturing companies, it also has strong clusters of companies in life sciences, creative and cultural industries, health, land based industries and tourism.

11.0.3 SE LEP's sea ports and the road and rail networks that serve them provide the UKs most important gateway to the rest of the world. SE LEP's sea ports – and the road and rail networks that serve the ports - provide the UK's most important gateway to the rest of the world. Each year around 14m passengers and 85m tonnes of freight goes via our ports – that is over half of England's international sea passenger population and a quarter of England's sea freight.

11.0.4 If Port of Dover were a separate country, it would be the world's 55th largest economy (with £119bn of trade per annum). 5 million tourist vehicles pass through the Port per annum and up to 10,000 lorries use the Port each day.

11.0.5 Conversely, the congestion arising from the lack of such investment has a material, immediate impact on the productivity of companies throughout the UK and the performance of the UK economy as a whole.

Securing more Foreign Direct Investment (FDI)

11.0.6 Government policy can help boost productivity and growth across our economy, by increasing competition and helping to bring new ways of doing things to the UK. Despite only 1.2% of UK businesses being in receipt of FDI, they accounted for 18% of employment and over one-quarter of GVA in 2014, indicating these few companies represent a number of multinationals who control large proportions of UK economic activity[47].

11.0.7 We are aware that there is an aspiration in some quarters in SELEP to want to increase the number of larger firms in the area, by being more proactive in landing Foreign Direct Investment. Generally speaking, the South East LEP area fairs better than many of the more peripheral regions of the UK for FDI investment, although London continues to dominate.

11.0.8 Since Brexit and the fall in the value of the pound, the UK has potentially become a more attractive location for foreign investors. The EU and North Americas still account for the majority of the UK's FDI projects. The

[47] UK foreign direct investment: trends and analysis: summer 2017, ONS

EU is the continent with the highest overall value, accounting for two-fifths of projects, followed by the North Americas with a further one-quarter of projects.

Encouraging more International Trade

11.0.9 According to a report by Harris, R (2013) into Inward Investment and Exporting in the LEPs[48], SELEP ranked 33rd out of 39 LEPs, in terms of the Share of market-based establishments with 10 employees or more, that export, 2010. In reality, SELEP's performance in this study may be slightly hampered by the fact it was surveying businesses with 10 employees or more, as small and micro businesses are over-represented in SELEP.

11.0.10 Recent analysis by BBF[49], using a methodology developed by Centre for Cities[50], ranks SELEP 21st of 38 LEPs in terms of value of export per job, 29th for export of goods and 10th for service exports. SELEP's exports were worth £20.7bn in 2015, split evenly between goods and services.

	Total			Goods			Services		
	Value	Value per job		Value	Value per job		Value	Value per job	
	£m	£	Rank	£'000	£	Rank	£'000	£	Rank
Basildon	860.0	83,601	276	429.1	5,133	303	430.9	5,154	141
Braintree	690.6	54,842	216	442.8	8,074	193	247.8	4,518	186
Brentwood	502.3	36,362	185	186.1	5,119	304	316.2	8,696	58
Castle Point	193.3	20,842	302	122.1	5,860	276	71.2	3,416	251
Chelmsford	671.8	83,067	337	301.6	3,631	345	370.2	4,456	188
Colchester	726.3	81,325	314	405.6	4,988	311	320.7	3,943	218
Epping Forest	391.0	49,390	343	163.5	3,311	354	227.5	4,606	182
Harlow	442.5	41,728	270	284.9	6,827	237	157.6	3,777	229
Maldon	285.9	19,861	172	208.4	10,494	126	77.5	3,903	223
Rochford	287.9	21,643	202	200.0	9,239	161	88.0	4,064	210
Southend-on-Sea	654.2	65,741	286	389.2	6,467	254	265.0	3,472	246
Tendring	388.3	39,072	235	252.7	6,033	269	135.7	5,833	116
Thurrock	555.7	64,300	280	303.1	6,139	267	252.5	4,021	213
Uttlesford	465.8	39,255	215	236.8	7,645	212	229.0	5,045	149
Ashford	1,193.4	55,054	10	833.9	31,960	8	359.5	4,209	202
Canterbury	564.2	63,958	60	238.1	16,515	35	326.1	5,027	152
Dartford	1,344.6	62,789	98	962.7	13,717	66	381.9	4,372	197
Dover	542.3	35,128	352	293.4	2,343	372	248.9	5,044	150
Gravesham	299.2	29,375	199	118.8	9,322	156	180.4	4,010	215
Maidstone	1,111.8	75,202	295	630.5	2,437	369	481.3	7,052	85
Medway	1,264.9	88,534	320	626.3	3,936	337	638.6	4,867	166
Sevenoaks	763.3	51,507	339	388.3	4,344	322	375.0	3,733	233
Shepway	613.8	37,657	65	345.3	17,372	28	268.4	3,520	245
Swale	1,334.3	49,457	194	992.1	8,064	194	342.2	5,395	132
Thanet	539.4	42,337	146	310.8	11,795	95	228.6	3,536	244
Tonbridge and Malling	804.7	57,572	184	312.7	10,509	125	492.0	3,406	253
Tunbridge Wells	953.8	62,482	246	293.4	7,932	198	660.4	3,722	234
Hastings	422.4	31,372	310	246.0	3,987	336	176.3	5,146	143
Rother	337.3	28,269	195	109.4	10,556	123	227.9	2,884	283
Wealden	733.9	48,983	112	421.0	13,197	73	312.9	4,130	207
Eastbourne	340.3	39,853	121	123.6	12,649	81	216.7	4,283	199
Lewes	512.4	36,621	248	308.4	6,600	250	204.0	4,984	153
BTVLEP	3,796.4	16,296	8	1,928.6	8,278	23	1,867.9	8,018	5
Coast to Capital	14,032.6	16,699	7	6,367.0	7,577	28	7,665.6	9,122	3
Enterprise M3	16,427.2	19,980	2	9,401.3	11,435	3	7,025.9	8,546	4
Hertfordshire	8,476.3	14,287	15	5,678.6	9,571	13	2,797.7	4,716	16
London	139,135.5	27,626	1	38,708.5	7,686	27	100,427.0	19,940	1
Oxfordshire LEP	6,371.4	17,513	5	3,645.8	10,021	7	2,725.6	7,492	7
South East Midlands	11,837.5	13,976	19	6,868.0	8,109	24	4,969.5	5,867	9
Thames Valley Berkshire	8,691.9	17,360	6	3,543.0	7,076	30	5,148.9	10,284	2
South East LEP	20,791.7	13,018	21	11,480.7	7,188	29	9,311.1	5,830	10
England	406,814.4	16,019		256,314	10,093		216,940	8,542	

Fig.18. Export performance of the various districts in the SELEP Region

[48] Harris, R (2013) into Inward Investment and Exporting in the LEPs: Report to BIS, September 2013.

[49] Analysis conducted by Rupert Waters, at Buckinghamshire Business First

[50] The methodology used in this bulletin is derived from Centre to Cities' Cities Outlook, 2017, available at: http://www.centreforcities.org/wp-content/uploads/2017/01/Cities-Outlook2017-Web.pdf

11.0.11 While Swale has the highest total export value among the SELEP districts, Ashford has the highest value per local job at £55,054, ranking 10th of all 380 local authority districts in Great Britain, led by its strong goods exports. Brentwood has the highest value of services exports per job in SELEP at £8,696, ranking it 58th out of 380 local authorities in Great Britain.

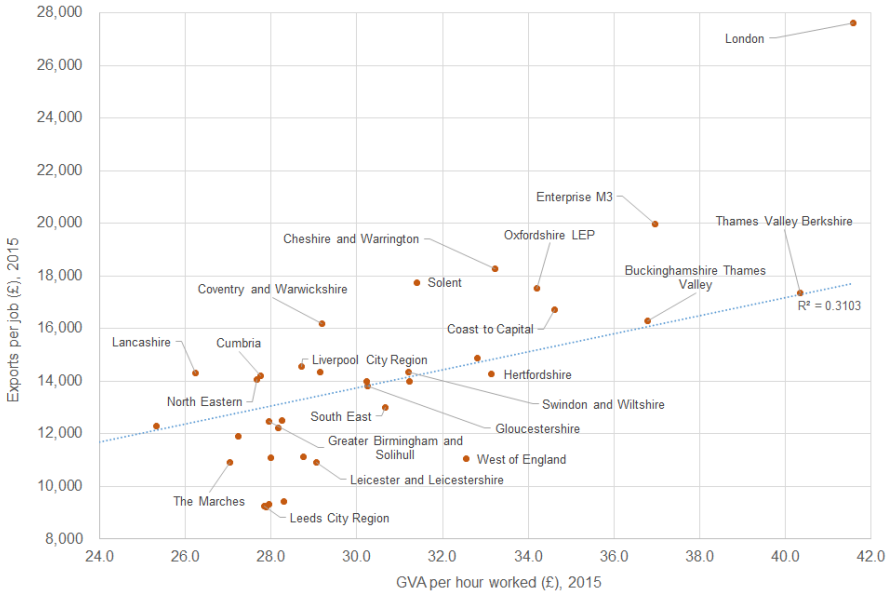

Fig 19: Exports & productivity by LEP, 2015, Source: BBF analysis of Regional Trade Statistics, HMRC, 2017 & Estimates of Exports by Region, ONS, 2017, Regional Accounts, ONS, 2016

The need to maintain a frictionless border

11.0.12 One of the potential downside risks for the SELEP economy (and nationally for that matter) arising from 'Brexit' is the potential disruption which could very easily see an Operation Stack situation become the norm, paralysing the national economy and the local road network.

11.0.13 This issue has recently been highlighted by Charlie Elphicke, MP, in his paper, Ready on day One – Meeting the Brexit Borders Challenge[51].

11.0.14 This report has been supplemented by a study by Oxera, which reports that Britain will be hit by huge border delays, require vast lorry parks in the south-east, and suffer more than £1bn a year in economic damage, according to a stark economic analysis of the likely impact of customs checks after Brexit[52].

11.0.15 Oxera explain, *"We estimate the impact of such a scenario to be at least £1bn per year. This is an extremely conservative estimate – it does not account for the economic costs of the uncertainty involved, the extra staff needed (for hauliers, ports and customs officials), the congestion associated with calling Operation Stack [which sees the M20 used as a makeshift lorry park], the land required for the additional customs checks [in the form of lorry parks], or of the wider economic impacts of jobs moving overseas due to uncertainty over the operation of just-in-time logistics. The full cost is likely to be much higher."*

[51] http://elphicke.com/downloads/ready-on-day-one--meeting-the-brexit-borders-challenge.pdf
[52] Brexit: the implications for UK ports, Oxera, August 2017

11.0.16 The study also sounds the alarm over a new customs IT system due to be delivered just as Britain leaves the EU, noting that *"It was agreed well before the referendum was announced that the current HMRC customs clearance system, CHIEF, would be replaced in March 2019," it states. "It's now due to be delivered just before we leave the EU and, having been planned to deliver 60m clearances per annum, it will now need to deliver 300m per year, with no understanding yet of what the customs deal with the EU looks like."*

11.0.17 Tailbacks in 2015 caused by strikes at Calais were estimated to cost Britain's economy £1 billion[53]

Conclusions and key questions about trade and inward investment

11.0.18 As far as FDI is concerned, the SELEP region performs better than many other, more peripheral parts of the UK. Its location to London and proximity to major international gateways can work in its favour.

11.0.19 However, the smooth running of these gateways is something which desperately needs to be maintained, as the potential for significant delays being experienced at the borders, post Brexit, is not something that the evidence suggests either the SELEP or the national economy can cope with.

11.0.20 As far as International Trade is concerned, the SELEP region appears to fare less well than some other parts of the UK.

11.0.21 Key questions arising from this analysis include;

- **Foreign Direct Investment:** As far as FDI is concerned, the places which are increasing their success rates are those that try and create connections in value chains, connect investors to market opportunity and are prospect led, rather than just treating the inward investment process as a piece of place marketing. Is there any more that can be done to increase the quality and volume of deal-flow and FDI successes, by connecting up different elements of the business support value chain to work together more effectively on the FDI process?
- **International Trade:** What more can be done to encourage a more international outlook in business and encourage businesses to trade overseas more? How can we particularly encourage greater trade in services, given it makes up such a large proportion of our economy?
- **Frictionless Borders:** There are serious concerns locally that potential disruption at our borders is likely to cause significant congestion and get in the way of the smooth running of the key transport gateways in SELEP. Is there more that can be done, to bring together the port authorities, EuroTunnel, technology providers and Border Force to develop solutions to overcome this issue?

12.0 Infrastructure

12.0.1 In order to improve our productivity, we must upgrade our commercial property, digital, energy, transport, water and flood infrastructure, and better align central government infrastructure investment with local growth priorities. In addition, to regenerate some parts of the SELEP region and to create attractive places in which people want to live work and play will require investment in town centre regeneration, public realm and green infrastructure.

[53] Charlie Elphick Website

12.0.2 Over the coming months SELEP will be developing a detailed Infrastructure Investment Plan and an Energy Strategy. These will build on the Kent Growth and Infrastructure Framework; the Greater Essex Infrastructure Framework; and the various infrastructure delivery plan's in East Sussex.

12.0.3 Our task here is not to repeat these excellent documents. What is presented here are some of the broader questions, issues and challenges that these documents raise.

The impact of indigenous growth and the growth of London

12.0.4 With circa 300,000 new homes forecast to be built across the SELEP area by 2030, standard estimates would suggest we could have a shortfall of about £6bn of infrastructure investment, which the region needs to ensure our infrastructure keeps pace with this scale of housing growth[54][55].

12.0.5 The SELEP Economy is clearly very strongly liked to London's economy. Analysis undertaken for the Kent Growth and Infrastructure Framework (2015) forecasts that 17% of all new commuting trips across Kent will be destined for London, a large proportion of which will be by rail. The growth of London as a major economic powerhouse is also likely to put significant pressures on the SELEP economy. Early indications from the London Plan suggest that whilst London is likely to have a housing need of circa 66,000 new homes per annum to 2041 and a need for circa 47,000 new jobs every year until 2041, current pressures on housing and employment land means that London is looking to some of the surrounding areas to help it deliver this growth. This issue, and the impact of the scale of this growth on the South East and the East of England is something that the South East of England Council's (SEEC) and the East of England Local Government Association (EELGA) continue to discuss with the Mayor of London, to explore opportunities to collaborate on the new London Plan, overcome barriers to housing delivery and lobby for infrastructure investment.

12.0.6 The Thames Estuary is essential to the growth of London and the South East. The area's importance has been acknowledged by Government with the establishment of the Ebbsfleet Development Corporation (tasked with the delivery of a Garden City at Ebbsfleet) and the Thames Estuary Growth Commission's review into the area's regeneration.

Investment needed to unlock Housing Growth & Garden Communities

12.0.7 Accelerating housing delivery is a key ambition of SELEP and its partners. Amongst its peer LEPs, SELEPs housing output is the largest nationally outside of London. The SELEP area has seen Housing Completions rise from 7,990 in 2012/13 to 10,670 in 2016/17, an increase of 33% in the rate of delivery. Our collective work with both private and public-sector developers is making a demonstrable difference, with Housing Starts growing from 6,620 in 2012/13 to 12,280 in 2016/17, an increase of 85%.

12.0.8 Whilst housing growth is forecast to increase across the whole of the SELEP area in the next economic cycle, major developments include;

[54] Based on estimates of funding shortfalls on current Infrastructure Funding Models, which suggest an additional £18,500 per dwelling: see http://www.huckfield.com/blog/filling-the-infrastructure-funding-gap/

[55] See also Cllr Paul Carter CBE presentation, January 2017

- **Otterpool Park Garden Town -** Otterpool Park is a new garden town of up to 12,000 homes and 85 hectares of employment land. It will include land for employment, schools, shops, health facilities and abundant green space;
- **North Essex Garden Communities** – comprising three potential sites, one West of Braintree (up to 10,000 homes), one West of Colchester (up to 24,000 homes) and East of Colchester (up to 9,000 homes);
- **Dunton Hills** – up to 5000 new homes, approximately midway between Basildon and Brentwood. There will be around 2500 new homes on the Brentwood side of the development, which will be the main Dunton Hills village. 2500 additional homes may be built in later stages of development;
- **Harlow and Gilston** – up to 8,500 new homes built in a series of six villages, each of which will have its own character;
- **The Ebbsfleet Garden City** – with plans to develop up to 15,000 homes over the next 15 years. Ebbsfleet forms part of the plans for Thames Gateway Kent, an area covering broadly the area east of the M25, bounded to the north by the Thames River and Estuary and to the south by the A2 and the North Downs.

12.0.9 In addition to the above, recent Housing Infrastructure Fund bid submissions included a range of asks of government to support the following housing led infrastructure schemes; **A120 Millennium Way Slips** (The A120 is the strategic east-west route linking the M11 and Stansted Airport with the A12, Colchester and the port of Harwich); **Colchester Northern Gateway** (a package of improvements at the A12 Junction 28 in the Colchester Northern Gateway Development area); **Maidstone** (the signalisation and enlargement of the M20 J7, A249 Bearsted Road and A249 Bearsted Road/New Cut Road roundabouts); **A2500 Lower Road, Minster** (construction of a 3-arm roundabout at Barton Hill Drive/Lower Rd and improve a 1.1km section of the A2500 Lower Road between the A249 and Barton Hill Drive on the Isle of Sheppey); **Swale Transport Infrastructure Junction 5a Plus** (a package of major highway schemes imperative to enabling delivery of the Swale Local Plan); **Weald Triangle** (infrastructure development that will deliver significant additional housing units in the Hailsham area); **Thurrock Purfleet Centre Development** (to support infrastructure costs for Purfleet centre development targeted at Land Assembly, Remediation, transport improvements, flood mitigation); **Medway** (2 major infrastructure improvements, one rail and one road, to improve connections to the Hoo Pennsinsular); **Essex CC** (potentially 4 projects); **Ashford Newtown Works** (Land remediation and assembly); **Basildon Town Centre** (Car Park 2 and East Square Development); **West of Braintree Garden Community** (Highways improvements to provide additional network capacity and multiple site access points, including new and improved site access from the A120 and improvements to the B1256); **Chelmer Waterside** (a new link road to enable the delivery of Chelmer Waterside - a key strategic growth site identified within Chelmsford's Local Plan); **Hythe Legacy Development** (proposals for redevelopment to bring to life an area of brownfield land that has previously been undevelopable due to environmental issues such as contamination and lack of infrastructure); **Northern Gateway Housing and**

Employment Land Infrastructure (to provide the necessary connectivity infrastructure to enable the development of 560 new housing units, including an extra care village plus 450,000sq ft of employment space); **Dover Bus Rapid Transit** (Necessary highways and transportation infrastructure required to serve major residential expansion of Whitfield, connecting new homes with Dover Town Centre and Dover Priority Railway Station); **Bedfordwell Road, Eastbourne** (infrastructure to improve the viability of the site); **Gravesham Grove Road** (Site purchase to enable delivery of a new access road and accelerate housing delivery);

Tendring Colchester Borders Garden Community (Highways improvements & site access via provision of a new A120 to A133 link road together with one at grade junction for the Garden Community); **North St Quarter, Lewes** (to address infrastructure challenges and improve viability of the site); **Maidstone Bus Station**; **Maidstone East Railway Station/Former Royal Mail Sorting Office** (Re-provision of surface level commuter car park to enable delivery); **North Heybridge Flood Alleviation and Regeneration Scheme** (to alleviate risk of flooding and improve waterside sites to accelerate delivery of planned homes, support delivery of affordable homes, create opportunity for additional supply of homes including mixed development to support local economy and meet local need); **Former Gas Works, Ship Street, Folkestone** (Land remediation); **Southend Better Queensway** (regenerate the northern end of Southend town centre, including the renewal of the Queensway housing estate); **Swale Queenborough and Rushenden** (Delivery of a Primary School required as part of the Education mitigation for earlier phases of redevelopment); **Swale Lower Road** (Widening of a section of Lower Road between the A249 and Barton Hill Drive, Minster-on-Sea, Sheppey); **Haine Road Roundabout** (New roundabout at Haine Road Manston Road to delivery 785 homes); **Thanet Columbus Avenue Road Link** (New Columbus Avenue road link and roundabout to Manston Road to facilitate strategic allocations of housing sites); **Thanet Potential local highway scheme**; **Thurrock Chadwell St Mary** (bid to support abnormal utility costs); **Tunbridge Wells Woodsgate Corner** (a proposed roundabout scheme to replace an existing signalised junction on the A264); and **Tunbridge Wells** (A264/Hall's Hole Road/Blackhurst Lane Junction Improvement);

12.0.10 This is by no means a comprehensive list of all of the housing enabling infrastructure schemes that we are presently aware of, but it provides a flavour of potential demand and the potential scale of some of the infrastructure funding shortfall.

Alleviating congestion by investing in transport infrastructure

12.0.11 As far as the transport infrastructure needs of SELEP are concerned, they are complex and diverse with the usual mix of needs, covering transport majors, pinch points, junction improvements, relief roads, railway improvements and public transport investments.

12.0.12 As highlighted earlier, in an international gateway region like SELEP, our consultation has shown there are significant concerns about the potential impact that future border arrangements might have on journey times and journey time reliability. Some parts of the region already have significant issues. Similarly, our job here is not to recreate an Infrastructure Investment Plan.

12.0.13 That said, partners in the South East have opined on the major RIS2 priority transport infrastructure schemes, through Transport for the South-East (TfSE), which prioritised the following schemes in SELEP;

- **A21 Kippings Cross to Lamberhurst** - offline dual carriageway and Flimwell and Hurst Green – Bypasses);
- A three lane **Lower Thames Crossing** (including M2 Junction 3 and M20 Junction 6 via A229) and wider network improvements (including M2 Junction 7 Brenley Corner, Dualling of the A2 from Lydden to Dover); and
- **A27/M27 South Coast Corridor** (A27 Lewes to Polegate, A27 Between B2123 Falmer Interchange and A293 Junctions, A27 Worthing & Lancing, A27 Chichester, M27 Junction 12 to A27/A3(M) Junction – upgrade to motorway standard and smart motorways and M27 J3 to M271/A35 Junction);

12.0.14 The existing Dartford Crossing is a major freight route between Kent and the major distribution centres in the Midlands and the North. However, the capacity is overloaded for large periods of the day and it is extremely vulnerable to incidents – over 300 times a year the Crossing is fully or partially closed[56]. The delivery of a new three lane Lower Thames Crossing is a major priority for SELEP partners.

12.0.15 Similarly, their Local Transport Plan, Essex County Council continues to prioritise investment in;

- **The A12/A47 corridor**; and
- **The A120 trunk road linking Harwich port to the M11**;

12.0.16 Our understanding is that Kent County Council and KMEP[57] are also lobbying for investment in;

- **The extension of Crossrail to Ebbsfleet as a minimum, and preferably to Gravesend;**
- **A new Thanet Parkway station;**
- **The rebuilding of Maidstone East station, Strood station and Swanley station**
- **Station and/or track improvements at Canterbury West station; Ashford International to link Rye and Hastings with High Speed 1;**
- **Proposed changes to Thameslink which would see 2 new trains per hour from Ashford to Cambridge; 2 new trains per hour from Rainham to Luton;**
- **Retaining international services at Ashford;**
- **Rail investment in East Kent to support market viability and in West Kent to ease overcrowding;**
- **Dualling the A2 from Lydden to Dover;**
- **Improving the M2-M20 connectivity (by upgrading the A229 and A249);**
- **Improving the A2 Bean & Ebbsfleet Junction; and**
- **Bifurcation of Port Traffic and delivery of the M20 Lorry Area;**

12.0.17 In addition, the Mayor of London, SEEC and EALGA have prioritised the following major transport infrastructure schemes which impact on SELEP;

- **West Anglia Mainline and Crossrail 2 North** (London - Stansted-Cambridge-Peterborough);

[56] Local Transport Plan 4: Delivering Growth without Gridlock 2016–2031, Kent County Council, 2016
[57] Key priorities for KMEP according to Infrastructure Summit, January 2017

- **Great Eastern Mainline** (London - Ipswich - Norwich);
- **Essex Thameside** (London - South Essex / London Gateway Port);
- **Thames Gateway Kent: Crossrail 1 ext. East and HS1 route** (London - North Kent - Channel Tunnel)
- **Lower Thames Crossing;** and
- **Brighton Mainline** (London - Gatwick - Brighton)

12.0.18 In addition to the above, a number of ports in the SELEP region are also keen to expand to enable them to deal with increased heavy bulk freight. If the UK aspired to be a top international trading nation, encouraging and supporting port investment is vital.

12.0.19 Similarly, partners own infrastructure plans contain a range of priority projects, ranging from Sustainable Travel, Public Transport, Road, Rail and other schemes.

12.0.20 Whilst this is not a comprehensive list of transport priorities, it covers the major schemes impacting on the SELEP region.

Broadband

12.0.21 The Government's Broadband Delivery UK project has published its latest Q2 2017 take-up data for the state aid supported roll-out of "superfast broadband" (24Mbps+) services across the United Kingdom[58], which shows the federated areas of SELEP are doing well in terms of % customer take-up of Fibre to The Cabinet (FTTC).

12.0.22 These figures really only really show how many homes have taken up "superfast broadband" (24Mbps+), rather than recording the particular speed of density of broadband coverage in a particular area. Crucially, because the BDUK contracts include a clawback (gainshare) clause, which requires the suppliers to return part of the public investment when customer adoption of the new service passes beyond the 20% mark in related areas, it looks as if over £645 million could be returned nationally via clawback and efficiency savings, which BDUK has estimated could be enough to boost the UK coverage of fixed line superfast broadband networks from 95% by the end of 2017 to 98% by the end of 2020.

12.0.23 The goal of all the major authorities in the SELEP area is to extend services to cover 100% of homes and businesses in the SELEP Region and some areas have expressed a desire to get involved in 5G trails and in rolling out faster speeds through Fibre to The Premises (FTTP).

Commercial Property

12.0.24 Another major priority for all the authorities in the SELEP area is to improve the availability of commercial premises in the area – particularly incubation centres, co-working spaces and grow on premises – to respond to the growing freelancer community being created by the changing working conditions, but to also address the impact of Permitted Development Rights, which have seen a large number of commercial offices converted to residential premises in the area.

[58] Q2 2017 "Fibre Broadband" Take-up Progress for the £1.6bn BDUK Project, ISPReview, September 9th, 2017

BDUK Phase One Take-up (Average %)	Uptake % (Jun 2017)	RANK (as at June 2017)
Project Area		
Rutland	55.6	1
Surrey	49.4	2
Buckinghamshire and Hertfordshire	48.4	3
South Gloucestershire	48	4
Berkshire Councils	47.9	5
Northamptonshire	47.6	6
Central Beds, Bedford Borough, Milton Keynes	47.1	7
Oxfordshire	46.9	8
Coventry, Solihull, Warwickshire	46.2	9
West Sussex	46.1	10
Cambridgeshire, Peterborough	45.5	11
Cheshire East, Cheshire West & Chester, Warrington, Halton	45.5	12
Wiltshire	45.4	13
North Yorkshire	45	14
Suffolk	44.4	15
East Sussex, Brighton and Hove	44.2	16
Northumberland	44.1	17
Essex, Southend-On-Sea, Thurrock	44	18
Leicestershire	43.9	19
Worcestershire	43.9	20
Nottinghamshire	43.2	21
Lincolnshire	43.1	22
Kent and Medway	42.9	23
Hampshire	42.7	24
Norfolk	42.2	25
East Riding of Yorkshire	41.9	26
North Lincolnshire, North East Lincolnshire	41.8	27
Northern Ireland	40.9	28
Cumbria	40.3	29
Staffordshire and Stoke-on-Trent	39.7	30
Shropshire	39.6	31
Herefordshire and Gloucestershire	39	32
Dorset, Bournemouth and Poole	38.4	33
Devon & Somerset	38.3	34
Derbyshire	37.3	35
Durham, Gateshead, Tees Valley and Sunderland	37.3	36
Wales	37.3	37
Lancashire, Blackpool, Blackburn with Darwen	37	38
West Yorkshire	36.8	39
Highlands and Islands	36.8	40
Isle of Wight	36.2	41
Rest of Scotland	33.1	42
Newcastle upon Tyne	32.9	43
Greater Manchester	32.5	44
Merseyside	31	45

BDUK Phase Two Take-up (Average %)	Uptake % (Jun 2017)	RANK (as at June 2017)
Project Area		
North Yorkshire	35.4	1
Warwickshire	34.9	2
Norfolk	32	3
Suffolk	31.7	4
Northumberland	29	5
Cheshire	28.9	6
Nottinghamshire	28.2	7
Worcestershire	27.5	8
East Sussex	26.4	9
East Riding (Yorkshire)	26	10
Essex	24.4	11
West Sussex	23.9	12
Kent	23.7	13
Leicestershire	23.7	14
Lancashire	23.4	15
Hampshire	23.3	16
Telford & Wrekin	23	17
Wiltshire	22.3	18
Cornwall	22.1	19
Lincolnshire	21.2	20
North Lincolnshire	21.1	21
Northamptonshire	21	22
South Yorkshire	21	23
Staffordshire	20.7	24
Bucks & Herts	20.3	25
Derbyshire	20	26
Cumbria	18.3	27
Northern Ireland	17.6	28
Northern Ireland	17.6	29
Durham	17.2	30
South Gloucestershire	16.8	31
West Yorkshire	16.5	32
Bedford & Milton Keynes	14.9	33
Black Country	14.8	34
Dorset	14.1	35
Highlands and Islands	no data yet	36
Rest of Scotland	no data yet	37
Wales	no data yet	38

Fig.20: BDUK rollout figures for superfast broadband, Sept 2017

12.0.25 According to VOA statistics, Basildon has lost 19% of its total office floorspace; Rochford 15%; and Eastbourne 14% since its peak in 2010-11. However, some areas have also recorded slight gains, with Dover and Swale having appeared to buck the downward trend.

12.0.26 This forecasting data is being supplemented by a wealth of anecdotal evidence from businesses in the SELEP region which indicates that the changes to office to residential permitted development rights is combining with a lack of suitable commercial property development, to make it very difficult for firms to find suitable business premises when their leases come to an end.

Affordable, clean energy

12.0.27 Recent analysis conducted by PwC shows that the UK is decarbonising at the fastest rate among G20 countries with the carbon intensity of the UK economy falling by 7.7% in 2016 as a result of a decline in coal consumption, improved energy efficiency and economic growth. The UK outperformed China, the US and other EU countries, in reducing carbon intensity since 2000[59].

[59] https://www.gov.uk/government/news/claire-perry-at-climate-week-uk-decarbonising-fastest-in-g20

12.0.28 Whilst this is positive, SELEP believes that the importance of affordable, clean energy on the competitiveness of the regions businesses and the quality of life of its residents has sometimes been overlooked.

12.0.29 Sites off the south-east coast have been at the forefront of UK offshore wind energy for over a decade. The SELEP area is recognised as a nationally designated Centre for Offshore Renewable Engineering; we have the Ford Dunton Technical Centre, which is a world leader in green automotive technologies and Thames Enterprise Park, on the site of the former Coryton Oil Refinery, will be a hub for new Environmental Technology and Energy generation.

12.0.30 The area is home to the world's largest offshore wind farm in the London Array. Kent and Essex ports have facilitated construction projects and provide bases for ongoing operation and maintenance, creating business opportunities and jobs. The UK's goal is to grow offshore wind to 40GW of capacity by 2030. A key area for development is the eastern English seaboard where substantial development zones are planned. Kent and Essex ports are well placed to support these.

12.0.31 In parallel with this Strategic Economic Plan, in common with all other LEPs. SELEP will be developing an energy strategy to complement this document.

Blue and Green Infrastructure

12.0.32 Investment in Blue and Green infrastructure in a region likes SELP is vital to the maintenance of a high quality of life.

12.0.33 For example, in a recent survey, 70% of residents rated the Kent countryside as very important to them, with almost four in five using the natural environment for leisure or recreational purposes at least once a fortnight. Kent is also one of the driest regions in England and Wales with 73% of our public water supply being taken from groundwater with the remainder from rivers or storage reservoirs. In Kent we are already using most of the capacity in the county and in some places already exceeding it.

Other infrastructure

12.0.34 In addition to the above, partners have expressed concerns about funding for a range of other important infrastructure, including health, education, flooding and waste facilities, with the general feedback that there was often insufficient funding designated to cover these important infrastructure needs.

12.0.35 In addition, partners remain keen for the government to continue to support the Thames Estuary Asset Management Programme (TEAM2100) which will further reduce tidal flood risk to the 1.35 million people and £275 billion property in London and the Thames estuary through capital maintenance and refurbishment of tidal flood risk assets.

Conclusions and key questions about infrastructure

12.0.36 One of the major advantages of localism is the ability for local organisations to use whatever funding they can secure to try and generate betterment to reinvest in future infrastructure needs. However, all too often, the basis on which the funding is allocated doesn't allow localities to build up a consistent capability, with funding either emerging periodically on an 'initiative by initiative' basis, or national bodies charging

interest to local bodies to cover their own overheads (further limiting localities ability to build a consistent capability).

12.0.37 In addition, all too often, funding arrangements continue to follow a 'gap funding', marginal viability model, which limits the ability of localities to invest in schemes as equity partners, to generate significant betterment to further reinvest in closing infrastructure gaps. Future funding arrangements for localities would do well to review these issues.

12.0.38 Key questions arising from this analysis include;

- **Missing schemes:** Whilst we are not trying to recreate an infrastructure plan, is there anything else missing?
- **Investment model:** Is now the time to break free from the old investment model of the past, which favoured 'deal' based investments and initiatives? Given the likely changes to EU funding, do localities need to be arguing for a more concerted approach to devolved funding, which allows localities to develop the organisational structures they need locally to drive growth?
- **Delivery bodies:** Government is asking us to be clear about what, if any, additional delivery bodies we need locally to drive improvements in the performance of our economy. Do we have all the tools we need?
- **Infrastructure priorities:** The SEP will never be – and should never be - a fully comprehensive list of all our infrastructure requirements. It will more likely provide an overview of some of the key priorities. Are there any substantial items missing from the list, that should be included?

13.0 Conclusions and final questions

13.0.1 In this evidence base, we have sought to highlight some of the core issues that underpin the SELEP economy; identify any key differences between the different geographies of the area (where they exist and where data allows) and highlight some key questions about the kind of interventions partners feel would solve the productivity gap.

13.0.2 However, this document is intended to be a further element of the consultation process. It is not intended to be a final document, or to be too directive, but to highlight what the data indicates, point towards some strategic issues which might need to be addressed and ascertain partners views about how best to proceed.

13.0.3 It is accompanied by a proforma, looking for project ideas to include in an Action Plan, which we hope will accompany the high-level, Strategic Economic Plan.

13.0.4 Collectively, the evidence base points towards some of the themes partners would like to see brought through into the Draft Strategic Economic Plan.

A successful economy, with so much more to give

13.0.5 Perhaps one of the core thrusts of the SELEP proposition should be that we are a very successful economy, but we have so much more to give.

13.0.6 If every part of the SELEP economy performed as well as the best performing part of the region (Dartford), the SELEP economy could contribute a further £36bn to the national economy. Similarly, if every part of the region performed as well as London, the SELEP economy would contribute a further £94bn and if every part performed as well as the best performing part of the South East (West Berkshire) it would contribute a further £588bn.

13.0.7 Collectively, this data illustrates a strong case to government to continue to invest in SELEP; how inappropriate it is to compare the performance of the SELEP economy to the best performing parts of London and the South East; and how much more the SELEP economy could contribute to the UK economy, given the appropriate support.

An international Gateway: A region which is important to driving growth across the whole of the UK

13.0.8 SELEP is also a gateway to the UK and the gateway to Europe. The national economy and a major portion of our international trade depend upon SELEP's infrastructure. That infrastructure therefore needs to be treated as a top national priority matched by investment – ensuring good-quality access to the Ports to the M25 corridor, the M20, the A2/M2 and, the Lower Thames Crossing.

13.0.9 SELEP and its partners acknowledge the Government's commitment to the 'Northern Powerhouse' and 'Midlands Engine' as national priorities to help rebalance the economy and to spread the benefits and impacts of economic growth across the country. However, the success of the Northern Powerhouse and Midlands Engine is also heavily dependent upon the efficient functioning of the infrastructure networks in the SELEP Region and our Ports, in particular. The majority of the daily commercial vehicle movements through the Ports in the SELEP Region are destined for, or originate from beyond the M25, including the Midlands and the North.

13.0.10 As well testified elsewhere, these transport infrastructure networks are under strain and need to be treated as national priorities for investment, including the Lower Thames Crossing and the associated strategic road networks in Kent and Essex.

13.0.11 As an island nation, the UK's economic success has always been founded on maritime trade. The UK Ports industry is the second largest in Europe, handling almost 500 million tonnes of freight each year. The overwhelming majority of goods imported and exported from the UK – about 95% of freight by volume every year – comes and goes through sea ports rather than airports. The ports sector contributes an estimated £2 billion in taxes to the UK Exchequer, and directly employs 118,000 people. Prioritising the UK's international gateways is essential to ensure that our thriving island economy maintains and enhances its global reach. Britain must keep trading; goods must keep moving.

The importance of placemaking and local geographies

13.0.12 Spatial Geography is an important construct in the delivery of economic development. Localism is clearly a critical issue to the SELEP Board and its partners. In addition, the impact of really high-quality place-making is there for everyone to see, in the way that local authorities and partners have been successful at developing cities, towns and villages across the SELEP area. Doubtless, there is more that we can do to

improve this evidence base, to better reflect localities needs and priorities (but we are hoping you may be able to respond to us using the enclosed proforma to tell us more about how you think this evidence base could better reflect these needs).

The importance of business sectors

13.0.13 Government is clearly interested in connecting place with specialised business clusters. However, not everything should – or could - be delivered at a single geographic level. Some activities are best being delivered nationally, some regionally, some pan-regionally and some extremely locally. Michael Porter, for example, often used to remark on how he felt a grouping of 400 or more businesses was needed to form a specialist business cluster. There is presently a lack of specialist 'business' clusters in the SELEP region – and or centred in the region and./or extending further afield (perhaps with the exception of the Creative and Cultural Economies and the Visitor Economy - although even these might potentially benefit from more investment).

13.0.14 You can rest assured that if we don't collectively make the case for the need for some new bodies to connect place with specialised industrial sectors, other places will.

The importance of stimulating firm-level productivity improvements

13.0.15 In addition, the government is also very interested in LEPs developing a localised industrial strategy, which they are currently envisaging is likely to be strongly theme based.

13.0.16 This evidence base starts to point to some of these themes, and is starting to ask for some really innovative project ideas that could help improve the productivity of the region. It seeks to do so in a 'space agnostic' way, by assuming localities will be open to collaborating at scale, where a particular initiative warrants it and intervening at a very local level where necessary.

What more can partners do in their locality and by working together?

13.0.17 As discussed previously, this evidence base is merely intended to provide a stimulus for localities to generate project ideas that can underpin the SEP and deliver increased productivity in the area. A number of authors have remarked recently how much we need an 'industrial renaissance' if we are to be successful at stimulating growth. However, in order for that to happen, LEPs and their partners need to deliver change and come up with new forms of intervention, that cut across the business, public, academic and community sectors.

13.0.18 This document is intended to help guide localities to think about what their interventions might be, and how they will be designed. Se are genuinely interested in hearing your ideas.

Do we have the right structures and investment models?

13.0.19 In order to deliver local infrastructure priorities and investments, a number of you have told us that you believe that the Government should move away from a culture of competitive bidding rounds and 'deals' to empower more devolved decision-making through the creation of a more structured approach to local investment and devolution.

13.0.20 The evidence from other parts of the country suggests that it will not be easy to make the case for this alternative approach. Evidence from the 'Midlands Engine' and the 'Northern Powerhouse' suggests localities need to come together under a common 'flag of convenience' if they are to be successful. Even then, there is considerable evidence to suggest localities still struggle to secure the freedoms and flexibilities they need to deliver the scale of growth they aspire to.

13.0.21 That said, maintaining the status quo is simply not tenable. It will not generate the level of betterment to deliver the scale of growth needed.

13.0.22 We commit this evidence base to you and look forward to your thoughts and ideas.