

## **The geography of key sectors in the South East**

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## **Executive Summary**

### **Background**

- According to M. Porter there are three broad types of industries – local industries, resource dependent industries and traded industries – each of which has a distinctive spatial pattern. Traded industries are those that sell their products and services across regions and often to other countries. They tend to be spatially concentrated, reflecting the location of specialist demand, skilled labour, technological infrastructure, supply chains and other competitive factors.
- SEEDA's focus is on a group of six traded industries, which it has designated as priority sectors: Financial and Professional services; ICT, Software and Digital Media; Advanced Engineering and Marine; Aerospace and Defence; Pharmaceuticals, Life Sciences and Healthcare; Environment and Energy.

### **Overview of priority sectors**

- According to ONS data there are 128,000 businesses in the South East in the six priority sectors – 18% of the UK total for these sectors. Aerospace and Defence and ICT, Software and Digital Media have the highest share of the UK market.
- Within the South East, the Financial and Professional Services sector accounts for almost half of the region's businesses within the priority sectors, while ICT, Software and Digital Media accounts for around one third.
- In 2007 the six priority sectors contributed £65.9 billion to the South East economy or 42% of total GVA.
- Over the decade 1997-2007, total GVA in the six priority sectors in the South East expanded by around 4.7% per year – above the regional average of 4%.
- Output in the six priority sectors in the South East, taken together, is expected to contract at a faster rate than the regional average in 2009 (-6.5%), although over the decade 2010-2020, GVA in these sectors is expected to expand at a faster rate than the regional average (3.3% per year, compared to 2.7%).
- In 2007 there were 1.53 million people employed in the six priority sectors in the South East, or 35% of total regional employment.
- Over the decade 1997-2007, total employment in the six priority sectors in the region expanded by around 0.7% per year – below the South East average of 1.1% per year.
- Employment in the priority sectors, taken together, is expected to contract at a faster rate than the regional average in 2009 (-2.1%), but over the decade 2010-2020, employment in these sectors is expected to expand at a slightly faster rate than the regional average (0.9% per year compared to 0.8%).

## Spatial concentration of priority sectors

- The concentration of businesses in the **Financial and Professional Services** sector in the South East is above the national average, but the concentration of employment is in line with the UK average.
- **Financial and Professional Services** businesses are most heavily concentrated in Surrey and neighbouring areas in Buckinghamshire and the Thames Valley. The highest concentration of employment in financial and professional services is in Surrey and a number of large urban areas, including Southampton, Reading and Brighton & Hove.
- The concentration of **ICT, Software and Digital Media** businesses in the South East is 25% above the national average, while the concentration of employment is 40% greater than the national average.
- Businesses and employment in the **ICT** sector are most heavily concentrated in the Thames Valley, with significant concentrations also in Milton Keynes and Brighton & Hove, and smaller concentrations in parts of Hampshire (Basingstoke and Hart principally).
- The concentration of both businesses and employment in **Pharmaceuticals, Life Sciences and Healthcare** is similar to the national average.
- Within the region, the greatest concentration of businesses in this sector is along the coast of Kent and Sussex, with a significant concentration in Oxford also. The highest concentration of employment in the **Pharmaceuticals, Life Sciences and Healthcare** sector is in parts of Surrey, Sussex and in Oxford.
- The concentration of both businesses and employment in the **Advanced Engineering and Marine** sector in the South East is similar to the national average.
- The greatest concentration of businesses in the **Advanced Engineering and Marine** sector is in Hampshire and Adur in West Sussex, with significant concentrations of businesses and employment also in Oxfordshire, the Thames Valley and Kent.
- The concentration of **Environment and Energy** businesses and employment in the South East is 20% and 10% below the national average, respectively.
- Sub-regionally, there is a concentration of businesses in this sector in parts of Kent, the Inner South East (eg. West Oxfordshire and Slough) and areas along the coast (such as Lewes, the Isle of Wight and Portsmouth). The highest concentration of employment in the **Environment and Energy** sector is in eastern parts of Kent, parts of Hampshire, parts of the Thames Valley and Brighton and Hove.
- The concentration of **Aerospace and Defence** businesses in the South East is around 30% above the national average, while the concentration of employment in this sector is around 20% above the national average.

- A high concentration of businesses in the **Aerospace and Defence** sector is found in West Sussex (notably Crawley), Hampshire (notably Rushmoor), parts of Surrey, and Shepway in Kent. Employment in this sector is heavily concentrated in Crawley, large parts of Hampshire, West Berkshire and South Buckinghamshire.

## Introduction

Alfred Marshall, writing at the end of the 19<sup>th</sup> century, included a chapter in his *Principles of Economics* on the concentration of specialized industries in particular localities. Marshall saw these localized concentrations of economic specialization ('industrial districts' as he termed them) as an integral feature of industrial organization.<sup>1</sup>

Over the past two decades the notion of industrial clusters has rapidly become the standard concept in the field and has become increasingly associated with the concept of knowledge economy or new economy. One of the leading business strategists argues that "*in a global economy – which boasts rapid transportation, high speed communications and accessible markets – one would expect location to diminish in importance, but the opposite is true. The enduring competitive advantages in a global economy are often heavily localized, arising from concentrations of highly specialized skills and knowledge, institutions, rivalry, related businesses, and sophisticated customers*".<sup>2</sup> Several other leading academics argue that globalization is promoting greater regional economic distinctiveness, and that regional economies rather than national economies are now the drivers of wealth creation and world trade.<sup>3</sup>

In his comparative work on international competitiveness, Porter (1990) argued that a nation's leading export firms belong to successful groups of rivals within related industries. He termed these groups 'clusters' - sets of industries related by horizontal and vertical links of various kinds.<sup>4</sup> A business cluster can be defined as a geographically proximate group of interconnected companies, suppliers, service providers and associated institutions in a particular field, linked by externalities of various types.<sup>5</sup>

Porter argues that the significance of these industrial clusters is in the interaction between four sets of factors that constitute a 'competitive diamond': firm strategy, structure and rivalry; factor input conditions; demand conditions; and related supporting industries. The more developed and intense the interactions between these four sets of factors, the greater will be the productivity of the firms concerned.

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<sup>1</sup> Martin, R. and Sunley, P. (2001) *Deconstructing Clusters: Chaotic Concept or Policy Panacea?* Journal of Economic Geography.

<sup>2</sup> Porter, M. E. (1998) *On Competition*, Harvard Business School Press, page 90.

<sup>3</sup> Ohmae, K. (1995) *The End of the Nation State: The Rise of Regional Economies*, London Harper Collins. Krugman, P. (1991) *Geography and Trade*, MIT Press, Cambridge, Massachusetts.

Scott, A. J. (2001) *Regions Global City Regions: Trends, Theory and Policy*, Oxford University Press, Oxford.

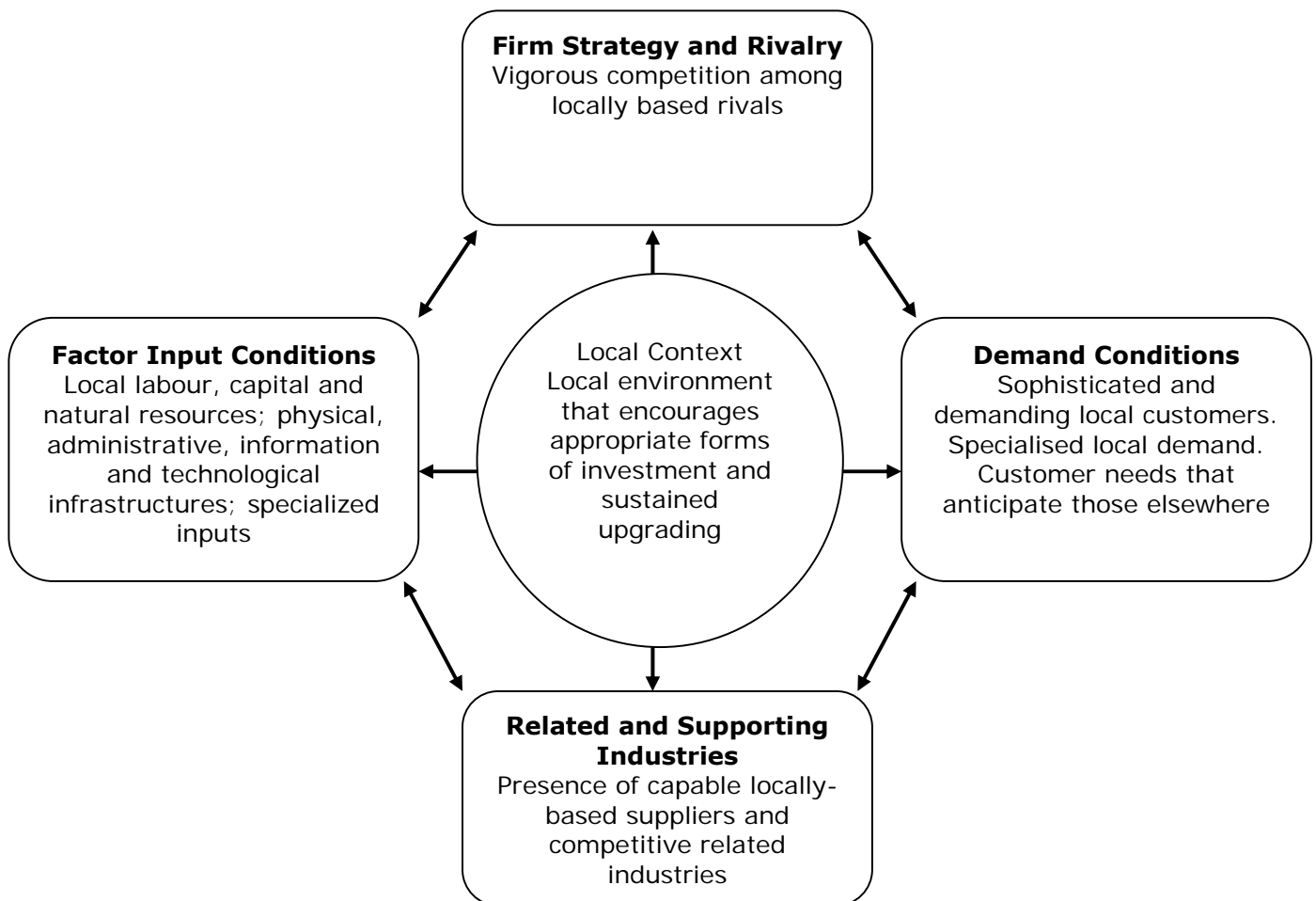
Fujita, N. Krugman, P. and Venables, A. (2000) *The Spatial Economy: Cities, Regions and International Trade*, MIT Press, Cambridge Massachusetts.

<sup>4</sup> Martin, R. and Sunley, P. (2001).

<sup>5</sup> See Porter, M. E. (1990) *The Competitive Advantage of Nations*, Macmillan, London and Porter, M. E.

(2003) *The Economic Performance of Regions*, *Regional Studies*, Vol. 37.6&7, pp.549-578, August/October, 2003

## Porter's Competitive Diamond of Local Industrial Clustering



Source: Porter (1998)

The distribution of economic activity by industry at local, regional and national level reveals three different broad types of industries, with very different patterns of spatial competition (Porter, 2003):

1. Local industries – industries that provide goods and services primarily to local markets or the region in which the employment is located. Such industries are mostly characterized by limited competition with other regions. Most are service activities (such as retailing) with some goods producing industries (such as many types of construction, concrete products, bottled drinks etc).
2. Resource dependent industries – industries that compete with other domestic and international locations. Employment in these industries tends to be concentrated primarily in those areas where natural resources can be found such as mining, certain types of transport activities (freight transportation) etc.

3. Traded industries – industries that sell their products and services across regions and often to other countries. Examples of traded industries include advanced manufacturing, ICT, software and digital media, finance and professional services etc.

Employment in local industries is broadly evenly distributed across all regions (it is roughly proportional to regional population) and in an advanced service economy such as the South East we have little resource dependent industry. The location of traded industries is primarily based on broader competitive considerations, and there are significant variations in employment concentrations by regions and sub-regions in the UK and elsewhere.

Although in Porter's work all clusters matter, some matter more than others – importance is often placed on traded clusters. Furthermore, empirical evidence shows that traded industries have much higher productivity, patenting rates and wages than local industries and that they are the sources of output and employment growth in an increasingly globalised world economy. Thus, the focus of this paper is on the traded industries across the region, which form the most productive part of the economy. We have grouped those industries into six broad categories, which constitute SEEDA's priority sectors:

- Financial and professional services
- ICT, Software and Digital Media
- Advanced Engineering and Marine
- Aerospace & Defence
- Pharmaceuticals, Life Sciences and Healthcare
- Environment & Energy

### **A note on data sources**

In the UK firms and industry data is classified according to the Standard Industrial Classification (SIC) system, which allows firms to be classified according to their principal activities so that they can be grouped into industries.

There are several levels at which SIC data is available. At the broadest level there are 9 industrial classifications. For example 'banking, finance, insurance and business services (including retail)' is one of the nine categories, which is of little use in sector and cluster analysis. The two-digit SIC codes define industries in more detail: for example 'insurance and pension funding (except compulsory social security)', and three and four-digit SIC codes define industries in even greater detail. For example the 4-digit SIC code 6601 refers to 'life insurance'. In our analysis of sectors and clusters across the South East we have used the SIC-4 digit data at several spatial levels (there are 515 industrial activities classified according to the 2003 Standard Industrial Classification at the 4-digit level).

The data that we use has been extracted from several sources:

- Employment and business units data at the SIC-4 digit level from the Annual Business Inquiry (ABI) at national, regional and sub-regional level.<sup>6</sup>
- Estimates of GVA and employment over time and projections to 2020 at the SIC-4 digit level at national and regional (South East) level.<sup>7</sup> Given the difficulty in measuring economic activity at SIC 4-digit level it is likely that the estimates of GVA for the six sectors are an underestimate of their contribution to the economy.<sup>8</sup>
- Company records from the FAME database as a complementary source to ONS (ABI) data. This database holds almost 500,000 business records in the South East and it allows us to track individual business performance by sector over time.<sup>9</sup>

### A note on methodology

We use standard location quotients (LQ) as an indicator of industrial concentration in a given geographical unit of analysis.<sup>10</sup> Location Quotient is defined as:

$$LQ_{b,i} = \left( \frac{F_{b,i}}{F_{T,i}} \right) \Bigg/ \left( \frac{F_{b,j}}{F_{T,j}} \right)$$

Where:

$LQ_{b,i}$  = location quotient for the sector b in area i (which could be district, Travel to Work Area or county)

$F_{b,i}$  = number of firms (or employees) in sector b in a given area i

$F_{T,i}$  = total number of firms (or employees) in a given area i

$F_{b,j}$  = number of firms (or employees) in sector b in a given region or country j

$F_{T,j}$  = total number of firms (or employees) in a given region or country j

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<sup>6</sup> The ABI is an annual survey of UK firms conducted by the Office for National Statistics (ONS) and it covers all UK businesses registered for Value Added Tax (VAT) and/or Pay As you Earn (PAYE), classified according to the 2003 Standard Industrial Classification.

<sup>7</sup> We have obtained GVA and employment data from Experian Business Strategies for the region and the UK.

<sup>8</sup> The UK Input Output tables are available for 123 sectors and the starting point for our analysis is SIC-4 digit which has 515 activities. It is likely that the type of activity included in our definition at 4-digit level is more productive than the average for that sector at 2-digit level.

<sup>9</sup> Note: business databases such as FAME are widely used by industry and government agencies. It is important to note that this data is incomplete and that firm classification in some instances could be inaccurate. In practice firms allocate themselves to a SIC code, which means that in some cases some firms may be mis-classified. This is a particular problem when the SIC code definitions change such as the recent switch from the SIC 2003 to SIC 2007.

<sup>10</sup> Empirical cluster identification is often accomplished through a modified location quotient approach, see Porter, M. E. (2003) *The Economic Performance of Regions*, Regional Studies, Vol. 37.6&7, pp. 549-578. Several South East specific studies use similar approach such as Ernst & Young (2009) *The Potential for the Greater South East to exploit global growth Opportunities*, for SEEDA, LDA and EEDA. Experian (2009) *Impact of the recession on the cultural and creative industries in the South East*, for SEEDA.

Note:

When  $LQ_{b,i} > 1$ , a sector is over represented in a given area (district, Travel to Work Area or county) relative to a benchmark area (country or region).

When  $LQ_{b,i} < 1$ , a sector is under represented in a given area (district, Travel to Work Area or county) relative to a benchmark area (country or region).

High location quotients can highlight the comparative advantage of an area by revealing what makes a particular geographic area 'unique' in comparison to the national or regional average.

We have used 'number of business units' as the main measure of comparative advantage of an area because a high concentration of business units could point towards the presence of an industrial cluster in an area.<sup>11</sup> In some areas there is a relatively small number of businesses but a high concentration of employment. This is simply because an area can have several large employers. For this reason it is also important to look at the concentration of employment in this sector across the region.

In addition to the Location Quotient we use the Agglomeration Coefficient as a measure of industry spread within an area (in this case a county). Agglomeration Coefficient is defined as:

$$Ak_{b,i} = \frac{1}{2} \sum_{n=1}^R \left| \frac{a_{b,n}}{A_{b,i}} - \frac{t_n}{T} \right|$$

Where:

$Ak_{b,i}$  = agglomeration coefficient for the sector b in area i

R = number of districts

$a_{b,n}$  = number of firms (or employees) in sector b in region n

$A_{b,i}$  = number of firms (or employees) in sector b in county i

$T_n$  = total number of firms (or employees) in district n

T = total number of firms (or employees) in county

Note:

When  $Ak_{b,i} = 0$ , the industry is proportionally spread across the districts in county i

When  $Ak_{b,i} = 1$ , the industry is concentrated in a few districts in county i

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<sup>11</sup> In a number of cluster studies a Location Quotient of at least 1.20 (relative to national average) is one of the indicators that a cluster of firms might be present in the area under observation.

## **A note on spatial distribution**

We have estimated the location quotients for the South East and its sub-regions. At regional level we have estimated location quotients relative to the national average, hence Great Britain = 1. At sub-regional level we have estimated location quotients relative to the South East average (South East = 1). A value of 1.5 indicates that the concentration of a specific sector is 50% greater than the regional average.<sup>12</sup>

The primary geographic unit used in the analysis is local authority district (LAD) followed by county. Administrative boundaries have the advantage of having stable definitions (boundaries) over time but they often do not fully reflect true economic boundaries. Travel To Work Areas (TTWAs) are approximations to self-contained labour markets based on commuting patterns and they are alternative geographies to the official administrative boundaries.<sup>13</sup> Since the TTWA better reflect true economic boundaries than the official administrative boundaries we have estimated business and employment location quotients for all 25 Travel to Work Areas in the South East.

The measure of industry spread (agglomeration coefficient) is only available at county level (this estimate is based on local authority district data).

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<sup>12</sup> When looking at concentration at sub-regional level it is important to bear in mind the difference between the South East and the national average. For example, in ICT, Software and Digital Media a local authority district can have a location quotient of 1.1 e.g. 10% above the regional average which could be interpreted as relatively low. However, this is relatively high when compared to the national average if we take into consideration the fact that the concentration in the region is some 40% above the national average.

<sup>13</sup> The 25 TTWAs in the South East were defined in 2007 using 2001 Census information and are based on lower layer super output areas. The basic criteria used in their construction were: at least 67% of those who live in the area also work there; at least 67% of those who work in the area also live there; and the working population as measured by the Census should be at least 25,000. In areas of low population density these criteria were amended so that the minimum working population of the TTWA was 3,500 and the self-containment criteria increased to at least 75 per cent. Boundary constraints have not been imposed so 2001-based TTWAs now cross the England-Wales and England-Scotland borders.

## Overview

### Business Units

- The company records from the FAME database show that there are some 79,000 businesses in the region in the six priority sectors or 13.6% of the UK total in these sectors (similar to the South East share of all businesses).<sup>14</sup>
- In the South East, Aerospace & Defence and ICT, Software & Digital Media have the highest percentage share of the UK market at 16% and 15.5% respectively. These are followed closely by Advanced Engineering & Marine (13.1%) and Financial & Professional Services (13%). The smallest share by far is in the Environmental sector, where the South East accounts for just 8.8% of the total UK market.
- The volume of companies in each market ranges from approximately 930 companies in the Aerospace sector through to over 30,000 in both the ICT and Financial & Professional services market.
- When compared with the data available through the Office for National Statistics' Annual Business Inquiry (ABI), there is a noticeably strong correlation with the South East percentage shares demonstrated using the FAME business database, although the number of business units that the ABI records for each priority sector, and the percentage shares, are slightly higher.<sup>15</sup>
- According to the ONS data there are some 388,000 business units in the region or 16% of all business units in Great Britain. There are some 128,000 business units in the region in the six priority sectors or 18% of the total business stock in these sectors in Great Britain.
- The top four sectors remain the same with Aerospace & Defence once again holding the greatest share of business units in the South East at 21.2%, followed by ICT (20.1%). ABI data shows a reverse order to FAME for Financial & Professional Services (18%) and Advanced Engineering & Marine (15.7%).
- The exact overseas and UK-owned split is more difficult to determine, as many large investors are comprised of international shareholders (these often appear as n.a in the data extracted). Where international countries have been listed as the Global Ultimate Owner these have been analysed, with the greatest overseas-owned percentage shown in Advanced Engineering & Marine at 9.8%, followed by the Environmental sector at 8.7%. Financial & Professional Services and ICT share the lowest proportion of foreign ownership at just 4.1% each.<sup>16</sup>
- The map shows that, despite the high concentration of business units in the districts bordering south west London (e.g. Windsor & Maidenhead), a large number of business units are also observed in more distant locations such as Milton Keynes and Brighton and Hove.

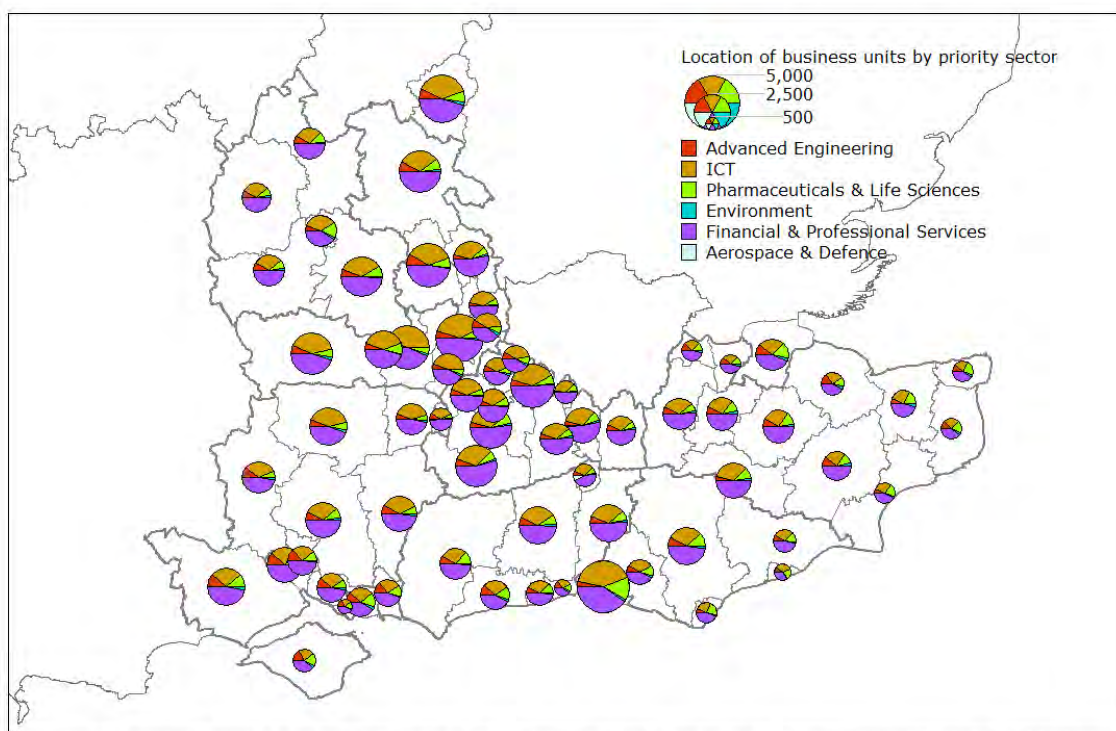
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<sup>14</sup> Note: business databases such as FAME are widely used by industry and government agencies, however since this data is incomplete we have also used the latest available data on the number of business units from the Office for National Statistics (d).

<sup>15</sup> The difference is due to ABI data recording Business Units rather than individual company numbers (some businesses have more than one business unit in the region).

<sup>16</sup> See Annex A for a brief overview of SEEDA Priority Sectors.

### Location of business units by sector (2007)



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- Financial and Professional Services account for nearly half of South East business units (46%) within the priority sectors, followed by ICT, Software and Digital Media (34%), Pharmaceuticals & Life Sciences (9.8%) and Advanced Engineering & Marine (7.3%) in 2007.
- The average percentages for the South East are highly representative of sectoral distribution at sub-regional level. Yet, a higher concentration of specific sectors is observed in different local districts such as ICT, Software & Digital Media in Brighton & Hove; Advanced Engineering & Marine in New Forest, Southampton and Portsmouth; and Pharmaceuticals & Life Sciences in Medway, Maidstone and Thanet.

### Output (GVA)

- In 2007 the six priority sectors contributed £65.9bn to the South East Economy or 42.1% of the total.<sup>17</sup> The six priority sectors' share of regional output was above the UK figure of 40.8% for these same sectors.
- In 2007 the six priority sectors in the South East accounted for 14.8% of these six sectors' total output at UK level. This is slightly higher than the South East's share of total UK GDP (14.3%).

<sup>17</sup> The total workplace based GVA in the South East in 2007 was £156.4bn (constant 2005 prices). Note: at regional and sub-regional level employment data is far more reliable than GVA data.

- Over the decade 1997-2007, total GVA in the six priority sectors in the region expanded by 58%, or around 4.7% per annum, which was above the South East average (around 4% per annum).
- Over the past decade the rate of GVA growth in these sectors in the South East was above the national average for these sectors (4.2%).
- The six priority sectors in the South East, taken together, are projected to contract by -6.5% in 2009, above the South East average of -5.8% and slightly below the six priority sectors UK average of -6.8%.
- The latest independent projections from Experian show GVA growth in the six sectors of 1.2% in 2010, marginally higher than the South East average of 0.8%, and just slightly above the six priority sectors UK average of 1.1%.
- Over the next decade (2010-2020) the sectors as a whole are projected to expand by 3.3% per annum, faster than the South East average GVA growth of 2.7% and faster than the six priority sectors UK average of 2.9%.<sup>18</sup>
- The six priority sectors as a whole accounted for 48.4% of total GVA growth in the South East, between 1997 and 2007. They are also expected to increase their contribution to GVA growth to 54.5% in the period 2010-2020.

## Employment

- In 2007 there were 1.53 million people employed in the six priority sectors in the South East or 35.2% of the total.<sup>19</sup> The six priority sectors' share of regional employment was above the UK figure of 33.4% for these same sectors.
- In 2007 the six priority sectors in the South East accounted for 14.7% of these six sectors' total employment at UK level. This is slightly higher than the South East's share of total UK employment (13.9%).
- Over the decade 1997-2007, total employment in the six priority sectors in the region expanded by 7.2%, or around 0.7% per annum, which was below the South East average (around 1.1% per annum).
- Over the past decade the rate of employment growth in these sectors in the South East was below the national average for these sectors (1.1%).
- Employment in the six priority sectors in the South East, taken together, is projected to contract by -2.1% in 2009, above the South East average of -1.9% but below the six priority sectors UK average of -2.7%.
- The latest independent projections from Experian show employment contraction in the six sectors of -0.4% in 2010, above the South East average of -0.1%, but well below the six priority sectors UK average of -1.4%.
- Over the next decade (2010-2020) employment in the sectors as a whole is projected to expand by 0.9% per annum, (against 0.8% for all sectors) and marginally faster than the six priority sectors UK average of 0.7%.<sup>20</sup>
- The six priority sectors as a whole accounted for 22.6% of total employment generation in the South East, between 1997 and 2007. They are also expected to increase their contribution to total employment to 39.8% in the period 2010-2020.

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<sup>18</sup> See Annex B for the six priority sectors performance over time (GVA) and the latest projections to 2020.

<sup>19</sup> Based on ABI and LFS data (ONS)

<sup>20</sup> See Annex C for a chart that shows the six priority sectors performance (employment) over time and the latest employment forecasts. See Annex D (data tables) and Annex F (sector definition).

## **1) Financial and Professional Services**

### **a) Output (GVA)**

#### *i) Past Performance:*

- Financial and Professional Services is the largest priority sector in the South East. In 2007 the sector contributed £23.2bn to the South East Economy or 14.8% of the total. Its share of regional output was smaller than the contribution that this sector makes to UK GDP. This sector accounted for some 16.6% of the overall GVA in the country. However the UK average is skewed by a large concentration of financial services activity in London.
- In 2007 the South East share of total Financial and Professional Services output in the UK was 12.8%, which is below the South East share of UK GDP (14.3%).
- Over the decade 1997-2007, total GVA in the Financial and Professional Services sector in the region expanded by 72.9%, the second best performance amongst the six priority sectors in the region. Over the same period real GVA in the Financial and Professional Services sector on average expanded by around 5.6% per annum, which was above the priority sector average (4.7%) and the South East average (around 4% per annum).
- Over the past decade the rate of GVA growth in this sector in the South East was below the national average (6.5%). However, the main reason behind this is the strong performance of London (largely financial services in London).

#### *ii) Projections:*

- The Financial and Professional Services sector in the South East is projected to contract by -7.9% in 2009, below the national average in this sector of -8.2%.
- The latest independent projections from Experian show GVA growth of 3.1% in 2010, well above the national average for this sector (2.1%). The rate of growth in 2010 is forecast to surpass the other priority sectors in the region, the South East total GVA growth (0.8%) or the UK rate of growth of 0.8%.
- Over the next decade (2010-2020) this sector is projected to expand by 3.8% per annum, against the UK Financial and Professional Services average of 3.6%.
- The Financial and Professional Services sector's share of total GVA for the six priority sectors in the South East is projected to increase from 33.8% in 2007 to 36.2% by 2020.
- The Financial and Professional Services sector accounted for 19% of total GVA growth in the South East, between 1997 and 2007. They are also expected to increase their contribution to GVA growth to 22.3% in the period 2010-2020.

### **b) Employment**

#### *i) Past Performance:*

- In 2007 there were 516,000 people employed in the Financial and Professional Services sector in the South East or 11.9% of total employment in the region. This sector accounts for 33.7% of the total employment in priority sectors in the South East.
- In 2007 the South East share of total Financial and Professional Services sector employment in the UK was 13.6%, which is marginally below the South East share of UK employment (13.9%).

- Over the decade 1997-2007 total employment in the Financial and Professional Services sector in the region expanded by 1.1% per annum (11.5% over the decade), faster than the total for the six priority sectors (0.75%) and similar to the total employment growth in the region (1.1% per annum).
- Over the past decade the rate of employment growth in this sector in the South East was below the rate of growth for the sector in the UK (2.7%).
- Employment in the Financial and Professional Services sector in the South East contracted by -3.9% in 2009, significantly faster than the regional average of -1.9%, but below the UK Financial and Professional Services sector average of -4.0%.

*ii) Projections:*

- The latest independent projections from Experian show employment growth of -0.3% in 2010, against the regional average of 0.1% and the UK Financial and Professional Services sector average of -1.6%.
- Over the next decade (2010-2020) employment in this sector is projected to expand by 1.2% per annum, faster than the South East average of 0.8% and marginally below the UK average in this sector of 1.3%.
- The South East share of total Financial and Professional Services sector employment in the UK is projected to marginally increase from 13.6% in 2007 to 13.7% by 2020.
- The Financial and Professional Services sector accounted for 11.7% of total employment generation in the South East, between 1997 and 2007. They are also expected to increase their contribution to total employment to 18.4% in the period 2010-2020.

**c) Sub-regional concentration**

*i) Business Units:*

- There are some 59,147 Financial & Professional Services business units in the South East or 15.2% of the total business units in the region.
- The concentration of Financial & Professional Services business units in the South East is some 10% above the national average (Location Quotient of 1.11).
- Twelve local authority districts in the South East have a significant concentration of business units in the Financial & Professional Services sector.
- Within the top 12 districts with the highest concentration of business units in the Financial & Professional Services sector in the South East there are some 14,630 business units or 1 in 5 Financial & Professional Services business units in the region.
- The concentration of business units in the top six local authorities ranges from some 21% above the regional average in Reigate and Banstead and Wokingham to over 40% above the regional average in Elmbridge and Chiltern<sup>21</sup>.
- The highest concentration of business units in the Financial & Professional Services sector is in Surrey (Elmbridge, Waverley, Guildford, Woking, Mole Valley, Surrey Heath and Reigate and Banstead) and neighbouring areas in Buckinghamshire and the Thames Valley (Chiltern, Windsor and Maidenhead, Wokingham) and Hart in Hampshire.

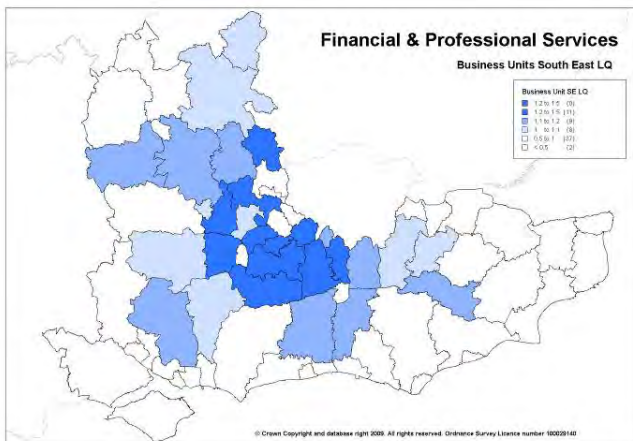
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<sup>21</sup>At national level the Location Quotient (LQ) can be easily estimated by multiplying the district LQ (e.g. 1.21 or 1.4) by the regional LQ (e.g. 1.11) for the relevant sector.

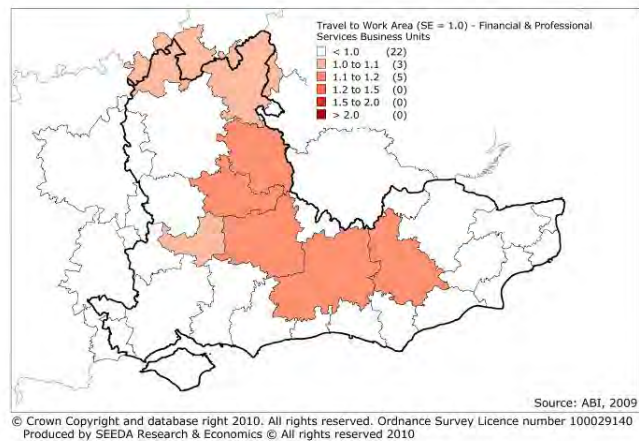
- A high concentration of business units is also found in Mid Sussex, Epsom and Ewell, across Surrey and large urban areas in the South East. There are over 13,000 business units in Brighton and Hove and over 10,000 in Milton Keynes.
- The highest concentration of business units by Travel-To-Work Areas (TTWAs) is located in Wycombe & Slough, Reading & Bracknell, Guildford & Aldershot, Crawley, and Tunbridge Wells (location quotient between 1.1 and 1.2).
- Crawley records a low concentration of business units in the Financial & Professional Services sector, though this is due to the presence of large companies. However, further analysis beyond county boundaries shows that Crawley and its surroundings are, in fact, an important TTWA hosting a high concentration of business units in the South East. The same pattern is observed in the Tunbridge Wells TTWA, though to a lesser extent.

### Financial & Professional Services – concentration of activity (2007)

**Business Units by Local Authority**



**Business Units by Travel-To-Work Areas<sup>22</sup>**



Note: The white areas have a concentration of both business units and employment below the South East average.

#### ii) *Employment*<sup>23</sup>:

- The concentration of employment in the Financial & Professional Services sector in the South East is similar to the national average (Location Quotient of 0.99).
- Twelve local authority districts in the South East have a significant concentration of employment in the Financial & Professional Services sector within the region.
- The concentration of employment in the top 12 local authority districts ranges from some 23% and 29% above the regional average in Bracknell Forest and Worthing to over 70% above the regional average in Epsom and Ewell and Reigate and Banstead.
- The highest concentration of employment in the Financial & Professional Services sector is in Surrey (Reigate & Banstead, Epsom & Ewell, Mole Valley, Woking), several large urban areas (Southampton, Reading, Milton Keynes and Brighton & Hove).

<sup>22</sup> The criterion behind TTWAs is that, of the resident economically active population, at least 75 per cent actually work in the area, and also, that of everyone working in the area, at least 75 per cent actually live in the area. Besides, the definitive minimum working population in a TTWA must be 3,500. See Annex G for maps of TTWAs in the South East.

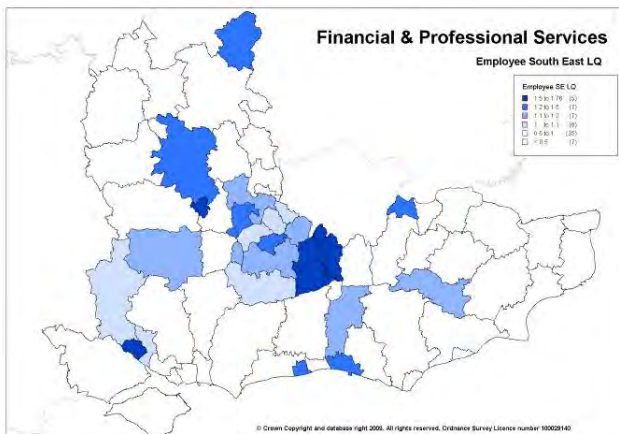
<sup>23</sup> Information in this section excludes self employment given that data is not available at sub-regional level.

Hove), Dartford in Kent, Worthing in West Sussex and South Oxfordshire and Bracknell Forest.

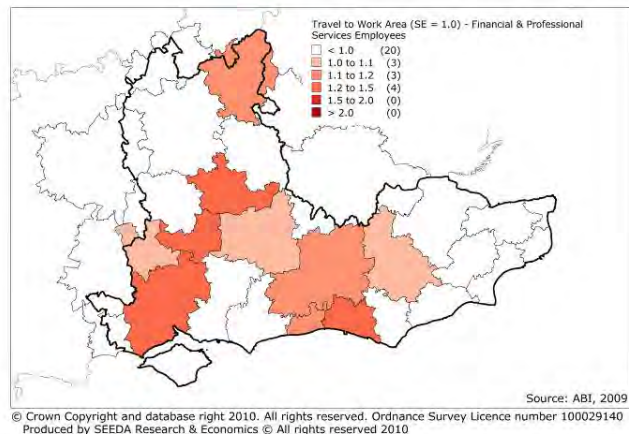
- There are some 152,729 employees in the Financial & Professional Services sector in these parts of the South East or 34.3% of the total employment in the Financial & Professional Services sector within the region, according to ONS data for 2007.
- A high concentration of employment in this sector is also found in Guildford, Basingstoke, Rushmoor and Elmbridge and several other large urban areas across the region.
- The highest concentration of employment by Travel-To-Work Areas (TTWAs) is located in Reading & Bracknell, Basingstoke, Southampton, and Brighton (location quotient between 1.2 and 1.5).
- In comparison with the map by Local Authority, the TTWAs map shows the widespread impact of top Financial & Professional Services companies on employment concentration. This is particularly relevant when they are located in small (although densely populated) local districts such as Reading, Basingstoke, Southampton and Brighton.

### Financial & Professional Services – concentration of activity (2007)

Employment by Local Authority



Employment by Travel-To-Work Areas



Note: The white areas have a concentration of both business units and employment below the South East average.

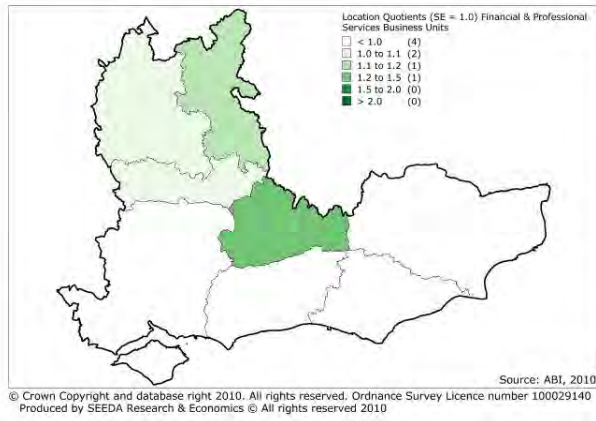
#### d) Sub-regional agglomeration

##### i) Business Units:

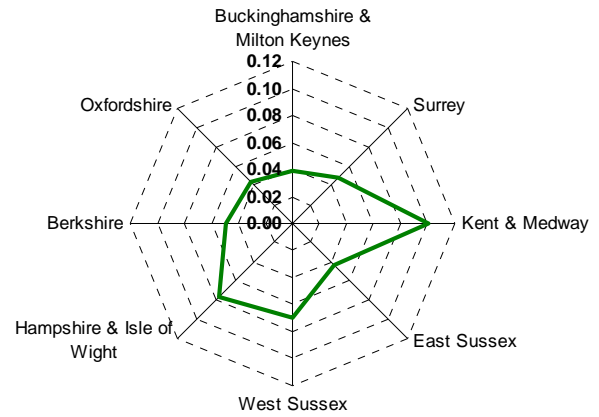
- Surrey along with Buckinghamshire & Milton Keynes shows the largest concentration of business units (22% and 15% above the regional average, respectively) in the Financial & Professional Services sector. In both counties the agglomeration coefficient is lower than 0.05 which means that the business units are proportionally spread across local districts & cities.
- East Sussex along with Kent & Medway are the South East counties with the lowest concentration of business units (16% and 17% below the regional average). Kent & Medway shows a slightly higher agglomeration coefficient (0.10) in the Financial and Professional Services sector compared to other South East counties.
- The remaining South East business units in the Financial & Professional Services sector are relatively well dispersed across counties with agglomeration coefficients ranging from 0.04 in Oxfordshire and Berkshire to 0.08 in Hampshire & the Isle of Wight.

## Financial & Professional Services (2007)

### Concentration of Business Units by County



### Agglomeration of Business Units by County

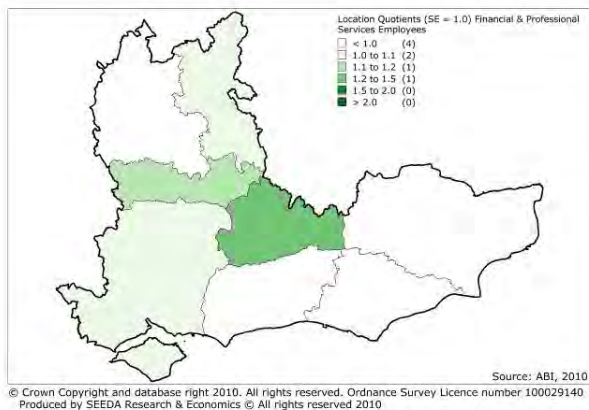


### ii) Employment:

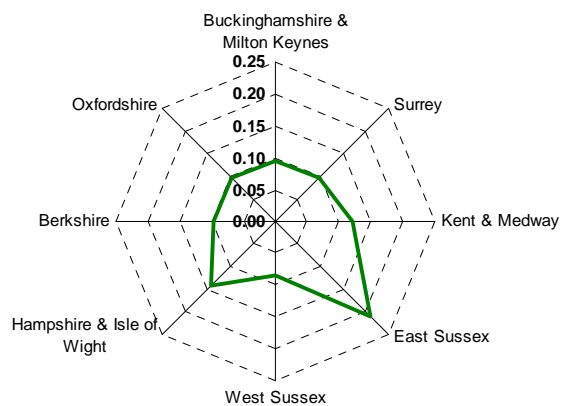
- Surrey and Berkshire are the South East counties with the largest concentration of employment in the Financial & Professional Services sector (28% and 13% above the regional average). Both counties record an agglomeration coefficient of 0.10 which indicates that most of employees in this sector are proportionally spread across local districts & cities.
- Kent & Medway shows the lowest concentration of employees (20% below the regional average) in the South East Financial & Professional Service sector.
- The concentration of employment in East Sussex is 3% lower than the regional average. However, the county shows the highest agglomeration coefficient (0.21) for the Financial & Professional Services sector, which is mainly attributed to the large concentration of employees in the city of Brighton & Hove.

## Financial & Professional Services (2007)

### Concentration of Employment by County



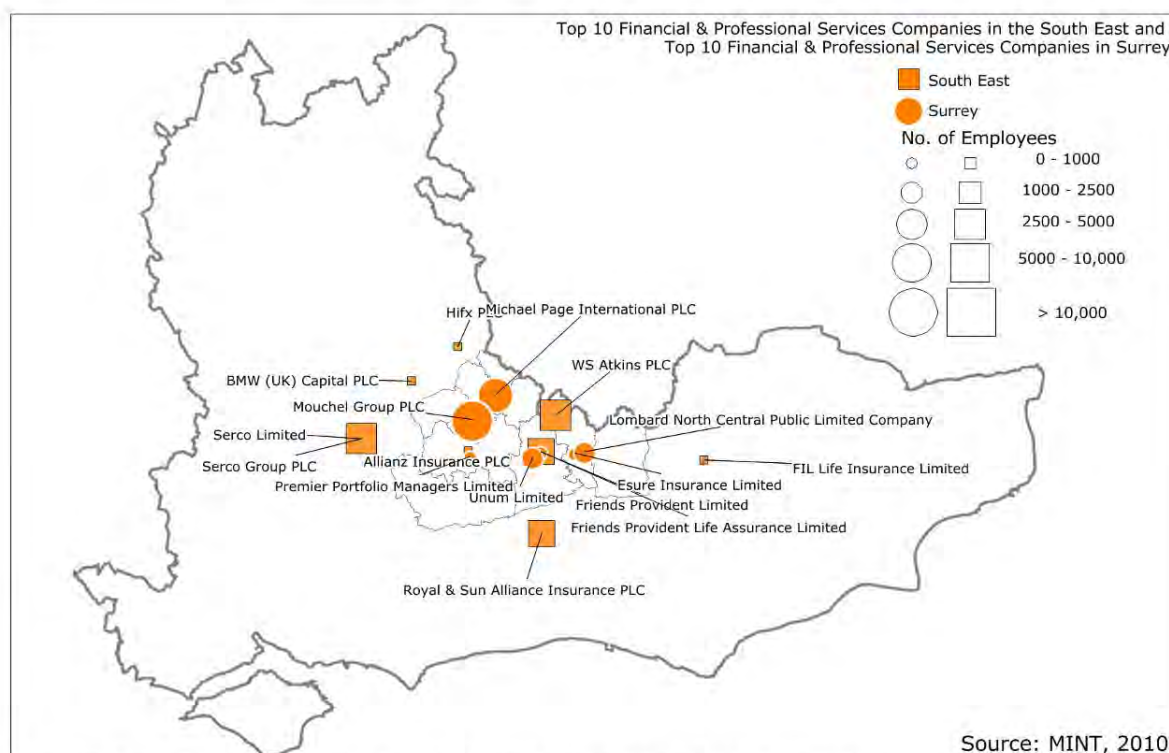
### Agglomeration of Employment by County



## e) Business specific examples

- Some of the top Financial & Professional Services companies in the South East (as measured by turnover) are located in Surrey, as the county shows the highest concentration of both business units and employment.
- Large employers such as *Michael Page International*, *WS Atkins*, and *Mouchel Group* are based in Runnymede, Woking and Epsom & Ewell, respectively.
- There are a few other large employers located outside Surrey. For instance, *Serco Limited Group* and *Royal & Sun Alliance Insurance* are based in Hampshire and West Sussex, respectively.

### Large Financial & Professional Services Firms in the South East and Surrey



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## 2) ICT, Software and Digital Media

### a) Output (GVA)

#### i) Past Performance:

- ICT, Software and Digital Media is the second largest priority sector in the South East. In 2007 the sector contributed £18bn to the South East Economy or 11.5% of total GVA in the South East. Its share of regional output was larger than the contribution that this sector makes to UK GDP (8%).
- In 2007 the South East share of the total ICT, Software and Digital Media output in the UK was 20.4%, which is well above the South East share of UK GDP (14.3%).

- Over the decade 1997-2007 this was the fastest growing priority sector in the South East. Total GVA in the ICT, Software and Digital Media sector in the region expanded by 91.6%, or around 6.7% per annum, which was well above the priority sector average (4.7%) and the South East average (around 4% per annum).
- Over the past decade the rate of GVA growth in this sector in the South East was above the national ICT, Software and Digital Media average of 4.8%.
- The ICT, Software and Digital Media sector in the South East contracted by -4.8% in 2009, well below the national average for this sector (-5.2%) and the second lowest amongst the priority sectors in the South East.

*ii) Projections:*

- The latest independent projections from Experian show that growth in this sector is forecast to contract by -1.4% in 2010 against the national ICT, Software and Digital Media average of -2.5%.
- Over the next decade (2010-2020) this sector is projected to expand faster than any other priority sector in the South East. Between 2010 and 2020 the rate of GVA growth is expected to expand by 3.9%, against the UK ICT, Software and Digital Media average of 3.4%.
- The ICT, Software and Digital Media sector's share of total GVA for the six priority sectors in the South East is projected to increase from 26.2% in 2007 to 27.5% by 2020.
- The ICT, Software and Digital Media sector accounted for 17.1% of total GVA growth in the South East, between 1997 and 2007. They are also expected to increase their contribution to GVA growth to 17.3% in the period 2010-2020.

**b) Employment**

*i) Past Performance:*

- In 2007 there were 350,000 people employed in the ICT, Software and Digital Media sector in the South East, or 8% of total employment in the region. This sector accounts for 22.9% of the total priority sector employment in the South East.
- In 2007 the South East share of the total ICT, Software and Digital Media sector employment in the UK was 19.5%, which is well above the South East share of UK employment (13.9%).
- Over the decade 1997-2007 total employment in the ICT, Software and Digital Media sector in the region expanded by 1.8% per annum or 19.9% over the period, significantly faster than the total for the six priority sectors (0.7% per annum) and faster than the total employment growth in the region (1.1% per annum).
- Over the past decade the rate of employment growth in this sector in the South East was faster than the rate of growth in the UK ICT, Software and Digital Media sector (1.3%).
- Employment in the ICT, Software and Digital Media sector in the South East declined by -1.5% in 2009. Nationally, this sector is forecast to contract by 2.4% in 2009.

*ii) Projections:*

- The latest independent projections from Experian show a 4.4% decline in employment growth in 2010, against the regional average growth of 0.1% and the UK ICT, Software and Digital Media sector average of -5.3%.
- Over the next decade (2010-2020) employment in this sector is projected to expand by 0.4% per annum, slower than the South East average of 0.8% and slightly faster than the UK ICT, Software and Digital Media sector average of 0.3%.
- The South East share of total ICT, Software and Digital Media sector employment in the UK is projected to marginally increase from 19.5% in 2007 to 20.9% by 2020.
- The ICT, Software and Digital Media sector accounted for 12.6% of total employment generation in the South East, between 1997 and 2007. However, they are expected to reduce their contribution to total employment to 4% in the period 2010-2020.

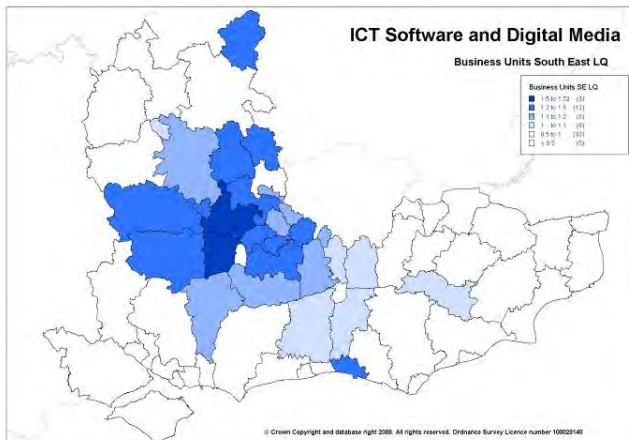
### **c) Sub-regional concentration**

#### *i) Business Units:*

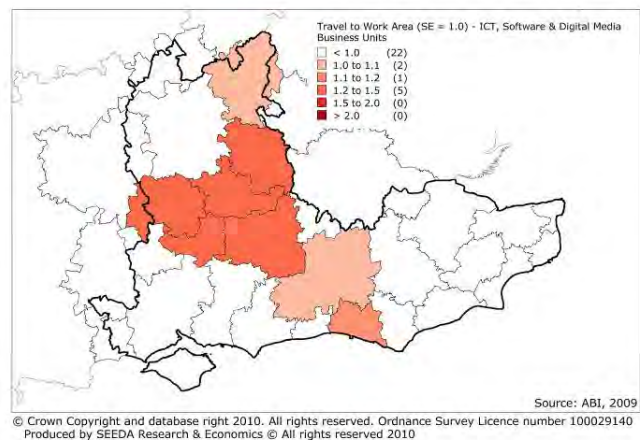
- There are some 43,600 ICT Software and Digital Media business units in the South East or 11.2% of the total.
- The concentration of ICT business units in the South East is well above the national average – some 25% above.
- The top three local authority districts in the region (Wokingham, Bracknell Forest and Hart) have a degree of business units concentration in the ICT, Software and Digital Media sector of between 50% and over 70% above the regional average. The concentration in Wokingham is more than double the national average.
- In Wokingham alone almost 1 in 5 of all business units are in ICT, Software and Digital Media.
- Proximity is an important factor in cluster analysis and in addition to those three areas there are another 11 neighbouring districts in the Thames Valley with business concentration of between 20% and 50% above the regional average.
- There are some 17,200 ICT, Software and Digital Media business units in these 14 neighbouring districts in the Thames Valley.
- These 14 districts account for 28% of the total business stock in the region but they account for almost 40% of the total ICT, Software and Digital Media Business stock in the region.
- If we factor in the other two areas with a significant concentration of businesses in the ICT, Software & Digital Media sector (Brighton & Hove and Milton Keynes) then these local authorities together account for some 47% of all business stock in the ICT, Software & Digital Media in this part of the region.
- The highest concentration of business units by Travel-To-Work Areas (TTWAs) is located in 5 areas, namely: Wycombe & Slough, Reading & Bracknell, Newbury, Basingstoke, and Guildford & Aldershot (location quotient between 1.2 and 1.5).
- Milton Keynes & Aylesbury along with Brighton, although with lower location quotients, form the boundary of the ICT, Software and Digital Media sector concentration from north to south across the region.

## ICT, Software and Digital Media – concentration of activity (2007)

**Business Units by Local Authority**



**Business Units by Travel-To-Work Areas**



Note: The white areas have a concentration of both business units and employment below the South East average.

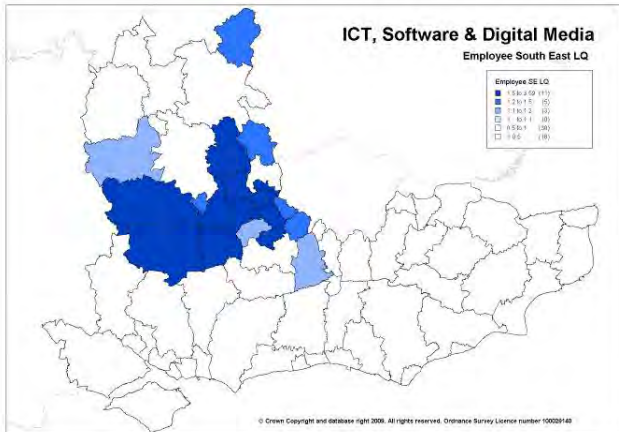
### ii) Employment:

- The concentration of employment in this sector within the region is some 40% greater than the national average.
- Within the region there are some 11 neighbouring districts in the Thames Valley with a concentration of employment of at least 50% above the regional average (LQ of 1.5).
- There are some 133,000 people employed within those districts in this sector or 46% of the total employment in this sector in the region.
- In several areas the concentration is well above the regional average. For example, there are some 10,600 people employed in this sector within Hart or 28% of the total employment within this local authority (excluding self employed and out-commuters).
- This is some 2.6 times greater than the South East average or some 4 times greater than the national average.
- In addition to the 11 neighbouring districts in the Thames Valley with a significant concentration of employment in this sector, there are five districts in the Thames Valley with a concentration of employment of between 20% and 50% above the regional average.
- Milton Keynes is another area with a significant concentration of employment in this sector. However, Brighton & Hove does not appear in the second chart since it has a high concentration of business units but its concentration of employment in this sector is below the regional average (but still some 20% above the UK average). It is likely that the main reason can be found in a high concentration of businesses that do not employ many people.
- The highest concentration of employment by Travel-To-Work Areas (TTWAs) is located in Newbury and Reading & Bracknell, whose location coefficients are more than twice the South East average for this sector. The concentration of employment in these areas is even larger than the concentration of business units which signals the presence of top companies recruiting a large number of employees.

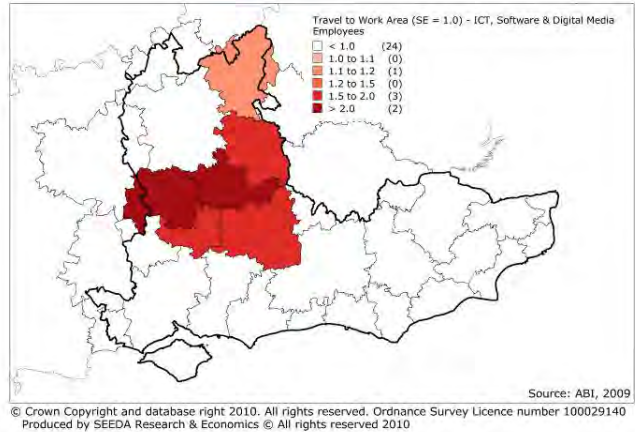
- High concentrations of employment are also found in the TTWAs of Basingstoke, Guildford & Aldershot, and Wycombe & Slough (location quotient between 1.5 and 2.0) along with Milton Keynes & Aylesbury (location quotient between 1.2 and 1.5).

### ICT, Software and Digital Media – concentration of activity (2007)

**Employment by Local Authority**



**Employment by Travel-To-Work Areas**



Note: The white areas have a concentration of both business units and employment below the South East average.

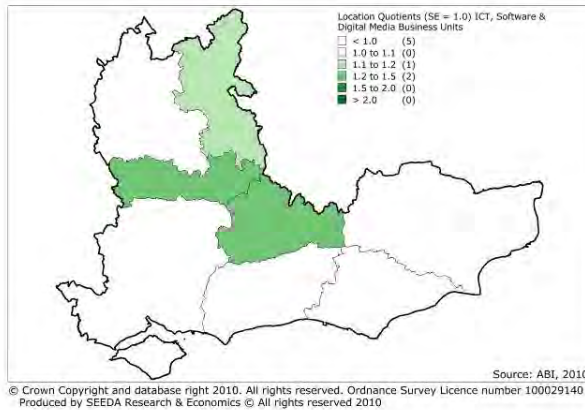
#### d) Sub-regional agglomeration

##### i) Business Units:

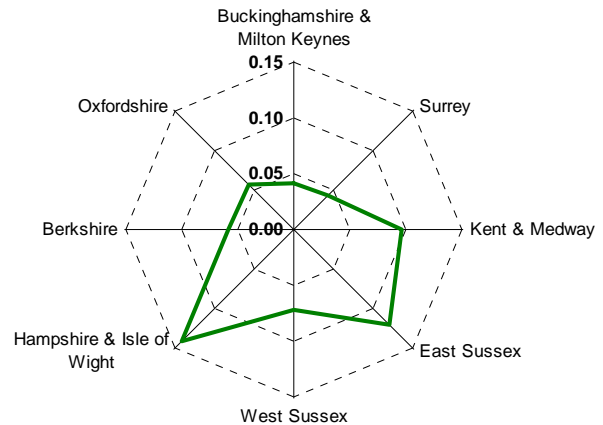
- Berkshire, Surrey and Buckinghamshire & Milton Keynes are the counties with the largest number and the highest concentration of business units in the ICT, Software & Digital Media industry. The location quotients for Berkshire, Surrey and Buckinghamshire & Milton Keynes are 39%, 20% and 19% above the regional average, respectively.
- In these counties the business units are proportionally spread across local districts as indicated by their low agglomeration coefficients that range from 0.04 to 0.06.
- Hampshire and East Sussex show the highest agglomeration coefficient of ICT, Software & Digital Media business units (0.14 and 0.12, respectively), although their location quotient is below the South East average (0.86 and 0.96, respectively).
- The business units in this sector in East Sussex are agglomerated around the city of Brighton & Hove alone, while the business units in Hampshire are agglomerated around Basingstoke and Deane, Hart and the Isle of Wight.

## ICT, Software and Digital Media (2007)

**Concentration of Business Units by County**



**Agglomeration of Business Units by County**

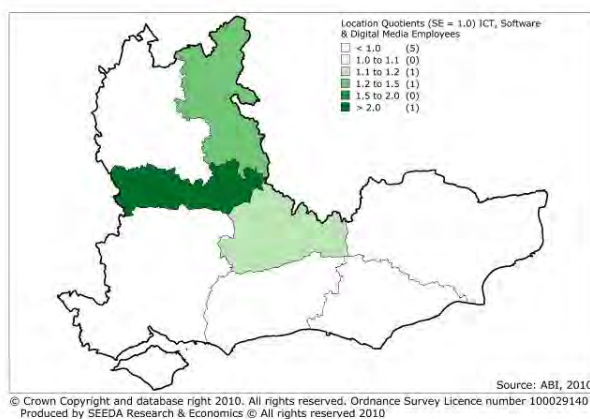


### ii) Employment:

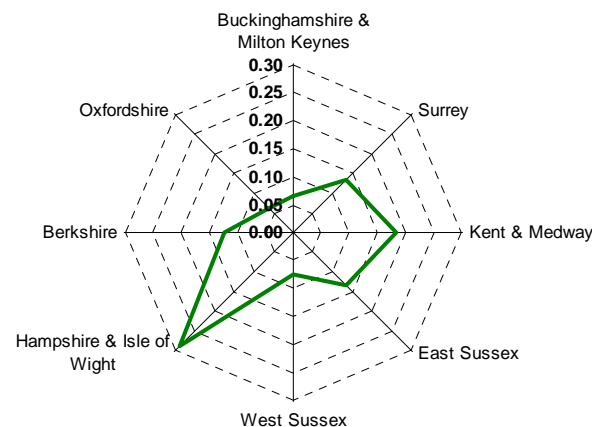
- The highest concentration of ICT, Software & Digital Media employment is observed in Berkshire with a location quotient twice as high (2.07) as the South East average. Employment in this sector is less dispersed than the business units, as is demonstrated by a higher agglomeration coefficient (0.12) in employment compared to that in business units (0.6).
- Buckinghamshire & Milton Keynes and Surrey also record a large number and concentration of ICT, Software & Digital Media employment, although the employees are more widespread in Buckinghamshire and Milton Keynes.
- Hampshire is the South East County with the highest agglomeration coefficient (0.29) for the ICT, Software & Digital Media industry, which is largely explained by the high concentration of employment in a few local districts (i.e. Hart, Basingstoke, and Southampton). However, the concentration of employment in the ICT sector in Hampshire is 8% below the regional average.

## ICT, Software and Digital Media (2007)

**Concentration of Employment by County**



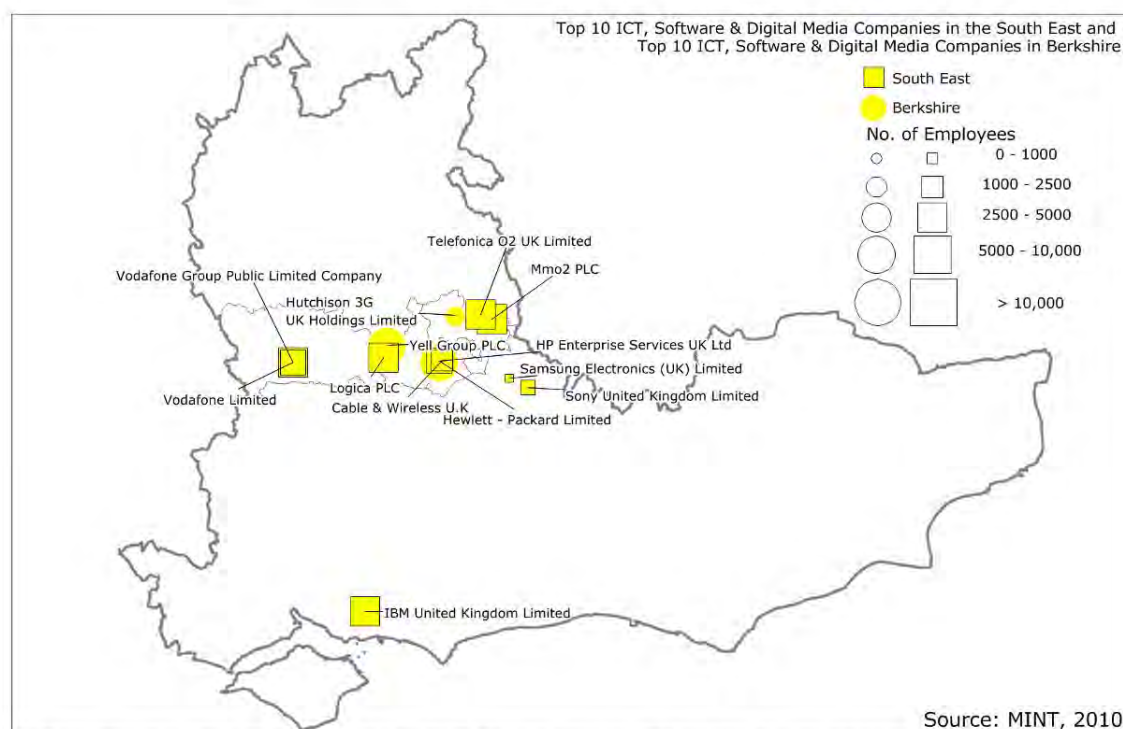
**Agglomeration of Employment by County**



## e) Business specific examples

- Most of the top ICT, Software and Digital Media companies in the South East (as measured by turnover) are located in Berkshire, as the county has the highest concentration of both business units and employment in this sector.
- Large employers such as *Telefonica O2*, *Vodafone*, *Hewlett – Packard*, *Mmo2* and *Logica* are based in Slough, Newbury, Bracknell Forest, and Reading.
- There are a few other large employers located outside Berkshire. For instance, *IBM UK* is located in Hampshire.

### Large ICT, Software & Digital Media Firms in the South East and Berkshire



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## 3) Pharmaceuticals, Life Sciences & Healthcare

### a) Output (GVA)

#### i) Past Performance:

- The Pharmaceuticals, Life Sciences & Healthcare sector is the third largest priority sector in the South East. In 2007 the sector contributed some £9.7bn to the South East Economy or 6.2% of total GVA in the South East. Its share of regional output was marginally below the contribution that this sector makes to UK GDP (6.5%).
- In 2007 the South East share of total Pharmaceuticals, Life Sciences & Healthcare output in the UK was 13.7%, which is below the South East share of UK GVA (14.3%).
- Over the past decade (1997-2007), total GVA in the Pharmaceuticals, Life Sciences & Healthcare sector in the region expanded by 43.9%, or around 3.7% per annum

which was below the priority sector average (4.7%) and the South East average (around 4% per annum).

- Over the past decade the rate of GVA growth in this sector in the South East was above the national Pharmaceuticals, Life Sciences & Healthcare average of 2.7%.
- The Pharmaceuticals, Life Sciences & Healthcare sector is the only priority sector in the South East which expanded in 2009. The rate of GVA growth is grew by 1.5%, faster than the national Pharmaceuticals, Life Sciences & Healthcare average of 1.2%.

*ii) Projections:*

- The latest independent projections from Experian show that output in this sector is forecast to expand by 2.7% in 2010 against the national Pharmaceuticals, Life Sciences & Healthcare average of 2.1%.
- Over the next decade (2010-2020) this sector is projected to expand by 2.2% per annum, against the national Pharmaceuticals, Life Sciences & Healthcare average of 1.7% per annum.
- The Pharmaceuticals, Life Sciences and Healthcare sector's share of total GVA for the six priority sectors in the South East is projected to remain broadly stable (from 16.0% in 2007 to 16.1% by 2020).
- The Pharmaceuticals, Life Sciences and Healthcare sector accounted for 6.7% of total GVA growth in the South East, between 1997 and 2007. However, they are expected to reduce their contribution to GVA growth to 6.1% in the period 2010-2020.

## **b) Employment**

*i) Past Performance:*

- In 2007 there were 378,000 people employed in the Pharmaceuticals, Life Sciences & Healthcare sector in the South East or 8% of total employment in the region. This sector accounts for 24.7% of total priority sector employment in the South East.
- In 2007 the South East share of the total Pharmaceuticals, Life Sciences & Healthcare sector employment in the UK was 13.3%, which is similar to the South East share of total UK employment (13.9%).
- Over the past decade (1997-2007) total employment in the Pharmaceuticals, Life Sciences & Healthcare sector in the region expanded by 1.6% per annum or 16.8% over the period, significantly faster than the total for the six priority sectors (0.7% per annum) and faster than the total employment growth in the region (1.1% per annum).
- Over the past decade the rate of employment growth in this sector in the South East was faster than the rate of growth in the Pharmaceuticals, Life Sciences & Healthcare sector (1.5%).
- Employment in the Pharmaceuticals, Life Sciences & Healthcare sector in the South East expanded by 2.4% in 2009. Nationally, this sector grew by 1.9% in 2009.

*ii) Projections:*

- The latest independent projections from Experian show a 4.3% growth in employment in 2010, against the regional average of -0.1% and the UK Pharmaceuticals, Life Sciences & Healthcare sector average of 2.2%. This is the

only SEEDA priority sector that is projected to see an expansion in its workforce over 2009 and 2010.

- Over the next decade (2010-2020) employment in this sector is projected to expand by 1.2% per annum, faster than the South East average of 0.8% and faster than the UK Pharmaceuticals, Life Sciences & Healthcare sector average of 0.7%.
- The South East share of total Pharmaceuticals, Life Sciences & Healthcare sector employment in the UK is projected to increase from 13.3% in 2007 to 14.4% by 2020.
- The Pharmaceuticals, Life Sciences and Healthcare sector accounted for 11.6% of total employment generation in the South East, between 1997 and 2007. They are also expected to increase their contribution to total employment to 14.4% in the period 2010-2020.

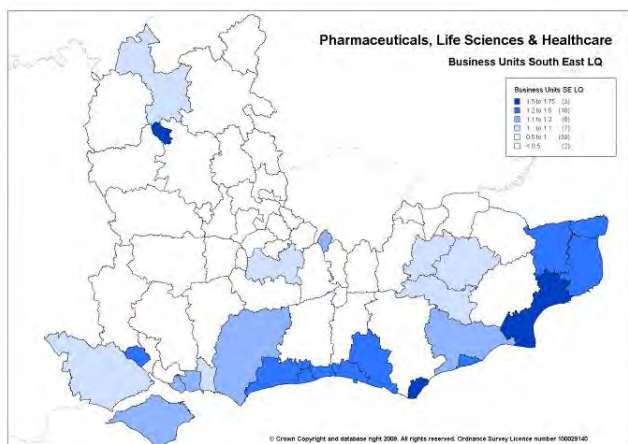
### **c) Sub-regional concentration**

#### *i) Business Units:*

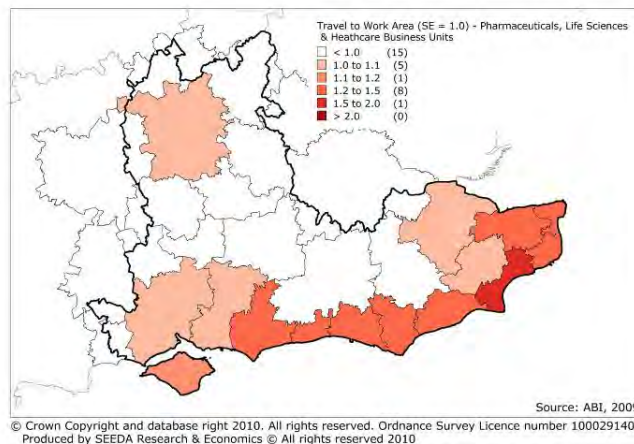
- There are some 12,550 Pharmaceuticals, Life Sciences and Healthcare business units in the South East or 3.2% of the total business units in the region.
- The concentration of Pharmaceuticals, Life Sciences and Healthcare business units in the South East in this sector is similar to the national average (Location Quotient of 0.93).
- Three local authority districts (Oxford, Eastbourne, and Shepway) have a significant concentration of business units in the Pharmaceuticals, Life Sciences and Healthcare sector.
- The concentration of business units in the top 3 local authorities ranges from some 52% and 59% above the regional average in Shepway and Oxford respectively to over 70% above the regional average in Eastbourne.
- There are another 11 local authority districts in the region with a concentration of business units in the Pharmaceuticals, Life Sciences and Healthcare sector of between 20% and 50% above the regional average.
- There is a high concentration in the Coastal South East (Brighton & Hove, Worthing, Thanet, Dover, Hastings, Lewes, Canterbury, Adur, Medway, Southampton and Arun).
- Within the top 14 districts with the highest concentration of business units in this sector, there are some 3,340 business units or some 26.6% of the total business units in the South East.
- The TTWAs analysis confirms the presence of a high concentration of business units along the coastal zone in the South East, with an important number of business units in Shepway (LQ = 1.5 - 2.0) and the Isle of Wight (LQ = 1.2 - 1.5).
- While Oxford is identified as one of the local authorities with the highest concentration of business units the TTWAs map shows a lower concentration for greater Oxford. This must be the result of a relatively reduced number of business units beyond the local authority boundary of Oxford.

## Pharmaceuticals, Life Sciences & Healthcare – concentration of activity (2007)

**Business Units by Local Authority**



**Business Units by Travel-To-Work Areas**



Note: The white areas have a concentration of both business units and employment below the South East average.

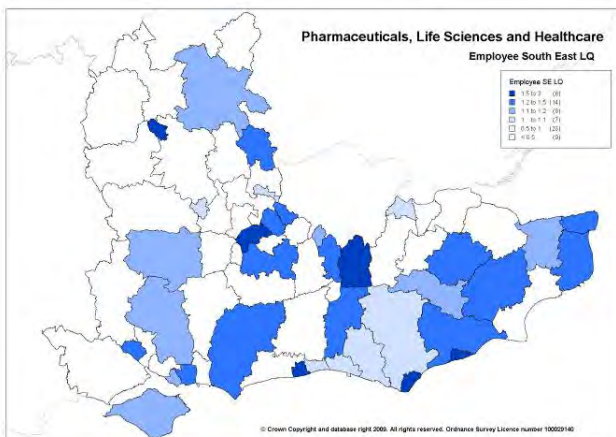
### ii) *Employment:*

- The concentration of employment in the Pharmaceuticals, Life Sciences and Healthcare sector in the South East is similar to the national average (Location Quotient of 0.99).
- Six local authority districts (Oxford, Surrey Heath, Tandridge, Worthing, Eastbourne, and Hastings) have a significant concentration of employment in the Pharmaceuticals, Life Sciences and Healthcare sector.
- The concentration of employment in the top 6 local authority districts ranges from some 64% above the regional average in Oxford to double the regional average in Worthing and Tandridge.
- The highest concentration of employment in the Pharmaceuticals, Life Sciences and Healthcare sector is in parts of Surrey (Tandridge and Surrey Heath), Sussex (Worthing, Eastbourne and Hastings) and Oxford.
- There are some 46,610 employees in the Pharmaceuticals, Life Sciences and Healthcare sector in this part of the South East or 13.8% of the total employment in the Pharmaceuticals, Life Sciences and Healthcare sector in the region.
- There are another 14 local authority districts in the region with a concentration of employment of between 20% and 50% above the regional average in the Pharmaceuticals, Life Sciences and Healthcare sector.
- There is again a high concentration in Surrey (Spelthorne, Guildford, Runnymede and Reigate & Banstead), PUSH (Portsmouth and Southampton), Kent (Maidstone, Dover, Thanet, Ashford), Chiltern in Buckinghamshire and several parts of Sussex (Chichester, Rother, Mid Sussex).
- There are some 140,298 employees in the top 20 districts with the highest concentration of employment in this sector or some 41.6% of the total employment in the Pharmaceuticals, Life Sciences and Healthcare sector within the South East.
- The TTWAs map shows that most of the employment in the sector is located along the coastal zone of the South East, with Worthing, Eastbourne, and Margate, Ramsgate & Sandwich recording the highest levels of concentration of employment (Location Quotient between 1.5 and 2.0)

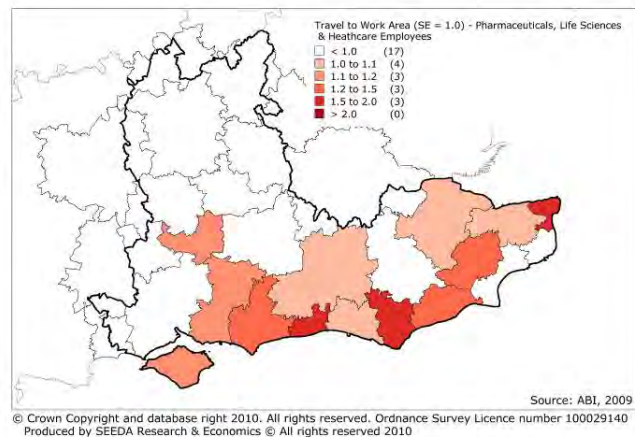
- The high concentration of employment in the local authorities of Oxford and Surrey Heath is substantially lower (below the regional average) when analyzed under the TTWAs of Oxford and Guildford & Aldershot, respectively.
- Shepway (or Folkestone) shows a low concentration of employment in the Pharmaceuticals, Life Sciences and Healthcare sector that contrasts with the high concentration of business units. This indicates the presence of a large number of small companies recruiting fewer employees in that area.

## Pharmaceuticals, Life Sciences & Healthcare – concentration of activity (2007)

**Employment by Local Authority**



**Employment by Travel-To-Work Areas**



Note: The white areas have a concentration of both business units and employment reserved below the South East average.

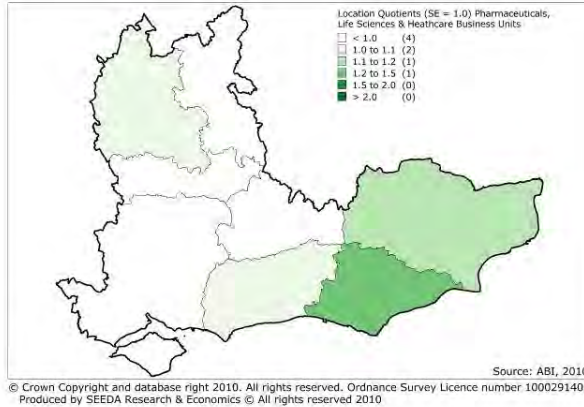
### d) Sub-regional agglomeration

#### i) Business Units:

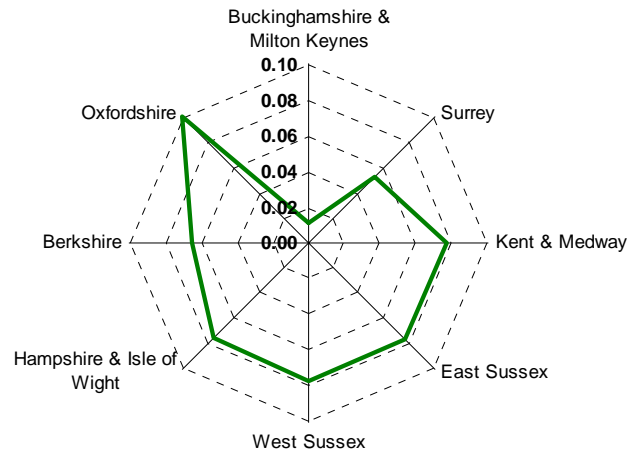
- East Sussex, Kent & Medway and West Sussex show the highest concentration of Pharmaceuticals, Life Sciences & Healthcare business units, with location quotients of 1.33, 1.11 and 1.07, respectively.
- The agglomeration coefficient for those counties is relatively low (0.08), indicating that the business units are widespread across local districts & cities.
- Berkshire and Buckinghamshire & Milton Keynes are the South East counties with the lowest concentration of Pharmaceuticals, Life Sciences & Healthcare business units (19% and 17% below the regional average, respectively). The business units are almost equally spread in Berkshire (agglomeration coefficient near to zero).

## Pharmaceuticals, Life Sciences & Healthcare (2007)

### Concentration of Business Units by County



### Agglomeration of Business Units by County

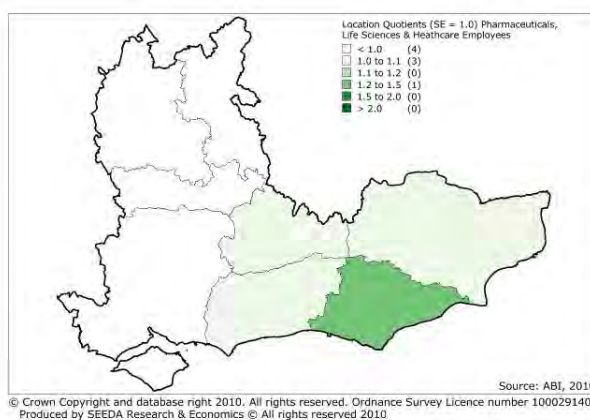


### ii) Employment:

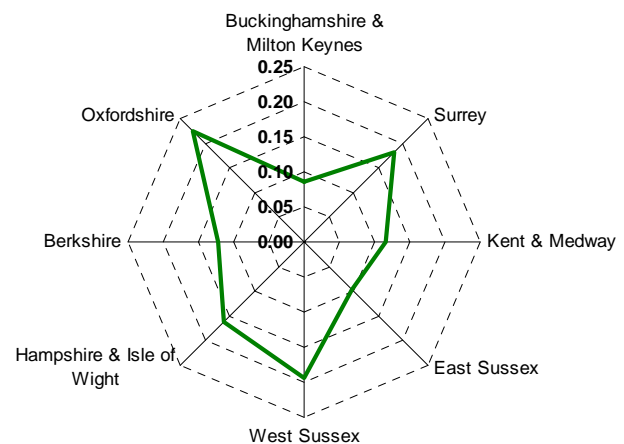
- East Sussex has the highest concentration of Pharmaceuticals, Life Sciences & Healthcare employment, well above the regional average (23%), although the total employees are half the number in Hampshire. The agglomeration coefficient in East Sussex is relatively low (0.10) compared to any other South East county, which illustrates that Pharmaceuticals, Life Sciences & Healthcare employees are relatively widespread across local districts & cities.
- The degree of concentration of sectoral employment in Oxfordshire, West Sussex, and Surrey is around the regional average, although these counties show the highest agglomeration coefficients in the South East (0.22, 0.19, and 0.18, respectively). Most of the employment in the Pharmaceuticals, Life Sciences & Healthcare industry is highly agglomerated in a few local districts such as Oxford and Crawley.

## Pharmaceuticals, Life Sciences & Healthcare (2007)

### Concentration of Employment by County



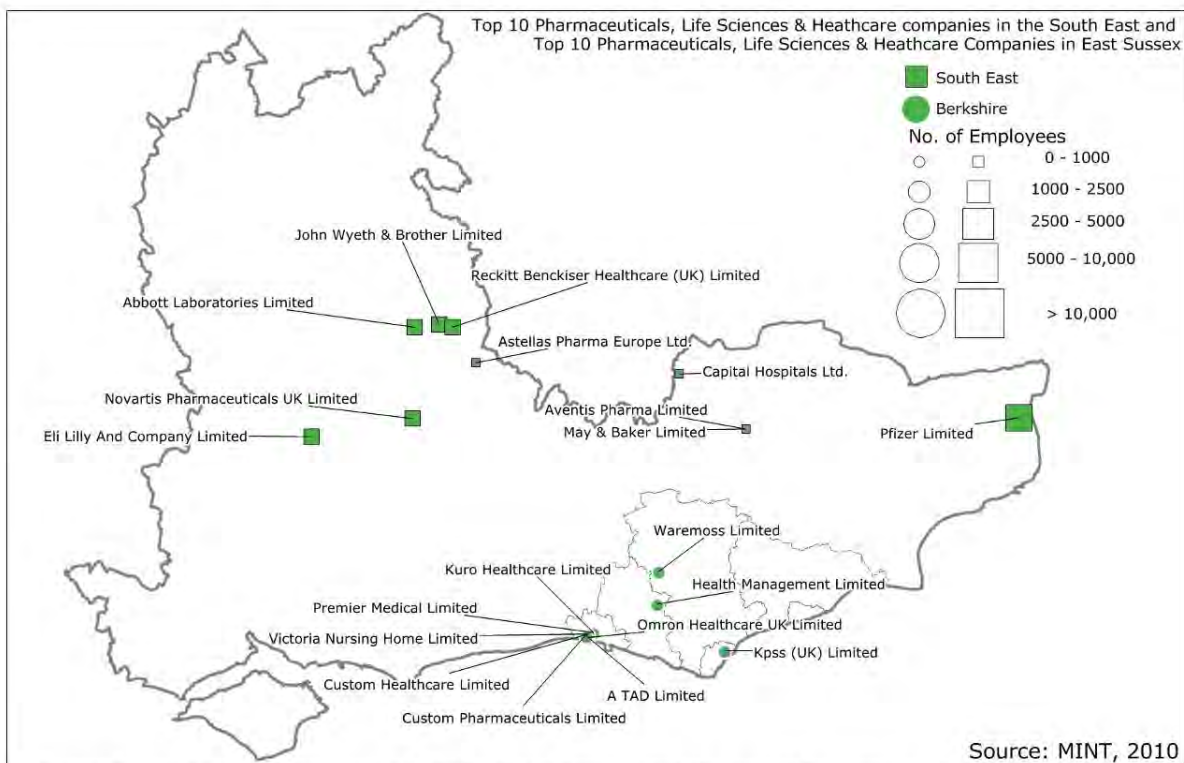
### Agglomeration of Employment by County



## e) Business specific examples

- A large number of top Pharmaceuticals, Life Science & Healthcare companies in the South East (as measured by turnover) are located in East Sussex, as the county shows the highest concentration of both business units and employment.
- Top companies in the Healthcare sub-sector such as *Kuro Healthcare*, *Premier Medical*, *Custom Healthcare* and *Omron Healthcare* are based in Brighton & Hove.
- A number of other large employers in the Pharmaceuticals & Life Sciences sub-sectors are based outside East Sussex - for instance, *Pfizer* in Kent, *Eli Lilly* and *Novartis* in Hampshire, and *Abbott* in Berkshire.

### Large Pharmaceuticals, Life Science & Healthcare Firms in the South East and East Sussex



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## 4) Advanced Engineering and Marine

### a) Output (GVA)

#### i) Past Performance:

- In 2007 the Advanced Engineering and Marine sector contributed £7.6bn to the South East Economy or 4.9% of total GVA in the South East. Its share of regional output was similar to the contribution that this sector makes to UK GDP (5%).
- In 2007 the South East share of total Advanced Engineering and Marine output in the UK was 13.9%, similar to the South East share of UK GDP (14.3%).
- Over the past decade (1997-2007) the Advanced Engineering and Marine sector in the South East expanded by 30.9%, or around 2.7% per annum, which was well

below the priority sector average (4.7%) and the South East average (around 4% per annum).

- Over the past decade the rate of GVA growth in this sector in the South East was above the national Advanced Engineering and Marine sector average of 1.6% per annum.
- The Advanced Engineering and Marine sector in the South East contracted by -14.4% in 2009, well below the national Advanced Engineering and Marine average of -15.7%, and by far the sharpest contraction amongst the priority sectors in the South East.
- In 2007 labour productivity in the Advanced Engineering and Marine sector was around 38% above the average productivity in the South East or some 13% above the priority sector average productivity.

*ii) Projections:*

- The latest independent projections from Experian show that growth in this sector is forecast to contract by -0.6% in 2010, in line with the national average for this sector.
- Over the next decade (2010-2020), total output in the Advanced Engineering and Marine sector in the South East is projected to expand by 2.4% per annum, well above the UK Advanced Engineering and Marine sector average of 1.9%.
- The Advanced Engineering and Marine sector's share of total GVA for the six priority sectors in the South East is projected to fall from 12.4% in 2007 to 10.0% by 2020.
- The Advanced Engineering and Marine sector accounted for 3.6% of total GVA growth in the South East, between 1997 and 2007. They are also expected to increase their contribution to GVA growth to 4.2% in the period 2010-2020.

## **b) Employment**

*i) Past Performance:*

- In 2007 there were 165,000 people employed in the Advanced Engineering and Marine sector in the South East, or 3.8% of total employment in the region. This sector accounts for 10.8% of total priority sector employment in the South East.
- In 2007 the South East share of the total Advanced Engineering and Marine sector employment in the UK was 13.9%, the same as the South East share of UK employment (13.9%).
- Over the past decade (1997-2007) employment in the Advanced Engineering and Marine sector in the region declined by around 2.5% per annum or 22.5% over the period.
- Over the past decade the rate of employment decline in this sector in the South East was below the rate of decline in this sector nationally (-2.8%).
- Employment in the Advanced Engineering and Marine sector in the South East contracted by -7.6% in 2009. Nationally, employment in this sector declined by -9.6% in 2009.

*ii) Projections:*

- The latest independent projections from Experian show a further decline in employment of -2.6% in 2010, against the regional average of -0.1% and the UK Advanced Engineering and Marine sector average of -4.9%.

- Over the next decade (2010-2020), employment in this sector is projected to contract by -0.6% per annum, nationally this sector is expected to remain stagnant.
- The South East share of total national employment in the Advanced Engineering and Marine sector is projected to increase from 14% in 2007 to 15.8% by 2020.
- The Advanced Engineering and Marine sector negatively contributed<sup>24</sup> with -10.1% out of total employment generation in the South East, between 1997 and 2007. However, they are expected to positively contribute to total employment with 2.8% in the period 2010-2020.

### **c) Sub-regional concentration**

#### *i) Business Units:*

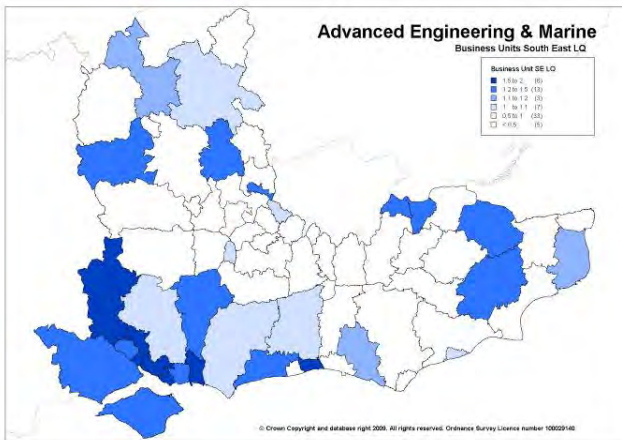
- There are some 9,380 Advanced Engineering and Marine business units in the South East or 2.4% of the total business units in the region.
- The concentration of Advanced Engineering and Marine business units in the South East is similar to the national average (Location Quotient of 0.97).
- Six local authority districts in the South East have a significant concentration of business units in the Advanced Engineering & Marine sector. This ranges from some 50% above the regional average in Test Valley to over 70% above the regional average in Havant.
- The highest concentration of business units in the Advanced Engineering & Marine sector is in Hampshire (Havant, Eastleigh, Gosport, Fareham, Test Valley) and Adur in West Sussex.
- There are some 966 business units in the Advanced Engineering & Marine sector in this part of the South East or 1 in 10 Advanced Engineering & Marine businesses in the region. (This part of the region accounts for some 6.4% of all businesses in the South East).
- There are another 13 local authority districts in the region with a concentration of business units in the Advanced Engineering & Marine sector of between 20% and 50% above the regional average.
- There is again a high concentration in Hampshire (Southampton, Isle of Wight, New Forest, Portsmouth and East Hampshire), followed by Kent (Swale, Dartford, Gravesham and Ashford) and Thames Valley and Oxfordshire (Slough, Wycombe, Vale of White Horse) and Arun in West Sussex.
- There are some 3,400 business units in the top 19 districts or 36% of the total Advanced Engineering & Marine businesses stock in the South. This is well above the 26% share of all business units in this part of the South East.
- The highest concentration of business units by Travel-To-Work Areas (TTWAs) is located along the south west coast of the region (Southampton, Portsmouth, Chichester & Bognor Regis, and Isle of Wight) with a significant presence in Andover (location quotients between 1.5 and 2.0).

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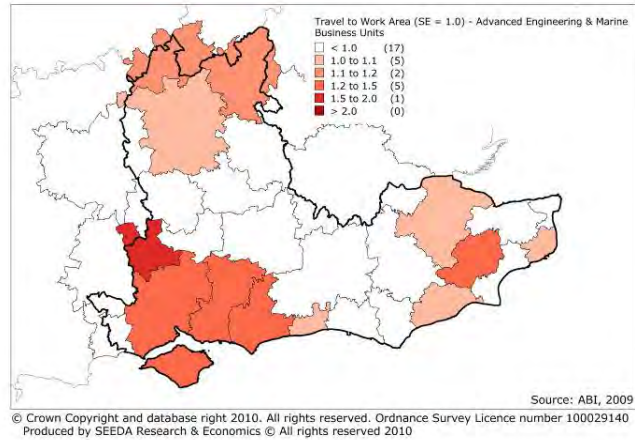
<sup>24</sup> A negative contribution to growth means that this particular sector saw a reduction in the number of total employment while the South East as a whole experienced an increase of total employment for the relevant period.

## Advanced Engineering and Marine – concentration of activity (2007)

**Business Units by Local Authority**



**Business Units by Travel-To-Work Areas**



Note: The white areas have a concentration of both business units and employment below the South East average.

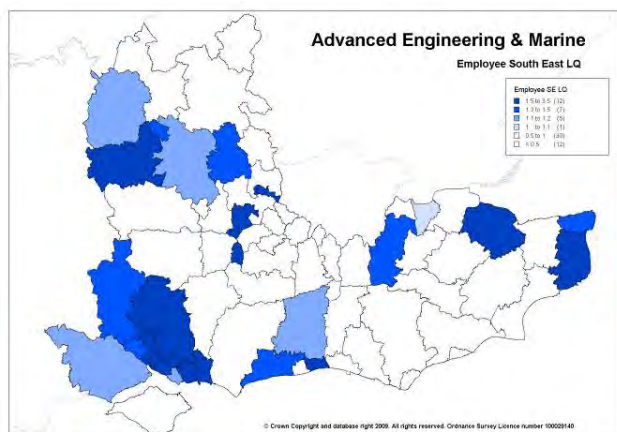
### ii) Employment:

- The concentration of employment in the Advanced Engineering and Marine sector in the South East is similar to the national average (Location Quotient of 0.97).
- 13 local authority districts in the South East have a significant concentration of employment in the Advanced Engineering & Marine sector.
- The concentration of employment in the top 13 local authority districts ranges from some 50% above the regional average in Portsmouth and Fareham to over 1.2 and 1.5 times the regional average in Rushmoor and Vale of White Horse respectively and over 2.3 times the regional average in Dover.
- The highest concentration of employment in the Advanced Engineering & Marine sector is in Hampshire (Rushmoor, Havant, Eastleigh, Winchester, Portsmouth and Fareham), Oxfordshire and Thames Valley (Vale of White Horse, Slough and Bracknell Forest) and Kent (Dover and Swale).
- There are some 52,520 employees in the Advanced Engineering & Marine sector in this part of the South East or 35% of total employment in the Advanced Engineering & Marine sector in the region.
- There are another 7 local authority districts in the region with a concentration of employment in the Advanced Engineering & Marine sector of between 20% and 50% above the regional average.
- There is again a high concentration in Hampshire (Southampton, and Test Valley), followed by Kent (Sevenoaks and Thanet) and Thames Valley and Oxfordshire (High Wycombe, Oxford) and Arun in West Sussex. There is also a concentration of employment (some 19% above the regional average) in Horsham (West Sussex), West Oxfordshire, South Oxfordshire and Gosport in Hampshire.
- There are some 77,450 employees in the top 20 districts with the highest concentration of employment in the region or some 52% of the total employment in the Advanced Engineering & Marine sector within the South East.
- The TTWAs map shows a high concentration of employment around the south west coast of the region, in line with the allocation of business units in the Advanced Engineering & Marine sector.
- However, the highest concentration of employment is observed in the east coast of the region - in Dover and Margate, Ramsgate & Sandwich, where the

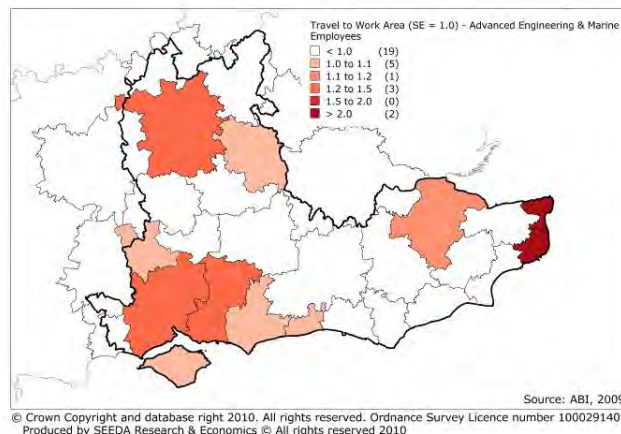
concentration of business units is relatively low compared to the South East average. This indicates the presence of a few large companies recruiting most of the labour force in those areas.

## Advanced Engineering and Marine – concentration of activity (2007)

### Employment by Local Authority



### Employment by Travel-To-Work Areas



Note: The white areas have a concentration of both business units and employment below the South East average.

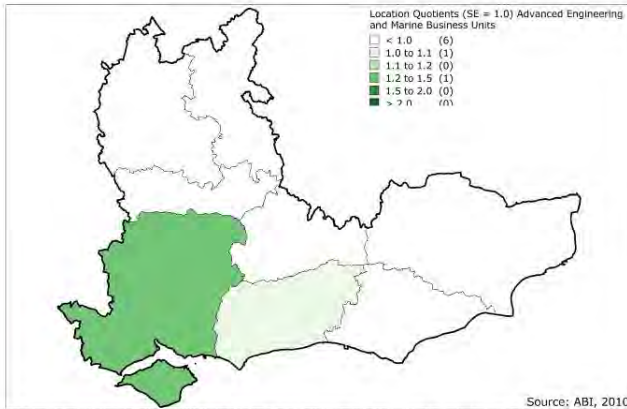
## d) Sub-regional agglomeration

### i) Business Units:

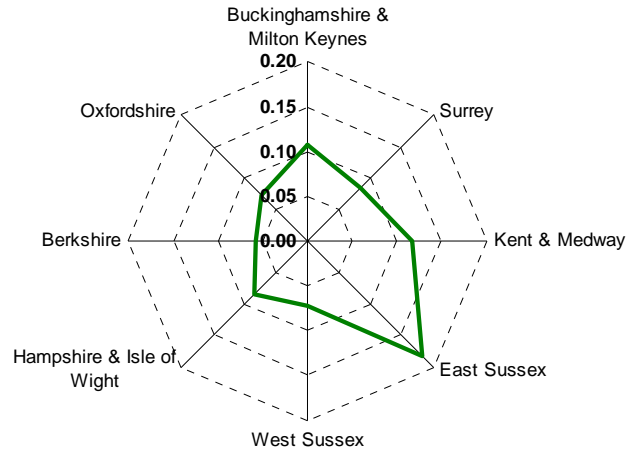
- Hampshire (including the Isle of Wight) is the South East county with the largest concentration of Advanced Engineering & Marine business units (32% above the regional average). Moreover, the business units are proportionally spread across most of its 14 local districts & cities, as is indicated by the agglomeration coefficient near zero (i.e. 0.08).
- East Sussex is the county with the lowest concentration (24% below the regional average) of Advanced Engineering & Marine business units. However, most of these business units are concentrated around a few local districts & cities (i.e. Brighton & Hove), which leads East Sussex to record the highest agglomeration coefficient (0.18) amongst the South East counties.
- The agglomeration coefficient for the remaining South East counties ranges from 0.06 in Berkshire to 0.12 in Kent & Medway which shows that the Advanced Engineering & Marine business units are relatively evenly distributed across those local districts & cities.

## Advanced Engineering and Marine (2007)

### Concentration of Business Units by County



### Agglomeration of Business Units by County

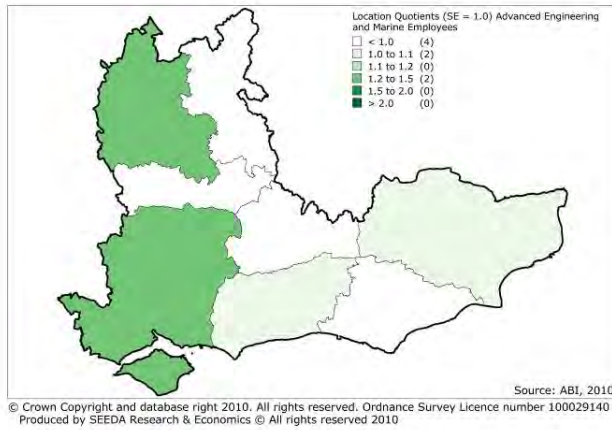


#### ii) Employment:

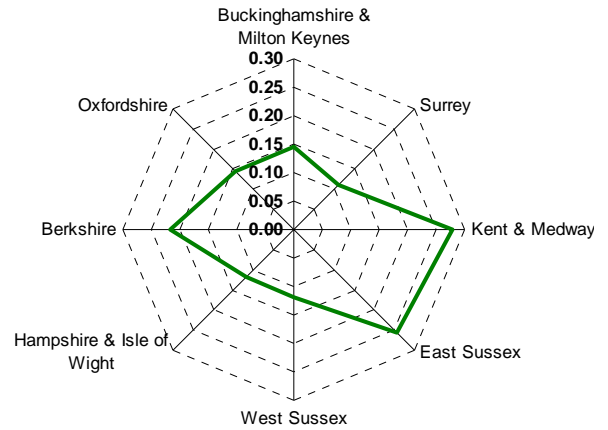
- The concentration of Advanced Engineering & Marine employment in Oxfordshire and Hampshire is 37% and 33% above the South East average, respectively.
- Oxfordshire and Hampshire have a large number of employees in this sector (17,520 and 43,880, respectively), although they are relatively well dispersed across local districts and cities with agglomeration coefficients of 0.15 for Oxfordshire and 0.12 for Hampshire.
- Kent and Medway is also a large contributor to employment in the Advanced Engineering & Marine sector with a total of 26,580 employees, which places the county's location quotient 4% above the regional average. However, most of this employment is largely concentrated around Dover, which means Kent and Medway records the highest agglomeration coefficient for the Advanced Engineering & Marine sector (0.28) in the South East.
- East Sussex also shows a relatively high agglomeration coefficient (0.26) for employment in the Advanced Engineering & Marine sector, mainly attributed to the city of Brighton & Hove. However, the scale of employment is not significant as the county has the lowest rate of concentration (51% below the regional average) in that specific sector.

## Advanced Engineering and Marine (2007)

**Concentration of Employment by County**



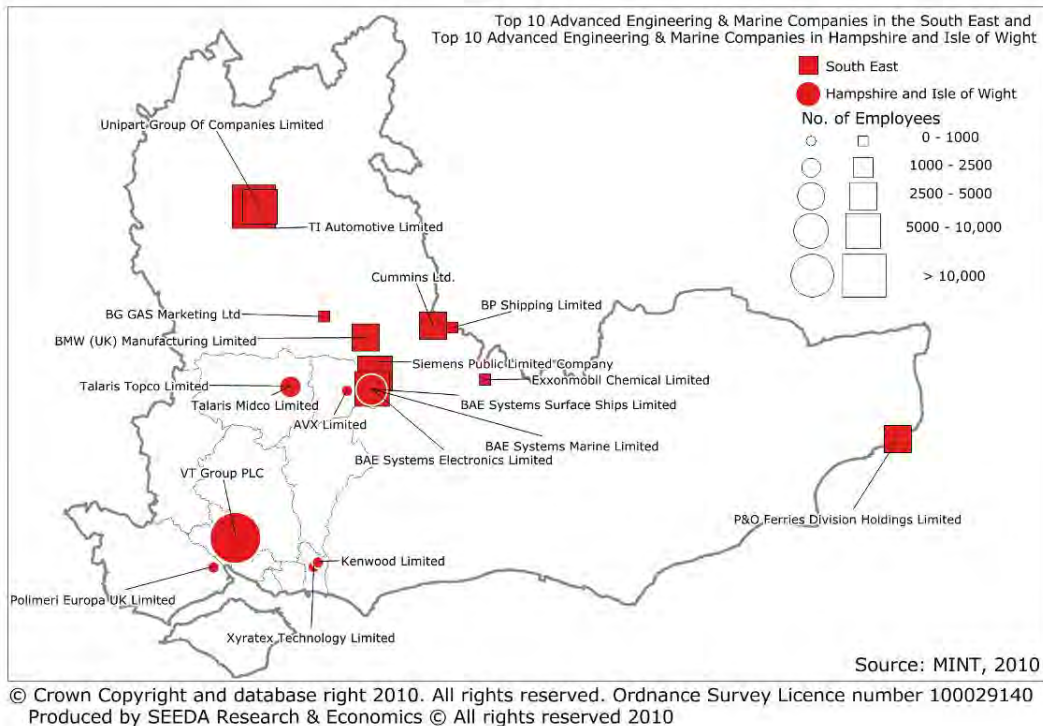
**Agglomeration of Employment by County**



### e) Business specific examples

- A wide range of top Advanced Engineering & Marine firms in the South East (as measured by turnover) are located in Hampshire as the county shows the highest concentration of both business units and employment.
- Large employers such as *BAE Systems* (Electronics, Marine and Surface ships branches) and *VT Group* are based in Rushmoor and Eastleigh, respectively.
- There are a few other large employers located to the north and northeast of Hampshire. For instance, *Siemens* in Surrey, *BMW* in Berkshire and *TI Automotive* and *Unipart Group of Companies* in Oxfordshire.

### Large Advanced Engineering & Marine Firms in the South East and Hampshire



## 5) Environment & Energy

### a) Output (GVA)

#### i) Past Performance:

- In 2007 the Environment & Energy sector contributed some £4.5bn to the South East Economy or 2.9% of total GVA in the South East. Its share of regional output was similar to the contribution that this sector makes to UK GDP (2.9%).
- In 2007 the South East share of the total Environment & Energy sector output in the UK was 13.9%, similar to the South East share of UK GDP (14.3%).
- Over the past decade (1997-2007) the Environment & Energy sector in the South East expanded by 28.4%, or around 2.5% per annum, which was well below the priority sector average (4.7%) and the South East average (around 4% per annum).
- Over the past decade the rate of GVA growth in this sector in the South East was above the national Environment & Energy sector average of 1.7% per annum.
- The Environment & Energy sector in the South East contracted by -11.4% in 2009, faster than the national Environment & Energy sector average of -9.3%.

#### ii) Projections:

- The latest independent projections from Experian show that growth in this sector is forecast to increase by 0.5% in 2010 against the national Environment & Energy sector average of -1.9%.
- Over the next decade (2010-2020), total output in the Environment & Energy sector in the South East is projected to expand by 2.9% per annum, or slightly faster than the UK Environment & Energy sector average of 2.7%.
- The Environment & Energy sector's share of total GVA for the six priority sectors in the South East is projected to decrease from 7.2% in 2007 to 6.4% by 2020.
- The Environment & Energy sector accounted for 2% of total GVA growth in the South East, between 1997 and 2007. They are also expected to increase their contribution to GVA growth to 3.1% in the period 2010-2020.

### b) Employment

#### i) Past Performance:

- In 2007 there were 64,000 people employed in the Environment & Energy sector in the South East or 1.5% of total employment in the region. This sector accounts for 4.2% of total priority sector employment in the South East.
- In 2007 the South East share of the total Environment & Energy sector employment in the UK was 13.1%, below the South East share of UK employment (13.9%).
- Over the past decade (1997-2007) employment in the Environment & Energy sector in the region increased by 0.1% per annum or 1.4% over the period.
- Over the past decade employment in this sector nationally declined by -0.1% per annum.
- Employment in the Environment & Energy sector in the South East contracted by -2.2% in 2009. Nationally, employment in this sector declined by -4.3% in 2009.

*ii) Projections:*

- The latest independent projections from Experian show a -1.8% decline in employment in 2010, against the regional average increase of 0.1% and the UK Environment & Energy sector average of -0.3%.
- Over the next decade (2010-2020) employment in this sector is projected to contract by -0.1% per annum, compared to 0,0% in this sector nationally.
- The South East share of total national employment in the Environment & Energy sector is projected to decline marginally from 13% in 2007 to 12.8% by 2020.
- The Environment & Energy sector accounted for 0.1% of total employment generation in the South East, between 1997 and 2007. However, they are expected to negatively contribute to total employment generation with -0.2% in the period 2010-2020.

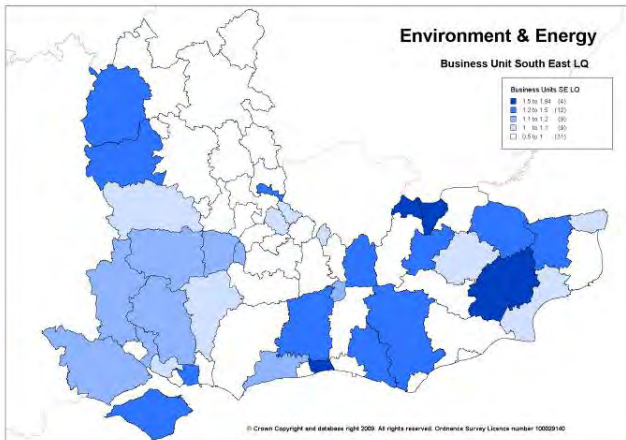
**c) Sub-regional concentration**

*i) Business Units*

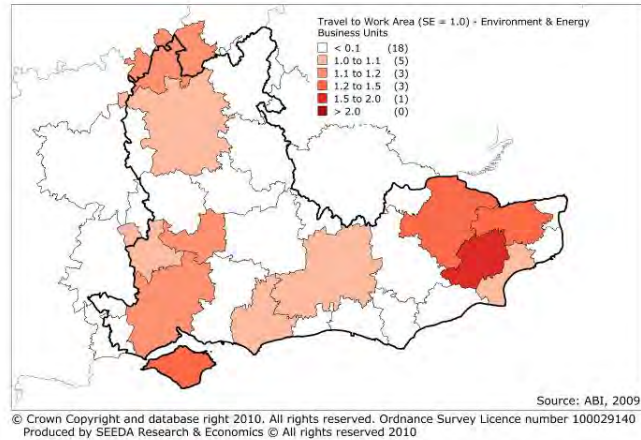
- There are some 2,650 Environment and Energy business units in the South East or 0.7% of the total business units in the region.
- The concentration of Environment and Energy business units in the South East is around 20% below the national average.
- The concentration of business units in the top 4 local authorities ranges from some 56% and 63% above the regional average in Adur and Ashford, respectively, to 70% and over 90% above the regional average in Dartford and Gravesham respectively.
- There are another 13 local authority districts in the region with a concentration of business units in the Environment and Energy sector of between 20% and 50% above the regional average.
- There is a high concentration in Kent and Medway (Tanbridge and Malling, Medway, Swale and Canterbury), the Inner South East (West Oxfordshire, Vale of White Horse, Slough, Tandridge) and Coastal South East (Lewes, Isle of Wight, Portsmouth, Wealden).
- Within the top 17 districts with the highest concentration of business units in this sector there are some 850 business units or some 32.2% of the total business units in the Environment and Energy sector in the South East.
- The TTWAs analysis shows that business units in the Environment & Energy sector are relatively dispersed across the region.
- The highest concentration of business units by TTWAs is located around the east coast of the region, with Ashford showing the highest location quotient (between 1.5 and 2.0 above the regional average) for the Environment & Energy sector.

## Environment & Energy – concentration of activity (2007)

**Business Units by Local Authority**



**Business Units by Travel-To-Work Areas**



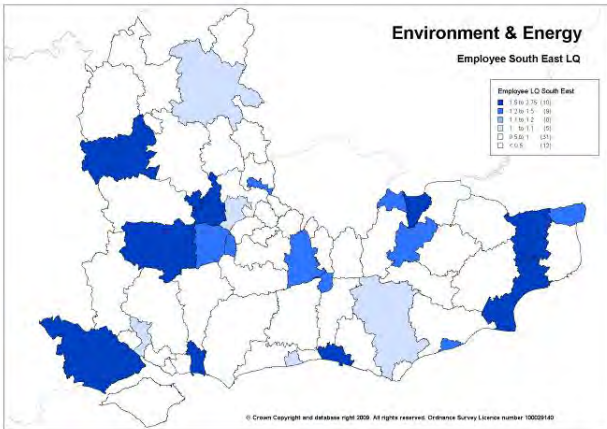
Note: The white areas have a concentration of both business units and employment below the South East average.

### ii) Employment

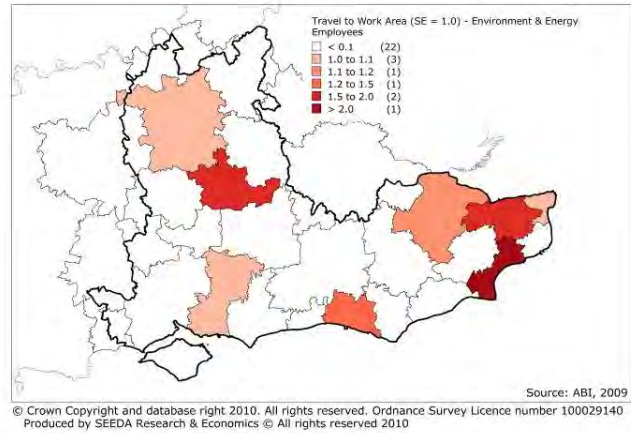
- The concentration of employment in the Environment and Energy sector in the South East is around 10% below the national average.
- The concentration of employment in the top 10 local authority districts ranges from some 50% above the regional average in Brighton & Hove to some 1.7 times the regional average in Shepway.
- The highest concentration of employment in the Environment and Energy sector is in parts of Kent (Shepway, Canterbury and Gravesham), Hampshire (Havant, New Forest, Basingstoke & Deane) and Thames Valley/Oxfordshire (Wokingham, Vale of White Horse, Reading) and Brighton & Hove.
- There are some 16,260 employees in the Environment and Energy sector in this part of the South East or 32.6% of total employment in the Environment and Energy sector in the region.
- There are another 10 local authority districts in the region with a concentration of employment of between 20% and 50% above the regional average in the Environment and Energy sector.
- There are some 25,930 employees in the top 20 districts with the highest concentration of employment in this sector or some 52% of the total employment in the Environment and Energy sector within the South East.
- The highest concentration of employment in the Environment & Energy sector is again observed around the east coast of the region, with Shepway –Folkestone– showing the highest location quotient (more than twice the regional average).
- Ashford records a low concentration of employment (below the regional average) despite having the highest proportion of Environment & Energy business units. This indicates the presence of a large number of relatively small business units recruiting few employees.

## Environment & Energy – concentration of activity (2007)

**Employment by Local Authority**



**Employment by Travel-To-Work Areas**



Note: The white areas have concentration of both business units and employment below the South East average.

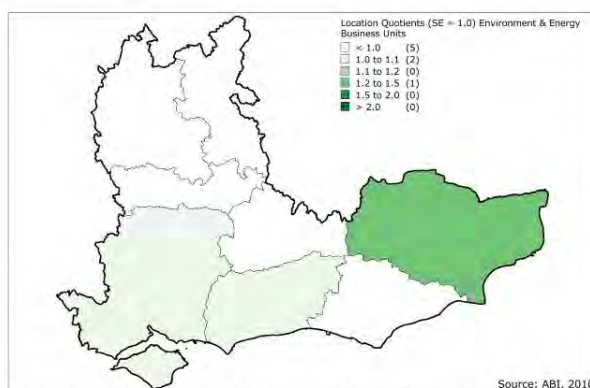
### d) Sub-regional agglomeration

#### i) Business Units:

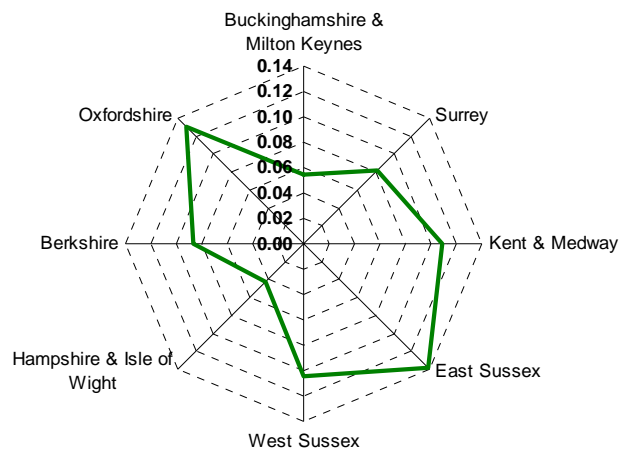
- Kent & Medway shows the highest concentration of business units in the Environment & Energy sector, which is 25% above the regional average. Hampshire and West Sussex also record relatively high concentrations of business units in the industry, which are 8% and 3% above the South East average.
- The agglomeration coefficient in those counties ranges from 0.04 in Hampshire, to 0.10 in West Sussex and 0.11 in Kent & Medway, which indicates a relatively well distributed number of business units across local districts & cities.

## Environment & Energy (2007)

**Concentration of Business Units by County**



**Agglomeration of Business Units by County**

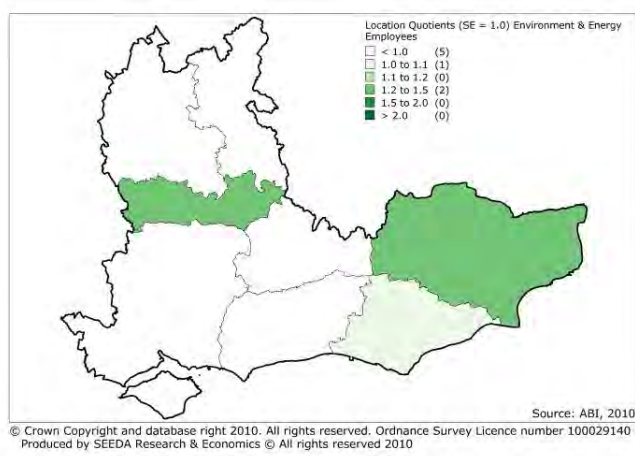


ii) *Employment:*

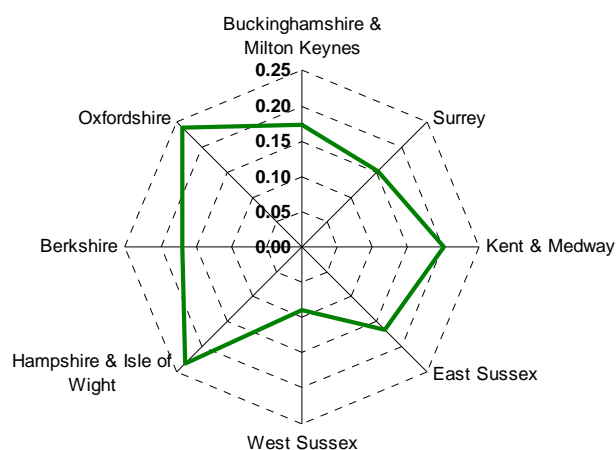
- Berkshire, Kent & Medway, and East Sussex show the highest concentrations of Environment & Energy employment, with location quotients of 30%, 20% and 10% above the regional average, respectively.
- The agglomeration coefficient in these counties is between 0.17 and 0.20, which points to a relatively significant concentration of employment across local districts. The Environment & Energy agglomeration coefficient in the South East ranges from 0.09 in West Sussex to 0.24 in Oxfordshire.
- In Berkshire and East Sussex, the high concentration of employment along with the low concentration of business units (as seen on the map) demonstrates the presence of large firms in the Environment & Energy sector.
- Conversely, in Hampshire and West Sussex, the low concentration of employment (3% and 7%, respectively) along with the above-mentioned high concentration of business units demonstrate the presence of a large number of small firms in the Environment & Energy sector.

### Environment & Energy (2007)

**Concentration of Employment by County**



**Agglomeration of Employment by County**

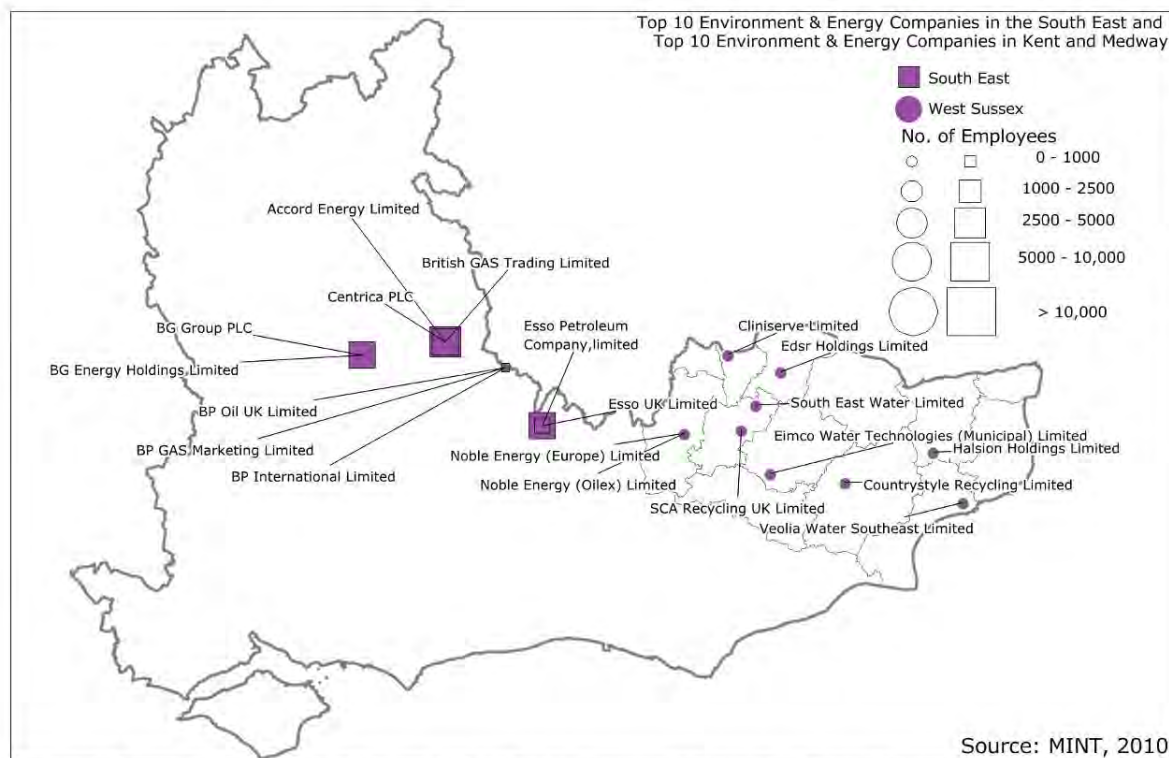


### e) Business specific examples

- A wide range of top Environment & Energy firms in the South East (as measured by turnover) are distributed across Kent & Medway as the county shows the highest concentration of both business units and employment.
- Top companies such as *Noble Energy*, *SCA Recycling*, *Eimco Water Technologies*, and *Edsr Holdings* are located in Seveoaks, Tonbridge and Malling, Maidstone, and Medway, respectively.
- There are a number of large employers located outside Kent & Medway. For instance, *Accord*, *Centrica*, and *British Gas* in Berkshire and *BP* and *Esso* in Surrey<sup>25</sup>.

<sup>25</sup> It is worth bearing in mind that some of these companies hold their head offices in locations close to London although their production facilities are located elsewhere.

## Large Environment & Energy Firms in the South East and Kent & Medway



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## 6) Aerospace & Defence

### a) Output (GVA)

#### i) Past Performance:

- In 2007 the Aerospace & Defence sector contributed some £3bn to the South East Economy or 4.5% of the total GVA in the South East. Its share of regional output was marginally higher than the contribution that this sector makes to UK GDP (4.3%).
- In 2007 the South East share of total Aerospace & Defence sector output in the UK was 15.5%, marginally higher than the South East share of UK GDP (14.3%).
- Over the past decade (1997-2007) the Aerospace & Defence sector in the South East expanded by 0.3% per annum, which was well below the average for all six priority sectors (4.7%) and the South East average (around 4% per annum).
- Over the past decade the rate of GVA growth in this sector in the South East was below the national Aerospace & Defence sector average of 2.7% per annum.
- The Aerospace & Defence sector in the South East contracted by -6% in 2009, faster than the national Aerospace & Defence sector average of -3.9% per annum.

*ii) Projections:*

- The latest independent projections from Experian show that growth in this sector is forecast to decrease by -0.3% in 2010 against the national Aerospace & Defence sector average of 3%.
- Over the next decade (2010-2020), total output in the Aerospace & Defence sector in the South East is projected to expand by 2.2% per annum, below the UK Aerospace & Defence sector average of 2.5%.
- The Aerospace & Defence sector's share of total GVA for all six priority sectors in the South East is projected to drop from 4.4% in 2007 to 3.9% by 2020.
- The Aerospace & Defence sector accounted for 0.05% of total GVA growth in the South East, between 1997 and 2007. They are also expected to increase their contribution to GVA growth up to 1.5% in the period 2010-2020.

**b) Employment**

*i) Past Performance:*

- In 2007 there were 57,000 people employed in the Aerospace & Defence sector in the South East, or 1.3% of total employment in the region. This sector accounts for 3.7% of total priority sector employment in the South East.
- In 2007 the South East share of total Aerospace & Defence sector employment in the UK was 16.6%, above the South East share of UK employment (13.9%).
- Over the past decade (1997-2007) employment in the Aerospace & Defence sector in the region decreased by -2.5% per annum or -22.2% over the period.
- Over the past decade employment in this sector nationally declined by -0.1% per annum.
- Employment in the Aerospace & Defence sector in the South East contracted by -4.3% in 2009. Nationally, employment in this sector fell by -3.1% in 2009.

*ii) Projections:*

- The latest independent projections from Experian show a -2.3% decline in employment in 2010, against the regional average of 0.1% and the UK Aerospace & Defence sector average of -0.9% decline.
- Over the next decade (2010-2020) employment in this sector is projected to increase by 0.2% per annum, against an increase nationally of 0.3% per annum.
- The South East share of total national employment in the Aerospace & Defence sector is projected to decline from 16.7% in 2007 to 16.1% by 2020. Over the previous decade the South East share of total UK employment in this sector declined from 21.2% in 1997 to 16.7% in 2007.
- The Aerospace and Defence sector negatively contributed with -3.4% out of total employment generation in the South East, between 1997 and 2007. However, they are expected to positively contribute to total employment with 0.4% in the period 2010-2020.

**c) Sub-regional concentration**

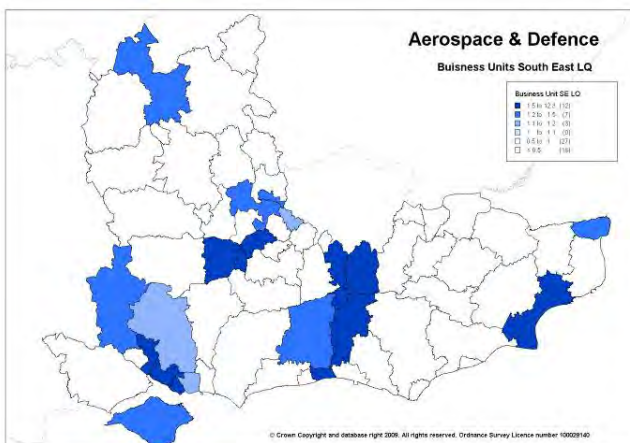
*i) Business Units:*

- There are some 900 Aerospace and Defence business units in the South East or 0.2% of the total business units in the region.
- The concentration of Aerospace and Defence business units in the South East is around 30% above the national average.

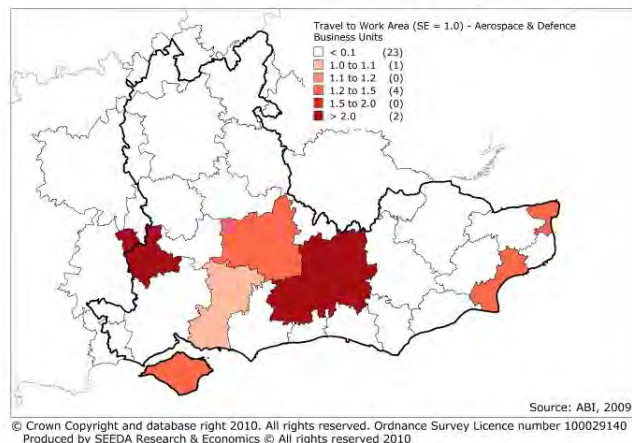
- The concentration of business units in the top 12 local authorities ranges from some 51% and 59% above the regional average in Shepway and Fareham respectively to some 3.5 times the average in Rushmoor and 11 times the average in Crawley. Crawley alone has over 100 business units in the Aerospace and Defence sector.
- A high concentration can be found in West Sussex (Crawley, Mid Sussex and Adur), Hampshire (Rushmoor, Gosport, Hart, Eastleigh and Fareham), Surrey (Reigate and Banstead, Tandridge and Surrey Heath) and Shepway in Kent.
- There are some 350 business units in the top 12 districts with the highest concentration of business units in this sector or some 39% of the total business units in the Aerospace and Defence sector in the South East.
- There are another 8 local authority districts in the region with a concentration of business units in the Aerospace and Defence sector of between 20% and 50% above the regional average.
- These are largely located in Hampshire, Thames Valley and Cherwell in Oxfordshire.
- There are some 500 business units in the top 20 districts with the highest concentration of business units in this sector or some 55% of the total business units in the Aerospace and Defence sector in the South East.
- The highest concentration of business units by TTWAs is located in Crawley and Andover, with a location quotient more than twice the regional average.
- Other dispersed areas with a relatively high concentration of Aerospace & Defence businesses are Guildford & Aldershot, Isle of Wight, Folkestone, and Margate, Ramsgate & Sandwich.

### Aerospace & Defence – concentration of activity (2007)

**Business Units by Local Authority**



**Business Units by Travel-To-Work Areas**



Note: The white areas have a concentration of both business units and employment below the South East average.

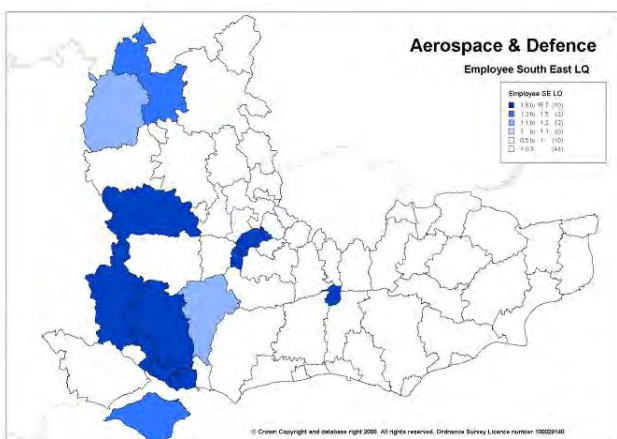
*ii) Employment:*

- The concentration of employment in the Aerospace and Defence sector in the South East is around 20% above the national average.
- 11 local authority districts in the South East have a significant concentration of employment in the Aerospace and Defence sector.

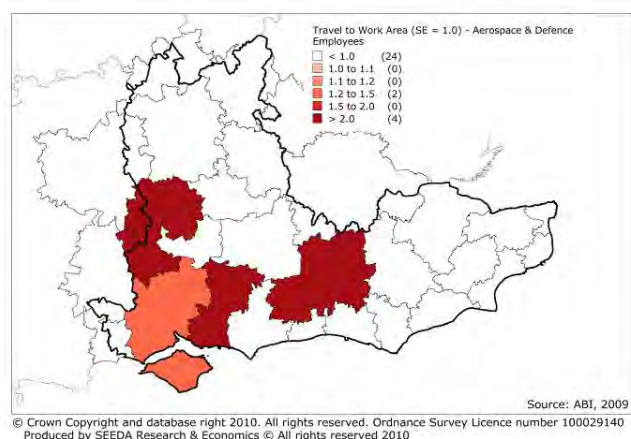
- The concentration of employment in the top 11 local authority districts ranges from some 58% above the regional average in Winchester to some 14 times the regional average in Crawley.
- The highest concentration of employment in the Aerospace and Defence sector is in Crawley, followed by a number of districts in Hampshire (Gosport, Fareham, Portsmouth, Test Valley, Rushmoor, Eastleigh, and Winchester) and in West Berkshire and South Buckinghamshire.
- The Isle of Wight and Cherwell also have a concentration of employment some 40% above the regional average in this sector.
- There are some 43,700 employees in the Aerospace and Defence sector in the top 13 districts, accounting for 79% of total employment in the Aerospace and Defence sector in the region.
- According to the TTWAs analysis the highest concentration of employment in the sector is located in Crawley, Andover, Newbury and Portsmouth, with a location quotient above 2.0, compared to the regional average.

### Aerospace & Defence – concentration of activity (2007)

**Employment by Local Authority**



**Employment by Travel-To-Work Areas**



Note: The white areas have a concentration of both business units and employment below the South East average.

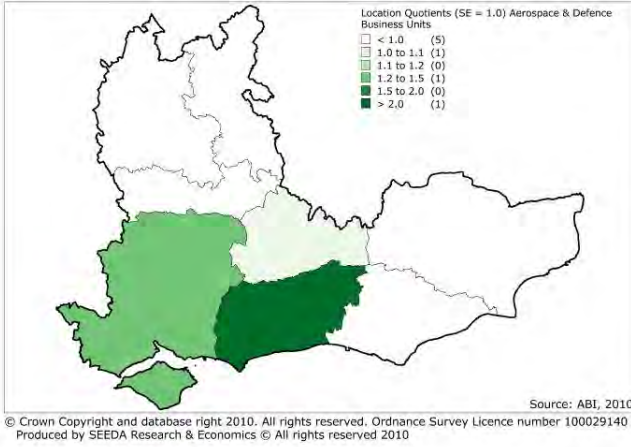
### d) Sub-regional agglomeration

#### i) Business Units:

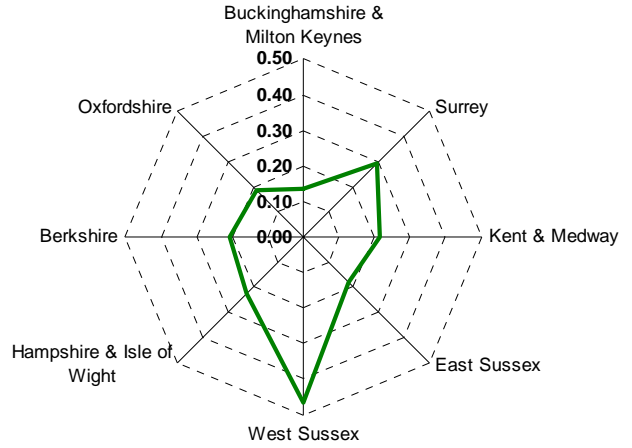
- West Sussex and Hampshire are the counties with the largest number of business units in the Aerospace & Defence industry. However, the level of concentration in West Sussex (122% above regional average) far exceeds Hampshire's (26% above regional average) and that of any other South East county.
- The Aerospace & Defence industry records the highest agglomeration levels compared to any other priority sector in the South East, ranging from 0.13 in Buckinghamshire & Milton Keynes to 0.47 in West Sussex.
- The high agglomeration of the Aerospace & Defence industry in West Sussex (0.47) is mainly attributed to the presence of a large number of business units in Crawley.
- Other counties with significant agglomeration of Aerospace & Defence business units are Surrey (agglomeration coefficient of 0.29) and Hampshire (agglomeration coefficient of 0.22).

## Aerospace & Defence (2007)

**Concentration of Business Units by County**



**Agglomeration of Business Units by County**

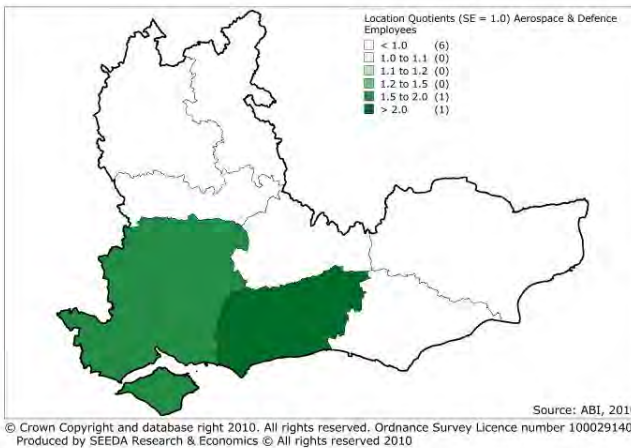


*ii) Employment:*

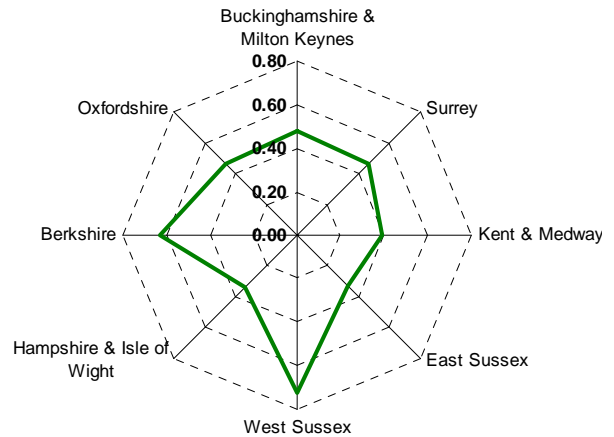
- Although the number of employees is larger in Hampshire than in West Sussex, the location quotient in the latter (3.84) is much higher than in the former (1.6).
- Likewise, West Sussex shows the highest agglomeration coefficient (0.72) for the Aerospace & Defence industry in the South East, which is even greater than the agglomeration coefficient for business units. This points to the presence of large firms in the region, particularly in Crawley.
- The concentration of Aerospace & Defence employment in Hampshire, although smaller than in West Sussex, is more dispersed across local districts, as is indicated in its lower agglomeration coefficient (0.34).

## Aerospace & Defence (2007)

**Concentration of Employment by County**



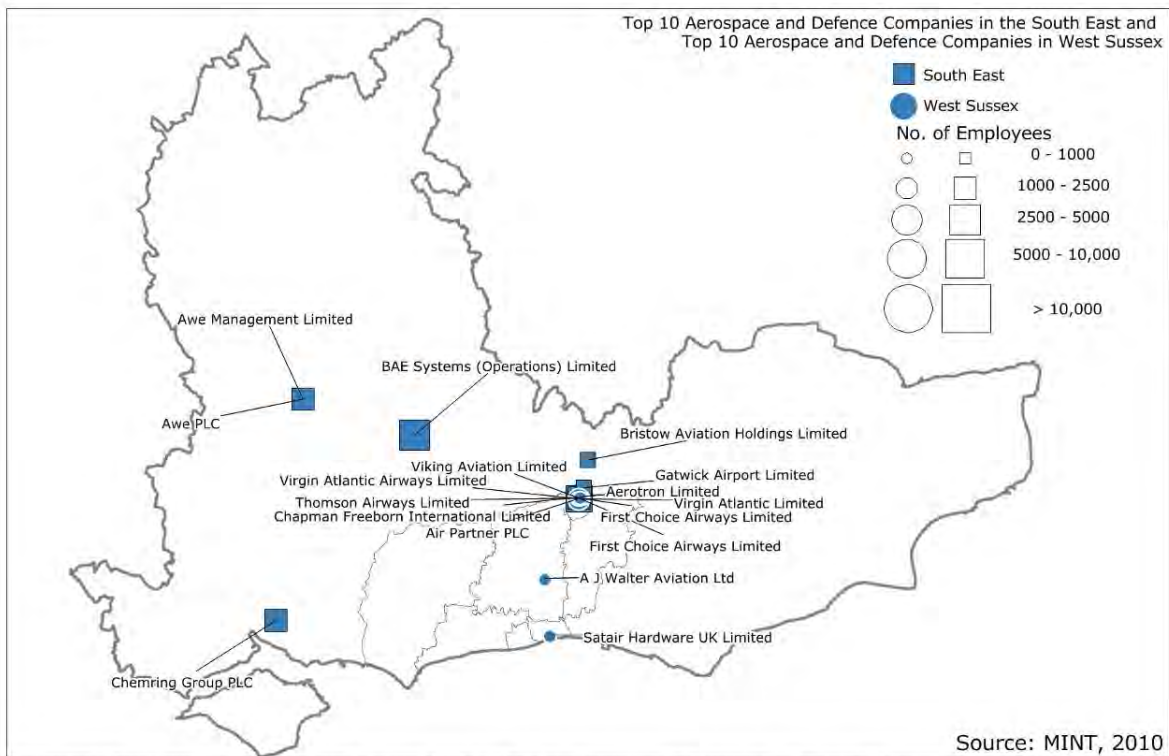
**Agglomeration of Employment by County**



### e) Business specific examples

- Most of the top Aerospace & Defence companies in the South East (as measured by turnover) are located in West Sussex, as the county shows the highest concentration and agglomeration of both business units and employment.
- Top companies such as *Virgin Atlantic*, *Thomson Airways*, *First Choice Airways* and *Gatwick Airport* are based in Crawley alone.
- Just a few other large employers are located outside West Sussex - for instance, *Chemring Group* and *BAE Systems (operations)* in Hampshire.

### Large Aerospace & Defence Firms in the South East and West Sussex

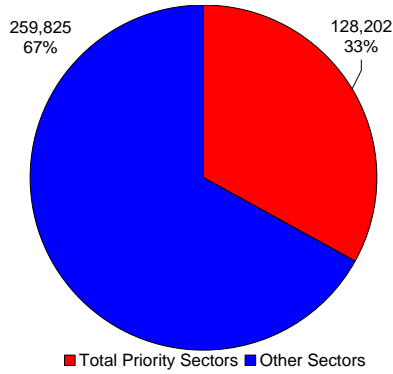


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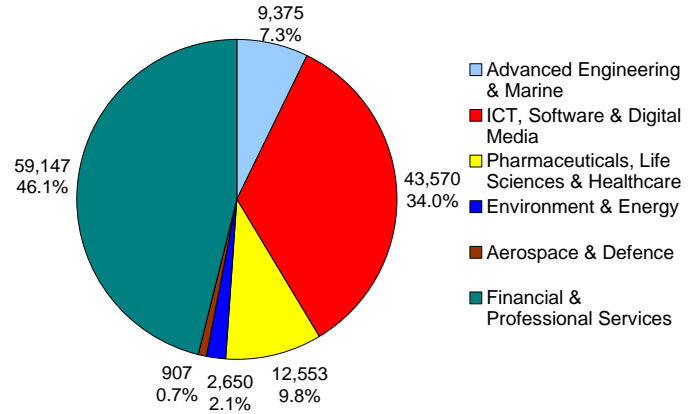
## Annex A: Overview of SEEDA Priority Sectors

**Figure A1: Total Business Units and SEEDA Priority Sectors Business Units (2007)**

Share of total business unit in the South East



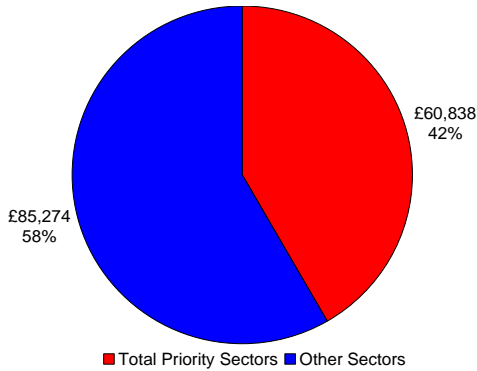
Business Unit Share of Total SEEDA Priority Sector



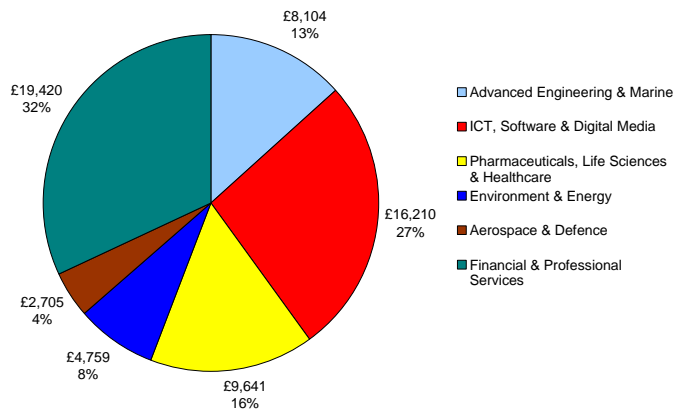
Source: SEEDA 2009 estimate derived from ONS (ABI) data

**Figure A2: SEEDA Priority Sectors' Forecast Share of GVA (2009)<sup>26</sup>**

Share of Total GVA in the South East



GVA Share of SEEDA Priority Sector

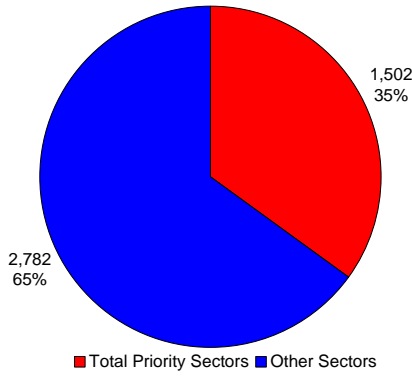


Source: SEEDA 2009 estimate derived from Experian data

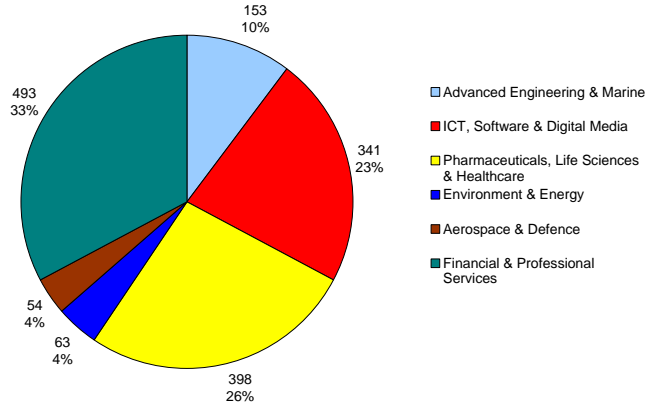
<sup>26</sup> GVA is expressed in £ million, constant (2005) prices

**Figure A3: SEEDA Priority Sectors' Forecast Share of Employment (2009)<sup>27</sup>**

Share of Total Employment in the South East

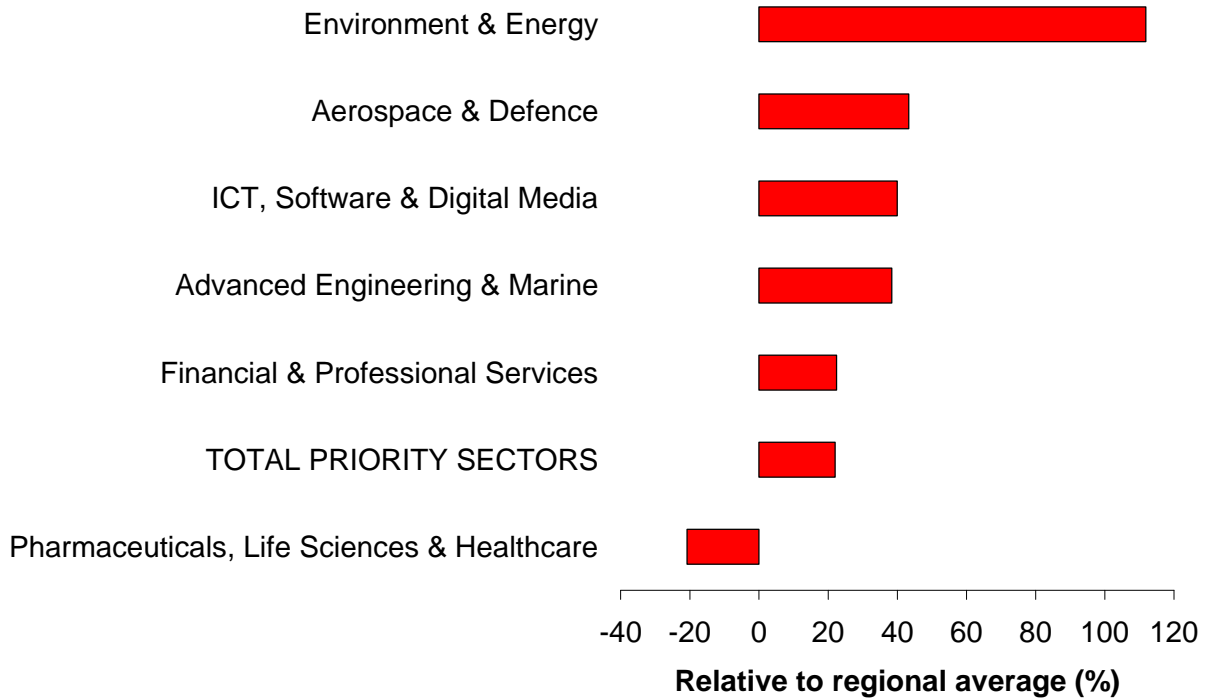


Employment Share of SEEDA Priority Sector



Source: SEEDA 2009 estimate derived from Experian data

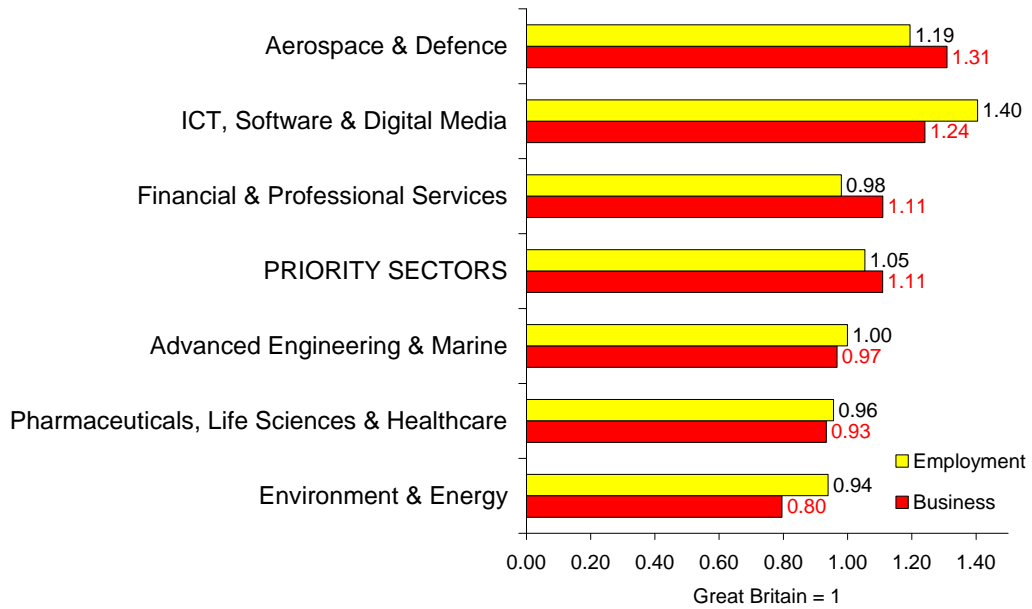
**Figure A4: Labour Productivity (relative to South East average)**



Source: SEEDA 2009 estimate derived from Experian data  
 Note: Labor productivity in the Energy Sector cannot be easily distinguished from land productivity

<sup>27</sup> Employment ('000s)

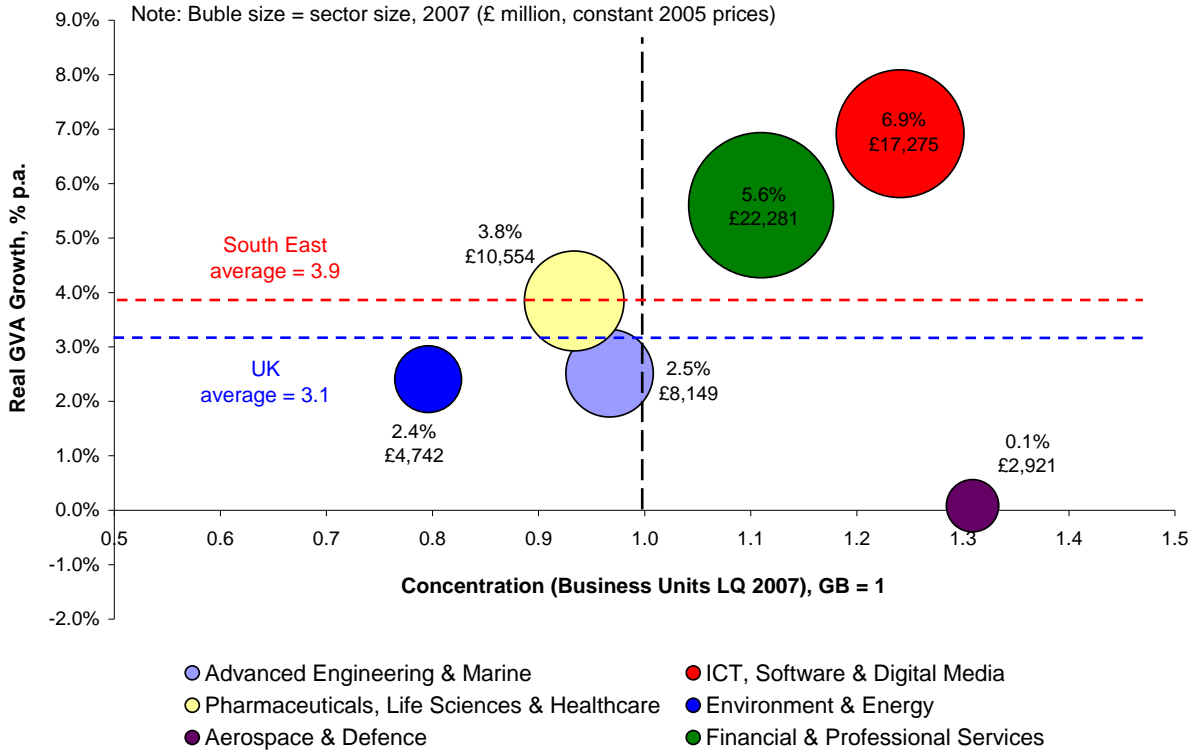
**Figure A5: SEEDA Priority Sectors – Employment and Business Unit Concentration (relative to national average)**



Source: SEEDA 2009 estimate derived from Experian data

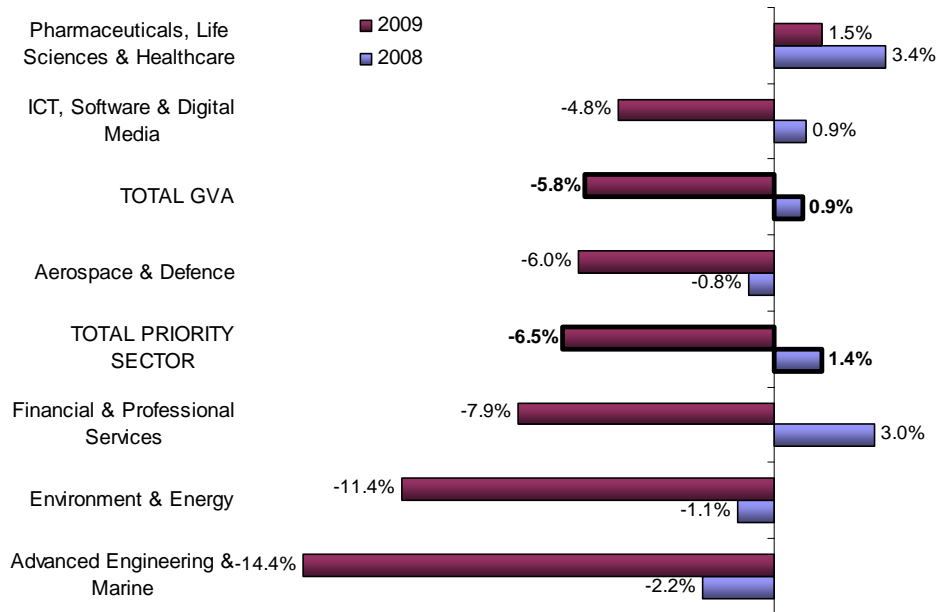
## Annex B: GVA Growth and Forecasts/Projections

**Figure B1: SEEDA Priority Sectors – GVA growth (1997-2007) and Concentration of Businesses relative to national average (2007)**



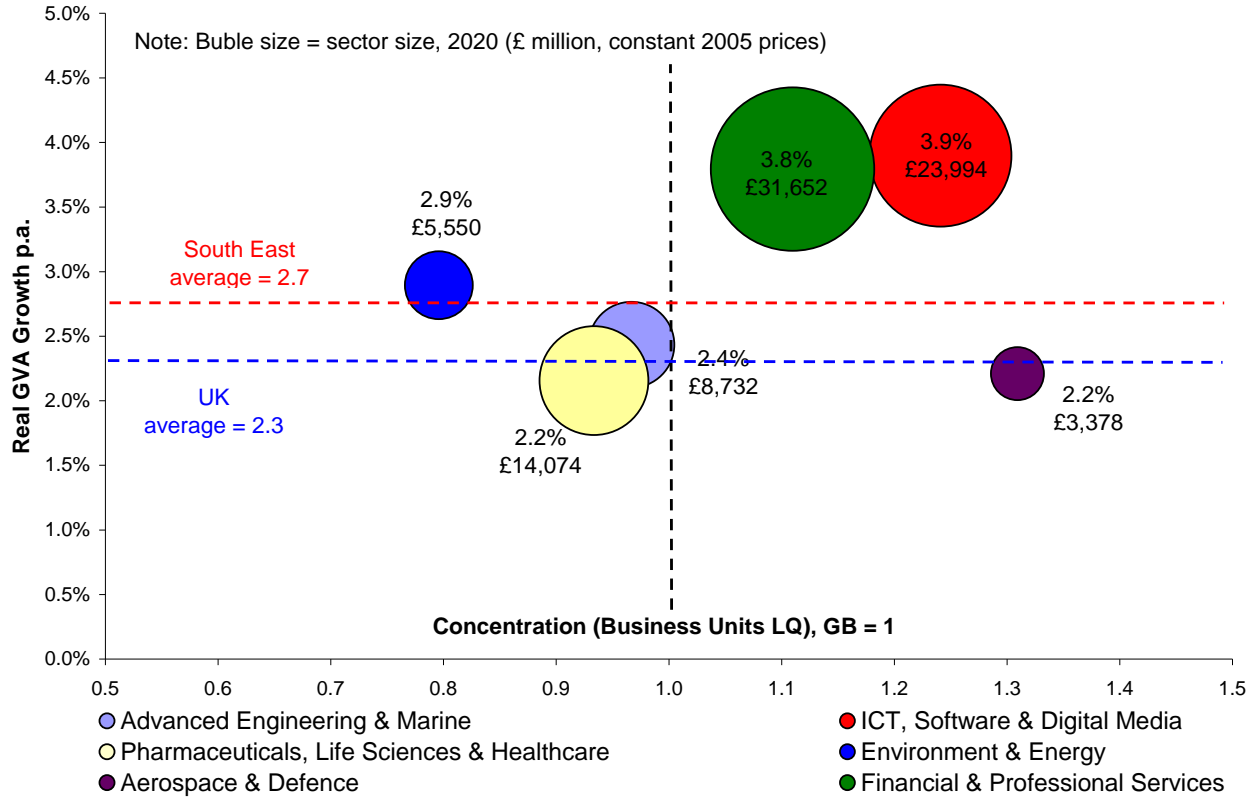
Source: SEEDA 2009 estimate derived from ONS (ABI) and Experian data

**Figure B2: SEEDA Priority Sectors – Estimate GVA growth 2008 and 2009**



Source: SEEDA 2009 estimate derived from ONS (ABI) and Experian data

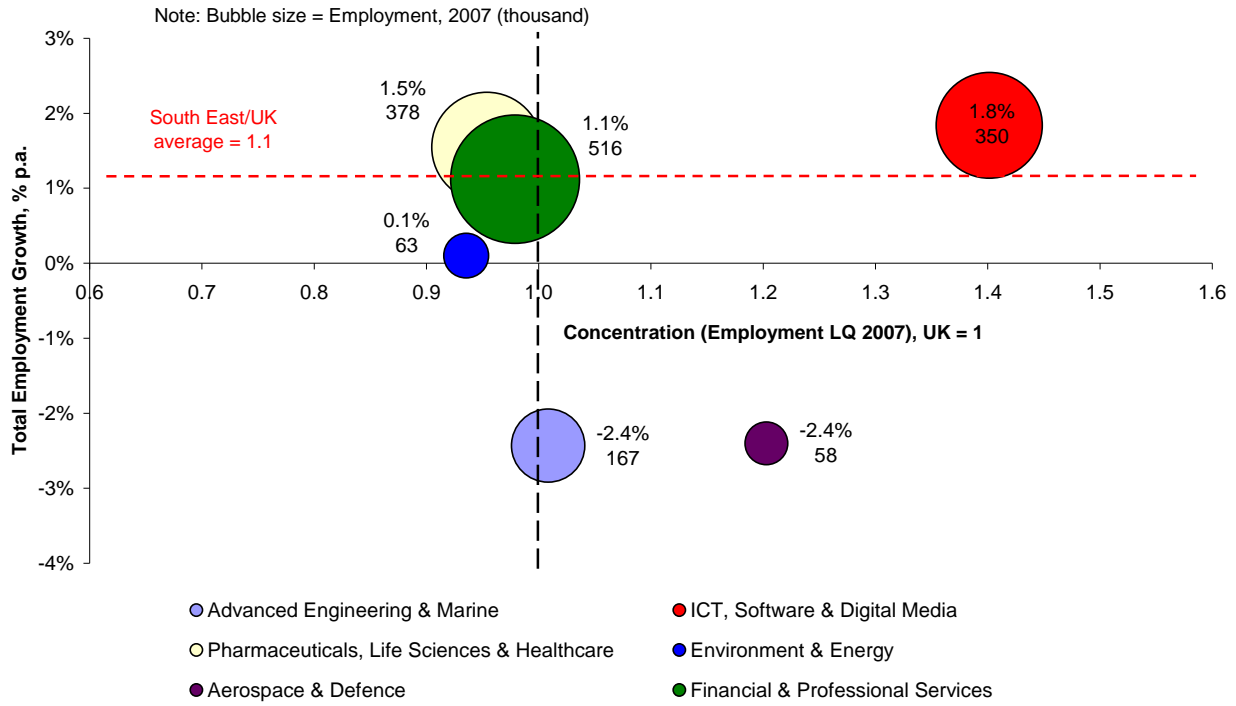
**Figure B3: SEEDA Priority Sectors – Projected GVA growth (2010-2020) and Concentration of Businesses relative to national average (2007)**



Source: SEEDA 2009 estimate derived from ONS (ABI) and Experian data

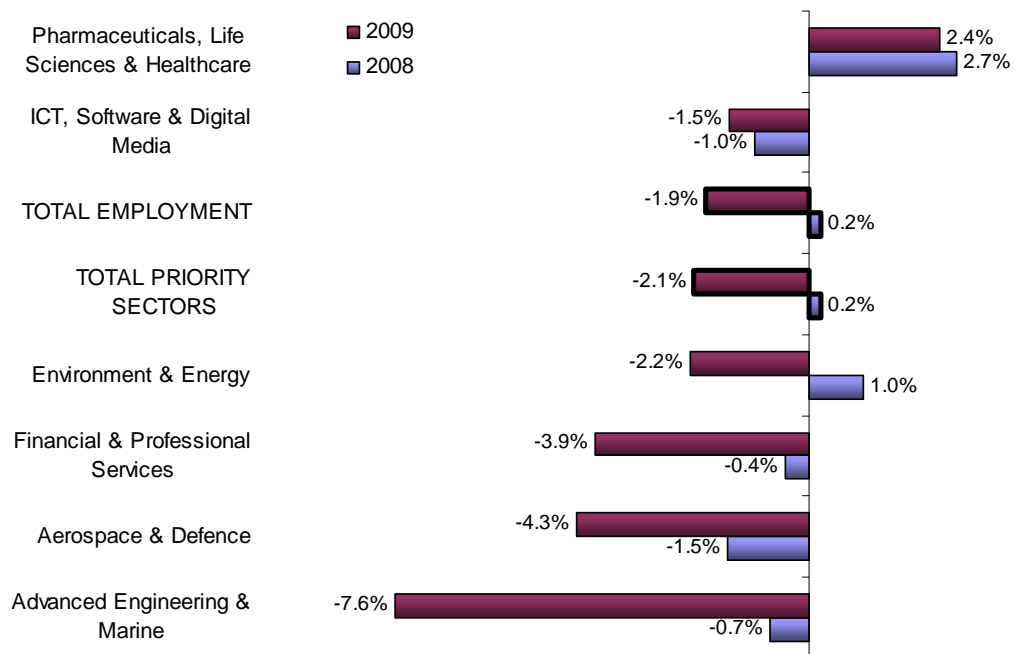
## Annex C: Employment Growth and Forecasts/Projections

**Figure C1: SEEDA Priority Sectors – Employment growth (1997-2007) and Concentration of Employment relative to national average (2007)**



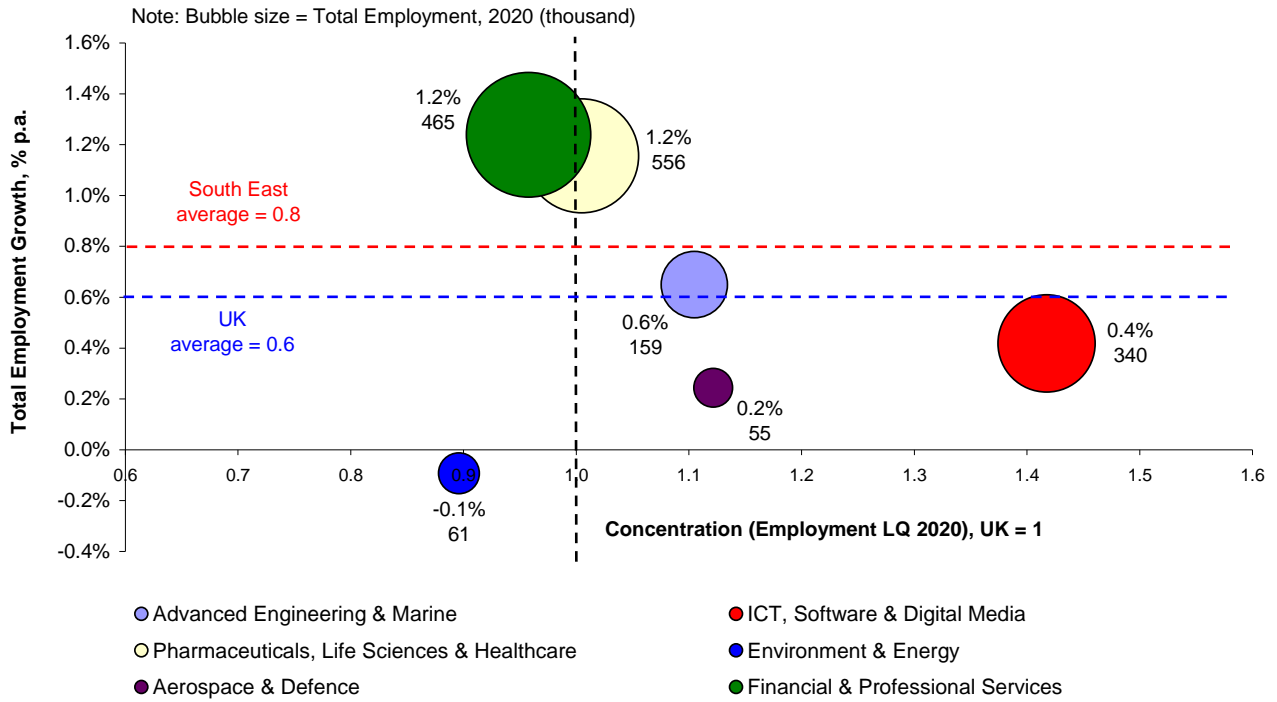
Source: SEEDA 2009 estimate derived from ONS (ABI) and Experian data

**Figure C2: SEEDA Priority Sectors – Estimate Employment growth 2008 and 2009**



Source: SEEDA 2009 estimate derived from ONS (ABI) and Experian data

**Figure C4: SEEDA Priority Sectors – Projected employment growth (2010-2020) and Projected Concentration of Employment relative to national average (2020)**



Source: SEEDA 2009 estimate derived from ONS (ABI) and Experian data

## **Annex D: Data Tables**

Note: GVA estimates are expressed in 2005 prices. Estimates expressed in current prices would be approximately 10% higher.

Growth rates are real growth rates as opposed to nominal rates (nominal rates include the impact of both real growth and changes in prices).

## D1 - GVA

GVA - South East		Table 1: Absolute Values ( £ millions 2005 constant prices )					
	1997	2007	2008	2009	2010	2020	
Advanced Engineering & Marine	£6,357	£8,149	£7,970	£6,823	£6,866	£8,732	
ICT, Software & Digital Media	£8,854	£17,275	£17,436	£16,604	£16,371	£23,994	
Pharmaceuticals, Life Sciences & Healthcare	£7,240	£10,554	£10,913	£11,071	£11,370	£14,074	
Environment & Energy	£3,739	£4,742	£4,688	£4,154	£4,173	£5,550	
Aerospace & Defence	£2,898	£2,921	£2,898	£2,724	£2,715	£3,378	
Financial & Professional Services	£12,917	£22,281	£22,955	£21,152	£21,815	£31,652	
<b>Total Priority Sectors</b>	<b>£42,004</b>	<b>£65,923</b>	<b>£66,860</b>	<b>£62,529</b>	<b>£63,310</b>	<b>£87,379</b>	
<b>Total GVA</b>	<b>£104,415</b>	<b>£153,787</b>	<b>£155,130</b>	<b>£146,112</b>	<b>£147,349</b>	<b>£191,473</b>	

GVA - UK		Table 1A: Absolute Values ( £ millions 2005 constant prices )					
	1997	2007	2008	2009	2010	2020	
Advanced Engineering & Marine	£48,768	£55,966	£54,756	£46,167	£46,463	£56,145	
ICT, Software & Digital Media	£52,013	£84,903	£85,515	£81,085	£79,052	£110,951	
Pharmaceuticals, Life Sciences & Healthcare	£57,971	£76,059	£77,445	£78,354	£79,986	£94,381	
Environment & Energy	£29,551	£34,586	£34,531	£31,334	£31,929	£41,751	
Aerospace & Defence	£14,375	£18,330	£18,274	£17,556	£18,091	£23,167	
Financial & Professional Services	£94,213	£176,473	£183,334	£168,343	£171,833	£243,983	
<b>Total Priority Sectors</b>	<b>£296,891</b>	<b>£446,317</b>	<b>£453,854</b>	<b>£422,840</b>	<b>£427,354</b>	<b>£570,378</b>	
<b>Total GVA</b>	<b>£793,713</b>	<b>£1,080,649</b>	<b>£1,087,296</b>	<b>£1,019,392</b>	<b>£1,027,045</b>	<b>£1,293,531</b>	

GVA - South East		Table 2: Growth Rates (%)					
	1997-07	p.a.	2008	2009	2010	2010-20	p.a.
Advanced Engineering & Marine	28.2%	2.5%	-2.2%	-14.4%	0.6%	27.2%	2.4%
ICT, Software & Digital Media	95.1%	6.9%	0.9%	-4.8%	-1.4%	46.6%	3.9%
Pharmaceuticals, Life Sciences & Healthcare	45.8%	3.8%	3.4%	1.5%	2.7%	23.8%	2.2%
Environment & Energy	26.8%	2.4%	-1.1%	-11.4%	0.5%	33.0%	2.9%
Aerospace & Defence	0.8%	0.1%	-0.8%	-6.0%	-0.3%	24.4%	2.2%
Financial & Professional Services	72.5%	5.6%	3.0%	-7.9%	3.1%	45.1%	3.8%
<b>Total Priority Sectors</b>	<b>56.9%</b>	<b>4.6%</b>	<b>1.4%</b>	<b>-6.5%</b>	<b>1.2%</b>	<b>38.0%</b>	<b>3.3%</b>
<b>Total GVA</b>	<b>47.3%</b>	<b>3.9%</b>	<b>0.9%</b>	<b>-5.8%</b>	<b>0.8%</b>	<b>29.9%</b>	<b>2.7%</b>

GVA - UK		Table 2A: Growth Rates (%)					
	1997-07	p.a.	2008	2009	2010	2010-20	p.a.
Advanced Engineering & Marine	14.8%	1.4%	-2.2%	-15.7%	0.6%	20.8%	1.9%
ICT, Software & Digital Media	63.2%	5.0%	0.7%	-5.2%	-2.5%	40.4%	3.4%
Pharmaceuticals, Life Sciences & Healthcare	31.2%	2.8%	1.8%	1.2%	2.1%	18.0%	1.7%
Environment & Energy	17.0%	1.6%	-0.2%	-9.3%	1.9%	30.8%	2.7%
Aerospace & Defence	27.5%	2.5%	-0.3%	-3.9%	3.0%	28.1%	2.5%
Financial & Professional Services	87.3%	6.5%	3.9%	-8.2%	2.1%	42.0%	3.6%
<b>Total Priority Sectors</b>	<b>50.3%</b>	<b>4.2%</b>	<b>1.7%</b>	<b>-6.8%</b>	<b>1.1%</b>	<b>33.5%</b>	<b>2.9%</b>
<b>Total GVA</b>	<b>36.2%</b>	<b>3.1%</b>	<b>0.6%</b>	<b>-6.2%</b>	<b>0.8%</b>	<b>25.9%</b>	<b>2.3%</b>

<b>GVA - South East</b>		<b>Table 3: Share of South East GVA (%)</b>				
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	6.1%	5.3%	5.1%	4.7%	4.7%	4.6%
ICT, Software & Digital Media	8.5%	11.2%	11.2%	11.4%	11.1%	12.5%
Pharmaceuticals, Life Sciences & Healthcare	6.9%	6.9%	7.0%	7.6%	7.7%	7.4%
Environment & Energy	3.6%	3.1%	3.0%	2.8%	2.8%	2.9%
Aerospace & Defence	2.8%	1.9%	1.9%	1.9%	1.8%	1.8%
Financial & Professional Services	12.4%	14.5%	14.8%	14.5%	14.8%	16.5%
<b>Total Priority Sectors</b>	<b>40.2%</b>	<b>42.9%</b>	<b>43.1%</b>	<b>42.8%</b>	<b>43.0%</b>	<b>45.6%</b>
<b>Total GVA</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

<b>GVA - UK</b>		<b>Table 3A: Share of UK GVA (%)</b>				
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	6.1%	5.2%	5.0%	4.5%	4.5%	4.3%
ICT, Software & Digital Media	6.6%	7.9%	7.9%	8.0%	7.7%	8.6%
Pharmaceuticals, Life Sciences & Healthcare	7.3%	7.0%	7.1%	7.7%	7.8%	7.3%
Environment & Energy	3.7%	3.2%	3.2%	3.1%	3.1%	3.2%
Aerospace & Defence	1.8%	1.7%	1.7%	1.7%	1.8%	1.8%
Financial & Professional Services	11.9%	16.3%	16.9%	16.5%	16.7%	18.9%
<b>Total Priority Sectors</b>	<b>37.4%</b>	<b>41.3%</b>	<b>41.7%</b>	<b>41.5%</b>	<b>41.6%</b>	<b>44.1%</b>
<b>Total GVA</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

<b>GVA - South East</b>		<b>Table 4: Share of Total Priority Sectors GVA (%)</b>				
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	15.1%	12.4%	11.9%	10.9%	10.8%	10.0%
ICT, Software & Digital Media	21.1%	26.2%	26.1%	26.6%	25.9%	27.5%
Pharmaceuticals, Life Sciences & Healthcare	17.2%	16.0%	16.3%	17.7%	18.0%	16.1%
Environment & Energy	8.9%	7.2%	7.0%	6.6%	6.6%	6.4%
Aerospace & Defence	6.9%	4.4%	4.3%	4.4%	4.3%	3.9%
Financial & Professional Services	30.8%	33.8%	34.3%	33.8%	34.5%	36.2%
<b>Total Priority Sectors</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

<b>GVA - UK</b>		<b>Table 4A: Share of Total Priority Sectors GVA (%)</b>				
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	16.4%	12.5%	12.1%	10.9%	10.9%	9.8%
ICT, Software & Digital Media	17.5%	19.0%	18.8%	19.2%	18.5%	19.5%
Pharmaceuticals, Life Sciences & Healthcare	19.5%	17.0%	17.1%	18.5%	18.7%	16.5%
Environment & Energy	10.0%	7.7%	7.6%	7.4%	7.5%	7.3%
Aerospace & Defence	4.8%	4.1%	4.0%	4.2%	4.2%	4.1%
Financial & Professional Services	31.7%	39.5%	40.4%	39.8%	40.2%	42.8%
<b>Total Priority Sectors</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

<b>GVA - South East</b>		<b>Table 5: Share of UK GVA, sector and total (%)</b>				
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	13.0%	14.6%	14.6%	14.8%	14.8%	15.6%
ICT, Software & Digital Media	17.0%	20.3%	20.4%	20.5%	20.7%	21.6%
Pharmaceuticals, Life Sciences & Healthcare	12.5%	13.9%	14.1%	14.1%	14.2%	14.9%
Environment & Energy	12.7%	13.7%	13.6%	13.3%	13.1%	13.3%
Aerospace & Defence	20.2%	15.9%	15.9%	15.5%	15.0%	14.6%
Financial & Professional Services	13.7%	12.6%	12.5%	12.6%	12.7%	13.0%
<b>Total Priority Sectors</b>	<b>14.1%</b>	<b>14.8%</b>	<b>14.7%</b>	<b>14.8%</b>	<b>14.8%</b>	<b>15.3%</b>
<b>Total GVA</b>	<b>13.2%</b>	<b>14.2%</b>	<b>14.3%</b>	<b>14.3%</b>	<b>14.3%</b>	<b>14.8%</b>

## **D2 – Labour Productivity**

<b>Productivity – South East</b>		<b>Table 6: Labour Productivity (2005 prices)</b>				
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	£29,787	£48,843	£48,113	£44,602	£46,076	£54,923
ICT, Software & Digital Media	£30,379	£49,409	£50,373	£48,682	£50,227	£70,607
Pharmaceuticals, Life Sciences & Healthcare	£22,348	£27,947	£28,123	£27,852	£27,431	£30,265
Environment & Energy	£59,543	£74,775	£73,179	£66,272	£67,766	£90,975
Aerospace & Defence	£39,328	£50,576	£50,939	£50,024	£51,048	£61,988
Financial & Professional Services	£28,003	£43,217	£44,709	£42,891	£44,371	£56,925
<b>Total Priority Sectors</b>	<b>£29,444</b>	<b>£43,063</b>	<b>£43,579</b>	<b>£41,634</b>	<b>£42,323</b>	<b>£53,432</b>
<b>TOTAL</b>	<b>£26,809</b>	<b>£35,297</b>	<b>£35,523</b>	<b>£34,105</b>	<b>£34,349</b>	<b>£41,268</b>

## **D3 – Employment**

<b>Total Employment - South East</b>		<b>Table 1: Absolute Values ( '000s )</b>				
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	213	167	166	153	149	159
ICT, Software & Digital Media	291	350	346	341	326	340
Pharmaceuticals, Life Sciences & Healthcare	324	378	388	398	415	465
Environment & Energy	63	63	64	63	62	61
Aerospace & Defence	74	58	57	54	53	55
Financial & Professional Services	461	516	513	493	492	556
<b>Total Priority Sectors</b>	<b>1,427</b>	<b>1,531</b>	<b>1,534</b>	<b>1,502</b>	<b>1,496</b>	<b>1,635</b>
<b>Total Employment</b>	<b>3,895</b>	<b>4,357</b>	<b>4,367</b>	<b>4,284</b>	<b>4,290</b>	<b>4,640</b>

<b>Total Employment - UK</b>	<b>Table 1A: Absolute Values ( '000s )</b>					
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	1,581	1,189	1,168	1,056	1,005	1,004
ICT, Software & Digital Media	1,583	1,793	1,764	1,721	1,630	1,673
Pharmaceuticals, Life Sciences & Healthcare	2,460	2,845	2,884	2,940	3,004	3,230
Environment & Energy	493	487	498	476	475	475
Aerospace & Defence	347	345	342	331	328	339
Financial & Professional Services	2,901	3,784	3,772	3,621	3,563	4,052
<b>Total Priority Sectors</b>	<b>9,365</b>	<b>10,442</b>	<b>10,428</b>	<b>10,145</b>	<b>10,004</b>	<b>10,774</b>
<b>Total Employment</b>	<b>28,151</b>	<b>31,307</b>	<b>31,312</b>	<b>30,679</b>	<b>30,393</b>	<b>32,386</b>

<b>Total Employment - South East</b>	<b>Table 2: Growth Rates (%)</b>						
	<b>1997-07</b>	<b>p.a.</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2010-20</b>	<b>p.a.</b>
Advanced Engineering & Marine	-21.8%	-2.4%	-0.7%	-7.6%	-2.6%	6.7%	0.6%
ICT, Software & Digital Media	20.0%	1.8%	-1.0%	-1.5%	-4.4%	4.3%	0.4%
Pharmaceuticals, Life Sciences & Healthcare	16.6%	1.5%	2.7%	2.4%	4.3%	12.2%	1.2%
Environment & Energy	1.0%	0.1%	1.0%	-2.2%	-1.8%	-0.9%	-0.1%
Aerospace & Defence	-21.6%	-2.4%	-1.5%	-4.3%	-2.3%	2.5%	0.2%
Financial & Professional Services	11.8%	1.1%	-0.4%	-3.9%	-0.3%	13.1%	1.2%
<b>Total Priority Sectors</b>	<b>7.3%</b>	<b>0.7%</b>	<b>0.2%</b>	<b>-2.1%</b>	<b>-0.4%</b>	<b>9.3%</b>	<b>0.9%</b>
<b>Total Employment</b>	<b>11.9%</b>	<b>1.1%</b>	<b>0.2%</b>	<b>-1.9%</b>	<b>0.1%</b>	<b>8.2%</b>	<b>0.8%</b>

<b>Total Employment - UK</b>	<b>Table 2A: Growth Rates (%)</b>						
	<b>1997-07</b>	<b>p.a.</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2010-20</b>	<b>p.a.</b>
Advanced Engineering & Marine	-24.8%	-2.8%	-1.7%	-9.6%	-4.9%	-0.1%	0.0%
ICT, Software & Digital Media	13.3%	1.3%	-1.6%	-2.4%	-5.3%	2.7%	0.3%
Pharmaceuticals, Life Sciences & Healthcare	15.6%	1.5%	1.4%	1.9%	2.2%	7.5%	0.7%
Environment & Energy	-1.2%	-0.1%	2.2%	-4.3%	-0.3%	0.1%	0.0%
Aerospace & Defence	-0.5%	-0.1%	-1.0%	-3.1%	-0.9%	3.5%	0.3%
Financial & Professional Services	30.4%	2.7%	-0.3%	-4.0%	-1.6%	13.7%	1.3%
<b>Total Priority Sectors</b>	<b>11.5%</b>	<b>1.1%</b>	<b>-0.1%</b>	<b>-2.7%</b>	<b>-1.4%</b>	<b>7.7%</b>	<b>0.7%</b>
<b>Total Employment</b>	<b>11.2%</b>	<b>1.1%</b>	<b>0.0%</b>	<b>-2.0%</b>	<b>-0.9%</b>	<b>6.6%</b>	<b>0.6%</b>

<b>Total Employment - South East</b>	<b>Table 3: Share of Total Employment - South East (%)</b>					
	<b>1997</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2020</b>
Advanced Engineering & Marine	5.5%	3.8%	3.8%	3.6%	3.5%	3.4%
ICT, Software & Digital Media	7.5%	8.0%	7.9%	8.0%	7.6%	7.3%
Pharmaceuticals, Life Sciences & Healthcare	8.3%	8.7%	8.9%	9.3%	9.7%	10.0%
Environment & Energy	1.6%	1.5%	1.5%	1.5%	1.4%	1.3%
Aerospace & Defence	1.9%	1.3%	1.3%	1.3%	1.2%	1.2%
Financial & Professional Services	11.8%	11.8%	11.8%	11.5%	11.5%	12.0%
<b>Total Priority Sectors</b>	<b>36.6%</b>	<b>35.1%</b>	<b>35.1%</b>	<b>35.1%</b>	<b>34.9%</b>	<b>35.2%</b>
<b>Total Employment</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

<b>Total Employment - UK</b>	<b>Table 3A: Share of Total UK Employment (%)</b>					
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	1997	2007	2008	2009	2010	2020
Advanced Engineering & Marine	5.6%	3.8%	3.7%	3.4%	3.3%	3.1%
ICT, Software & Digital Media	5.6%	5.7%	5.6%	5.6%	5.4%	5.2%
Pharmaceuticals, Life Sciences & Healthcare	8.7%	9.1%	9.2%	9.6%	9.9%	10.0%
Environment & Energy	1.8%	1.6%	1.6%	1.6%	1.6%	1.5%
Aerospace & Defence	1.2%	1.1%	1.1%	1.1%	1.1%	1.0%
Financial & Professional Services	10.3%	12.1%	12.0%	11.8%	11.7%	12.5%
<b>Total Priority Sectors</b>	<b>33.3%</b>	<b>33.4%</b>	<b>33.3%</b>	<b>33.1%</b>	<b>32.9%</b>	<b>33.3%</b>
<b>Total Employment</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Total Employment - South East	Table 4: Share of Total Priority Sectors Employment (%)					
	1997	2007	2008	2009	2010	2020
Advanced Engineering & Marine	15.0%	10.9%	10.8%	10.2%	10.0%	9.7%
ICT, Software & Digital Media	20.4%	22.8%	22.6%	22.7%	21.8%	20.8%
Pharmaceuticals, Life Sciences & Healthcare	22.7%	24.7%	25.3%	26.5%	27.7%	28.4%
Environment & Energy	4.4%	4.1%	4.2%	4.2%	4.1%	3.7%
Aerospace & Defence	5.2%	3.8%	3.7%	3.6%	3.6%	3.3%
Financial & Professional Services	32.3%	33.7%	33.5%	32.8%	32.9%	34.0%
<b>Total Priority Sectors</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Total Employment - UK	Table 4A: Share of Total Priority Sectors Employment (%)					
	1997	2007	2008	2009	2010	2020
Advanced Engineering & Marine	16.9%	11.4%	11.2%	10.4%	10.0%	9.3%
ICT, Software & Digital Media	16.9%	17.2%	16.9%	17.0%	16.3%	15.5%
Pharmaceuticals, Life Sciences & Healthcare	26.3%	27.2%	27.7%	29.0%	30.0%	30.0%
Environment & Energy	5.3%	4.7%	4.8%	4.7%	4.7%	4.4%
Aerospace & Defence	3.7%	3.3%	3.3%	3.3%	3.3%	3.1%
Financial & Professional Services	31.0%	36.2%	36.2%	35.7%	35.6%	37.6%
<b>Total Priority Sectors</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Total Employment - South East	Table 5: Share of Total UK Employment, sector and total (%)					
	1997	2007	2008	2009	2010	2020
Advanced Engineering & Marine	13.5%	14.0%	14.2%	14.5%	14.8%	15.8%
ICT, Software & Digital Media	18.4%	19.5%	19.6%	19.8%	20.0%	20.3%
Pharmaceuticals, Life Sciences & Healthcare	13.2%	13.3%	13.5%	13.5%	13.8%	14.4%
Environment & Energy	12.7%	13.0%	12.9%	13.2%	13.0%	12.8%
Aerospace & Defence	21.2%	16.7%	16.7%	16.5%	16.2%	16.1%
Financial & Professional Services	15.9%	13.6%	13.6%	13.6%	13.8%	13.7%
<b>Total Priority Sectors</b>	<b>15.2%</b>	<b>14.7%</b>	<b>14.7%</b>	<b>14.8%</b>	<b>15.0%</b>	<b>15.2%</b>
<b>Total Employment</b>	<b>13.8%</b>	<b>13.9%</b>	<b>13.9%</b>	<b>14.0%</b>	<b>14.1%</b>	<b>14.3%</b>

Source: SEEDA 2009 estimates derived from ONS and Experian data

## **Annex E: SEEDA Priority Sectors Definition<sup>28</sup>**

Note: sectoral definitions are based on Standard Industrial Classification (SIC 2003) 4-digit definition of economic activity. In total there are 515 different classifications of activity under SIC 2003 4-digit.

Most SIC codes as used by Sector Consortia have been included within the relevant sector definition.

Note: It is easier to define those well established sectors using SIC definition than those relatively new and emerging sectors.

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<sup>28</sup> The most recent (unpublished) update of this paper (September 2010) is based on SIC 2007 data and on the revised sectoral definition. With our colleagues from the ONS regional presence team in the South East we have revised the April 2010 definition using SIC 2007 digit 4 and digit 5 sectoral and occupational data. The final result is a narrower definition for the six sectors and sub-sectors. The switch from SIC 2003 to SIC 2007 and the change in definition has had little impact on the overall results and on the spatial distribution of the six sectors. In the latest update we have split the six sectors into sub-sectors.

## E.1 Financial & Professional Services

SIC(2003)	Description
6511	Central banking
6512	Other monetary intermediation
6521	Financial leasing
6522	Other credit granting
6523	Other financial intermediation not elsewhere classified
6601	Life insurance
6602	Pension funding
6603	Non-life insurance
6711	Administration of financial markets
6712	Security broking and fund management
6713	Activities auxiliary to financial intermediation not elsewhere classified
6720	Activities auxiliary to insurance and pension funding
7320	Research and experimental development on social sciences and humanities
7411	Legal activities
7412	Accounting, book-keeping and auditing activities; tax consultancy
7413	Market research and public opinion polling
7414	Business and management consultancy activities
7415	Management activities of holding companies
7420	Architectural and engineering activities and related technical consultancy
7450	Labour recruitment and provision of personnel
7486	Call centre activities

## E.2 ICT Software & Digital Media

SIC(2003)	Description
2211	Publishing of books
2212	Publishing of newspapers
2213	Publishing of journals and periodicals
2214	Publishing of sound recordings
2215	Other publishing
2231	Reproduction of sound recording
2232	Reproduction of video recording
2233	Reproduction of computer media
2465	Manufacture of prepared unrecorded media

3001	Manufacture of office machinery
3002	Manufacture of computers and other information processing equipment
3130	Manufacture of insulated wire and cable
3220	Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
3230	Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods
3650	Manufacture of games and toys
5143	Wholesale of electrical household appliances and radio and television goods
5184	Wholesale of computers, computer peripheral equipment and software
5185	Wholesale of other office machinery and equipment
5186	Wholesale of other electronic parts and equipment
5245	Retail sale of electrical household appliances and radio and television goods
6420	Telecommunications
7133	Renting of office machinery and equipment including computers
7210	Hardware consultancy
7221	Publishing of software
7222	Other software consultancy and supply
7230	Data processing
7240	Data base activities
7250	Maintenance and repair of office, accounting and computing machinery
7260	Other computer related activities
7440	Advertising
9211	Motion picture and video production
9212	Motion picture and video distribution
9213	Motion picture projection
9220	Radio and television activities
9231	Artistic and literary creation and interpretation
9240	News agency activities

### **E.3 Pharmaceuticals, Life Sciences & Healthcare**

<b>SIC(2003)</b>	<b>Description</b>
1588	Manufacture of homogenised food preparations and dietetic food
2441	Manufacture of basic pharmaceuticals
2442	Manufacture of pharmaceutical preparations
2451	Manufacture of soap and detergents, cleaning and polishing preparations
2452	Manufacture of perfumes and toilet preparations
3310	Manufacture of medical and surgical equipment and orthopaedic appliances
3543	Manufacture of invalid carriages

5146	Wholesale of pharmaceutical goods
5231	Dispensing chemists
5232	Retail sale of medical and orthopaedic goods
7512	Regulation of the activities of agencies that provide health care, education, cultural services and other social services excluding social security
8511	Hospital activities
8512	Medical practice activities
8513	Dental practice activities
8514	Other human health activities
8520	Veterinary activities

#### **E.4 Advanced Engineering & Marine**

<b>SIC(2003)</b>	<b>Description</b>
1730	Finishing of textiles
2416	Manufacture of plastics in primary forms
2417	Manufacture of synthetic rubber in primary forms
2430	Manufacture of paints, varnishes and similar coatings, printing ink and mastics
2470	Manufacture of man-made fibres
2521	Manufacture of plastic plates, sheets, tubes and profiles
2612	Shaping and processing of flat glass
2613	Manufacture of hollow glass
2614	Manufacture of glass fibres
2615	Manufacture and processing of other glass including technical glassware
2623	Manufacture of ceramic insulators and insulating fittings
2624	Manufacture of other technical ceramic products
2625	Manufacture of other ceramic products
2626	Manufacture of refractory ceramic products
2811	Manufacture of metal structures and parts of structures
2840	Forging, pressing, stamping and roll forming of metal; powder metallurgy
2851	Treatment and coating of metals
2852	General mechanical engineering
2862	Manufacture of tools
2911	Manufacture of engines and turbines, except aircraft, vehicle and cycle engines
2912	Manufacture of pumps and compressors
2914	Manufacture of bearings, gears, gearing and driving elements
2923	Manufacture of non-domestic cooling and ventilation equipment
2924	Manufacture of other general purpose machinery not elsewhere classified

2931	Manufacture of agricultural tractors
2932	Manufacture of other agricultural and forestry machinery
2941	Manufacture of portable hand held power tools
2942	Manufacture of metalworking machine tools
2943	Manufacture of other machine tools not elsewhere classified
2951	Manufacture of machinery for metallurgy
2952	Manufacture of machinery for mining, quarrying and construction
2953	Manufacture of machinery for food, beverage and tobacco processing
2954	Manufacture of machinery for textile, apparel and leather production
2955	Manufacture of machinery for paper and paperboard production
2956	Manufacture of other special purpose machinery not elsewhere classified
2971	Manufacture of electric domestic appliances
3110	Manufacture of electric motors, generators and transformers
3140	Manufacture of accumulators, primary cells and primary batteries
3150	Manufacture of lighting equipment and electric lamps
3161	Manufacture of electrical equipment for engines and vehicles not elsewhere classified
3162	Manufacture of other electrical equipment not elsewhere classified
3210	Manufacture of electronic valves and tubes and other electronic components
3320	Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes, except industrial process control equipment
3330	Manufacture of industrial process control equipment
3340	Manufacture of optical instruments and photographic equipment
3350	Manufacture of watches and clocks
3410	Manufacture of motor vehicles
3420	Manufacture of bodies (coachwork) for motor vehicles: manufacture of trailers and semi-trailers
3430	Manufacture of parts and accessories for motor vehicles and their engines
3511	Building and repairing of ships
3512	Building and repairing of pleasure and sporting boats
3520	Manufacture of railway and tramway locomotives and rolling stock
3541	Manufacture of motorcycles
3542	Manufacture of bicycles
3550	Manufacture of other transport equipment not elsewhere classified
6110	Sea and coastal water transport
6120	Inland water transport
6322	Other supporting water transport activities
7122	Renting of water transport equipment
7310	Research and experimental development on natural sciences and engineering
7430	Technical testing and analysis

## E.5 Environment & Energy

SIC(2003)	Description
1110	Extraction of crude petroleum and natural gas
1120	Service activities incidental to oil and gas extraction excluding surveying
1541	Manufacture of crude oils and fats
1592	Production of ethyl alcohol from fermented materials
2320	Manufacture of refined petroleum products
2330	Processing of nuclear fuel
2830	Manufacture of steam generators, except central heating hot water boilers
3120	Manufacture of electricity distribution and control apparatus
3710	Recycling of metal waste and scrap
3720	Recycling of non-metal waste and scrap
4011	Production of electricity
4012	Transmission of electricity
4013	Distribution and trade in electricity
4021	Manufacture of gas
4022	Distribution of gaseous fuels through mains
4030	Steam and hot water supply
4100	Collection, purification and distribution of water
4511	Demolition and wrecking of buildings; earth moving
4512	Test drilling and boring
4524	Construction of water projects
4532	Insulation work activities
5151	Wholesale of solid, liquid and gaseous fuels and related products
5157	Wholesale of waste and scrap
6030	Transport via pipelines
9001	Collection and treatment of sewage
9002	Collection and treatment of other waste
9003	Sanitation, remediation and similar activities

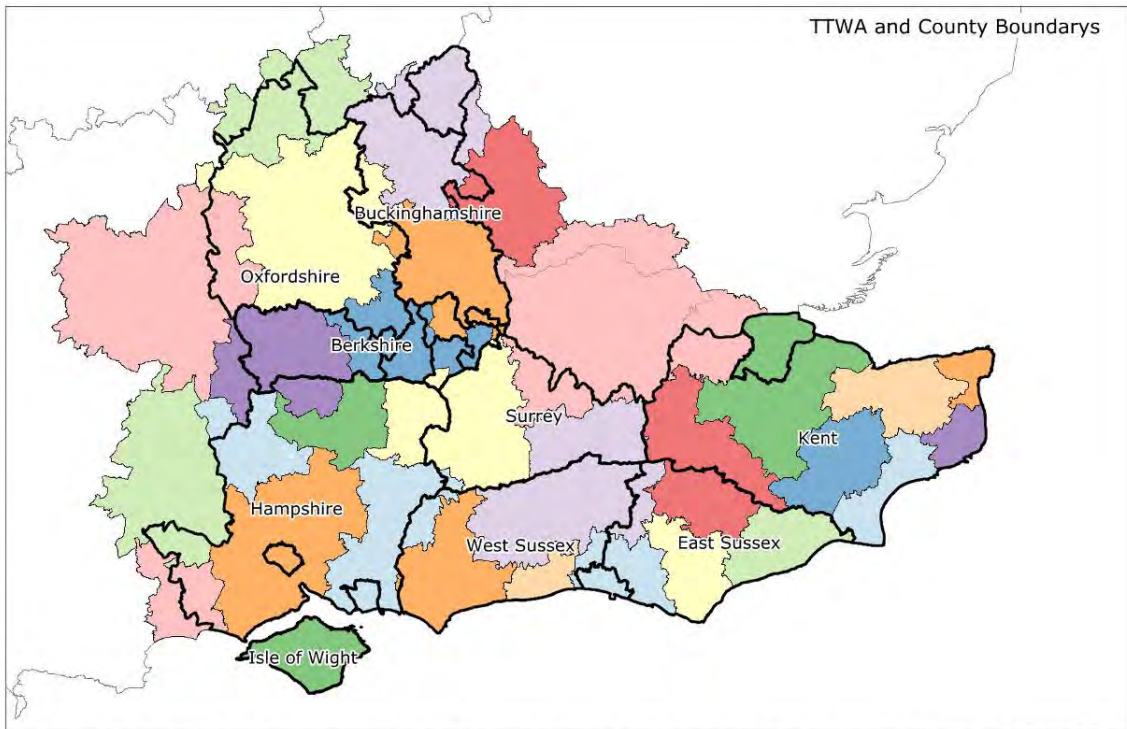
## E.6 Aerospace & Defence

SIC(2003)	Description
2461	Manufacture of explosives
2960	Manufacture of weapons and ammunition
3530	Manufacture of aircraft and spacecraft
6210	Scheduled air transport

6220	Non-scheduled air transport
6230	Space transport
6323	Other supporting air transport activities
7123	Renting of air transport equipment
7522	Defence activities



## Annex G: Travel-To-Work Areas (TTWAs) in the South East



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