Sector Report: Creative, Digital, and IT - 2015

Final

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Executive Summary

1. This report is part of a suite of papers looking into the priority sectors within the Coast to Capital region. They will make up part of the evidence base when looking at sector specific strengths, advantages, issues, and needs in the Coast to Capital region. This report is focused on the Creative, Digital, and IT (CDIT) sector as a key part of the local and national economy and its future growth, looking into the specifics of its strengths, weakness and challenges that characterise the sector.

Businesses and Employees

2. A picture has emerged of a sector that, overall, is fairly split between Creative and Digital and IT in both businesses and employees, except in Brighton and Hove where Creative sub-sectors are slightly more prevalent. The Creative, Digital and IT sector makes up a sizable part of the local economy and has grown at a faster rate than the region as a whole. It accounts for 15% of businesses, 5% of employment, and 8% of Gross Value Added (GVA), nationally the shares are 11%, 5%, and 8% respectively, all of which have increased since 2010, however, that growth has been uneven.

3. Growth in businesses has been above the UK average in six of the fourteen Local Authority areas and growth in employees has mostly occurred in Brighton & Hove which accounted for 84% of employee growth in Coast to Capital. Overall CDIT employment growth was lower than growth in the national sector. The sector is more reliant on the Digital and IT sub-sector for jobs growth, almost all the employee growth from 2009-2013 came from the Digital and IT sub-sector, most of the growth in the Creative sub-sector occurred in Brighton & Hove and Lewes.

Sector Trends and Drivers

4. These can be grouped into two broad and interdependent areas; the first is product, particularly around technical innovation, big data, and increased interconnectivity creating new products and services, both to consumers and in the supply chain. The second is skills; increasing skills levels in technical and managerial positions are required, and they are increasingly merging. These skills are needed to drive the innovations that create new opportunities and to exploit these opportunities and manage business operations.

Skills and Employment Demand

5. Employment in the sector in the Coast to Capital region is expected to grow 16% by 2022, slightly below the national level of 17.5%, increasingly in higher-level occupations and requiring higher levels of education. In comparison, employment in the region as a whole is predicted to grow by just under 5%. Some of the skills that will be required in the Digital and IT sector are security and data protection, analytics and research, technology specific, inter-personal and customer service, and business management. In the Creative sector the skills that will be required

are business management, fundraising, foreign languages, multi-platform technical abilities, and monetisation of intellectual property.

THE BRIGHTON AND HOVE CLUSTER

6. The CDIT cluster in Brighton and Hove has reached a high level of visibility and reputation through its business population. It has become embedded as evidenced by its size and concentration and the institutions that surround and interact with the sector. It is not as strong as areas such as London and locations to the west of London in terms of employee numbers and specialisation but this should begin to change as successful clusters will draw in suppliers, rival and complementary businesses that attracts skilled employees, which in turn draws in more businesses, creating a virtuous circle. As this continues employee specialisation in the Brighton and Hove cluster will increase to match those other locations.

7. There is also some evidence of a strong concentration of the sector in Croydon and East Surrey, likely benefiting from their proximity to London and those areas west of London. Croydon in particular has the potential to be the next national cluster in the Coast to Capital region, it has a large CDIT business population and has been identified as the fastest growing cluster in London. There may be some positive spill over effects from Brighton and Hove along the coast, particularly Lewes and Adur based on the recent growth in businesses and employees.

PRODUCTIVITY

8. At £3.07 billion the Gross Value Added (GVA) of the sector makes up 8% of the Coast to Capital regional GVA but has yet to return to pre-recession levels and both GVA growth and GVA per employee in the sector has been below the UK and South East average and this seems likely to continue if current growth trends continue and if nationally the sector grows at the predicted 5.5% per year to 2020.

ISSUES AND BARRIERS TO GROWTH

9. There are some barriers to growth, such as lack of revenues for re-investment, lack of 'move-on' premises that companies can grow into, excessive workloads, intense competition, and lack of visibility or profile. Skills issues are mentioned but are not identified as a major barrier to growth in the sector. This may be due to the locational advantage of the area being attractive to high skilled workers, four universities, and good graduate retention, particularly in Brighton and Hove. However those barriers to growth may highlight the lack of business and managerial skills required to overcome these barriers.

SUB-SECTORAL MAKEUP

10. Using size, growth, and location quotients to highlight CDIT sub-sector strengths in the Coast to Capital region brought out the following sub-sectors for employees:
    - performing arts and artistic creation;
    - support activities to performing arts and operation of arts facilities;
    - computer programming activities;

- computer consultancy activities;
- information technology and computer service activities;
- software publishing.

11. Applying the same method to businesses revealed sub-sector strengths in:
    - specialised design activities;
    - information service activities;
    - computer programming activities.

LABOUR MARKET CHARACTERISTICS

12. The sector is well qualified and occupy high level positions, around 42% of the workforce has a degree level qualification compared to 24% in the wider economy and a third work in professional occupations compared to a fifth nationally. There is a strong supply of apprenticeships and graduates in the region, those apprenticeships related to CDIT have doubled since 2008/2009 and graduates that studied a CDIT related subject accounted for almost a third of graduates. This may explain the low levels of reported skills gaps, hard to fill vacancies, and skills shortage vacancies. Where there are skills gaps they are more likely to be in managerial and professional occupations, this is possibly related to the fact the sector is one of the lowest for providing training for employees.

13. The sector is important component of the region's economy, it has a strong presence of businesses and an excellent support structure embedded within the region, is well catered for in terms of skills and education involvement in the sector, and enjoys an international reputation. The full benefit of this is not being taken advantage of as there is a dearth of large businesses and employee numbers are lower than might be expected when the CDIT share of businesses is 15% in the Coast to Capital region compared to 11% nationally. This may be why local CDIT productivity is lower than the national and South East regional economies. The sector is starting from a strong position but its areas of underperformance make it both high value and full of potential future growth.

Contents

INTRODUCTION

14. Coast to Capital spans the UK's two most successful and important economic regions; it extends from South London to the coast, from Chichester in the west along to the city of Brighton and Hove and on to Lewes in the east. The LEP comprises the whole of West Sussex, the London Borough of Croydon, the City of Brighton and Hove, East Surrey, and the Local Authority district of Lewes which is part of East Sussex. It has a resident population of nearly two million and an estimated 116,000 businesses. The Coast to Capital LEP has always had one clear aim; to foster exceptional growth and productivity gains in the local economy.

15. This report is part of a suite of papers looking into the priority sectors within the Coast to Capital region; the others being Financial and Business Services, Health and Life Sciences, Advanced Manufacturing and Engineering, Environmental Technologies and Services, the Visitor Economy, and Food and Horticulture. They will make up part of the evidence base when looking at sector specific strengths, advantages, issues, and needs in the Coast to Capital region, providing a reference point for partners, potential bids for funding by local organisations, or foreign direct investment inquiries.

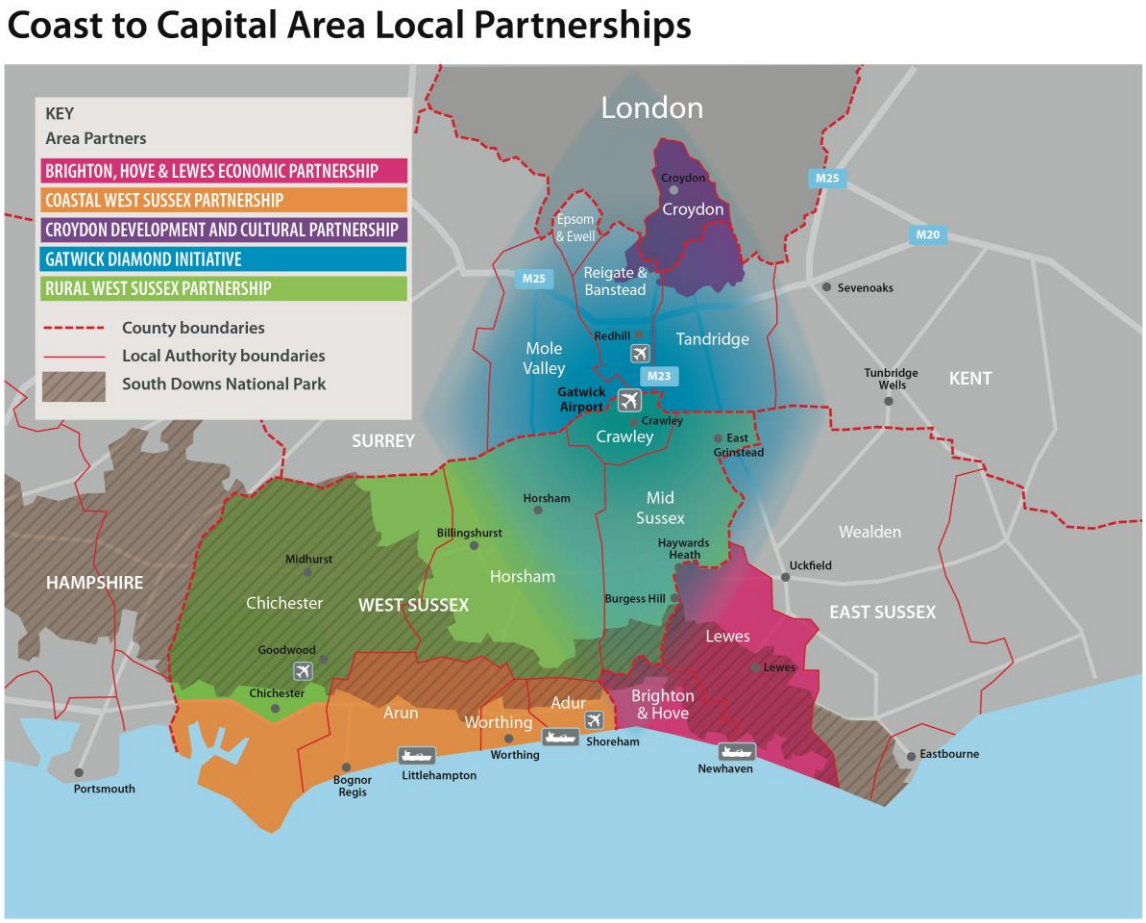


Figure 1 – Coast to Capital Region

coasttocapital
Brighton & Hove, Croydon, Gatwick Diamond and West Sussex
www.coast2capital.org.uk

16. The paper makes reference to the local Area Partnerships and Local Authorities, which are set out in figure 1. It should be noted that some of these Area Partnerships overlap in places such as Chichester and Arun that are in both the Rural and Coastal West Sussex partnerships. The Gatwick Diamond comprises of Epsom and Ewell, Mole Valley, Reigate and Banstead, Tandridge, Crawley, Horsham, and Mid Sussex; the last two are also in the Rural West Sussex Partnership.

17. The Creative, Digital, and IT (CDIT) sector is a key part of the local and national economy and its future growth. In the Coast to Capital region the sector is centred on the internationally recognised cluster that has emerged in Brighton and Hove. The sector has moved along the coast to Lewes, Adur, and Worthing, and there is a strong publishing sub-sector in Chichester, along with digital gaming in Horsham and Brighton and Hove, a large presence of telecommunications, production and broadcasting in Croydon, and East Surrey has a strong sector mix overall. The sector is starting from a strong position and this paper is designed to look into the specifics of these strengths and the weakness and challenges that will undoubtedly exist to some degree in any sector.

18. The topics that are covered include analysis of the sector in terms of business and employee numbers and growth, along with the makeup of the sub-sectors within CDIT and the sub-sector strengths of the Coast to Capital region and the Area Partnerships. The current characteristics of the CDIT labour market and near future sector trends, drivers, skills and employment demands, issues and barriers to growth in the sector are explored using both national sources and recent local surveys. As Brighton and Hove is often at the centre of any discussion on CDIT, particularly within the Coast to Capital region, consideration is given to its status as a CDIT cluster. The historical productivity of the sector is also examined and projections have been used to look at potential productivity growth over the next ten years.

19. Where possible the analysis is explored both by businesses and employees as businesses are more visible than employees in an economy and they often define a sector through their activities and the growth and value they create. This is not to discount the importance of employees; if businesses drive economic activity then employees are those who make it successful. Businesses are only as good as the people they employ and in some ways employee numbers and their trends can be used as a proxy for business performance. By looking at both we can get a more complete picture of the sector.

20. Set out below are the Standard Industrial Classification (SIC) codes used to define the CDIT sector. This definition was taken from a variety of previous works on

defining the sector by Nesta[1], Creative Skill Set[2], UKCES[3], E-Skills UK[4], and our own work reviewing the relevant SIC codes. The Nesta definition is particularly interesting as they have defined creative industries as those who have 30% or more of their workforce in creative occupations. Using these various sources has created as full and accurate a picture of CDIT as can be captured by SIC codes.

CREATIVE, DIGITAL, AND IT 2007 SIC CODES

CREATIVE:

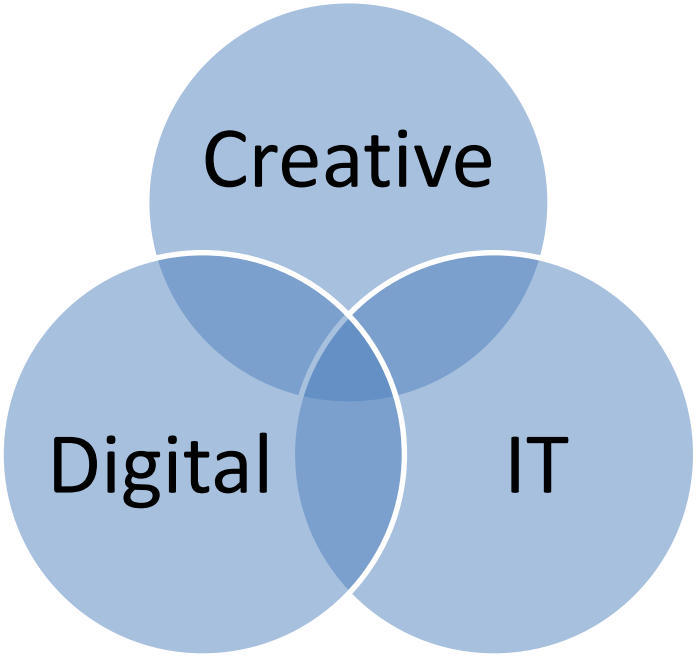
58 - Publishing activities
59 - Motion picture, video and television programme production, sound recording and music publishing activities
60 - Programming and broadcasting activities
7021– Public relations and communications activities
731 – Advertising
741 – Specialised design activities
742 – Photographic activities
743 – Translation and interpretation activities
8552– Cultural Education
90 - Creative, arts and entertainment activities

DIGITAL AND IT:

61 - Telecommunications
62 - Computer programming, consultancy and related activities
63 - Information service activities

[1] Nesta – A Dynamic Mapping of the UK's Creative Industries – 2013
[2] Creative Skills Set – Classifying and Measuring the Creative Industries – 2013
[3] UKCES – Sector Skills Insights: Digital and Creative – 2012
[4] E-Skills UK – Technology Insights – 2012

21. Of course not every business within this definition will be engaged in all three Creative, Digital and IT activities, but they will be involved some combination of each. This definition will at least capture those companies that are engaged in all three activities and gauge the potential size of the business base that is capable of combining these activities in some form along the lines of the 'Fused' and 'Super Fused' companies highlighted in the Brighton Fuse 2013 report.



The Coast to Capital Creative, Digital and IT Sector

Creative vs Digital and IT

22. To provide context figures 2 and 4 highlight the share of the Creative and Digital and IT SIC codes (as set out in the introduction) across businesses and employees, as will be seen using both brings slightly differing results.

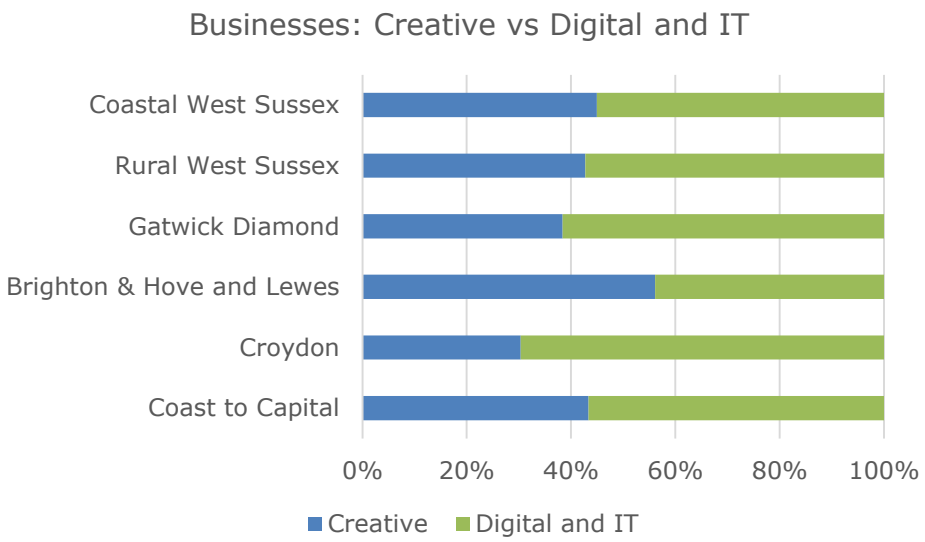


Figure 2 – Business share Creative vs Digital and IT SIC codes 2013, Source: ONS UK Business Counts 2013/Coast to Capital

23. In figure 2, businesses in the Coast to Capital region are split roughly 45/55 Creative to Digital and IT[5]. Looking at the Area Partnerships three can be seen to follow this, but Croydon and Brighton & Hove and Lewes each go their own way. Croydon is more Digital and IT focused whereas Brighton & Hove and Lewes lean more to Creative businesses, accounting for around 55%.

24. In figure 3 the contribution to business stock growth within the CDIT sector can be seen for the Creative SIC codes and the Digital and IT SIC codes. This has somewhat follows the same pattern as the overall structure of the sector within each location although there are some slight variations in Coastal and Rural West Sussex where Creative businesses have grown more than the overall sector structure would suggest; the same is also true for Brighton & Hove and Lewes.

[5] ONS UK Business Counts 2013

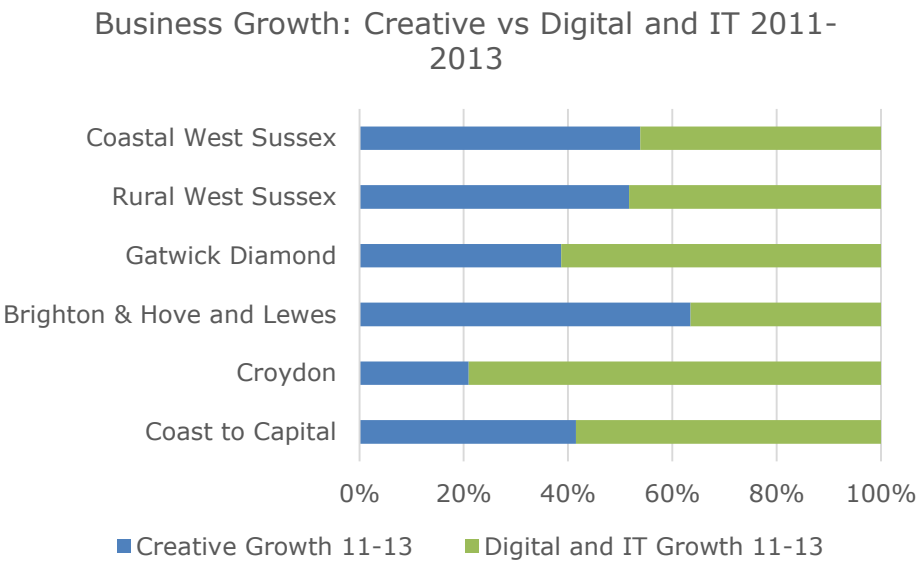


Figure 3 – Business growth Creative vs Digital and IT SIC codes 2011-2013, Source: ONS Business Counts 2013/Coast to Capital

25. In figure 4, the Creative to Digital and IT split is closer to 35/65 in the Coast to Capital region, a 10% change[6]. This shows that Creative businesses are smaller and employing fewer people than Digital and IT businesses. This is particularly noticeable in Brighton & Hove and Lewes. However, in Rural and Coastal West Sussex there is little change and in Coastal West Sussex the number of Creative employees has a higher share than businesses.

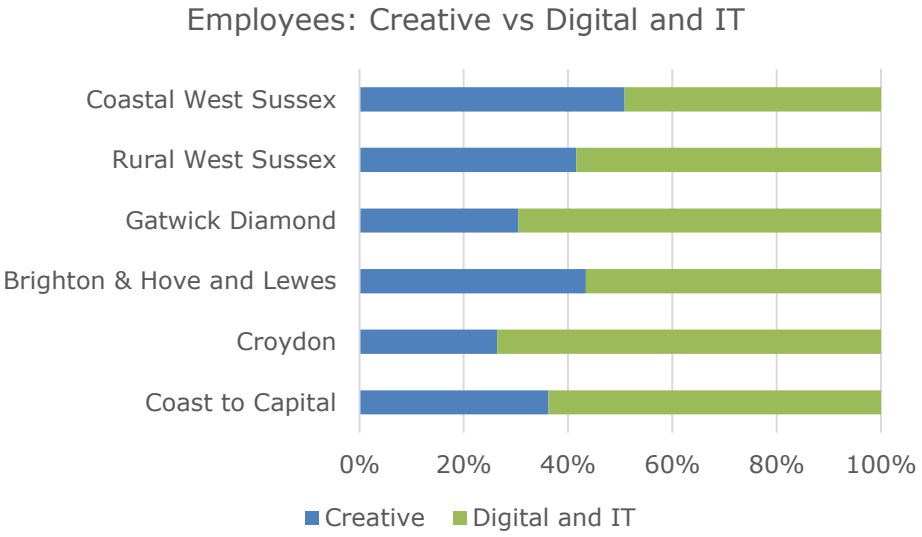


Figure 4 – Employee share Creative vs Digital and IT SIC codes 2013, Source: Business Register and Employment Survey 2013/Coast to Capital

[6] ONS UK Business Counts 2013

26. In figure 5 the contribution to the growth of employees has been split by Creative and Digital and IT SIC codes. Creative industries have been the cause of most of the losses and Digital and IT sub-sectors have had the gains. Croydon and Brighton & Hove and Lewes are exceptions to this but in different ways; Croydon has experienced declines in Digital and IT employees and Brighton & Hove and Lewes have had gains in Creative employees, enough to grow Coast to Capital's regional Creative employment. Coastal West Sussex is also somewhat different, loosing employees in both sub-sectors, albeit with the Creative side losing the most[7].

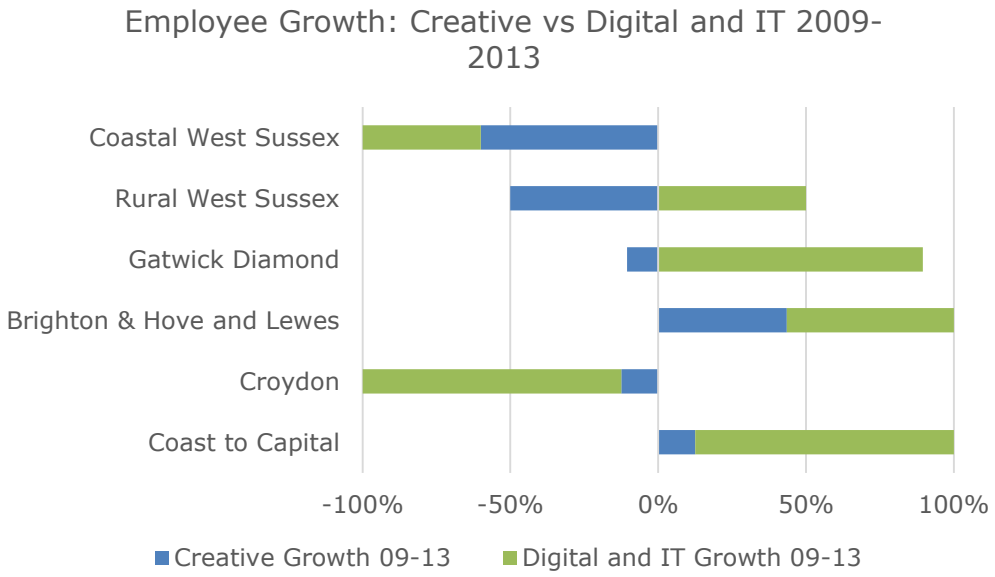


Figure 5 – Employee growth Creative vs Digital and IT SIC codes 2009-2013, Source: Business Register and Employment Survey 2013/Coast to Capital

27. In figures 6 and 8 the split between Creative sub-sectors and Digital and IT sub-sectors are shown for both businesses and employees at the Local Authority level. For businesses the split is generally around 45%/55% Creative to Digital and IT. Lewes, Brighton and Hove, and Chichester have above average levels of Creative sector businesses, in all three areas the Creative sector is larger than the Digital and IT sector. Crawley and Croydon have higher than average shares of Digital and IT businesses, which account for over 70% of the sector. Horsham and Worthing also have higher shares of Digital and IT businesses, accounting for around 65% of the sector[8].

[7] Business Register and Employment Survey 2013
[8] ONS UK Business Counts 2013

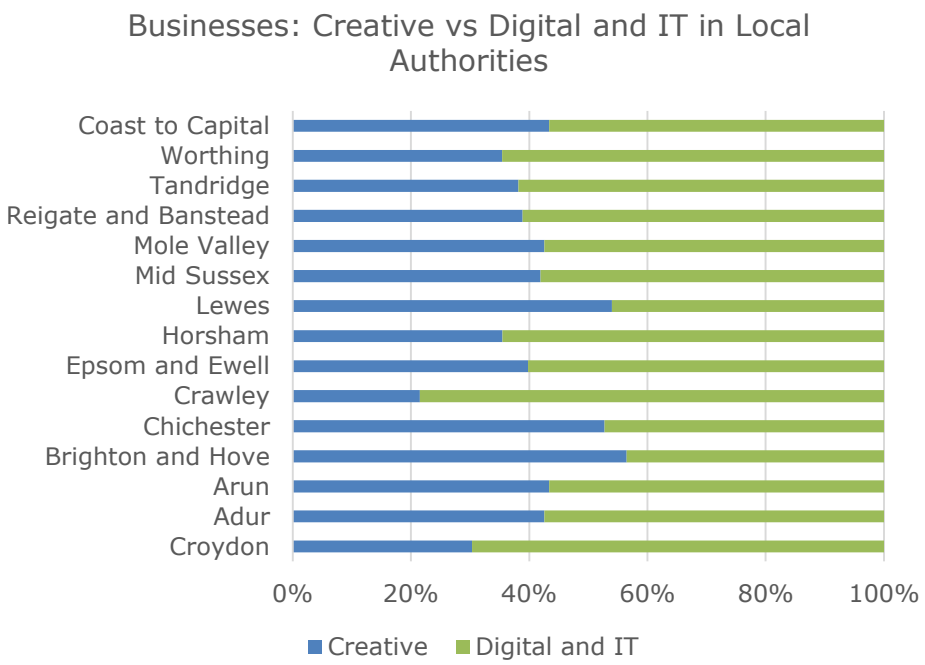


Figure 6 – Business share Creative vs Digital and IT SIC codes 2013, Source: ONS UK Business Counts 2013/Coast to Capital

28. Business growth has mostly come from the Digital and IT sector but there are some areas where the Creative sector has seen most growth. In particular Adur has only seen growth in the Creative sector, although overall growth in Adur has been low, and in Brighton and Hove, Chichester, and Mid Sussex have seen greater growth in the Creative sector than in the Digital and IT sector.

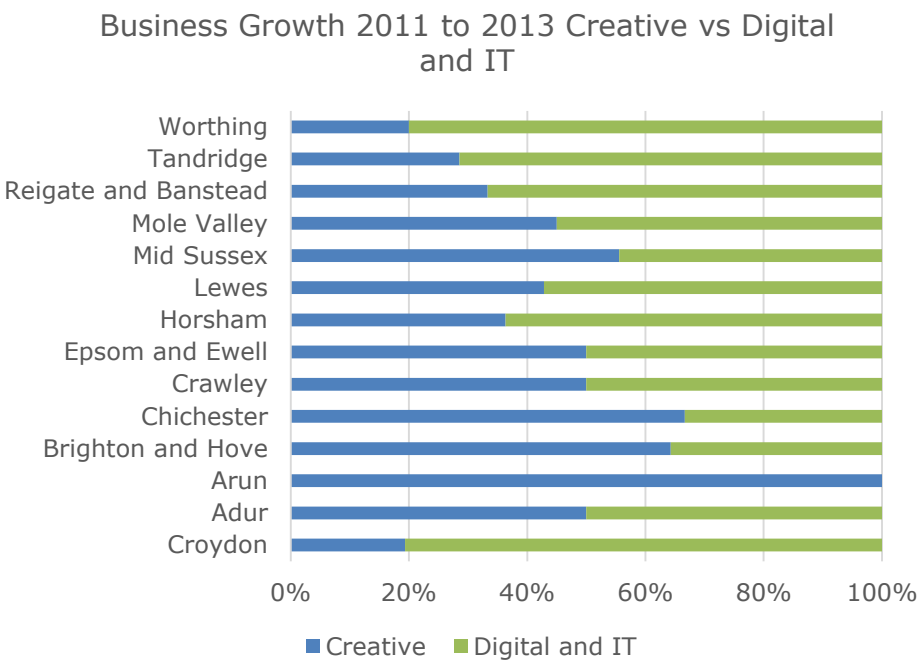


Figure 7 – Business growth Creative vs Digital and IT SIC codes 2011-2013, Source: ONS Business Counts 2013/Coast to Capital

29. In figure 8 there is more variation between Creative and Digital and IT sub-sector shares from the regional average than seen in business shares. Croydon, Adur, Crawley, Horsham, and Mole Valley each have higher shares of Digital and IT employment, over 70%. This is higher than the share of Digital and IT businesses in these areas. Chichester, Lewes, and Worthing have higher than average shares of Creative sector employees, over 50%, which is similar to the share of Creative businesses except in Worthing[9].

[9] Business Register and Employment Survey 2013

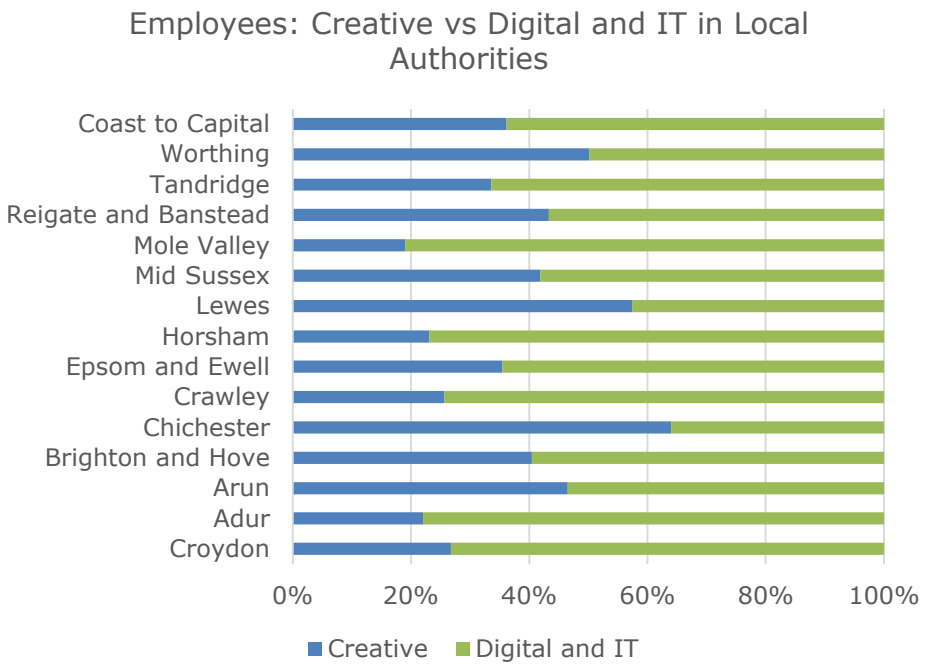


Figure 8 – Employee share Creative vs Digital and IT SIC codes 2013, Source: Business Register and Employment Survey 2013/Coast to Capital

30. In most Local Authority areas Digital and IT employment growth has been far larger than Creative employment growth from 2009 to 2013. The main differences are in Worthing and Croydon where employment in both the Creative and Digital and IT sectors have fallen, mostly in the Digital and IT sector. Lewes is the one area where employment in the Creative sector has been larger than in the Digital and IT sector.

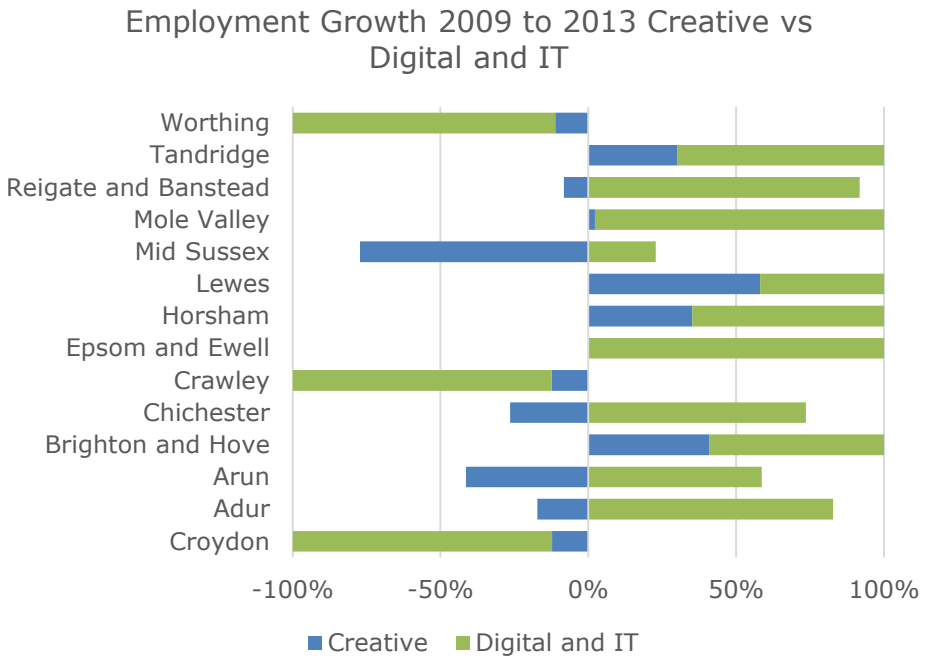


Figure 9 – Employee growth Creative vs Digital and IT SIC codes 2013, Source: Business Register and Employment Survey 2013/Coast to Capital

Business – Stock, Growth, and Share

31. The CDIT sector makes up a large part of the local economy, compared to the broad industry groups it is second only to the 'Professional, scientific and technical activities' industry and on par with the 'Wholesale and retail trade; repair of motor vehicles and motorcycles'.

32. There are 11,440 CDIT businesses in the Coast to Capital region[10], making up 15.3% of all businesses, compared to 11.2% in the UK; this share has risen from 14.4% in 2011, largely driven by Croydon where the number of CDIT businesses grew 20% from 2011 to 2013. CDIT business stock has grown by 11% since 2011, slightly faster than the UK CDIT stock and almost three times as fast as business stock in the rest of the Coast to Capital region (4.4%).

33. There has been an upward trend in CDIT business creation, a 20% average year on year growth since 2008, and the three year survival rate for a CDIT company that started in 2011 is 82%[11].

34. Micro businesses (those with 0-9 employees) accounted for 96.2%[12] of all CDIT businesses in the Coast to Capital region, in comparison micro businesses make up 94.4% of the UK CDIT sector. The higher share may be due to the

[10] ONS Business Counts 2013
[11] FAME database Bureau van Dijk/Coast to Capital
[12] ONS UK Business Counts 2013

proportionally higher number of CDIT businesses in the area, creating a larger pool of micro businesses. Small CDIT businesses (10-49 employees) account for 3.2% in Coast to Capital and 4.7% in the UK and medium CDIT businesses (50-249 employees) have a share of 0.3% in Coast to Capital and 0.8% in the UK.

35. There appear to be no large CDIT businesses (250+ employees) in the Coast to Capital region, which account for 0.2% in the UK. This may be due to the high level of competition for work and employees in the area making the progression to a large business difficult, but it does contradict other intelligence that suggests there are a number of companies in the region that employ over 250 employees. Even if some large businesses are not accounted for, the lower share of small, medium and large businesses compared to the UK points to a lack of business growth and potential employment gains, as large businesses employ proportionally more people than their share of the business population.

36. Micro businesses have had the highest volume of growth, 1,060 businesses, but the number of small and medium businesses has grown proportionally faster, 17.5% and 33% respectively[13]. Although some of this is skewed by low base numbers[14] it does show that some CDIT companies are growing and expanding to take on more employees. This is happening at a faster rate than the UK CDIT sector where the number of small and medium businesses grew by 16% and 4.6%.

Jellyfish Online Marketing
Turnover: *£14.6m*
Profile: *started in 1999 the company is a leader in online marketing services, with offices in Reigate, Brighton, Baltimore, and Durban and employing around 70 people.*

[13] ONS UK Business Counts 2013
[14] The 33% growth in medium businesses accounts for 10 extra companies

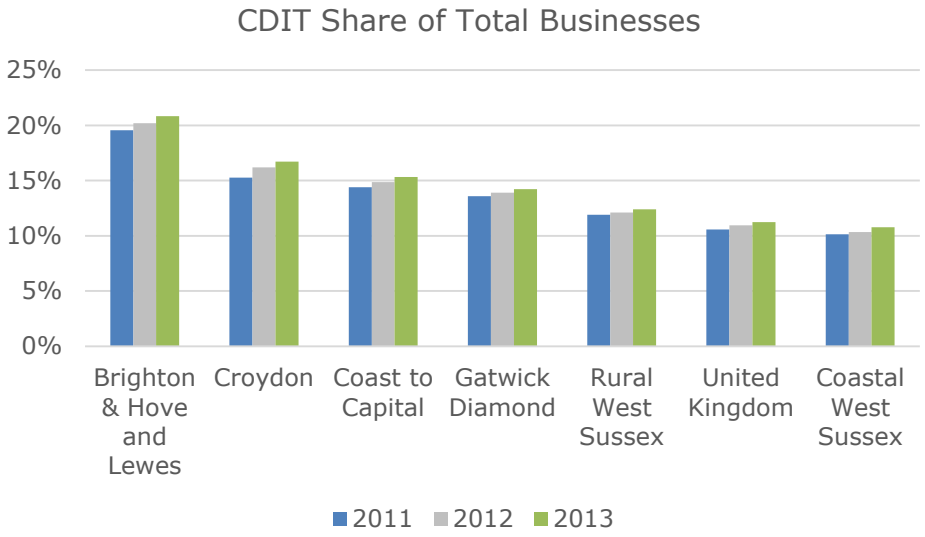


Figure 10 – CDIT share of total businesses in Coast to Capital 2011-2013, Source: ONS UK Business Counts 2013/Coast to Capital

37. Figure 5 highlights the CDIT share of businesses in the Coast to Capital region and the area partners, along with a comparison to the United Kingdom. All areas have grown but the Coastal West Sussex share remains below the UK rate and is almost half the Brighton & Hove and Lewes share.

Area	2011 - 2013 Share Growth
Croydon	1.4%
Brighton & Hove and Lewes	1.3%
Coast to Capital	0.9%
United Kingdom	0.7%
Gatwick Diamond	0.7%
Coastal West Sussex	0.6%
Rural West Sussex	0.5%

Table 1 – CDIT business share growth in Coast to Capital 2011 – 2013, Source: ONS UK Business Counts 2013/Coast to Capital

38. The table above shows the Coast to Capital region's dependence on the Croydon and Brighton & Hove and Lewes areas for CDIT growth, the other three Area Partnership locations grew their share by less than half in comparison. There is a weaker CDIT sector in the partnerships areas covering West Sussex, in both business share and growth they are the bottom two geographies and in table 2 they are in the bottom three for employment growth, some way below average. The strong growth in the CDIT business stock has driven those share gains.

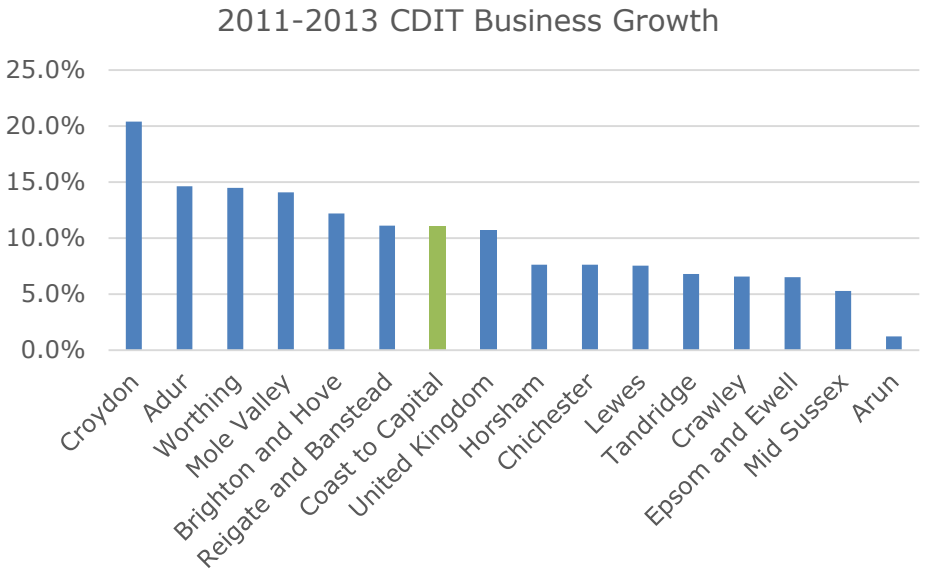


Figure 11 – CDIT business growth 2011-2013, Local Authorities, Source: ONS UK Business Counts 2013/Coast to Capital

39. This growth is uneven however, much of it is located in a few areas and there is a clear gap between above and below average growth. Figure 11 shows the high growth areas of Croydon, Adur, Worthing, and Mole Valley, all growing by 14% or more[15]. It also highlights low growth in the Arun area which is slightly surprising considering its position on the coast between Brighton and Hove and Chichester which have strong CDIT sectors and the high growth in the Adur and Worthing areas. It again highlights how dependant the Coast to Capital region is on a few locations, only six out of fourteen Local Authority areas grew above the UK average and the other eight are at least 3% below that average.

Employment – Levels, Growth, and Share

40. CDIT employee growth in the Coast to Capital region has been mixed, the sector has grown faster than the wider Coast to Capital regional economy but it has not kept pace with the national growth rate. The growth is also uneven among the Area Partnerships, either large growth or decline and very little in the middle.

41. The CDIT sector employed 40,600 people in 2013 accounting for 5.2% of the Coast to Capital workforce (a 0.2% rise in share since 2009). In Great Britain[16] as a whole the CDIT sector employs 5.1% of the workforce, up 0.4% since 2009. The number of CDIT employees in the Coast to Capital region has risen 2,300 since 2009, a 6.2% increase, much faster than in the Coast to Capital region as a whole which grew 2%; in comparison Great Britain CDIT employees grew 9.2%,

[15] ONS UK Business Counts 2013
[16] The UK is not available as a geography in Business Register and Employment Survey data so the nearest approximation was used

highlighting how well CDIT employee growth has been within the region but that it has failed to keep pace with the nation.

42. The number of CDIT employees may have risen across the region but growth was not spread equally. Employee growth was especially strong in Brighton & Hove and Lewes (26.7%), outpacing total employee growth by some distance, whilst in Croydon there was a 12.9% decrease in CDIT employees. This CDIT employee fall in Croydon is proportionally greater than the total fall in employees. CDIT employees have fared even worse in Coastal West Sussex, falling -8.6% despite overall employee growth of 4.9%[17].

Employee Growth	CDIT Growth	Total Growth
Brighton & Hove and Lewes	26.7%	5.4%
Great Britain	9.2%	2.0%
Gatwick Diamond	8.5%	3.5%
Coast to Capital	6.2%	2.0%
Rural West Sussex	0.3%	4.0%
Coastal West Sussex	-8.6%	4.9%
Croydon	-12.9%	-10.2%

Table 2 – CDIT and Total employee growth 2009-2013, Source: Business Register and Employment Survey 2013/Coast to Capital

43. As can be seen in figure 12 growth can wildly vary between Local Authority areas[18]. Some of this is due to the smaller economies being more sensitive to change but it can provide some insight, for example Coastal West Sussex's decline is due to the sharp fall in Worthing; Adur, Arun and Chichester all experienced growth to some degree.

44. The fall in Worthing has been concentrated in Computer programming and consultancy activities and to a lesser extent Telecommunications. At the other end of the scale, employee growth in Adur was driven by Telecommunications and Computer programming and consultancy activities, this is not surprising as these sub-sectors are some of the largest in the area. There will be more information on sub-sectors later in the document.

Leo Learning Limited
Turnover: *£7.2m*
Profile: *the result of a merger between Epic Group Limited and Line Communications they are global company based in Brighton providing e-learning programmes and solutions to local and international clients.*

[17] ONS Business Register and Employment Survey 2013
[18] Ibid

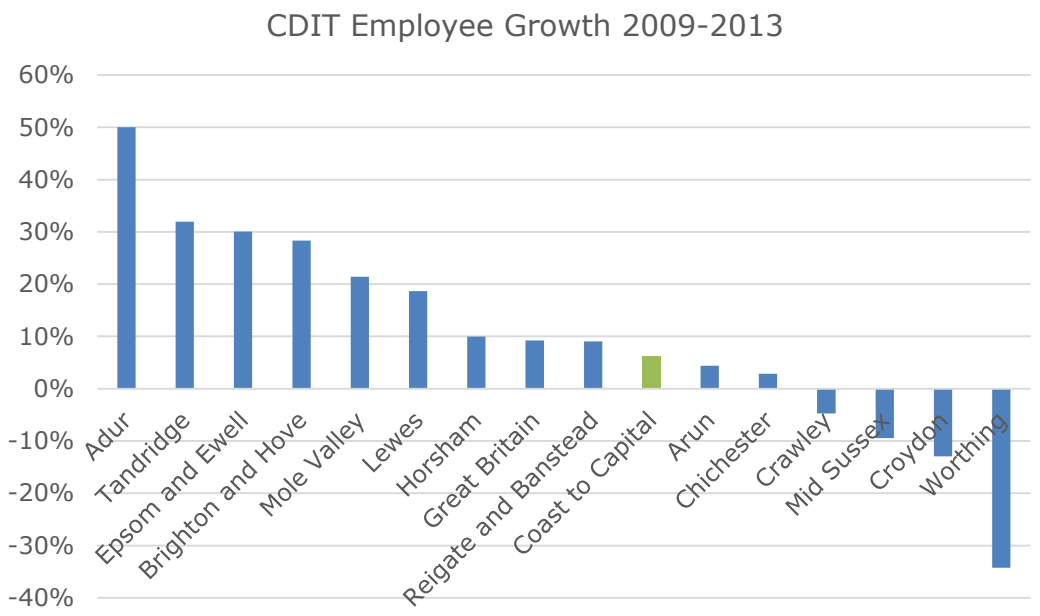


Figure 12 – CDIT employee growth 2009-2013, Local Authorities, Source: Business Register and Employment Survey 2013/Coast to Capital

45. Some of this growth can be misleading, Adur has experienced 50% growth from 2009 to 2013, but as figure 13 shows this only contributed a small amount to the overall growth in Coast to Capital. In terms of size, Brighton and Hove leads the contribution to growth in the region at 84%.

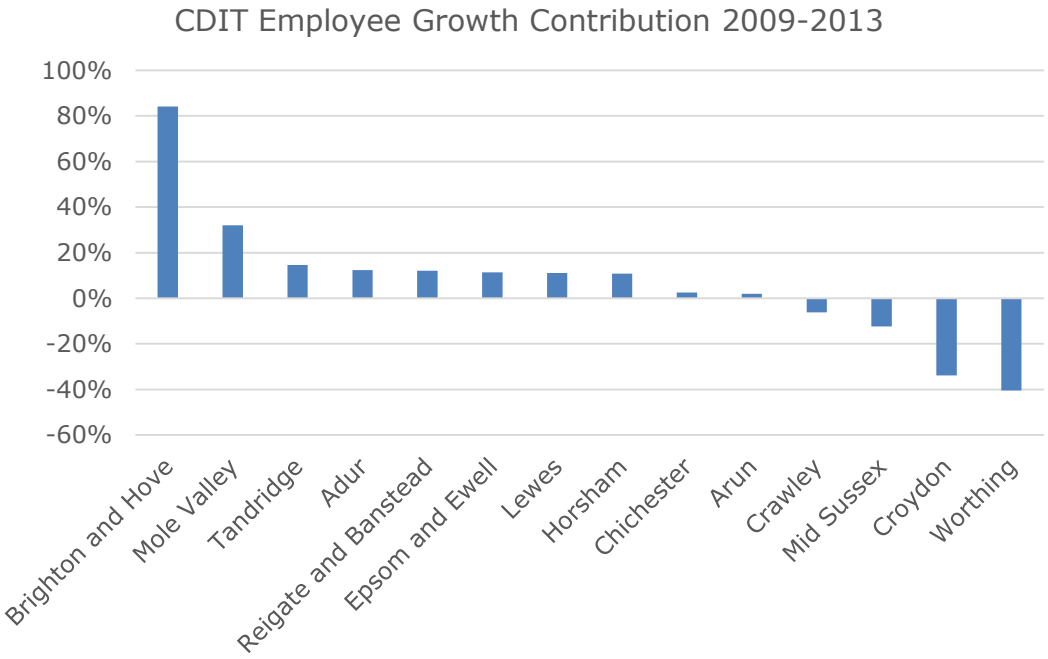


Figure 13 – CDIT growth contribution by Local Authority 2009-2013, Source: Business Register and Employment Survey 2013/Coast to Capital

46. All of this differs greatly from business growth in CDIT which has been upward and with less variation across local geographies. This is not unexpected as starting and running a business requires a high level of planning, effort, and time, whereas in comparison the labour market is more flexible and is directed by business needs, creating a more variable growth pattern.

47. Across these three sections a picture has emerged of a sector that makes up a sizable part of the local economy and has grown at a faster rate than the region as a whole. But that growth has been uneven; growth in businesses has been above the UK average in only six of the fourteen Local Authorities and growth in employees has mostly occurred in Brighton & Hove which accounted for 84% of employee growth in Coast to Capital, whereas in Croydon it fell 13%, and overall was lower than national sector growth. The sector is also reliant on Digital and IT for jobs, almost all the employee growth from 2009-2013 came from the Digital and IT sub-sector, the only growth in the Creative sub-sector occurred in Brighton & Hove and Lewes.

Sector Trends and Drivers

48. There are a number of economic, demographic, technological, and consumer trends and drivers that will have an effect on the CDIT sector now and in the future. These can be grouped into two broad and interdependent areas; the first is product, particularly around technical innovation, big data, and increased interconnectivity creating new products and services, both to consumers and in the supply chain. The second is skills; increasing skills levels in technical and managerial positions are required, and are increasingly merging, at one end to drive the innovations that create new opportunities, and at the other to exploit the opportunities and manage business operations.

49. The trends and drivers are based on the national sector but are equally applicable to the local CDIT sectors.

50. **The Digital and IT Sub-Sector:**[19]

- A growing 'digital native' population – those who have grown up using digital and technological products and services;
- 'borderless businesses' which are able to expand across nations, devices, and applications with ease; demand for services can happen anywhere at any time;
- increasing spending on software and services compared to hardware (e.g. cloud services);
- rising investment in IT;
- continual technical innovation and the opportunities for new products and services they create;

[19] E-skills UK Labour Market Review 2011/UKCES Sector Skills Insights: Digital and Creative 2012/UKCES Sector Skills Assessment: Information Technology and Communications 2012

- enhanced data collecting capacity to provide information on consumer demands and provider capabilities;
- technological change driving from within the sector and from the outside, via changing consumer demands for productivity gains from technology in their businesses;
- specific technologies are changing the sector, such as cloud computing, mobile computing, big data and analytics, cyber-crime and security, and data protection;
- increasing importance of management skills to respond to challenges;
- increased emphasis on services and service skills;
- globalisation pushing the need for innovation and higher value added skills;
- developments in Green IT, which will require skills in power management, and environmental impact assessment;
- an older worker profile requiring replacement as they retire;
- the impact of the 12 disruptive technologies identified by McKinsey opening up new market opportunities;
- Government policy on supporting the 8 great technologies influencing the take-up of big data and satellites.

51. **The Creative Sub-Sector:**[20]

- opening up of new global markets through digital communication;
- increased competition from globalisation;
- growth in the 'experience economy' over the last 10 years;
- continued growth in consumer spending on entertainment, art, and literature and through the recession;
- high levels of innovation throughout the sector driven by digitalisation;
- increasing interconnectivity between creative and digital professions;
- threats to intellectual property through illegal copying;
- fragmentation of the audience as new technologies allow for personalised media consumption

Chichester Festival Theatre
Turnover: *£5.8m*
Profile: *employing around 150 people the Chichester Festival Theatre recently celebrated its 50th anniversary with a renovation of their building. It has been home to many great works, actors, directors, and has strong links to the local community.*

Skills and Employment Demand

52. These trends and drivers will have implications for employment and skills demand. Based on the UK Commission for Employment and Skills Working Futures data, employment in the CDIT sector is

[20] UKCES Sector Skills Insights: Digital and Creative 2012/Skillset and CCS: Sector Skills Assessment for the Creative Industries of the UK 2011

predicted to increase by 16% from 2012 to 2022, slightly below the national level of 17.5%. In comparison, employment in the region as a whole is predicted to grow by just under 5%[21]. The lower growth in the Coast to Capital region may be due to the CDIT sector being dominated by micro businesses which employ fewer people.

53. The CDIT sector here is made up of the Information Technology and Arts and Entertainment sectors as defined by the UKCES; these sectors are not exactly comparable to the CDIT sector as defined by Coast to Capital, but it does provide an indicator for the likely trends in growth. There is expected to be a 27% increase in IT employees and a 7% increase in Arts and Entertainment employees in the Coast to Capital region.

54. Most of the employment growth in both IT and Arts and Entertainment will be in managerial and senior, professional, and associate professional and technical occupations, between the two sectors these occupations will grow 26%. This will increase the occupation's share of employment by almost 8% in Arts and Entertainment, a 5% share increase in managerial occupations alone, and 2% in IT, where these occupations already account for 79% of employment[22].

55. The increase in demand for higher level occupations is also expected to drive the demand for employees with level 4+ qualifications. The Digital and IT sector is expected to increase 10% from 2012 to 2022 and the Arts and Entertainment is expected to increase 11% across the Coast to Capital region. This is similar to the projected 10% increase for both sectors at the national level.

56. Below are specific skills requirements in the Digital and IT and Creative sub-sectors that will become more prevalent in the near future as new products and services are developed from recent developments across the sector.

57. In the **Digital and IT sectors** specific skills[23] that will be required are:

- **Security skills** - as cyber-crime, online privacy, and data protection become more important there will be need for security skills across all areas of the Digital and IT sector.
- **Business skills** – technical skills are no longer enough and professionals in the sector will increasingly need skills around project planning, workforce management, and business development.
- **Technology Specific skills** – the core skills of the industry, they will be around power management, cloud computing, and data security. More specifically these skills will be architecture, infrastructure, and networking, technological communications infrastructure, integrated security solutions, and modelling, simulation, and analytics.

[21] UKCES Working Futures 2012
[22] Ibid
[23] UKCES Sector Skills Insights: Digital and Creative 2012/UKCES Sector Skills Assessment: Information Technology and Communications 2012

- **Inter-personal skills** – the sector will become more service oriented, the workforce will need customer service skills embedded throughout.
- **Analytical and Research skills** – big data has the potential to open up new business opportunities and businesses trying to take advantage of this will need employees with these skills to match information to business problems and opportunities.

58. The **Creative sector** skills[24] that will be in demand are:

- **Multi-platform skills** – the ability to understand and create content across a range of media platforms that are now available, matching technical skills with creative skills.
- **Management and Business skills** – there will be need for combining leadership, project management, supply chain management, and business development skills with creative and technical skills.
- **IP and monetisation of multi-platform content** – increasing need to understand IP rights and legislation to monetise creative output and exploit new markets that are opening up through digital expansion.
- **Foreign language skills –** working and collaborating across borders and with foreign partners will become more important and language skills will aid in working in a global economy.
- **Fundraising skills –** particularly in demand for Performing Arts, Visual Arts and Cultural Heritage.

Brighton Dome and Festival LTD
Turnover: *N/A*
Profile: *a registered charity that runs the Brighton Dome and an annual festival of music, theatre, dance, circus, art, film, literature, debate, outdoor and family events across Brighton and Hove. Now in its 49th year it is one of the largest creative and cultural events in the area, employing around 80 people and supporting many more jobs in the local economy.*

The Brighton and Hove Cluster

59. Brighton and Hove is very much the hub of the CDIT sector in the Coast to Capital region and many creative and digital people are drawn to it, making it a competitive advantage to the Coast to Capital economy. What this section aims to determine is if the CDIT sector in Brighton and Hove can be defined as a cluster[25] at a national level, how embedded it is, and if there are any other strong clusters in the Coast to Capital region.

60. There are many ways to measure clusters but the European Cluster Observatory has a framework which has defined three measures that capture a fuller picture

[24] UKCES Sector Skills Insights: Digital and Creative 2012/Skillset and CCS: Sector Skills Assessment for the Creative Industries of the UK 2011
[25] More information on clustering is available in the annex

of a potential cluster and whether it has reached specialised critical mass. These three measures are:

- **Size:** the number of people employed in the cluster in relation to the wider economy. The rationale for this variable is that at a large enough size it is likely the "*meaningful economic effects of clustering are present*".
- **Specialisation:** the concentration of a cluster of a local region in relation to the wider economy (Location Quotients[26]). The rationale for this measure is that it is an indication that the economic effects of the cluster are *"strong enough to attract related economic activity from other regions".*
- **Focus:** the employment share of the cluster in relation to the local region. The rationale for this is that if a cluster makes up a large share of a local economy's employment, then *"spill-over effects and linkages will actually occur"* rather than being lost in wider economic activity.

61. This method has been applied to CDIT employment in Brighton and Hove in comparison with all the local and unitary authorities across the Great Britain, unlike the Cluster Observatory which compares regions across the EU. The Cluster Observatory gives a star for each of the three variables, the criteria is that a location has to be in the top 10% of regions for size and focus and a location must have a location quotient (LQ) above 2.0.

62. Using this framework places Brighton and Hove's CDIT cluster as 29th out of 380 for size; 48th out of 380 for focus; and with an LQ of 1.4. This gives the Brighton and Hove cluster a one star rating for size. There are 27 one star rated clusters across Great Britain, mostly for size and are predominantly larger cities and metropolitan areas. There are 11 two star clusters, split evenly between a combination of size and focus, and focus and LQ. There are 16 three star clusters, but if we merge the London Boroughs on the assumption that clustering occurs in London and not, for example, Westminster, then the number comes down to 6. These three star clusters are all either in London or to the west of London and Heathrow[27]. This framework did also reveal Mole Valley as a one star cluster for focus, and with a LQ of 1.9 it is nearly a 2 star cluster.

63. This process is only applied to cluster employment by the European Cluster Observatory, but it should also be used on the business population. This is because the business population is used to ascertain the solidity and vitality of an industry's structure, reduces the risk of identifying a cluster based on one company that employs a large number of people, and certain cluster effects, such as producer-user relationships, knowledge spill overs, and local competitive pressures are more relevant to companies than employees. On the other hand it does not take into account the size of the companies, it can overestimate clusters of small or

[26] A definition can be found in the annex
[27] In no particular order: London, Wokingham, Slough, Reading, West Berkshire, Windsor and Maidenhead.

new businesses, whereas using employees can provide a better picture of the absolute and relative size of a cluster at local and national levels[28].

64. Applying the Cluster Observatory framework to the business population provides a much different picture. In this instance there are 9 three star clusters, but if we again assume that the London Boroughs are merged into one as London then there are only 2 three star clusters and the second one is Brighton and Hove. The only other Coast to Capital local area that achieves a star rating for businesses is Croydon which is in the top 10% of locations for size.

65. This framework has suggested that Brighton has a CDIT cluster that has not reached specialised critical mass in terms of employees but has a strong base in terms of business clustering. This suggests that businesses are starting to enjoy the benefits from firm clustering but are not yet reaching the scale and specialisation from employment required to fully exploit those gains in terms of increased productivity and innovation, in turn competing with those other three star employment clusters. This highlights the importance of applying the framework to both businesses and employees, the results suggest a large number of smaller firms with small workforces, using just one or the other would have over or underestimated the cluster.

Cogapp
Turnover: *£1.6m*
Profile*: based in Brighton and employing around 40 people Cogapp help companies and organisations around the world improve their digital presence through websites, interactive installations and mobile apps.*
They also advise, design, consult and provide maintenance and operating services.
Past clients include the British Museum, the BBC, London 2012, the Qatar National Library, and the Metropolitan Museum of Art in New York.

66. Mole Valley and Croydon are the only other local areas that achieve a star rating in either method. Widening the criteria to the top 20% to find those local areas that are a step below cluster status but could indicate widening of the cluster beyond Brighton and Hove. For employment size this brings up Croydon; for employment focus and specialisation there are no local areas in the top 20%, although Lewes and Reigate and Banstead are very close. For business size Reigate and Banstead and Mid Sussex are in the top 20%; for focus and specialisation Epsom and Ewell, Croydon, Mole Valley, Reigate and Banstead, Mid Sussex, and Lewes appear in the top 20% of each.

67. Croydon in particular is well placed to become the next major national CDIT cluster in the Coast to Capital region. It already has CDIT business population size to be in the top 10% of locations around the country and the specialisation and focus is likely to follow as Croydon Tech City has recently been identified as being the

[28] Clustering Dynamics and the Location of High Tech Firms: Mario Maggioni 1999 p19-20

fastest growing tech start-up cluster in London. The area also has sub-sector strengths in the games industry, data storage and file-sharing management[29].

68. Measuring the cluster is a large component of determining whether or not there is a cluster in Brighton and Hove, but it cannot tell us how embedded it is; for that we need to look into the institutions, support, and reputation that surrounds the cluster. The most obvious place to start is with the two universities in Brighton and Hove; not only do they provide a supply of graduates to the area but they also have research capabilities and links to businesses in the CDIT sector.

69. The University of Brighton has set up postgraduate digital media arts and digital media production courses developed with input from the local industry. The School of Computing, Engineering, and Mathematics has an internship programme that links graduates with local businesses. Research groups work on interactive technologies, informatics, and grouped network data, and the Fusebox Knowledge Exchange project is working in partnership with Wired Sussex, which aims to connect academic approaches to learning with entrepreneurial business strategies aimed at creating value. Its creative research is linked to product design using advanced engineering technologies, sustainable design, and interdisciplinary work is encouraged across the creative subjects.

70. The University of Sussex has the centre for material digital culture, which is an inter-disciplinary research centre exploring multiple aspects of digital transformation. It actively researches informatics, data systems, management of data systems and bio-medical diagnostics, and development of video analytic software. The university also has research centres in cultural studies, creative and critical thought, and research groups focused on computer graphics, communications, information, networks and knowledge.

71. It is not just what the universities offer that is important, the level of interaction companies in the sector have with the universities is also key to defining the cluster. 56% of respondents in the Brighton Fuse report had engaged with a university in 2011, the types of interaction documented are informal networking, use of facilities, placement schemes, and 10% of respondents collaborated on research projects[30]. Whilst this is not representative of CDIT companies as a whole it does provide an indication that university and company interaction is strong.

72. There is an excellent support structure in Brighton and Hove for the CDIT sector, which is also a feature of an embedded cluster. Many organisations, events, and networks are in place and set up to aid businesses in the CDIT sector such as Wired Sussex, the voice of the local CDIT sector, Develop in Brighton, the largest games developer conference in Europe[31], and there are also many co-working

[29] The Financial Times – June 16th 2015: http://www.ft.com/cms/s/0/876bcd12-140a-11e5-9bc5-00144feabdc0.html
[30] The Brighton Fuse 2013
[31] More detail on these and other local and national support organisations is available in the annex

spaces in Brighton such as The Skiff and The Werks. These are places the freelance community can get together to work in an office and share the cost of office space. There is also strong networking within the sector through organisations such as Wired Sussex, local Chambers of Commerce, the Federation of Small Businesses, Sussex Enterprise, and through more informal avenues[32].

73. Further evidence of how embedded the cluster is in Brighton and Hove is the recent announcement that a digital catapult will be set up in New England House[33]. The catapult is linked to the national Connected Digital Economy Catapult which aims to provide the platform for SMEs to innovate rapidly in the digital sector and will be focused on the 'Internet of Place' which aims to provide context to the internet of things and open up new and innovative of creating value from real time data. The catapult bid was led by Coast to Capital and involves a wide range of partners that form a consortium, including the local universities. It is one of three digital catapult projects that were awarded around the country and is an endorsement of the reputation that Brighton and Hove has as a CDIT cluster. It will not be Brighton centric however, the aim is to support projects throughout the Coast to Capital region and potentially further afield, both in the UK and internationally; the first project that will be undertaken is in partnership with Gatwick Airport around how multiple data sets within a confined geography can be used for commercial and user gain.

Relentless Software
Turnover: *£4.5m*
Profile: *started in 2003 in Brighton Relentless Software is a digital games studio employing around 30 people. They aim to make games for all ages and their quiz game 'Buzz!' won a BAFTA. They have worked on games for home consoles and mobiles and tablets and have collaborated with National Geographic.*

74. This appears to be a case of a cluster having reached a high level of visibility and reputation through businesses, becoming embedded as evidenced by the institutions surrounding the sector, and should now be growing the cluster to 'critical mass specialisation' through employees. Successful businesses draw in suppliers, complementary and rival businesses that in turn draw in skilled employees for these businesses, which in turn draws in more businesses, either through re-location or start-ups, creating a virtuous circle[34]. As this continues it would be reasonable to expect employee specialisation in the CDIT cluster to increase to match those other 3 star employee clusters.

75. There is also some evidence of strong pre-cluster concentrations in Croydon and East Surrey, most likely due to their proximity to London. Some of this can be

[32] The Greater Brighton and Hove and West Sussex Business Survey 2014
[33] A Creative and Digital hub designed to provide affordable and flexible start-up and move on space for the CDIT sector
[34] Evidence of this has come out of the Brighton Fuse Report 2013 and the Greater Brighton and Hove and West Sussex Business Survey 2014

seen in figure 13 where, apart from Croydon, the contribution to employee growth came from Brighton and Hove and East Surrey. There is less evidence of pre-cluster concentration in the areas immediately surrounding Brighton and Hove, expect potentially Lewes, but figure 11 shows some above average growth in businesses and employees in Adur and Worthing, and above average employee growth for Adur, Lewes, and Horsham in figure 12 which may hint at some positive spill over effects from the Brighton and Hove cluster.

Gross Value Added

76. Gross Value Added (GVA) is a measure of productivity based on the value of goods and services produced in an area, industry or sector of an economy. The estimated GVA for the CDIT sector in the Coast to Capital region comes with certain caveats, which have been set out in the Annex. The key thing to note is that Information and Communications industries are being used as a proxy for the Digital and IT sectors and the Arts, Entertainment, and Recreation industries are being used as a proxy for the Creative sector. The figures are only estimates but they do provide a good indication of the productivity level and trends of the CDIT sector in the Coast to Capital region.

iCrossing UK
Turnover: *£28m*
Profile*: iCrossing UK is a digital marketing company that was recently named the 4th best independent agency in the UK. They have 17 offices worldwide, employing an estimated 140 people.*
In 1997 iCrossing UK started life as Spannerworks in Brighton. In 2007 it was bought by iCrossing and rebranded as iCrossing UK.
Past clients include Coca Cola, LEGO, LG, and Barclays.

77. On the face of it the CDIT GVA is impressive; in 2011 the estimated GVA for the CDIT sector in the Coast to Capital region was £3.07 billion[35], a 5.1% increase on the previous year and making up 7.9% of the regions GVA. However, at its peak in 2002/2003 the sector accounted for 9.4% of total GVA and has since fallen back to 1997/1998 levels.

78. At the national level these two sectors contributed £108 billion GVA in 2011, an 8% share of the total[36]. From 1997 to 2011 the average annual growth rate for the CDIT sector output grew 5.3% per year[37], 1% higher than the Coast to Capital region, and the national average growth rate in this sector for 2010 to 2020 is predicted to be 5.5% per year[38].

79. From 1997 to 2011 the sector grew by an annual average of 4.3% but whilst this appears to be strong growth it is largely driven by growth in the early years and it has not kept pace with the national level. Average annual growth was 11% from 1997 to 2001 at which point it fell out to an average of 1.6% per year from 2002

[35] ONS LEP GVA data 2013/Coast to Capital
[36] ONS GVA Estimates 2014
[37] Ibid
[38] UKCES Sector Skills Insights: Digital and Creative 2012

to 2011. In terms of total value the CDIT sector was at its highest in 2008 (£3.13bn) and has yet to return to pre-recession levels. At the national level the average growth rate from 2002 to 2011 was 3.6% per year highlighting a productivity gap in the region. The Coast to Capital region has fallen further behind recently, GVA growth in the 2007-2011 period was 4.4% in London, 2.2% in the UK, and 0.3% in Coast to Capital.

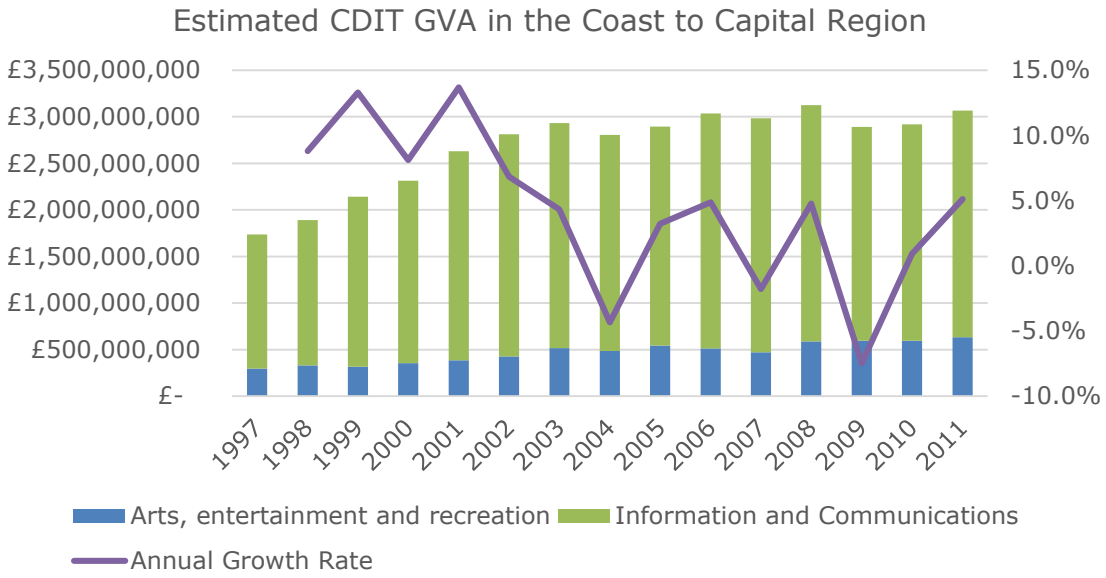


Figure 14 – Estimated CDIT GVA in the Coast to Capital Region - Source: ONS GVA Estimates 2014/Coast to Capital

80. This slow growth is strongly affected by the GVA growth in Information and Communications, the larger of the two sectors, which experienced strong growth in the 1997 to 2001 period before slowing down; the Arts, Entertainment, and Recreation sector has continued a strong upward trend in growth. The credit crisis in 2008 and the Eurozone crisis in 2010 were difficult times for the economy but the Arts, Entertainment, and Recreation sector showed strong performance, with GVA growing on average 8.1% per year from 2008 to 2011, however the Information and Communications sector fared poorly, it had an average annual growth of -0.6% in the same period.

81. The estimated GVA per employee for these two sectors in the Coast to Capital region is £60,300, for comparison the estimated GVA per employee across the Coast to Capital region is £52,400. However the CDIT sector in the Coast to Capital region is lagging behind the rest of the country in productivity per employee; at the UK level the estimated GVA per employee is £64,100 and in the South East region it is £71,600. It should be noted that a large proportion of the UK level is driven by London, where GVA per employee across the two sectors is £91,700. When London is removed the UK GVA per employee in the IT and Arts sectors is £54,300, though this does not change the South East region's level, further

highlighting how the CDIT sector performs well within Coast to Capital region but performs below the national level.

Gross Value Added Growth Projections

82. By calculating the average annual growth rate for GVA a projection can be made for the potential future growth of the sector. In figure 15 three scenarios have been projected based on the 15, 10, and 5 year average annual growth rates (AAGR)[39].

- In scenario one the 15 year AARG is played out and GVA reaches £4.9bn by 2020 and surpasses 2008 levels by 2012, this however includes the exceptional growth of the 1997 – 2001 period, which has not been sustained over a longer period of time.
- In scenario two the 10 year AARG is used and GVA reaches £3.5bn by 2020 and returns to 2008 peak levels by 2013, this removes the 1997 – 2001 growth rates.
- In scenario three the 5 year AARG is used and the 2008 peak is not reached until 2017 and GVA in 2020 is £3.2bn, however this rate is highly affected by the 2008 financial crisis.

83. It is likely scenario two would be the most probable outcome based on the slow recovery from the recent recession in comparison to previous ones and the historical growth trends of the sector after the exceptional growth in 1997 – 2001. However it should be noted that at the UK level the CDIT sector is expected to grow 5.5% per year. This, plus previous year's growth rate comparisons, further highlight the low productivity growth experienced by the Coast to Capital region's CDIT sector and poses the question why this is so when there is a favourable business environment for the CDIT sector in the region.

[39] 15 year average annual growth rate = 4.3%; 10 year average annual growth rate = 1.6%; 5 year average annual growth rate = 0.3%

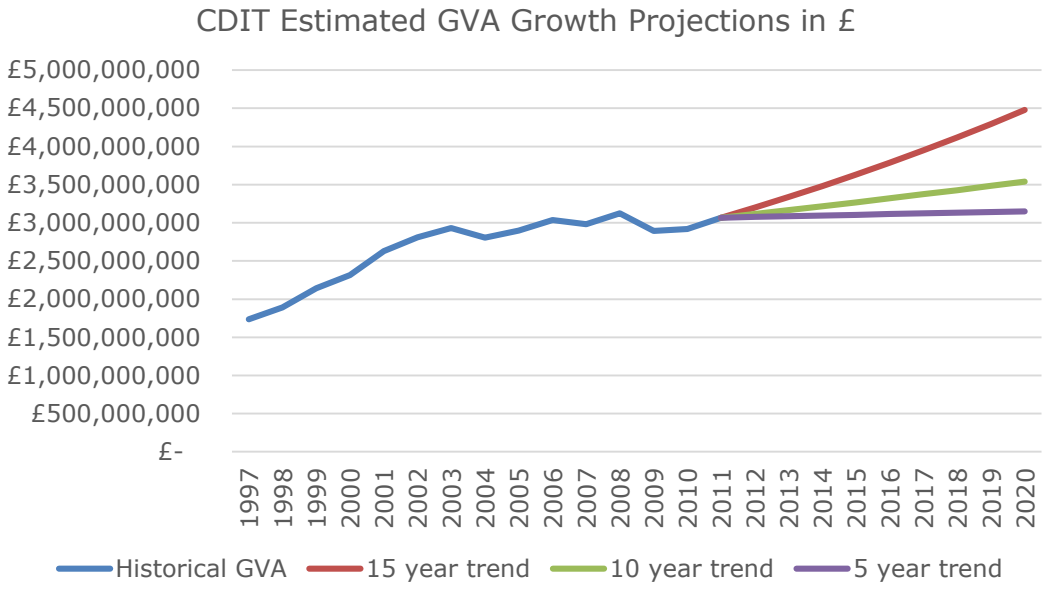


Figure 15 – Estimated GVA growth projections in Coast to Capital Region – Source: ONS GVA Estimates/Coast to Capital

84. There are a number of potential reasons for the low productivity growth, firstly low productivity is a national problem[40], there appears to have been poor productivity growth across all industries nationally since the recession, in part due to the fairly consistent employment rate suggesting companies have been keeping employees throughout the financial crisis at the expense of productivity gains.

85. The second is more sector specific, there is an idea called the 'Solow Paradox' which suggests that the improvements in technology have not yet produced complementary productivity boosts[41].

86. Third there may be social and demographic factors in effect, such as the 'laid back' attitude among employees identified by some respondents to the Greater Brighton and Hove and West Sussex Business Survey, or the lower skills levels in some areas.

87. Fourth there is the higher level of micro businesses in the regions CDIT sector; these businesses are less likely to be able to take advantage of the economies of scale that boost productivity, this is why clustering is important.

88. Fifth the sector is labour intensive, at a certain point the output of an employee reaches its maximum, apps, website designs, and artistic output cannot be produced at a limitless rate and are not yet subject to the automation that has been seen in manufacturing.

[40] Called the 'Productivity Puzzle'
[41] The Economist: Technology isn't working - http://www.economist.com/node/21621237/print

Issues and Barriers to Growth

89. The Greater Brighton & Hove and West Sussex business survey highlights some sector specific barriers to growth in the CDIT sector. The need for London connections for work, especially with national and international clients, many companies that relocated from London to Brighton continue on trade on their ex-London credentials, suggesting Brighton currently has a lower brand status for business. Some businesses mention that Brighton can be too 'laid back', finding it hard to hire local workers who can go out and win work in a highly competitive environment.

90. Some instances of difficulty in recruiting people with the right experience were also noted, and that keeping young people once they had been trained was also a problem. Strong competition for staff may be expected in a cluster but it is also highlights the lack of critical mass in the employee side of the cluster if there is some difficulty in finding the right employees. Staff retention is also a problem for businesses the further away from the Brighton hub, partially caused by transport issues, as some local staff have left companies outside of Brighton due to difficulties commuting each day[42].

Fresh Egg Limited
Turnover: *£2m*
Profile: named as one of the top 100 digital agencies for 2014 Fresh Egg is a leader in web design and digital marketing, with 60 employees and offices in Worthing, London, and Sydney.

91. The main barriers to growth found by the Brighton Fuse report are the current economic climate, lack of revenues for re-investment, excessive workloads, competition, and a lack of profile. These are not necessarily specific to the CDIT sector, though it does point to a lack of the business and managerial skills required in the sector to increase revenues, hire and manage staff and workloads, and create viable business strategies to compete with other companies. It also highlights some of the competitive pressures expected to be found in a cluster.

92. The lack of skills was mentioned as a barrier, however it was not high priority, this would suggest a good supply of skills in the area as would be expected in a cluster, however the Brighton Fuse report does only focus on the Brighton and Hove area. As mentioned earlier those further away from the Brighton hub may have trouble retaining employees due to commuting distances and that they experience difficulty in finding the right skills, but because of lifestyle choices rather than poor supply. The report also highlights that those businesses which are high growth and are involved in innovative activities experience a higher prevalence of skills gaps and shortages.

[42] Greater Brighton and Hove and West Sussex Business Survey 2014

93. There are also issues about 'move on' space in the area, where there is limited suitable office space where businesses can grow into, which takes time to find and may not have the required broadband connections and speed[43]. This may be part of the reason why there are so few large companies, particularly in the Brighton and Hove area.

Sub-sectoral Makeup

94. The sub-sectors set out below have been based on their SIC codes for ease of identification, different levels of detail have been chosen for each sub-sector to account for the contrasting sizes of each. For example programming and broadcasting activities have been grouped together due to the small size of its constituent parts; the same applies for telecommunications, whereas the creative arts sub-sectors have been split into purely creation activities and support activities.

Creative Sub-Sectors:
581 – Publishing of books, periodicals and other publishing activities
591 – Motion picture, video and television programme activities
592 – Sound recording and music publishing activities
60 – Programming and broadcasting activities
731 – Advertising
741 – Specialised design activities
742 – Photographic activities
743 – Translation and interpretation activities
8552 – Cultural education
9001/03 – Performing arts and artistic creation
9002/04 – Support activities to performing arts and Operation of arts facilities

Digital and IT Sub-Sectors
582 – Software publishing
61 – Telecommunications
6201 – Computer programming activities
6202 – Computer consultancy activities
6203 – Computer facilities management activities
6209 – Other information technology and computer service activities
631 – Data processing, hosting and related activities; web portals
639 – Other information service activities

[43] The Brighton Fuse Report 2013

95. This section has been split into employees and businesses to look at the variations in sub-sector composition and strengths, looks at the share of each sub-sector as a proportion of the CDIT sector, and introduces a scorecard to highlight sub-sectors with strong performance, using size, growth, and LQ[44] together to create a fuller picture of specific sub-sector strengths based on absolute (size) and relative (LQ) strengths.

EMPLOYEES

96. Figure 16 shows the employee share of each sub-sector within the Coast to Capital CDIT sector. Those in green are the Creative sub-sectors and those in blue are the Digital and IT sub-sectors. Computer consultancy is far and away the largest sub-sector.

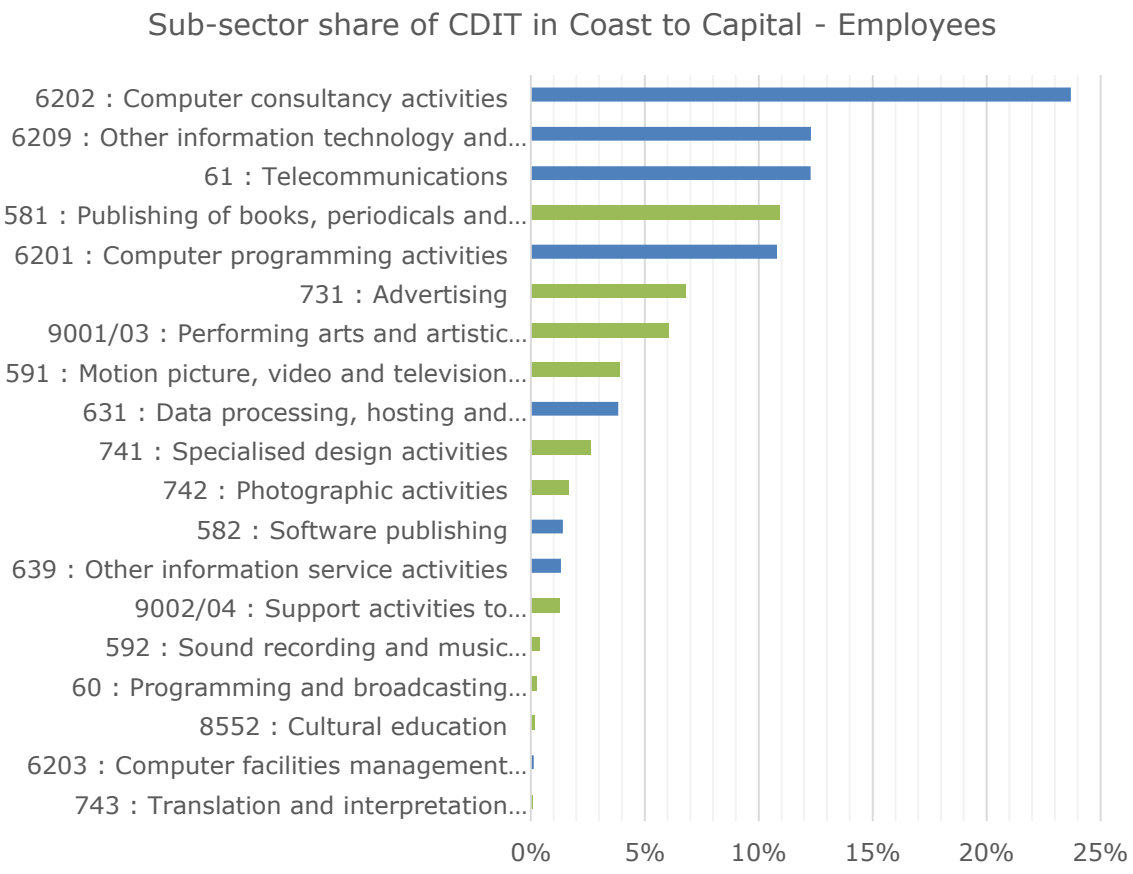


Figure 16 – Sub-sector share of CDIT employees Coast to Capital region 2013, Source: Business Register and Employment Survey 2013/Coast to Capital

97. Below a sub-sector scorecard has been produced to visualise performance across the three variables of size, growth, and LQ. The scorecard is a ranking of each sub-sector on each variable, split into top, middle, and bottom ranks.

[44] Sub-Sector employee and business growth can be seen in more detail in the Annex along with more information on location quotients

Sub-Sector Scorecard - Employees			
Sub-sector:	Size	Growth	LQ
581 : Publishing of books, periodicals and other publishing activities			
582 : Software publishing			
591 : Motion picture, video and television programme activities			
592 : Sound recording and music publishing activities			
60 : Programming and broadcasting activities			
61 : Telecommunications			
6201 : Computer programming activities			
6202 : Computer consultancy activities			
6203 : Computer facilities management activities			
6209 : Other information technology and computer service activities			
631 : Data processing, hosting and related activities; web portals			
639 : Other information service activities			
731 : Advertising			
741 : Specialised design activities			
742 : Photographic activities			
743 : Translation and interpretation activities			
8552 : Cultural education			
9001/03 : Performing arts and artistic creation			
9002/04 : Support activities to performing arts & Operation of arts facilities			

Table 3 – Employee Sub-sector scorecard, Source: Business Register and Employment Survey 2013/ Coast to Capital

Ranking Key:
Top Third
Middle Third
Bottom Third

98. Those sub-sectors that are mostly yellow and green are the sub-sectors that are strengths in the Coast to Capital region in terms of employees. From the scorecard sub-sector strengths can be seen in:

- Performing arts and artistic creation;
- support activities to performing arts and operation of arts facilities;
- computer programming activities;
- computer consultancy activities;
- information technology and computer service activities;
- software publishing.

99. There are some sub-sectors that are strong in both size and LQ despite negative growth in the 2009 to 2013 period and should not be wholly discounted.

100. Going down a geographic level to the Area Partnerships and analysing the same absolute and relative employee strengths, in relation to the Coast to Capital region, draws out the following sub-sector strengths[45]:

- The **London Borough of Croydon** has sub-sector strengths in Telecommunications, Data processing, hosting and related activities, Specialised design activities, Computer programming activities, and Computer consultancy activities.
- **Brighton & Hove and Lewes** have concentrations in Software publishing, Motion picture, video, and television activities, Information service activities, Specialised design activities, and Performing arts and artistic creation.
- The **Gatwick Diamond's** strengths include Data processing, hosting and related activities, Photographic activities, Computer programming activities, Computer consultancy activities, and Information technology and computer service activities.
- **Rural West Sussex** has strong concentrations in Publishing, Information service activities, Computer programming activities, Computer consultancy activities, and Support activities to performing arts and operation of art facilities.
- **Coastal West Sussex** has sub-sector concentrations in Publishing, Advertising, and Support activities to performing arts and operation of art facilities.

101. Applying the framework of absolute and relative strengths to the Local Authority areas in relation to the Coast to Capital region shows:

- **Croydon** has sub-sector strengths in Telecommunications, Computer programming activities, Computer consultancy activities, and Data processing, hosting, and related activities.
- **Adur** has strengths in Telecommunications, and Other information technology and computer service activities.
- **Arun** has strengths in Telecommunications and Publishing of books and other publishing activities.
- **Brighton and Hove** has strengths in Telecommunications, Computer programming activities, Other information technology and computer service activities, and Performing arts and artistic creation.
- **Chichester** has sub-sector strengths in Publishing books and other publishing activities, and Support activities to performing arts and operation of arts facilities.
- **Crawley** has strengths in Telecommunications, Publishing of books and other publishing activities, Data processing, hosting and related activities, and Computer programming activities.

[45] This does exclude some large employment sub-sectors that do not have high LQ scores; some specialisation would still be expected in large employment sectors.

- **Epsom and Ewell** has sub-sector strengths in Publishing of books and other publishing activities, Motion picture, video, and television programme activities, Computer consultancy activities, and Other information technology and computer service activities.
- **Horsham** has strengths in Telecommunications, Computer programming activities, and Computer consultancy activities.
- **Lewes** has sub-sector strengths in Publishing of books and other publishing activities, Advertising, and Performing arts and artistic creation.
- **Mid Sussex** has strengths in Publishing of books and other publishing activities, Computer consultancy activities, and Advertising.
- **Mole Valley** has sub-sector strengths in Computer consultancy activities, Other information technology and computer services, and Data processing, hosting, and related activities.
- **Reigate and Banstead** has strengths in Publishing of books and other publishing activities, Computer consultancy activities, and Advertising.
- **Tandridge** has sub-sector strengths in Telecommunications, and Computer consultancy activities.
- **Worthing** has strengths in Publishing of books and other publishing activities, Advertising, and Computer programming activities.

BUSINESSES

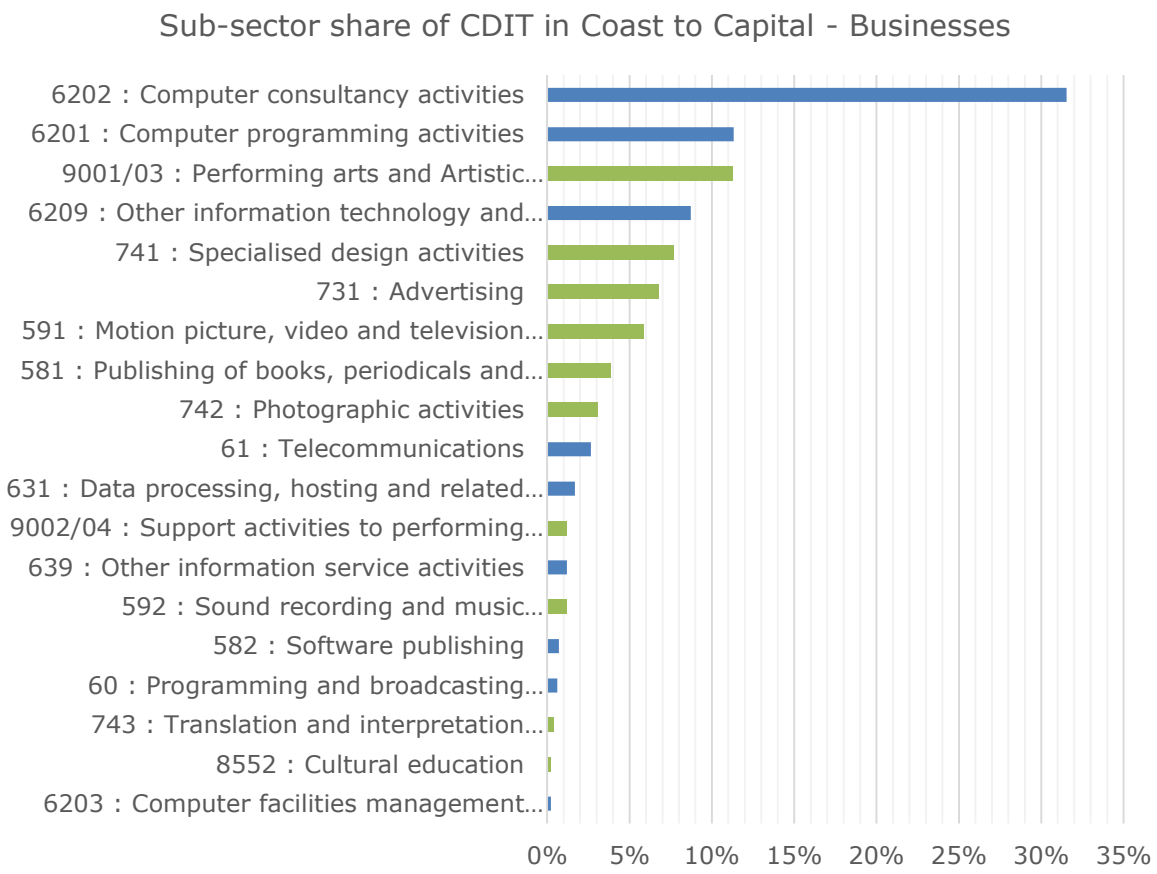


Figure 17 - Sub-sector share of CDIT businesses Coast to Capital region 2013, Source: ONS UK Business Counts 2013/Coast to Capital

102. Figure 17 shows the share of sub-sectors as a proportion of businesses within the CDIT sector, a comparison with figure 16 highlights those sectors with a small number of businesses and a high number of employees, such as Telecommunications, Publishing of books, Data processing and hosting, and Information technology and computer service activities.

103. A scorecard has again been produced with the same parameters as the employee version, to find any differences between employees and businesses in sub-sector performance in both relative and absolute terms.

Sub-Sector Scorecard - Businesses			
Sub-sector:	Size	Growth	LQ
581 : Publishing of books, periodicals and other publishing activities			
582 : Software publishing			
591 : Motion picture, video and television programme activities			
592 : Sound recording and music publishing activities			
60 : Programming and broadcasting activities			
61 : Telecommunications			
6201 : Computer programming activities			
6202 : Computer consultancy activities			
6203 : Computer facilities management activities			
6209 : Other information technology and computer service activities			
631 : Data processing, hosting and related activities; web portals			
639 : Other information service activities			
731 : Advertising			
741 : Specialised design activities			
742 : Photographic activities			
743 : Translation and interpretation activities			
8552 : Cultural education			
9001/03 : Performing arts and artistic creation			
9002/04 : Support activities to performing arts & Operation of arts facilities			

Table 4 – Business Sub-sector scorecard, Source: ONS UK Business Counts 2013/Coast to Capital

Ranking Key:
Top Third
Middle Third
Bottom Third

104. From this scorecard, looking at those sub-sectors with a green or yellow ranking key in all three variables, we can see the Coast to Capital region has business strengths in the following sub-sectors:
- Specialised design activities,
- Information service activities,
- Computer programming activities.

105. There are fewer strong sub-sectors across all three variables when looking at businesses, but there is one that appears in both; Computer programming activities. There are also some sub-sectors that have a strong ranking in both size and LQ which are still strong sub-sectors despite their poor growth. These are:
- Performing arts and artistic creation,
- Information technology and computer services,
- Computer consultancy activities.

106. Looking for absolute and relative strengths in comparison to Coast to Capital region at the Area Partnership level shows:

- The **London Borough of Croydon** has sub-sector strengths in Computer consultancy activities, Computer programming activities, Information service activities, Data processing and hosting, and Sound recording and music publishing activities.
- **Brighton & Hove and Lewes** have concentrations in Performing arts and artistic creation, Photographic activities, Specialised design activities, Information service activities, Sound recording and music publishing, and Motion picture, video, and television programme activities.
- The **Gatwick Diamond's** strengths include Other information technology and computer services, Computer consultancy activities, Advertising, Data processing and hosting, Publishing, and Telecommunications.
- **Rural West Sussex** has strong concentrations in Publishing, Photographic activities, Computer consultancy activities, and Other information technology and computer service activities.
- **Coastal West Sussex** has sub-sector concentrations in Other information technology and computer service activities, Photographic activities, Specialised design activities, Publishing, and Telecommunications.

107. Applying the framework of absolute and relative strengths to the Local Authority areas relative to the Coast to Capital region shows:

- **Croydon** has sub-sector strengths in Computer consultancy activities, Computer programming activities, Information service activities, Data processing and hosting, and Sound recording and music publishing activities.
- **Adur** has strengths in Telecommunications, Publishing of books and other publishing activities, Other information services, Specialised design activities, Photographic activities, and Other information technology and computer service activities.
- **Arun** has sub-sector strengths in Telecommunications, Advertising, Specialised design activities, Other information technology and computer service activities, and Performing arts and artistic creation.
- **Brighton and Hove** has strengths in Motion picture, video and television programme activities, Specialised design activities, and Performing arts and artistic creation.
- **Chichester** has strengths in Publishing of books and other publishing activities, Motion picture, video, and television programme activities, Advertising, Specialised design activities and Photographic activities.
- **Crawley** has sub-sector strengths in Computer programming activities, Computer consultancy activities, and Other information technology and computer service activities.

- **Epsom and Ewell** has strengths in Computer consultancy activities, Motion picture, video and television programme activities, and Telecommunications.
- **Horsham** has strengths in Computer consultancy activities, Other information technology and computer service activities, and Publishing of books and other publishing activities.
- **Lewes** has sub-sector strengths in Performing arts and artistic creation, Other information technology and computer service activities, Specialised design activities, and Motion picture, video and television programme activities.
- **Mid Sussex** has strengths in Publishing of book and other publishing activities, Specialised design activities, and Computer consultancy activities.
- **Mole Valley** has sub-sector strengths in Computer consultancy activities, Advertising, and Performing arts and artistic creation.
- **Reigate and Banstead** has strengths in Computer consultancy activities, Computer programming activities, Advertising, and Other information technology and computer service activities.
- **Tandridge** has strengths in Computer consultancy activities, Other information technology activities, Advertising, and Publishing of books and other publishing activities.
- **Worthing** has strengths in Computer programming activities, Computer consultancy activities, Other information technology and computer service activities, and Specialised design activities.

108. In addition to this Brighton and Hove has been identified as one of twelve national gaming hubs by Nesta[46]. The area is particularly known for its iOS specialisation, building mobile games for iPhones, but it also has companies such as two from Disney (racing games and club penguin), Second Life (a virtual world company); and Babel and Black Rock (translations of games for other markets). The industry accounts for an estimated 1,000 jobs and is relatively balanced between larger, established companies and the smaller, newer companies. The two universities of Brighton and Sussex both conduct research into gaming, which support the local industry.

109. A report by the University of Chichester on developing networks of innovation[47] looked at the strengths of the priority sectors that Coast to Capital has focused on, with more emphasis on meeting 'smart specialisation' requirements. The report identified three business sector strengths in the Coast to Capital region that may benefit from development within a Regional Innovation System[48]:

[46] Nesta – Map of the UK Games Industry - 2014
[47] University of Chichester: Developing Networks of Innovations – Space to Be Creative: 2013
[48] Regional innovation Systems encourage the rapid diffusion of knowledge, skills and best practice within a geographic area larger than a city, but smaller than a nation.

- Bioscience including Medical Technologies
- Electronics with a focus on sensors and vehicle electronics
- Connected Digital Economy

110. The Connected Digital Economy is the most relevant to the CDIT sector, particularly based around the CDIT cluster in Brighton and Hove, and the Digital Catapult that was recently launched looking into the 'internet of place'.

Labour Market Characteristics

111. Much of the data on the CDIT workforce is available at national level only, there is likely some variance at the local level but the general trends are likely to hold true for the Coast to Capital region also. The CDIT workforce is better qualified than the wider labour market, almost 42% of the workforce has a degree level qualification or higher, in the rest of the economy this is 24%, and a third work in professional occupations compared to a fifth in the rest of the economy. In the Digital and IT sub-sector 55% of employees hold a level 4 or higher qualification. Only 2% of workers hold no qualification, which has fallen sharply since 2008 as companies hit by the recession kept hold of their highly skilled workers.

Aircom International Limited
Turnover: *£71.7m*
Profile: *recently purchased by the TEOCO Corp and employing around 900 people they provide network planning and optimisation services to the mobile telecoms industry*

112. The highly qualified workforce is partly due to the strong supply of apprentices, starts have increased 72% from 2008/2009 to 2012/2013 in the Coast to Capital region. However apprenticeships related to CDIT subjects have had mixed growth; starts are currently double the 2008/2009 figure but have been falling since 2010/2011 and their share of total apprenticeships has increased 0.5%, but has also fallen from a peak in 2009/2010[49].

113. Graduates from institutions within Coast to Capital have risen 26% from 2007/2008 to 2011/2012 and almost a third of graduates studied a CDIT related subject. In that period 23% of graduates studied Creative Arts and Design related subjects and 8%[50] studied in subjects related to the Digital and IT sector[51]. The graduates are well qualified, 47% of graduates in these degrees have a 2:1 degree or above and there is an upward trend of improving qualification levels[52]. These subjects may be somewhat tangential to the sector and not everybody who studies them will follow that career path but they serve as a reasonable proxy for assessing the available talent pool.

[49] Based on SFA Apprenticeship data
[50] HESA Destinations of Leavers Survey 2008 - 2012
[51] Mass communications and documentation, Computer Science, and Engineering and Technology.
[52] Ibid

114. Another reason for the strong workforce is that more and more companies have access to a global labour market and can use this to fill the skills gaps they find in the local and national labour pool and it is no different for the CDIT sector. In the Digital and IT sector the proportion of non UK born workers was 16% and in the Creative Media and Entertainment sector the proportion is 14%, in comparison the UK average is 14%[53]. Some of this is a two way street, with some migration from the UK to North America for higher wages and a more stable market[54].

115. This good supply of skilled labour contributes to the lower level of skills gaps in the CDIT sector compared to the economy as a whole, nationally 7% of CDIT employers report skills gaps and 4% of employees have skills gaps, compared to 13% and 5% respectively in the wider economy. When skills gaps do occur they are more likely to be in managerial, professional, and associate professional occupations, skills gaps in professional occupations are particularly noticeable in the Digital and IT sub-sector[55]. This is similar to evidence found in the recent Brighton Fuse report.

116. Hard to fill vacancies and skills shortage vacancies provide an indication of the extent of demand for skills and the shortages in the labour market. In the national CDIT sector hard to fill vacancies make up 18% of vacancies and skills shortage vacancies account for 16% of vacancies. In the wider economy hard to fill vacancies are 23% and skills shortage vacancies are 16%[56].

117. Job specific skills (80%) and advanced IT or software skills (52%) are the most difficult to obtain for Digital companies and are more so than the wider economy, 67% and 23% respectively[57]. This reflects the high skilled and specific requirements within Digital and IT companies. The Creative sector appears to have more difficulty in finding written communication, literacy, and numeracy skills.

[53] Labour Force Survey 2010
[54] Skillset and CCS: Sector Skills Assessment for the Creative Industries of the UK 2011
[55] UK Employers Skills Survey 2012
[56] Ibid
[57] Ibid

118. Some sector specific skills are set out below but are increasingly cutting across the sectors:

Creative	Digital	Information Technology
• Art and Design • Photography • Cinematography • Production • Multi-Platform Content	• Web Design • Programming Languages e.g. SQL, C#, .NET • Big Data Analytics • Data Protection	• IT Architecture, Analysis, and Design • Cloud Storage Systems • Networked Communication Systems • Network Security

119. There are incidences of under-employment, where an employee is over skilled for their role, in the Digital and IT sub-sector 47% of employers report over-skilled employees, accounting for 16% of employees, but this is slightly below the national average[58]. This suggests poor utilisation of the workforce, even if it is at a slightly lesser degree than the national average, and may contribute to the lack of productivity growth, as skills are a key driver of productivity in knowledge intensive industries.

120. The amount of training in the CDIT sector is below the national average, 18% compared to 25%, has been falling faster than the national rate since 2002[59], and is lower on average in terms of percentage of employers providing training, employees receiving training, and average number of training days, making the CDIT sector one on the lowest training sectors in the UK. The sector's workforce may be one of the best qualified but, as has been seen, there are some skills gaps in managerial roles that are affecting growth, training employees can boost a company's managerial capacity.

Spirent Communications PLC
Turnover: *£250m*
Profile: *based in Crawley and employing over 1,500 people the company is a global entity, working with clients to provide networking solutions over wires, wireless and satellite connections. They have recently acquired the Danish company Mobliethink which is involved in mobile data analytics.*

121. The creative sector has above average levels of self-employment, it accounts for approximately 25% of employment across the sector, compared with 14% in the whole economy. Self-employment in the Digital and IT sub-sector has grown 40% from 2002 to 2010, and now accounts for 16%

[58] UK Employers Skills Survey 2012
[59] Ibid

of employment in the sector. Evidence suggests the self-employed need a wider skill set compared to employees, as they are required to do both the technical work and the business management[60]. Adapting to the extra skills required may be part of the reason productivity growth has been held back, the extra roles and responsibility may be having a negative effect on their work.

[60] UKCES 'Skills for Self-employment' 2011

ANNEX

LOCAL SUPPORT ORGANISATIONS

- **Wired Sussex –** is the voice of the local CDIT industry, it has 2,550 members and helps provide recruitment and business support services, find office space, supports local networks, and international trade. It also offers a space for promoting projects, finding jobs, has an internship placement programme, and promotes events and training.
- **Croydon Tech City –** aims to make Croydon an accommodating space for early-stage digital and technical start-ups. They provide workspace, business advice, tech surgeries to get ideas off the ground and fix problems in existing products, and can help with funding and investment introductions.
- **University of Brighton –** has set up postgraduate digital media arts and digital media production courses developed with input from the local industry. It also has the Centre for Research and Development, which has specialisations in creative and performing arts, architecture, design, and media, and the Fusebox Knowledge Exchange project in partnership with Wired Sussex, which aims to connect academic approaches to learning with entrepreneurial business strategies aimed at creating value.
- **University of Sussex –** has the centre for material digital culture, which is an inter-disciplinary research centre exploring multiple aspects of digital transformation. The university also has research centres in cultural studies, creative and critical thought, and research groups focused on computer graphics, communications, information, networks and knowledge.
- **University of Chichester** – the Arts Research Cluster is based here and brings together researches in dance, performing arts, fine art, music, film, and media, all engaged in the creation and production of new works, contributing fresh ideas to their respective fields, in addition to studying, analysing, re-visiting and re-interpreting existing theories and pieces.
- **University for the Creative Arts –** recently opened the Design Business Institute, which provide a centre for design, business, and creative digital research and innovation. It will support students and businesses through commissions, live projects, research and development, placements, internships, and co-sponsored innovation programmes. It also offers the first MBA in Creative Business Management.
- **Develop in Brighton –** this is the largest games developer conference in Europe. Attracting 1,500 developers from 20 countries to demonstrate new games and hardware, provides speaker events from leading professionals in the industry, and looks at the issues facing the industry.

National Support Initiatives

- **Creative and Cultural Skills** – is one of the Sector Skills Councils established by the UK Government to foster the development of a skilled workforce. It covers crafts, cultural heritage, jewelry, design, music, performing, literary and visual arts. It was created to bridge the gap between industry, education and the government as well as to give employers an effective influence over education and the skills developed in the UK.
- **Creative Skillset** – are the UK-wide strategic skills body that works with employers, individuals, trade associations, unions, learning and training providers, Government and its public agencies and other key organisations to ensure that the UK's Creative Industries have continued access now, and in the future, to the skills and talent they require. This is done by influencing and shaping policy, ensuring quality and by securing the vital investment for individuals to become the best in their field and for businesses to grow.
- **Connected Digital Economy Catapult** – builds platforms for many UK small businesses to innovate on at speed and with less risk, so new digital products and services can be accelerated to market. They bring together a wide range of partners interested in the success of the digital economy such as large businesses, startups and small businesses and the research and academic community.
- **Future Cities Catapult** – is about innovation around urban integration: how cities can take a more joined-up approach to the way they plan and operate. To improve quality of life, strengthen their economy and protect the environment. Their mission is to bring together cities, firms and academics to develop new commercial solutions for integrated city systems. We do three things:
- **E-Skills UK** – is the Sector Skills Council for Business and Information Technology, they work on behalf of employers to develop the software, internet, computer gaming, IT services and business change skills and expertise necessary to operate in the global digital economy.
- **Innovate UK –** previously the Technology Strategy Board, they fund, support and connect innovative businesses to accelerate sustainable economic growth. They plan to have Smart and Launchpad competitions in specific sectors, including Digital and Emerging Technologies.
- **Satellite Applications Catapult** – helps organisations make use of and benefit from satellite technologies, and bring together multi-disciplinary teams to generate ideas and solutions in an open innovation environment.

Employee Sub-Sector Growth

122. Below are the sub-sector growth rates for CDIT employees in the Coast to Capital region and Great Britain both for use with the sub-sector employee score card (table 3) and for comparison of sub-sector growth between the two geographies.

Sub-sector	Coast to Capital 09-13 growth	Great Britain 09-13 growth
6203 - Computer facilities management activities	642.9%	39.7%
9002/04 - Support activities to performing arts and Operation of arts facilities	102.3%	30.5%
8552 - Cultural education	62.2%	9.1%
743 - Translation and interpretation activities	55.6%	20.2%
591 - Motion picture, video and television programme activities	34.1%	-9.6%
592 - Sound recording and music publishing activities	29.8%	6.3%
582 - Software publishing	27.9%	29.9%
9001/03 - Performing arts and artistic creation	24.6%	19.2%
6201 - Computer programming activities	21.7%	15.9%
731 - Advertising	17.5%	24.8%
6209 - Other information technology and computer service activities	17.4%	-6.9%
6202 - Computer consultancy activities	11.9%	5.0%
631 - Data processing, hosting and related activities; web portals	-3.8%	21.1%
61 - Telecommunications	-6.7%	4.4%
581 - Publishing of books, periodicals and other publishing activities	-11.9%	-2.1%
639 - Other information service activities	-15.8%	-4.1%
741 - Specialised design activities	-25.7%	29.1%
742 - Photographic activities	-29.2%	2.2%
60 - Programming and broadcasting activities	-62.0%	46.3%

Table 5 – Employee sub-sector growth in Coast to Capital region and Great Britain 2009-2013, Source: Business Register and Employment Survey 2013/Coast to Capital

Business Sub-Sector Growth

123. Below are the sub-sector growth rates for CDIT businesses in the Coast to Capital region and United Kingdom both for use with the sub-sector business score card (table 4) and for comparison of sub-sector growth between the two geographies.

Sub-Sector	Coast to Capital 11-13 Growth	United Kingdom 11-13 Growth
6203 : Computer facilities management activities	150.0%	85.4%
743 : Translation and interpretation activities	60.0%	45.0%
6201 : Computer programming activities	52.4%	56.9%
9002/04 : Support activities to performing arts and Operation of Arts Facilities	50.0%	48.7%
8552 : Cultural education	25.0%	39.5%
639 : Other information service activities	22.7%	14.5%
61 : Telecommunications	22.4%	18.5%
731 : Advertising	21.4%	13.1%
741 : Specialised design activities	20.8%	16.1%
591 : Motion picture, video and television programme activities	20.0%	15.3%
592 : Sound recording and music publishing activities	18.2%	21.0%
60 : Programming and broadcasting activities	16.7%	18.5%
6202 : Computer consultancy activities	9.2%	7.4%
631 : Data processing, hosting and related activities; web portals	5.6%	13.0%
581 : Publishing of books, periodicals and other publishing activities	4.8%	1.9%
742 : Photographic activities	3.0%	-5.3%
582 : Software publishing	0.0%	-7.2%
9001/03 : Performing arts and Artistic Creation	-4.2%	-2.7%
6209 : Other information technology and computer service activities	-15.5%	-11.3%

Table 6 – Business Sub-Sector growth 2011-2013 – Coast to Capital and the United Kingdom; Source: ONS Business Counts 2011-2013/Coast to Capital

Gross Value Added Methodological Notes

124. Information and Communications industries are being used as a proxy for the Digital and IT sectors, it does not cover all of them but it does cover most, and Arts, Entertainment, and Recreation industries are being used as a proxy for the Creative sector; the calculations are based on estimates; the Arts, Entertainment, and Recreation sector GVA is based on a share of the GVA from a group of sectors:
    - Arts, Entertainment and Recreation
    - Other Service Activities
    - Activities of Households

125. Some additional sub-sectors are captured in the Arts, Entertainment, and Recreation sector GVA:
    - Libraries
    - Museums and Cultural activities
    - Gambling activities
    - Sports activities

126. Some sub-sectors are not included from professional services and education activities. The figures are not exact and are likely overestimates, but they do provide a good indication of the output and trends of the CDIT sector in the Coast to Capital region.

Location Quotients

127. Location quotient is a method of measuring the relative concentration of an industry in one location compared to another. For example the Coast to Capital LQ would be compared to the national concentrations and an Area Partnership LQ would be compared to the Coast to Capital concentration.

128. For this paper the Coast to Capital regional level formula looks like this:

(Coast to Capital Total Employees/Coast to Capital CDIT Employees) / (UK Total Employees/UK CDIT Employees)
= LQ

Clustering

129. Businesses clustering was popularised by Michael Porter who has defined a cluster as a *"geographic concentration of interconnected companies and institutions in a particular field".* The institutions he has listed are local and national governments, universities, standards-setting agencies, think tanks, vocational training providers, and trade associations[61].

130. In his paper Porter states that clusters allow individual companies to benefit from a scale that it could only achieve through massive growth or by merging with other companies. This is achieved through three avenues that drive competition, some of which should be evident in a CDIT cluster in Brighton and Hove. Firstly it pushes

[61] Clusters and the New Economics of Competition – Michael Porter 1998

up productivity through better access to suppliers and specialised employees, and the complementarities and linkages between companies[62]; belonging to a cluster can boost reputation and make it easier to measure and compare performance between companies as they share similar circumstances.

131. Secondly some of the benefits that affect productivity also affect innovation. Clustering makes opportunities for innovation more visible, provide the ability to act flexibly and quickly to those opportunities, and provide space to experiment at lower cost as supplies and expertise is locally available.

132. Thirdly it drives new company formation because barriers to entry are reduced as it lowers risk for new entrants due to a strong customer base, people already working in the cluster can identify gaps in the market, assets, skills and staff are more easily available than in another location, and local entrepreneurs may benefit from established relationships[63].

[62] Some of these complementarities can be seen in the Greater Brighton and Hove and West Sussex Business Survey which noted some companies have preferred associates and partners to offer customers a wider range of services that cannot all be done in-house.
[63] Ibid