

Liverpool City Region

Growth Sector Summaries



**LIVERPOOL
CITY REGION**
COMBINED AUTHORITY



Sector Summary – Advanced Manufacturing

Profile

Advanced manufacturing makes a vital contribution to the local and national economy. The sector, broadly defined, covers a wide range of activity including chemicals and pharmaceuticals, automotive, metal products, electronics and manufactured fuels.

The sector is strong in the City Region, experiencing both employment growth and increased GVA over the period 2010-16. Forecasts however are mixed for the sector with baseline trajectory indicating a potential loss of 5,800 jobs over the next decade, but rising productivity. This reflects continuing structural change within the industry, driven by automation and digitisation of processes and increasing reliance on a higher skilled technical and professional workforce.

A key challenge for manufacturing is maintaining competitiveness in a context of Brexit and shifting international markets. Key global manufacturers, including Jaguar Land Rover and Unilever have made major investments in City Region, building capacity for innovation and production. The recently completed Science and Innovation Audit underlines the opportunity to capture the economic benefits of the 4th Industrial Revolution through targeted investment in infrastructure and leverage of the existing networks and supply chains present in the City Region.

Skills Challenges

Securing the skills and future labour force for employers is vital to realising the sector's growth and productivity goals. The sector faces a number of challenges to renewing the skills of the existing workforce, while also working with education and training providers to create the skills supply needed in the future. There are three key areas of importance for advanced manufacturing.

Replacement demand. The sector has an ageing workforce, with ONS data for the City Region indicating that 37 per cent of workers are aged 50+. The age profile heightens the importance of employers planning to meet replacement demand by securing a flow of appropriate skills and creating the organisational capacity for the training of new recruits. Just including manufacturing specific occupations, estimates suggest a need for around 29,500 replacement workers over a decade, excluding requirement for additional managerial, sales and administrative occupations within the Advanced Manufacturing sector – figure 1.



WORKFORCE

- Around 47,200 jobs in 2016 - **6.6%** of City Region employment.
- Jobs grew by **4,340** between 2010 and 2016, with variation across sub sectors.
- **37%** of workers aged **50+**.

BUSINESSES

- **2,265** manufacturing business units – broad definition of manufacturing.
- **74.4%** have **0 – 9 employees**, **19.4%** have **10 – 49 employees**, **4.2%** have **50 – 249 employees** and less than **1%** have **250+ employees**.
- The LCR survey says that **22%** have a head office outside of the UK.
- For **29%**, their primary market is outside the UK – LCR survey.

OUTPUT

- Generated economic output (GVA) of **£4.3 billion** in 2016.
- Contributes **13.9%** of total output for LCR.
- Contributed **21%** of City Region GVA growth between 2006 and 2016.

EARNINGS

- Average annual gross pay (North West) for manufacturing in 2016 was **£28,253** – **3%** higher than the national average of £27,430.

BREXIT

- LCR survey says **53%** of manufacturers have noticed an impact from Brexit.
- **68%** expect Brexit to have an impact in the future.
- **74%** say that Brexit has not affected their recruitment.

Skills shortages

Manufacturing firms responding to the LCR business survey identified problems in filling vacancies. Some 34 per cent of manufacturing businesses found them hard to fill, compared to 27 per cent for all businesses, and 74 per cent indicated they had low numbers of applicants with the required skills for their business compared to the survey average of 54 per cent. The occupations most difficult to recruit for manufacturing employers were skilled trades and process, plant and machine operatives.

Future workforce

Ensuring adequate supply of new entrants into advanced manufacturing to meet future skills and labour demand will require increased engagement in education and training. This should include championing engineering careers to young people, increasing accessibility through work experience and greater adoption of apprenticeships, where these lead to higher level qualifications. According to the LCR business survey, the sector already has a higher than average take up of apprenticeships – 31 per cent of manufacturing respondents compared to 26 of all respondents, but there is greater scope to use this route to attract young people at the start of their careers.

Across the City Region, there is a commitment to raise the base level of educational attainment and specifically in core English, mathematics and digital skills. For advanced manufacturing this should be complemented by targeted activity to raise participation and achievement across all STEM subjects, with pathways into higher learning at Universities and through work based routes.

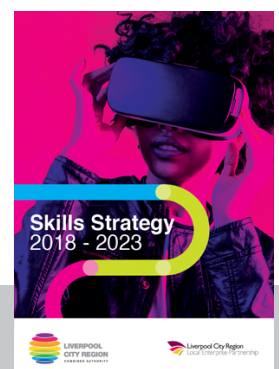
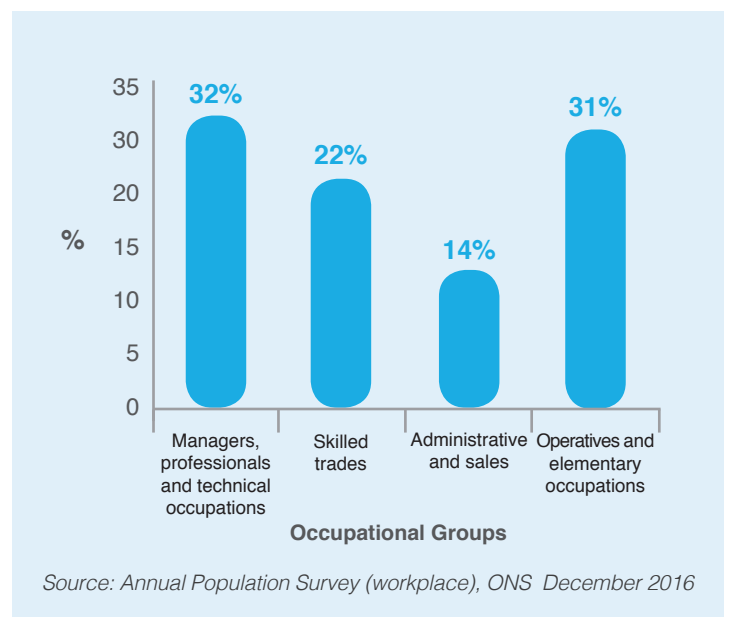
Within the framework of the Liverpool City Region Skills Strategy, delivery of an improved skills system relies on leadership at a number of levels. Strategically this will be through the Combined Authority to shape City Region relationships with government to secure greater devolution of funds and decision making; through the Making It board and Skills for Growth Action Plans to improve demand and foresight to design the skills training and curricula to underpin high quality and high value jobs growth; through providers to create the flexibility and responsiveness needed to improve the efficacy of the labour market and ensure that there is equal access and achievement for all sections of the community; and finally, through individuals to commit to lifelong learning and work readiness.

Figure 1: Estimated Replacement Demand for next 10 years, LCR

Manufacturing Occupations	Replacement Demand
Science, research, engineering and technology professionals	8,518
Science, engineering and technology associate professionals	3,742
Skilled metal, electrical and electronic trades	7,575
Process, plant and machine operatives	6,291
Elementary trades and related occupations	3,334
Total	29,460

Source: UKCES Working Futures 2012 to 2022, ONS and CPC calculations

Figure 2: Occupational Profile – Advanced Manufacturing, LCR 2016





Sector Summary – Digital and Creative

Profile

Digital and creative is vital for the City Region economy both as a discrete sector and as a skills set that is increasingly in demand by all businesses. Digital sector activities include computer programming and information services. Creative includes publishing, film and TV broadcasting, advertising, design and cultural education.

The sector is growing in the City Region, with net employment increasing over the period 2010 – 2016. Growth was generated in particular by computer programming, consultancy and related activity and information services. While constituting a relatively small part of the City Region economy (around 3 per cent), the sector offers considerable potential increase its share of output and employment, with forecasts suggesting the potential for jobs and GVA growth. Over the period 2015 – 25 additional employment is forecast in information and communication activities, arts entertainment and recreation and with the addition of strong growth in professional scientific and technical activities, suggesting that more than 4,000 new jobs may be created over the forecast period.

The sector will be boosted by national policy incentives including the UK Industrial Strategy, high performance cognitive computing cluster that forms a key element of the Science and Innovation framework for the City Region and major investment through the Digital Infrastructure Plan. The City Region has leading international facilities including the Hartree Centre and Sci-Tech Daresbury, top ranked University research at University of Liverpool and John Moores University and growing SME clusters specialising in games design and video, health informatics and computer aided design. These create a leading edge for the City Region, but also underline the importance of building an excellent skills system able to produce world class labour supply to meet current and future demand.

Skills Challenges

Digital and creative sector businesses are dynamic, requiring high quality and job ready skills and experience. With increasing demand for digital and creative skills across the economy, there is strong competition for workers, both in respect to specific technical competences and the ability of employees to apply their skills in commercial environments. Creating a labour supply

WORKFORCE

• **11,300** jobs in 2016.

- **1.8%** of City Region employment.
- Jobs grew by **1,255** between 2010 and 2016, with variation across sub sectors.
- The LCR survey shows the sector has a young age profile with **33%** aged between 25 and 49 years compared to an average of **21%** for the whole workforce.

BUSINESSES

• **2,450** business units

- **95.1%** have **0 – 9 employees**, **3.9%** have **10 – 49 employees** and less than **1%** have over **50 employees**.
- The LCR survey indicates **77%** operate from a single site, compared to an average of **73%**.
- **13%** of goods and services are primarily exported outside the UK.

OUTPUT

- Generated economic output (GVA) estimated at **£1 billion** in 2016.
- Contributes **3.2%** of total output for LCR.

EARNINGS

- Average annual gross pay (North West) for the information and communication sector in 2016 was **£31,230** – **14%** lower than the national average of **£35,758**.

BREXIT

- LCR survey says that just **39%** of businesses have noticed an impact from Brexit. **52%** expect an impact in the future.
- Majority (**69%**) do not expect Brexit to impact on recruitment.



that is enterprising and has strong technical skills is a primary challenge for the City Region. Focusing on this goal, there are two key areas of activity help meet growing demand and realise the economic potential of the digital and creative sector.

Replacement demand. The sector has an ageing workforce, with ONS data for the City Region indicating that 37 per cent of workers are aged 50+. The age profile heightens the importance of employers planning to meet replacement demand by securing a flow of appropriate skills and creating the organisational capacity for the training of new recruits. Just including manufacturing specific occupations, estimates suggest a need for around 29,500 replacement workers over a decade, excluding requirement for additional managerial, sales and administrative occupations within the Advanced Manufacturing sector – figure 1.

Meeting demand

Digital and creative has a number of distinct challenges associated with the fast moving, young and the small company size character of the sector. Figure 1 provides an indication of high replacement demand likely over a decade, in occupations important to digital and creative industries. With the LCR business survey showing higher than average recruitment activity due to growth, shortages are likely to occur where firms are competing within a limited pool of potential recruits. The problem will be amplified in jobs that required advanced technical and professional skills, where one third of LCR survey respondents in the sector identified a shortage. The low availability of recruits with advanced IT skills was expressed as a particular concern among SMEs during the LCR survey sector panels.

Future workforce

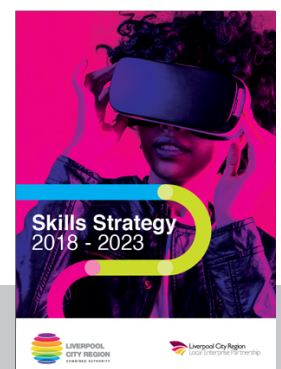
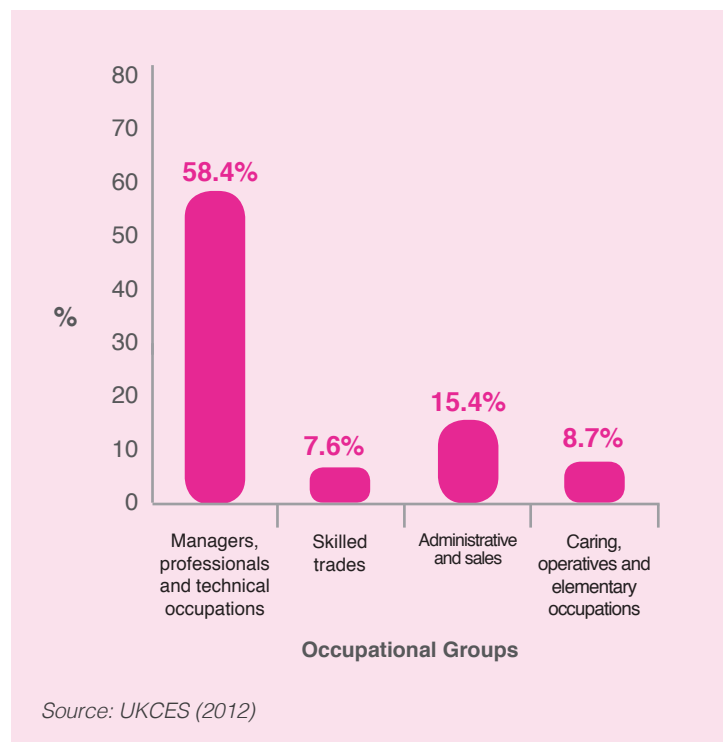
A key challenge for digital and creative is expanding the pipeline of appropriate skills and labour into the sector. While the industry remains popular with young people, employer preference for experience and work readiness can be perceived as limiting the scope for in-work skills development and progression. The LCR business survey shows that the digital and creative sector has a lower than average employment of apprenticeships, with 21 per cent of respondents indicating they have an apprenticeship compared to 26 per cent overall. Among those that have taken on apprenticeships, this has been in lower numbers than the survey average. This may be due to smaller average size of firms in the sector, but also reflects a concern by employers that the appropriate frameworks are not available. In LCR, 5 per cent of all apprenticeships are in information and communications technology, indicating scope for both increased demand by employers and more specific provision geared to the needs of a fast growing and dynamic sector.

Figure 1: Estimated Replacement Demand for next 10 years, LCR

Digital and Creative Occupations	Replacement Demand
Science, research, engineering and technology professionals	8,518
Business, media and public service professionals	14,410
Science, engineering and technology associate professionals	3,742
Culture, media and sports occupations	4,930
Skilled metal, electrical and electronic trades	7,575
Textiles, printing and other skilled trades	5,262
Total	44,437

Source: UKCES Working Futures 2012 to 2022, ONS and CPC calculations

Figure 2: Occupational Profile - Digital and Creative, UK 2010





Sector Summary – Financial and Professional Services

Profile

The financial and professional services sector makes a substantial contribution to the City Region economy, both directly as a key source of employment and investment and also by providing specialist services to business across all sectors. The primary areas of business activity, within the sector, include accountancy; insurance; legal services; head office functions; and other professional occupations.

The sector is estimated to employ some 46,000 people, representing 7.5 per cent of the City Region workforce. The wider sector, which includes banking and real estate, contributes over 27 per cent of the economic output of the City Region, with financial and insurance activity (4.4 per cent of GVA in 2016), real estate activity (13 per cent) and business service activity (10 per cent). Over the period 2005 – 2015 GVA output of real estate and business service activities have risen, while financial and insurance has fallen. Forecasts indicate that this pattern will continue with finance and insurance contracting by 0.1 per cent per year from 2015 – 2025, while real estate is forecast to expand by 0.9 per cent annually and professional and business support services by 1.3 per cent per year. The net effect could be an additional 14,300 additional jobs over the period.

Liverpool City Region is recognised by government as a Financial Sector of Excellence for its national expertise in areas of finance and insurance. These include the third largest cluster of wealth management businesses in the UK and specialist professional services in maritime law, insurance, accountancy and financing. Following the financial crash, the sector has sought to consolidate its position as a leading financial and professional services location, by competing for investment and talent. Increasing the availability of grade-A city centre office accommodation and improving links between business and the City Region's universities to ensure the relevance of professional training, are key activities.

Skills Challenges

The sector has strong skills supply, in particular from among graduates of the City Region's universities. However, the sector needs to continue to refine work roles to maintain

WORKFORCE

- **46,035** jobs in 2016; **7.5%** of City Region employment.
- Jobs grew by **4,740** between 2010 and 2016, with variation across sub sectors.
- The sector has a younger than average age profile with **61%** aged **25 – 49** and just **29%** are aged **50+**, compared to 56% and 32% across all sectors.
- LCR business survey notes **78%** of finance and insurance businesses and **54%** of business support services expect staff turnover to increase in the next 12 months.

BUSINESSES

- Approximately **4,900** business units.
- **92.2%** have **0 – 9 employees**, **6.1%** have **10 – 49 employees**, **1%** have **50 – 249** and less than **1%** have **250+ employees**.
- LCR business survey shows **72%** operate from a single site, compared to an LCR average of 73%.
- **10%** of businesses state their primary market is EU and global.

OUTPUT

- The wider sector including banking, generated economic output (GVA) of **£8.46 billion** in 2016.
- Contributes **27.3%** of total output for LCR.

EARNINGS

- Average annual gross pay (North West) for the wider financial, real estate and professional services sector in 2016 was **£26,926** – 27.8% lower than the national average of **£34,417**.

BREXIT

- According to the LCR survey, **42%** of businesses have noticed an impact from Brexit. **58%** expect an impact in the future. **67%** of businesses do not expect Brexit to affect their recruitment.



competitiveness within UK and international markets in order to identify and secure cost advantages that attract investment into the City Region and increase customer base. This will include greater focus on customer care and customisation of services, expanded use of pre-recruitment and apprenticeships to attract young people into careers in finance and professional services.

Replacement demand

Around 61 per cent of the workers in the financial and professional services sector aged between 25 and 49 and just 28.6 per cent aged 50+. Compared to other sectors in the City Region economy, Financial and Professional Services face fewer immediate issues in coping with high replacement demand, but may have other challenges. These include ensuring that employees have career progression through professional grades and addressing competition for the highest calibre of staff, within the City Region labour market. Figure 1 provides an estimation of likely replacement demand over a 10 year period for occupations important for the Finance and Professional Services sector. Reflecting the overall profile of the City Region economy, high numbers of recruits will be required in professional and associate professional occupations and administrative occupations.

Skills shortages

The LCR business survey indicates that 64 per cent of business in the sector recruited in the last 12 months, with primary reasons given as business growth (for 66 per cent of respondents) and staff turnover (for 60 per cent). Just under half of businesses with vacancies (47 per cent) found them hard to fill. Some 63 per cent said that they had low numbers of applicants with the required skills, a rate higher than the survey average of 54 per cent. 24 per cent said that applicants lacked the work ready skills including attitude and motivation.

Future workforce

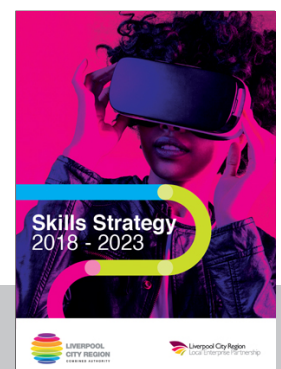
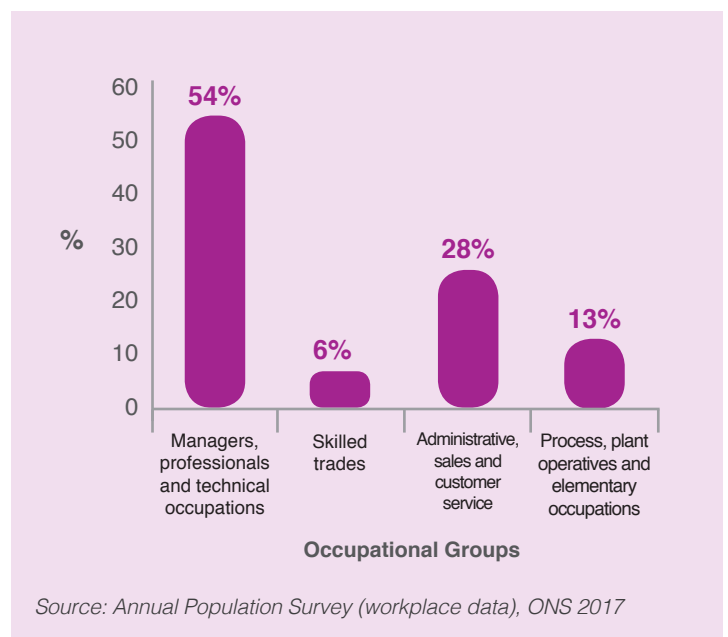
As a relatively highly qualified industry, Financial and Professional Services rely on a strong supply of skills into the sector. Within a context of changing regulations and markets, professional development and in-work training are important for businesses to maintain competitiveness and retain experienced staff members. The LCR business survey shows that 20 per cent of businesses in the sector reported that they had employees that were not proficient in their roles. While this was in line with the survey average, it underlined the importance of investment in training budgets and the availability of bespoke skills training programmes. The sector will need to continue to work closely with universities and training providers to ensure the relevance of training provision and the work readiness of new entrants into the sector.

Figure 1: Estimated Replacement Demand for next 10 years, LCR

Finance and Professional Services	Replacement Demand
Corporate managers and directors	15,629
Business, media and public service professionals	14,410
Business and public service associate professionals	17,225
Administrative occupations	25,188
Customer service occupations	4,412
Total	76,864

Source: UKCES Working Futures 2012 to 2022, ONS and CPC calculations

Figure 2: Occupational Profile – Finance and Professional, LCR, 2017





Sector Summary – Health and Life Sciences

Profile

The health and life sciences sector is an important source of world leading innovation and a major employer in the City Region. Linked to a large health and social care sector are globally important centres of life science research and development, alongside key pharmaceutical manufacturing activities. The combined resources, activity and specialist capacity within the sector positions the City Region as an international centre of excellence.

The sector employed 125,165 people in 2016 across 2,895 business units. The healthcare sector is estimated to generate around £2.7 billion GVA and life science an additional £1.7 billion GVA. Recent trends show employment growth, with the largest increases being in health care and residential care activities. Forecasts for 2015 – 2025 show this trend continuing with annual employment growth of 0.2 per cent, which could result in a further 2,300 jobs over the period.

The City Region has world leading assets and resources that underpin a highly dynamic and innovative sector. There is internationally renowned research and practice at the University of Liverpool, Liverpool John Moores University, the Liverpool School of Tropical Medicine and outstanding NHS organisations such as Liverpool Heart and Chest Hospital, The Walton Centre, Clatterbridge, the Royal Liverpool Phase 1 Unit and Innovation Agency. There is also a growing base of science and technology companies at Sci-Tech Daresbury and Liverpool's Knowledge Quarter that includes the University Enterprise Zone – Sensor City as part of incubator space across 4 sites. Life science is a key component of the Science and Innovation Audit, focusing on infection control connecting with digital activities and materials science to engineer anti-microbial surfaces and products. These areas offer the potential to generate high GVA and create new high skilled jobs in the City Region.

Skills Challenges

The diverse labour and skills requirement of the sector means that employers may be operating at different levels to source the very best talent and expertise. Some employers are engaging in national and international recruitment for senior research and clinical positions, while others are focused on local labour markets to fill care, administrative and professional roles. Across all levels it is vitally important to ensure that recruitment and

WORKFORCE

- **125,165 jobs** in 2016.
- Accounts for approximately 20.3% of City Region employment.
- The number of employees in the healthcare sector **grew by 4,080** between 2010 and 2016.
- LCR business survey reports that just **28%** of sector businesses expect staff turnover to increase in the next 12 months.
- The public and healthcare sectors have an older age profile with **37%** aged **50+** compared to an average of 32% across all sectors.

BUSINESSES

- There are **2,895** business units within the sector.
- **66.7%** have **0 – 9** employees, **26.8%** have **10 – 49** employees, **5%** have **50 – 249** employees and **1.2%** have **250+** employees.

EARNINGS

- Average annual gross pay (North West) for the human health and social work sector in 2016 was **£19,176**, consistent with the national average of £19,626.

OUTPUT

- Generated an estimated economic output (GVA) of **£4.4 billion** in 2016.
- Contributes **14.2%** of total output for LCR.

BREXIT

- LCR survey says that just **29%** of businesses have noticed an impact from Brexit. However, **51%** expect an impact in the future. Just **over half of employers (58%)** do not expect Brexit to impact on recruitment.



employer-led training activity creates career pathways into healthcare and life sciences in order to expand the quality and relevance of the City Region labour force. Building the local skills pool, through joint planning by academic, NHS and commercial sector employers will be necessary to meet anticipated demand for laboratory and technician staff. New entrants into the sector need not necessarily come from university courses, but can be through technical training, expanded use of apprenticeships and workplace learning.

Replacement demand

The skills and competences required in the health and life science sector are changing, with national studies indicating a greater demand for digital skills in informatics and data science in order to respond to shifts in technology that are shaping both research and clinical practice. Figure 1 provides an indication of replacement demand in key occupational areas relevant to health and life sciences over a 10 year period. While this covers the whole labour market, it illustrates areas of demand that may affect labour availability

Skills shortages

The LCR business survey indicates that 75 per cent of businesses in the sector recruited in the last 12 months. The primary reason given was staff turnover for 84 per cent of respondents, significantly higher than the survey average of 68 per cent. In the survey 43 per cent of businesses with vacancies found them hard to fill, citing low numbers of applicants with the required skills. Some 28 per cent of businesses also noted that there were insufficient numbers of people interested in doing the type of jobs being advertised, a level higher than the survey average of 20 per cent.

Future workforce

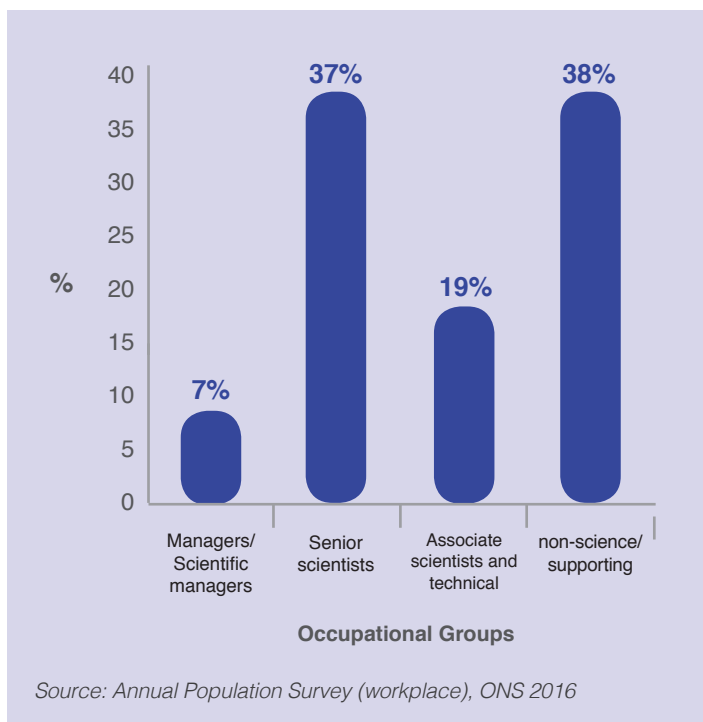
The Skills for Growth Action Plans for healthcare and life sciences identify a range existing activities, within the sector, that are aimed at shaping the supply of training and meeting labour demand. However, this existing provision is not currently fully utilised by employers and learners in sufficient numbers. The sector has identified stimulating demand, through careers activity with young people, to demonstrate the opportunities available in the sector and actions with employers that underline the benefits of apprenticeships as a means to meet future skills requirements. A key element of the strategy is promoting higher level apprenticeships, particularly in areas such as health informatics, data science, laboratory technicians and clean room operators. Through continued refinement of frameworks and links into graduate and post-graduate training, apprenticeships could provide an important source of labour and skills.

Figure 1: Estimated Replacement Demand for next 10 years, LCR

Health and Life Sciences	Replacement Demand
Science, research, engineering and technology professionals	8,518
Health professionals	14,122
Science, engineering and technology associate professionals	3,742
Health and social care associate professionals	4,378
Total	30,760

Source: UKCES Working Futures 2012 to 2022, ONS and CPC calculations

Figure 2: Occupational Profile – Public and Health Sector, LCR 2016





Sector Summary – Low Carbon and Energy

Profile

The low carbon energy sector has a strong presence in the Liverpool City Region as part of a growing international economy in clean energy production and the development of new technologies to reduce energy use and greenhouse gas emissions. Within the City Region the sector strengths include marine energy, low carbon energy business and low carbon energy infrastructure.

The sector employed around 30,275 people in 2016, across 3,505 business units. LCR estimates suggest that the sector generates around £2 billion GVA annually to the City Region economy. Employment trends over the period 2010 – 2016 show that there has been an increase in job numbers of around 3,560. Data indicates variation by sub sector of activity, with environmental and technical consultancy and waste management having showing increases in employment numbers. Forecasts for the City Region however suggest that employment in energy and utilities sectors will have a small decline over the period 2015 – 25 with a loss of around 200 jobs.

With increasing international focus on clean growth, the specialist business activities and existing capacity for innovation present in the City Region provides a firm foundation for export of products and services into the post-Brexit global market. Liverpool Bay has the second largest concentration of offshore wind turbines in the world, the Port of Liverpool is one of the largest entry points in the UK for biomass and there is ongoing and significant investment in turbine and logistics technology. National policy through the UK Industrial Strategy and Clean Growth Strategy provide important frameworks to support City Region investment and strengthening of supply chain linkages and transfer of innovation across sectors.

Skills Challenges

The low carbon energy sector has strong skills connections to a number of industries and occupations across the economy. While there are discrete and technical areas of activity within the low carbon energy sector, a majority of the workforce will have skill sets that are grounded in other occupational groups. Specifically these include metal manufacturing and engineering, construction and civil engineering, marine logistics, electrical engineering and control systems and professional and financial services. Planning for skills supply will need to take a dual approach of both growing

WORKFORCE

- **30,275** jobs in 2016
- **4.8%** of City Region employment.
- Jobs grew by **3,560** between 2010 and 2016, with variation across sub sectors.
- Older age profile with approximately **35%** aged **50+** in the energy sector.

BUSINESSES

- **3,505** business units.
- **87.9%** have **0 – 9 employees**, **10.3%** have **10 – 49 employees**, **1%** have **50 – 249** and less than **1%** have **250+ employees**.
- The LCR business survey says **59%** operate from a single site, compared to a City Region average of **73%**.
- **30%** of businesses reported that they primarily export goods and services outside the UK, compared to an average of **11%**.

OUTPUT

- The sector generates an estimated economic output (GVA) of **£2 billion** in 2016.
- The level of output constitutes **6.5%** of total output for LCR.

EARNINGS

- Average annual gross pay (North West) for the energy sector in 2016 was **£31,328 – 12.3%** lower than the national average of **£35,758**.

BREXIT

- LCR survey says that just **37%** of businesses have noticed an impact from Brexit. **81%** expect an impact in the future. A majority (**93%**) do not expect Brexit to impact on recruitment.



the base of potential recruits with strong STEM qualifications to meet new and replacement demand, with increased information and guidance activity to promote careers in the low carbon energy sector.

As many employees will come from a diverse range of sectors and occupational groups, the skills challenges are shared with energy, manufacturing and construction sectors

Replacement Demand

In common with the manufacturing and logistics sectors, the low carbon energy sector has an aging workforce. ONS data for the City Region indicates that 35 per cent are aged 50+, compared to an average of 32 per cent in the City Region workforce. The ageing workforce is likely to heighten demand for labour. Figure 1 indicates estimated replacement demand across a selection of occupations relevant to the low carbon energy over the next decade. While this demand will be spread across the whole City Region economy, it illustrated likely areas of pressure. These figures do not include increased requirement for sales and managerial roles that are expected to increase as proportion of energy sector employment nationally.

Skills Shortages

According to the LCR business survey 81 per cent of Low Carbon Energy businesses recruited in the last 12 months, significantly higher than the City Region average of 68 per cent. The primary reason for recruitment was business growth for 82 per cent, a level nearly double the average for the whole economy (49 per cent). Some 38 per cent of employers found vacancies difficult to fill, with 63 per cent citing low numbers of applicants with the required skills and 50 per cent indicated the problem was due to a shortage of technical skills.

Future workforce

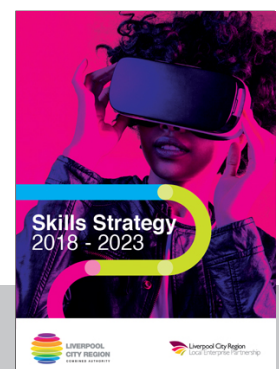
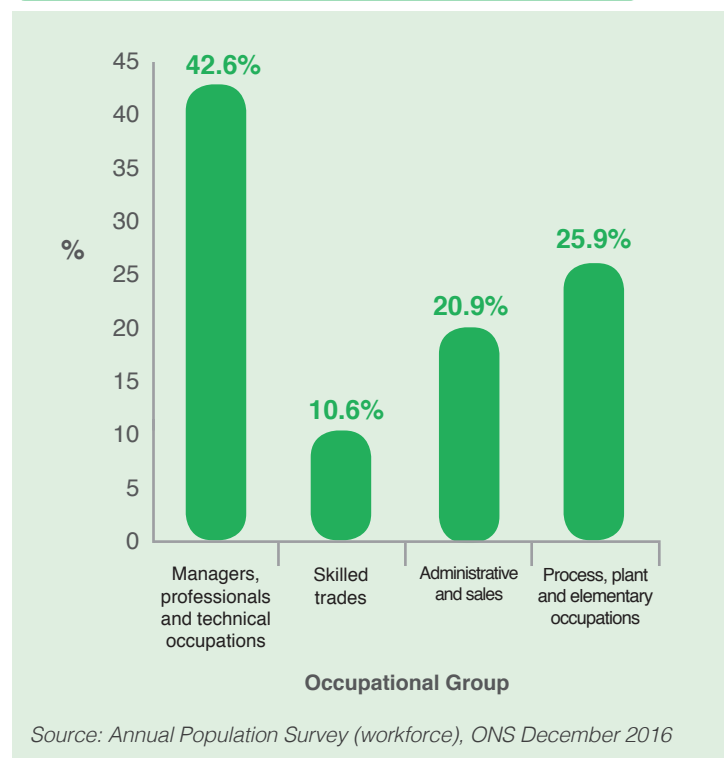
Replacement demand, business growth and the impact of new technologies will increase the requirement for skilled recruits into the Low Carbon Energy sector. National analysis by UKCES suggest there is growing competition between sub-sectors for recruits in technical and professional occupations, with sustained demand for process and elementary occupations arising from replacement need. The sector has a strong engagement with staff training, with the take up of apprenticeships in the sector higher than the average across the LCR business survey: 30 per cent compared to 26 per cent respectively. However, the visibility of the sector and careers options will need to be maintained to encourage new recruits into the sector. Given the relatively high skilled and technical nature of the occupational profile for the energy sector, STEM qualifications remain vitally important as is the design of tailored technical education and degree provision geared specifically to growth occupations that continue to be vital for the City Region.

Figure 1: Estimated Replacement Demand for next 10 years, LCR

Health and Life Sciences	Replacement Demand
Science, research, engineering and technology professionals	8,518
Science, engineering and technology associate professionals	3,742
Skilled metal, electrical and electronic trades	7,575
Skilled construction and building trades	6,250
Process, plant and machine operatives	6,291
Elementary trades and related occupations	3,334
Total	35,710

Source: UKCES Working Futures 2012 to 2022, ONS and CPC calculations

Figure 2: Occupational Profile – Energy Sector, North West, 2016





Sector Summary – SuperPort Liverpool

Profile

SuperPort Liverpool is a leading maritime and logistics sector offering multimodal access to and from the UK into global markets. The sector is an international hub for marine, road, air and rail freight transportation and a major UK centre for warehousing and logistics services.

The sector is estimated to employ some 26,210 people and contribute £700 million GVA to the City Region economy. Recent trends indicate there has been growing employment, with an additional 12,000 jobs created in the sector between 2010 and 2016, the largest change being in warehousing and freight transport. Forecasts for transport and storage suggest that this pattern will continue, with employment growth of 0.5 per cent per year between 2015 and 2025, potentially resulting in the creation of a further 1,600 jobs over the period.

SuperPort Liverpool is firmly established as a leading centre for logistics, with established port facilities and the highest density of warehousing in the UK, located within 70 miles of the Port of Liverpool. The sector is linked to road, rail, air and inland waterway networks that provide direct access to UK markets. The capacity of the sector will be further enhanced through an intermodal infrastructure investment of over £1 billion and new deep-water Liverpool2 container terminal. This will allow the port to service 95 per cent of the world's largest container ships, opening up faster supply chain transit for at least 60 per cent of the existing UK container market.

Skills Challenges

Anticipated growth in employment and strong replacement demand coupled with increased e-commerce and use of robotic technology in the sector creates a number of significant skills challenges for the SuperPort sector. Emerging employer requirements creates a need for digital and engineering skills in the sector. With an ageing workforce and comparatively low skill levels, there is a pressing need to ensure future labour supply in a context where Brexit may affect recruitment and staffing levels.

Replacement demand

A primary challenge for the SuperPort sector is reducing the average age of the existing workforce by attracting younger recruits into careers within maritime, distribution and logistics. ONS data for the City Region indicates that 41 per cent of

WORKFORCE

- **26,210** jobs in 2016.
- **4.2%** of City Region employment.
- Jobs grew by **12,010** between 2010 and 2016, primarily in transport and warehousing sub-sectors.
- Older age profile with **41%** aged 50+ compared to **32%** across all sectors.

BUSINESSES

- Approximately 2,040 business units.
- **93.6%** have **0 – 9 employees**, **5.1%** have **10 – 49 employees**, **1.2%** have **50 – 249 employees** and less than **1%** have **250+ employees**.
- The LCR business survey shows **63%** operate from a single site, compared to an LCR average of **73%**.
- Also **27%** of SuperPort businesses state their primary market is EU and global.

OUTPUT

- Generated an estimated economic output (GVA) of **£0.7 billion** in 2016.
- Contributes **2.4%** of total output for LCR.

EARNINGS

- Average annual gross pay (North West) for the transportation and storage sector in 2016 was **£25,430** – **6.7% lower** than the national average of £27,274.

BREXIT

- LCR survey says that just **30%** of businesses have noticed an impact from Brexit. However, **80%** expect an impact in the future. A majority (**87%**) do not expect Brexit to impact on recruitment.



the workforce is aged 50+, compared to an average of 32 per cent across all sectors. This age profile highlights a pressure within the sector to find and replace experienced staff that will be retiring over the next decade in addition to establishing new skills and securing new recruits into the sector. Estimates of replacement demand, as shown in figure 1, based on a selection of occupations relevant to SuperPort, suggest significant requirement over the next decade. While this demand will be spread across the whole City Region economy, and in particular with distribution and manufacturing sectors, it illustrates the types of occupations being replaced. The LCR business survey reports that 73 per cent of businesses in the sector recruited in the last 12 months, with the primary reasons being business growth, for 64 per cent of respondents and staff turnover, for 59 per cent. The average number of vacancies per employer was 8, higher than the average 6.5 across the survey.

Skills shortages

Within the SuperPort sector, skills shortages are found both among existing employees and among recruits. National studies of the logistics sector show that there is a comparatively low level of qualifications among employees in operative and elementary occupations and that low qualifications at entry into the sector are maintained into management positions. Despite a need to update qualification levels of existing staff, including management and leadership skills, a majority of training expenditure is on job specific, statutory requirements and health safety training. There is a lower use of external training provision in this sector than the average for all City Region sectors included in the LCR business survey. According to the LCR business survey, 38 per cent of employers that had vacancies found them difficult to fill. The main reasons for the difficulty was low numbers of applicants with the required skills, including technical skills specific to the roles being advertised. Across all occupation groups within the sector, the survey highlighted process, plan and machine operative roles the most difficult to fill.

Future workforce

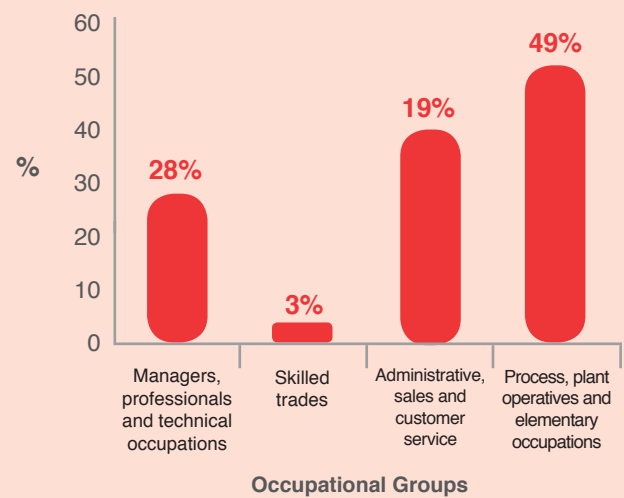
There is a pressing need to make the sector more attractive to young people by investing in training and creating career pathways. While there will continue to be a heavy reliance on operative and elementary occupations, increased use of technology for stock management and tracking to improve the speed and efficiency of distribution, alongside an increased emphasis on customer service, will drive the need to improve skills across all jobs in the sector. These changes provide an important opportunity to reposition SuperPort to emphasise the career possibilities to work within a globally important industry, but require provision specifically responding to the changing needs of the industry. Increased engagement with schools and in careers activity and the increased use of apprenticeship frameworks will be important to meet current and future skills demands.

Figure 1: Estimated Replacement Demand for next 10 years, LCR

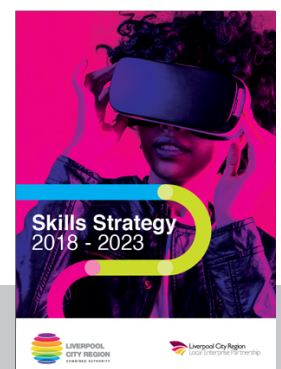
SuperPort Sector	Replacement Demand
Corporate managers and directors	15,629
Customer service occupations	4,412
Process, plant and machine operatives	6,291
Transport and mobile machine drivers and operatives	11,269
Elementary trades and related occupations	3,334
Total	40,935

Source: UKCES Working Futures 2012 to 2022, ONS and CPC calculations

Figure 2: Occupational Profile – Logistics Sector, UK, 2012



Source: UKCES (2014 Understanding skills and performance challenges in the logistics sector. Evidence report 86





Sector Summary – Visitor Economy

Profile

The rising international profile of Liverpool City Region as a cultural, business and leisure destination has led to growing numbers of jobs and has boosted investment. The Liverpool City Region sector definition includes hotel accommodation and food and beverage services, selected retail services, cultural and sports facilities and services.

The Visitor Economy in the City Region employs 51,700 people and contributes £4.2 billion (GVA) to the City Region economy. Recent trends indicate employment growth, within the wider sector including retail, accommodation and food and beverage services have added around 15,000 jobs between 2010 and 2016. Forecasts indicate that this pattern will continue with annual jobs growth of 0.4 per cent, 0.7 per cent and 0.9 percent in the retail, accommodation and food and the arts, entertainment and recreation sectors respectively over the period 2015 – 2025. The City Region Visitor Economy Strategy sets an intention to grow employment in the sector by 72,000 by 2025.

Major investments, cultural events and strong partnership action to promote the City Region in international and UK markets have made Liverpool the fifth most popular UK city for overseas visitors and the fifth most popular destination for domestic visitors. Developing key assets including the cruise liner terminal, Mersey Waters, the World Golf Resort, five-star hotels and further coastal and resort opportunities are expected to drive growth and further investment in the sector.

Skills Challenges

The Visitor Economy relies on the quality of skills of people that are employed in the sector. Businesses are working to shift perceptions that the sector only offers low paid and short term jobs. While the Visitor Economy is attractive to new recruits, and in particular is popular with young people as a career pathway, there remain shortages in key occupations in high skilled chefs and front of house staff able to work to a 5-star standard. Additionally, the availability of language skills and tailored customer care training are of concern to employers. The dual challenge for the sector is to realise growth in visitor numbers, employment and business output, while also raising the quality of skills and the customer service offered by staff. This includes greater diversity in the workforce to reflect the customer base and resident population of the City Region.



WORKFORCE

- **51,700** jobs in 2016.
- **8.4%** of City Region employment.
- Jobs grew by **15,260** between 2010 and 2016, with variation across sub sectors.
- Young age profile with **25.3%** aged **16 - 24 years** compared to an average of **12%** for the whole workforce.

BUSINESSES

- Approximately **6,310** business units
- **86%** have **0 – 9 employees**, **12.3%** have **10 – 49 employees**, **1.3%** have **50 – 249 employees** and less than **1%** have **250+ employees**.
- The LCR business survey shows **69%** operate from a single site compared to an LCR average of **73%**.

OUTPUT

- The wider sector of distribution, transport and accommodation sectors generate a substantial **£4.2 billion** (GVA) in 2016.
- This constitutes **13.6%** of total output for LCR.

EARNINGS

- Average annual gross pay (North West) for the accommodation and food services sector in 2016 was **£11,194** – **9.4%** lower than the national average of **£12,356**.

BREXIT

- LCR survey says that just **41%** of businesses have noticed an impact from Brexit. **54%** expect an impact in the future. A majority (**72%**) do not expect Brexit to impact on recruitment.

Replacement demand

The sector has a young age profile among employees, ONS data for the City Region indicates that 25.3 per cent are aged between 19 and 24 years and 54.6 per cent between 25 and 49 years, this compares with 12 per cent and 56 per cent respectively for the whole economy. While the sector is popular and offers flexible working practices, it has comparatively high staff turnover that can work against maintaining quality of service and increases pressure on businesses to recruit and train staff. The LCR business survey shows that 72 per cent of businesses in the sector recruited in the last 12 months, with a majority of these (77 per cent) replacing staff. Figure 1 indicates estimated replacement demand across a selection of occupations relevant to the Visitor Economy sector over the next decade. While this demand will be spread across the whole City Region economy, and in particular with retail and distributive trades, it illustrates the types of occupations being replaced.

Skills shortages

Nearly half (45 per cent) of employers recruiting in previous 12 months reported, in the LCR business survey, that they had hard to fill vacancies; significantly higher than the average of 27 per cent. The primary reasons reported were a low number of applicants with the required skills for their businesses and also a lack of applicants with required personal skills including attitude and motivation. Work readiness was a particular concern, with 42 per cent noting that this was lacking among applicants, compared to the survey average of 33 per cent. In addition to general skills, the business survey also captured specific issues of difficulty in finding the highest calibre chefs, a lack of knowledge in relation to finance and management, language and communication skills and basic technology skills.

Future workforce

Of central importance to growing a future workforce is promoting the sector as offering opportunities for aspirational careers. This will require continued engagement with schools and training providers to offer work experience to prospective recruits and demonstrate the progression pathways towards management and leadership positions. Enterprise skills are vitally important for the sector to both expand the number of successful start-ups and also as a key skill in driving growth into new international markets. The LCR business survey indicates that the Visitor Economic has a lower take up of apprenticeships than the average (21 per cent compared to 26 per cent). With 20 per cent of respondents not taking up apprenticeships citing the lack of appropriate frameworks, improving the relevance of training to workplace requirements is vital.

Figure 1: Estimated Replacement Demand for next 10 years, LCR

Visitor Economy	Replacement Demand
Other managers and proprietors	9,229
Culture, media and sports occupations	4,930
Administrative occupations	25,188
Textiles, printing and other skilled trades	5,262
Leisure, travel and related personal service occupations	5,091
Customer service occupations	4,412
Elementary administration and service occupations	27,291
Total	81,403

Source: UKCES Working Futures 2012 to 2022, ONS and CPC calculations

Figure 2: Occupational Profile – Distribution, Hotels and Restaurants, LCR 2017

