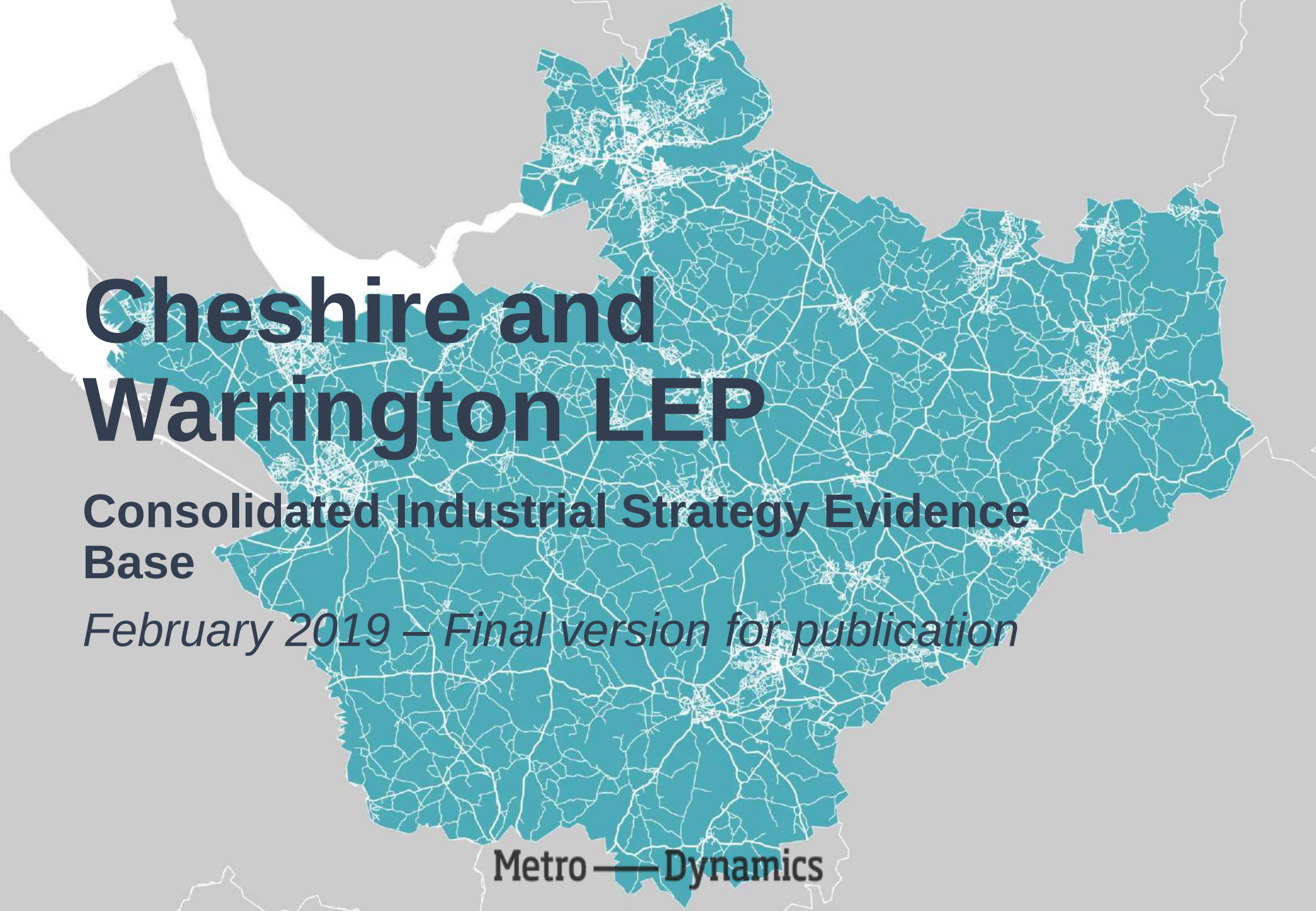

Cheshire and Warrington LEP

Consolidated Industrial Strategy Evidence Base

February 2019 – Final version for publication

Metro Dynamics

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Executive Summary

Metro Dynamics has been commissioned by Cheshire and Warrington (C&W) LEP to develop an evidence base to underpin their emerging Local Industrial Strategy (LIS). This report summarises the key points of this analysis. It draws upon existing LEP evidence, including the Strategic Economic Plan (SEP) and other strands of work, and has supplemented this with additional analysis to look at a more granular level at productivity, the business base, characteristics of the labour market, and place. It has been developed over four months, starting in Summer 2018. The data provided will therefore reflect what was available at time of development – detail contained in the methodology.

The Cheshire and Warrington economy

C&W is one of the UK's success stories and one of the strongest economies in the North; it is generating £5.4bn more every year than if it performed at the UK average. A £30.9bn economy it has grown strongly in recent years, exceeding both the UK and North West (NW) average. Looking at GVA per head, in 2017, C&W produced £33,384 per head of population. This is the highest of all northern LEPs and the fourth highest of all LEPs.

The region has set an ambition to be a £53.3bn economy by 2040, requiring an extra £7.8bn GVA above the estimated growth rate. Given past performance this is achievable, but the area cannot be complacent. It both needs to maintain its strong performance and become more resilient to economic shock and business relocation.

C&W is a successful economy with higher than average productivity, but this declined marginally in recent years. Growth in number of hours worked has exceeded GVA growth. We have seen larger job growth in low productivity sectors and more part-time jobs have been created. Most likely it is a blend of these, which contributes to the decline in productivity and the LIS should look to address issues in a holistic manner.

The business base

C&W is a supportive and successful business environment – home to many large, well-known businesses (including Bentley, Novelis, Eddie Stobart, Essar Oil, Betfred) with good levels of business activity and business density in Chester and Macclesfield. In total there are 42,000 VAT registered businesses with a high ratio of business per capita. The area also enjoys a low business death rate and high business survival rate.

Competitive advantage

Manufacturing is thriving, both growing at a significantly higher rate than across the rest of the UK and most manufacturing heartlands. It is over twice as productive as GB with GVA per job of £171,756. It has the biggest GVA contribution of any sector (£7.7bn) and has a high number of jobs (45,000).

We have assessed the highest productivity sectors in C&W to identify areas of competitive advantage. Using the data definitions C&W has super strengths in:

- Manufacture of petroleum, chemicals and pharmaceuticals
- Manufacture of motor vehicles, trailers and semi-trailers

We have developed these data definitions into three specialisms: manufacturing, energy, and life sciences.

Resilience

Recent moves by large anchor firms in life sciences and telecommunications have seen those sectors lose jobs and levels of specialisation. A lower business birth rate than the UK and low business growth in all but two key sectors suggest that C&W needs to encourage start-ups and scale-ups.

Ideas and innovation

This is an innovative business environment – high spend on Research and Development (R&D) and most Innovate UK projects funded in key sectors. R&D spend is far higher than the UK average. Importantly, this is driven by private sector investment in R&D with over 93% of the total investment by business. Maintaining this high level, whilst also increasing HEI and public sector R&D spend in the region could be of benefit.

Evidence shows that firms who export tend to be more innovative. C&W is a large exporter, exporting more than the LEP average. It has strong links beyond the UK with a high number of foreign owned companies (particularly German and US) and strong trade links with non-EU countries. This is positive for post-Brexit resilience and investment activity.

People

There are around 927,000 residents in C&W, however the population is growing slower than the national average. This is accompanied by other demographic challenges particularly around ageing and the proportion of early retired residents in C&W far exceeds the national average. Macclesfield particularly has low population growth and an older population.

In addition, there are areas of deprivation in the region. Ellesmere Port, Crewe and Warrington, as well as parts of Chester, Northwich, Winsford and Macclesfield, all perform poorly on the Index of Multiple Deprivation and see low skill levels. And low housing affordability highlights inequality within places.

Increasing earnings power

There is an active labour force with high levels of employment, typically with high skills in high-level jobs with good wages. Since 2004, there has been an increase in residents qualified to NVQ Level 4 and above, and a steady decline in the proportion of working individuals with other qualifications (including trade apprentices), no qualifications and NVQ Level 1 qualifications.

The unemployment rate in C&W (3.4%) is lower than the regional and national average of 4.5%, whilst the employment rate (75.4%) is higher than the averages for the NW and UK . This is accompanied by a low level of NEETs. This suggests that out of work residents are not especially a drag on productivity.

However, the percentage of jobs in C&W paying below the real living wage is higher than the UK and regional average. This is an area of concern given that the real living wage acts as a proxy for in work poverty, which remains a major issue for achieving inclusive growth. Raising wages (and perhaps redesigning jobs) alongside targeted support for identified residents and sectors could help raise living standards and increase productivity.

Place

Looking below the LEP level, there are differences between the three local authority areas, with growth in Cheshire East outstripping Warrington and Cheshire West and Chester on GVA growth and GVA per hour worked. The largest area by population, Cheshire East in recent years has been the only part of the LEP to experience positive productivity growth.

This is a polycentric area consisting of rural areas and towns, each making distinctive contributions to the C&W economy. Performance between the town areas is variable. Only two places can see clear indication of young urban renters – an indication that much of the LEP area is not attractive to millennials. Variations between the towns shows that some – Chester and Warrington – are growing faster than others such as Ellesmere Port and Macclesfield.

Finally, the LEP contains a broad range of areas, from manufacturing centres, to towns, to rural - and from the most affluent and to more deprived.. Each has different opportunities and concerns around connectivity, demographics, housing to name a few. The LIS will consider appropriate interventions for all of its areas.

Introduction

Metro Dynamics has been commissioned by C&W LEP to develop an evidence base to underpin their emerging Local Industrial Strategy (LIS).

This data pack consolidates the existing SEP evidence base, C&W technical reports, propositions and strategies, and the additional analysis conducted for the LIS. A diagram illustrating the process of developing the LIS evidence base is shown on page 6.

It also includes updated GVA analysis (overall GVA and growth, GVA per head and growth, and broad sector productivity) using data from the December 2018 release for 2017. Please note, other productivity and jobs data are quoted for 2016.

The analysis has considered C&W as a whole, but also variation within the LEP area. This involves looking at differences between the three local authorities, as well as identifying patterns at the small area level, data permitting. Recognising the polycentric nature of C&W, our analysis has looked at the rural economy and where possible drilled down into the five principal towns: Chester, Crewe, Ellesmere Port, Macclesfield and Warrington, to understand the dynamics of these urban areas and how they contribute to the growth of the conurbation.

Comparators have been used to provide context for C&W's performance, data permitting. This includes similar successful LEP areas of fast economic growth, such as Enterprise M3 (EM3), an area covering parts of Surrey and Hampshire, and Greater Manchester (GM). Performance will also be compared at the regional level to the North West (NW) and at the national level to the United Kingdom (UK), Great Britain (GB) or England. Where possible, temporal data and change over time has been used to contextualise current performance and show trends.

This pack is organised into seven sections. The first two sections give an overarching summary of the C&W economy:

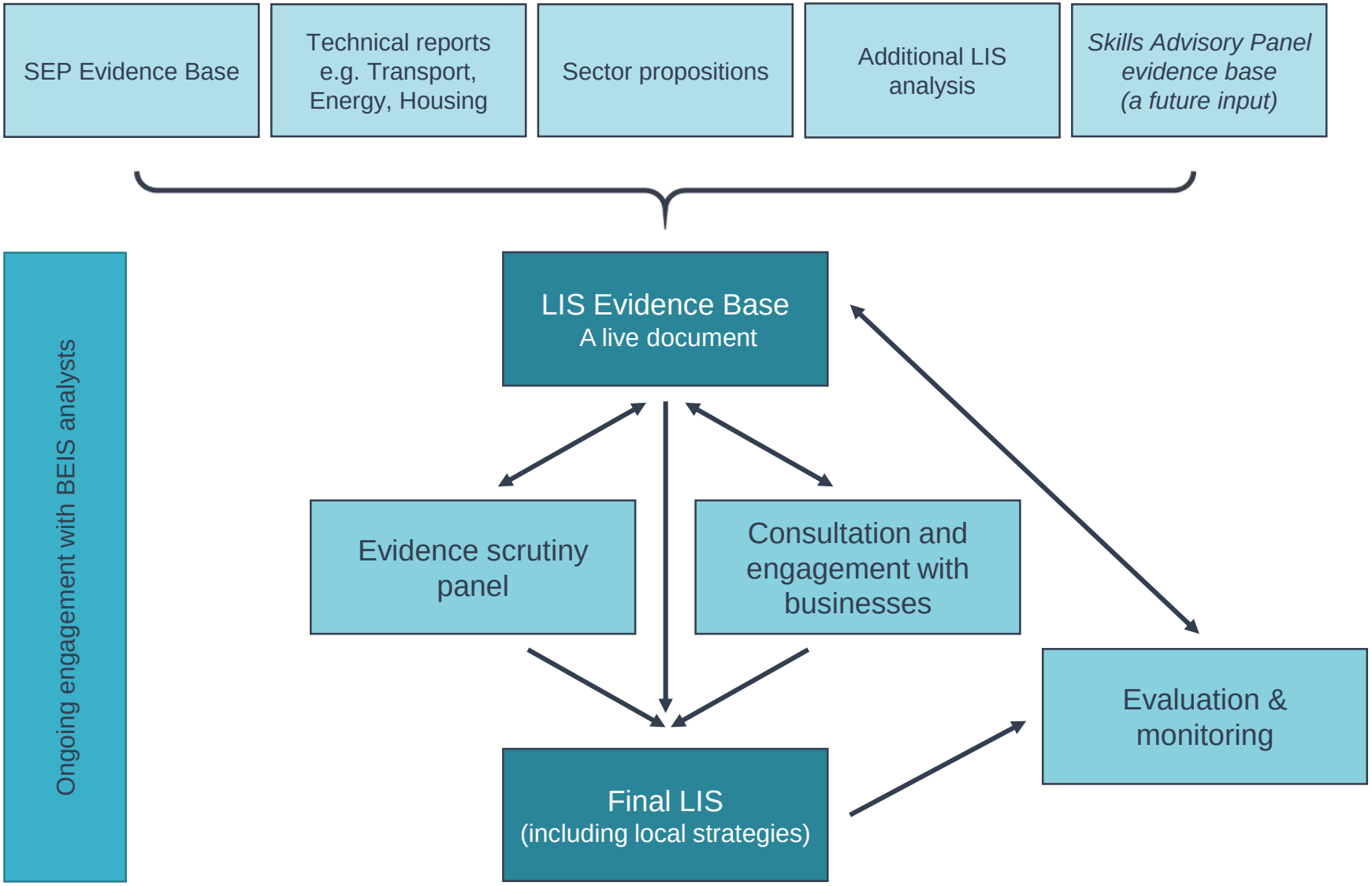
- **Economy and productivity** – analyses overall economic growth and productivity
- **Sectors** – provides detailed analysis of C&W's key sectors covering number of jobs, LQs, GVA, productivity and top companies, plus links for the Grand Challenges and Sector Deals

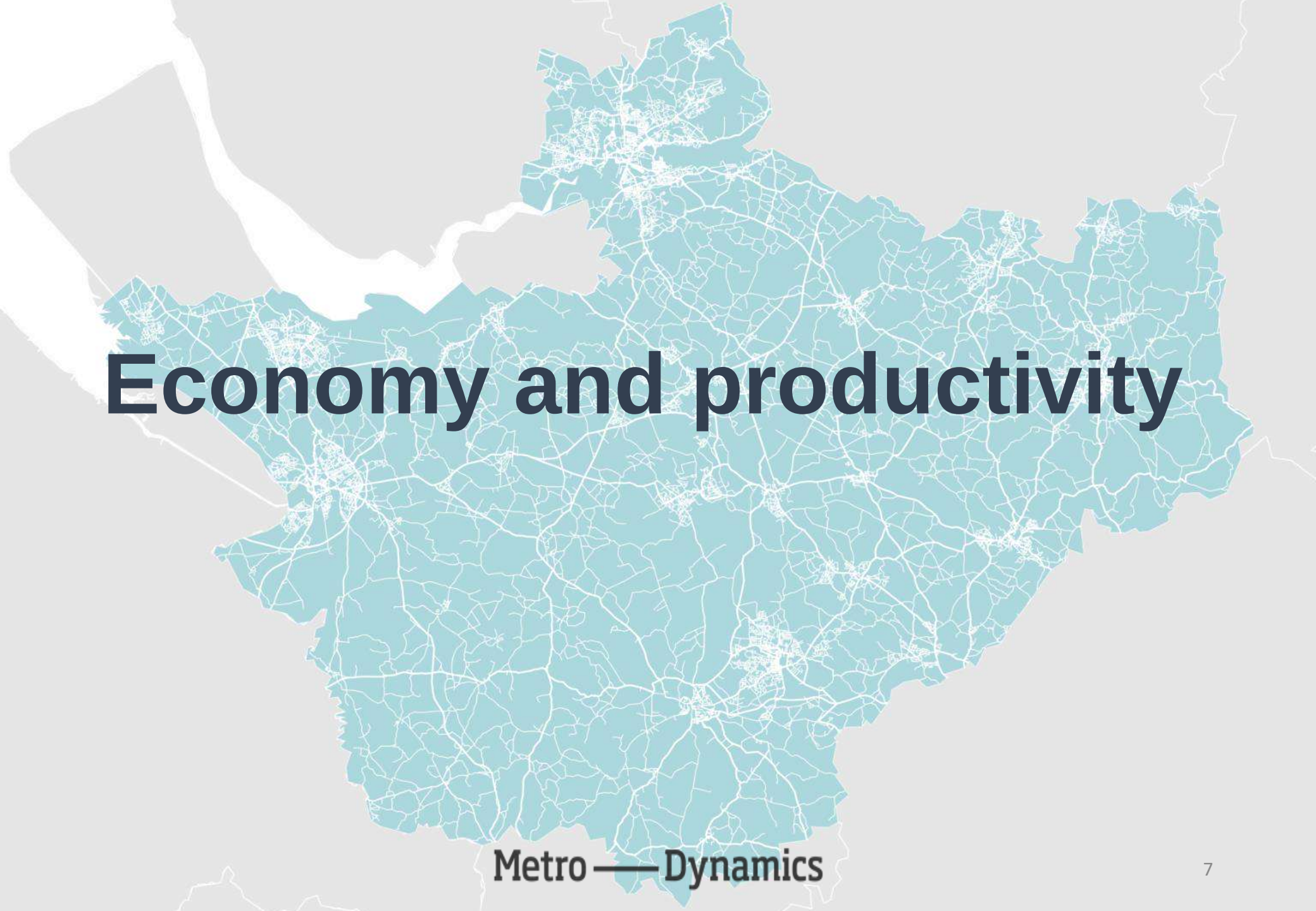
To closely align with the national Industrial Strategy, the next five sections are structured by the 'five foundations of productivity':

- **Ideas** – covers R&D and innovation spending
- **People** – provides in depth analysis of the labour market, including demographics, employment patterns, wages, deprivation, skills and foreign migration
- **Infrastructure** – summarises the main findings of more detailed technical reports
- **Business environment** – includes a detailed analysis of the business base covering distribution by sector, spatial distribution, births and deaths, research and development, exports and inward investment
- **Place** – presents commuting patterns, population clusters, house prices and affordability, and land use, and summarises the economic, demographic and labour market profiles of the five principal towns

Following this, the methodology section sets out the analytical approach taken in this evidence base. Additional maps and charts are provided in the Appendices.

Process to develop the LIS evidence base





Economy and productivity

Metro Dynamics

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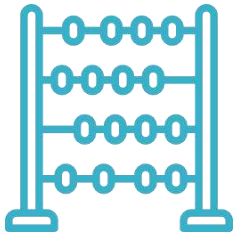
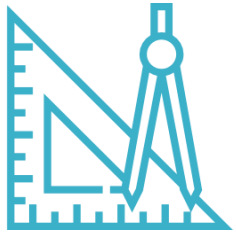
Economy and productivity – summary



A **£30.9bn** economy with an ambition to be a **£53.3bn** economy by 2040

2.7% average annual GVA growth compared to 2.2% in the UK and 2.1% in the NW

Highest GVA per head of **northern LEPs** and **4th highest** of all LEPs – **£33,384**



£34.63 produced per hour worked – 4.1% higher than UK and 13.6% higher than the NW but **stagnant** and **still not back to 2007 levels**

Economic growth

Gross Value Added (GVA) is the standard measure in the UK for the total size of local economies. It measures the increase in the value of the economy due to the production of goods and services in an area.

C&W is a £30.9bn economy according to the most recent GVA figures. The economy has grown strongly in recent years. Between 2012 and 2017, average annual GVA growth was 2.7%.

This exceeds average annual growth in the NW at 2.1% and UK at 2.2%. Cheshire East has grown particularly strongly at 3.3% per annum. C&W has also grown faster than EM3 and GM, which grew 1.5% and 2.0% on average per year, respectively.

GVA per head of population is a normalised measure of GVA used to compare regions of different sizes. The chart on the following page illustrates GVA per head for C&W, its local authorities, and comparators.

In 2017, C&W produced £33,384 per head of population. This is the highest of all northern LEPs and the fourth highest of all LEPs, after London, Thames Valley Berkshire and Oxfordshire.

GVA per head in C&W is 21.2% higher than average GVA per head in the UK (£27,555) and 39.6% higher than average GVA per head in the NW (£23,918). GM has a similar GVA per head to the NW (£23,729), and EM3* performs slightly lower than C&W (£32,575).

Within C&W, Cheshire East has the highest GVA per head at £36,201, followed by Warrington at £32,654. Cheshire West and Chester has the lowest figure at £30,677, but still performs higher than the NW and UK averages.

All areas in the chart overleaf have experienced a fall in GVA per head during the financial crisis and a period of stagnation since 2009.

Growth in GVA per head has been relatively strong in C&W since 2012 with 2.2% growth per annum. This is compared to growth of 1.5% in the UK, 1.6% in the NW, 0.8% in EM3 and 1.3% in GM. Average annual GVA per head growth between 2012 and 2017 has been highest for Cheshire East (3.0%), followed by Cheshire West and Chester (2.5%) with fairly stagnant growth in Warrington (0.5%).

** Geography of EM3 calculated at full extent of districts.*

GVA per head (1998-2017)

GVA is deflated to give values in 2017 terms. Geography of EM3 calculated at full extent of districts.

Source: ONS Balanced GVA by industry – country and region; NUTS 1, NUTS 2 and NUTS 3; combined authorities, city regions and other economic and enterprise regions of the UK (1998-2017); Balanced GVA indices by UK Local Authorities, LEPs and UK NUTS 1, NUTS 2 and NUTS 3 (1998-16); ONS Population Estimates (2017)

Economic growth ambition

C&W LEP has a growth ambition to increase GVA to £53.3bn by 2040 from a base of £30.9bn in 2017.*

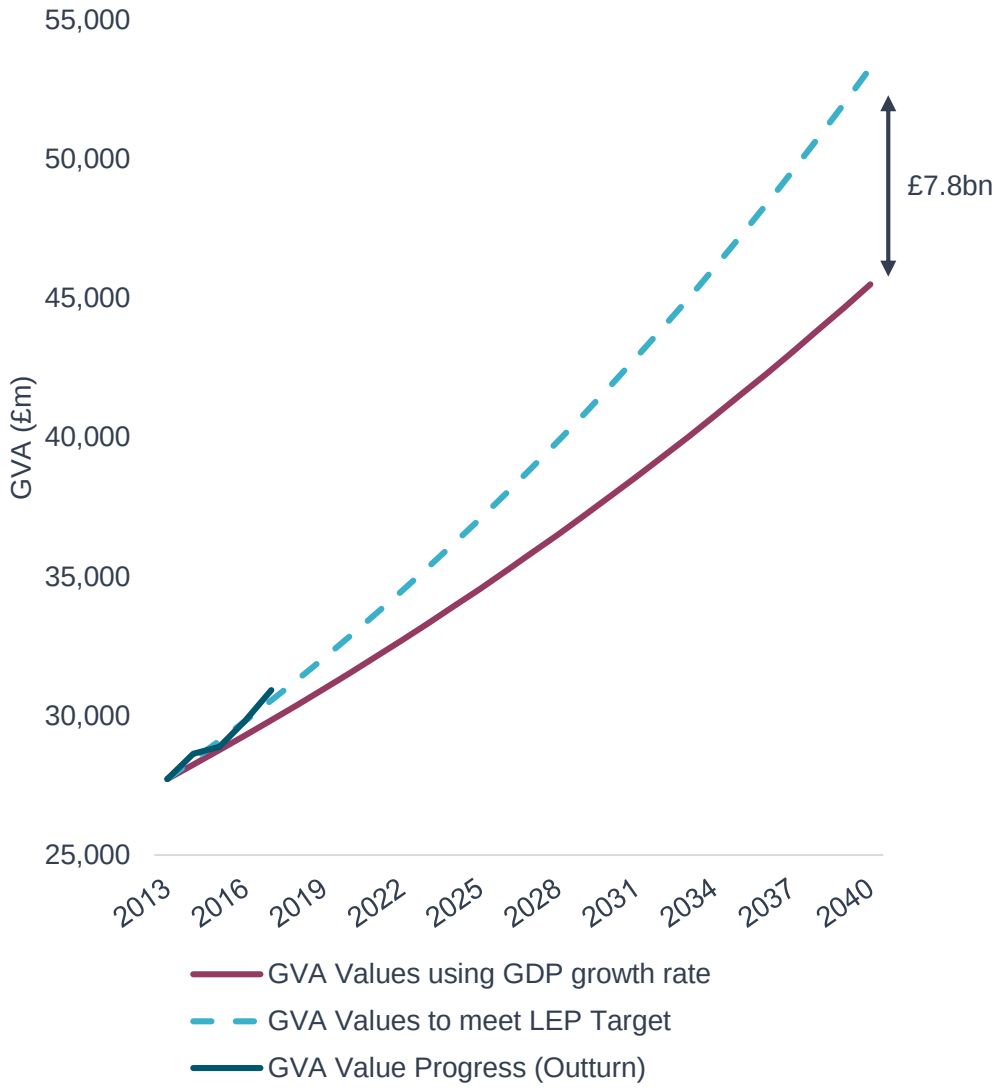
Average GDP growth in the UK, over the last 20 years (at the time the SEP evidence base was written), was 1.9% a year whilst the average annual GVA growth of C&W over the past 20 years was 1.8%. Applying the average of 1.85% to C&W shows that GDP uplift of a similar rate would increase the C&W economy to around £45.5bn by 2040.

The graph to the right shows comparative growth scenarios for C&W. The GVA growth of about 2.5% per annum required to reach the £53.3bn target is illustrated by the light dotted blue line. The maroon line shows the implied GVA growth rate, should the UK economy (and C&W) grow at a rate which is equivalent to the average of the last twenty years. The distance between the two lines shows the difference in the two forecasts.

C&W needs to achieve an extra £7.8bn of GVA growth by 2040 (on top of the implied UK GVA growth) in order to reach the target. This requires C&W to consistently outperform the UK average by 0.6% per annum.

Sustaining strong GVA growth could be achieved by increasing GVA per job or by increasing the number of residents who live in the area by approximately 145,000. Increases to the population will place pressure on C&W's land use and infrastructure. This suggests that the target of £53.3bn is achievable through support of productivity enhancing measures.

The dark blue line illustrates progress between 2013 and 2017. At this early stage, the data reflects an encouraging trend with C&W exceeding GVA growth targets. C&W is on track to achieve its goal.

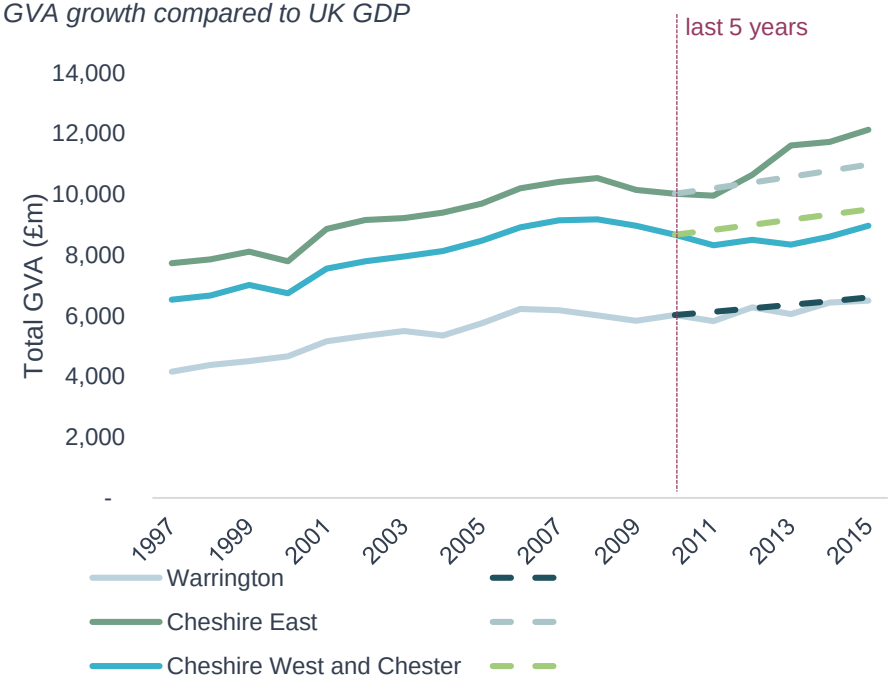


** All figures are presented in 2017 terms.*

Source: Metro Dynamics analysis of ONS GVA data and OECD GDP historical data deflators

GVA analysis

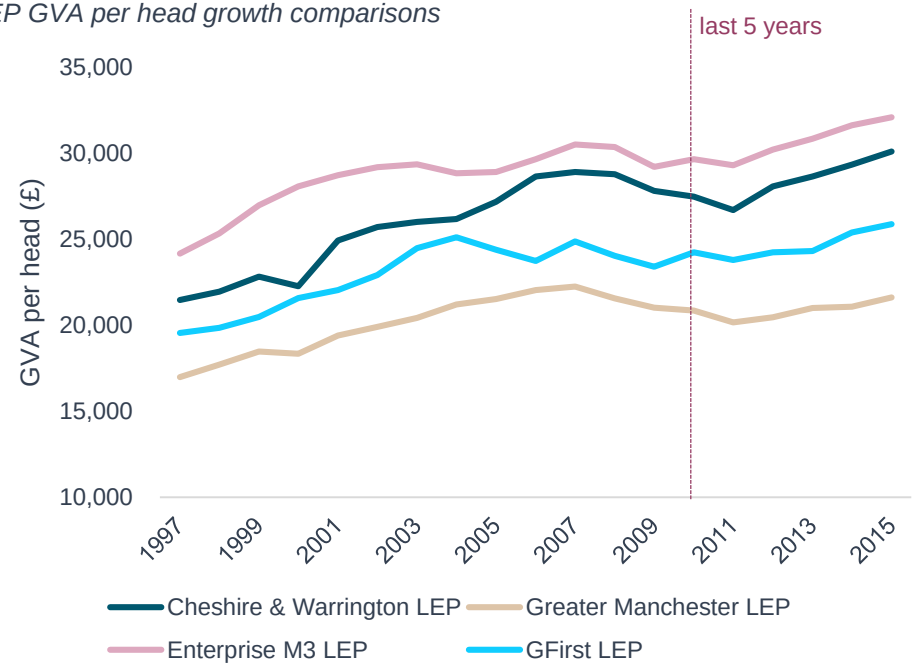
GVA growth compared to UK GDP



The chart on the left shows GVA growth in the three local authority areas with the dotted lines showing UK average GVA growth applied to each local authority. Please note, this output is from the SEP evidence base and therefore uses the most up-to-date data available at the time, which is older than GVA data used elsewhere.

Cheshire East has the largest GVA and has grown at a higher rate than the UK average over the last five years. GVA growth in Warrington is in line with national growth, though Cheshire West and Chester is lagging behind, suggesting there has been a shift in the economy since the recession.

LEP GVA per head growth comparisons



The chart on the right depicts the GVA per head growth of Cheshire and Warrington against three LEP comparators: EM3, GFirst and GM.

Growth in EM3 has outstripped C&W over the last five years, whilst GVA growth in C&W has grown at a higher rate than GFirst and GM.

GVA is deflated to give values in 2015 terms.

Source: ONS GVA data (2015)

Overall productivity

The chart overleaf illustrates overall productivity, measured by GVA per hour worked for C&W, its local authorities, and comparators.

In 2016, GVA per hour worked was £34.63 in C&W. This is 4.1% higher than the UK average and 13.6% higher than the NW average. GM is 15.9% less productive, whilst GVA per hour worked is 8.5% higher in EM3.

Reflecting other economic metrics, Cheshire East is best performing producing £39.02 per hour worked. Cheshire West and Chester is slightly lower at £33.96 per hour worked. Productivity in Warrington is lower than the C&W average at £29.15, falling below the UK level in 2009 and the NW in 2014.

During the financial crisis, all areas experienced a decline in productivity. The impact in C&W (-2.3%) between 2008 and 2009 was similar to the UK (-1.9%) and NW (-2.1%). It was most pronounced for Warrington (-3.1%). Productivity in C&W has not recovered to its 2007 levels with a decrease of 4.6% from 2007 to 2016.

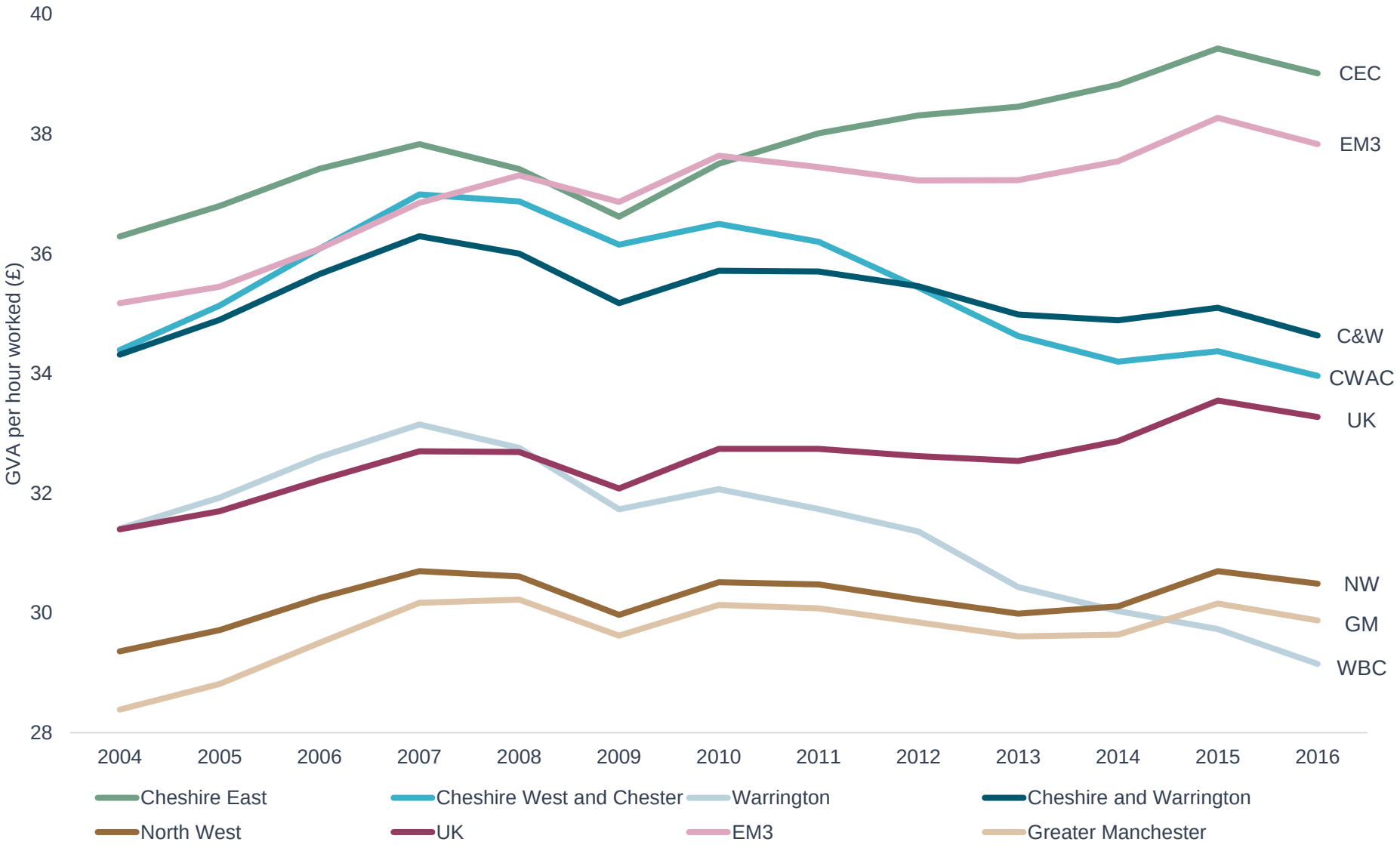
Between 2011 and 2016, productivity has been relatively static in the UK with on average 0.3% growth per annum. Growth has also been stagnant in the NW (0.0%), EM3 (0.2%) and GM (-0.1%). In the same period, C&W has declined slightly by 0.6% with negative growth of -1.3% in Cheshire West and Chester and -1.7% in Warrington.

Decreasing productivity in C&W, Cheshire West and Chester and Warrington may be due to GVA growing slower than the number of hours worked (see Appendices). The opposite is true of Cheshire East where average annual productivity growth between 2011 and 2016 has been 0.5%

It may also be due to a large increase in the number of jobs (>1,000) between 2011 and 2016 in low productivity, low wage sub-sectors in health and social care, hospitality and the visitor economy, retail, education, and logistics (see Appendices). There has also been a 22.9% increase in the number of part-time employees, compared to an increase of 12.0% in full-time employees*.

** An employee is anyone aged over 16 that an organisation pays from its payroll. Full-time is defined as 30 hours or more.*

Productivity: GVA per hour worked (2004-16)



GVA is deflated to give values in 2017 terms.

Source: ONS GVA per hour worked – indices by UK Local Authorities, LEPs and UK NUTS 1, NUTS 2 and NUTS 3 (2004-16)

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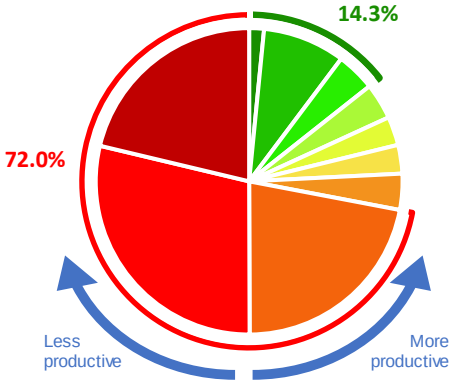
Productivity dashboard

Snapshot of productivity in Cheshire and Warrington

Select LEP:	Cheshire and Warrington
Select comparator:	Enterprise M3

Sectors

The three most productive sectors in Cheshire and Warrington (Property, Manufacturing, and Finance and Insurance) constitute 14.3% of employment, whereas the three least (Public Sector, Transport and hospitality, and Professional and Administrative) constitute 72.0%.



- Property
- Finance and Insurance
- IT and telecomms
- Arts, Entertainment, Other
- Transport and hospitality
- Manufacturing
- Construction
- Primary and Utilities
- Professional and Administrative
- Public Sector

Labour productivity

£34.61

GVA per Hour worked

36.9% of employment in Cheshire and Warrington is manager, director, or professional jobs. That compares to
38.0% in Enterprise M3, and
31.6% in England

Professional jobs

Output gap with the UK

+£5.4bn

If GVA per head was performing at the UK average, Cheshire and Warrington would add £5.4bn less to the UK economy

Exporting Business

£15,364 Value of exported goods per worker in Cheshire and Warrington. That compares to
£19,359 in Enterprise M3, and
£8,968 in England

Wages

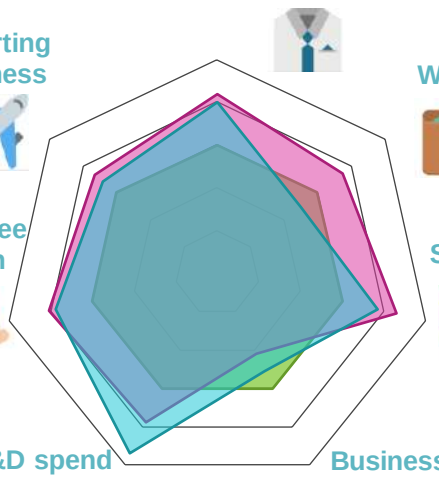
£13.23 The median wage for workers in Cheshire and Warrington. That compares to
£15.68 in Enterprise M3, and
£14.17 in England

Employee Health

69.1% The % of adults who are physically active in Cheshire and Warrington. That compares to
69.6% in Enterprise M3, and
66.1% in England

Skills

44.0% The % of 16-64 in Cheshire and Warrington with an NVQ4+ qualification. That compares to
47.1% in Enterprise M3, and
38.3% in England



R&D spend per worker

£2716 Business expenditure on R&D per FTE in Cheshire and Warrington. That compares to
£1789 in Enterprise M3, and
£811 in England

Business Births

134 No. of business born per 1,000 active businesses in Cheshire and Warrington per year. That compares to
118 in Enterprise M3, and
150 in England

England | Enterprise M3 | Cheshire and Warrington

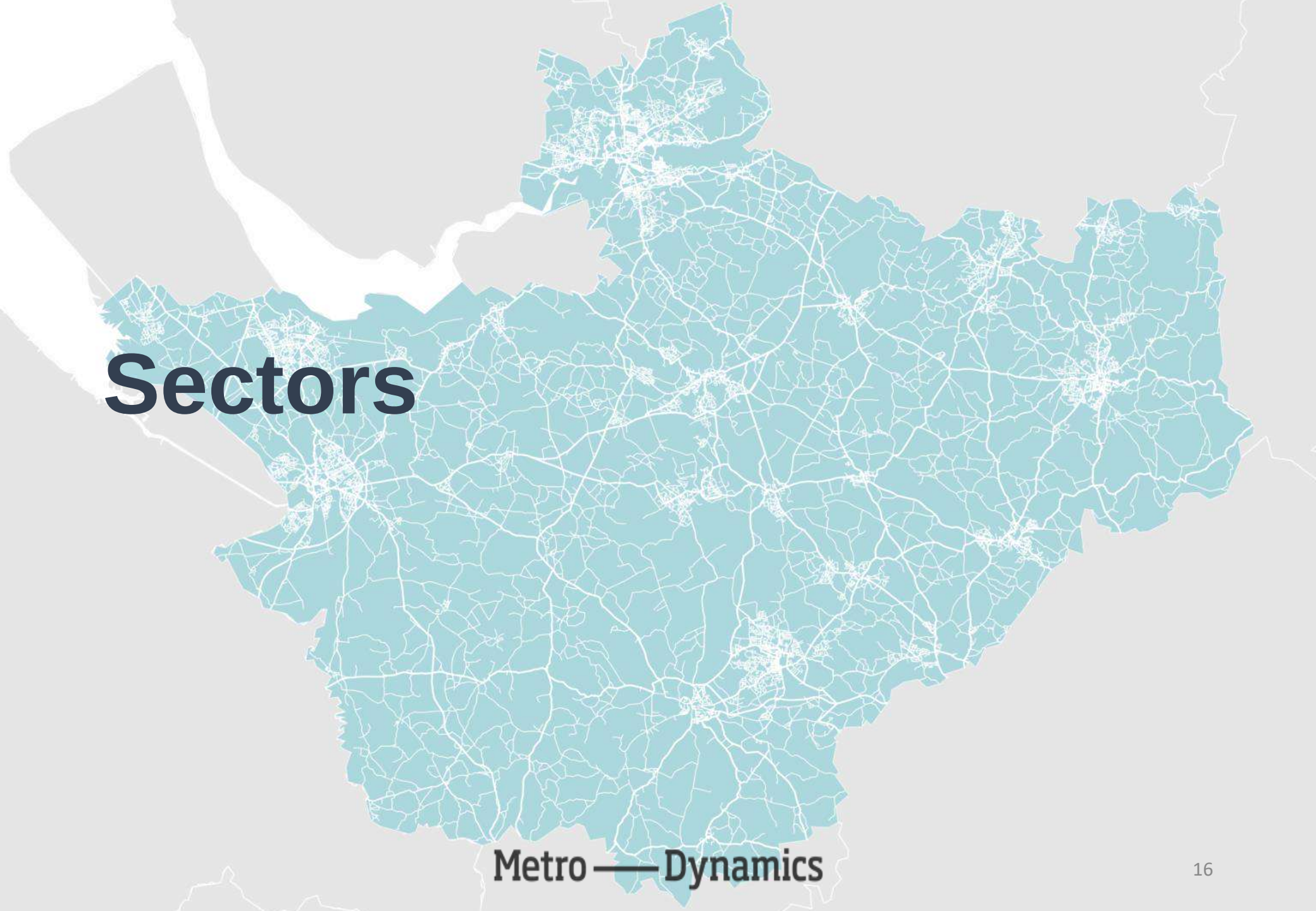
The infographic above provides a snapshot of productivity and factors influencing how productive an economy is in C&W compared to EM3.

This confirms the strength of the economy in C&W, as it has a positive output gap of £5.4bn. This means that if GVA per head in C&W was performing at the UK average, it would add £5.4bn less to the UK economy.

Please note, the aggregation of sectors used here differs slightly to that of the broad sector groups referenced elsewhere in the pack, as this uses a different dataset. Labour productivity appears to be £0.02 lower, due to a different deflator being used.

Source: ONS GVA per hour worked (2016), ONS Annual Population Survey (2017), ONS Annual Survey of Hours and Earnings (2017), ONS Business Demography (2016), ONS Business Enterprise Research and Development by LEP (2013), PHE (2016/17), HMRC Growth Hub Data – Exports (2015), ONS Population Estimates (2016), ONS Business Register and Employment Survey (2015)

Sectors



Metro Dynamics

Sectors – summary

Manufacturing is the largest sector by GVA at **£7.7bn** - 25% of GVA with 9% of the jobs

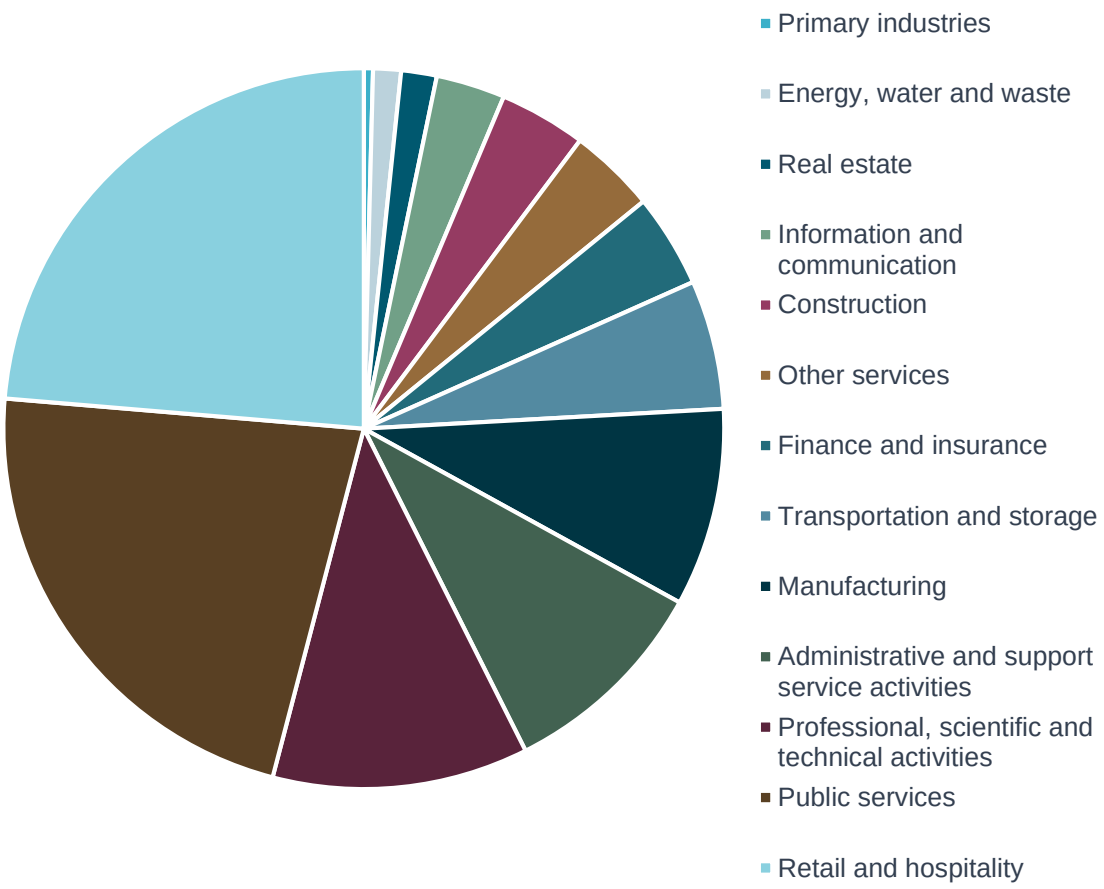
Super strengths (high productivity, specialisation and jobs) in **petroleum, chemicals & pharma** and **motor vehicles**

Specialisms in chemicals, automotive assembly, nuclear energy, oil refining, medicines discovery and manufacture

Almost 46% employed in public services and retail and hospitality. High employment in services and manufacturing

Sector make up of the economy

Employment by broad sector group (2016)



This pie chart illustrates the sector make up of the C&W economy by showing the share of jobs by broad sector group (using the definitions in the Methodology).

In 2016, there were 511,500 jobs in C&W*. The largest broad sector groups by the number of jobs in C&W are retail and hospitality (118,500 jobs) and public services (111,500 jobs). This accounts for 45.9% of total jobs. These are sectors which tend to be low paid and low productivity.

C&W's strengths in services are evidenced by a high number of jobs in professional, scientific and technical activities (57,500 jobs), admin and support activities (48,000 jobs) and finance and insurance (21,000 jobs). Though smaller in number there are 15,500 jobs in information and communication, and a further 8,000 jobs in real estate. There are also a relatively high number of jobs in transportation and storage (29,000).

Outside of services, manufacturing** is ranked as the fifth highest broad sector group with 44,500 jobs, which is almost 9% of total jobs.

** Please note the share of jobs by sector quoted in this analysis might not sum to the total number of jobs due to estimates. ** Including chemicals and pharmaceuticals.*

Source: ONS Business Register and Employment Survey (2016)

Job growth

Job growth by local authority (2011-16)

	Jobs (2016)	New jobs (2011-16)	Job growth (2011-16)
Cheshire East	198,500	22,000	12.5%
Cheshire West and Chester	175,000	20,000	12.9%
Warrington	138,000	19,500	16.5%
Cheshire and Warrington	511,500	61,500	13.7%
Job growth: EM3 = 8.4%, GM = 10.1%, NW = 8.8%, GB = 8.4%			

Top 10 SIC2 sub-sectors by job growth in C&W (2011-16)

Sub-sector	Jobs (2016)	Job change (2011-2016)
Legal and accounting activities	19,500	10,500
Human health activities	36,500	10,000
Food and beverage service activities	32,000	8,000
Warehousing and support activities for transportation	13,000	6,000
Retail trade, ex. motor vehicles and motorcycles	52,000	4,000
Education	36,500	4,000
Activities of head offices; management consultancy activities	15,000	3,500
Office administrative, office support and other business support activities	9,000	3,000
Employment activities	20,000	3,000
Services to buildings and landscape activities	11,000	2,500

In 2016, there were 511,500 jobs in C&W with almost 40% of these in Cheshire East.

The top table shows job growth for C&W, the three local authorities and comparators. Jobs growth, between 2011 and 2016, in C&W has been strong with 61,500 new jobs, which equates to growth of 13.7%.This rate of growth is significantly higher than EM3 and GB (both 8.4%), NW (8.8%) and GM (10.1%).

Warrington's jobs growth of 16.5% has been the strongest of the local authorities. This has been followed by Cheshire West and Chester and Cheshire East which experienced 12.9% and 12.5% growth, respectively.

The bottom table shows the top 10 SIC2 sub-sectors by job growth in C&W between 2011 and 2016. High job growth has occurred in the key sector of finance and business services, in the sub-sectors of office administration and support (3,000 new jobs), employment activities (3,000 new jobs) and services to buildings and landscapes (2,500 new jobs). In another key sector, logistics and distribution, there have been 6,000 new jobs created in warehousing and support services for transportation.

Other large increases in jobs have occurred in health and social care with 10,000 new jobs in human health activities, the visitor economy with job growth of 8,000 in food and beverage services, retail (4,000 new jobs) and public services, specifically education (4,000 new jobs). The sub-sector with the highest increase in the number of jobs is legal and accounting activities with 10,500 new jobs created in the past five years.

For a more detailed version of this table, please see the Appendices.

Source: ONS Business Register and Employment Survey (2011-16)

Levels of specialisation

To understand specialisation patterns in terms of concentration and de-concentration for the different activities taking place in C&W, we carried out a Location Quotients (LQ) analysis.

LQs are ratios for each sector between the local share of employment and share of employment in GB. Higher LQs correspond to higher levels of specialisation, with an LQ above 1 indicating that the area is more specialised in that sector than GB as a whole. This is a key piece of analysis since building on existing sectoral strengths is likely to increase the chances of economic success.

The bubble charts on the following pages illustrate results of the LQ analysis for SIC 2 sub-sectors. On the y-axis are the LQs for 2016 with a higher value indicting a higher degree of specialisation. The right quadrant denotes gains in concentration and the left quadrant represents de-concentration, relative to the average for GB over the period 2011-2016. The size of the bubbles indicates total employment in the industrial subgroup. The bubble chart on page 21 shows a zoom in of the SIC2 sub-sectors in the boxed area on page 22.

This analysis demonstrates C&W's strengths in its six key sectors (see the SIC code definition in the Appendices).

Manufacturing (indicated by the brown circles) comes through strongly as a highly specialised sector with four SIC2 sub-sectors within the top 20, accounting for 17,250 jobs.

The manufacture of coke and refined petroleum is the most specialised sub-sector in C&W with an LQ of 7.58 and has increased in concentration since 2011. It has relatively low employment compared to other sub-sectors with 1,000 jobs. This sub-sector may also be considered to be part of energy and environment. Motor vehicle manufacture is three times as specialised in C&W than GB and has a high number of jobs (8,000), although it has become less specialised since 2011. C&W is also specialised in the manufacture of paper and paper products (LQ of 1.44) and food production (LQ of 1.14).

The chemicals sector (light blue circle) is highly specialised with an LQ of 2.41, but has fallen in concentration since 2011. It has a relatively high number of jobs (3,500).

Relating to the energy and environment sector, architectural and engineering activities has 13,000 jobs and an LQ of 1.41, although this has decreased in concentration between 2011 and 2016. Nuclear is hard to capture by SIC code, but according to the UK Civic Nuclear Industry, there are 6,863 jobs in C&W.

In the life sciences sector, the manufacture of basic pharmaceutical products and preparations (light green circle) is 5.6 times more specialised in C&W than GB with 3,250 jobs. This sub-sector has experienced a large increase in its level of specialisation.

Within finance and business services, C&W has specialisms in financial service activities with an LQ of 1.64 and 13,500 jobs. Travel agency and tour operations has an LQ of 1.37 and employment activities has an LQ of 1.25.

C&W is specialised at warehousing and support activities for transport with an LQ of 1.51 and 13,000 jobs. Another area of specialism is postal and courier service (LQ of 1.28) and 5,000 jobs.

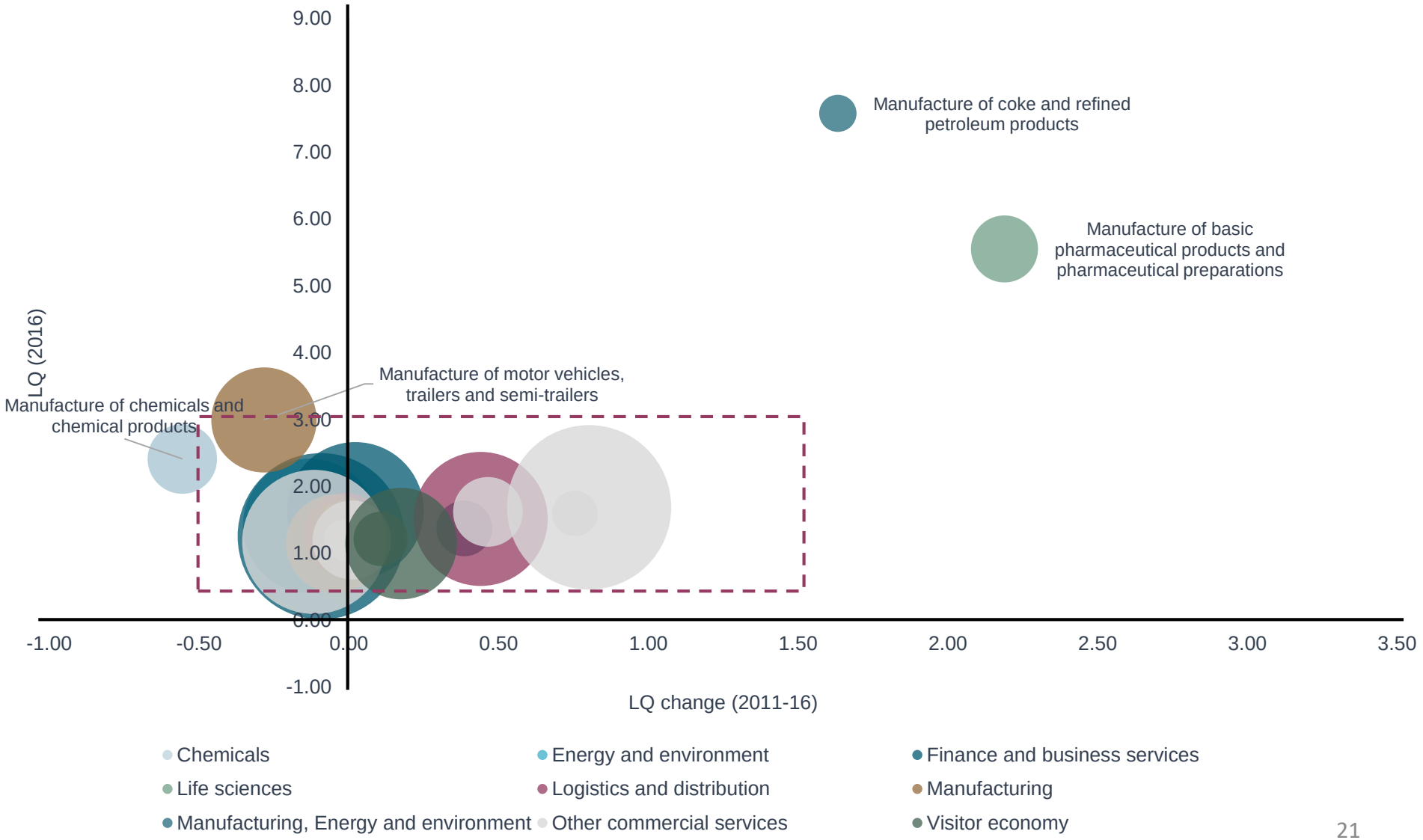
Other specialisms include other commercial services with sub-sectors as diverse as legal and accounting, waste collection and veterinary activities, as well as sub-sectors in the visitor economy.

A bubble chart for SIC5 sub-sectors can be found in the Appendices, but please note that this data is for 2015, as it is from the SEP evidence base.

Metro — Dynamics

Location Quotients analysis

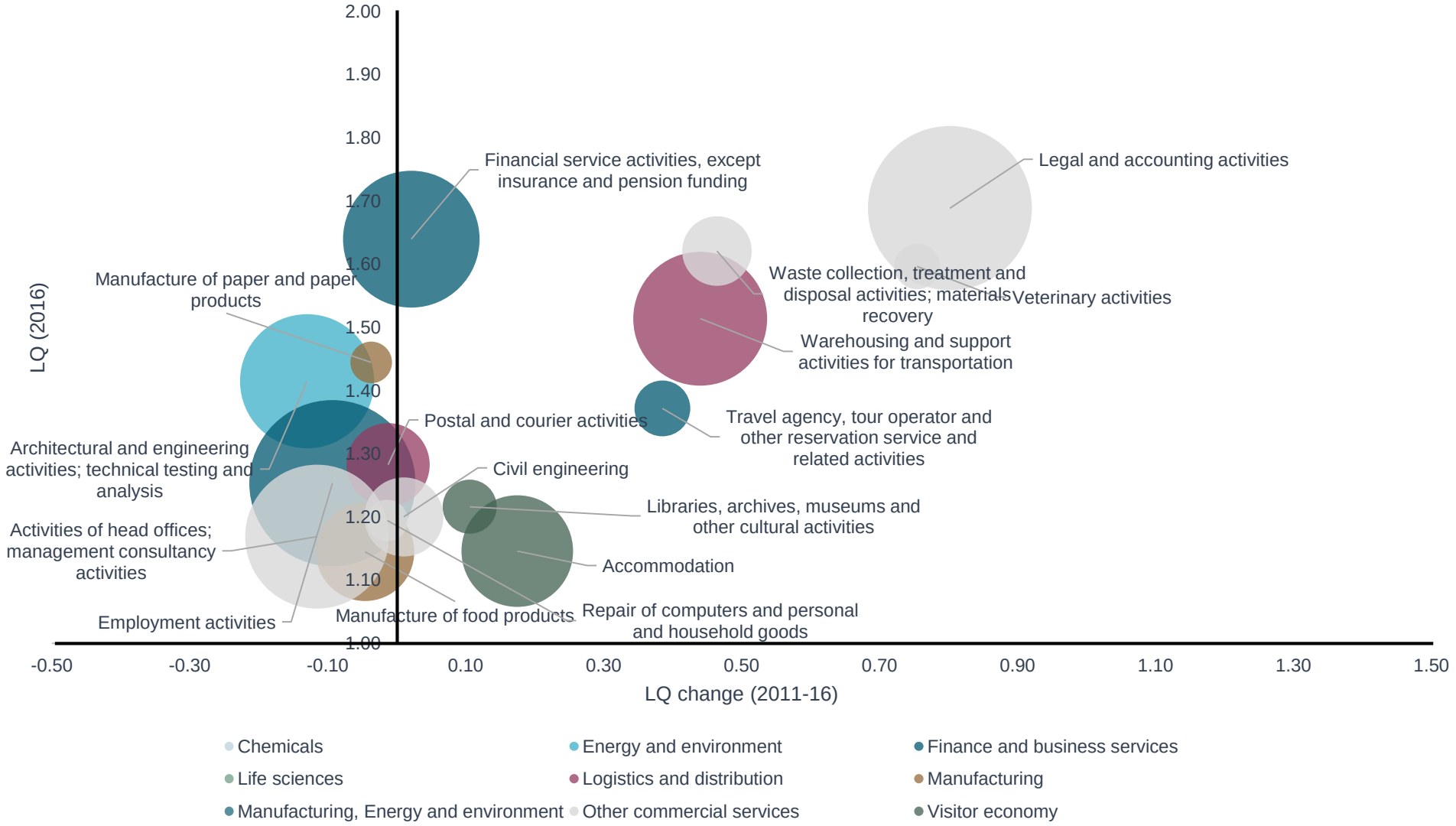
Top 20 SIC2 sub-sectors by LQ for Cheshire and Warrington (>1,000 jobs) (2016)



Source: ONS Business Register and Employment Survey (2011-16)

Metro — Dynamics

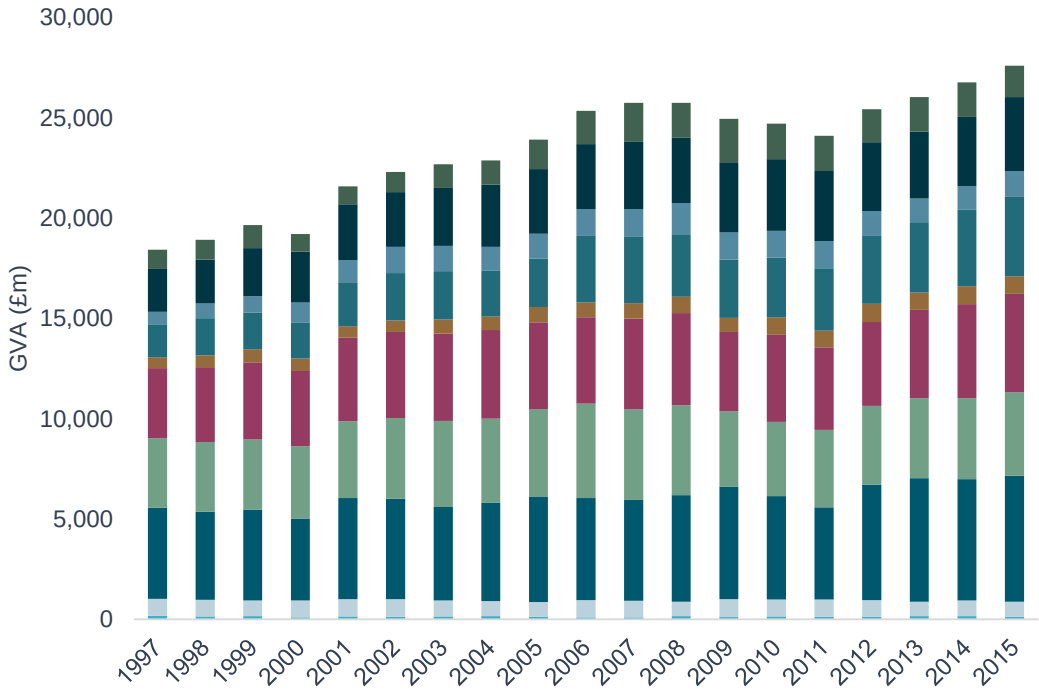
Zoom in of Top 20 SIC2 sub-sectors by LQ for Cheshire and Warrington (>1,000 jobs) (2016)



Source: ONS Business Register and Employment Survey (2011-16)

Breakdown of GVA

Economic breakdown of GVA in Cheshire and Warrington



	C&W		UK Overall	
	% GVA 2015	Average annual growth 2010-15	% GVA 2015	Average annual growth 2010-15
Finance	5.7%	-2.4%	7.2%	-0.7%
Public admin & defence, education & health	13.3%	0.7%	18.4%	0.1%
Information and communication	4.7%	-0.4%	6.5%	3.2%
Business Services	14.3%	5.9%	12.3%	3.8%
Domestic Services	3.2%	0.2%	3.9%	1.4%
Distribution	17.8%	2.5%	18.6%	2.4%
Construction & Real Estate Activities	15.1%	2.4%	19.1%	3.8%
Manufacturing	22.8%	4.7%	9.8%	1.4%
Production (excl. Manufacturing)	2.8%	-1.9%	3.5%	-2.6%
Agriculture	0.4%	-1.6%	0.7%	-0.4%

The graph above shows the sectoral areas of growth in C&W between 1997 and 2015. Sector growth between 2010 and 2015 and a comparison with UK average are provided on the right hand side.

Please note, this output is from the SEP evidence base and therefore uses the most up-to-date data available at the time, which is older than GVA data used elsewhere.

The distribution reveals some interesting trends. Finance has declined at a faster rate than the rest of the country at 2.4%, while business services has grown at a faster rate than the average.

Manufacturing is thriving as it is both growing at a significantly higher rate than across the rest of the UK, and in most manufacturing heartlands.

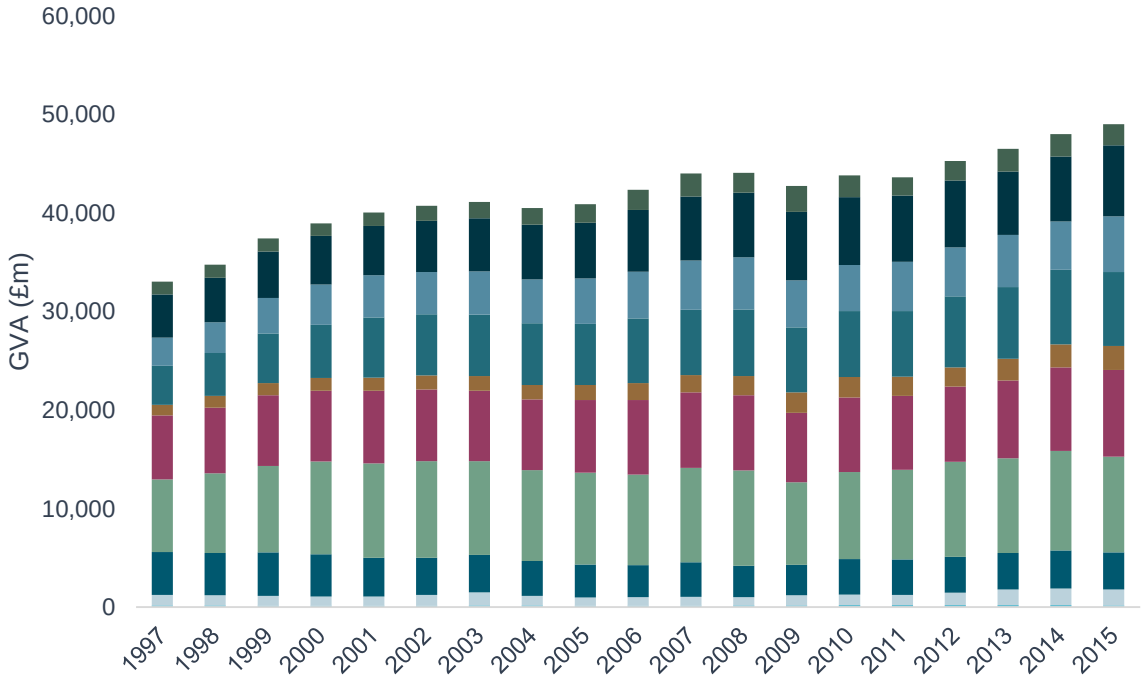
The share of manufacturing in C&W's economy (more than twice the figure of the UK average) is also quite notable. These findings suggest that this sector has been instrumental in driving economic growth in C&W.

*GVA is deflated to give values in 2015 terms. * Including chemicals and pharmaceuticals.*

Source: ONS GVA data (2015)

Breakdown of GVA in EM3

Economic breakdown of GVA in EM3



	EM3	
	% GVA 2015	Average annual growth 2010-15
Finance	4.4%	0.1%
Public admin & defence, education & health	14.7%	1.0%
Information and communication	11.5%	4.2%
Business Services	15.3%	2.4%
Domestic Services	5.0%	3.6%
Distribution	18.0%	3.1%
Construction & Real Estate Activities	19.8%	1.9%
Manufacturing	7.7%	1.1%
Production (excl. Manufacturing)	3.3%	8.8%
Agriculture	0.4%	-1.8%

The graph above shows the comparative areas of growth for EM3, an area covering parts of Surrey and Hampshire, using 2015 data, which was the most up-to-date data available at the time of the SEP analysis.

Construction and real estate activities has experienced huge growth, especially when compared to C&W. Much of this growth has been driven by property price increases in the southern spill-over areas of London, which have driven an increase in both domestic and commercial construction.

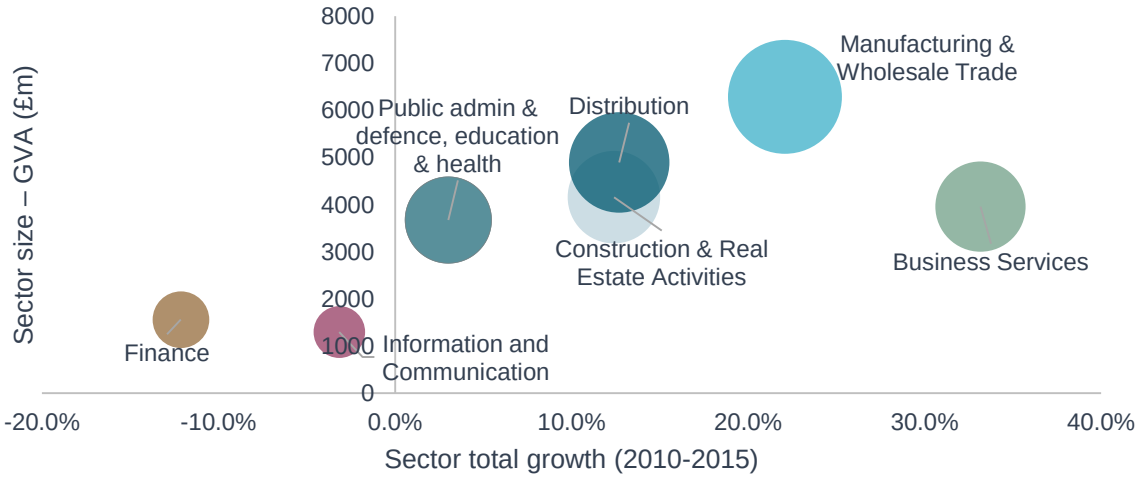
EM3 also clearly outperforms C&W in information and communication. In this area, C&W lags behind the UK average both in share of the economy and, more notably, in recent growth trends.

GVA is deflated to give values in 2017 terms. Manufacturing includes chemicals and pharmaceuticals.

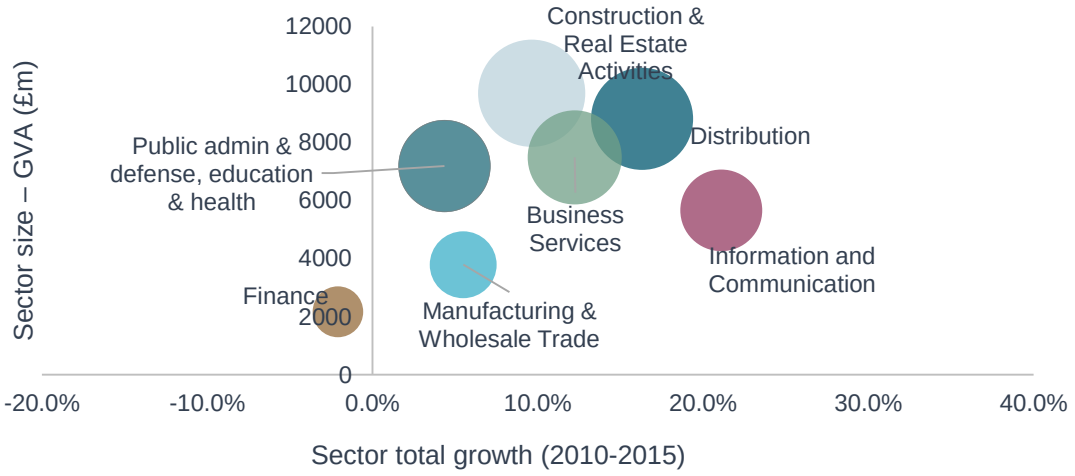
Source: ONS GVA data (2015)

Comparative GVA by sector

Comparative GVA by sector for Cheshire and Warrington



Comparative GVA by sector for EM3



The top chart illustrates the size of GVA in the seven largest economic sectors in C&W, as well as their percentage GVA growth over the period between 2010 and 2015. The bottom chart shows this analysis for EM3. Please note, this uses the most up-to-date data available at the time of the SEP analysis.

The chart emphasises the importance of manufacturing and wholesale trade in C&W, as it is the largest sector in terms of GVA and has the second highest growth rate over the last five years. Growth in manufacturing and wholesale trade is also quite significant when compared to EM3.

Distribution is the second largest sector but growth has been slower. Information and communication is relatively low and declining, contradicting the trends in EM3 and in the UK overall.

Information and communication is an important sector in the economy and is often considered to be a priority although it represents less than 5% of C&W's economy and has declined by 3% between 2010 and 2015.

The decline in finance is also quite noticeable. This may be due to a decline in the banking sector in Chester, in particular the restructuring processes in MBNA and Lloyds, which have recently relocated a considerable number of jobs from Chester.

GVA is deflated to give values in 2015 terms.

Source: ONS GVA data (2015)

Productivity by broad sector group

Productivity by broad sector group (2017)

Broad sector group	GVA (£m)	GVA per job	GVA per job growth	Jobs
Real estate	£3,310	£367,778	-24.2%	9,000
Manufacturing*	£7,729	£171,756	7.2%	45,000
Finance and insurance	£2,030	£104,103	10.8%	19,500
Information and communication	£1,366	£78,057	-16.4%	17,500
Primary industries and energy, waste and water	£1,084	£71,669	-58.4%	15,125
Construction	£1,653	£68,875	16.6%	24,000
Other services	£916	£40,711	-13.4%	22,500
Transportation and storage	£1,013	£40,520	-2.6%	25,000
Administrative and support services	£1,876	£39,495	29.7%	47,500
Professional, scientific and technical activities	£2,294	£35,292	-29.0%	65,000
Public services	£3,630	£34,085	-3.6%	106,500
Retail and hospitality	£3,943	£33,701	11.7%	117,000

Productivity can also be measured by GVA per job. The table on the left shows GVA per job for broad sector groups (using the definitions in the Methodology). Colour coding indicates whether the sector in C&W is more (green), similar to (orange) or less (red) productive than GB (see Appendices).

Manufacturing* is one of only two sectors in C&W more productive than GB. It is over twice as productive with GVA per job of £171,756. It has the highest GVA contribution of any sector (£7.7bn), has a high number of jobs (45,000) and high job growth of 16.9%, compared to 3.5% in GB.

Real estate, the highest productivity sector, has a GVA per job of £367,778, due to its relatively high GVA (ranked 4th compared to other sectors) and low number of jobs. However, it is less productive than the average for GB (£447,660 per job).

Financial and insurance; IT; primary industries and energy, waste and water; and construction are mid-rank for both GVA contribution and productivity, but have a relatively high number of jobs.

With significantly lower levels of productivity sit transportation and storage, administration, and professional services. Of these, transportation and storage has the lowest GVA contribution and a relatively high number of jobs. Administration makes a relatively large GVA contribution but has a very high number of jobs, although it is 24% more productive in C&W than GB. Professional, scientific and technical activities make a relatively large contribution to GVA (£2.3bn) and employ a larger number of employees than manufacturing (65,000 jobs). It has declined in productivity by 29.0% since 2012. Further detail on this is contained in the appendix.

The most unproductive sector, similar to GB levels, is retail and hospitality. Public services is also low productivity sector. These sectors make the second and third largest GVA contributions, respectively, and have the highest levels of employment with over 100,000 jobs.

High productivity in primary industries (agriculture, forestry, fishing, mining and quarrying) and energy, waste and water is an anomaly, because of the low number of jobs relative to its GVA.

*GVA is deflated to give values in 2017 terms. * Including chemicals and pharmaceuticals.*

Source: ONS Balanced GVA by industry (2012-17), ONS Business Register and Employment Survey (2012-17)

High productivity sub-sectors

Having set out productivity by broad sector groups, this next section goes further by analysing productivity at the sub-sector level. The table overleaf gives a more detailed breakdown of productivity for the top 12 sub-sectors (either single SIC2s or groups of one or more aggregated SIC2s, depending on data availability).

This analysis demonstrates C&W's strengths in its key sectors. All key sectors feature within the top 12 highest productivity sub-sectors with the exception of logistics and distribution. Sub-sectors within logistics and distribution in C&W are less productive than the GB level.

Sub-sectors in manufacturing, energy and environment, and life sciences come through particularly strongly. Other highly productive sub-sectors fall into digital, agriculture, other commercial services and production.

By combining this analysis with Location Quotient (LQ)* and employment analysis, we can identify C&W's super strengths. The following criteria was used:

- High productivity (GVA per job within top 12 and higher than GB)
- Highly specialised (an LQ significantly greater than 1)
- High number of jobs (> 1,000)
- In one or more of C&W's key sectors

Using this criteria, C&W has super strengths in (shown in maroon on the following page):

- Manufacture of petroleum, chemicals and pharmaceuticals
- Manufacture of motor vehicles, trailers and semi-trailers

The manufacture of petroleum, chemicals and pharmaceuticals contributes £5.0bn to the economy. It is the most productive sub-sector with GVA per job of £646,559, which is about three times more productive than the sector in GB as a whole and twice as productive as the NW.

Since 2011, productivity has increased by 58.4%, compared to 16.9% in GB. This sub-sector is highly specialised with an LQ of 3.58. There are 7,750 jobs, which has decreased slightly by 1.9% since 2011. In this same time period, the chemicals sector lost 1,250 jobs, which may explain the increase in productivity since 2011. This sector was still highly productive in 2011 (over twice as productive as GB).

Motor vehicle, trailer and semi-trailer manufacture has a GVA of £825m, which is ranked the ninth highest of all SIC2 sub-sectors. It has a GVA per job of £103,158. This is 14.0% higher than the level of productivity in this sub-sector in GB. Levels of specialisation are over three times that of GB. There are 8,000 jobs in this sub-sector with growth of 23.1%, which is slightly lower than growth in GB of 30.1%.

There is potential for growth in the scientific research and development sector. It has relatively high GVA of £584m (within the top 15 highest sub-sectors by GVA) with 2,000 jobs giving it a GVA per job of £292,111, which is 3.7 times higher than the GB level. There has been a high loss of jobs (-3,500) with the relocation of AstraZeneca to Cambridge, which may in part contribute to high productivity and growth.

C&W has the potential to increase productivity in two further sectors. Telecommunications and financial services are both specialised sub-sectors with a high number of jobs in both, especially finance. Both are amongst the highest productivity sectors in C&W, but are less productive than GB and the NW. They have both also experienced a decline in productivity over the past five years. In the case of telecoms, this is despite a loss of jobs. It will be important to ensure that these high productivity sectors continue to grow and reverse their declining levels of productivity.

Productivity tables for each of C&W's key sectors can be found in the Appendices. A table of the top sub-sectors by productivity for GB and the NW can also be found in the Appendices.

** LQs are a measure of specialisation. It measures the share of employment in a sector in the local economy as a ratio of the share of employment in the same sector in the UK. Higher LQs correspond to higher levels of specialisation. An LQ above 1.0 indicates that the area is more specialised in that sector than nationally.*

Top 12 sub-sectors by productivity (2016)

Sub-sector	GVA (£m)	GVA per job	GVA per job growth	LQ	Jobs	Job change	C&W key sector
Manufacture of petroleum, chemicals and pharmaceuticals	£5,011	£646,559	58.4%	3.58	7,750	-150	**Chemicals, energy and environment, and life sciences**
Real estate activities	£3,351	£418,889	-14.1%	0.92	8,000	1,500	Other commercial services
Scientific research and development	£584	£292,111	112.2%	0.88	2,000	-3,500	**Energy and environment, and life sciences**
Manufacture of other transport equipment	£150	£250,235	24.0%	0.27	600	-150	**Manufacturing**
Electricity, gas, steam and air conditioning supply	£341	£227,425	138.0%	0.72	1,500	-1,750	**Energy and environment**
Water supply and sewerage	£161	£189,854	-34.7%	0.90	850	470	Other commercial services
Repair of computers and personal and household goods	£186	£148,711	-13.7%	1.19	1,250	250	Digital
Mining and quarrying	£61	£142,516	-56.0%	0.67	430	55	Primary industries
Crop and animal production, hunting and related service activities	£145	£105,479	-34.8%	0.19	1,375	425	Primary industries
Telecommunications	£391	£104,316	-24.1%	1.11	3,750	-1,000	Digital
Manufacture of motor vehicles, trailers and semi-trailers	£825	£103,158	29.9%	3.00	8,000	1,500	**Manufacturing, and energy and environment**
Financial service activities, except insurance and pension funding	£1,377	£101,985	-7.8%	1.64	13,500	0	**Finance and business services**

*GVA is deflated to give values in 2017 terms.*Source: ONS Regional gross value added (balanced) reference tables (2011-16), ONS Business Register and Employment Survey (2011-16)

Low productivity sub-sectors

It is important to also look at those sub-sectors with low productivity. The table overleaf shows the 15 least productive sub-sectors in C&W. The majority of C&W's lowest productivity sub-sectors are less productive than the GB level with the exception of social work.

Many of the least productive sub-sectors in C&W are also amongst the least productive sub-sectors in GB and the NW, and fall within well-known low productivity, low value and low wage sectors such as health and social care, hospitality and the visitor economy, retail, and public services. Linked to this, most of the least productive sub-sectors in C&W are either not specialised or have relatively low levels of specialisation (e.g. an LQ of 1.1).

There are also low productivity sub-sectors in C&W's key sectors. In finance and business services, security and investigation activities, which has a GVA per job of £16,028, appears as it has relatively low GVA (£52m), but a relatively high number of jobs (3,250 jobs). Employment activities with GVA per job of £17,261 is another low productivity finance and business services sub-sector. It has a mid level GVA figure of £345m, but the fourth highest number of jobs (20,000).

In manufacturing, the manufacture of beverages and tobacco products is a low productivity sub-sector (£25,803 per job), due to the low GVA contribution (£12m) and low number of jobs (475 jobs).

Within logistics and distribution, warehousing and support activities for transportation has a GVA per job of £26,006, again based on its mid-level GVA contribution (£338m), but high number of jobs (13,000 jobs).

All but two of the top 15 least productive sectors have experienced either no change or a fall in productivity in the last five years. The exceptions are food and beverage service activities with GVA per job of £21,864, which became 22.4% more productive between 2011 and 2016. This is despite the large increase of jobs by 8,000 (33.3% increase), but is likely to be because of high GVA growth (63.2%).

Productivity in beverages and tobacco manufacture has increased by 9.5%. There has been marginal job change in this sector, but relatively high GVA growth of 38.6%, though starting from a low base.

There are a few sub-sectors in the bottom 15 which have both a low number of jobs (less than 1,000 jobs) and low GVA (less than £20m), including gambling and betting activities; motion picture, video and TV programme production, sound recording and music publishing activities; forestry and fishing; and beverage and tobacco product manufacture.

The majority have a high number of jobs. Of the 15 least productive sub-sectors, eight have a very high number of jobs. Those with over 10,000 jobs fall within the top 11 SIC2 sub-sectors by the number of jobs. Six of the very high employment sub-sectors have experienced high job growth between 2011 and 2016 (over 3,000 new jobs).

Many of these sub-sectors with a high number of jobs make a relatively mid-level GVA contribution (£150-400m), such as residential care activities, employment activities, social work activities, and warehousing and support activities for transportation.

The three highest sub-sectors by employment: retail trade (52,000 jobs), education (36,500 jobs) and food and beverage service activities (32,000 jobs) make large GVA contributions of £1.5bn, £1.0bn and £700m, respectively. The very high levels of employment result in a low productivity. With the exception of education, this is consistent with results for the NW as a whole.

A table of the bottom sub-sectors by productivity for GB and the NW can be found in the Appendices.

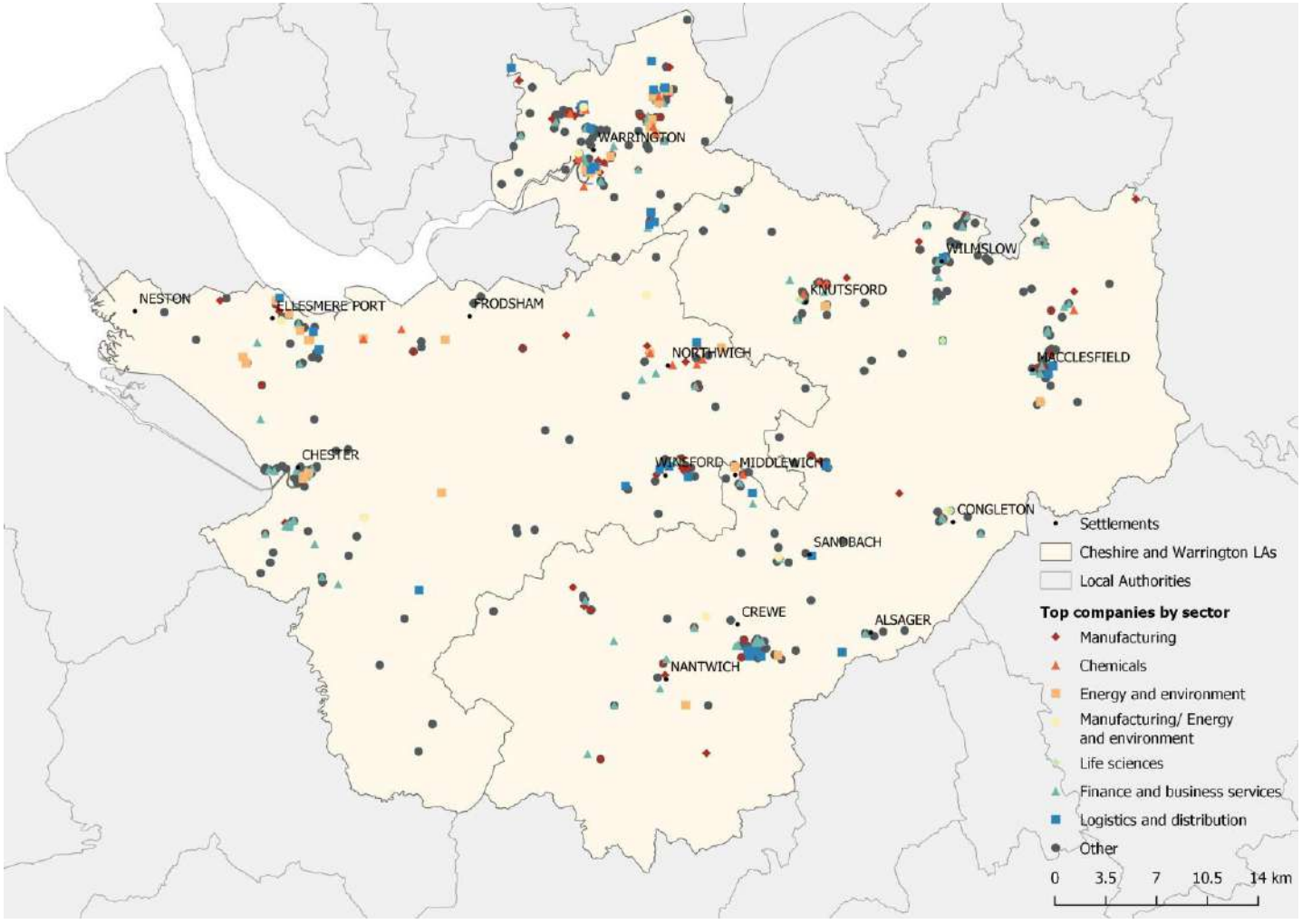
Bottom 15 sub-sectors by productivity (2016)

Sub-sector	GVA (£m)	GVA per job	GVA per job growth	LQ	Jobs	Job change	C&W key sector
Sports activities and amusement and recreation activities	£68	£9,776	-35.0%	0.91	7,000	2,000	Other commercial services
Residential care activities	£161	£15,369	0.0%	0.91	10,500	0	Health and social care
Security and investigation activities	£52	£16,028	-3.8%	0.98	3,250	0	**Finance and business services**
Gambling and betting activities	£13	£16,597	-14.7%	0.52	800	-450	Other commercial services
Motion picture, video and television programme production, sound recording and music publishing activities	£8	£17,202	-61.1%	0.26	475	100	Digital
Employment activities	£345	£17,261	-12.4%	1.25	20,000	3,000	**Finance and business services**
Forestry and fishing	£5	£20,844	-43.4%	0.52	245	95	Primary industries
Food and beverage service activities	£700	£21,864	22.4%	1.10	32,000	8,000	Visitor economy
Social work activities without accommodation	£286	£21,999	-0.5%	0.87	13,000	0	Health and social care
Legal and accounting activities	£463	£23,727	-35.4%	1.69	19,500	10,500	Other commercial services
Manufacture of beverages and tobacco products	£12	£25,803	9.5%	0.79	475	100	**Manufacturing**
Warehousing and support activities for transportation	£338	£26,006	-22.3%	1.51	13,000	6,000	**Logistics and distribution**
Accommodation	£250	£27,804	-1.5%	1.15	9,000	2,500	Visitor economy
Education	£1,026	£28,123	-20.1%	0.85	36,500	4,000	Public services
Retail trade, except of motor vehicles and motorcycles	£1,467	£28,205	-1.8%	1.10	52,000	4,000	Retail

*GVA is deflated to give values in 2017 terms.*Source: ONS Regional gross value added (balanced) reference tables (2011-16), ONS Business Register and Employment Survey (2011-16)

Top companies by sector

Top 1,000 companies by sector (2018)



Please note, this list of companies is a snapshot. It is not exhaustive and does not have 100% coverage. It is meant to be used indicatively to show spatial patterns in the types of companies present in the area and their characteristics.

Source: Experian MarketIQ (2018)

A sample of C&W's top 1,000 companies by turnover was extracted from the Experian MarketIQ database. The map on the previous page shows these companies categorised by key sector.

Large companies tend to be concentrated in urban areas: Warrington, Northwich, Knutsford, Wilmslow, Macclesfield, Crewe, Chester and Ellesmere Port. There is also a concentration of large companies in the rural south western area of C&W, some of which fall within the key sectors, whilst others are in the hospitality, wholesale, IT and legal sectors.

Manufacturing

There are a high number of large manufacturing companies concentrated in four areas. Warrington has large companies such as Novelis and Fideliti. Bentley Motors, Trac Precision Machining and Massey Bros are based in Crewe. There is a concentration of companies from Northwich-Knutsford-Wilmslow, including Norcros. Macclesfield has companies including Senior UK, Proseal UK and Direct Food. Manufacturing firms in the rural south western part of the LEP include Tetrapak, Ardagh Metal Beverages and Morrey Oils.

Chemicals

Large chemicals companies tend to be located in the northern part of C&W with a small concentration in Warrington, owing to UPL Europe, Perstorp and PQ Silicas, and Northwich, where TATA, Thor Specialties and Nalco are based.

Energy and environment

There is a concentration of energy and environment companies based in Warrington, including Sellafield, SP Power Systems and Electricity North West, and Ellesmere Port, due to Essar Oil, Wood Group, Laker Vent Engineering and GHD Livigunn.

Finance and business services

Large finance and business services companies are present in all major towns with Royal London in Wilmslow, Assurant General in Crewe and Cufe Investments in Warrington. Many of the large companies in the rural south western part of C&W are finance and business service companies, such as Bristol-Myers Squibb Business Services (providing business support to the global pharmaceutical firm), The Portman Travel Group and Nextgear Capital.

Logistics and distribution

Logistics and distribution companies with the highest turnover are in Warrington including Eddie Stobart, The Delivery Group and Secured Express. There are also large logistics and distribution companies located elsewhere, such as Great Bear Distribution in the rural south western part of C&W, and Expert Logistics and Brit-European Transport in Crewe.

Life sciences

There are relatively few life science companies in the top 1,000 companies. Notably AstraZeneca is not in the list, perhaps as it is headquartered elsewhere. Companies include Lupin Healthcare (Knutsford), Advanced Medical Solutions (Wilmslow), Redx Pharma (Macclesfield) and Protomed (Congleton).

Top companies by sector

Top companies in manufacturing

- BAE Systems Land
- Bentley Motors
- Enrichment Technology
- Fideliti
- Glanbia Cheese
- GM Vauxhall (PSA Group)
- Norcros
- Novelis UK
- Micromass
- Oakes Millers
- Senior UK
- Siemens

Top companies in chemicals

- Albis
- A Schulman
- Brown Brothers Distribution
- CF Fertilisers
- Longfield Chemicals
- Perstorp UK
- PQ Silicas
- TATA Chemicals
- Thermoplastic Compounds
- Thor Specialties
- Unilever
- UPL Europe

Top companies in energy and environment

- Boulting Group
- Electricity North West
- Essar Oil
- Exova
- MHI Vestas Offshore Wind
- National Nuclear Laboratory
- Nuvia
- Peel Energy
- Sellafield
- SP Power Systems
- United Utilities
- Urenco
- Wood

Top companies in life sciences

- Advanced Medical Solutions
- AstraZeneca
- Complete Healthvision
- Crawford Healthcare Holdings
- Cyprotex
- Dechra Pharmaceuticals
- Lupin Healthcare
- Protomed
- Redx Pharma
- Sanofi Group
- ThermoFisher Scientific
- Waters Corporation

Top companies in finance and business services

- Assurant Solutions
- Barclays
- Betfred
- Boldon James
- Exchequer Solutions
- CAESUR Financial
- Fircroft
- Gladstone Brookes
- Lloyds
- M&S Finance
- Mobica
- Natrium Holdings
- Payzone
- Perspective Financial Group
- Quintessential Finance Group
- Quint Group
- Radius Payment Solutions
- Royal London Management Services
- UK Fuels
- Virgin Money

Top companies in logistics and distribution

- Air Products
- AO
- Boughey Distribution
- Brit-European Transport
- Carrier Transicold
- Currie European Transport
- Eddie Stobart
- Expert Logistics
- Great Bear
- Distribution
- Iforce Group
- Kinaxia
- London and North Western Rail
- Secured Express
- The Delivery Group

The companies in a darker font colour are from the Experian MarketIQ database and are mapped on page 31. The companies in the lighter font colour are from other sources listed below. A list of top companies by local authority can be found in the Appendices.

Source: BvD Fame (2016), Experian MarketIQ (2018), C&W SEP (2017), Regeneris (2017) Cheshire and Warrington Value Proposition

C&W specialisms

Using ONS datasets, we identified that C&W has super strengths in:

- Manufacture of petroleum, chemicals and pharmaceuticals
- Manufacture of motor vehicles, trailers and semi-trailers

Combining this finding and the key sectors identified in the SEP, we have defined three ‘super strength specialisms’ for Cheshire and Warrington.

These are:

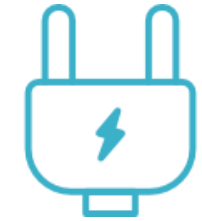
Manufacturing – including chemicals and automotive

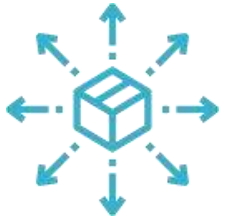
Energy & environment – including nuclear, green gases & hydrogen, and oil refining

Life Sciences – including a world class medicines discovery and manufacturing offer

Alongside these three specialisms, we have looked at the other key sectors identified in the SEP. Whilst these are not specialisms, the assets, businesses, and employment figures together suggest the potential of these sectors to deliver growth for the LEP.

The following pages cover each of the five key sectors in more detail. Due to the sector classifications in the SEP at SIC2 level, there is a small degree of duplication. This is outlined in the methodology.





Metro — Dynamics

Spotlight on the super strength specialism: Manufacturing

£7.7bn with **4.7%** average annual growth

Over **2x** as productive as GB

45,000 jobs

1,830 VAT registered businesses with **11.2%** growth

Highly specialised in:

Chemicals

Automotive manufacture and assembly (expertise in light weighting)

Large companies in Warrington, Crewe, Northwich-Knutsford-Wilmslow and Macclesfield

SIEMENS

BENTLEY

BAE SYSTEMS

TATA

TATA CHEMICALS LIMITED

Unilever

VAUXHALL

£13m from **Innovate UK & 3**

IS Challenge Fund grants to date

Export **£3.3bn** chemicals, **£1.8bn** machinery & transport, **£505m** manufactured goods

Close proximity to assets:

- International Centre for Advanced Materials
- Hartree High Power Computing Centre
- Virtual Engineering Centre at Sci-Tech, Daresbury

Part of:

- Made Smarter North West pilot

Figures for GVA and productivity (inc. chemicals and pharma) are for 2017, with growth 2012-17; number of jobs (inc. chemicals and pharma) are for 2016; number of businesses are for 2017, with growth 2012-17; exports are for 2015 with chemicals exports inc. pharma; Innovate UK is to date – September 2018. All sources are quoted on the relevant pages.

Metro — Dynamics

Spotlight on the super strength specialism: Energy and environment

26,605 jobs

2,390 VAT registered businesses

Highly specialised in:

- **Nuclear**
- **Green gases & hydrogen**
- **Oil refining**

£8.2m from **Innovate UK** & **11** IS Challenge Fund grants to date

Key assets:

- Stanlow oil refinery
- Birchwood Park Nuclear Cluster and Nuclear Engineering Design Centre
- Capenhurst Technology Park
- UK Geothermal Observatory – Cheshire Energy Research Field Site
- Thornton Science Park
- Proximity to Nuclear AMRC
- Nationally strategic energy hub at Protos
- Cheshire Energy Hub and Energy Innovation District
- £17m Intelligent Energy Systems Demonstrator
- 1/3 European uranium processed at Capenhurst
- UK's largest nuclear services cluster

Spotlight on nuclear

- 6,863 jobs
- Covering the lifecycle: planning, construction, maintenance & decommissioning
- Strong links to Sellafield
- Good supply chains
- Potential for small modular reactors

Large companies in Warrington and Ellesmere Port

Exova, United Utilities, ESSAR, wood., electricity northwest, PEEL Energy, urenco

Figures for number of jobs are for 2016; number of businesses are for 2017; Innovate UK is to date – September 2018 and refers to funding allocated to infrastructure systems, which is mainly for energy projects. All sources are quoted on the relevant pages.

Metro — Dynamics

Spotlight on the super strength specialism: Life sciences

6,000 jobs

150 VAT registered businesses

Highly specialised in:

A world class medicines discovery and manufacturing offer

Manufacture of **basic pharmaceutical products and preparations** is **5.6x** more specialised

Businesses clustered in Alderley Park and Hurdsfield

AstraZeneca, cyprotex, ThermoFisher SCIENTIFIC, Advanced Medical Solutions Group plc, SANOFI

£8.2m from **Innovate UK & 5**

IS Challenge Fund grants to date

Key assets:

- UK Medicines Discovery Catapult
- Alderley Park – 25 new medicines discovered at Alderley Park in last 60 years
- Hurdsfield
- BioHub Incubator at Alderley Park
- Cheshire Science Corridor
- Waters Corporation Mass Spectometry HQ
- Close proximity to:
  - UOM – 5th in UK for research power in medical sciences
  - Sci-Tech Daresbury MedTech Centre

Figures for number of jobs and specialisation are for 2016; number of businesses are for 2017; Innovate UK is to date – September 2018 and refers to funding allocated to health and life sciences. All sources are quoted on the relevant pages.

Bringing finance and business services to the forefront

69,125 jobs with **15.2%** employment growth

£3.9bn GVA with **20.1%** growth

5,060 VAT registered businesses

Finance & insurance

15% less productive than GB

Specialised in:

Financial service activities, especially banking, credit provision and other services

Large companies in all major towns

ASSURANT®

M&S Bank

BARCLAYS

ROYAL LONDON

LLOYDS BANK

Key assets:

- Hartree Centre
- Barclays UK Global Technology Centre
- Bank of America EMEA Global Technology Centre
- North West Financial Centre of Excellence
- Proximity to
  - Financial services in Manchester and Liverpool
  - HEIs – talent and R&D assets

Figures for number of jobs are for 2016, with growth 2011-16; GVA and productivity are for 2017, with growth 2012-17; number of businesses are for 2017. All sources are quoted on the relevant pages.

Unlocking the potential of the logistics and distribution sector

29,000 jobs with **45%** employment growth

1,685 VAT registered businesses with **67.7%** growth

23% less productive than GB

3.6% GVA growth 2012-17

Specialised in:

Warehousing & support activities for transport

Postal and courier services

Large companies mainly in Warrington with others in Crewe and rural areas

great bear

expert logistics
better by miles

Carrier
TRANSICOLD

The Delivery Group

Eddie Stobart

Key assets:

Omega Business Park

- £1bn, 575 acre mixed-use development
- Close to M6/M62 interchange
- Halfway between Liverpool and Manchester
- Companies include Brakes, Hermes, Travis Perkins, ASDA, Hut Group and Plastic Omnium

- Manchester Ship Canal
- Local multi modal sites
  - Port Cheshire
  - Port Warrington
  - Port Ince
- Good connectivity
  - M6, M56, M53
  - West Coast Mainline
  - Manchester Airport
  - Liverpool Airport

Figures for number of jobs are for 2016, with growth 2011-16; number of businesses are for 2017, with growth 2012-17; GVA and productivity for 2017, with growth 2012-17. Case study on Omega sourced from Warrington Borough Council. All sources are quoted on the relevant pages.

C&W links to national sector deals to date

Automotive

Transition to ultra-low and zero-emission vehicles; agile, innovative and cost competitive supply chains.

Potential links to C&W automotive sector, supply chain development; and lightweighting expertise

Life Sciences

New pioneering treatments and medical technologies; improving patient lives and driving economic growth; substantial investment in R&D

Links to C&W's world class medicines discovery and manufacturing offer

Nuclear

Cost competitive nuclear sector; new construction techniques and innovative approaches to manufacturing; reduce the costs of building new reactors; domestic supply chain capability and skills.

Links to the nuclear cluster, including supply chains

National Nuclear Laboratory – specialist nuclear R&D infrastructure key to enabling investments

Potential to lead the Clean Growth Grand Challenge

Maximise advantages for UK industry from the global shift to clean growth

Mission: Establish the world's first net-zero carbon industrial cluster by 2040 and at least 1 low-carbon cluster by 2030

- A strong energy sector with a specialised nuclear sector, specialisms in oil refining and emerging strengths in smart energy systems and green gases
- Expertise in energy systems and fuels and links to sensors, smart energy grids and electric vehicles
- Access to a variety of renewable energy sources within a relatively small geographical area
- The infrastructure to distribute energy locally and nationally
- Energy demand already high and likely to grow from manufacturers and other energy intensive industries with new developments such as Square Kilometre Array project at Jodrell Bank, which will process more data in one day than is currently on the entire internet
- Potential to build on work developing on the Energy Innovation District (EID) to provide secure, low carbon and lower costs energy. It is the blueprint for how a co-ordinated energy strategy can support a modern industrial strategy and encourage global investment.
- EID comprises an existing cluster of energy related industry, including large scale energy assets, energy intensive industries, the associated supply chain and a centre for Research and Development.
- **Opportunities:** district heating; thermal efficiency, low carbon heat sources, smart energy systems
- **Challenges:** less expertise in construction

Supporting UK development of other Grand Challenges

AI and data

Put the UK at the forefront of the AI and data revolution

Use data, AI and innovation to transform prevention, early diagnosis and treatment of chronic disease

Opportunities: Industry 4.0; Med Tech cluster and Daresbury as hubs

Challenges: skills; limited AI/ big data assets

Ageing society

Harness the power of innovation to meet the needs of an ageing society

Ensure people can enjoy at least 5 years of life by 2035, while narrowing the gap between rich and poor

Opportunities: fintech; manufacturing; future proofing homes; innovation in care; skills of our older work force

Challenges: skills; training for older workforce

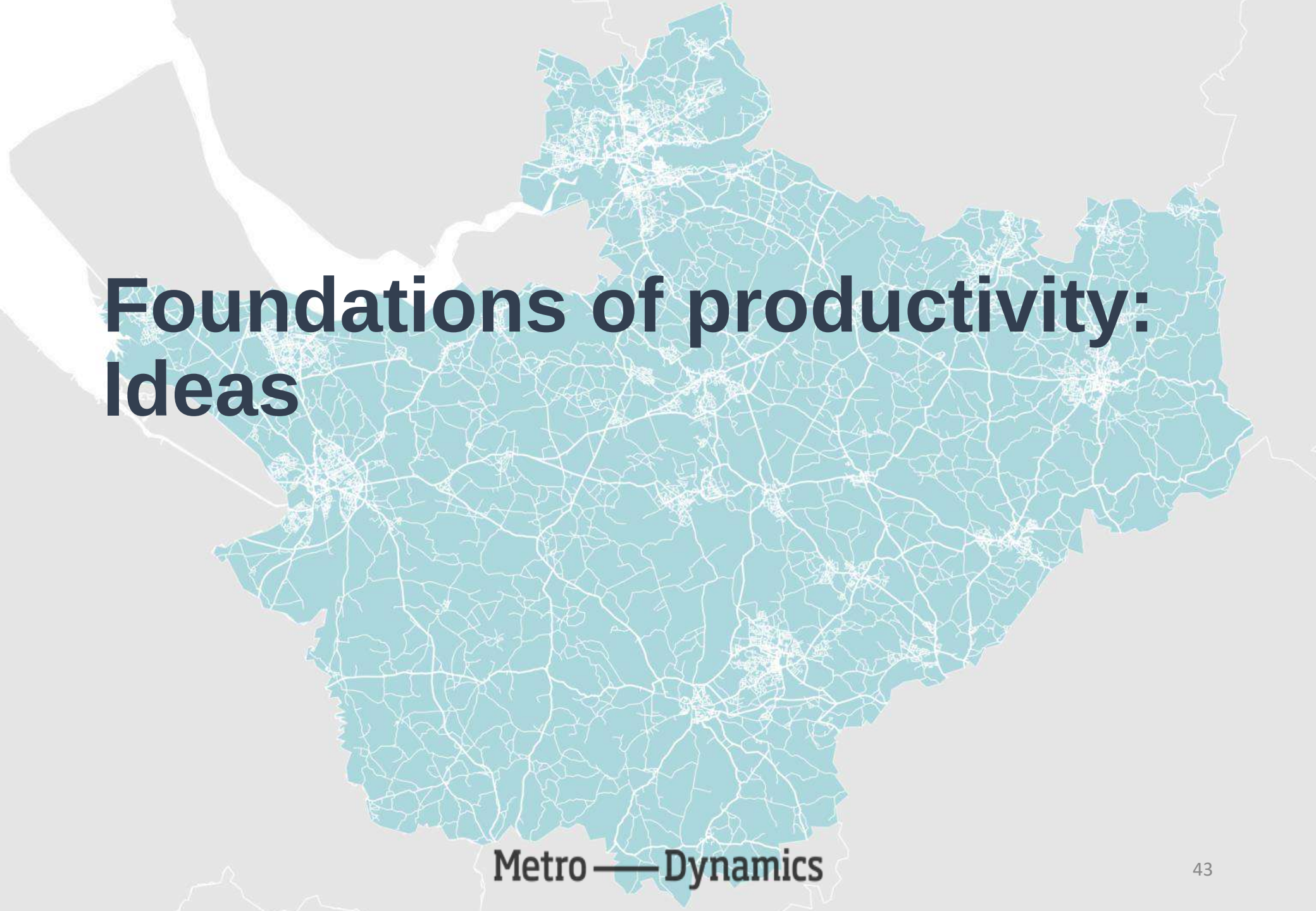
Future of mobility

Become a world leader in the way people, goods and services move

Put the UK at the forefront of the design and manufacturing of zero emission vehicles

Opportunities: smart networks; LTP 4.0; better transport information; new fuels (including biofuels); lightweighting

Challenges: threat to existing petro-chemicals industry; does not address congestion



Foundations of productivity: Ideas

Metro — Dynamics

Ideas – summary

Business led R&D - €1,876.40 spend on R&D per person – **93%** by businesses

7th highest LEP by business R&D spend in 2013

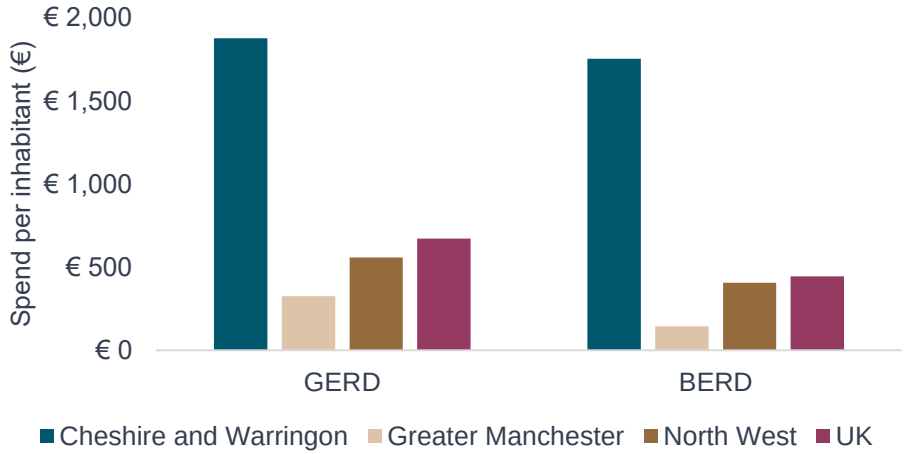
Innovate UK

£49.6m Innovate UK funding: **£13.0m** – manufacturing, **£8.2m** – health & life sciences, **£8.2m** – infrastructure systems (inc. energy)

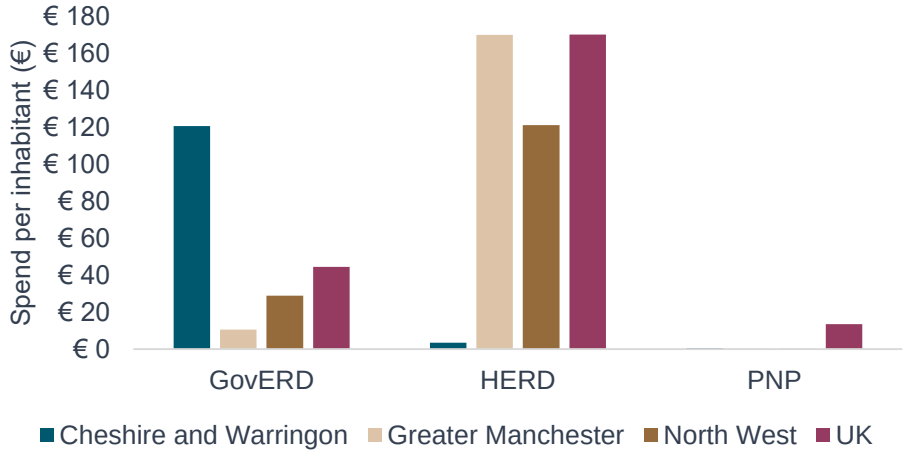
The **Cheshire Science Corridor** – home to the **highest concentration of science and technology assets** in the North of England

Research and development

Intramural R&D expenditure: GERD and BERD – spend per inhabitant (€, 2015)



Intramural R&D expenditure: GovERD, HERD and PNP – spend per inhabitant (€, 2015)*



Gross domestic expenditure on research and development (GERD) is a measure of research and development (R&D) activity. It refers to R&D performed in and funded by four sectors of the economy: business enterprise (BERD), government, including research councils (GovERD), higher education (HERD), and private non-profit organisations (PNP)*.

The top left graph shows GERD and BERD spend per inhabitant, whilst the bottom left graph shows GovERD, HERD and PNP spend per inhabitant for 2015. This shows the extent to which C&W invests and participates in innovation, and the channels through which it does this.

C&W has very high gross domestic expenditure on R&D of €1.7bn, which equates to €1,876.40 per inhabitant. C&W is the third highest NUTS 2 region in the UK, second only to Inner London – West (€3,688.30 per inhabitant) and Berkshire, Buckinghamshire and Oxfordshire (€2,010.20 per inhabitant). R&D spending in C&W is over triple the NW average (€557.10 per inhabitant) and 2.8 times higher than the UK (€671.70 per inhabitant) average. It exceeds spending in GM (€324.80 per inhabitant).

Over 93% of R&D expenditure in C&W is by businesses, totaling €1.6bn or €1,751.70 per inhabitant. This is much higher than the NW and UK averages of €406.90 and €443.60 per inhabitant, respectively.

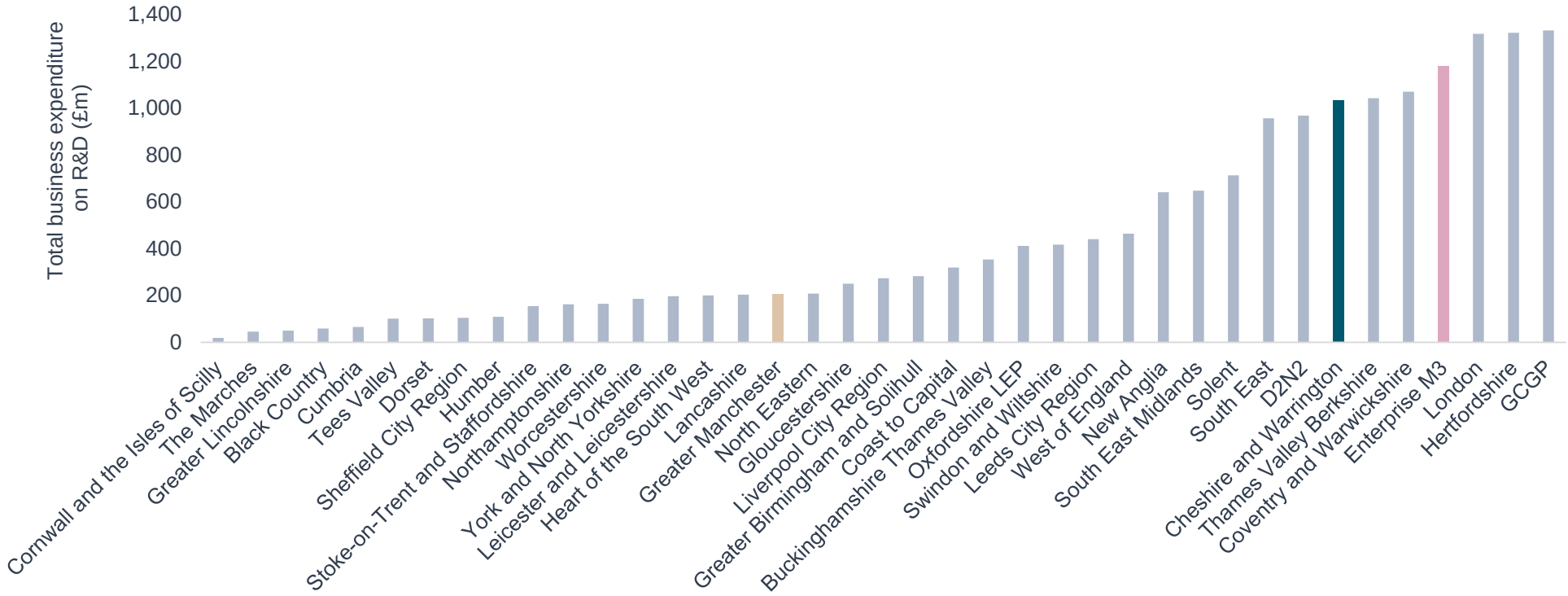
Government and HE spend on R&D per inhabitant is much lower for C&W and comparators. HE expenditure in C&W is particularly low (€3.50 per inhabitant). In contrast, GM and the UK have a per inhabitant spend of over €170. This is likely because C&W does not have a research intensive university, although there are four of the top ten STEM universities in the UK within 30 miles.

For C&W, GM and the NW, non-profit spend on R&D is very low (less than €1 per inhabitant) compared to the UK (€13.50 per inhabitant).

** The values for PNP for C&W, GM and the NW are below €1 and therefore appear to be very small.*

Source: Eurostat (2015)

Total business expenditure on research and development (2013)



The graph above shows the spending of businesses on R&D by LEP. This uses a different dataset to the one used in the previous page, which is only available for 2013.

C&W is ranked as the seventh highest LEP for total business expenditure on R&D. It is the only northern LEP within the top ten.

In 2013, businesses in C&W spent £1.0bn on R&D, which is 5.8% of total spending of all LEPs. This may be due to the AstraZeneca research facilities, which were still in C&W in 2013.

Businesses in EM3 spent more on R&D with a value of £1.2bn. EM3 has many innovative businesses, such as Boeing, Airbus, BAE Systems and Bombardier.

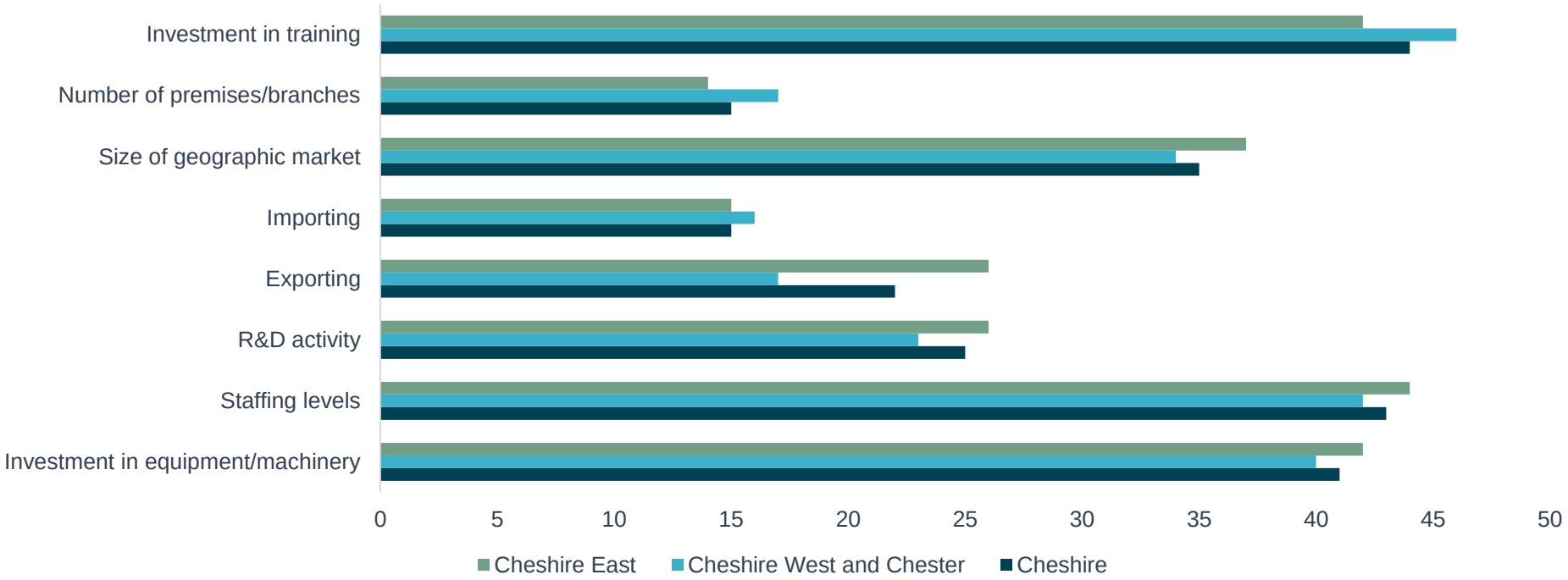
In contrast, expenditure on R&D by businesses in GM was relatively low at £206m.

Source: ONS Business Enterprise Research and Development by LEP (2013)

Metro Dynamics

Business expenditure on R&D

*Plans for key areas of activity in the next 12 months – to increase (2017)**



The graph above shows the plans for key areas of activity in the next 12 months for businesses which participated in the Cheshire Business Survey. Please note, this survey only includes businesses in Cheshire East and Cheshire West and Chester, as Warrington undertook its own business survey.

Overall for Cheshire, 25% of businesses are interested in increasing R&D activity over the next year, with 26% in Cheshire East and 23% in Cheshire West and Chester. Only 3% of total businesses plan to decrease R&D activity in the next year. This is 2% of businesses in Cheshire East and 4% in Cheshire West and Chester.

The survey also found that there is a willingness to increase R&D activity in micro businesses with 19% stating this is an area they wish to increase in the next 12 months. The share is higher for small (26%) and medium and large sized businesses (30%).

For those businesses which reported plans to increase or decrease R&D activity in the next 12 months, only 4% of those have decreased their plans, whilst 13% have increased their plans, because of the EU referendum.

** Excluding Warrington.*

Source: BMG Research (2017) Cheshire Business Survey

R&D tax credits

*Summary of R&D tax credits (2015-16)**

	Number of claims	Amount claimed (£m)	Expenditure (£m)
Cheshire East	215	£25	£240
Cheshire West and Chester	125	£5	£50
Warrington	80	<£5	£15
Cheshire and Warrington	420	£30	£305
Greater Manchester	1,140	£75	£530
North West	4,465	£220	£1,550
UK	42,885	£3,650	£28,685

R&D tax credits support companies working innovatively to advance science and technology. It is essential that projects advance the overall field, rather than just for the purpose of the business. Relief is made available for both SMEs and large companies.

Overall, in 2015-16, there were 420 claims made in C&W. Over half of these were in Cheshire East. The second highest number were made in Cheshire West and Chester (125 claims), followed by Warrington (80 claims). In all local authorities the majority of claims are made via the SME R&D scheme.

Interestingly in Cheshire East, £20m of the £25m claimed was made via Research and Development Expenditure Credit (RDEC), which is made available for large companies. In Cheshire East, only 15 of the 215 total claims account for 80% of the total amount of money claimed.

Companies in GM are more active in claiming R&D tax credits. C&W has just over one third of the number of claims to GM (1,140 claims) and 40% of the amount claimed by businesses in GM (£75m). Despite this, C&W has a higher average value per claim at £71,429 per claim, compared to £65,789 in GM.

** Unable to calculate for EM3 as data is only available at County/UA.*

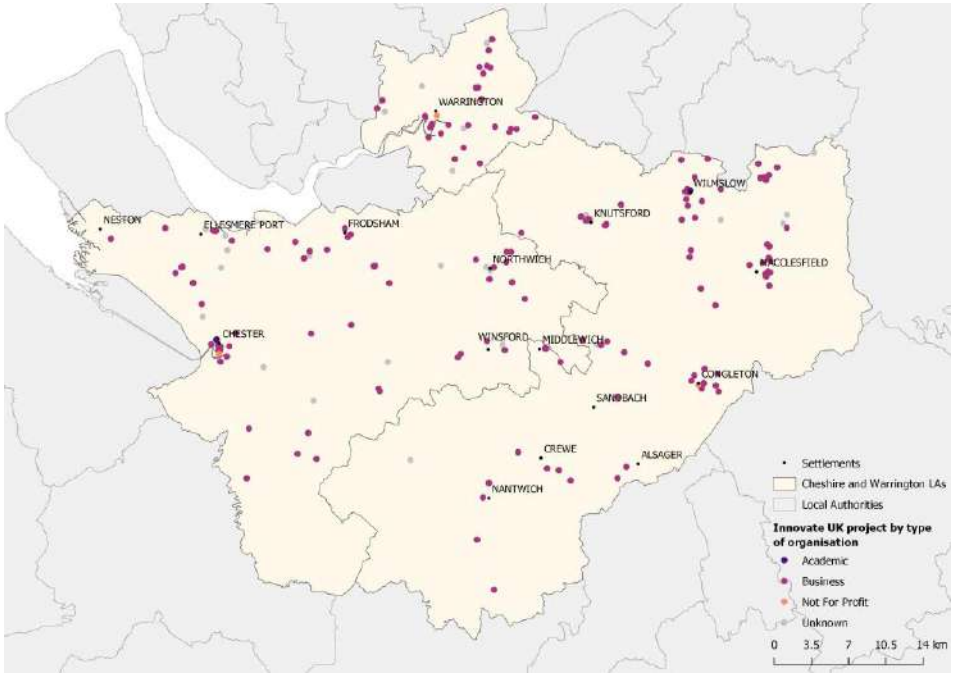
Source: HMRC Research and Development Tax Credits (2015-16)

Innovate UK spending

Innovate UK funding (to date – September 2018)

	Funding allocated (£m)	Funding spent (£m)
Cheshire and Warrington	£49.6	£35.1
EM3	£220.0	£160.2
Greater Manchester	£117.7	£84.3
North West	£270.2	£198.6

Innovate UK projects by type of organisation (to date – September 2018)



Innovate UK, the innovation agency for the UK, is part of UK Research and Innovation. It works with individuals, companies and other organisations to drive innovation in science and technology with the aim of growing the economy.

The table on the left shows a summary of funding allocations and spending for C&W, its LEP and regional comparators to date.

C&W has been allocated £49.6m of spending, which represents 18.4% of the total allocation to the NW. The NW in total has received £270.2m, which is 3.7% of total Innovate UK funding. It is the third lowest receiving region after Wales (£173.2m) and Northern Ireland (£79.6m). The allocation of funding to C&W is relatively low compared to EM3 (£220m) and GM (£117.7m).

The map on the left illustrates Innovate UK projects in C&W by the type of organisation receiving the funding. This is categorised by academic institutions, businesses and not for profit organisations, although there are some projects where this information is missing from the dataset.

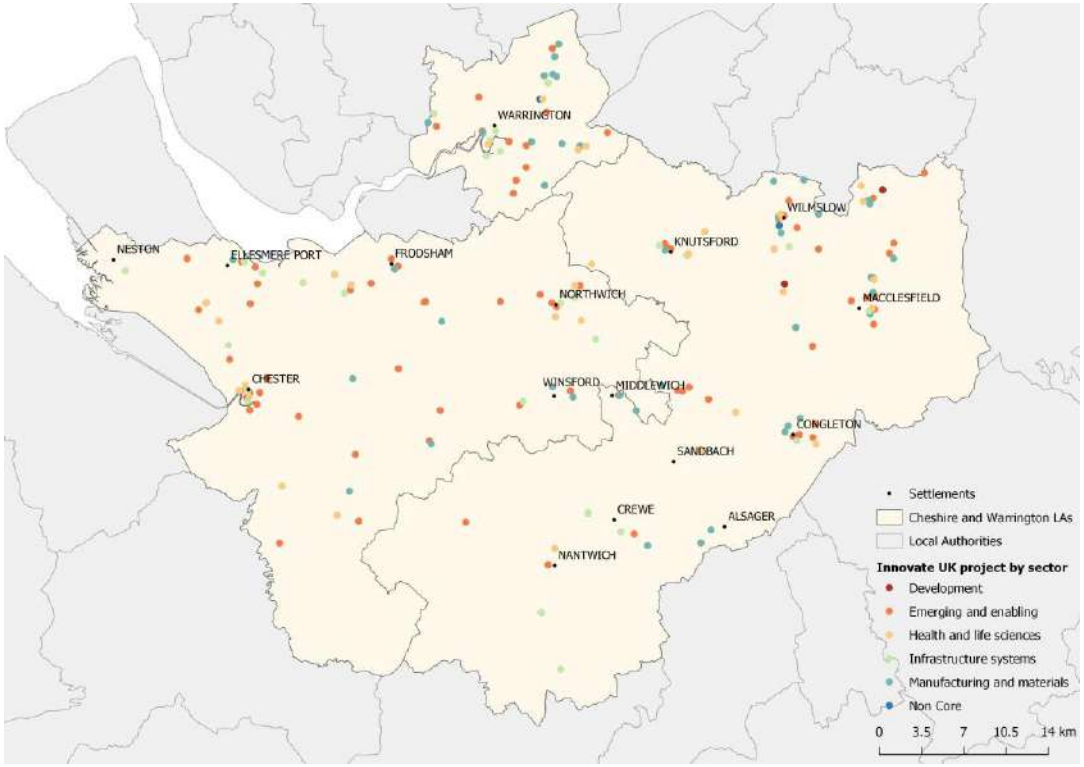
Projects tend to be in larger urban areas with concentrations in Chester, Macclesfield and Warrington.

In total (excluding withdrawn projects), there have been 491 Innovate UK projects to date (September 2018) in C&W. Over 88% of these projects have been for businesses (434 projects). Out of these projects, over half have been for micro businesses (223 projects). A further 26.0% have been for large businesses (113 projects), followed by 14.3% to small businesses (62 projects) and the remaining 8.3% to medium businesses (36 projects).

A further eight projects have been to academics, mostly to the University of Chester for energy and food related projects. Five projects in not for profit organisations have been funded by Innovate UK, which include Cheshire West and Chester Council and Warrington Borough Council.

Source: Innovate UK (2018)

Innovate UK projects by sector (to date – September 2018)



Innovate UK sector definitions

Development – includes cross-border projects

Emerging and enabling technologies – early stage, cross cutting and broad scope innovation

Health and life sciences – agriculture, food and healthcare, including precision medicine and biosciences

Infrastructure systems – energy, transport and digital connectivity

Manufacturing and materials – using digital technologies to increase productivity, supporting automotive and aerospace, and early stage concepts

** Please note that these figures are conservative as a lot of projects had missing data.*

The map on the left categorises Innovate UK projects in C&W by sectors, as defined by Innovate UK (see box).

Manufacturing and materials projects are concentrated in Ellesmere Port, Crewe, Macclesfield, Knutsford-Wilmslow and Warrington. Funding amounts to £13.0m (26.2% total funding). Recipients include large manufacturing companies Bentley Motors, C-Tech Innovation, Novelis and Urenco. Projects relate to advanced materials, high-value manufacturing and low carbon vehicles. In the rural south west, Great Bear Distribution was funded for a low emission freight project.

Projects in health and life sciences are concentrated in Chester and around Macclesfield, totalling £8.2m of funding (16.5% total). Specifically, projects in health, life sciences and bio-tech total £4.4m. Companies with funding in this sector include Absynth Biologics, Cellular Therapeutics and NeuDrive. In the rural south west of C&W, food projects have been funded.

There has been £8.2m in grants allocated in infrastructure systems with projects mainly concentrated in the north west of C&W around Ellesmere Port, as well as Chester and Warrington. Recipients include large companies such as Wood, the National Nuclear Laboratory, Nuvia, Sellafield and United Utilities.

Companies and organisations in C&W have successfully won 25 Industrial Strategy Challenge Fund projects, totalling £7.3m, relating to healthcare, robotics, energy and materials.

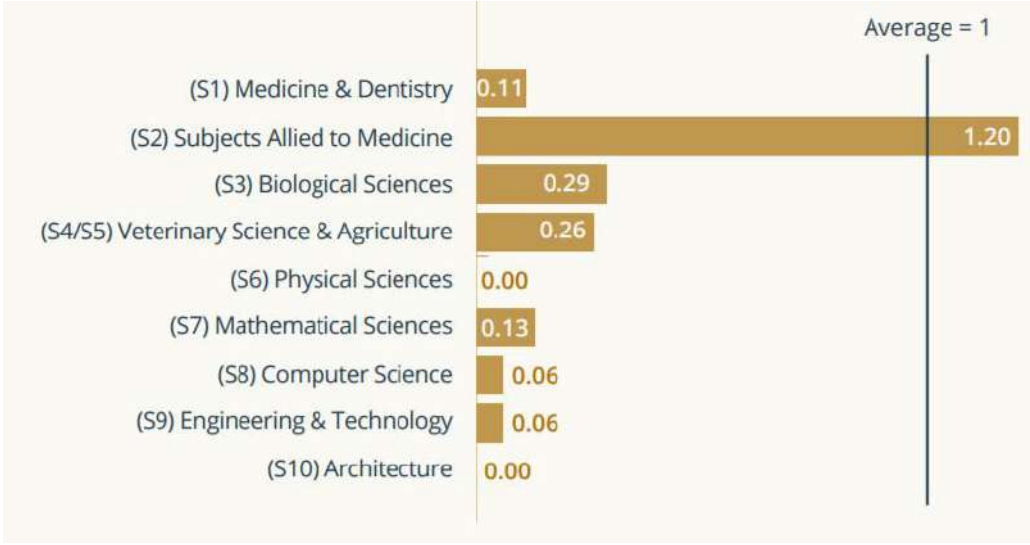
Aptus Clinical received £463,196 as part of a partnership with The Christie NHS Foundation Trust, Manchester University Foundation Trust, The Christie Pathology Partnership, Cellular Therapeutics and University of Manchester to scale-up advanced therapies for patients in Manchester.

In robotics, successful recipients included Nuvia, the National Nuclear Laboratory and Wood. Energy revolution projects have been granted to Stopford Projects and C-Tech Innovation. Chemicals company PQ Silicas and Bentley Motors are amongst successful bidders for manufacturing funds.

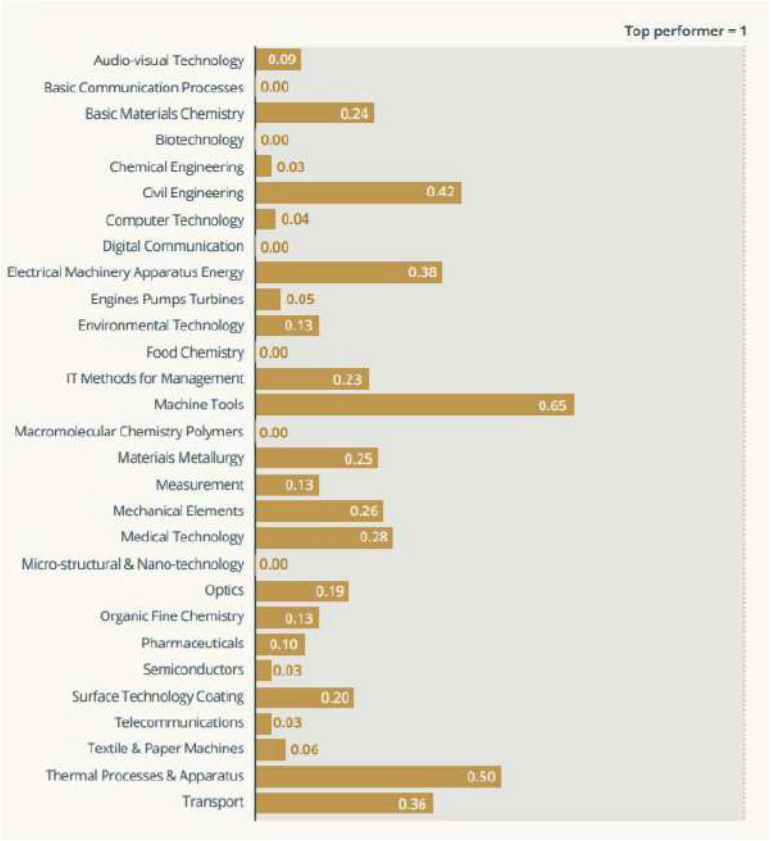
Source: Innovate UK (2018)

Smart specialisation

Indicator of staff submitted involvement in innovative research production to Research Excellence Framework (REF)



Number of inventors on patents across various technology areas



These two charts are taken from the Smart Specialisation Hub's profile on C&W. This document identifies sectoral and innovation capabilities using benchmarking with the performance of other LEPs.

The left hand chart shows that higher education staff in C&W have strengths in medicine related subjects, as C&W has a score of 1.2, compared to the average of 1. This is the highest scoring subject in C&W. This emphasises the shortage of research intensive universities in C&W.

The right hand chart shows a score for the number of inventors on parents across a variety of science and technology areas where 1.0 is the top performer. The highest score C&W has is for machine tools (0.65), followed by thermal processes and apparatus (0.50). This shows that there are relatively low levels of patent activity in C&W.

Source: Smart Specialisation Hub (2018) LEP Profile: Cheshire and Warrington

Science and innovation audits

Mapping C&W strengths in different sectors

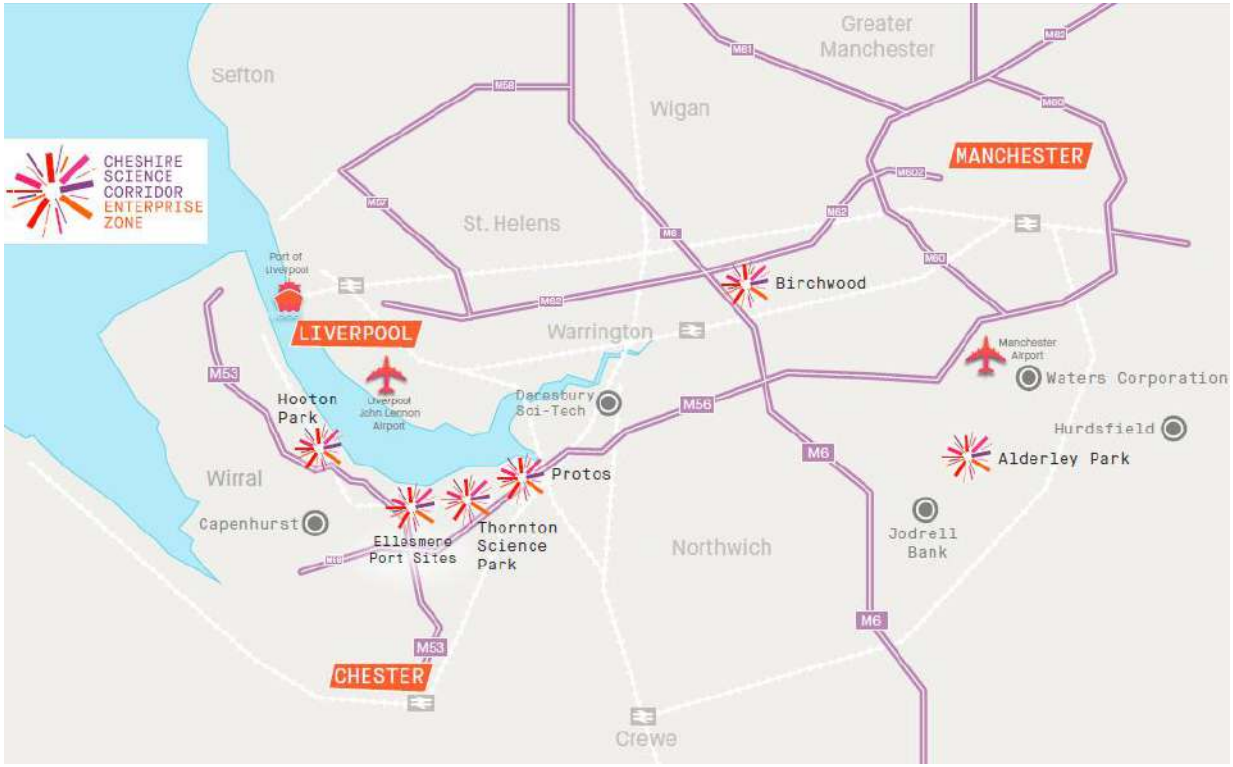
	Life Science / Pharma	Energy	Chemicals	Advanced Engineering	Fin Tech	Agri-Tech / Food
Strategic Economic Plan	■	■	■	■	■	
Northern Independent Economic Review	■	■	■	■	■	■
GM and East Cheshire Science and Innovation Audit	■	■	■			
LCR+ Science and Innovation Audit	■		■			
North West Nuclear Arc Science and Innovation Audit		■				
Northern Powerhouse in Health Research Science and Innovation Audit	■					
North West Coast Arc Eco-Innovation Science and Innovation Audit		■				

The diagram above illustrates the cross over of various strands of work, including five science and innovation audits, with our sectors.

Source: CWLEP (2018)

Cheshire Science Corridor

Map of the Cheshire Science Corridor



The map to the left shows the main sites along the Cheshire Science Corridor. It is comprised of:

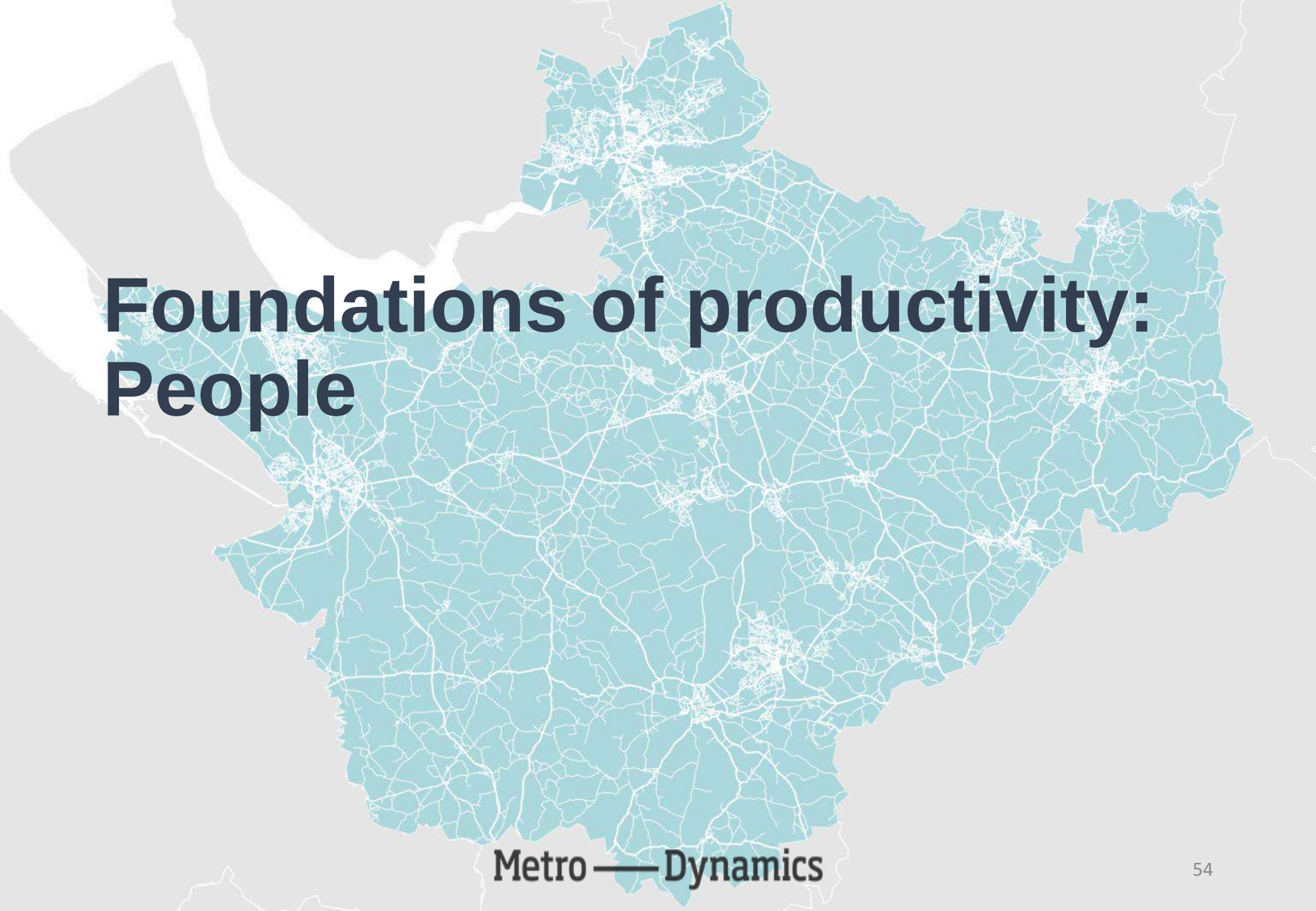
- 9 business parks
- 2 Enterprise Zones
- 11 universities within 30 miles of corridor
- 2 airports within 30 minutes
- Easy access to Manchester and Liverpool city centres

Below is a list of key assets and achievements:

- Hurdsfield produces 1% of all UK exports (home to AstraZeneca manufacturing plant)
- 25 new medicines discovered at Alderley Park in last 60 years (1 every 2.4 years)
- 1/3 of all European uranium processed at Capenhurst
- 5% of UK energy consumed in Ellesmere Port
- UK's largest nuclear services cluster
- The Square Kilometre Array (SKA) project at Jodrell Bank will process more data in one day than is currently on the entire internet

Source: Cheshire Science Corridor (2018)

Foundations of productivity: People



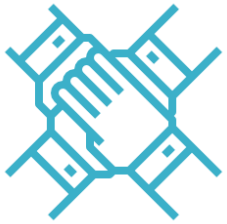
Metro — Dynamics

People – summary

Almost **927,000** residents with **over 40%** in Cheshire East – **2.2%** growth (**3.7%** nationally)

An older age profile with **over 21%** of residents aged 65 and over

A highly skilled workforce with **44%** of working age people with **NVQ Level 4+** with high demand for **STEM** and **digital** skills in key sectors



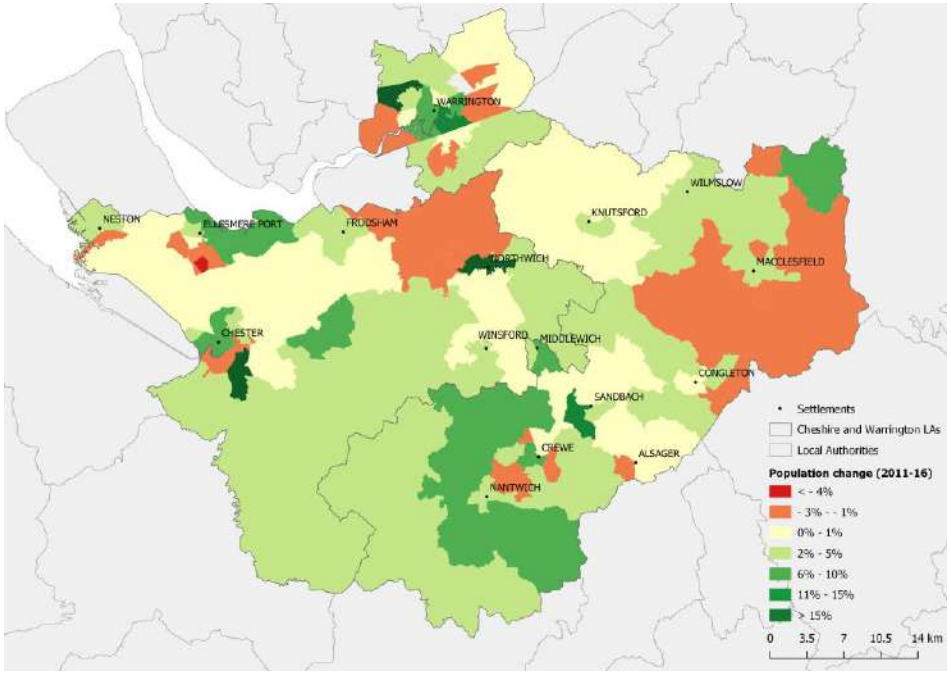
Inclusive growth challenges with **22.4%** of workers earning **below the living wage**

Population change

Population change by local authority (2012-17)

	Population (2017)	Population growth (2012-17)
Cheshire East	378,846	1.7%
Cheshire West and Chester	337,986	2.4%
Warrington	209,704	2.9%
Cheshire and Warrington	926,536	2.2%
Average population growth: EM3 = 3.2%, GM = 3.6%, NW = 2.5%, UK = 3.7%*		

Population change (2011-16)



There are almost 927,000 people living in C&W. Over 40% of residents live in Cheshire East.

Between 2012 and 2017, C&W experienced lower population growth (2.2%) than the UK average (3.7%). It also grew slightly less than the NW average (2.5%). Population growth in GM at 3.6% was similar to the UK average, whilst growth in EM3 was slightly lower at 3.2%. The highest population growth was in Warrington (2.9%), but this is still lower than the national average.

The map to the left depicts population change between 2011 and 2016 in C&W, as local area data is only available up to 2016. Much of the map, particularly parts of southern and eastern Cheshire and the outskirts of Warrington have growth of 2-5%. Parts of northern Cheshire between Chester and Ellesmere Port, surrounding Knutsford and Sandbach, and north east of Warrington have very low growth of 0-1%.

The map also shows areas of decline in south Chester, south Crewe, south Ellesmere Port, south and east of Macclesfield, east of Frodsham and parts of Warrington. In these areas there has been decline of between -3% and -1%. This sharply contrasts with high growth (> 6%) in areas directly adjacent to areas of decline, such as in Chester, Crewe, Northwich and Warrington.

Analysing overall figures of population change in the five principal towns shows that all have grown at a lower rate than the UK between 2011 and 2016. Warrington has grown the most (3.2%), followed by Chester (2.5%). Crewe has grown by 1.4%, whilst Ellesmere Port and Macclesfield have grown at 0.4% and 0.3%, respectively.

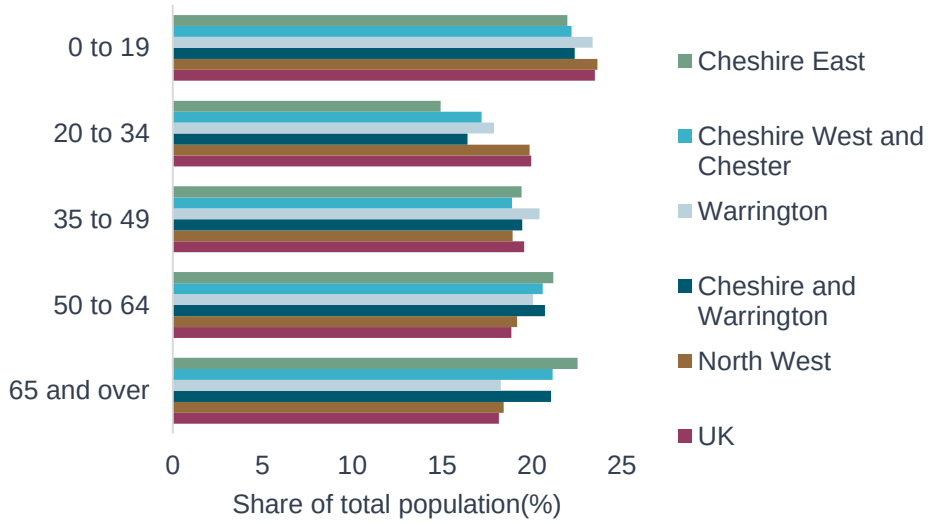
** Geography of EM3 calculated at full extent of districts.*

Source: ONS Population Estimates (2012-17), ONS MSOA Mid-Year Population Estimates (2011-16)

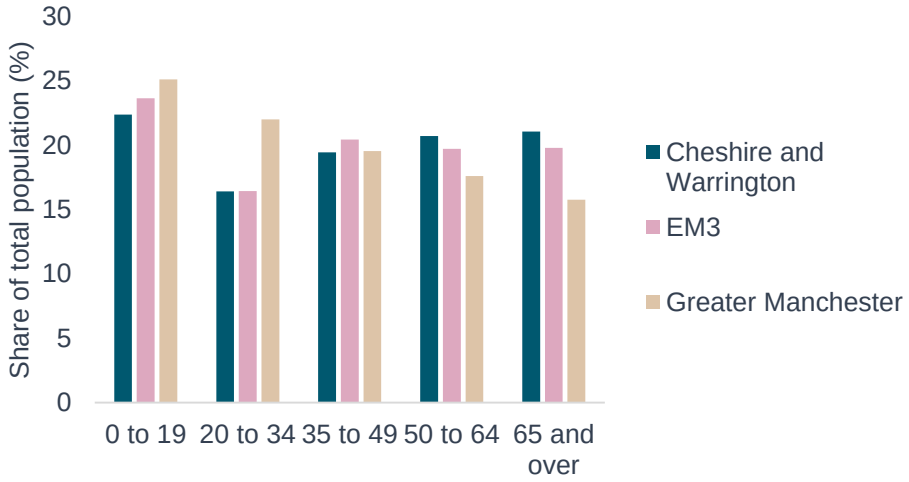
Metro — Dynamics

Age profile

Age structure (2017)



Age structure for LEPs (2017)



Ratio of retirement age to working age residents (2017)

	Ratio of retirement age to working age residents
Cheshire East	0.38
Cheshire West and Chester	0.35
Warrington	0.29
Cheshire and Warrington	0.35
EM3 = 0.32, GM = 0.25, NW = 0.29, UK = 0.29*	

Compared to the NW and UK, C&W has an older population. There is a higher proportion of residents at retirement age. Over 21% of C&W residents are aged 65 and over compared to 18.4% in the NW and 18.2% in the UK. Of the five principal towns, Macclesfield has the highest proportion of residents in this age bracket at 19.7%, whilst Warrington town has the lowest (17.2%).

Equally, there is a lower proportion of younger residents in C&W with 22.4% of residents aged 0 to 19 compared to 23.6% regionally and 23.5% nationally. This is more pronounced for the 20 to 34 age group, which represents 16.4% of C&W's population compared to 19.9% in the NW and UK.

Comparing C&W to EM3 and GM shows that it has a similar age profile to EM3, but a much older population than GM.

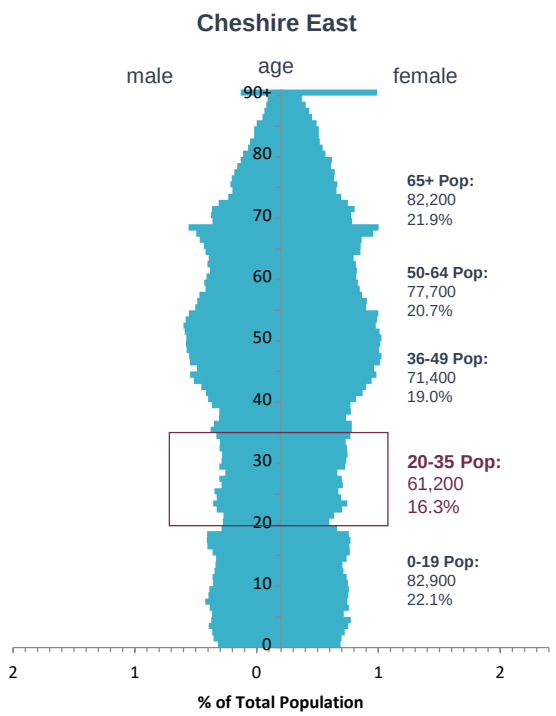
The age profile of C&W is reflected in the higher ratio of retirement age to working age residents. In C&W, the ratio of retirement age to working age residents is 0.35, compared to 0.29 in the NW and UK. C&W also has a higher ratio than both EM3 (0.32) and GM (0.25).

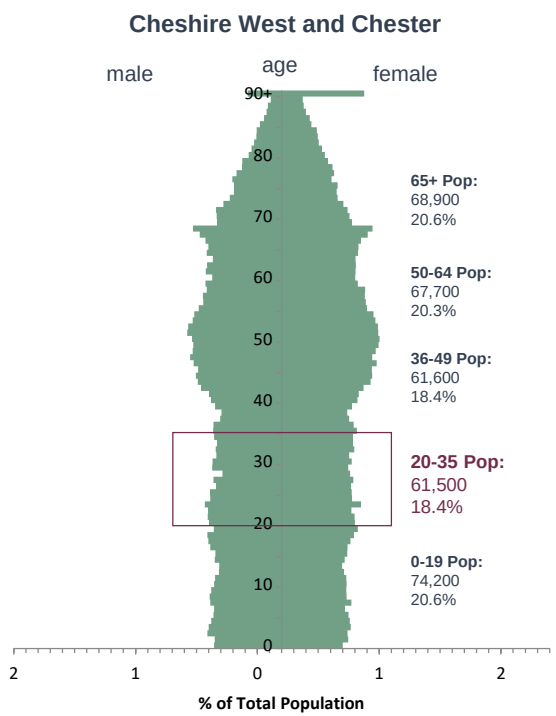
** Geography of EM3 calculated at full extent of districts.*

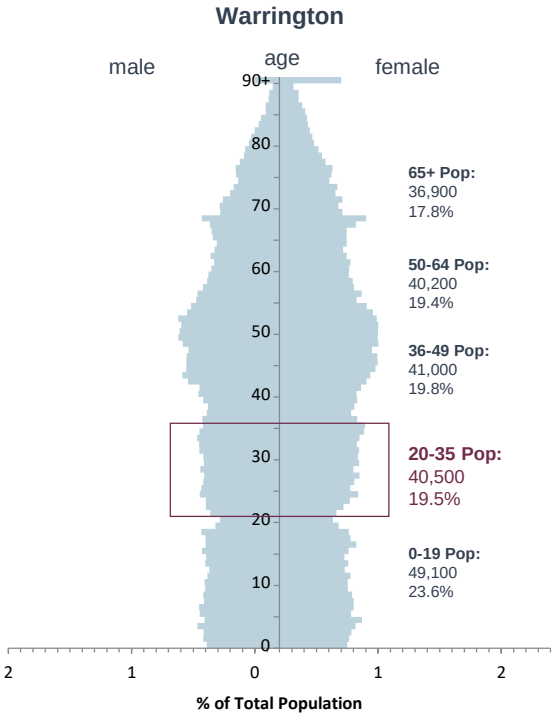
Source: ONS Population Estimates (2017)

Detailed age profiles

Population pyramids (2015)







The charts above present more detailed population pyramids for the three local authorities i.e. the population distribution by different age groups. Please note, this is using 2015 data, as this figure is taken from the SEP evidence base.

All three local authorities have a relatively old population, with the highest shares of people aged between 45 and 55, and a spike at retirement age.

In turn, there is a decline in number of residents when young people hit the ages of 18/19 in Warrington and Cheshire East, suggesting that they leave the area. This pattern is less evident in Cheshire West and Chester, perhaps due to the presence of a university.

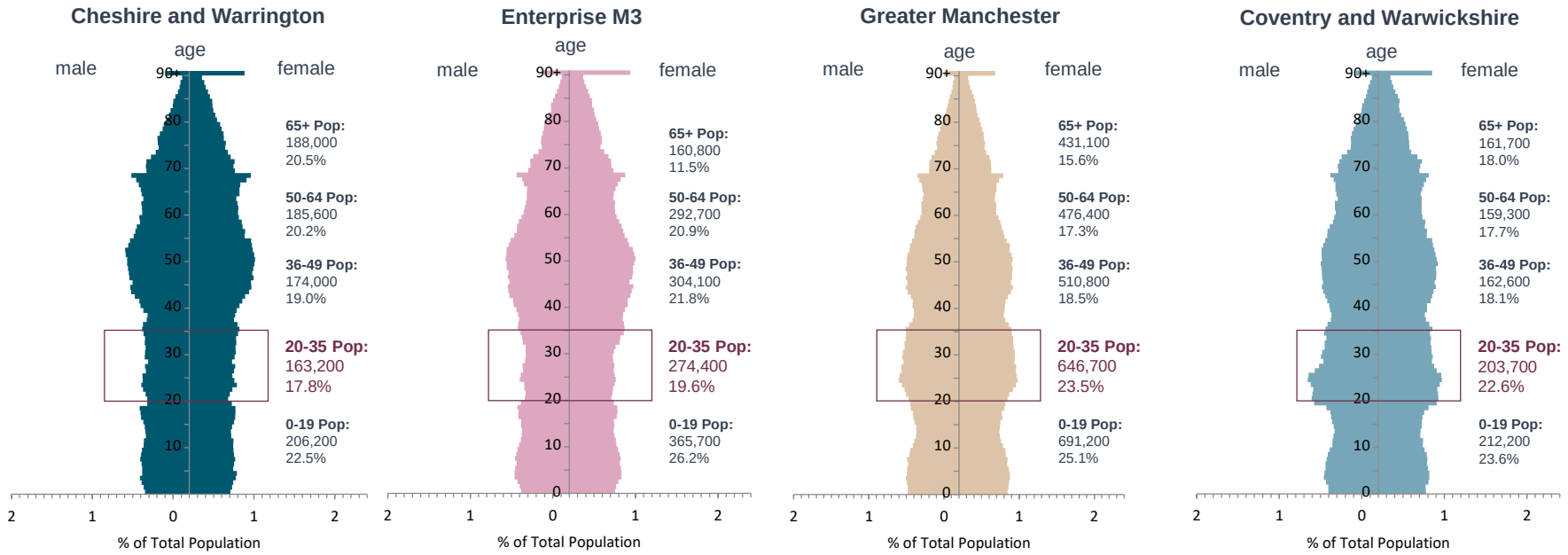
Moreover, there is a relatively small proportion of 20-35 year olds across all three local authorities – and more notably in Cheshire East – when compared to the national average (21.5%).

Source: ONS Population Estimates (2015)

Metro — Dynamics

Detailed age profiles – LEP comparators

Population pyramids for LEPs (2015)



Pop. growth 2005-15: **4.2%**
Total Population: **917,000**

Pop. growth 2005-15: **7.8%**
Total Population: **1,527,000**

Pop. growth 2005-15: **7.5%**
Total Population: **2,756,200**

Pop. growth 2005-15: **9.4%**
Total Population: **899,400**

The charts above show the detailed population pyramids for C&W and LEP comparators again using 2015 data from the SEP evidence base. The figures show relatively low levels of population growth and higher population ageing in C&W.

Population growth over the last decade is considerably lower than the UK average (7.8%) and particularly low when compared to Coventry and Warwickshire, which has somewhat similar size and characteristics.

C&W has the smallest proportion of 20 to 35 year olds compared to the selected LEPs, significantly below the figures for the UK as a whole (21.5%).

C&W would need an additional 52,000 residents aged 20 to 35 to achieve the same profile of younger people as GM. It would need 44,500 new residents between 20 and 35 in order to have a similar profile to Coventry and Warwickshire, although the latter has a large university campus which might contribute to a high share of young residents.

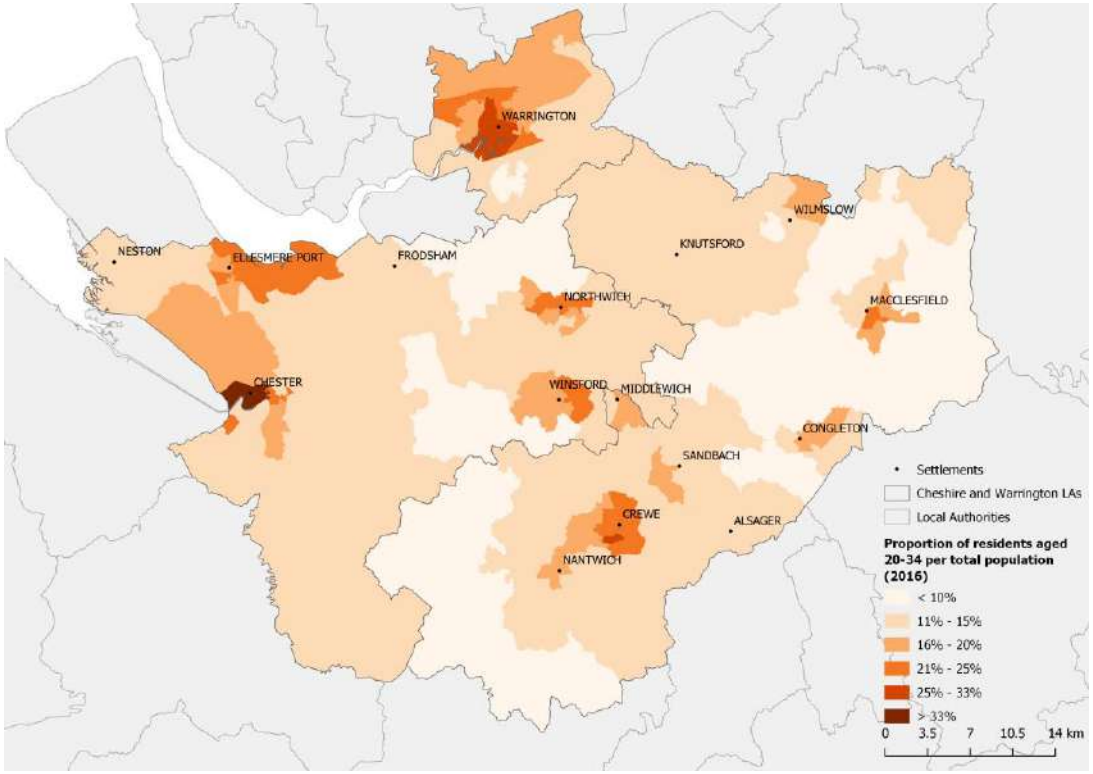
Population pyramids for 2039 population pyramids for C&W and LEP comparators can be found in the Appendices.

Source: ONS Population Estimates (2015)

Metro — Dynamics

Spatial distribution of young people

Proportion of residents aged 20-34 per total population (2016)



The map to the left illustrates the spatial distribution of young people across C&W. The proportion of residents aged 20 to 34 per total population is shown by mid-level super output area (MSOA) with the darker colour representing a higher proportion of this age group.

There is a low proportion of 20 to 34 year old residents in much of the rural parts of Cheshire. Some areas have less than 10% of residents in this age group.

There are typically a higher proportion of young residents living in towns with pockets of 21 to 25% of this age group in Macclesfield, Crewe, Northwich, Winsford and Ellesmere Port. The highest proportion of young residents live in the centre of Warrington (25-33%) and Chester (>33%), which is likely to relate to the location of the University of Chester campuses.

The high concentration of young people in central Chester is reinforced when analysing the overall proportion of 20 to 34 year old residents within the full boundary of Chester. Almost 24% of residents fall within this age bracket. This reflects the findings of the cluster on page 124, which showed Chester has pockets of young and qualified urban residents.

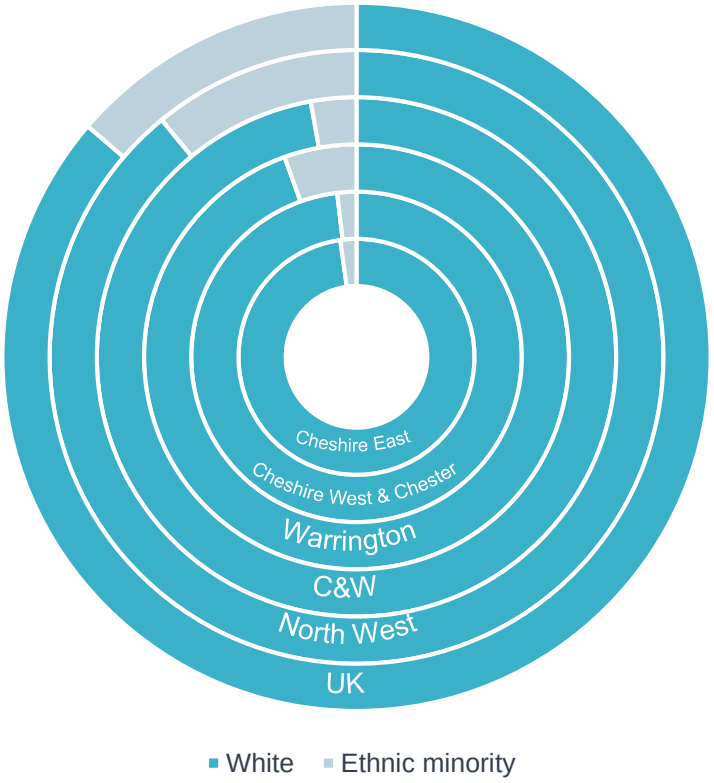
Interestingly, this is closely followed by Crewe where 20.3% of residents are aged 20 to 34. Crewe also has the highest proportion of residents aged 0 to 19 (24.4%), showing that the town has a young population.

Macclesfield, with its higher proportion of retirees, has the lowest proportion of residents in the 20 to 34 age bracket (16.4%).

Source: ONS MSOA Mid-Year Population Estimates (2011-16)

Ethnicity

Total population by ethnicity (2017)



The pie chart to the left shows total population by ethnicity (white and ethnic minority) for C&W and its local authorities compared to the NW and UK.

C&W has a largely white population (97.2%), which is significantly higher than the UK (86.3%) and NW averages (89.0%).

Within C&W, Cheshire West and Chester has the highest proportion of white residents (98.1%), closely followed by Cheshire East (97.8%). Warrington has a slightly more diverse population with 5.5% ethnic minorities, which is still significantly lower than the national and regional averages.

EM3 has lower proportion of white residents than C&W (91.6%), but still higher than average. In contrast, GM has a very diverse population with 18.6% of its residents being of an ethnic minority, which far surpasses regional and national averages.

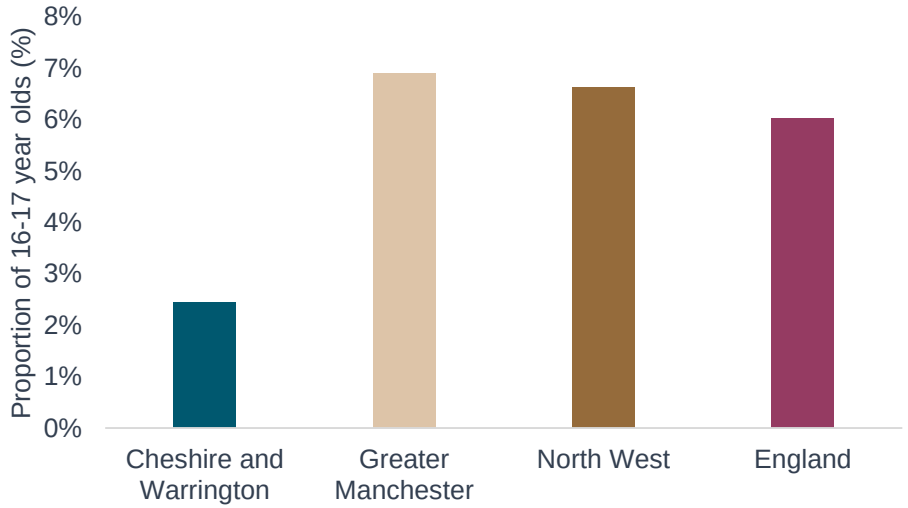
Source: ONS Annual Population Survey (2017)

Employment profile

Employment and economic activity of residents aged 16-64 (2017)

	Economic activity rate	Employment rate	Unemployment rate
Cheshire East	76.9%	75.9%	1.3%
Cheshire West and Chester	78.2%	73.6%	5.9%
Warrington	80.2%	77.4%	3.4%
Cheshire and Warrington	78.1%	75.4%	3.5%
Greater Manchester	75.9%	72.0%	5.0%
EM3	83.1%	81.3%	2.1%
North West	76.5%	73.0%	4.5%
UK	78.2%	74.7%	4.5%

*Proportion of 16-17 year old residents not in education, employment or training (NEET) inc. those whose activity not known (2016)**



The table above shows economic activity, employment and unemployment rates to help identify inclusive growth challenges.

Economic activity indicates the size of the labour market. Economically inactive people, including students, the long-term sick and carers, are outside of the labour market, as they are neither in employment or are unemployed.

The economic activity rate in C&W (78.1%) is similar to the UK. By being higher than the NW (76.5%), this shows that a high proportion of people are involved in the labour market, especially in Warrington (80.2%).

Unemployment rate is a measure of the health of an economy, as it responds to recession and growth. Unemployed people are those without a job who have been actively seeking work in the past four weeks and those who have found a job and are waiting to start.

The unemployment rate in C&W (3.4%) is lower than the regional and national average of 4.5%, whilst the employment rate (75.4%) is higher than average for the NW (73.0%) and UK (74.7%).

Within C&W, there is some variation. Cheshire East has a very low unemployment rate (1.3%), but has the highest levels of economic inactivity. Cheshire West and Chester has the highest unemployment rate (5.9%) and the lowest employment rate (73.6%). C&W performs better than GM but worse than EM3 for all indicators.

In September 2018, there were 11,785 claimants, approximately 25% of which are aged 50 years and over, compared to 26.3% in the UK and 23.6% in the NW. For those residents claiming Employment and Support Allowance (ESA), a study from 2017 showed that 47% had mental and behavioral disorders.

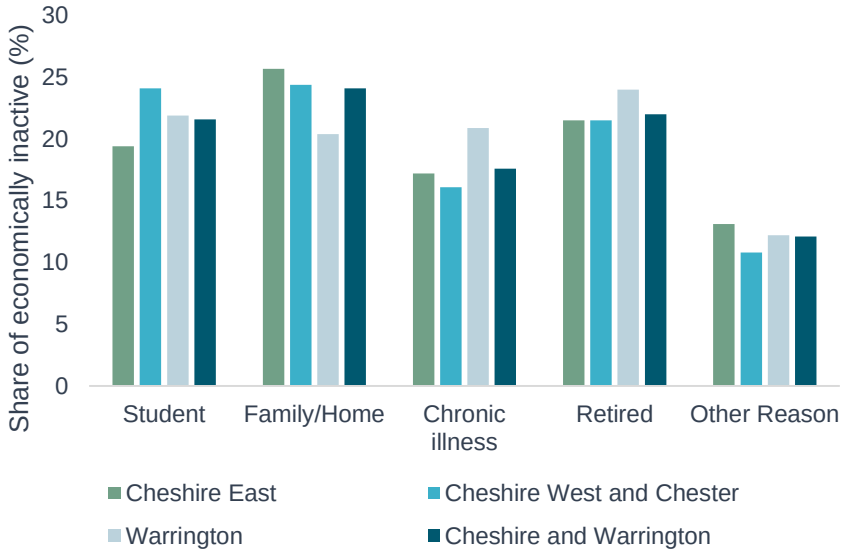
The graph above depicts the share of 16-17 year old residents not in education, employment or training (NEET), including those whose activity is not known. C&W (2.4%) has a lower proportion of NEETs than GM (6.9%), the NW (6.6%) and England (6.0%). There is little variation between local authorities.

** Unable to calculate for EM3 as data is only available at County/UA.*

Source: ONS Annual Population Survey (2017), DWP (2018), DfE (2016)

Economically inactive population

Percentage of economically inactive residents by reason – C&W (2017)



Percentage of economically inactive residents by reason – C&W and comparators (2017)

The left hand chart compares the reasons for economic inactivity in C&W with the three local authorities.

The primary source of economic inactivity in C&W is caused by residents choosing to remain at home for family reasons (24.1%). This is also the main cause of economic inactivity in Cheshire East (25.7%) and Cheshire West and Chester (24.4%). This is similar to the UK.

Warrington has a lower share of economic inactive residents for this reason, but a greater proportion of early retirees (24.0%) than the other two local authorities. Warrington also has the highest level of economic inactivity due to chronic (long-term) illness (20.9%), which could contribute to the high number of early retirees.

The right hand chart compares the reasons for economic inactivity in C&W, its LEP comparators, the NW and UK.

C&W has a lower percentage of residents in education (21.6%) compared with the NW (24.2%), UK (27.1%), EM3 (23.8%) and GM (26.1%). However, the proportion of early retired residents (22.0%) far exceeds the national average (13.1%). This may be a lifestyle choice reflecting the affluence of the area and the clusters of older, established residents as shown on page 124.

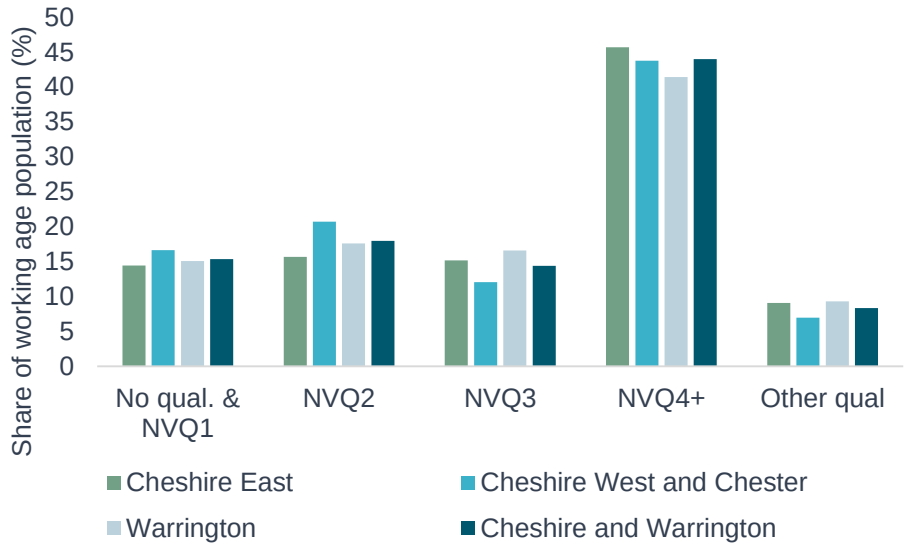
The proportion of residents who cannot work due to chronic illness in C&W (17.6%) is lower than levels in GM (25.9%), the NW (26.5%) and UK (22.3%). This suggests that it is not the primary reason for the area's high rate of early retirement.

Analysis of gender differences in reasons for economic inactivity find no major disparities between C&W and the UK or other LEPs.

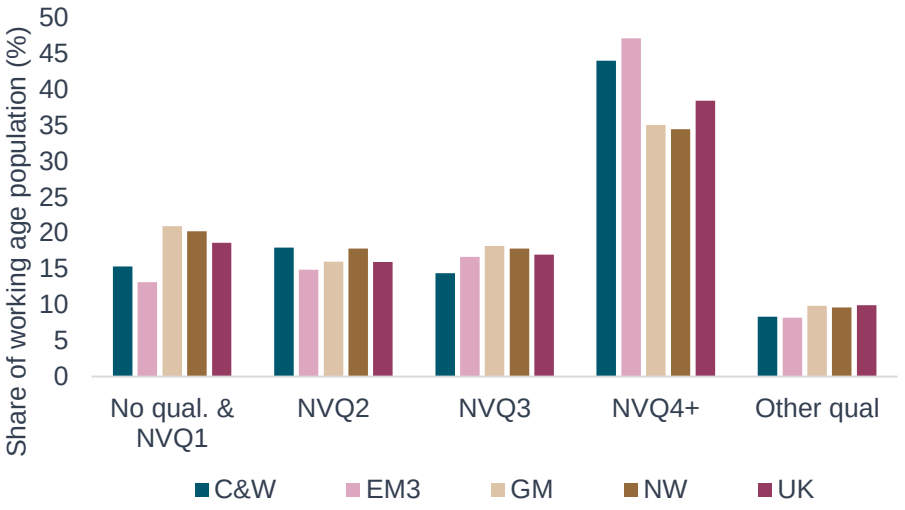
Source: ONS Annual Population Survey (2017)

Skills profile

Qualifications profile in Cheshire and Warrington (2017)



Qualifications profile for Cheshire and Warrington and comparators (2017)



An analysis of qualifications within the LEP area as shown in the graphs above provides insight into the level of skills available in the employment base.

The graph on the left shows differences in the skills profile within C&W. Cheshire East has the highest skills levels with the highest proportion of residents with a further or higher education degree (45.7%) and the lowest proportion of residents with no or low skills (14.4%).

Warrington has the lowest proportion of residents with NVQ Level 4 or above (41.4%), although this is still higher than the UK average.

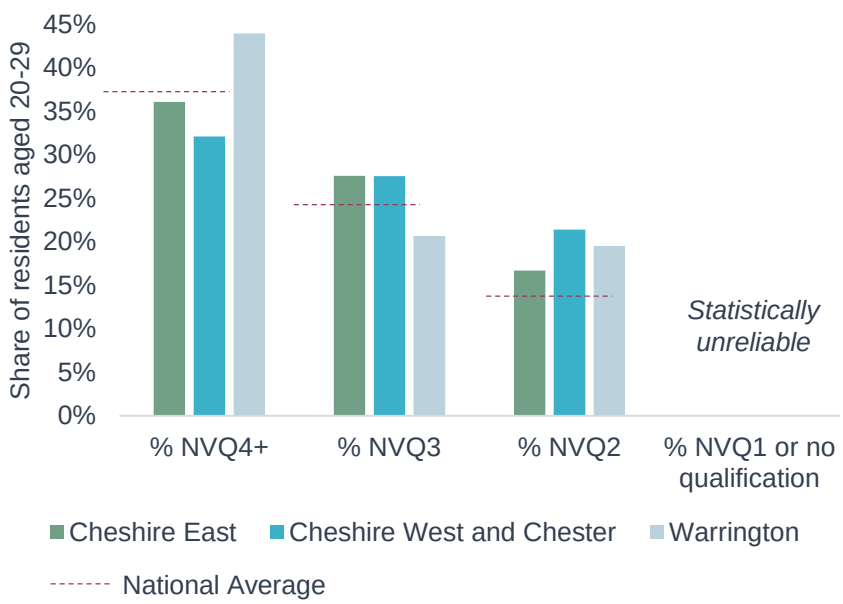
The graph on the right compares the skills profile of C&W to its comparators. It has higher skills levels than GM, the NW and UK. For instance, 44.0% of residents in the LEP area have NVQ Level 4 or above compared to 35.0% in GM, 34.5% in the NW and 38.4% in the UK. However, in EM3, 47.1% of residents have this level qualification.

A higher skills profile is also characterised by a lower proportion of residents with no or low qualifications. In C&W, 15.3% of residents have either no qualifications or NVQ Level 1, compared to an average of 20.2% in the NW and 18.6% in the UK. This figure is lower than GM, which exceeds the regional and national comparators (21.0%) and higher than EM3 (13.1%).

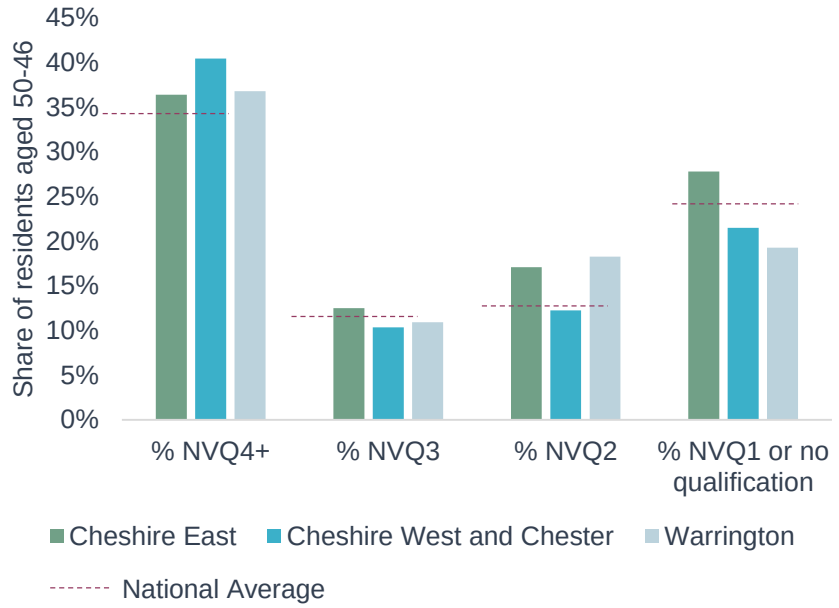
Source: ONS Annual Population Survey (2017)

Skills profile by age

Qualifications profile for residents aged 20-29 (2015)



Qualifications profile for residents aged 50-64



To further understand the skills profile of C&W, qualifications levels were split by age group. The purpose of this analysis is to test the hypothesis that the older residents are more likely to have higher qualifications. This uses data from 2015, as this is an output from the SEP.

The chart on the left shows the qualifications profile for young residents (20-29 year olds), whilst the chart on the right shows the qualifications profile for older residents (aged 50-64).

The data indicates that younger residents who live in Warrington are the most likely to have university or further education degrees.

This is counter to the pattern for older workers (aged 50-64) and suggests that Warrington may be acting as a spill over area to Manchester, and attracting young university graduates. This may reflect some of the new urban-style developments being built in Warrington.

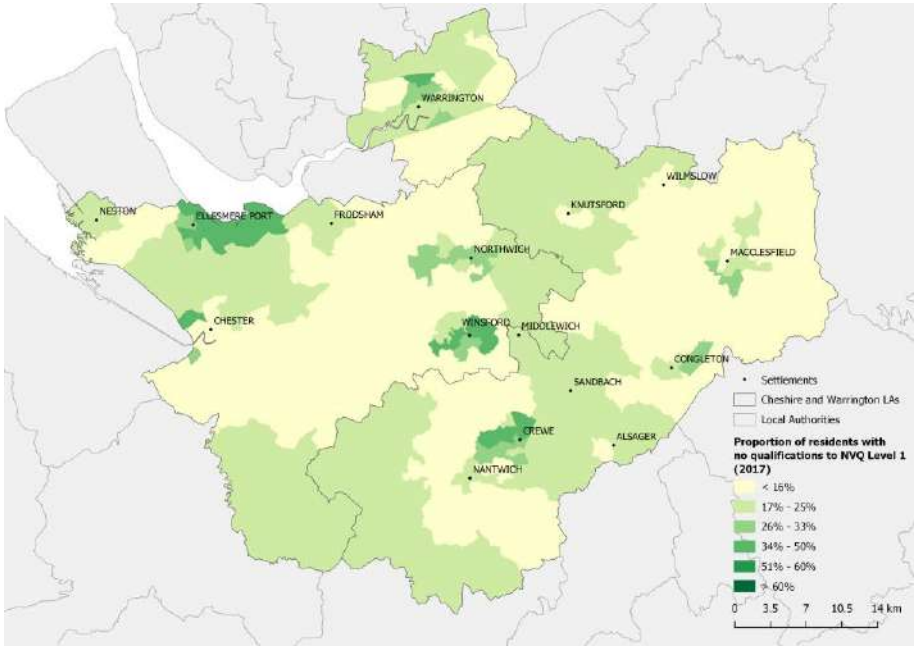
Cheshire East has the highest total number of highly educated residents aged between 50 and 64, but Cheshire West and Chester has the highest share of further and university degrees amongst this age group.

Source: ONS Annual Population Survey (2015)

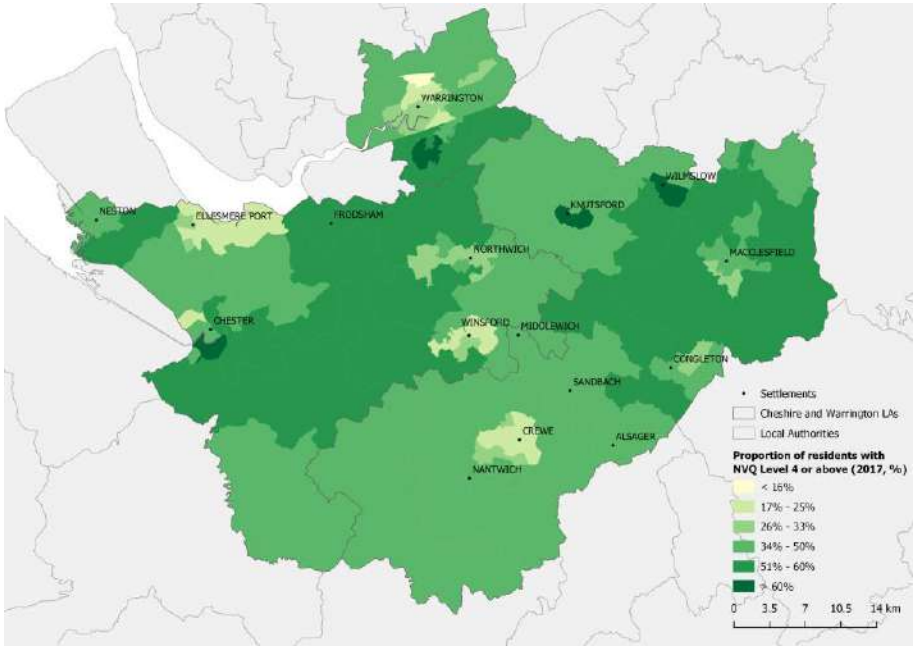
Metro — Dynamics

Spatial distribution of skills

Residents with no or low qualifications (2017)



Residents with further or higher education degree or above (2017)



Mapping qualification levels provides an understanding of the spatial distribution of skills across the area, which is important for understanding the skills challenge.

The left hand map shows the proportion of residents with either no qualifications of NVQ Level 1 and the map on the right shows the proportion of residents with NVQ Level 4 or above. The two maps are almost exact inverses of one another.

There are high levels of skills inequality with a difference of approximately 47 percentage points between the areas with the highest and lowest proportion of residents with NVQ Level 4 or above.

Areas where a relatively high proportion of residents have high level qualifications (51 to 60%) are typically in the north west part of the LEP area, moving east from Chester and northwards to Frodsham, and the outskirts of Macclesfield. In south Chester, Appleton (south of Warrington), Knutsford and Wilmslow, over 60% of residents have NVQ Level 4 or above.

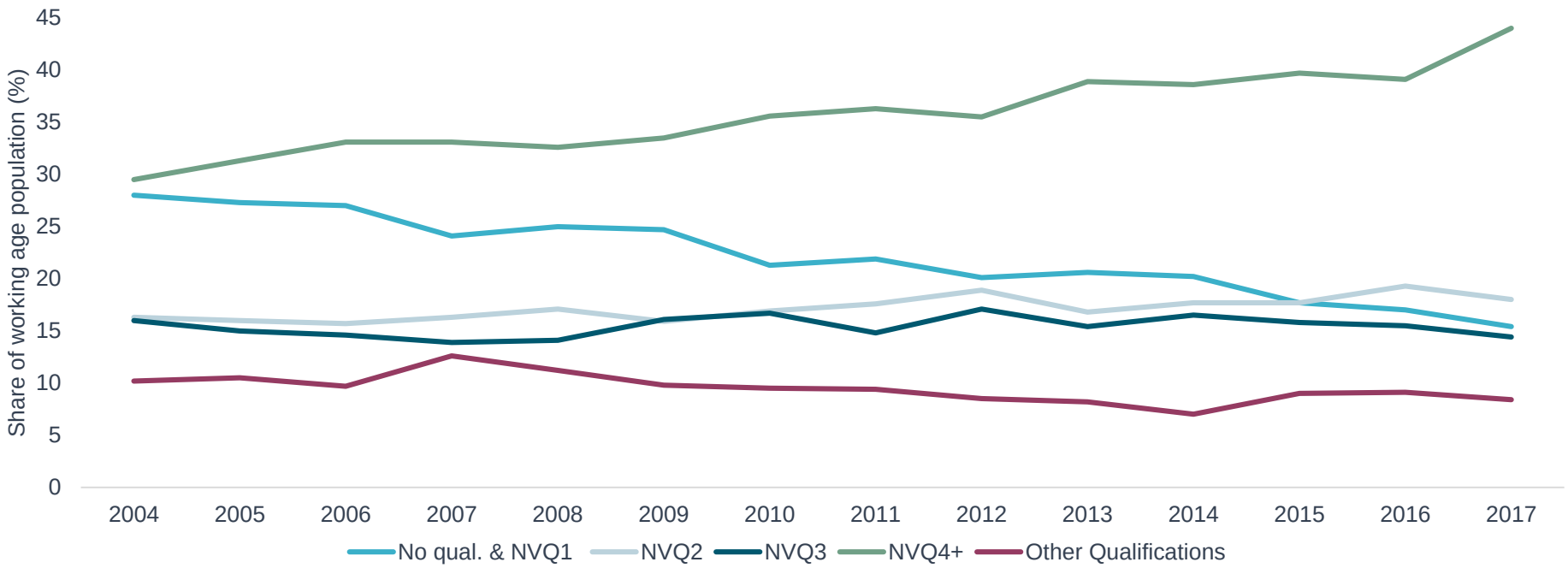
There are a high proportion of residents with no qualifications or NVQ Level 1 in Ellesmere Port, north Chester, Winsford, Crewe and north Warrington.

The skills profile for the five principal towns shows that Chester overall has the highest proportion of residents with a degree equivalent qualification or higher (45.2%) and the lowest proportion of residents no or low qualifications (18.0%). In contrast, Ellesmere Port has the highest proportion of residents with no or low skills (27.0%). Crewe has the lowest proportion of residents with a degree or higher (26.9%).

Source: Metro Dynamics estimates based on ONS Annual Population Survey (2017) and Census (2011) data

Skills profile trends

Qualifications level change in Cheshire and Warrington (2004-17)



The above chart illustrates changes in the skills composition of the working age population in C&W between 2004 and 2017.

Since 2004, a steady decline in the proportion of working individuals with other qualifications (including trade apprentices), and no qualifications or NVQ Level 1 qualifications is observed.

The proportion of C&W's working population with NVQ Level 2 and NVQ Level 3 has remained constant over the 14 year period, whilst there have been increases in the proportion of the working population with NVQ Level 4 or above.

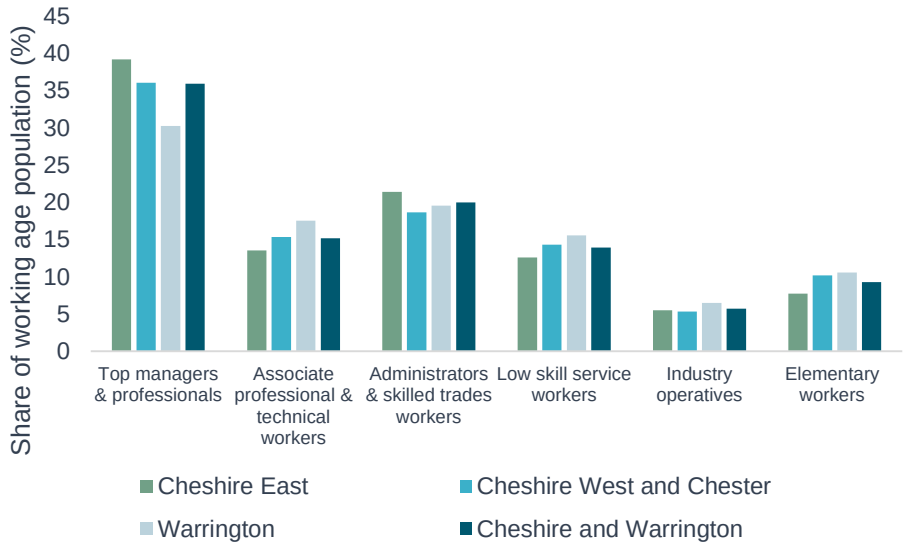
These results are consistent with trends in both the UK and NW. Encouragingly, C&W's workforce is, on average, more highly qualified than the national average.

Figures for the skills profile trends of both the UK and NW can be viewed in the Appendices.

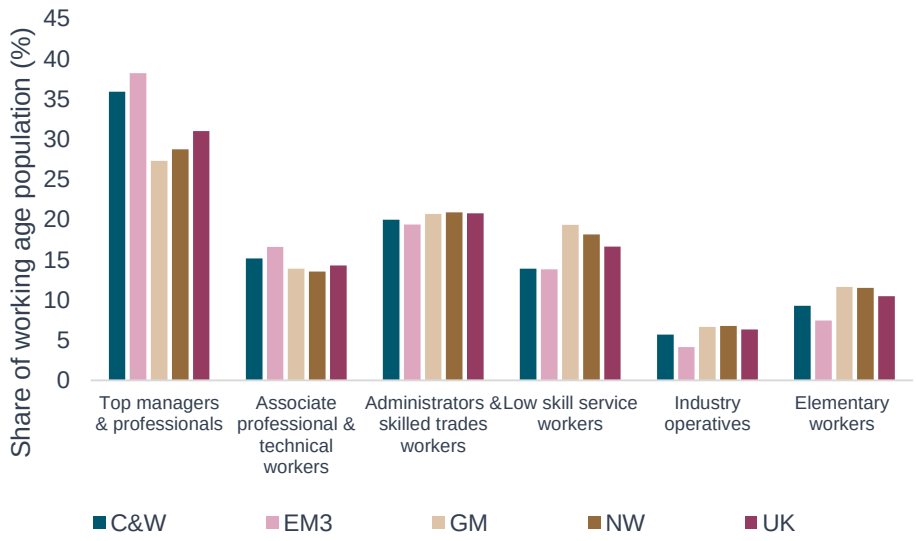
Source: ONS Annual Population Survey (2004-17)

Occupations profile

Occupations profile in Cheshire and Warrington (2017)



Occupations profile for Cheshire and Warrington and comparators (2017)



The chart on the left illustrates the occupational profile of current residents in C&W. It broadly reflects the skills profile of the area.

Cheshire East has the highest proportion of residents employed as top managers and professionals (39.2%), reflecting its high skills levels. Warrington has the lowest proportion of residents in managerial roles (30.2%), reflecting its lower levels of NVQ Level 4 and above residents.

The right hand chart compares the occupations profile in C&W to comparators. There is a relatively high proportion of residents in high-level occupations in C&W. Almost 36% of residents are top managers and professionals, compared to 28.8% in the NW and 31.0% in the UK.

There are also a higher proportion of associate professional and technical workers in C&W (15.2%) compared to the NW (13.5%) and UK (14.3%), especially in Warrington (17.6%). Higher level occupations are often higher value jobs, which are more beneficial to the local economy.

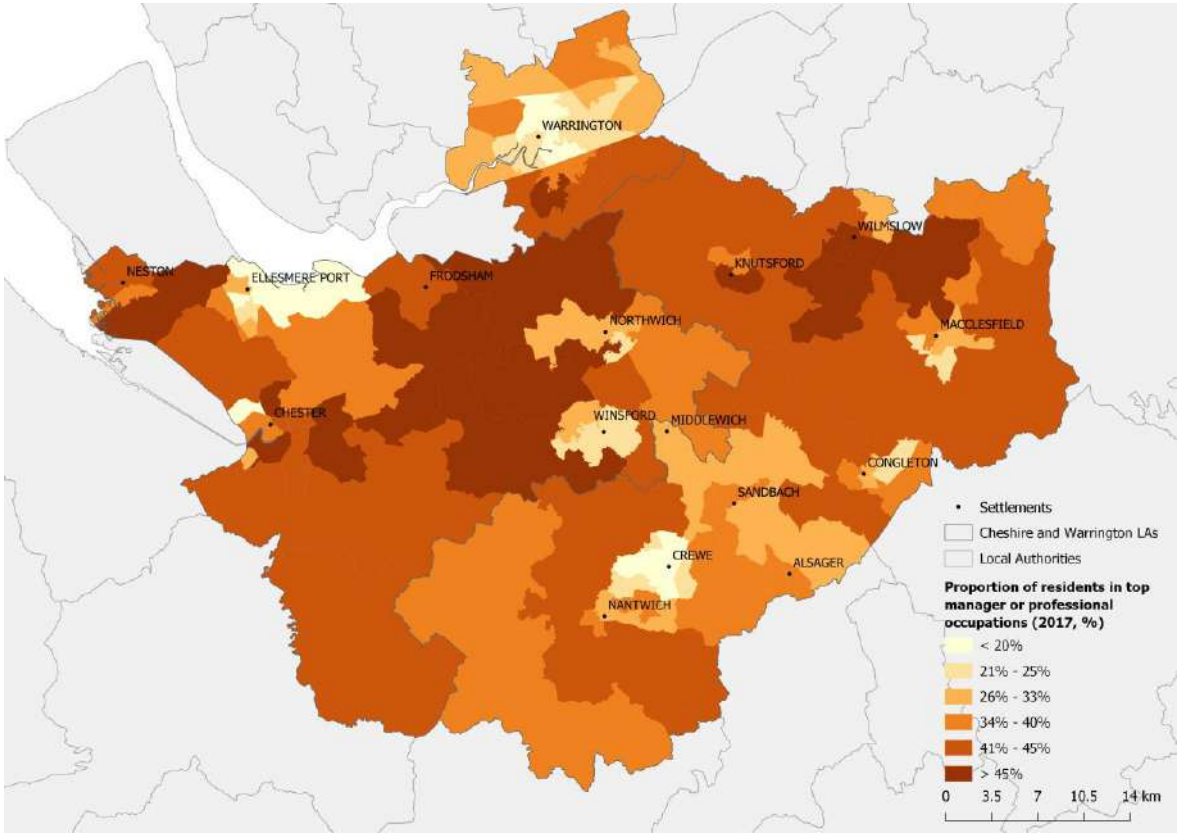
C&W has a lower proportion of low-level occupations. There are a lower proportion of elementary workers (9.3%) compared to the NW (11.5%) and UK (10.5%). In Ellesmere Port, 12.7% of residents are in elementary roles, closely followed by Crewe (12.0%). Macclesfield has the lowest proportion (7.1%).

As with the skills profile, C&W outperforms GM, but EM3 has a higher proportion of high level jobs.

Source: ONS Annual Population Survey (2017)

Spatial distribution of occupations

Residents in top manager or professional occupations (2017)



Mapping the proportion of residents in certain occupations is useful for strengthening our spatial understanding of the labour market.

This map shows the proportion of residents who work as managers, directors, senior officials or in professional occupations. It follows a similar pattern to the map of residents with NVQ Level 4 or above.

Areas with a relatively high proportion of residents in these high level roles (>45%) include Knutsford, the area south of Wilmslow, south Chester, the area west of Ellesmere Port, and the central part of the LEP area between Frodsham, Northwich and Winsford.

The larger urban settlements of Ellesmere Port, Warrington, Crewe and Macclesfield, as well as Winsford and Congleton, have a lower proportion of residents in top managerial or professional occupations. In parts of Ellesmere Port, Warrington and Crewe, the figure is less than 20%.

The skills profile for the five principal towns shows that the following proportion of residents are in these roles: Chester (38.0%), Macclesfield (32.8%), Ellesmere Port (26.0%), Warrington (25.3%) and Crewe (21.7%).

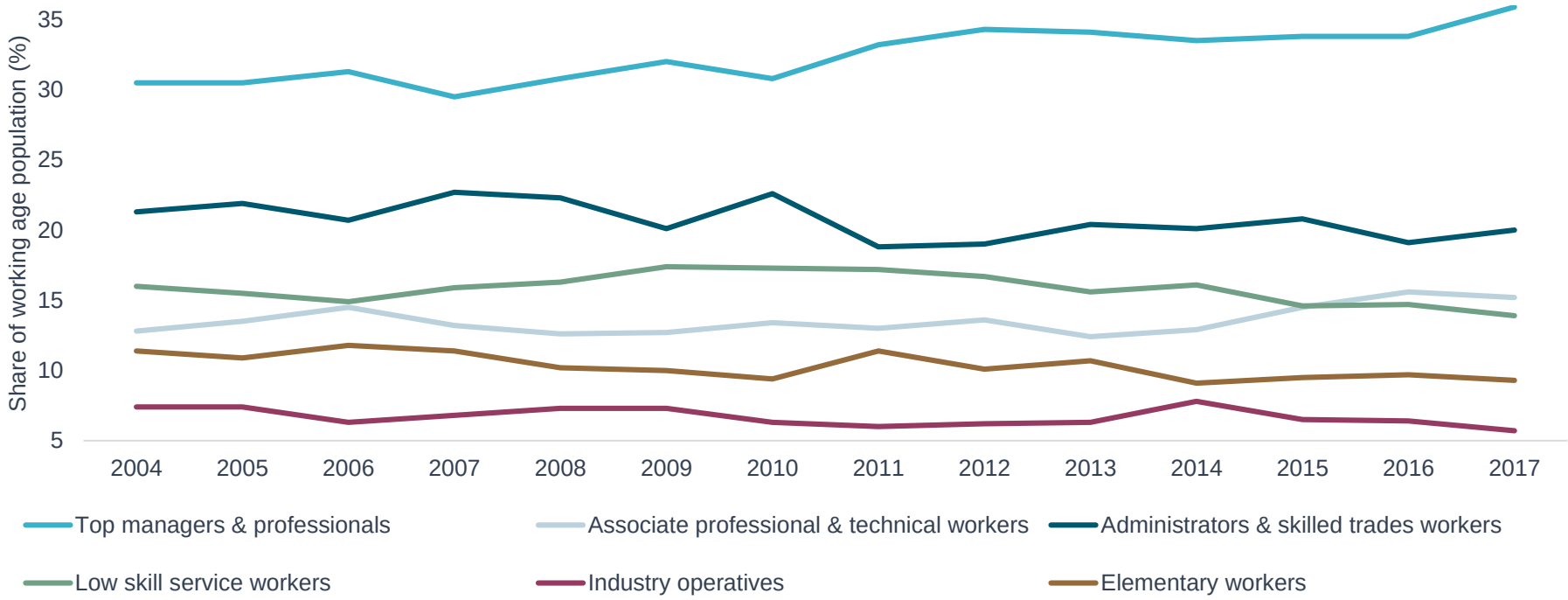
Maps showing the spatial distribution of residents employed as industry operatives and elementary roles can be found in the Appendices.

Source: Metro Dynamics estimates based on ONS Annual Population Survey (2017) and Census (2011) data

Metro — Dynamics

Occupations profile trends

Occupational change for Cheshire and Warrington (2004-17)



The above chart illustrates changes in C&W's working age population over the period 2004 to 2017.

Consistent with the UK's transition to a knowledge based services economy, a moderate decline can be observed in the proportion of the population engaged in administrative, skilled trade, elementary, low skill service and industrial work.

In contrast, the proportion of the population employed in professional and technical work has increased moderately.

The most dramatic change is the 5-6% increase in the proportion of the population employed as top managers or professionals. This may partially reflect title creep in recent years.

These trends are relatively consistent with the broader UK economy and NW. The main point of difference with the UK is the more pronounced decline in the share of the population employed in skilled trades which has fallen by nearly 5%.

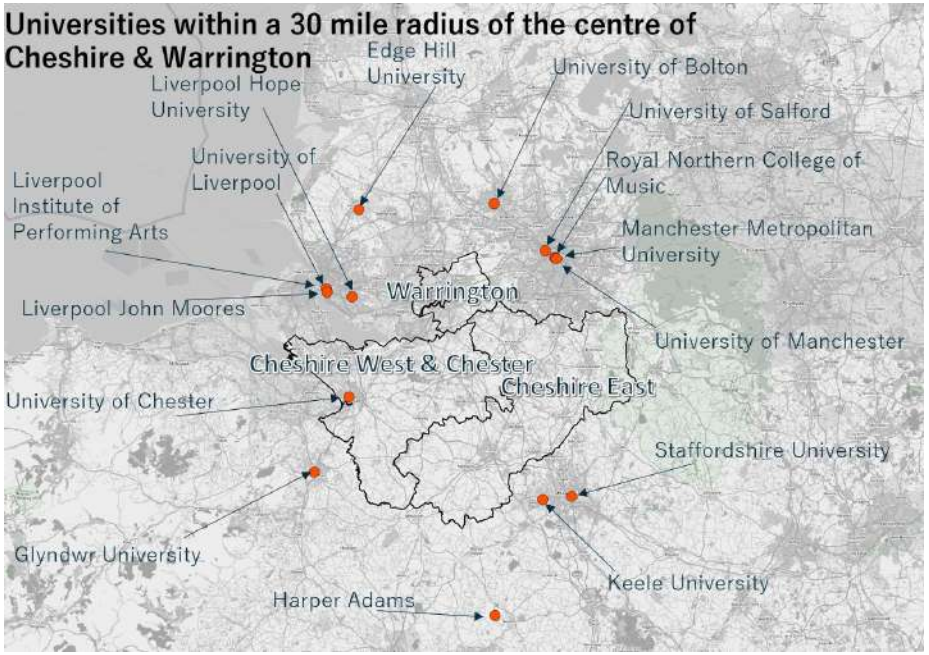
Figures for the UK and NW can be viewed in the Appendices.

Source: ONS Annual Population Survey (2004-17)

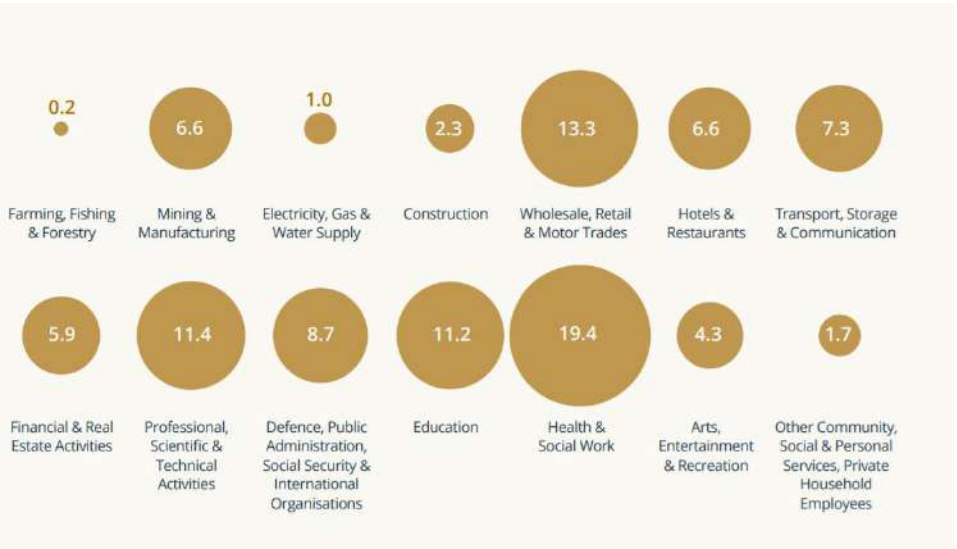
Metro — Dynamics

Talent pool – graduates

Universities within a 30 mile radius of the centre of Cheshire and Warrington



Employment of first degree graduates across industry sectors (%, 2013/14)



It is important to consider the future workforce in C&W. It is a major challenge for the area to find suitably qualified and resilient residents to fill the additional 120,000 net additional jobs by 2040 and to replace the 230,000 retiring by 2025. Replacement demand suggests a deficit of up to 60,000 graduates.

C&W has a strong talent pool of graduates from which to draw upon. There is one Higher Education Institution (HEI) within its boundaries (University of Chester), and C&W is well connected to surrounding universities, as shown on the map above. There are 15 HEIs within a 30 mile radius of C&W, including research intensive universities.

These universities have a combined student body of approximately 200,000 students, made up of 160,000 undergraduates and 40,000 post graduates.

The right hand chart illustrates the proportion of employment of first degree graduates (in home region) by sector. This shows that the highest proportion of graduates work in health and social care (19.4%), followed by wholesale, retail and motor trades (13.3%), professional, scientific and technical activities (11.4%), and education (11.2%). This fits with the high levels of employment in these sectors.

Source: Cheshire and Warrington Skills and Education Plan (2017); Regeneris (2017) Cheshire and Warrington Value Proposition; Smart Specialisation Hub (2018)

Metro — Dynamics

Talent pool – school leavers

Most recent overall effectiveness of all schools (as at March 2018)

	Proportion of schools ranked			
	Outstanding	Good	Requires improvement	Inadequate
Cheshire East	25%	65%	8%	2%
Cheshire West and Chester	28%	64%	7%	1%
Warrington	24%	68%	7%	1%
Cheshire and Warrington	26%	65%	7%	1%
Greater Manchester	25%	62%	10%	3%
North West	23%	65%	10%	3%
England	21%	65%	10%	4%

GCSE attainment (2016/17)

	Percentage of pupils who achieved a strong 9-5 pass in English and maths	Percentage of pupils who achieved all Eng. Bacc. components inc. a strong 9-5 pass in English and maths
Cheshire East	46.9%	19.8%
Cheshire West and Chester	39.8%	23.1%
Warrington	46.0%	19.2%
Cheshire and Warrington*	44.1%	21.1%
North West	40.3%	19.1%
England	39.6%	19.7%

C&W also has a strong education offer with good quality schools. As of March 2018, 104 schools or 26% of all Ofsted inspected state schools, including nursery, primary, secondary, special and pupil referral units, were ranked 'Outstanding'. This is higher than the NW (23%) and English (21%) averages. In Cheshire West and Chester, 45 schools (or 28%) are 'Outstanding'.

Achieving a grade 5 or above in either English language or literature and maths is the new headline attainment measure given recent changes to the GCSE grading structure.

C&W has relatively high attainment with 44.1% achieving this measure*, compared to 40.3% in the NW and 39.6% in England. Performance is mixed between the local authorities: Cheshire East (46.9%), Warrington (46.0%) and Cheshire West and Chester (39.8%).

The English Baccalaureate (Eng. Bacc.) is a group of GCSE subjects, including English, maths, science, history or geography, and a foreign language, which are looked upon favourably by universities. Pupils must achieve a strong 9-5 pass in English and maths, and a grade C or above in the other elements, as these subjects had not been reformed in 2017.

In C&W, 36.5% of pupils were entered compared to regional (34.7%) and national (35.0%) averages. Cheshire West and Chester has high entry levels (43.9%).

In C&W, 21.1% of pupils entered achieved all components including grade 5 and above in English and maths, which is higher than the NW (19.1%) and English (19.7%) averages. Cheshire West and Chester outperformed the other two local authorities with 23.1% passing all components, despite the lower percentage achieving just English and maths.

There are a high number of post-16 education providers in C&W, including FE colleges, 6th form schools, private training providers and special schools. These providers equip residents with a range of academic and vocational qualifications.

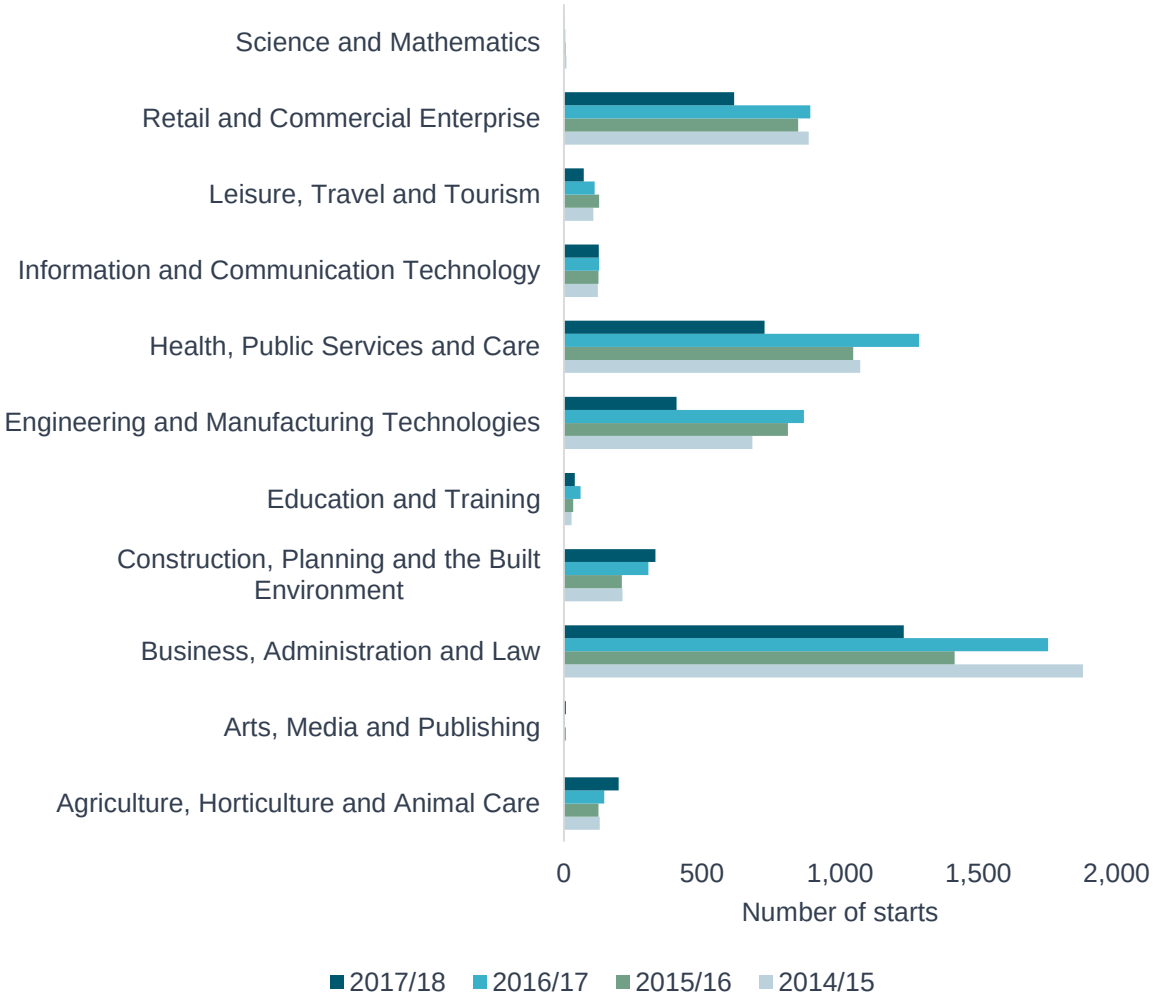
** Please note this is an estimate based on local authority counts.*

Source: Ofsted State-funded schools inspections and outcomes as of 31 March 2018; DfE GCSE and equivalent results in England 2016/17 (revised)

Metro — Dynamics

Talent pool – apprenticeships

Apprenticeship starts in Quarter 2 by framework (2014/15-2017/18)



C&W also draws on its apprentices in its talent pool. In 2017/18, there were 3,757 apprenticeship starts in the second quarter. This is a 32.4% decrease from the previous year.

The graph to the left shows the number of apprenticeship starts in the second quarter by framework.

In the last four years, the highest proportion of apprenticeship starts have been in business, administration and law with 1,230 starts in 2017/18 (32.7%).

The subject area with the second and third highest share of apprenticeship starts is health, public services and care (19.3%) and retail and commercial enterprise (16.4%), which are known to be high employment sectors.

Engineering and manufacturing technology had 408 apprentice starts in 2017/18, representing 10.9% of total starts. This subject area has experienced a large fall of 53.0% in the number of apprenticeship starts from the previous year. There are very low numbers of apprenticeship starts in science and maths with only one apprentice in 2017/18. This further demonstrates a lack of STEM skills in the future workforce.

Results from the Cheshire Business Survey (2017)*, which surveyed businesses in Cheshire East and Cheshire West and Chester showed that 12% of businesses currently employ apprentices, whilst 23% have employed apprentices in the last 5 years (including currently).

** Excluding Warrington.*

Source: DfE Data Cube (2018); BMG Research (2017) Cheshire Business Survey

Job vacancies

Recruitment and skills gaps in Cheshire (2017)*

	Cheshire East	Cheshire West and Chester	Cheshire*
Have had any vacancies in the last 12 months	46%	48%	47%
Have had hard to fill vacancies in the last 12 months	22%	19%	21%
Have any skills gaps	68%	70%	69%

Reason for recruitment difficulties during the last 12 months (where have had hard to fill vacancies) in Cheshire (2017)*

	Cheshire East	Cheshire West and Chester	Cheshire*
Low number of applicants with the required skills	81%	84%	82%
Lack of work experience the company demands	49%	54%	51%
Lack of qualifications the company demands	32%	31%	31%
Wage rates too low	12%	17%	14%
Too much competition from other employers	30%	29%	30%
Not enough people interested in doing this type of job	48%	59%	53%
Remote location / poor public transport	24%	29%	26%
Cost and availability of childcare	11%	14%	12%
Other	21%	14%	18%

The top left hand table shows the results of select questions on workforce and skills from the Cheshire Business Survey. Please note, this survey only includes businesses in Cheshire East and Cheshire West and Chester, as Warrington undertook its own business survey.

In Cheshire, 47% of businesses report having a vacancy in the last 12 months. A lower proportion (21%) claim to have had hard to fill vacancies in the last 12 months. In Cheshire East, the proportion with hard to fill vacancies has increased from 9% in 2011 to 22% in 2017. There has been a slightly lower increase in Cheshire West from 8% in 2011 to 19% in 2017.

As seen in the bottom left hand table, of the businesses reporting hard to fill vacancies, 82% in Cheshire cite that this is because of a low number of applicants with the required skills. In Cheshire West and Chester, 84% of businesses have this issue, increasing from 61% in 2011. At the Cheshire level, 51% of businesses explain their hard to fill vacancies by a lack of work experience demanded by the company, whilst 31% answered that it was due to a lack of qualifications demanded by the company.

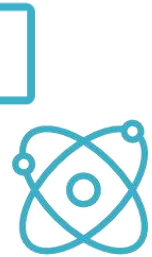
* *Excluding Warrington.*

Source: BMG Research (2017) Cheshire Business Survey

Skills mismatches in the local economy

There is a **mismatch** between the skills employers need and the skills which individuals have and can offer

High demand for **STEM** and **digital** in C&W's key sectors – manufacturing, energy and environment, and life sciences



26% of students taking **STEM or digital** related A levels (compared to 29% nationally) and **low numbers** in **engineering** and **manufacturing** or **science** and **maths** apprenticeships

Lack of information around job and progression opportunities to make informed choices about subjects and skills – **87%** of young people surveyed in Cheshire East lack information about local labour markets

Only **4%** of training and education funding for adults (not training for apprenticeships) in **engineering and manufacturing**, and only **2%** in **science and maths**

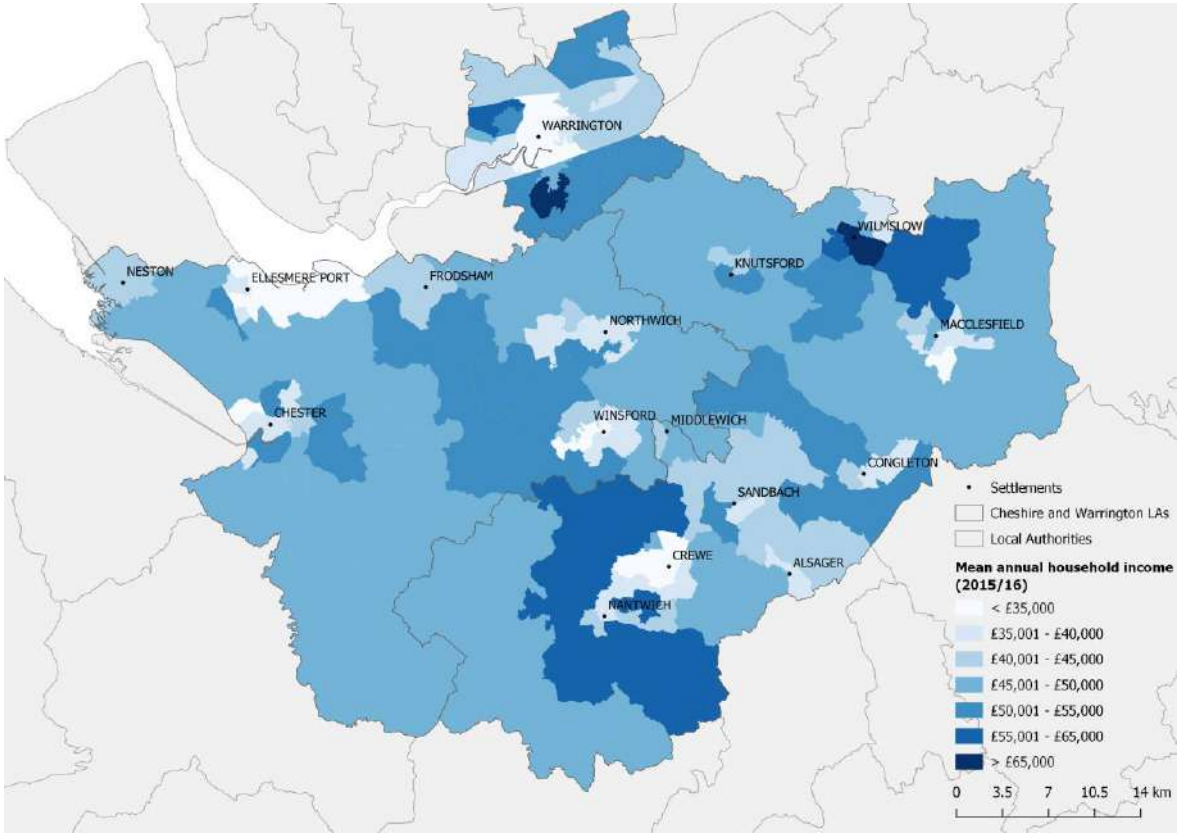
To meet business needs over the next year, **31%** of Cheshire* businesses need to improve **IT skills,** and **12%** need to improve **science, technology and engineering skills (23%** in **production** and **construction)**

** Excluding Warrington.*

Source: Cheshire and Warrington Skills and Education Plan (2017); BMG Research (2017) Cheshire Business Survey

Earnings

Mean annual household income (2015/16)



The map to the left illustrates the spatial distribution of wages across C&W.

Mean annual household income may be distorted by outlying values, resulting in income seeming higher than expected. This disguises extremes which is important when considering inclusive growth.

Much of C&W has a medium value mean annual household income of £45,001 to £50,000. There are some areas with slightly higher income of £50,001 to £55,000, particularly around the outskirts of Chester, south of Frodsham and south Warrington.

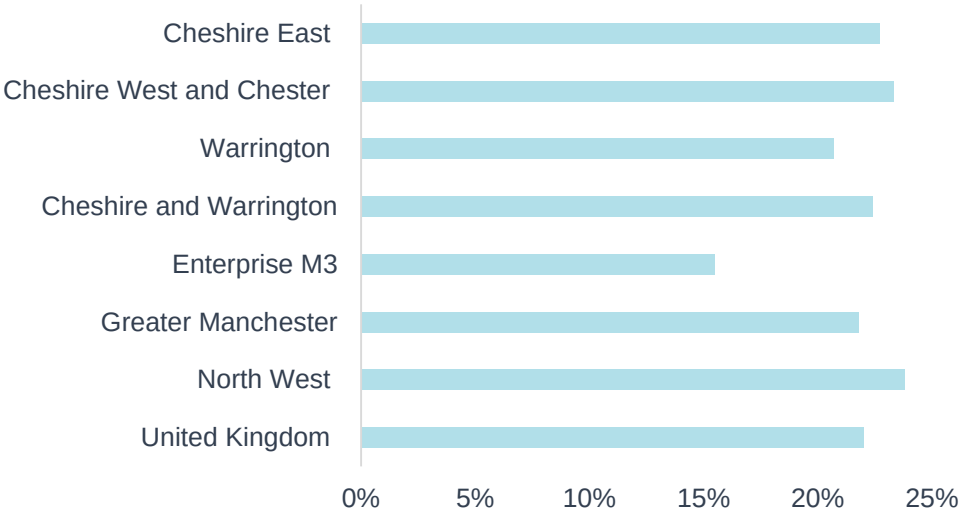
Wealthier pockets with a mean household income upwards of £55,001 exist in Nantwich and the surrounding area, north of Macclesfield and parts of Warrington. Appleton (south of Warrington) and Wilmslow have the highest mean annual household income of > £65,000.

Areas with relatively low household income (<£40,000) are typically in urban areas, including Ellesmere Port, Chester, Warrington, Northwich, Winsford, south Macclesfield, and the area encompassing Crewe, Sandbach, Alsager and Congleton.

Source: ONS Small area income estimates for middle layer super output areas, England and Wales (2015/16)

Living wage

Share of workplace jobs under the real living wage for C&W and comparators (2017)*



Residents vs workers earning below living wage

The left hand chart illustrates the percentage of workplace jobs earning beneath the real living wage* in 2017, as set by the Living Wage Foundation.

Results indicate that C&W (22.4%) has a slightly higher percentage of workers earning below the living wage than the UK as a whole (22.0%), GM (21.8%) and EM3 (15.5%), but less than the NW average (23.8%). This is an area of concern given that the real living wage acts as a proxy for in-work poverty, which remains a major issue for achieving inclusive growth.

The breakdown between the three local authorities in C&W demonstrate that jobs paying below the living wage are more prevalent in Cheshire East (22.7%) and Cheshire West & Chester (23.3%).

The top right chart compares the percentage of C&W residents earning below the living wage with the percentage of jobs in C&W which pay beneath the living wage.

The percentage of C&W residents earning below the living wage is 2.3 percentage points lower than the proportion of jobs in C&W which pay below the living wage. This indicates a mismatch between the wages of those who live and those who work in C&W.

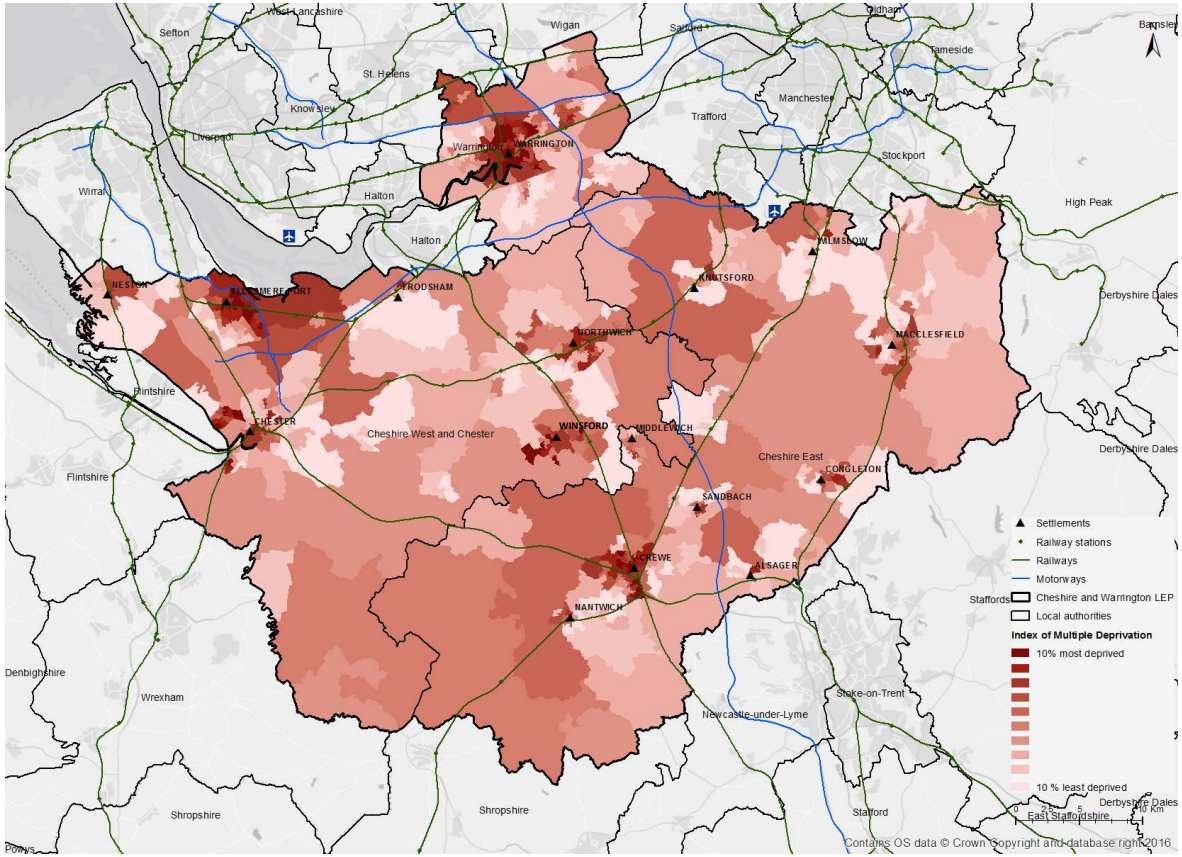
Future initiatives may seek to promote the development of higher paying roles within C&W, as well as housing opportunities for the current C&W workforce.

** Based on the Living Wage Foundation living wage of £8.45 per hour in 2017 (outside of London).*

Source: ONS Annual Survey of Hours and Earnings (ASHE) - Estimates of the number and proportion of employee jobs with hourly pay below the living wage, by local authority (2017)

Index of Multiple Deprivation (IMD)

Index of Multiple Deprivation (2015) - deciles



The Index of Multiple Deprivation (IMD) combines information from multiple domains of deprivation such as income, health and crime, and is used to identify areas of relative high and low deprivation in England.

The map shows IMD for C&W with areas of darker red indicating higher deprivation.

There tends to be higher levels of deprivation in towns. For instance, there are areas of relatively high deprivation in Ellesmere Port, Crewe and Warrington, as well as parts of Chester, Northwich, Winsford and Macclesfield.

These areas also tend to underperform in other socio-economic indicators, such as earnings and skills levels.

Source: DCLG (2015), Ordnance Survey

Public health

Adults in C&W spend around a **fifth** of their life in **poor health**

High levels of adults classified as **overweight or obese** – **two thirds** in Cheshire East and Cheshire West and Chester, **nearly 70%** in Warrington

Similar rates of **physical inactivity** to the national average of **28.7%**

Proportion **claiming out of work benefits** is **lower than NW average** of 11% - Cheshire East (6.0%), Cheshire West and Chester (7.5%) and Warrington (7.4%)

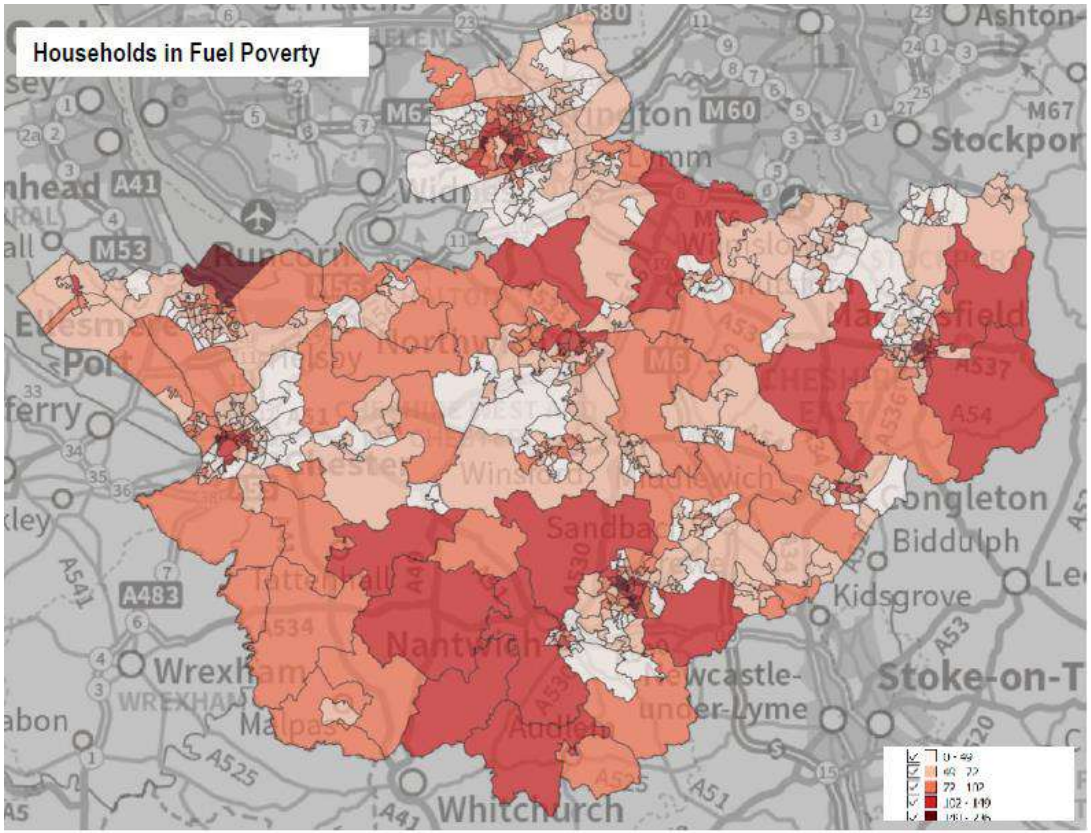
Most common reason for claiming either incapacity benefit or Employment and Support Allowance was **mental and behavioural disorders,** followed by **musculoskeletal issues**

Over 70% of those reporting worklessness in C&W also report some degree of **limiting long term illness of disability**

Source: Champs Public Health Collaborative; Public Health Institute, Liverpool John Moores University (2017) Worklessness in Cheshire and Warrington

Fuel poverty

Households in fuel poverty



Fuel poverty can be used as a further indicator of deprivation. It is measured using the Low Income High Costs (LIHC) indicator whereby a household is considered to be fuel poor if the required fuel costs exceed the national median level, or if expenditure was at this amount, the household would fall below the poverty line.

The map to the left illustrates the number of households in fuel poverty.

This shows that there are areas with high levels of fuel poverty in the five principal towns: Chester, Crewe, Ellesmere Port, Macclesfield and Warrington. This is consistent with other indicators of deprivation.

However parts of the towns and their surrounding areas have relatively low levels of fuel poverty. There are very low levels of fuel poverty in parts of Warrington, east Chester, south Crewe and Nantwich, north Macclesfield, Wilmslow and Knutsford.

Interestingly there are quite high levels of fuel poverty in the south of C&W, as this area does not have access to gas infrastructure. Households in this area have to rely on alternative sources of heating, such as oil or coal.

Source: Mickledore and Bizcat (2018) Development of an Energy Strategy and Implementation Plan for Cheshire and Warrington

Internal UK migration

Internal UK migration (June 2016-17)

	Inflows	Outflows	Net movements
Cheshire East	16,830	15,020	1,810
Cheshire West and Chester	16,640	14,290	2,350
Warrington	8,060	7,490	570
Cheshire and Warrington	41,530	36,800	4,730

Net movements by age (June 2016-17)

The table to the left shows internal migration figures for C&W and the local authorities. These are broken down into inflows and outflows to and from the place to other places in the UK. The net movements are also quoted.

Overall, C&W is a net attractor of people. Total net migration to C&W between June 2016 and June 2017 was 4,730. This comes from 41,530 movements in and 36,800 movements out.

All local authorities have positive net migration. Cheshire West and Chester has the highest net migration with 2,350 movements. This is almost 50% of total net movements in C&W.

The graph to the left illustrates net movements by age group for C&W and the three local authorities.

There are very low levels of net migration of under 19 year old people (90 movements). This is owing to an outflow of young people from Cheshire East of 520 and Warrington of 300. Looking at a more granular breakdown of inflows and outflows by age group shows that the highest outflows are of 15-19 year olds, presumably as they leave home for university. There is an outflow of 1,270 15 to 19 year old residents from Chester East. There is a positive inflow of 0 to 19 year olds in Cheshire West and Chester, most like because there is a university in Chester.

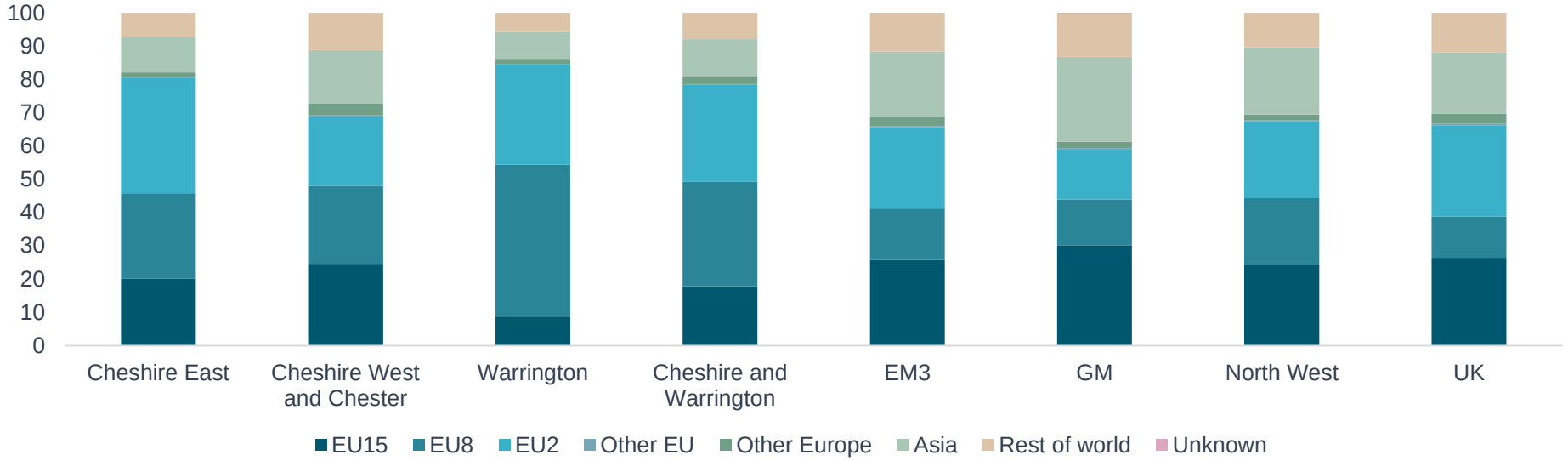
However, more people move to C&W in their 20s and early 30s than leave to go to university. There is a high net inflow of 20 to 34 year old people of 1,800, which makes up 38.1% of total net movements. Despite this, there is still a lower than average proportion of residents in this age group. Similarly, there is a positive net inflow of 35 to 49 year olds of 1,630, which is 34.5% of total net movements.

There is relatively low positive migration of people aged 50 to 64 and 65 and over of 490 and 720, respectively. This shows C&W is more attractive to working people than retirees.

Source: ONS Internal migration: by local authority and region, five-year age group and sex

Migration from outside the UK

NINo Registrations to Overseas Nationals Entering the UK (March 2017-18)



The chart above illustrates the country of origin of adult overseas nationals entering the UK who have been allocated National Insurance numbers (NINo) between March 2017 and March 2018. This can be used as a proxy for migration to C&W from outside of the UK.

It shows the distribution of NINo registrations across the EU15, EU8, EU2, other EU countries, Asia and rest of the world for C&W and its three local authorities, as well as the comparators of EM3, GM, the NW and the UK.

Between March 2017 and March 2018, 5,040 adult overseas nationals entering the UK were allocated NINos in Cheshire and Warrington.

The analysis shows that the highest proportion of overseas nationals allocated NINos are from EU8 countries (31.4%), totalling 1,581 people. EU 8 countries are those which joined the EU in 2004, including the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

Warrington has the highest proportion of EU8 nationals allocated NINos at 45.7% (737 people). The levels of migration from these countries is higher than the share for all comparators: EM3 (15.5%), GM (13.7%), NW (20.0%) and UK (12.3%).

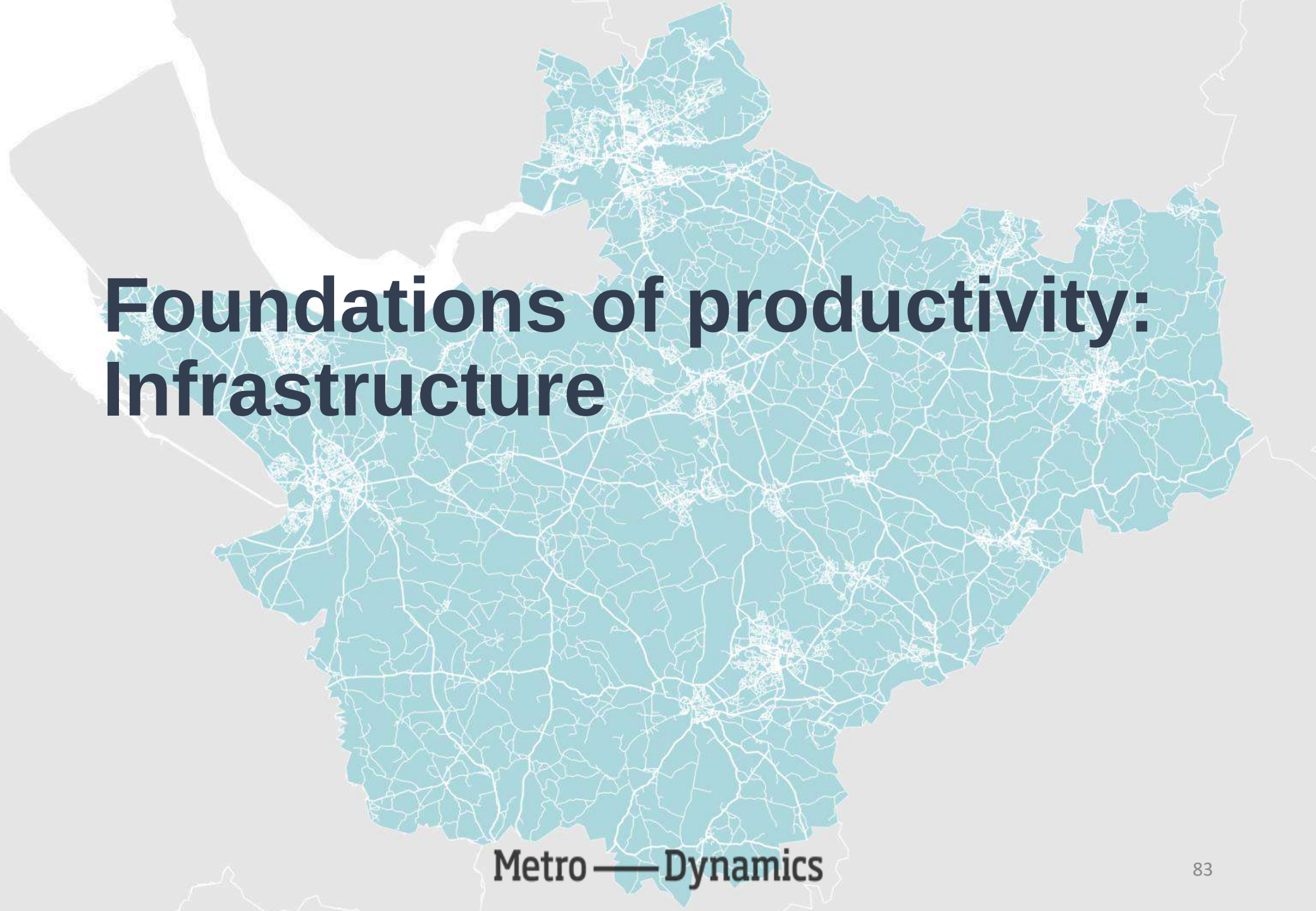
A further 29.2% of NINo registrations are from nationals entering the UK from EU2 countries (1,471 people). This refers to Bulgaria and Romania, who joined the EU in 2007.

The share of NINo allocations to people from EU2 countries in Cheshire East is slightly higher at 34.8% (673 people). Again, the proportion of EU2 migrants in C&W is higher than the averages for the NW (23.0%) and UK (27.5%), as well as the LEP comparators of EM3 (24.3%) and GM (15.0%).

** Geography of EM3 calculated at full extent of districts.*

Source: DWP NINo Registrations to Adult Overseas Nationals Entering The UK (2018)

Foundations of productivity: Infrastructure



Metro — Dynamics

Infrastructure – summary

Major planned rail infrastructure investment – **HS2** (arriving at Crewe in 2027) and **Northern Powerhouse Rail**

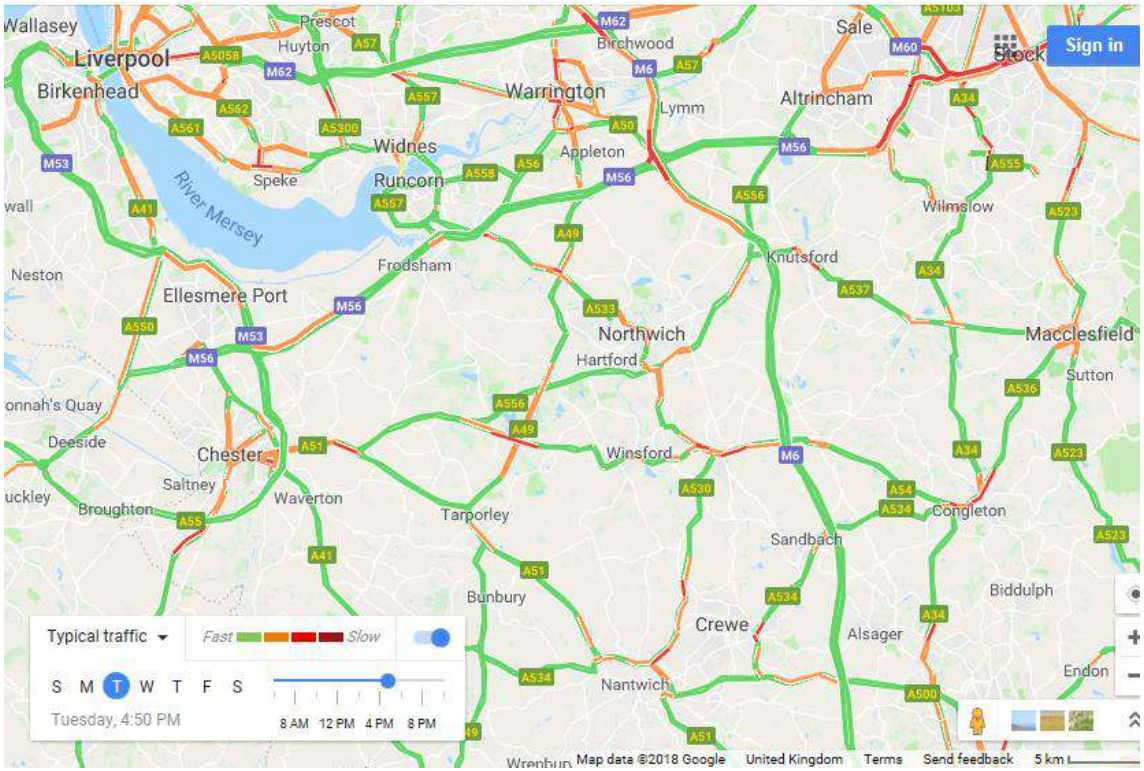
Transport Strategy – **excess of £200m** funding through LGF for infrastructure investment

97% of businesses have access to **fibre broadband**, but this doesn't often meet business need

Energy intensive industry – **5% of the UK's energy** in used by industry on the south of the river Mersey

Congestion and travel times

Typical existing afternoon peak congestion for A roads and motorways



The last Census also recorded that 41% of households in the area had access to 2 or more cars (32% for England & Wales) and only 18% did not have access to a car (26% in England & Wales).

The map to the left shows peak congestion during a week day afternoon. A roads and motorways are marked with a traffic light colour coding system whereby green indicates fast moving traffic, orange is for slower moving traffic, and red is for slow traffic.

Whilst it is positive that many of the main routes are clear there are areas of slower traffic which occur in the larger towns, particularly Warrington, Chester and Crewe.

Warrington in particular has slow traffic including on the nearby motorway. Given Warrington's importance as a logistics hub fast journey times are vital for deliveries and more productive travel.

In the Cheshire Business Survey*, which surveyed businesses in Cheshire East, and Cheshire West and Chester, 23% of businesses stated that they view transport infrastructure as a barrier to business turnover growth in the next three years. This includes both road and rail. The main disadvantage of being located in Cheshire according to 11% of businesses is traffic congestion. In Cheshire East, 14% of businesses see this as the main disadvantage.

This justifies the need to make improvements to road infrastructure.

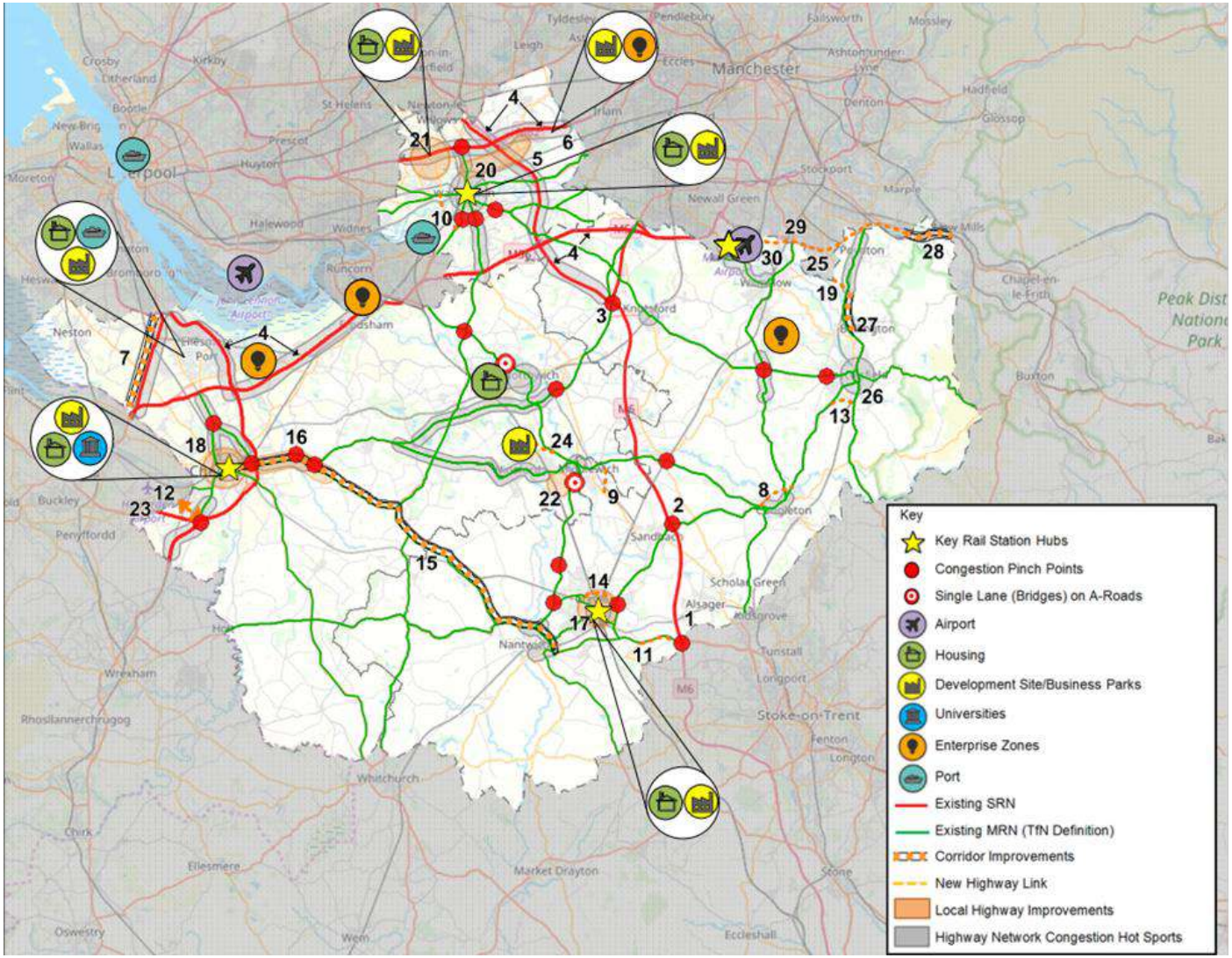
** Excluding Warrington.*

Source: C&W (2018) Draft Transport Strategy Consultation; BMG Research (2017) Cheshire Business Survey

Metro — Dynamics

Strategic infrastructure priorities – road

Strategic infrastructure priorities – road



The map to the left shows strategic infrastructure for road in C&W. The scheme numbers referenced in the map align with the scheme numbers in the Transport Strategy with scheme descriptions.

Whilst Cheshire and Warrington benefits from high levels of strategic connectivity it is recognised that there is significant potential for strategic sites to be enhanced though improved and integrated access. Equally it is also acknowledged that there is wider disparity in the level of connectivity across the sub region and a need to ensure that transport networks remain inclusive and provide residents with necessary access to jobs and service

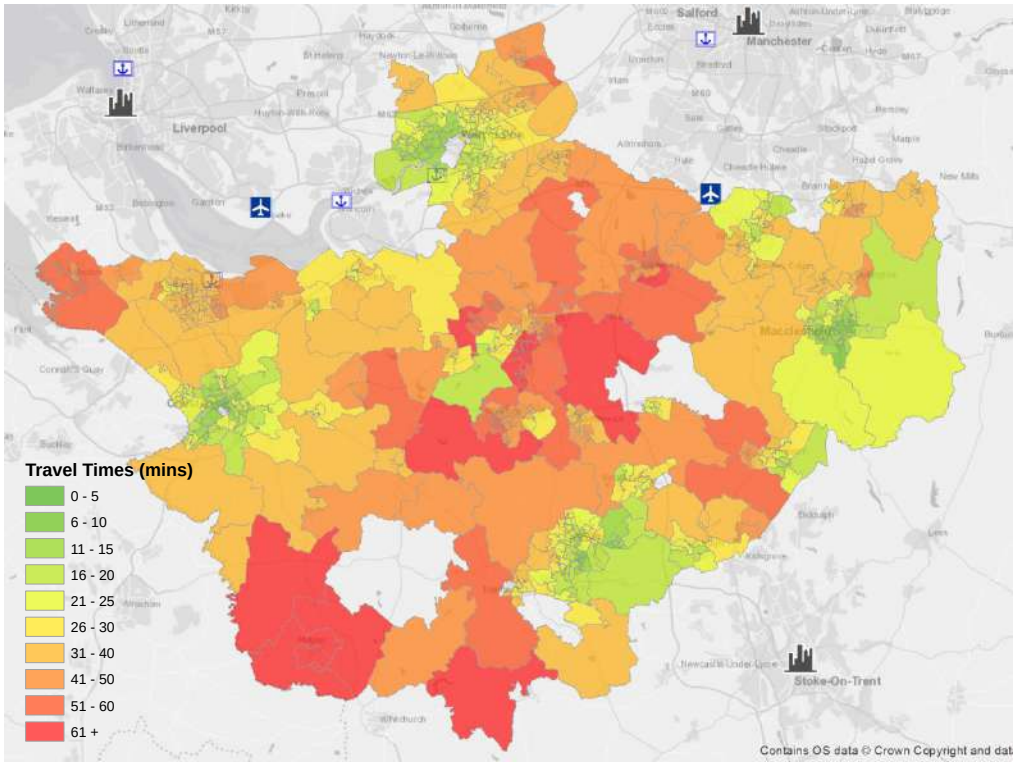
This infrastructure is needed to support C&W's key sectors and additional housing in order to meet the SEP ambition of a £53.3bn economy by 2040.

Further detail can be found in the Transport Strategy.

Source: C&W (2018) Draft Transport Strategy Consultation; Draft Transport Strategy

Public transport travel times and usage

Morning travel times to nearest major rail station by public transport



Travel by bus will be crucial for the success of local economies but is. currently underutilised as a mode in the sub-region. In Warrington there been a noticeable decline in patronage and whilst in recent years bus use has remained relatively stable in Cheshire West and Cheshire East, this is from a low base

Car ownership and usage is high with limited inter-town public transport connectivity. The map to the left shows morning travel times to the nearest major rail station by public transport. This includes Chester, Crewe, Macclesfield and Warrington. As would be expected, there are shorter journey times of under 25 minutes in and around urban areas (yellow/light green). More remote, rural areas have longer journey times (orange/red) of up to 1 hour or more in length.

The infographic below indicates mode share for commuting in C&W. Bus and rail use in C&W is relatively low at 3% and 2%, respectively. The area is similar to the UK average for walking and cycling. Accessibility by bus can make a significant contribution to linking the sub-region's population to key urban centres and in reducing car use for local trips.

Mode share for commuting

Bus – 3%

Rail – 2%

Walking – 10%

Cycling – 3%

Source: C&W (2018) Draft Transport Strategy Consultation; Draft Transport Strategy

Air quality

An Air Quality Management Area (AQMA) is an area that local authorities recognise as needing improvements to air quality – it is a legal requirement to declare these areas, in the interests of public health and safety.

The five pollutants most likely to affect health on a day-to-day basis are: **Ozone**; **Nitrogen dioxide** (NO_2); **Sulphur dioxide** (SO_2); **Particulate matter** (as PM_{10}); and **Fine particulate matter** (as $PM_{2.5}$).

In Cheshire and Warrington, there are currently 23 AQMAs. The following summarises the AQMAs declared by each local authority:

Cheshire East - 17 AQMAs currently, including:

- Congleton AQMA Nos. 2, 4, 5 & 6 – areas encompassing properties adjacent to the M6 Jcts. 18-19; A34 West Road; stretches of the A34 and A54; and M6 Jct. 17
- Other areas adjacent to or encompassing parts of: Hospital Street (A534); the A556 Chester Road; Mere; Nantwich Road A534; the A6 Market Street Disley; the A50 Manchester Road at the Windsor Way junction; the Mill Lane / Silk Road junction; the A532 Earle Street Crewe; Wistaston Road; Middlewich Road; Chester Road; Hibel Road; and Park Lane

Cheshire West & Chester – 4 AQMAs currently, including:

- Whitby Rd/Station Rd AQMA – incorporating residential properties on certain roads in this area
- Frodsham AQMA – an area at the junction of Fluin Lane and the A56 High St
- Thorton le Moors AQMA No. 4 – encompassing the entire village and some of the adjacent area of Stanlow
- Chester City Centre AQMA (No. 5) – covering entire area within inner ring road and some adjoining sections

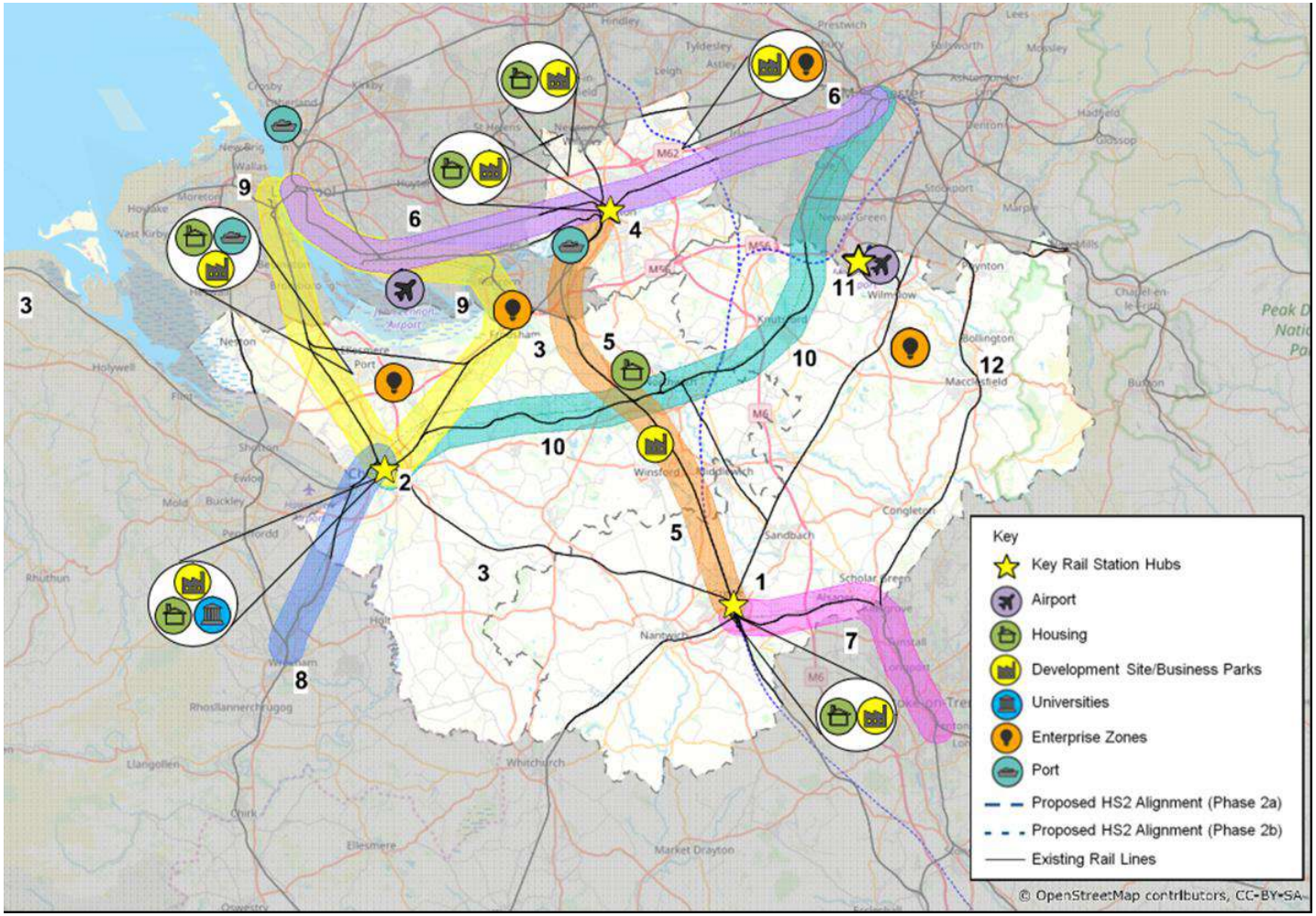
Warrington – 2 AQMAs currently, including:

- Warrington AQMA No.1 – a 50m continuous strip on both sides of the M6, M62 and M56 motorway corridors
- Warrington AQMA 4 2016 – covering the link roads and the town centre ring road

Source: Defra (2018)

Strategic infrastructure priorities – rail

Strategic infrastructure priorities – rail



The map to the left shows strategic infrastructure for rail in C&W. The scheme numbers referenced in the map align with the scheme numbers in the Transport Strategy. Improving 4 key hubs (Crewe, Chester, Warrington and Manchester Airport) will maximise connectivity and accelerate growth, opening up a whole range of destinations including major cities, ports and airports.

For too many journeys across the area rail travel does not match the convenience, comfort or cost of travel by car. To support a doubling of the economy rail will need to play a greater part than it currently does for internal and cross boundary movements.

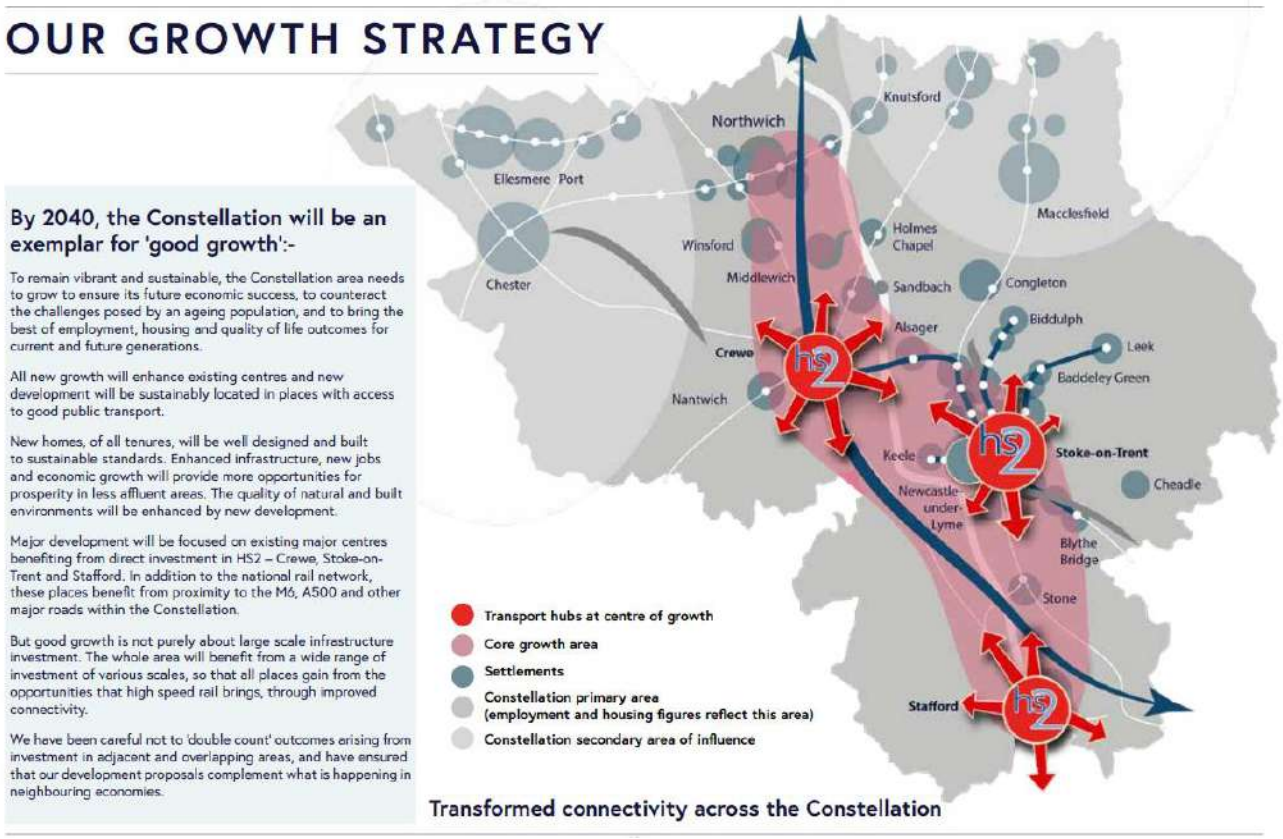
These rail improvements are essential for maintaining C&W's position as one of the most well connected places in the North and the UK with key strategic links to major cities and economies. Further detail can be found in the Transport Strategy.

Source: C&W (2018) Draft Transport Strategy Consultation; Draft Transport Strategy

Metro Dynamics

Strategic infrastructure priorities – HS2

Strategic infrastructure priorities – HS2



The LEP is planning for significant economic growth through HS2, working with others through the Constellation Partnership. Building on 3 HS2 transport hubs and growth areas at Crewe, Stoke-on-Trent and Stafford, the Constellation will be a distinctive network of connected and successful places.

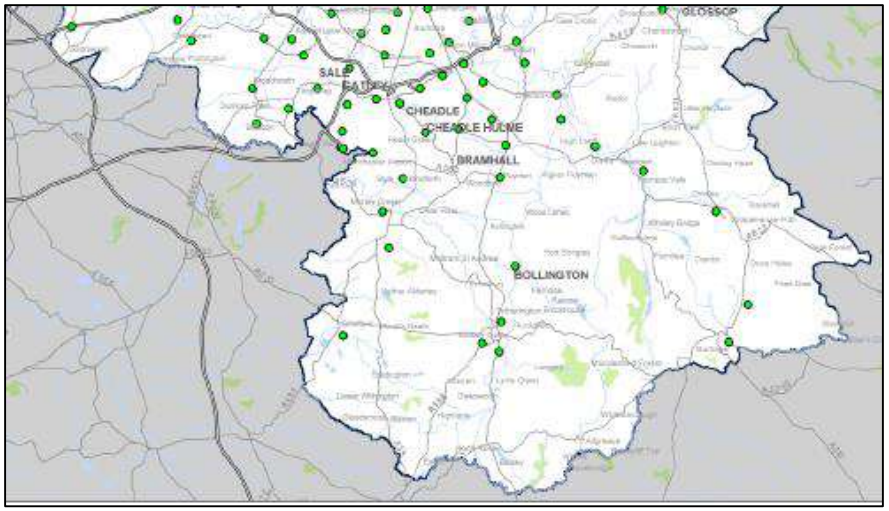
Crewe will be the Constellation's primary transport hub. New development will ripple from the constellation's urban heart to generate good growth throughout the area. Enhanced public transport services focused on Crewe and the other transport hubs in the area will strengthen the Constellation's connectivity to adjoining economies. This includes:

- HS2 core station transformation - connecting HS2, national, and regional rail services to the motorway network and Crewe Town Centre
- A Crewe Hub Station HS2 campus generating 3750 homes and 20,000 jobs
- A further 3,400 homes and 17,000 jobs across the wider area of the Crewe Hub Masterplan

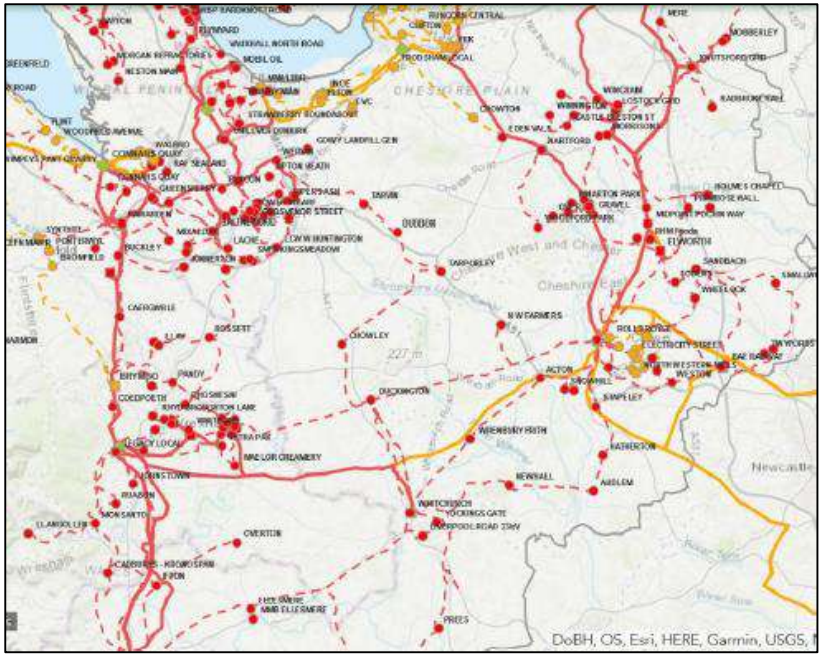
Source: Constellation Partnership Growth Strategy (November 2018)

Electricity capacity

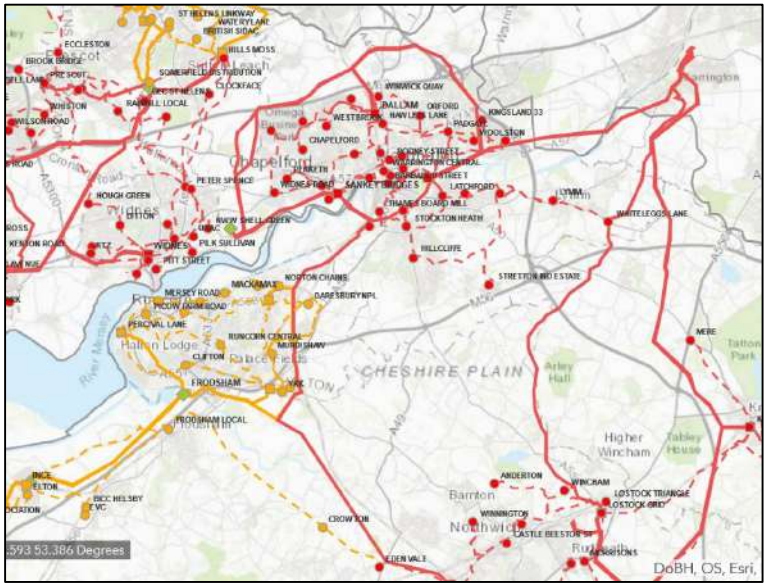
Electricity North West – sub-station capacity



SP Networks – southern C&W



SP Networks – northern C&W



These maps illustrate constraints to electricity capacity.

The map on the top left shows the current capacity position of Electricity North West for sub-stations. A red, amber, green colour coding is used with green illustrating capacity and red illustrating immediate constraints. Electricity North West states that there is good capacity across most of Cheshire East.

The top right and bottom left maps show SP Network current capacity position for the southern and northern portions of C&W. This uses the same colour coding as the left hand map. Solid lines are major pipelines and dotted lines are spurs.

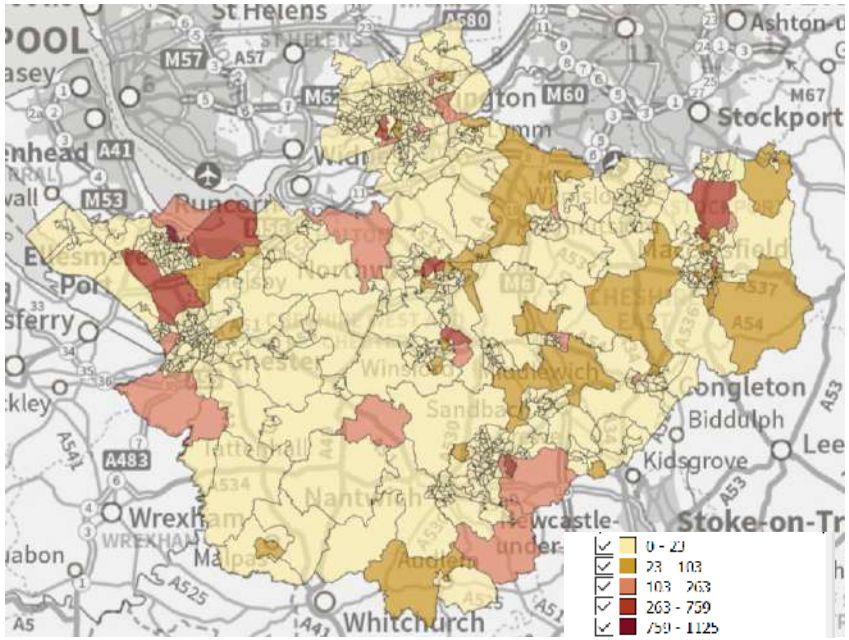
This shows some up-coming capacity constraints in Chester and Northwich. There are capacity issues in delivering substantial growth in Warrington.

Source: Mickledore and Bizcat (2018) Development of an Energy Strategy and Implementation Plan for Cheshire and Warrington

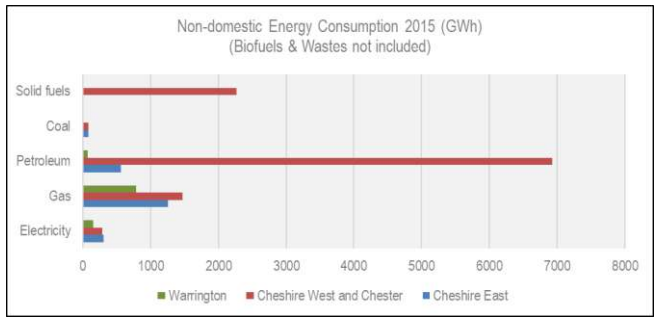
Metro — Dynamics

Energy intensive businesses

Employment in energy intensive industries



Non-domestic energy consumption (GWh, 2015) (ex. Biofuels and wastes)



C&W is an area with a number of different energy challenges and opportunities. The area has a number of large industrial sites and a particular concentration of high intensity energy users along the Mersey Estuary. The energy intensive industrial cluster at Ellesmere Port consumes around 2.5% of UK's total industrial energy use. This makes Ellesmere Port outstanding in C&W, especially regarding the type of energy used; petroleum products totally dominate, followed by solid fuels.

The Mersey basin is a location for many of the specific carbon intensive industries cited by BEIS in their decarbonisation roadmaps up to 2050 (published alongside the Clean Growth Strategy) including chemicals, paper & pulp and glass.

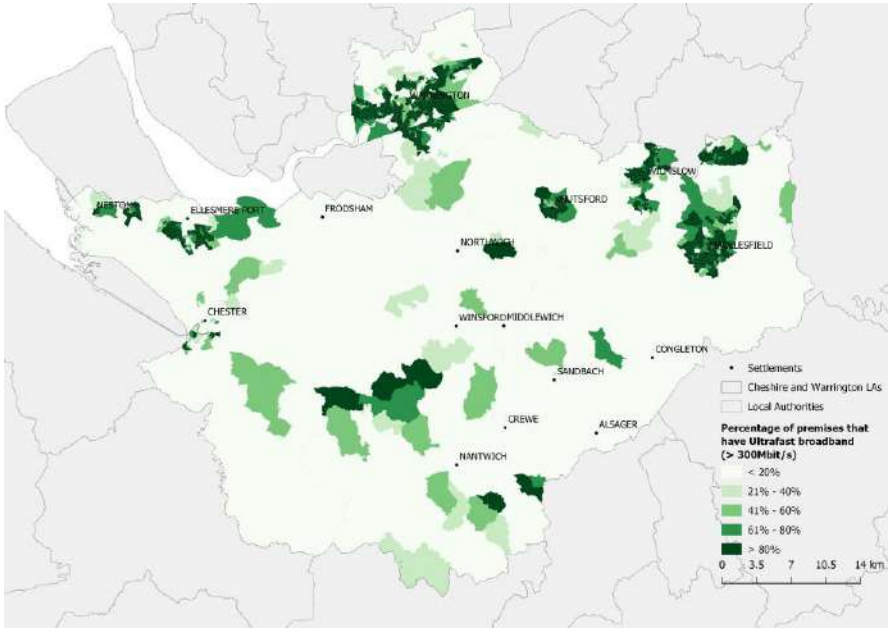
C&W as a whole has additional high energy users in pockets across the area (incl. Tata Chemicals in Northwich, Bentley Motors in Crewe, Barclays at Radbroke Hall and Astra Zeneca in Macclesfield). The BEIS roadmaps highlight the potential future importance of carbon capture and with nearby pipeline access to the Irish Sea gas field this could represent an opportunity for C&W. In addition the area lies within a grid development system proposed by Cadent for the introduction of hydrogen.

The total annual energy consumption in C&W, road transport excluded, was 23,600 GWh in 2015 (the whole of the Liverpool City Region consumes 20,400 GWh; Greater Manchester consumes 33,700 GWh). The energy consumption differs considerably between the Local Authorities, mainly due to the energy intensive industrial cluster at Ellesmere Port. Whilst domestic energy use represents more than 50% of the total energy used in Cheshire East and Warrington (transport not included), the corresponding share in Cheshire West and Chester (CW&C) is only 20%.

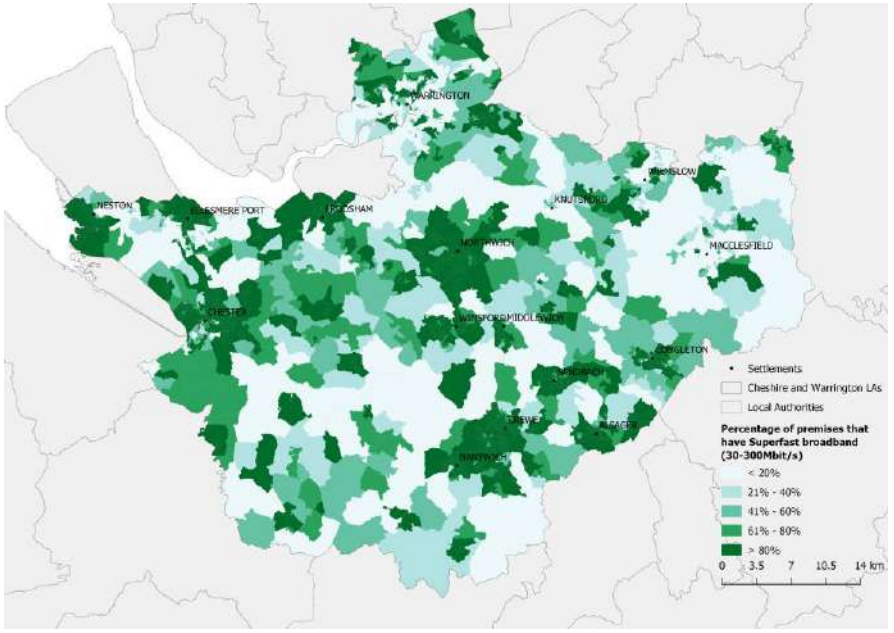
Source: Mickledore and Bizcat (2018) Development of an Energy Strategy and Implementation Plan for Cheshire and Warrington

Broadband connectivity

Percentage of premises that have Ultrafast broadband (> 300Mbit/s) (2018)



Percentage of premises that have Superfast broadband (30-300Mbit/s) (2018)



Effective and high quality broadband coverage is essential to support businesses and economic growth, especially given the shift towards an internet based economy and changing work practices with working from home becoming more common.

Overall, 29.8% of premises in C&W have Ultrafast broadband with speeds of over 300Mbit/s. There is considerable variation between the local authorities: Warrington – 56.6%, Cheshire East – 29.2%, Cheshire West and Chester – 14.5%.

The left hand map shows the percentage of premises that have Ultrafast Broadband at the local level. There are high levels of Ultrafast broadband coverage in the principal towns of Ellesmere Port, Macclesfield and Warrington with many areas of the towns with over 80% of premises with this speed of broadband. Knutsford and Wilmslow also have high coverage.

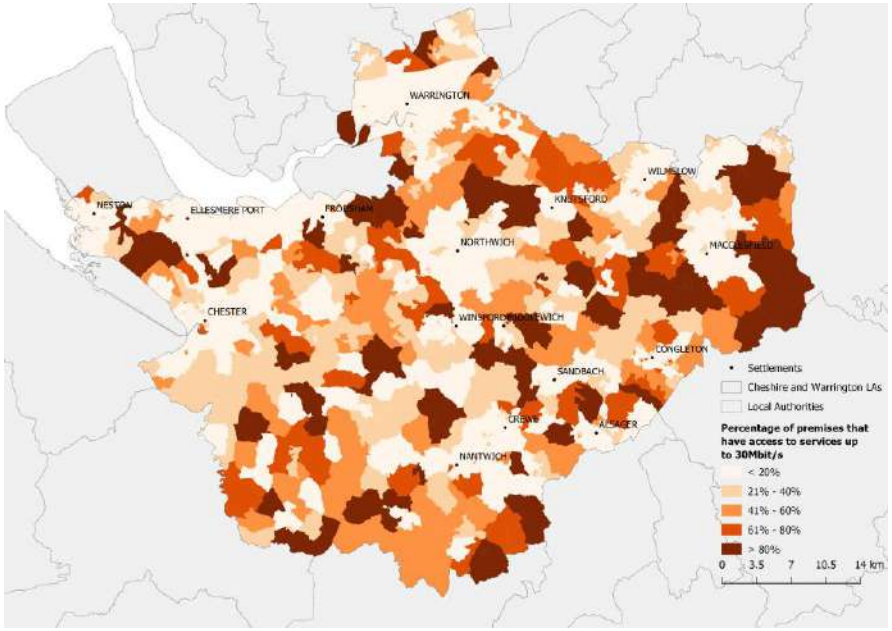
In contrast, less than 20% of premises in Crewe have Ultrafast broadband and coverage is also lower in Chester. Much of the rural areas of C&W also have low levels of Ultrafast coverage.

The majority of premises in C&W have Superfast broadband with speeds of 30-300Mbit/s (62.8%). The figure is 77.9% in Cheshire West and Chester, 61.4% in Cheshire East and 40.1% in Warrington.

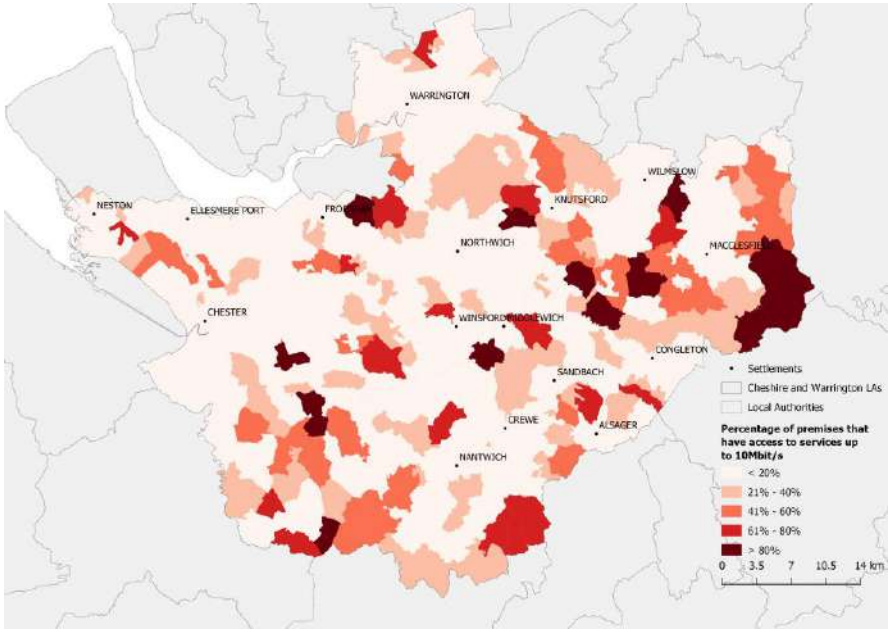
The right hand map shows the percentage of premises that have Superfast broadband at the local level. This also shows that there are a high proportion of premises with this speed of broadband across much of C&W.

Source: Ofcom Connected Nations (2018)

Percentage of premises that have access to services up to 30Mbit/s (2018)



Percentage of premises that have access to services up to 10Mbit/s (2018)



Looking at lower broadband speeds, 7.1% of premises in C&W have access to services with speeds of up to 30Mbit/s. Across the local authorities, the percentage of premises with access to this speed of broadband is 9.0% in Cheshire East, 7.4% in Cheshire West and Chester, and 3.1% in Warrington.

The left hand map shows the percentage of premises that have access to services up to 30Mbit/s. This map shows that there is a low percentage of premises with this speed in urban areas, whilst rural areas tend to have higher proportions of premises with this speed.

For low speeds of less than 10Mbit/s, 2.2% of premises in C&W have this speed. By local authority, this is 3.0% of premises in Cheshire East, 2.3% in Cheshire West and Chester, and 0.6% in Warrington.

The right hand map shows the percentage of premises at the local level that have access to services up to speeds of 10Mbit/s. Areas with a higher percentage of premises with this broadband speed are typically in more rural areas.

For parts of C&W, which have a high proportion of premises with access to services up to 30Mbit/s (shown in the left hand map), such as the areas surrounding Macclesfield and parts of the south west of C&W, this is due to a high proportion of premises having internet speeds of less than 10Mbit/s.

Source: Ofcom Connected Nations (2018)

Foundations of productivity: Business environment

Metro — Dynamics

Business environment – summary

Over 42,000 VAT registered businesses – **89.5%** micros, **8.5%** small, **1.6%** medium and **0.4%** large

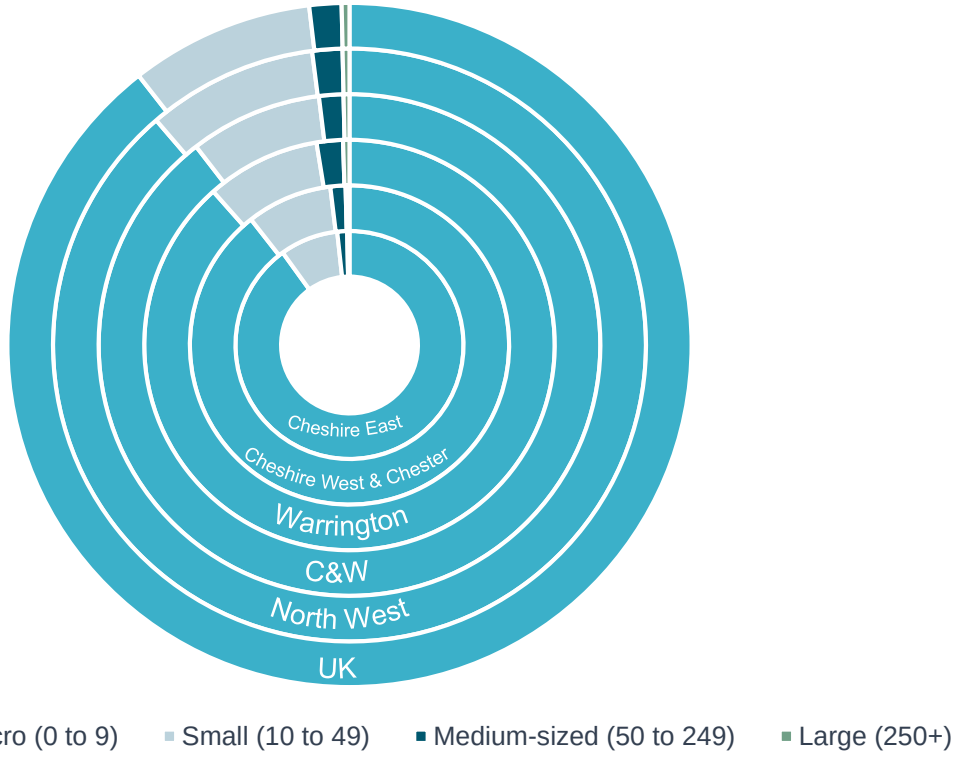
High number of **businesses per capita** with **good survival** and **scale up rates**

Low business death rate of **10.8%**, but low birth rate of **13.4%**

£7.6bn exports and over **81%** of current inward investment projects in key sectors

Business profile

Share of businesses by size (2017)



The pie chart to the left illustrates the breakdown of businesses by size in C&W and its local authorities compared to the NW and UK.

There are 42,030 VAT registered businesses* in C&W with 47.7% in Cheshire East, 33.4% in Cheshire West and 19.0% in Warrington. In terms of the breakdown of businesses by size, C&W follows a broadly similar pattern to the UK.

In C&W, there are 37,625 micro businesses (0 to 9 employees), which account for 89.5% of total businesses. This is very similar to the UK average of 89.4% and slightly higher than the NW average of 88.7%. The highest proportion of micro businesses is in Cheshire East (90.0%), whilst Warrington has the lowest share (89.4%). EM3 has a slightly higher proportion of micros (90.5%) whilst GM has a lower share (88.7%).

There are 3,580 small businesses (10 to 49 employees) in C&W, which is 8.5% of the total. This is similar to the UK average of 8.7%, but lower than the regional average (9.3%). Warrington has the highest share of small businesses (9.0%). Of the LEP comparators, EM3 has a lower share of small businesses (7.7%), whilst GM is much closer to the NW average (9.2%).

C&W has the same share of medium sized businesses (50 to 249 employees) to the NW and GM at 1.6%. This is very similar to the share in EM3 and the UK average (1.5%). Just over 2% of businesses in Warrington are of this size.

There are 160 large businesses in C&W, which is 0.4% of the total. This is the same as LEP, regional and national comparators.

** Businesses are defined as VAT and/or PAYE registered.*

Source: ONS Business Counts (2017)

Business base

Summary table of business base for manufacturing, chemicals, and energy and environment (2012-17)*

	Manufacturing*		Chemicals		Energy and environment	
	Share of total businesses	Business growth (2012-17)	Share of total businesses	Business growth (2012-17)	Share of total businesses	Business growth (2012-17)
Cheshire and Warrington	4.4%	11.2%	0.2%	6.7%	5.7%	28.8%
EM3	4.1%	2.9%	0.1%	-6.7%	4.4%	21.8%
Greater Manchester	5.5%	4.7%	0.2%	15.2%	4.2%	32.5%
North West	5.4%	7.4%	0.2%	9.5%	4.8%	33.7%
UK	4.9%	8.6%	0.1%	14.3%	4.3%	35.9%

The table above shows the share of total VAT registered businesses and business growth between 2012 and 2017 for the manufacturing*, chemicals, and energy and environment sectors.

In 2017, there were 1,830 manufacturing VAT registered businesses in C&W, representing 4.4% of total businesses. This is slightly higher than EM3 (4.1%), but lower than GM (5.5%), the NW (5.4%) and UK (4.9%).

Since 2012, the number of manufacturing businesses in C&W has grown by 11.2%. Growth in this sector has far surpassed both the regional (7.4%) and national (8.6%) averages, as well as growth rates in the comparator LEPs of EM3 (2.9%) and GM (4.7%).

There were 80 VAT registered businesses in the chemicals sector in 2017. This represents a low proportion of total businesses (0.2%), which is similar to LEP, regional and national comparators.

Growth in the chemicals sector since 2012 has been low (6.7%) relative to the NW (9.5%) and UK (14.3%) averages. Growth in GM has been much higher at 15.2%.

Energy and environment is a large sector with 2,390 VAT registered businesses, amounting to 5.7% of the total business base. This is a difficult sector to capture by SIC code, so it is possible that there may be an overestimation of the number of businesses, as businesses which relate to sectors other than energy may be included . The share of energy and environment businesses in C&W (5.7%) is higher than the regional (4.8%) and national (4.3%) averages. It is also higher than EM3 (4.4%) and GM (4.2%).

However, growth in this sector at 28.8% since 2012 has been slightly lower than for GM (32.5%), the NW (33.7%) and UK (35.9%), but higher than EM3 (21.8%).

** Excluding chemicals and pharmaceuticals.*

Source: ONS Business Counts (2012-2017)

Summary table of business base for life sciences, finance and business services, and logistics and distribution (2012-17)*

	Life sciences*		Finance and business services		Logistics and distribution	
	Share of total businesses	Business growth (2012-17)	Share of total businesses	Business growth (2012-17)	Share of total businesses	Business growth (2012-17)
Cheshire and Warrington	0.4%	30.4%	12.0%	49.0%	4.0%	67.7%
EM3	0.4%	28.6%	11.2%	28.7%	2.8%	22.0%
Greater Manchester	0.3%	47.6%	12.1%	62.3%	5.3%	112.7%
North West	0.3%	41.3%	11.3%	55.4%	5.0%	87.2%
UK	0.4%	35.3%	10.6%	49.7%	4.1%	63.1%

The table above shows the share of total VAT registered businesses and business growth between 2012 and 2017 for the life sciences*, finance and business services, and logistics and distribution sectors.

In 2017, there were 150 life sciences* VAT registered businesses in C&W, representing a low proportion of total businesses (0.4%), which is similar to LEP, regional and national comparators.

The number of VAT registered businesses in life sciences has increased by just over 30% since 2012, exceeding growth in EM3 (28.6%). Growth is slightly below the national average (35.3%) and significantly lower than that of the NW (41.3%) and GM (47.6%).

C&W had 5,060 VAT registered businesses in its finance and business services sector in 2017. As a broad sector, finance and business services companies account for a large share of total businesses (12.0%), which is roughly the same as GM. It is slightly higher than the NW (11.3%), UK (10.6%) and EM3 (11.2%).

Growth in this sector has been relatively high compared to other sectors at 49.0% since 2012. This is similar to the UK average of 49.7%, and higher than EM3 (28.7%), but lower than the NW (55.4%) and GM (62.3%).

There were 1,685 VAT registered businesses in logistics and distribution. This represents 4.0% of total businesses, in line with the UK average. EM3 falls below this at 2.8%. In contrast, GM and the NW have a higher share of businesses in this sector at 5.3% and 5.0%, respectively.

This sector has grown 67.7% since 2012, surpassing the UK average of 63.1%. The number of VAT registered businesses in logistics and distribution in GM has more than doubled. Average growth in the NW is also higher at just over 87%.

A chart of the share of VAT registered businesses by sector and local authority can be found in the Appendices.

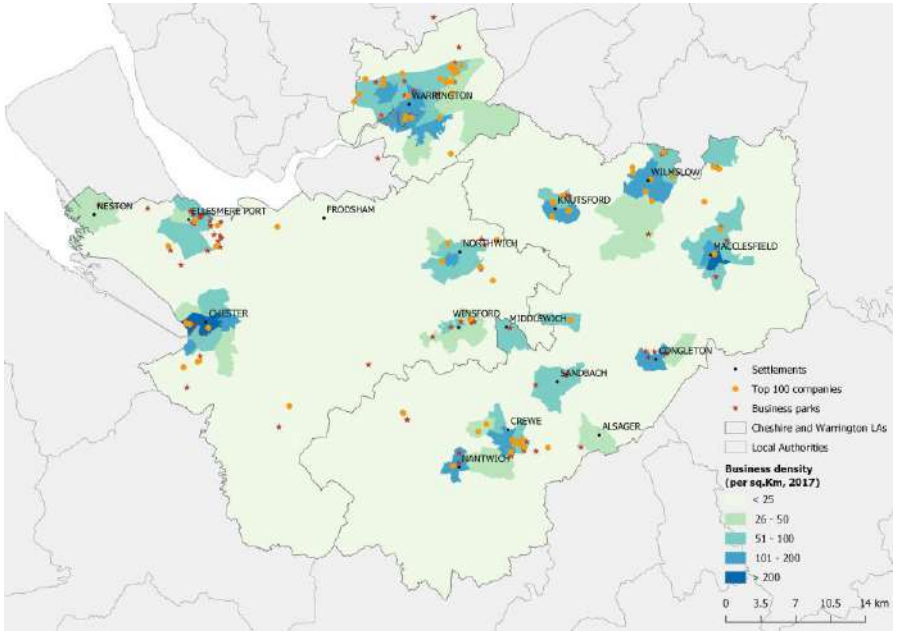
* *Including pharmaceuticals.*

Source: ONS Business Counts (2012-2017)

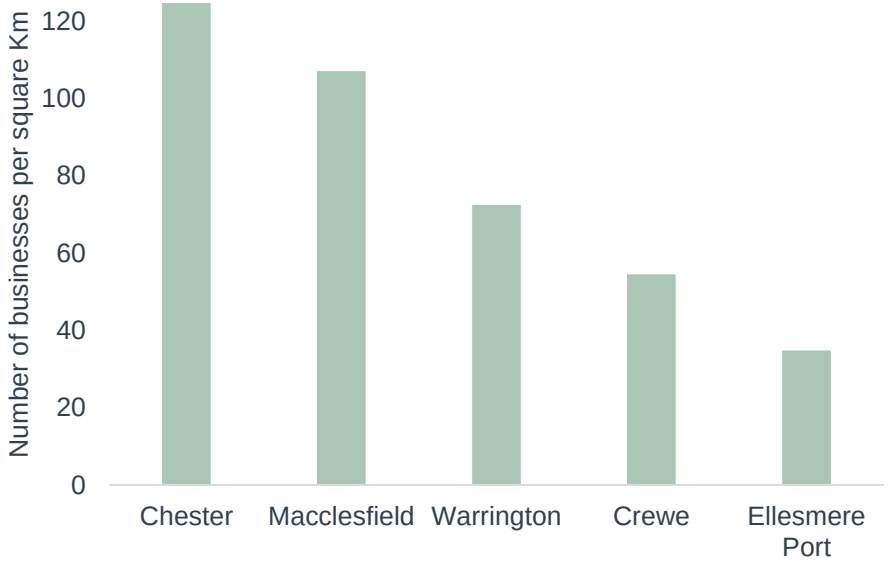
Metro — Dynamics

Business density

Number of businesses per square Km (2017)



Business density by town (2017)



The map on the left illustrates business density, which is measured by the number of VAT registered businesses per square kilometre. It is used to show where firms are located.

This illustrates the polycentric nature of C&W with high density in urban areas, typically where the top 100 companies and business parks* are located.

Areas with a high concentration of businesses (101 to 200 per square kilometre) include central Warrington, Knutsford, Wilmslow, Congleton, Crewe, Nantwich and east Chester.

Parts of central Chester and Macclesfield have the highest business densities in the area with over 200 businesses per square kilometre.

The chart on the right shows the overall business density for the five principal towns of Chester, Crewe, Ellesmere Port, Macclesfield and Warrington (using the MSOA definitions in the Methodology).

This chart mainly reflects the spatial distribution of businesses in the map. With 3,145 businesses, Chester has the highest business density of 125 businesses per square kilometre. Macclesfield with its 2,815 businesses has a slightly lower business density of 107 businesses per square kilometre.

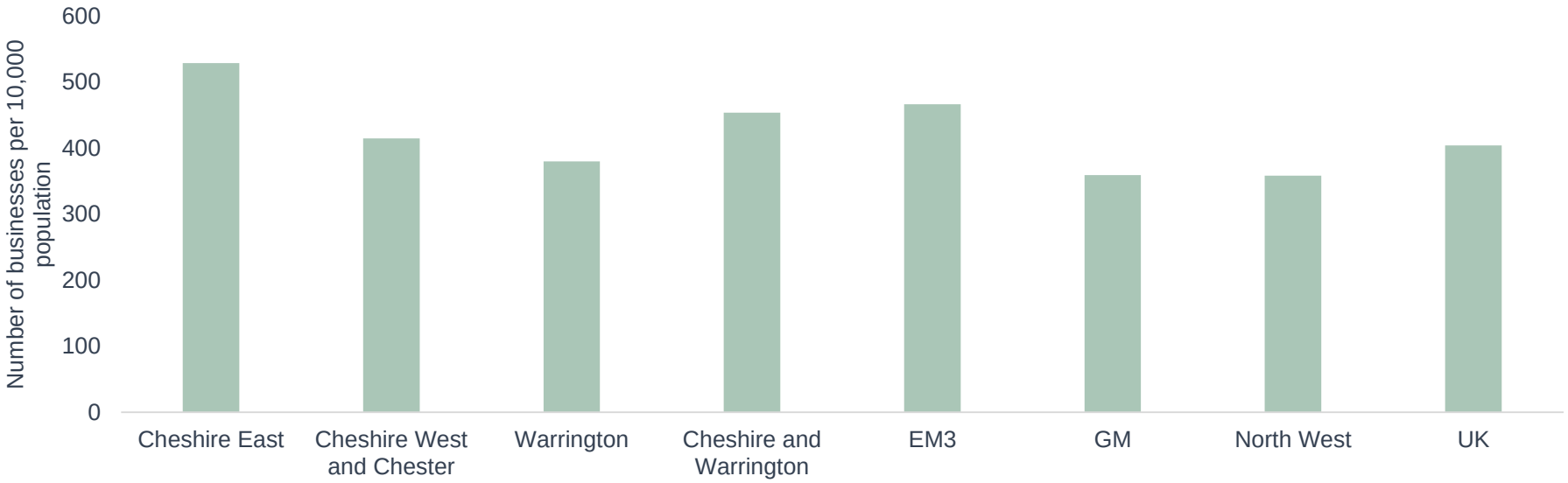
Warrington has the highest number of businesses at 5,915, but a business density of 72 businesses per square kilometre, due to its greater area. Crewe and Ellesmere Port have lower business densities based on their lower number of businesses and relatively large areas.

** Includes industrial estates and business, employment, commercial, enterprise and technology parks.*

Source: ONS Business Counts (2017), Experian MarketIQ (2018)

Businesses per capita

Number of businesses per 10,000 population (2017)



The chart above shows the number of VAT registered businesses per capita. This is a useful way of comparing the number of businesses for larger areas. Population can be used as a proxy for size in order to normalise the number of VAT registered businesses for comparison with other areas. Businesses per capita can be used to indicate the success of an area at attracting and retaining businesses.

In C&W, there are 454 VAT registered businesses per 10,000 population. This is almost 27% higher than the NW, which has 358 VAT registered businesses per 10,000 people. It is just over 12% higher than the UK level of 404 VAT registered businesses per 10,000 people. This shows that C&W has high levels of business activity, indicating an attractive and supportive business environment.

Within C&W, Cheshire East has the highest business per capita ratio at 529. Warrington has the lowest ratio at 380, which falls below the UK level. This ranking is similar to other economic indicators.

Alongside its LEP comparators, C&W has a similar number of businesses per capita to EM3, which is marginally higher at 467 VAT registered businesses per 10,000 people. It has a much higher ratio than GM (359 VAT registered businesses per 10,000 people), which is similar to the wider NW.

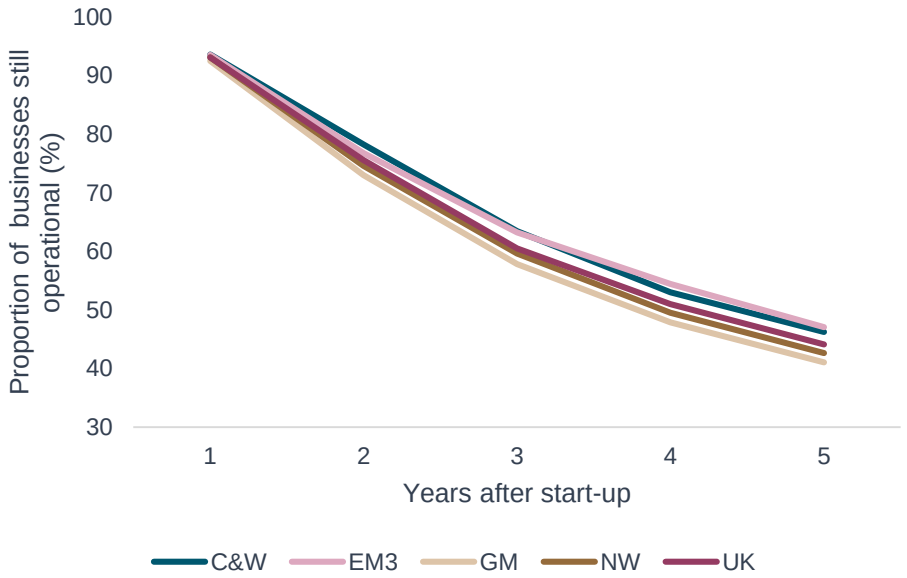
Source: ONS Business Counts (2017), ONS Population Estimates (2017)

Business demography

Business birth and death rates (2016)

	Business birth rate	Business death rate
Cheshire East	13.7%	10.5%
Cheshire West and Chester	13.3%	10.6%
Warrington	12.9%	11.7%
Cheshire and Warrington	13.4%	10.8%
*Business birth rate: EM3** = 11.8%, GM = 18.3%, NW = 15.2%, UK = 14.6%*		
*Business death rate: EM3** = 11.1%, GM = 12.6%, NW = 11.7%, UK = 11.6%*		

Businesses still active for years following start-up (2011-16)



The table shows business birth and death rates*. Business births are a key determinate of job creation and economic growth. Business deaths can be more frequent in a period of economic downturn.

C&W has a business birth rate of 13.4%, which is slightly lower than for the UK (14.6%) and NW (15.2%) as a whole. It has a higher birth rate than EM3** (11.8%), but GM has a very high rate of 18.3%. Within C&W, Cheshire East has the highest business birth rate (13.7%).

The business death rate in C&W (10.8%) is slightly lower than the region (11.7%) and country (11.6%). It is also lower than its LEP comparators. Reflecting the business birth rate, Cheshire East has the lowest business death rate (10.5%). This is indicative of a stable and mature business base.

In C&W, the total number of VAT registered businesses has grown by 1,155 between 2015 and 2016, reflecting a successful business environment and economy. There were 25% more business births than deaths in C&W in 2016, which is similar to the UK (26.4%), but lower than the NW (31.0%).

To achieve the UK business birth rate in 2016, 600 additional businesses would need to be created in C&W. There would need to be 900 additional new businesses to achieve the 2016 business birth rate in the NW.

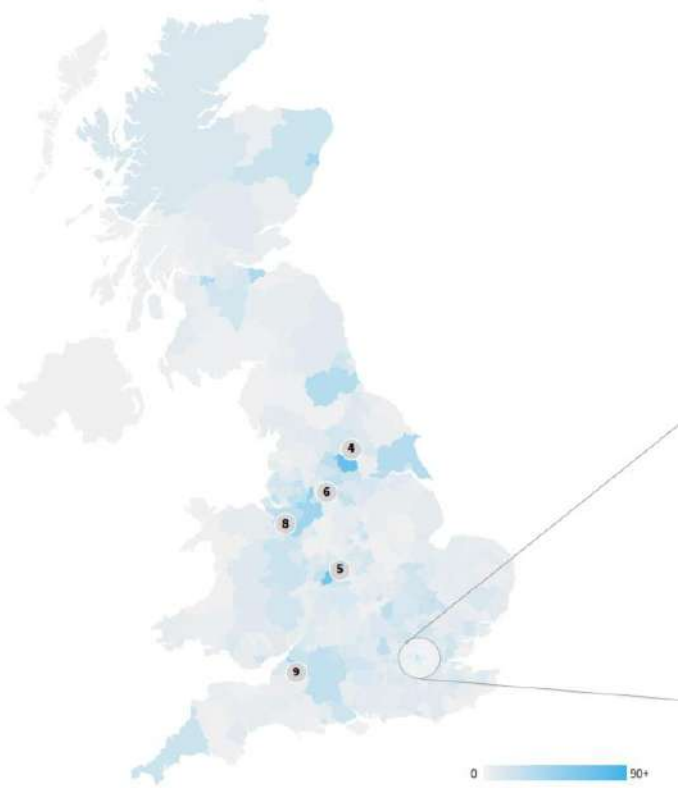
Business survival rates are also indicative of a supportive business environment. C&W has a high business survival rate, particularly relative to the NW. It has the highest three year survival rate with 63.5% of VAT registered businesses still operational after three years compared to 59.6% in the NW and 60.5% in the UK. The survival rates of businesses over five years from 2011 in C&W (46.2%) is similar to EM3 (47.1%).

** Birth and death rates calculated as a percentage of active business population for that year. Note this uses a different measure of businesses to other figures referenced in this pack, hence why figures may not match. ** Geography of EM3 calculated at full extent of districts.*

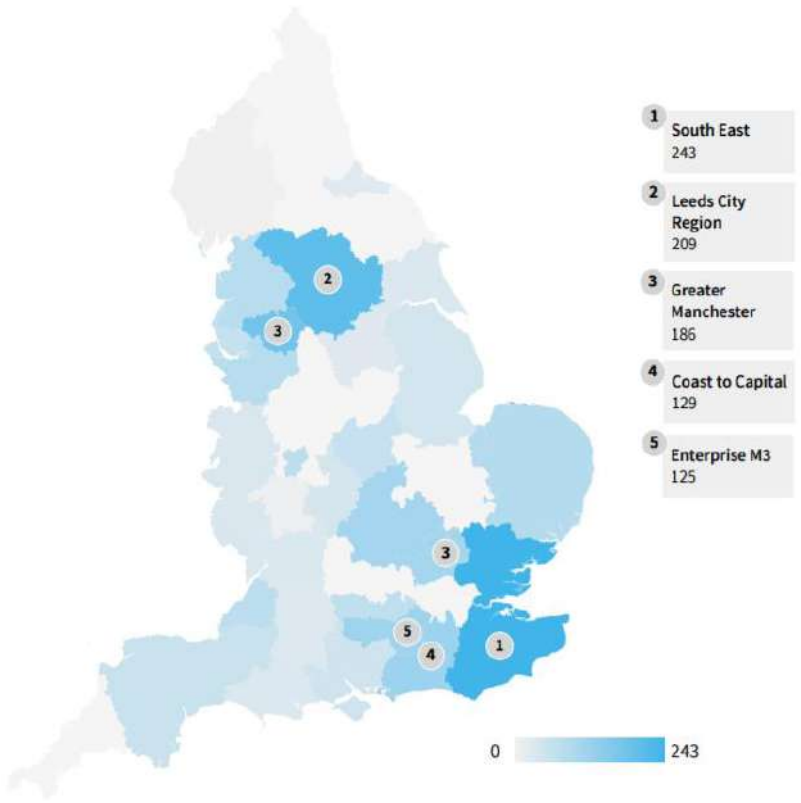
Source: ONS Business Demography (2016)

Business scale ups

Local authorities by the number of scale ups (2018)



LEPs by the number of scale ups (2018)



The maps above are from the ScaleUp Index, a report published by the ScaleUp Institute, using analysis of Companies House data by Beauhurst. They illustrate the number of visible scale ups by local authority (the left hand map) and LEP (the right hand map).

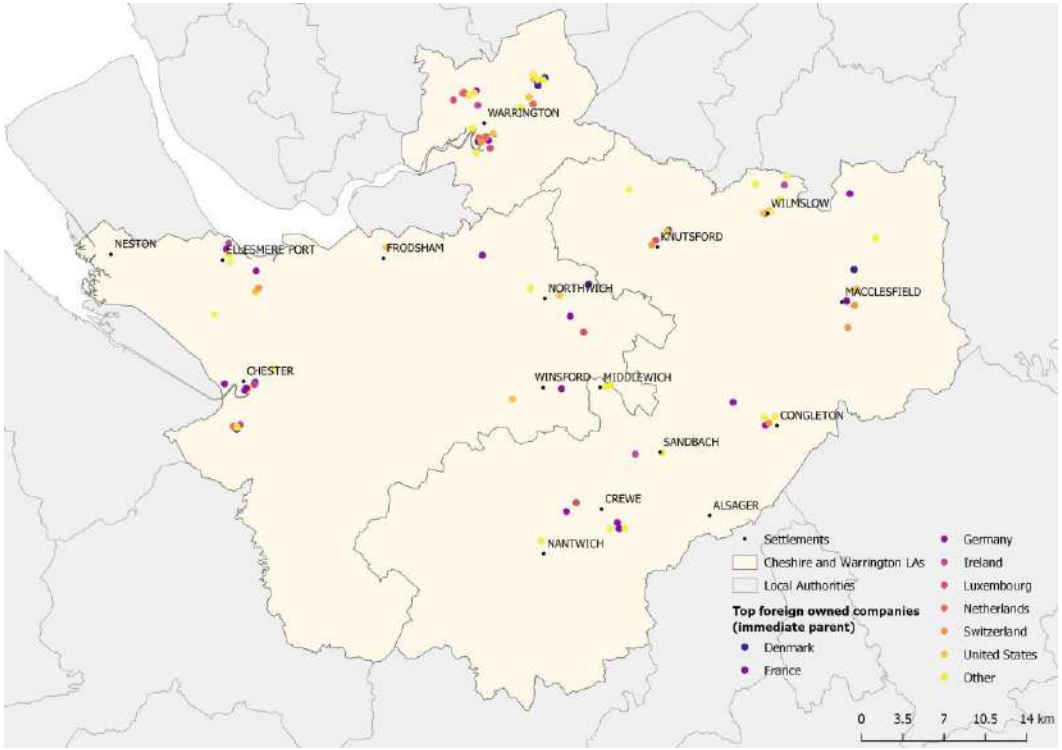
Visible scale ups use the OECD definition of a high-growth firm, whereby average annual growth (turnover or employees) is greater than 20% per annum over a three year period with at least 10 employees at the start of the observation.

Cheshire East is ranked as the eighth highest local authority by the number of scaleups with 42 scaleups. Raw figures are unavailable, but Cheshire West and Chester and Warrington also have relatively high levels of scaleup activity.

Source: ScaleUp Institute and Beauhurst (2018) The ScaleUp Index 2018

Foreign companies – immediate parent

Top companies with a foreign immediate parent (2018)



Using the sample of top 1,000 companies from Experian MarketIQ, this page and the next illustrate foreign ownership by looking at parentage.

This map shows companies in C&W with a foreign *immediate* parent*. This is defined by ONS as the first foreign business which holds 10% or more voting power within the company. There can be more than one immediate parent.

Of the 638 top companies which submitted immediate parent information, 16.3% are foreign owned.

In C&W, companies with a foreign immediate parent tend to be located in urban areas. Large UK owned companies tend to be located in rural areas. Companies with a UK immediate parent in the rural south west of C&W include Meadow Foods, Ardagh Metal Beverages, Bristol-Myers Squibb Business Services and Great Bear Distribution.

No one foreign country dominates in terms of ownership, but the majority of companies with a foreign immediate parent are either European, particularly German, or American. There are a high number of foreign owned companies in manufacturing.

Below are examples of companies with a foreign immediate parent by sector:

- Manufacturing – Asics (Netherlands), Tetra Pak (Netherlands), Prowell (Germany)
- Chemicals – Perstorp (Swedish), PQ Silicas (Netherlands) and Albis (Germany)
- Energy and environment – MHI Vestas Offshore (Denmark) and Nuvia (France)
- Finance and business services – Payzone
- Logistics and distribution companies – Carrier Transicold (USA), Euroresins (Germany)

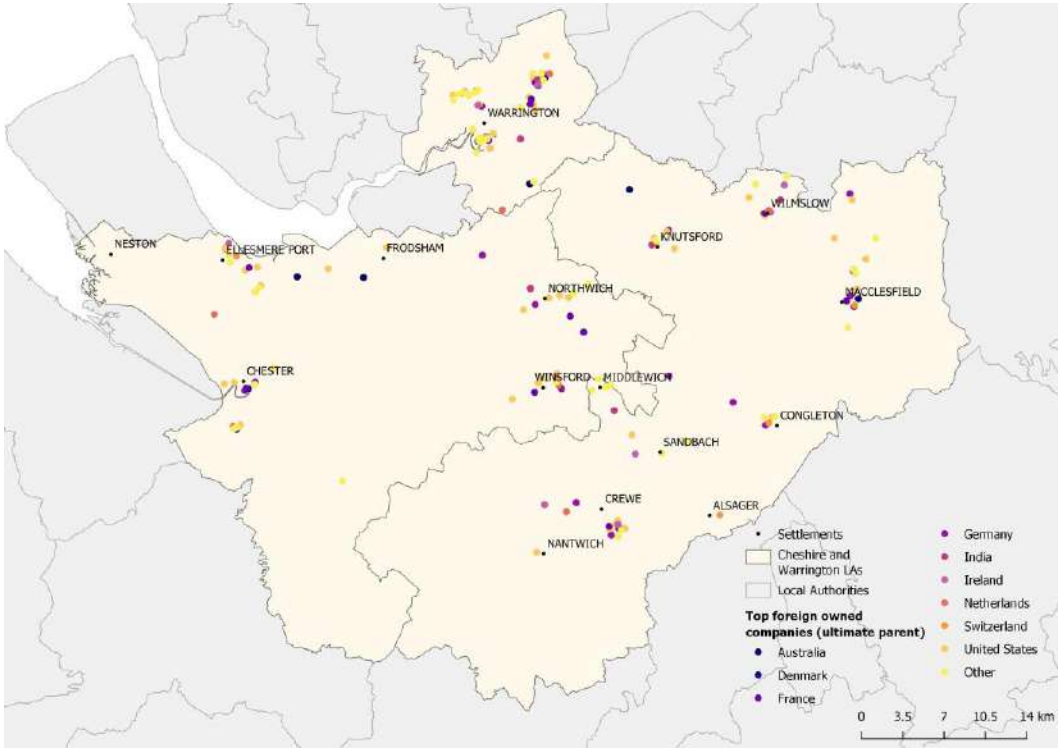
** Please note there is missing data where not all companies have submitted information on foreign ownership.*

Source: Experian MarketIQ (2018)

Metro Dynamics

Foreign companies – ultimate parent

Top companies with a foreign ultimate parent (2018)



This map shows companies with a foreign *ultimate* parent*. The foreign ultimate parent is at the top of the ownership chain and is not controlled by any other entity.

A total of 589 top companies submitted ultimate parent information. A large proportion are foreign owned at 40.6%.

Many companies with a UK immediate parent have a foreign ultimate parent. A lot of the countries which featured prominently as foreign immediate parents are also present in the list of foreign ultimate parents, but some new countries emerge, such as Australia and India.

Below are examples of companies with a foreign ultimate parent by sector:

- Manufacturing – Bentley Motors (Germany) and Novelis (India)
- Chemicals – CF Fertilisers (USA) and TATA Chemicals (India)
- Energy and environment – SP Power Systems (Spain)
- Finance and business services – Assurant General Insurance (USA)
- Logistics and distribution – Great Bear Distribution (Luxembourg)

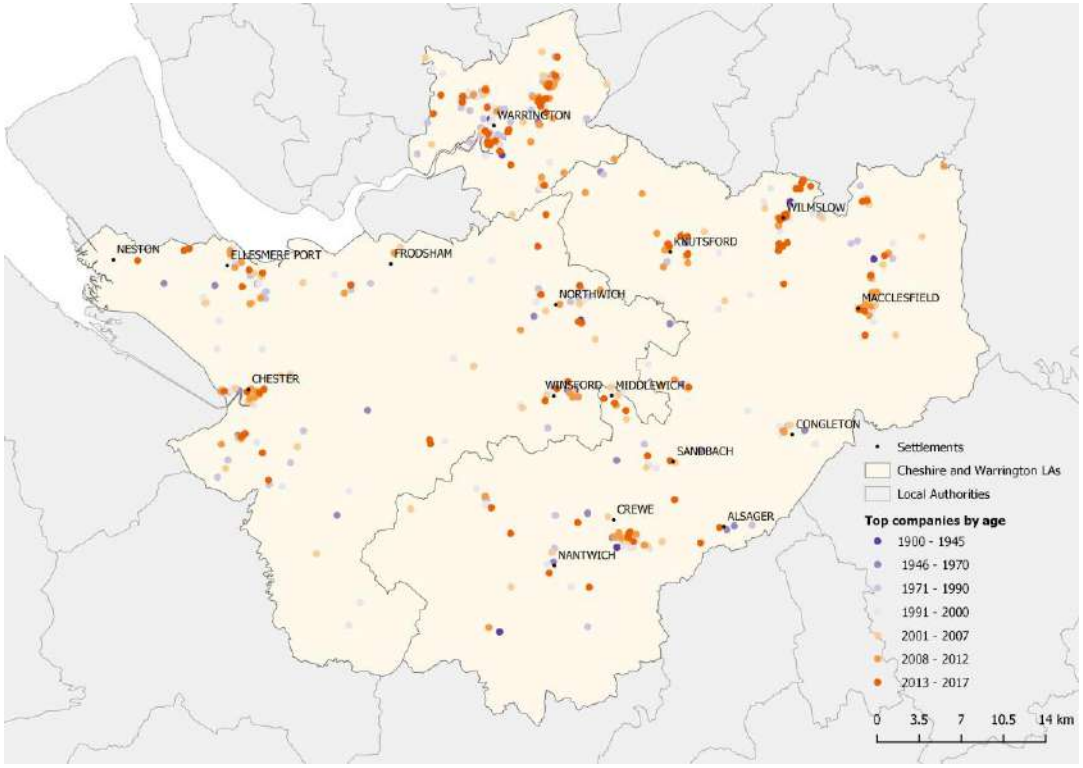
Many of the companies which have complete UK ownership are located in rural areas. Large companies located in the rural south western part of C&W with a UK ultimate parent include many wholesale and hospitality companies, as well as companies in finance and business services, such as Tuxedo MoneyPlus and The Funding Corporation, and manufacturing, such as Morrey Oils.

** Please note there is missing data where not all companies have submitted information on foreign ownership.*

Source: Experian MarketIQ (2018)

Young companies

Top companies by age (2018)



This map illustrates the top 1,000 businesses in C&W by their age using their date of incorporation as a proxy.

The majority of C&W's largest companies have been established for a significant length of time with around two thirds of them established before 2007. This includes Certas Energy UK, Sellafield, Bentley Motors and Atos.

Looking at the spatial distribution of companies shows that newer companies, which have been established within the last ten years, tend to be located in urban centres. Companies in rural areas tend to be older.

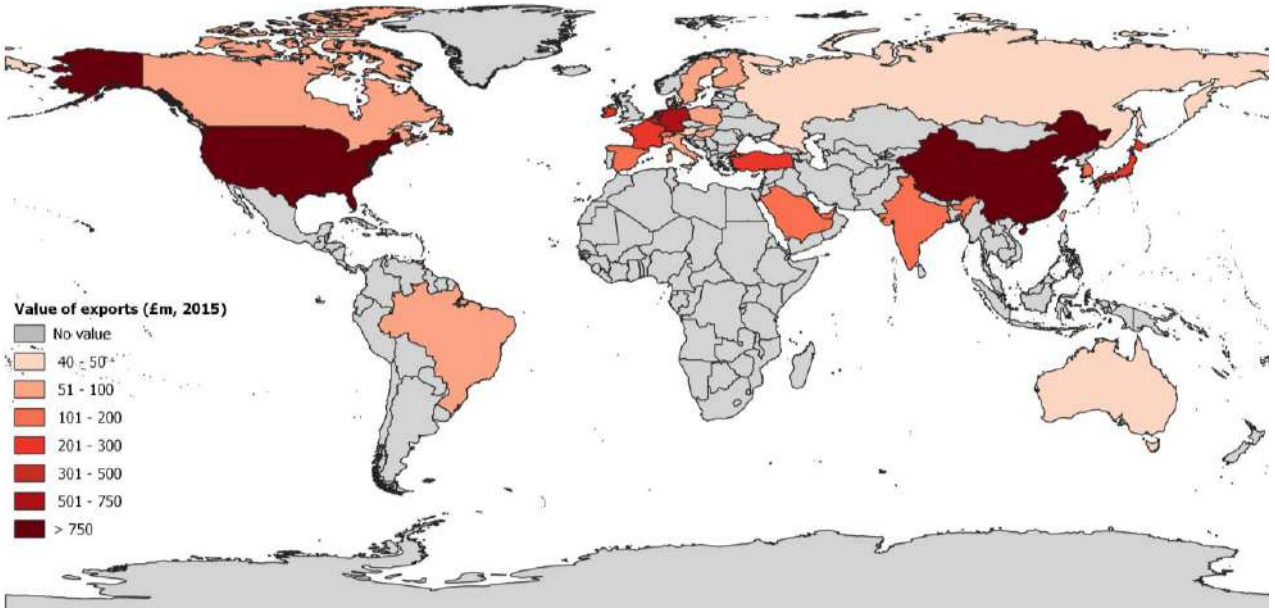
This suggests that new business start-ups and investments in C&W tend to be in urban areas, particularly the towns of Chester, Macclesfield, Crewe and Warrington. This reaffirms the polycentric nature of C&W.

Please note, the date of incorporation is not a perfect proxy for company age, but is meant to be used indicatively to show where business activity, whether new business start-ups, churn or investment, is taking place.

Source: Experian MarketIQ (2018)

Exports by country

Value of exports to main world trading partners (2015)



High levels of exports are indicative of a successful, outward looking area with productive companies. The map above illustrates the value of goods exports to the main trading partners of C&W.

In 2015, C&W exported £7.6bn of goods, which is higher than the LEP average of £6.4bn (£4.9bn excluding London). C&W also has a higher than average value of exported goods per worker of £15,364, compared to the English average of £8,968.

Non-EU countries were the largest recipient of exports, making up 62.4% of total exports.

C&W has the joint fourth highest share of exports to non-EU countries with the same proportion as Leeds City Region.

The top two trading partners of C&W are outside of the EU. The USA is the largest export market for goods (£1.5bn), followed by China (£910m). The next three largest trading partners are in the EU: Germany (£684m), the Netherlands (£553m) and Belgium (£329m).

EM3 is a larger exporter, exporting £14.6bn in 2015. It has a similar share of trade to non-EU countries (59.5%) but its top three trading partners only include one non-EU country: USA, Germany and the Netherlands.

GM has a lower level of exports than C&W (£5.5bn) with an EU share of 58.4%. Its top three export markets are the USA, Germany and Ireland.

Whilst the EU is still a large export market (£2.9bn), the strong trading links that C&W have with non-EU countries puts the area in good stead for strengthening these relationships and developing new ones post-Brexit.

Source: HMRC Growth Hub Data – Exports (2015)

Exports by industry

Export of goods by destination (2015)

The chart on the left depicts the breakdown of goods by broad sectors and by EU and non-EU trade.

This confirms the strengths of the chemicals, pharmaceutical and broader manufacturing sectors in C&W.

In the Standard International Trade Classification, chemicals includes organic and inorganic chemical products, pharmaceutical products, oils and cleaning preparations, plastics and fertilisers. This is the largest export sector for C&W, representing 43.8% of total exports, with a value of £3.3bn in 2015, owing to strengths in both chemical and pharmaceutical manufacture. Over 70% of exports were to non-EU countries with a value of £2.4bn, which is a much higher share than comparator LEPs. EM3 has a similar value of chemicals exports (£3.2bn), whereas GM has a much lower value of chemical exports (£1.4bn).

Machinery and transport exports, which include industrial machinery, telecommunications equipment, electrical machines/appliances, and transport vehicles and components, represent 23.9% of total exports with the value of £1.8bn. The value of machinery exports in EM3 is significantly higher at £6.2bn, representing 42.4% of their total exports. GM exports £1.3bn of machinery and transport. C&W export the majority of their machinery and transport to non-EU countries (76.2%), which is worth £1.4bn. This most likely relates to sectoral strengths in automotive and machinery.

There are also a relatively high value of exports of manufactured goods at £505m, almost two thirds of which go to the EU. These include metals and non-metallic mineral manufactures (including glass), leathers, rubber, cork and wood, paper, and textiles, which account for a high number of jobs in C&W.

Source: HMRC Growth Hub Data – Exports (2015)

Inward investment

Inward investment is important for job creation and economic development. As shown on page 104 and 105, C&W is home to many large, successful foreign owned businesses from many different countries in a diverse range of sectors.

C&W has had positive recent inward investment success. In manufacturing, this includes Astra, Bentley Motors, Plastic Omnium, Prowell, Mahle and Sonova Phonak. Investments in energy include Areva, GDF Suez and MHI Vestas Offshore. Companies such as Assurant Solutions, WEX Europe and New Balance have recently invested in the finance and business services sector. In the logistics and distribution sector, investments include Amazon.

As of July 2018, there were almost 80 ongoing active and prospective FDI projects in C&W. These include attracting new businesses to establish a new site in C&W, as well as assisting existing firms with expansion, joint ventures and acquisition. Almost 40% of FDI projects were new investors.

Similar to the broad range of foreign immediate and ultimate parent companies in C&W (see pages 104 and 105), investors are from a range of countries. This includes both countries within and outside of the EU, including Australia, Belgium, Brazil, Canada, China, France, Germany, India, Ireland, Italy, Mexico, Spain and the United States.

The table on the right shows a summary of projects by C&W's key sectors. Over 81% of the projects relate to C&W's key sectors. The highest number of projects (29) relate to manufacturing, specifically sub-sectors including automotive, transport, food and drink, engineering, electronics, metals and aerospace. There are also a high number of life science projects (11), including pharmaceuticals and biotechnology. There are a further ten projects in energy and environment across a broad range of sub-sectors such as nuclear, oil and gas, and renewable energy.

Summary of ongoing active and prospective FDI projects as of July 2018

Sector	Number of projects	Number of new jobs*	Investment*
Manufacturing	29	1,512	£507.8m
Chemicals	8	123	£85.8m
Energy and environment	10	108	£2.0m
Life sciences	11	295	£34.5m
Finance and business services	5	521	£5.4m

** Please note that these figures may be an underestimation as a lot of projects had missing data.*

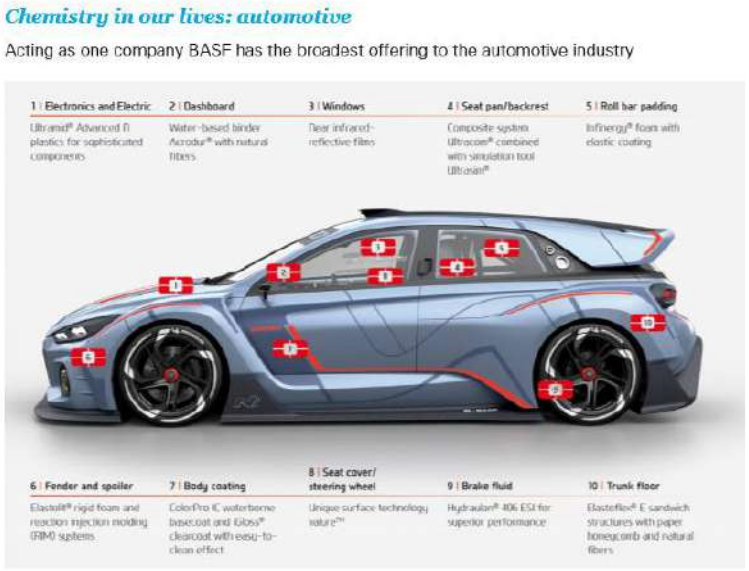
Source: Regeneris (2017) Cheshire and Warrington Value Proposition, DIT FDI reports (2018)

C&W industrial supply chains: from Chemicals to Automotive

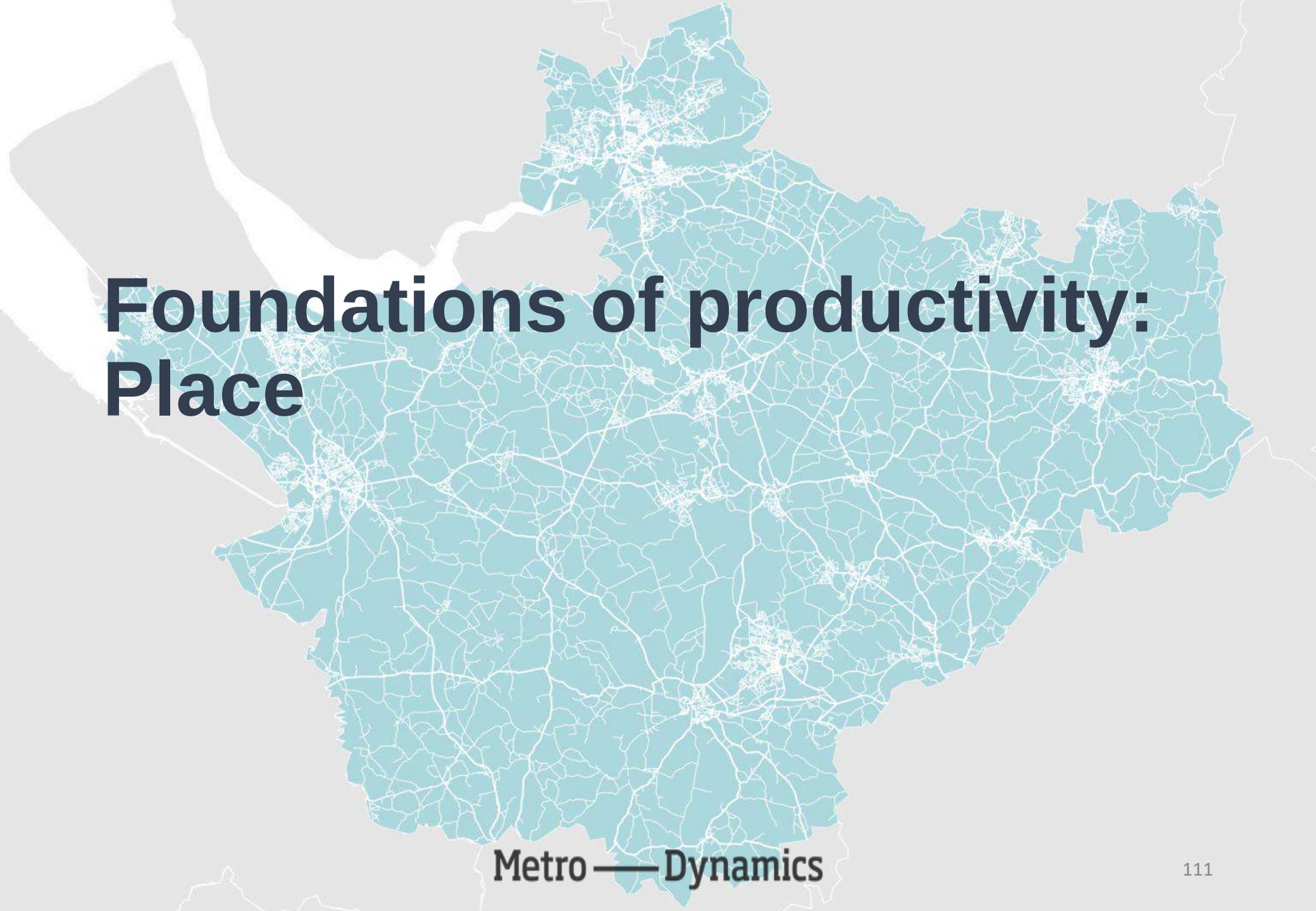
Chemicals: The 'industry for industries', being both its own biggest customer and a provider of materials and technologies to other important sectors such as aerospace, automotive and construction. The sector is unique, linking critical parts of the supply chain – from energy and feedstocks (raw materials), to advanced materials, fine chemicals, life sciences and consumer products According to the Chemicals Council - for every direct job in the UK, around two more are supported in purchased services and supply chains.

Automotive: home to original equipment manufacturers (OEMs) like Bentley & Vauxhall. Creating and sourcing components globally, the automotive industry has strong international supply chains. For example, Bentley's local and national supply chain is limited – in 2012, 80% of its inbound materials, parts and components were imported from the EU, in particular Germany. The lack of British-based parts and components manufacturers is identified by industry leaders as the most critical issue facing the country's car-making sector, making it harder to compete with countries where the suppliers surround the car plants.

The diagram uses BASF (headquartered in nearby Cheadle) as an example of how chemicals are used in the automotive industry.



Source: Chemical Council: Sustainable Innovation for a Better World (2018)



Foundations of productivity: Place

Metro — Dynamics

Place – summary

A **polycentric** area with wealthy and established rural areas, and clusters of deprivation and **young qualified residents** in urban centres

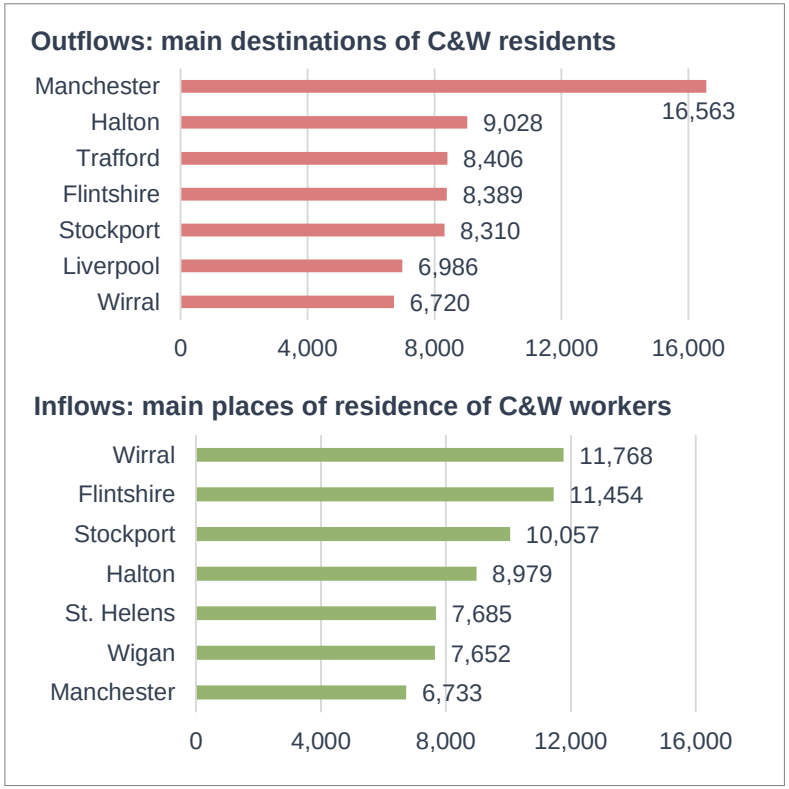
Net attractor of workers, especially young people from surrounding areas (including Liverpool)

Areas of **low affordability** in rural areas with **more affordable** urban centres

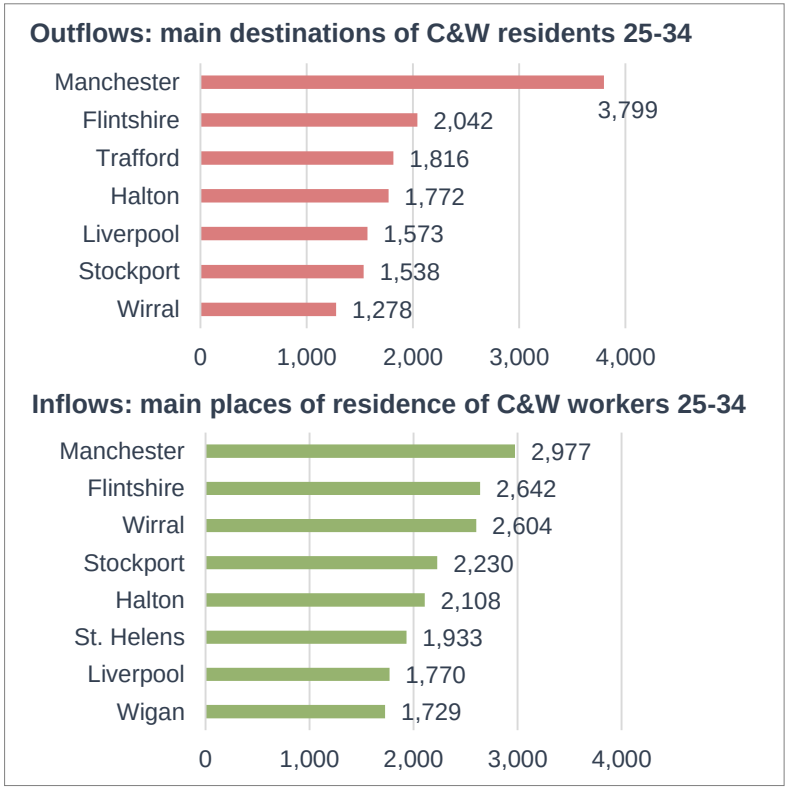
£30m of HIF allocated to C&W with approvals for **33,000** homes and a further **70,000** through Local Plans

Commuting patterns

Cheshire and Warrington commuting patterns (2011)



Cheshire and Warrington commuting patterns for 25-34 year olds (2011)



Almost 70% of C&W's resident workers work inside the LEP area. For younger residents (between 25 to 34) the number is slightly lower (67%), indicating that more are commuting externally.

The left hand chart shows, by number of commuters, the main origins and destinations of C&W's external commuters. The right hand chart presents similar figures, but considers only young commuters, aged 25 to 34.

Not surprisingly, surrounding local authorities are the main destination of C&W's out-commuters and also the main places of origin of external workers.

Manchester is the main destination for all age groups and there is a net outflow of people from C&W into Manchester. Conversely, C&W attracts workers mainly from Wirral, Flintshire and Stockport.

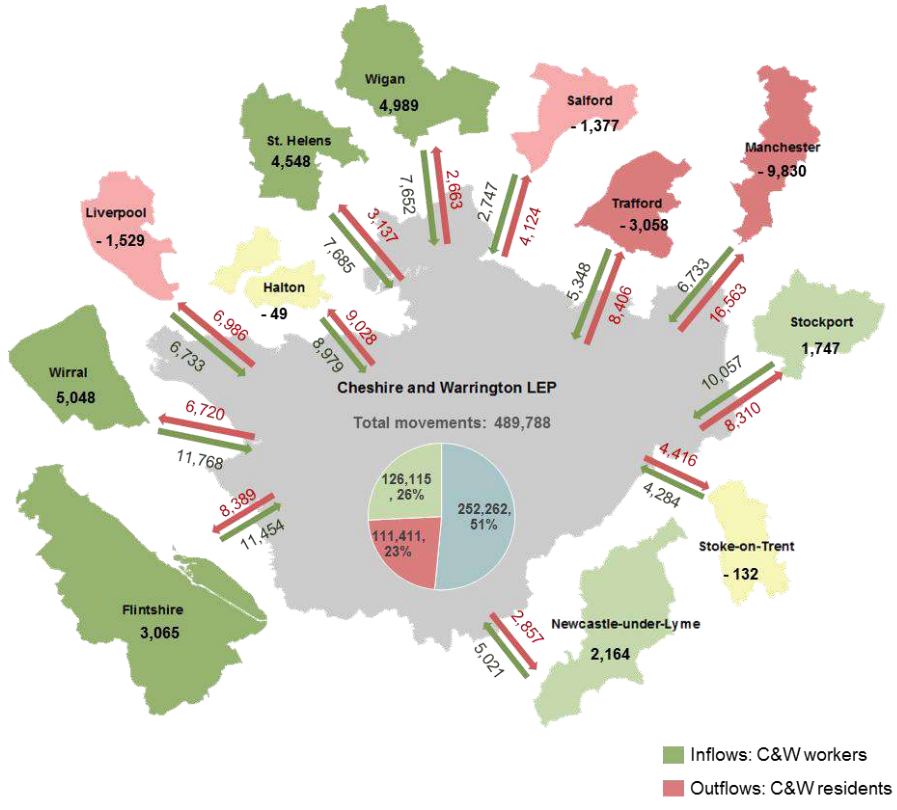
Interestingly, the inflows from Manchester are much more significant among young commuters (it is the most common origin) than when considering all age groups.

Source: ONS Census (2011)

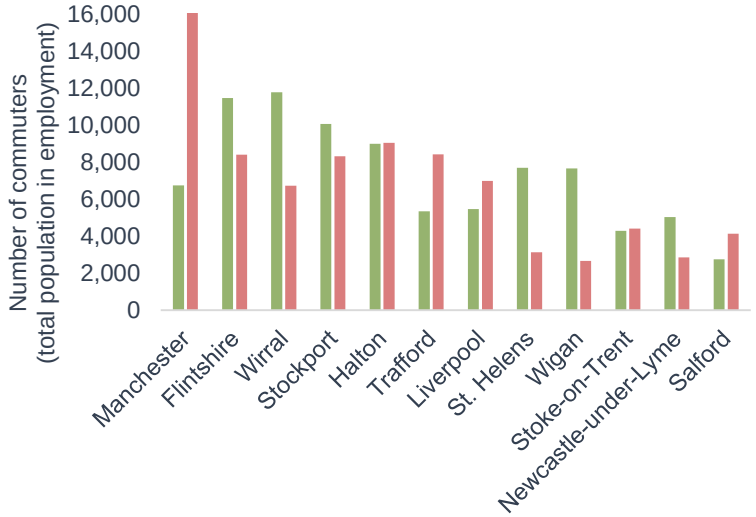
Metro — Dynamics

Inflows and outflows of all workers

Cheshire and Warrington commuting flows (2011)



Number of commuters by local authority (2011)



The map to the left and chart above illustrate commuting inflows and outflows for all workers.

Over half of all daily movements (inflows and outflows) take place within C&W.

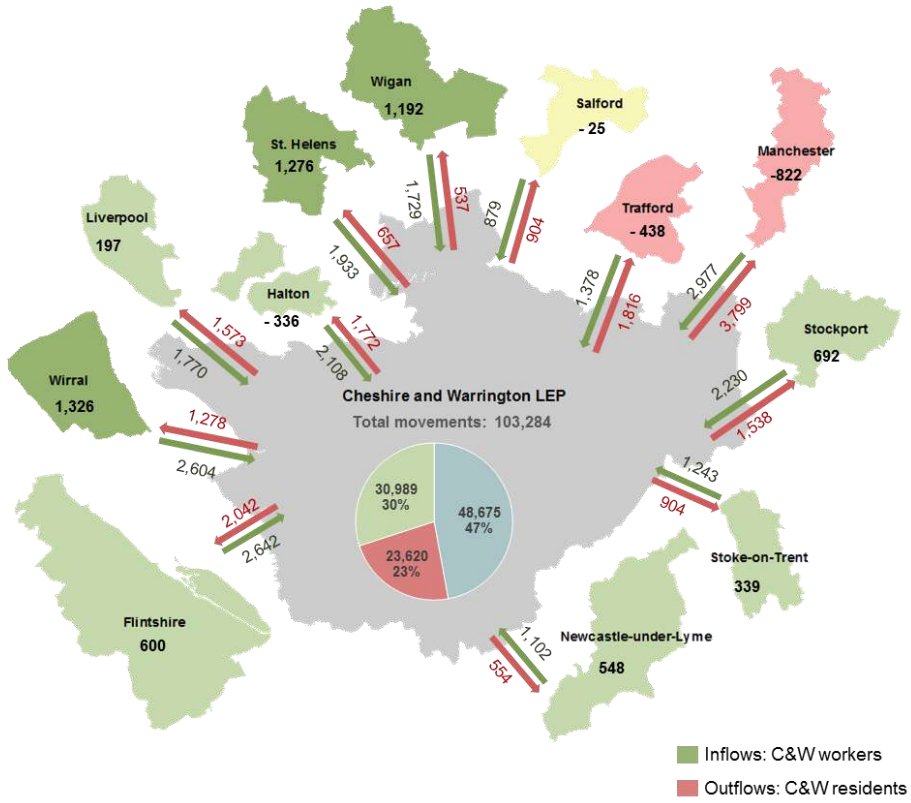
C&W is a net receiver of workers. There are more people living outside and working in C&W (126,155) than C&W residents working outside the LEP area (111,411).

Manchester and Trafford are the places with the highest net commuting outflows. The highest net inflows of commuters are from Wigan, Wirral, and St. Helens.

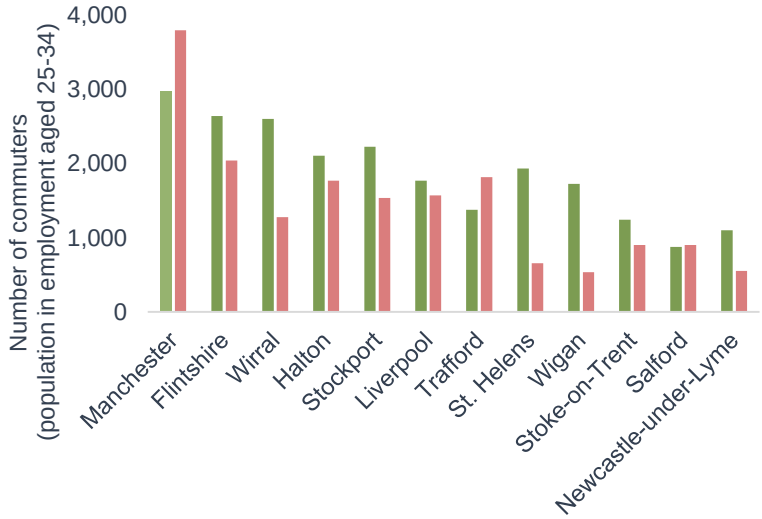
Source: ONS Census (2011)

Inflows and outflows of young people

Cheshire and Warrington commuting flows for 25-34 year old residents (2011)



Number of commuters by local authority for 25-34 year old residents (2011)



The map to the left and chart above illustrate commuting inflows and outflows, but considering young commuters only.

A lower proportion of young (25 to 34) C&W residents or workers are both residents and workers within C&W (47%, against 51% for all age groups). This suggests more young people commute into C&W to work, than the average.

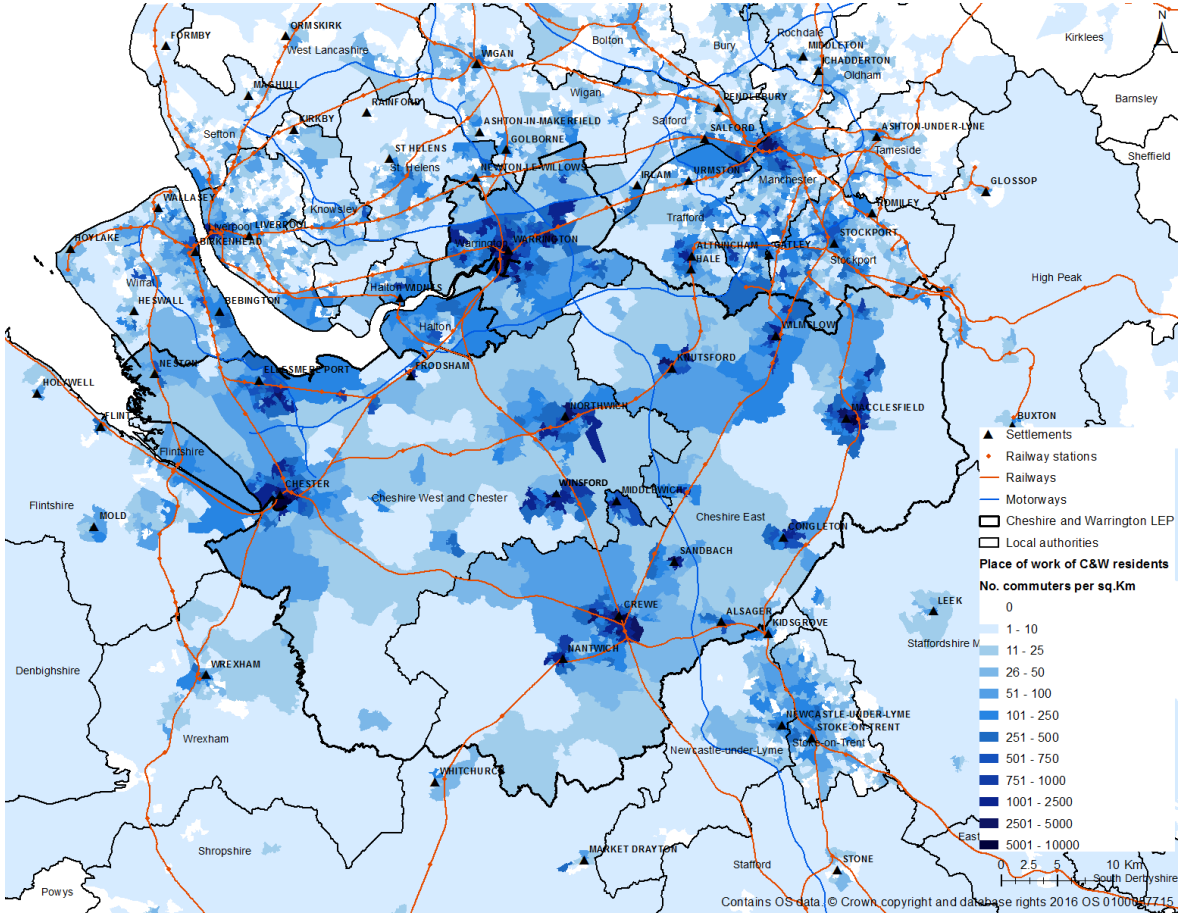
For ages 25 to 34, there is a net inflow from all surrounding local authorities except for central areas of Manchester (Manchester, Trafford and Salford). This suggests that C&W is serving as an economic magnet for young labour in the region. Interestingly, more young Liverpudlians work in C&W than visa versa. This is very surprising as this pattern does not usually hold for urban areas.

Source: ONS Census (2011)

Metro — Dynamics

Commuting – where C&W residents work

Places of work of Cheshire and Warrington residents (2011)



This map shows with high granularity the main places of work of C&W residents. The map reinforces the previous finding that most C&W residents work inside the LEP area.

Main employment destinations inside C&W are Warrington, Chester, Ellesmere Port, Crewe, Nantwich, Macclesfield, Northwich and Knutsford.

Those C&W residents working outside of C&W tend to work within relatively short distances of their place of residence.

Further analysis shows that Manchester is an important destination for residents, particularly those in Warrington and the northern part of Cheshire East.

Residents in the southern areas of Cheshire East also work largely in Stoke-on-Trent and Newcastle-under-Lyme.

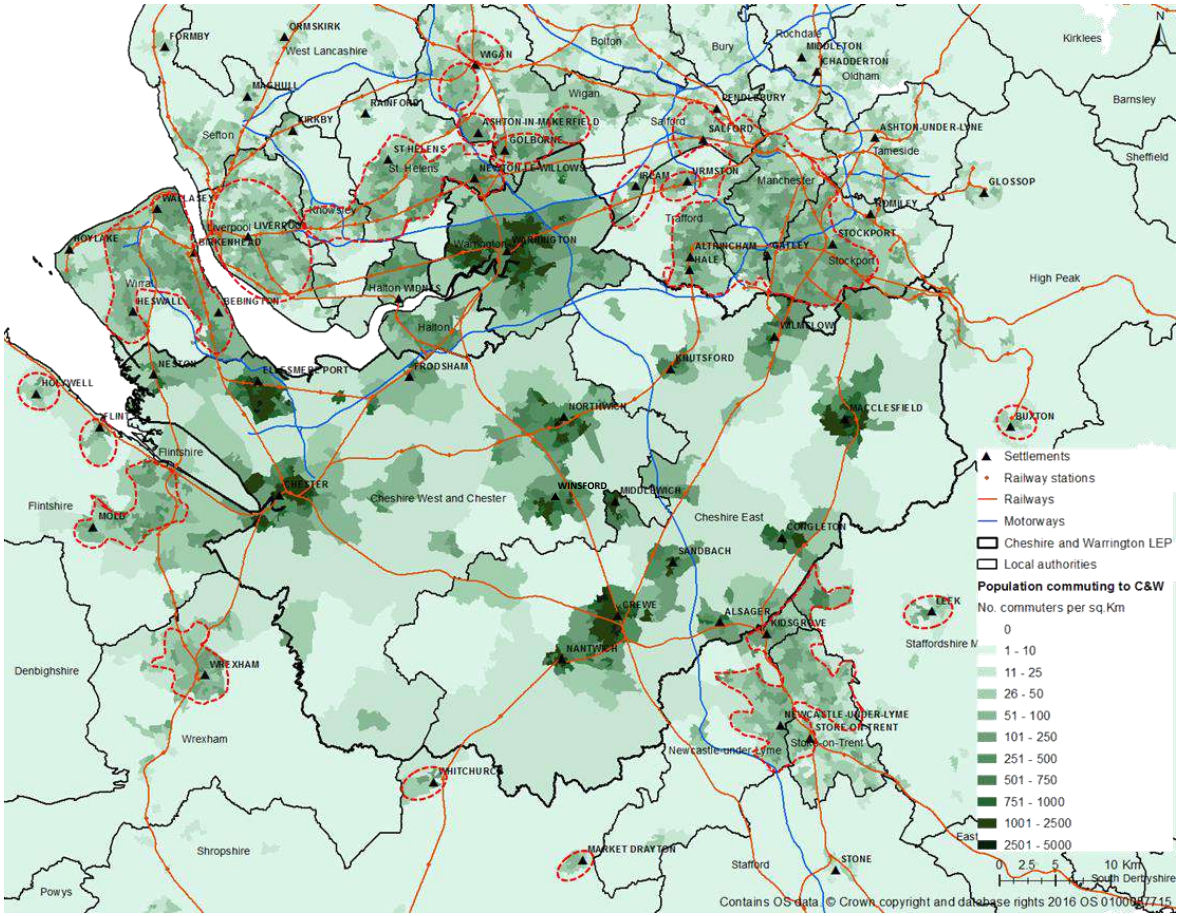
There is considerable external commuting from Cheshire West and Chester to Flintshire, Birkenhead and Halton.

Source: ONS Census (2011)

Metro — Dynamics

Commuting – who works in C&W

Places of residents of Cheshire and Warrington workers (2011)



This map illustrates the main areas of residence of Cheshire and Warrington workers. Areas of high concentration of C&W workers are circled in red.

Unsurprisingly, workers live mostly in the main urban centres in C&W and in some important settlements around railway stations.

Outside of C&W, the area attract mainly workers who live immediately north of its boundaries, including the southern parts of Greater Manchester, Halton, St Helens, Liverpool and Wirral.

More detailed analysis suggests that most of these commuters work in Warrington and the northern areas of Cheshire East, except from residents in Wirral who commute mostly to areas around Chester.

There are also important concentrations of workers from Stoke and Newcastle who commute to C&W, mainly to Crewe and the industrial areas of Cheshire West and Cheshire.

Chester and its surroundings, as well as Ellesmere Port, are also attractive to residents in Flintshire and Wrexham.

Source: ONS Census (2011)

Existing housing stock

C&W has circa **390,000** households

There is a **higher proportion of home ownership** (73%) compared to 64% in England

There is a **higher proportion of older** (over 65 year olds) **home owners** (80%) compare to England (75%)

Significant **under-occupation** exists in **older households** with 72% of older households with more than two spare rooms compared to 65% in England

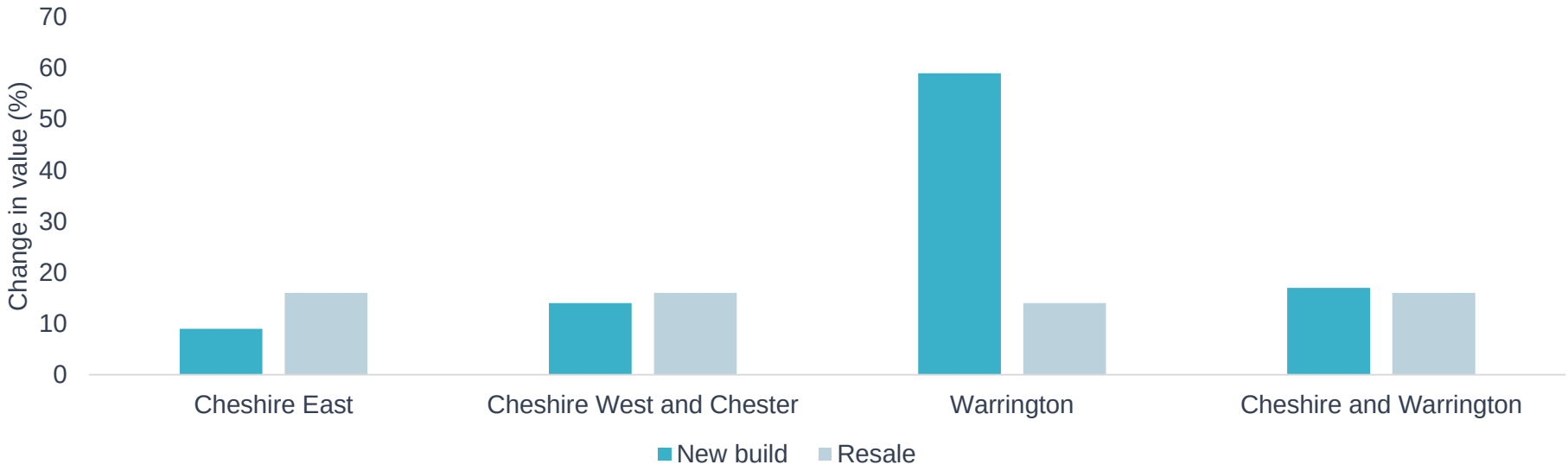
Social housing in C&W (14%) is **lower than the national figure** (18%)

C&W has a **lower proportion of Private Rented Sector** housing (13%) compared to 18% in England

Source: Developing a Housing Strategy for Cheshire and Warrington (2018)

Existing housing stock

Change in house prices (2013-17)



The chart above shows the change in value of new builds and resales over the period of 2013 to 2017.

House prices are increasing across C&W. Overall there has been a 17% rise in the cost of new builds and a 16% rise in resale values.

Warrington has seen the largest increase in the cost of new build properties at 59%. This is much larger than in Cheshire East (9%) and Cheshire West and Chester (14%).

All three local authorities have seen relatively similar increases in the value of resale prices with Cheshire East and Cheshire West and Chester both experiencing a 16% rise, whist there was a slightly lower increase in Warrington (14%).

Rental costs in C&W are higher than the national average with particular pressure in Cheshire East and Cheshire West and Chester. Warrington has experienced strong rental growth with a 13% increase since 2015.

Source: Developing a Housing Strategy for Cheshire and Warrington (2018)

Future supply

There are approvals in place for **33,000 homes**

A **further 70,000** homes will come from Local Plans through to 2030, **exceeding the Government's OAN figures**

The three councils are collectively planning for **60% uplift on projected demographic growth figures** (3,740 per annum compare to 2,740 per annum)

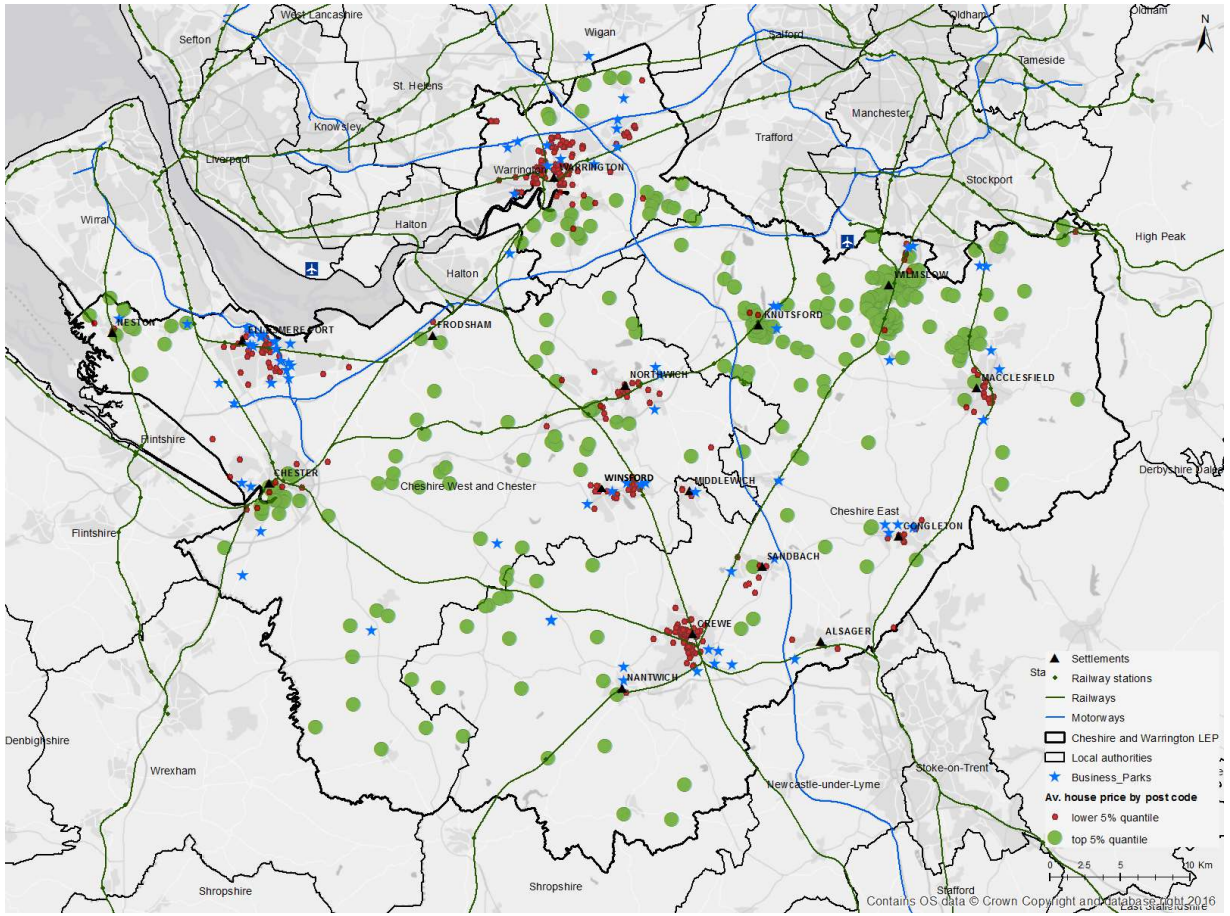
There is a push to accelerate delivery with over **£30m of HIF** already allocated to the sub-region

Source: Developing a Housing Strategy for Cheshire and Warrington (2018)

Metro — Dynamics

Highest and lowest house prices

Highest and lowest residential prices by postcode (2015)



The map on the left shows the location of properties sold which fall within the top 5% (green dots) and bottom 5% (red dots) of house prices in C&W in 2015. This uses 2015 data, as this was the most up-to-date data available at the time of the SEP.

The patterns emerging from the map reveal the dynamics that are at play between the different settlements within C&W.

Areas of wealth (underscored by properties in the top 5%) are found predominantly in rural areas with clusters around Wilmslow, Knutsford and outer Warrington. Chester is the only urban area with a mix of high and low property prices.

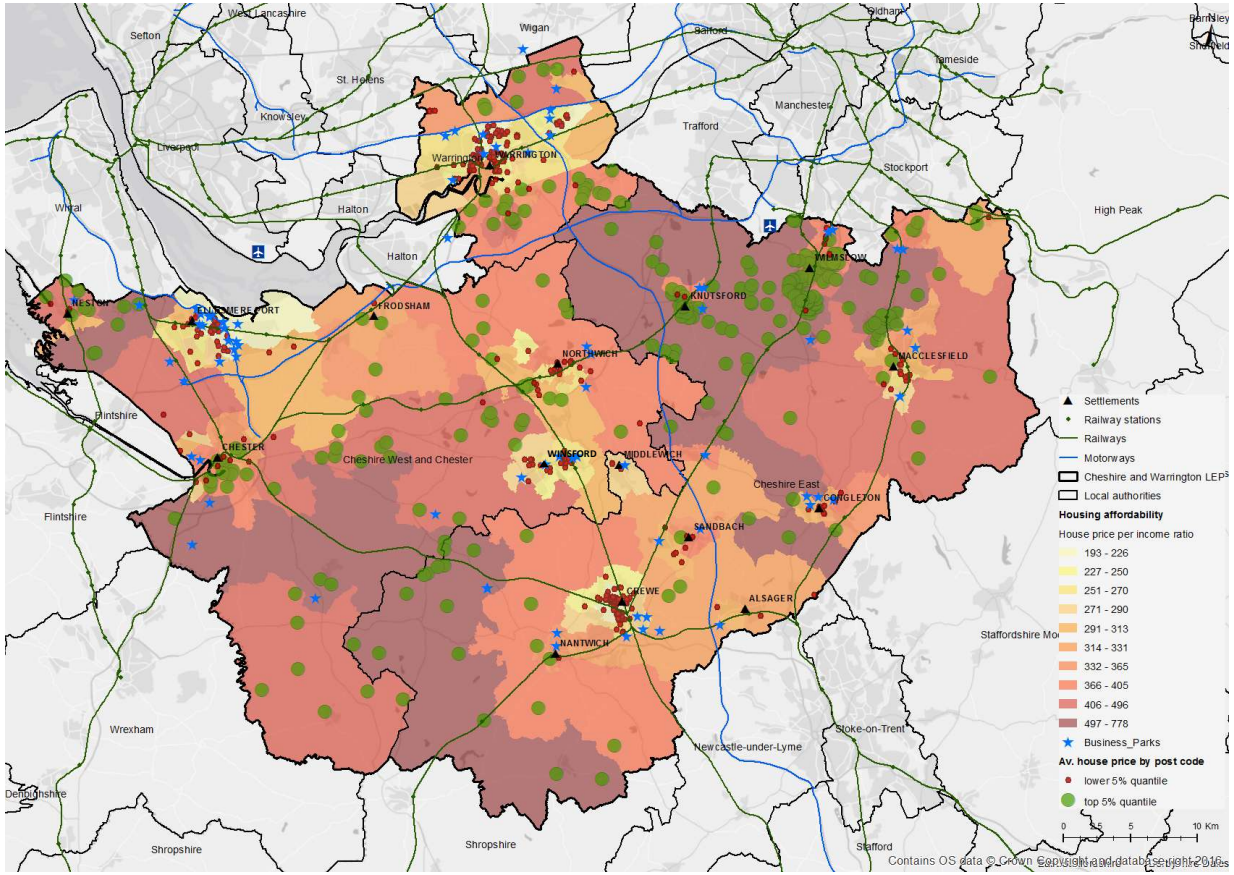
Clusters of properties in the bottom 5% are found in Crewe, inner/old Warrington and the industrial town of Ellesmere Port.

The presence of business parks in proximity to clusters of the lowest house prices indicates that, unsurprisingly, business parks are located in the less desirable, industrial areas of C&W.

Source: HM Land Registry (2015)

Housing affordability

Housing affordability (2015)



To better understand the patterns observed in the previous map, this map shows housing affordability. Housing affordability is derived by calculating the ratio between median house prices and total weekly household incomes. Darker areas on the map indicate less affordable places.

This uses 2015 data, as this was the most up-to-date data available at the time of the SEP.

This map shows that expensive properties in the countryside are located in the least affordable areas, which attract the wealthiest residents.

Chester is the only urban area which shows relatively low levels of affordability, which is consistent with the pattern of mixed house prices and the presence of dynamic urban residents as illustrated on page 124.

The relative affordability of the various light-coloured areas on the map can be associated with two different dynamics. It can be a symptom of spirals of deprivation that keep houses prices and income low, or can denote a healthier economy with affordable housing.

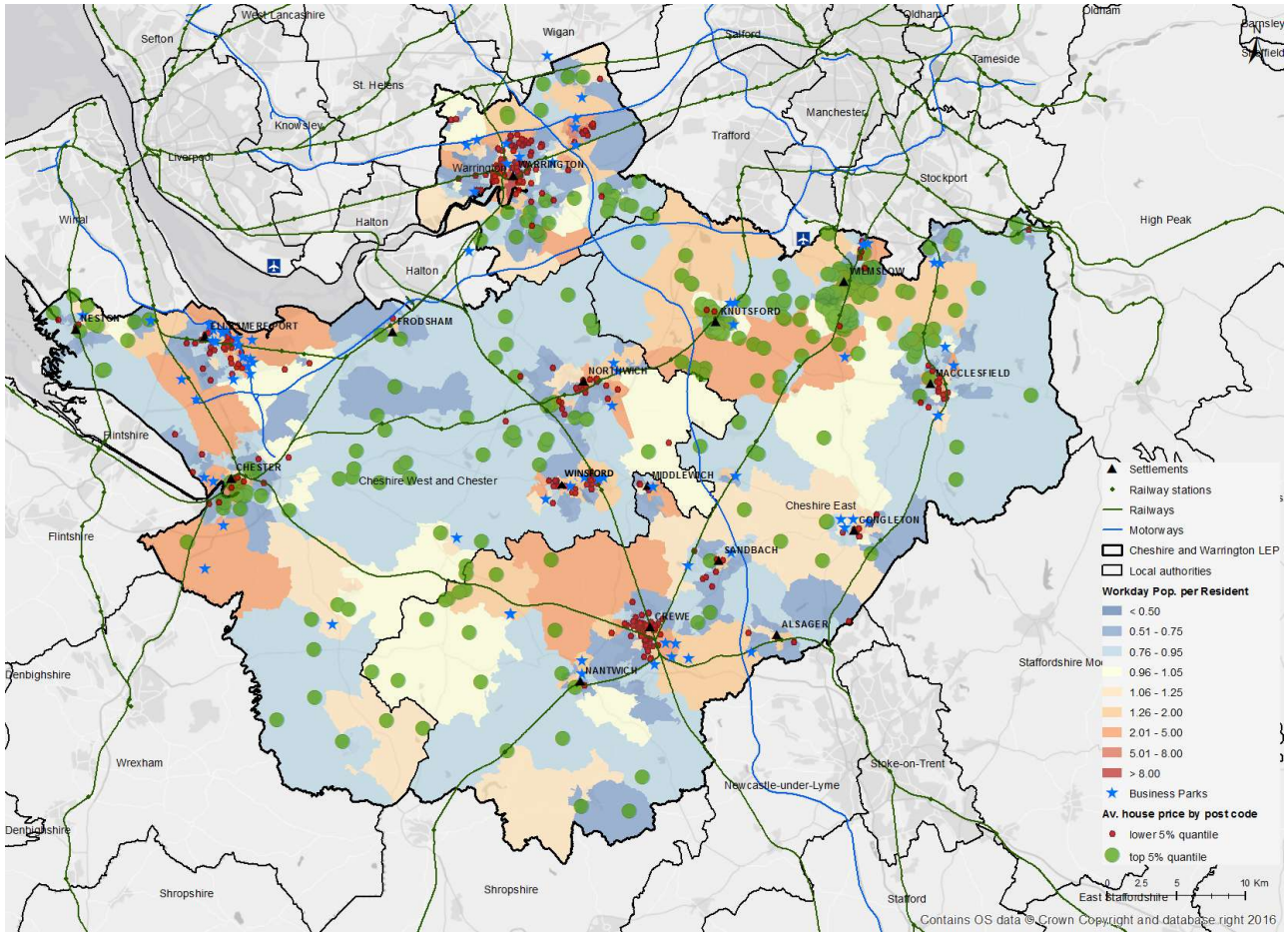
As can be inferred from the analysis on page 124, Warrington seems to support a more dynamic urban environment with more attractive housing stock that appeals to a younger and wealthier cohort of workers.

Source: Metro Dynamics analysis of HM Land Registry and ONS Annual Survey of Hours and Earnings (2015)

Metro — Dynamics

Land use – employment and residential

Land use in Cheshire and Warrington



This map illustrates land use in C&W, adding to our understanding of the rural-urban divide. Workday population per resident is used as a proxy to indicate whether an area is predominantly used for employment or residential.

Areas which are predominantly for employment use are displayed in darker shades of red, while predominantly residential areas are in darker shades of blue. Yellow areas denote a balanced mix of residential and employment use.

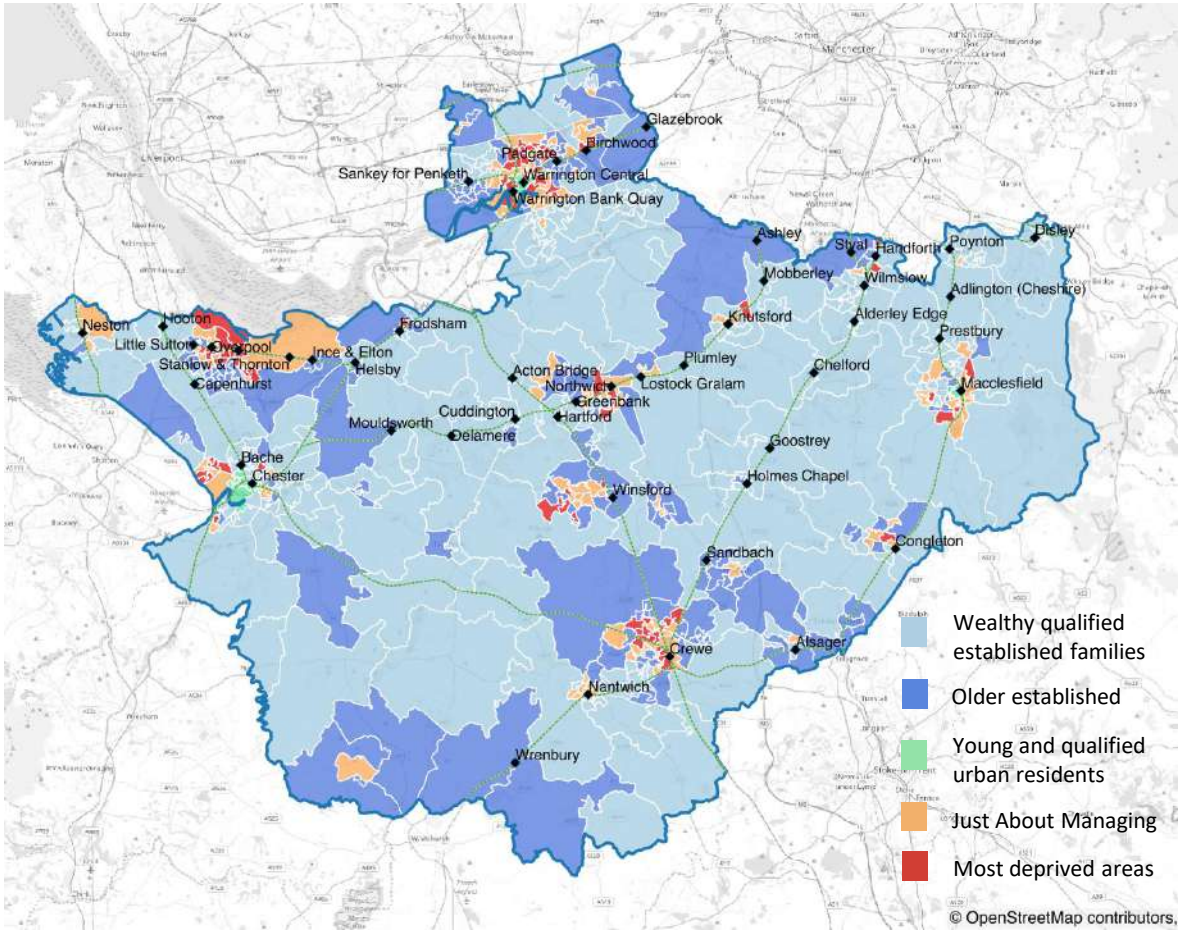
Not surprisingly, urban centre are markedly employment areas surrounded by residential areas.

The situation in the countryside is more diverse, with no clear pattern. There are localities that support a balanced mixed-use whilst others are distinctly used for employment use or are residential.

Source: ONS Census (2011)

Population clusters

Population clusters in Cheshire and Warrington



To better understand the type of residents inhabiting the different areas in the LEP, we conducted a cluster analysis over a series of socio-economic variables and identified five broad categories that ascribe C&W's residents to different socio-economic groups. This map illustrates the spatial distribution of these clusters.

Validating the picture behind housing affordability patterns, the cluster map confirms that the countryside and the area outside of the town centres attract wealthy families and residents with higher skills levels.

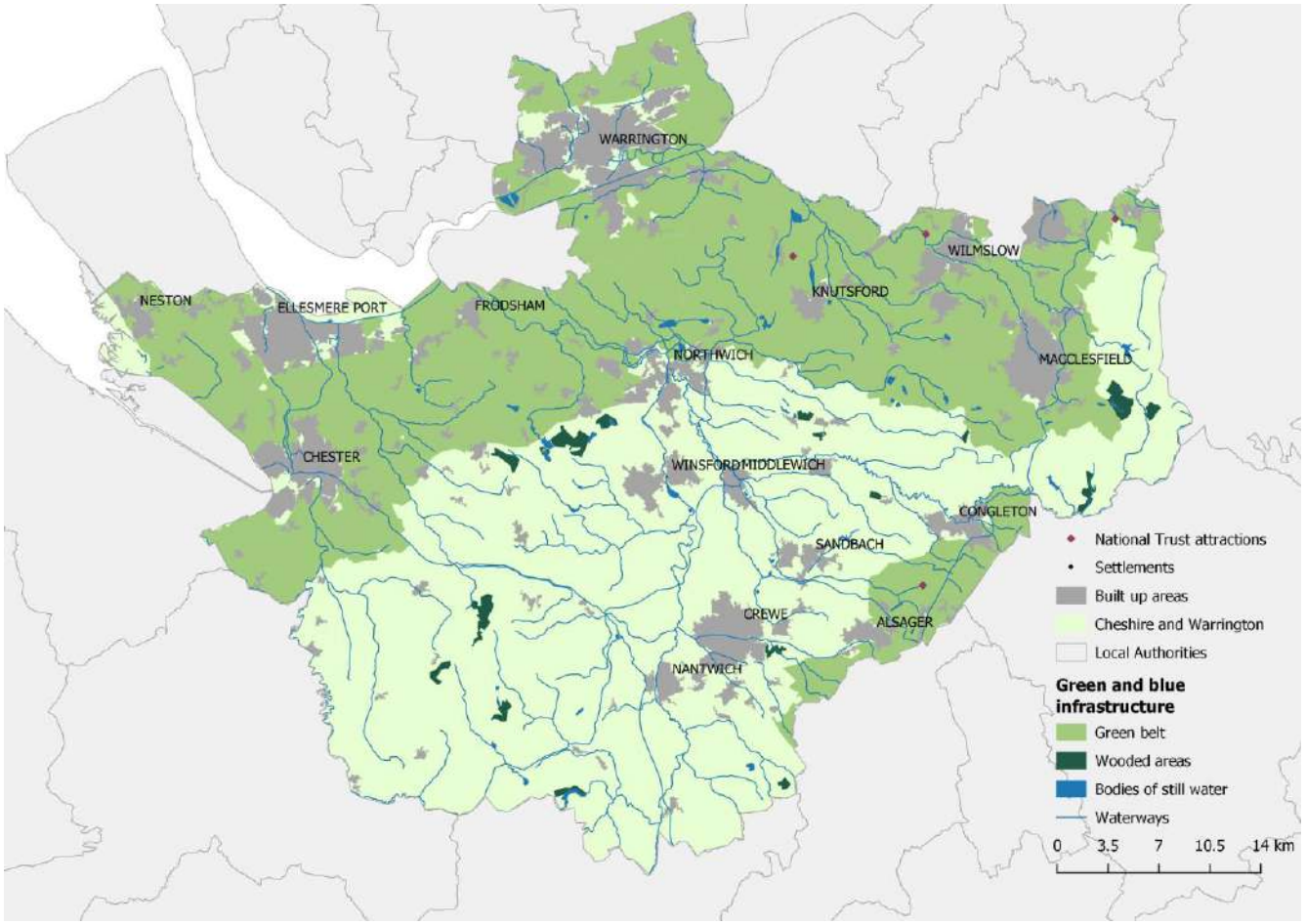
The more deprived areas are found in the urban centres and are particularly extensive in Crewe and Ellesmere Port. This reflects the IMD analysis.

Warrington and Macclesfield have pockets of young and highly qualified people residing in proximity to the central stations. Chester stands out for having a more extensive concentration of this group, which explains the comparatively higher house prices we previously observed.

Source: Metro Dynamics analysis of ONS Census (2011)

Natural assets

Green and blue infrastructure in C&W



The map to the left illustrates C&W's blue and green infrastructure.

C&W has a strong quality of place offer with a number of large green spaces, reflecting the rural aspect of its geography.

There are large swathes of green belt, particularly in the northern parts of Cheshire West and Chester and Cheshire East, and in Warrington. Green belt surrounds the main urban areas of Chester, Ellesmere Port, Warrington and Macclesfield. Interestingly there are no Areas of Outstanding Natural Beauty in C&W.

There are a number of rivers, bodies of still water and wooded areas in the sub-region.

There are four National Trust attractions: Quarry Bank, Lyme, Little Moreton Hall and Tatton Park.

Source: Ordnance Survey

Metro Dynamics

Spotlight on the rural economy

477,216 people with 2.2% growth

13.7% aged 20-34 with some areas <10%

246,775 jobs with 20.2% growth

26,740 businesses with 18.9% growth

A wide range of sectors :

- **Agricultural sectors (crop and animal production)** – 8,500 jobs (5,000 in Cheshire East)
- **Agri-food** – 6,500 jobs (2,750 in Cheshire East, 2,750 in Cheshire West, 1,250 in Warrington)
- **Logistics and distribution**
- **Visitor economy**

Large companies in rural areas

ArdaghGroup

meadow foods

AGRICULTURE

Aviagen Turkeys

great bear

52.2% with NVQ Level 4+ and **44%** employed as managers and top professionals

Relatively **high wages** and **low** levels of **deprivation**

Challenges around:

Housing affordability with high house prices

Digital connectivity – in some areas **over 60%** premises have internet speeds of **less than 10Mbit/s**

All statistics are for the areas of C&W outside of the five principal towns. Population and proportion of young residents are for 2016, with growth 2011-16; number of jobs and businesses, qualifications and occupations are for 2017, with job and business growth 2012-17. All sources are quoted on the relevant pages.

Principal towns – economic profile

Towns	Jobs (2017)	Job growth (2012-17)	Jobs density* (2017)	VAT registered businesses (2017)	Business growth (2012-17)	Business density* (2017)	Example companies
Chester	49,400	8.3%	1,960	3,145	30.5%	125	Urenco, Bristol-Myers Squibb, Great Bear Distribution
Crewe	40,925	6.3%	1,133	1,970	30.5%	55	Bentley Motors, Assurant General Insurance, BAE Systems
Ellesmere Port	28,725	15.7%	692	1,445	33.2%	35	Essar Oil, PSA, Prowell
Macclesfield	32,175	11.0%	1,225	2,815	20.8%	107	Senior UK, AstraZeneca, Proseal
Warrington	117,000	16.2%	1,434	5,915	32.5%	72	Sellafield, United Utilities, Eddie Stobart

** Jobs/business density expressed as number of jobs/businesses per square Km.*
Number of jobs and businesses for 2012 calculated using MSOA 2001 definitions

Source: Business Register and Employment Survey (2012-17), ONS Business Counts (2012-17), Ordnance Survey

Principal towns – demographic profile

Towns	Population (2016)	Population density* (2016)	Population change (2011-16)	Share of total population (2016)				
				0-19	20-34	35-49	50-64	65+
Chester	76,981	3,054	2.5%	20.9%	23.5%	19.1%	17.8%	18.8%
Crewe	77,838	2,155	1.4%	24.4%	20.3%	19.5%	18.5%	17.3%
Ellesmere Port	60,698	1,462	0.4%	23.4%	18.1%	19.2%	20.6%	18.6%
Macclesfield	60,086	2,287	0.3%	22.2%	16.4%	20.9%	20.7%	19.7%
Warrington	169,181	2,073	3.2%	23.7%	19.1%	20.7%	19.3%	17.2%

** Population density expressed as number of people per square Km*

Source: Metro Dynamics analysis of ONS Population Estimates (2016), Ordnance Survey

Principal towns – labour market profile

Towns	Share of working age population (2017)					Share of working age population (2017)					
	No/ NVQ Level 1	NVQ Level 2	NVQ Level 3	NVQ Level 4+	Other	Top managers & professionals	Associate professional & technical workers	Administrators & skilled trades workers	Low skill service workers	Industry operatives	Elementary workers
Chester	18.0%	18.1%	12.6%	45.2%	6.1%	38.0%	14.6%	16.3%	15.6%	4.1%	11.5%
Crewe	26.6%	17.3%	19.7%	26.9%	9.5%	21.7%	10.5%	25.9%	15.8%	14.2%	12.0%
Ellesmere Port	27.0%	25.7%	12.0%	29.3%	6.1%	26.0%	12.9%	21.1%	19.2%	8.0%	12.7%
Macclesfield	20.3%	15.4%	17.7%	41.2%	5.4%	32.8%	14.0%	24.8%	13.7%	7.6%	7.1%
Warrington	19.1%	22.1%	17.5%	34.7%	6.7%	25.3%	17.1%	24.5%	16.0%	7.2%	10.0%

Source: Metro Dynamics estimates based on ONS Annual Population Survey (2017) and Census (2011) data

Metro Dynamics

LONDON
3 Waterhouse Square
138 Holborn
EC1N 2SW

(+44) 0203 865 3082

MANCHESTER
Elliot House
151 Deansgate
M3 3WD

(+44) 0161 393 4364