GMCA

new economy

Deep Dives:
Phase 1 summary report

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FINAL REPORT

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1 Introduction

1.1 Greater Manchester's (GM's) vision is to establish itself as one of the world's leading regions, driving sustainable growth across a thriving North of England. It is aiming to be ever more connected, productive, innovative and creative, known for the excellent quality of life enjoyed by residents who are able to contribute to and benefit from the prosperity that growth brings.

1.2 As set out in the Autumn 2016 GM Spatial Framework Strategic Options consultation, it is recognised that whilst a relatively small number of locations will make a disproportionate contribution to sub-regional economic growth and that their success will be fundamental to GM's prospects, it will be essential that all parts of GM are able to find a strong and positive economic function to support future growth and to maximise the ability of all residents to share in its benefits.

1.3 The need to enhance the economic role of all parts of GM is a priority as GM refreshes its strategic approach, building on the opportunities afforded by wider Northern Powerhouse proposals (see box 1). It is recognised that major interventions may be required to exploit this potential and transform the growth prospects, both in terms of employment and housing (as well as labour market and skills) of these areas, so that they are better able to attract investment targeted at more than just the local market.

1.4 The Deep Dive research was commissioned to strengthen GM's evidence on the strengths and weaknesses of the local economy in order to support the achievement of GM's vision and the development of detailed plans in response to the economic issues and opportunities in all parts of GM.

1.5 The Deep Dive research has been led by New Economy, with Deloitte supporting at the scoping stage and Ekosgen reviewing the outputs and providing independent quality assurance. The work has been developed drawing on input from both the public and the private sectors. Workshops have been held with Chief Executives and local authority officers in each GM district to check and challenge the evidence presented, to assess how it fits with local plans and to draw out the GM wide implications of the research. Consultation has also been undertaken with experts from a wide range of public and private partners including GM's universities, Transport for Greater Manchester (TfGM), GM Chamber, pro manchester, Manchester Airport, NHS North West, the Manchester Growth Company, and Local Enterprise Partnership and Business Leadership Council members to provide further input and challenge to the evidence presented.

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Box 1: Developing Greater Manchester's Strategic Approach

There are a number of significant workstreams underway to inform the development of GM's strategic approach, which the Deep Dive evidence will inform. These include:

- The development of the **Greater Manchester Spatial Framework** to enable an informed, integrated approach to spatial planning across the city region, based on a clear understanding of the role of places and the connections between them.
- The continuing development of the **Greater Manchester Investment Strategy**, which supports the implementation of the GM Strategy through investment to create and safeguard jobs. This is undertaken primarily through loans from which funding is then recycled to maximise the impact of investment over several funding cycles.
- The development of **Transport 2040**, a new long-term transport strategy for GM that will deliver world class connections that will support long-term sustainable economic growth and access to opportunities for all.
- The establishment from April 2017 of GM as a **pilot area for 100% retention of business rates** income, including the transfer of additional functions to GM within the business rates system.
- The development of **Locality Plans** that will set out how a transformed, integrated health and social care system will be delivered in each of the ten GM localities, in line with the **GM Strategic Plan**.
  The implementation of the requirements of the GMCA associated with the outcomes of the **Area Based Review**, a review of post-16 education across the country to ensure that a skills offer is in place to meet economic and educational needs.
- The reform of the way that all services for children are delivered, with an initial focus on integrating preventative **services for children** and young people.

In addition, the Northern Powerhouse Independent Economic Review (NPH IER) has provided an examination of the factors driving the North's economic performance to identify pan-Northern and globally-distinctive strengths. Government and the Northern Core Cities have committed to "NPH Phase 2", working together to deliver an Economic Strategy for the Northern Powerhouse, setting out how key challenges will be addressed across skills and employment, enterprise, innovation, trade and investment and housing to drive increases in the productivity of the North and the UK as a whole. The Deep Dive work has drawn upon and fed into the findings of the NPH IER.

It should also be noted that Stephanie Flanders, former BBC Economics Editor, currently working as J.P Morgan Asset Management's chief market strategist for UK and Europe has been appointed to chair the independent RSA Inclusive Growth Commission, examining how the state needs to change (both centrally and locally) to enable different parts of the country to fully realise the potential of devolution. A key focus will be geographical inclusion: making sure that the benefits of a place-based approach to growth are widely shared. The Commission plans to present a robust, authoritative and compelling case for change and devise new, ambitious measures and mechanisms for how this change can happen. The Deep Dive research will be used, alongside a range of other evidence, to develop a GM submission to the open call for evidence.

1.6 Phase 1 of the Deep Dives research, is a series of detailed sector reviews looking at the nine key sectors of GM's economy. The sectors analysed are: Manufacturing; Business, Finance and Professional Services; Digital and Creative Industries; Health and Social Care (including Health Innovation); Low Carbon Good and Services; Logistics; Retail and Wholesale Distribution; Hospitality, Tourism and Sport; and Construction. These reports have been published alongside this summary report.

1.7 The Deep Dive sector reports use sub-local authority geographies (e.g. super output areas or wards) wherever possible to give an understanding of the 'real' and 'local' footprint of opportunities and challenges in these sectors, presented in the context of GM, northern, UK and international factors that will influence and shape growth.[1]

1.8 This summary report draws together the sector findings, set in a wider GM economic and demographic context, and draws out the key messages and implications for GM.

1.9 The remainder of this report is structured as follows:

- Section 2 provides the GM economic context
- Section 3 outlines key demographic and labour market trends
- Section 4 introduces the sector analysis identifying overarching trends and messages
- Sections 5 to 13 summarise the findings from the individual sector Deep Dive reports
- Section 14 provides conclusions and outlines next steps

1.10 The detailed Deep Dive sector reports are available at http://neweconomymanchester.com/publications

[1] The data provided in the sector Deep Dive series of reports is used to support the understanding of the major trends within the sector and to set the context of the sector against the wider economy and UK.

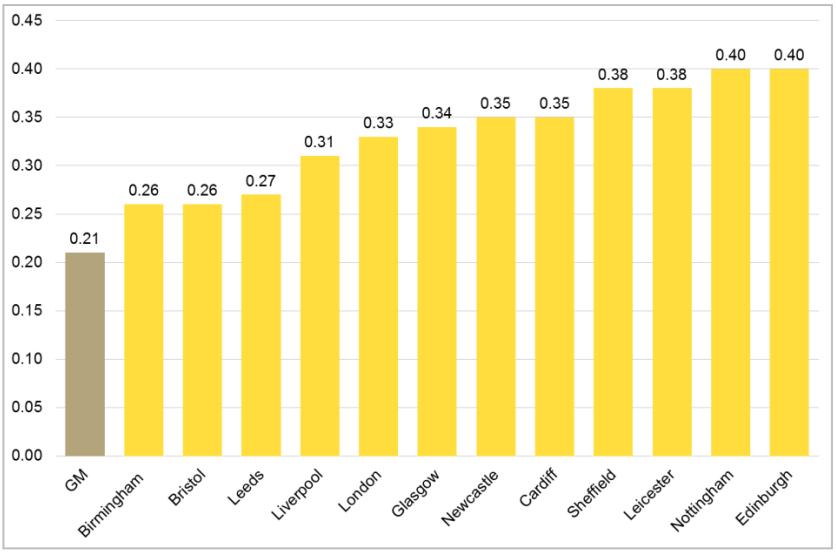
2 Economic Context

2.1 GM is the main driver of the Northern economy and generates nearly 40% of the North West's total GVA and 19% of the Northern Powerhouse's GVA.[2] With a total GVA output of £56bn, GM is the largest city-regional economy outside London, contributing 3.5% of total national economic output.[3]

2.2 Just over 1.3m people are employed within firms located in GM, making up around a fifth of jobs in the Northern Powerhouse.[4] Whilst employment growth has tracked the UK average over the last decade, GM was more severely impacted by the recession, when total jobs fell by 2.8% between 2008 and 2011, compared to 1.8% nationally. Post-recession, employment in GM between 2012 and 2015 grew at 2.0% per annum, faster than the UK at 1.9% per annum.[5]

2.3 GM is an economically diverse city region. Figure 1 shows GM's standing on the Krugman Similarity Index, which measures relative economic specialisation – the lower the score, the more diverse an area's economy. After several decades of economic disruption and change, GM is, on this measure, now the most economically diverse city region in the UK. The evidence suggests that economies and cities which are most successful in responding to economic change and shocks are those that are least dependent on a single sector[6]. In contrast to many other cities or LEP areas in the UK, GM is not heavily reliant on a single large sector or major employer for jobs and growth.

Figure 1: Economic diversity, Krugman Similarity Index, GM and city regions, 2014



Source: ONS Business Register Employment Survey[7]

[2] Note: The definition used covers the English regions of: North West, North East, and Yorkshire & Humberside
[3] ONS, Regional Gross Value Added (Income Approach)
[4] ONS, Annual Population Survey/Labour Force Survey
[5] ONS, Business Register & Employment Survey
[6] Manchester Independent Economic Review, 2012
[7] Data taken from The State of Liverpool City Region Report: Making the Most of Devolution, University of Liverpool & Liverpool John Moores University, 2015

2.4 Within this economic diversity, the Deep Dive sector analysis finds that GM has concentrations of specialised and distinctive activity which have the potential to drive the city region's economic growth. These include:

- **Business, finance and professional services** – including legal and accounting, insurance, and business services
- **Manufacturing** – including advanced materials; textiles; chemicals; food & drink; and GM firms' role in national supply chains
- **Health innovation** – including life sciences, medical technology/devices, health services, devolution
- **Digital** – including media/creative and data analytics

2.5 These findings align with the conclusions of the Northern Powerhouse (NPH) Independent Economic Review (IER) which has run in parallel to the Deep Dive research. The NPH IER was commissioned by Leaders and LEPs from across the North to provide a rigorous assessment of the factors driving the North's economic performance and the industries and sectoral strengths that could lead economic growth of the North over the next 30 years. The NPH IER analysis shows that the North has four prime capabilities which are highly productive and can compete on the national and international stage (Advanced Manufacturing, Energy, Health Innovation, and Digital), alongside three enabling capabilities (Financial & Professional Services, Education, and Logistics) that support the prime capabilities and combine to create a complementary and distinctive offer. The analysis shows that the capabilities are inter-related and the way that they interact drives new opportunities and business.

2.6 As shown above, GM has internationally significant opportunities in three of the four NPH prime capabilities (**manufacturing**, **health innovation**, and **digital**). In addition, **Business, finance & professional services** is a prime capability for GM, as it is central to both GVA and jobs growth; however at the level of the North it is only identified as an 'enabling' capability as it does not have a pan-regional footprint. GM also benefits from the strong interactions and linkages between the prime capabilities. Digital is particularly important as a capability that runs across and interacts with most parts of GM's economy.

2.7 The Deep Dive sector work also confirms that GM has a globally significant concentration of science, research and innovation assets, which is a key factor that differentiates the city region from UK and international city competitors. The synergies between these innovation assets are explored in more detail in the Science and Innovation Audit (SIA) of GM and East Cheshire. The Corridor Manchester is the strongest single location with its concentration of university, NHS and private sector assets, although leading research is undertaken in the universities in Salford and Bolton and public/private facilities across GM. Capitalising on these assets will be critical for future economic growth prospects.

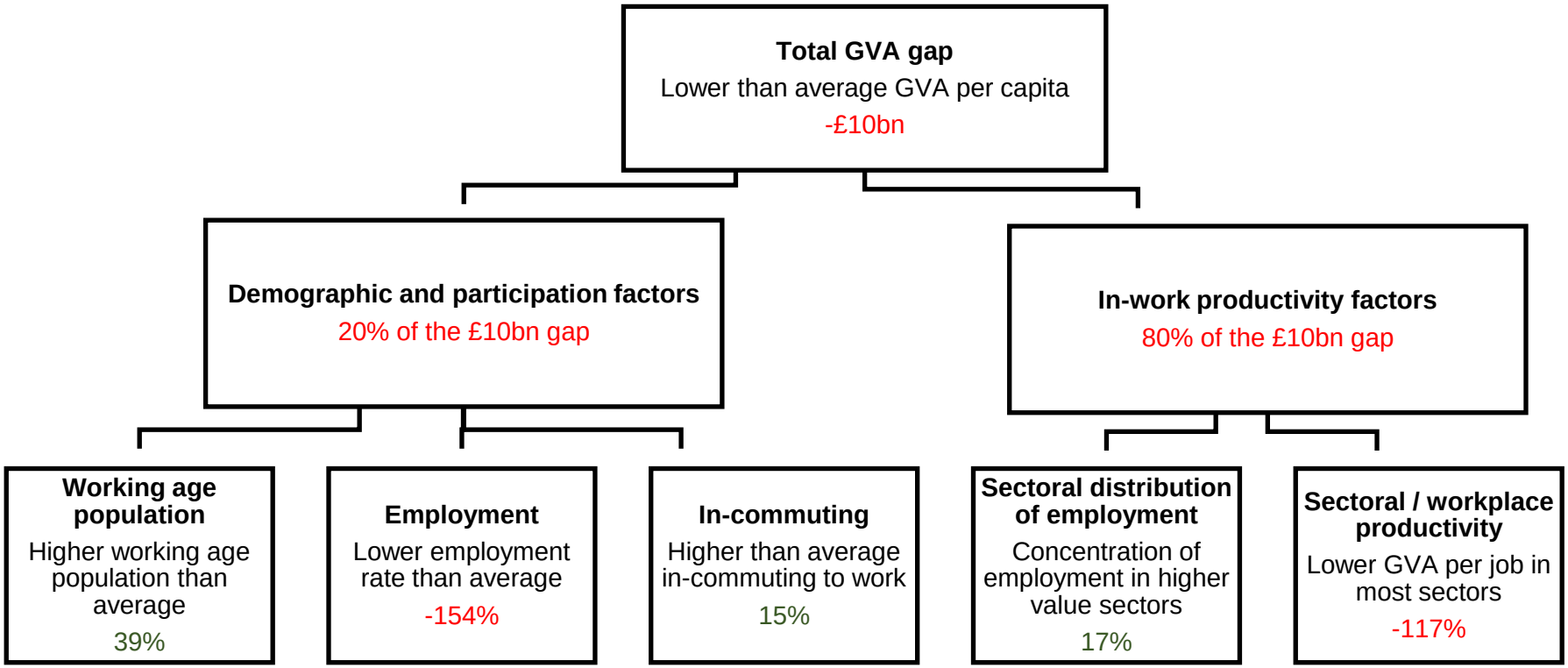
2.8 Despite its economic assets and opportunities, productivity remains below what would be expected for a city of its size. If GM's GVA per capita were the same as the UK average, they city region would generate an additional £10bn per annum. Its economy would be fully 20% larger. Figure 2 breaks down the productivity gap into its composite parts and shows:

- Productivity in GM is low due to a mix of both demographic and "in work" productivity factors.
- Demographic factors account for around 20% of the productivity gap between GM and the UK. While GM benefits from a large working age population and high levels of in-commuting compared to other areas, low employment rates and high levels of economic inactivity act as a significant drag on its economic potential.
- "In work" productivity accounts for 80% of the productivity gap. GM's sector mix gives it a boost compared to other parts of the UK, as it has concentrations of high value industries. However, the GVA generated on average in jobs across the city region acts as a brake and is the single biggest factor in accounting for the difference in productivity.

2.9 It is important to note that the productivity gap is not as substantial if London is excluded from the UK average, falling to around £2.7bn. In part this reflects different regional prices as prices are typically lower in regions with lower incomes per capita, although analysis undertaken for the NPH IER suggests this only explains about 3-4% of the 20% performance gap. Eurostat data from 2012 shows the performance gap compared with comparator European cities – Lille, Leipzig, Turin, Barcelona, Rotterdam, Cologne, Dusseldorf, Helsinki, Frankfurt and Munich – is larger still (40-50%)[8].

[8] Gross domestic product (GDP) at current market prices by NUTS 2 regions [nama_10r_2gdp], Euros per inhabitant, Eurostat, extracted on 11/07/16

Figure 2: Drivers of productivity and the composition of GVA gap (green numbers indicate a positive contribute to GM's productivity performance, red a negative)



Source: New Economy analysis (Percentages indicate the main contributors to the productivity gap)

Economic geography

2.10 The economic geography of GM is highly diverse and there are concentrations of both opportunity and need across the conurbation. Figure 3 shows where jobs are concentrated in GM. The regional centre (which covers the city centre including the Corridor Manchester, Salford Quays and parts of East Manchester) is the main concentration of employment in GM, accounting for 19% of all jobs. It is the location in which the bulk of GM's most productive service activities, research assets, and nationally/internationally mobile jobs are clustered. Employment in the regional centre has grown by 7% per annum between 2009 and 2014 and now stands at over 230,000. Economic forecasts and the analysis undertaken for the sector Deep Dive reports suggest that it will continue to be GM's most important location for jobs growth in the future, particularly high productivity service jobs.

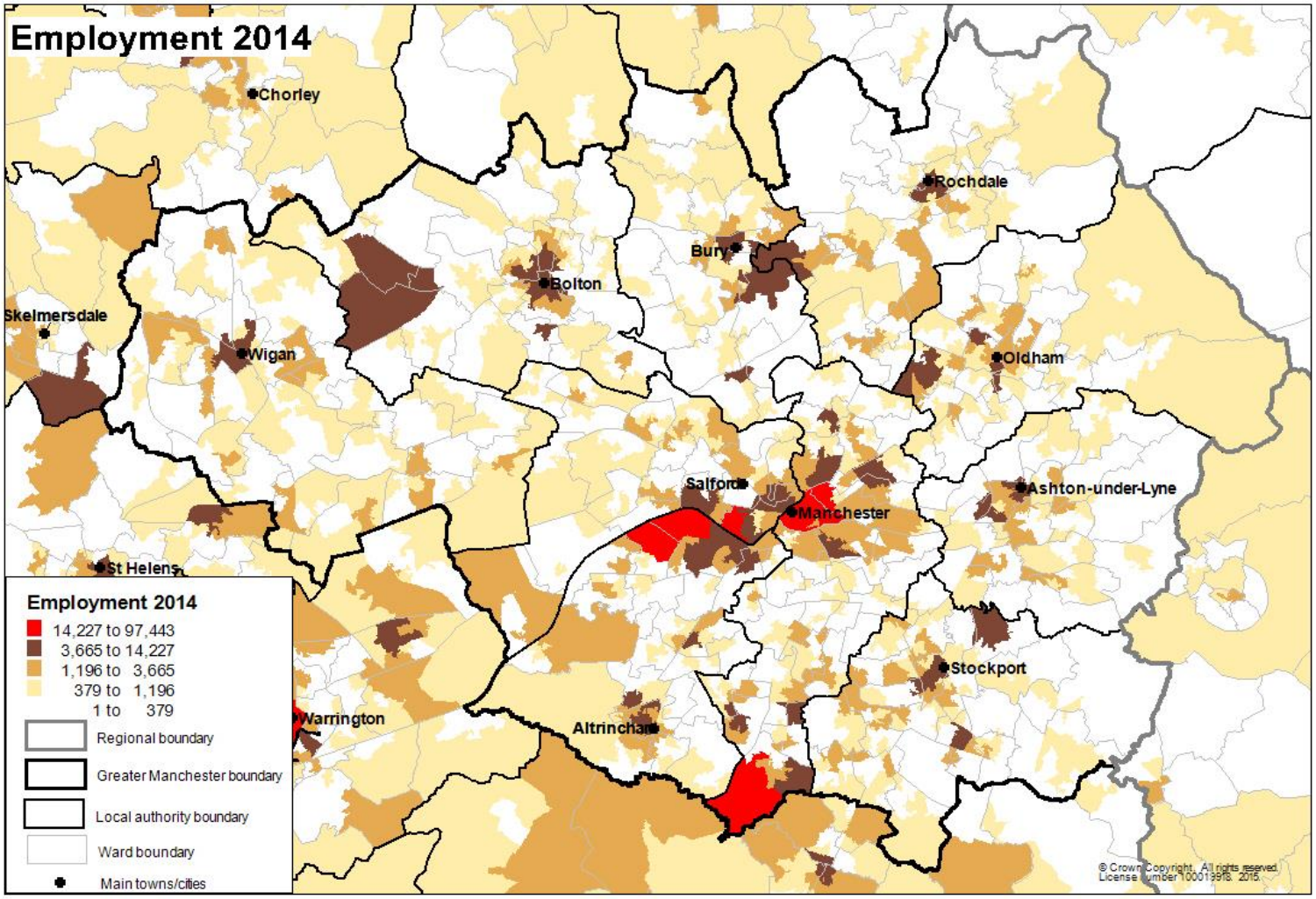
2.11 Outside the regional centre, employment is more dispersed. Trafford Park accounts for 3% of employment, Manchester Airport 2% and collectively the 8 district town centres account for 10%. 65% of employment is therefore outside these large sites.

2.12 There are strong cross local authority border flows within GM, which have increased over the past decade. Travel patterns highlight the high levels of travel across local authority boundaries for work, education and recreation. Figure 4 illustrates the strength of cross border travel to work patterns, highlighting in particular the significant flows from all districts to the regional centre. The conurbation's pull extends outside GM into Macclesfield and Congleton in Cheshire, High Peak in Derbyshire and Blackburn with Darwen and Rossendale in Lancashire. The city also has strong linkages with neighbouring cities including Leeds, Liverpool and Sheffield. Wigan also stands out as having significant flows into and out of areas outside of the city region area.

2.13 However, there is also significant 'leakage' of the benefits of growth to areas outside GM: many GM jobs are taken by those living in prosperous residential areas outside the GM boundary (see figure 17 later in the report which shows that concentration of high income households in areas bordering GM). Rather than being simply 'dormitory towns', these areas are becoming more important as employment locations in their own right, as they attract commercial investment on the back of their skilled populations. Research by Centre for Cities[9] for their Cities Outlook 2015 has highlighted how smaller cities and towns in the South East have been able to capture the benefits of population growth and strengthen their own economic performance. Over the past decade the fastest growing towns and cities in the UK have been those around London, where strong commuting linkages to London have facilitated population growth of skilled (and often entrepreneurial) residents, which has resulted in high rates of new business starts, increased jobs and, ultimately, strong local economies. With the right interventions a similar trend could occur in GM.

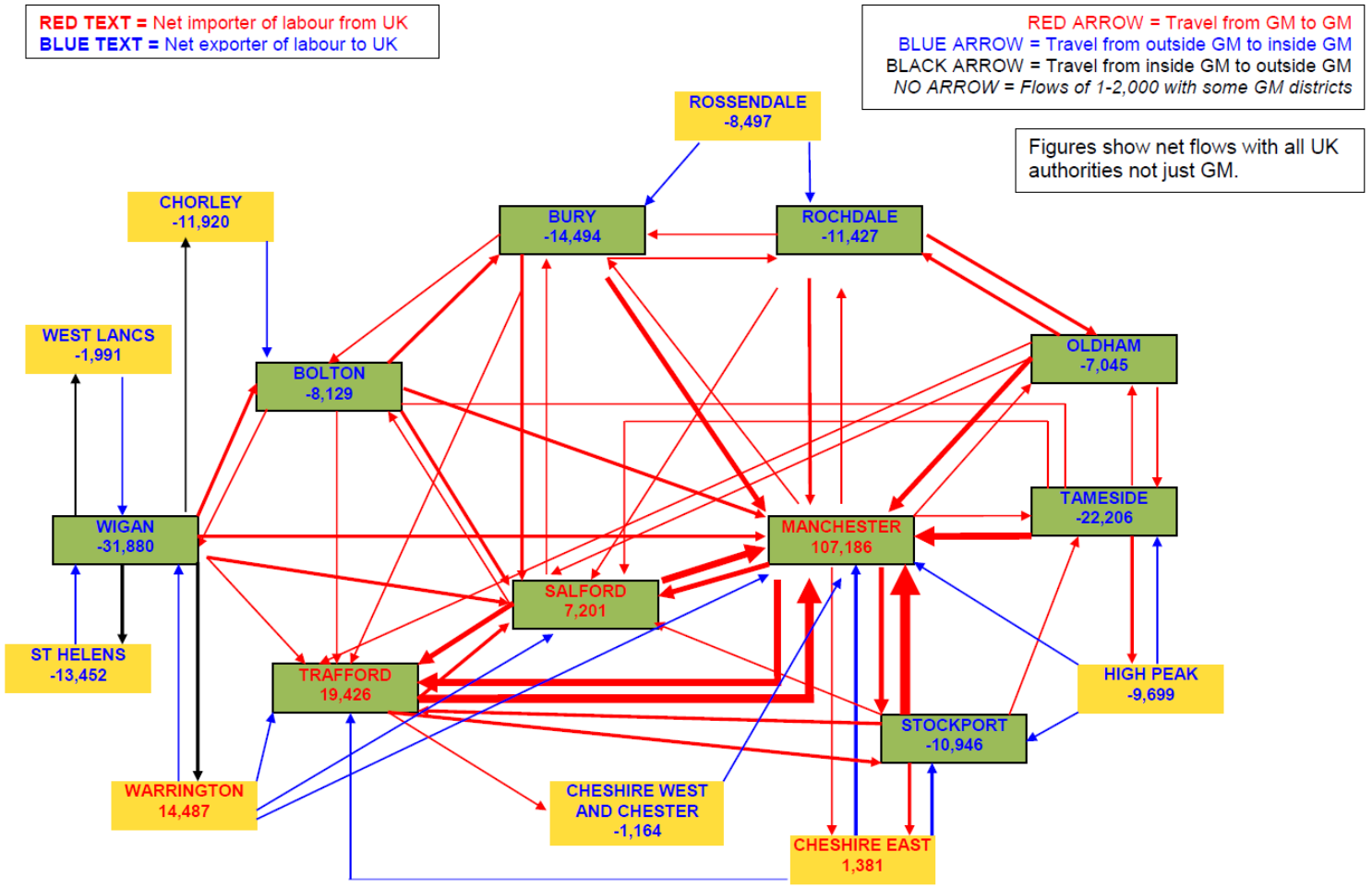
[9] Centre for Cities, City Outlook 2015

Figure 3: Employment within Greater Manchester firms, 2014



Source: ONS, Business Register and Employment Survey

Figure 4: Major travel to work flows within GM and a selection of surrounding districts
(Travel to work flows over 2,000 to and from GM districts to the rest of the UK)



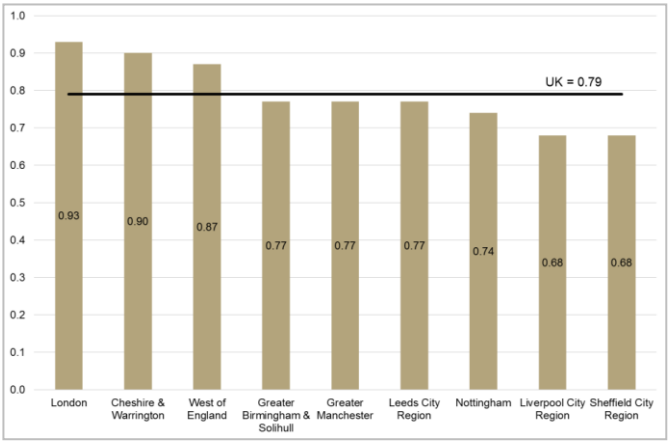
Source: Census 2011

Enterprise

2.14 A strong business base and entrepreneurial culture are essential for generating new jobs. However the data suggest that GM as a whole is less entrepreneurial than comparator areas. Data from Government's Inter-Departmental Business Register shows that GM had a total of 97,500 business units registered for PAYE and/or VAT in 2014. This equates to around 55 companies per 1,000 working-age residents (16-64), compared with an average of 66 per 1,000 in the UK. The equivalent figure for London is 79 per 1,000.

2.15 More positively, GM is closer to the UK average in terms of jobs density – the number of jobs per residents aged 16 to 64 years old. While London leads the way with 0.93 jobs per working age-resident, GM (0.77) is broadly in line with the national average of 0.79.

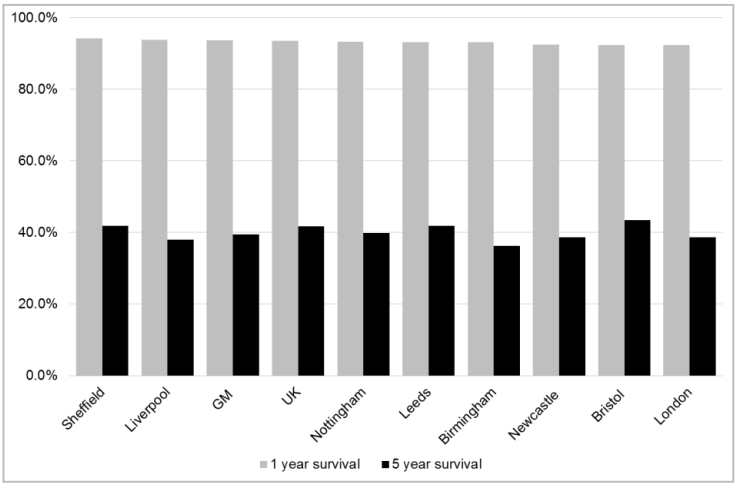
Figure 5: Job density for GM and comparator city regions, 2013



Source: ONS Business Demography

2.16 Almost 94% of companies survive their first year of trading in GM, in line with the UK average, but less than 40% of these firms in GM are still trading after five years, compared to 42% nationally.

Figure 6: Business survival rates for GM and comparator areas



Source: ONS Business Demography

2.17 The rate of self-employment is another measure of enterprise activity. The rate in GM has increased over recent years. The proportion of residents aged 16+ who are self-employed has increased from 10.7% in 2005 to 13.1% in 2015, but lags behind the UK average of 14.8%. While the increase in self-employment in GM seems like a positive trend on the surface, representing a more entrepreneurial culture, there is evidence that it is also a result of "reluctant" self-employment due to the relatively weak jobs market following the recession and the "casualisation" of the labour market (discussed in more detail in the labour market section below).

Innovation

2.18 The level of innovation in an economy is a key indicator of future productivity potential. However, measures of levels of innovation are poor at a local level in the UK and data availability for GM is limited. This section therefore provides an analysis of R&D spend, which only provides a partial picture of 'innovation' performance. The evidence should also be considered alongside the detailed review of assets outlined in each of the Deep Dive reports.

2.19 GM is home to world-leading research expertise located within four universities, the University of Bolton, University of Manchester, Manchester Metropolitan University, and the University of Salford. GM is also home to the Royal Northern College of Music and the North West regional office of the Open University. Alongside universities, GM businesses themselves are innovators and there are a series of important private sector R&D facilities, Science Parks, and public sector organisation (especially GM's University Teaching Hospitals) that contribute significantly to wealth generation. These organisations promote and foster innovation within existing firms, as well as new start-up and spin-out businesses.

2.20 Figure 7 provides data on R&D spending within the North West (the lowest geography at which data is available) and shows that private sector investment in the region has fallen as a proportion of the UK total between 2004 and 2014. R&D spending by Government and Universities, whilst rising in real terms, has remained broadly similar in terms of the percentage share of the UK total spend.

Figure 7: North West expenditure on R&D by source of funding, 2004 to 2014 [10]

R&D performed within…	2004		2014		change 2004 to 2014	
	£ in NW	Share of UK total	£ in NW	Share of UK total	% change in level	Percentage point change in share of UK
Business	£1,739m	13.7%	£1,798m	9.0%	3.4%	-4.7% pt
Government	£84m	3.9%	£86m	3.9%	2.4%	0% pt
HEIs	£416m	8.3%	£631m	8.0%	51.7%	-0.3% pt

Source: ONS, UK Gross Domestic Expenditure on R&D Regional Tables, 2004-2014

[10] Note: Due to ONS aggregation of NW and NE Government expenditure on R&D, figures were calculated on a historic percentage share basis

Trade

2.21 Firms that export, and cities that have greater concentrations of exporters, are more profitable, productive, and resilient to economic shocks. GM level trade data, obtained from HMRC, show that in 2014 the value of goods exported by GM firms was £5.36bn compared with £5.35bn in 2013, representing a marginal increase of approximately 0.1%. Controlling for GM's sector mix, this is around half the level that would be expected for a city of GM's size.

2.22 The EU is GM's largest market for goods exports. The value of GM goods exports to the EU was £3.135bn in 2014, compared with £2.997bn in 2013 – representing an increase of approximately £138m (4.6%).[11] Data on the individuals markets outside the EU that GM goods are exported to is not available from HMRC. However, information on goods exported through Manchester Airport to countries outside the EU is available from UK Trade Info. While the data only give a partial picture, they highlight that in 2009 the USA accounted for almost half of all non-EU exports from the Airport; however in 2014 this was reduced to just over 20%. This is in line with national export trends. Saudi Arabia and China both increased their share of exports (by 7.2% and 1.4% respectively) as did Japan, Brazil and India.[12]

2.23 In the 2014 GM Business Survey businesses were asked whether or not they export and the barriers they faced to exporting. 11.2% of firms stated they were exporting in 2014, a 1.7% decline on 2012 figures. Data from the BIS Business Barometer, while not directly comparable as the question wording is not identical, show that nationally around 21% of SMEs export, providing additional evidence that a lower percentage of GM firms are exporters. Sectors with the highest levels of exporting were Digital (41%), Professional Services (31%), and Manufacturing (30%). The most common reasons for firms in GM not exporting were regulations/legal requirements, political concerns, and language and cultural barriers.

Figure 8: Export value (visible) GM, North West, UK, 2013-14 (£bn)

	EU			Non-EU			TOTAL		
	2013 (£bn)	2014 (£bn)	% change	2013 (£bn)	2014 (£bn)	% change	2013 (£bn)	2014 (£bn)	% change
GM	2.99	3.14	5.0%	2.35	2.2	-6.4%	5.351	5.356	0.1%
NW	14.44	13.44	-6.9%	13.22	12.29	-7.0%	27.67	25.72	-7.0%
UK	150	147	-2.0%	148	140	-5.4%	298	287	-3.7%

Source: HMRC

[11] Data provided to New Economy by HMRC.
[12] UKTI.

3 Demographic and Labour Market Context

3.1 GM is home to 2.8m people[13] and over 7m people live within 30 miles of Manchester city centre. In contrast to falling population levels seen in the 1980s and 1990s, GM is now experiencing strong population growth in line with national trends. Between 2002 and 2014 GM's population grew by 210,000 (8.3% compared to 8.8% for the UK).

3.2 Overall, GM's population is young and diverse: 12.1% of residents are aged 16-24 (compared to 11.4% nationally) and 16.2% are from a BME background (14% nationally). GM has experienced net migration of 77,800 between 2001 and 2011[14], as new residents have been attracted by the economic, cultural and leisure offer of the city region.

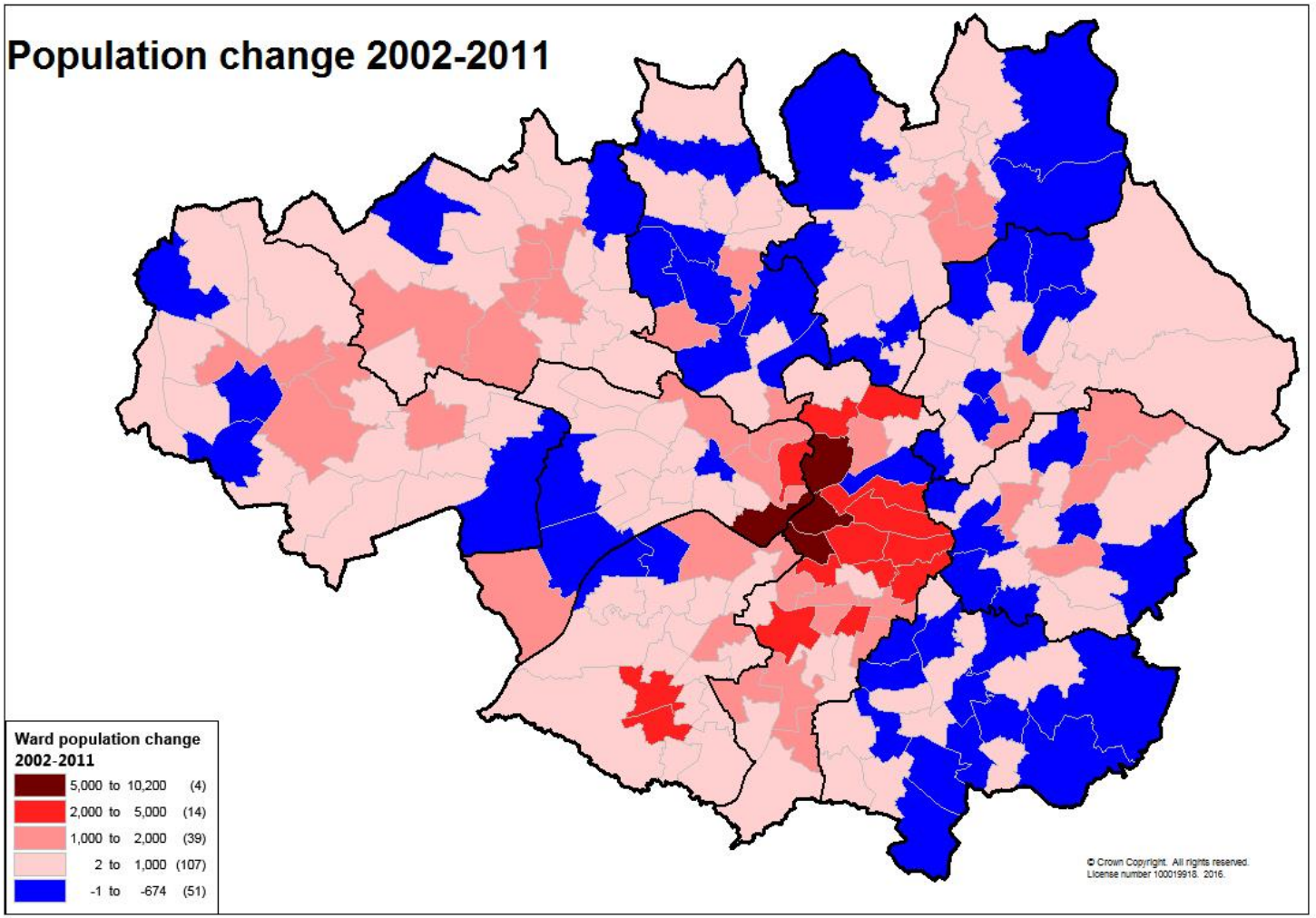
3.3 GM's population is also ageing, in line with the rest of the UK. Significant growth levels have been experienced in older age cohorts.[15] In 2014 there were 424,800 people age 65 and over in GM (15% of GM's population), representing growth of 9.7% between 2010 and 2014.[16] While the 65 and above age group has grown rapidly in recent years, the rate of growth was some way behind Great Britain as a whole, at 11.2% over the same period. In GM, all age groups of 50 and over experienced strong growth between 2010 and 2014, with those aged 65-74 increasing by 12.7% over the period (the highest growth rate of any age group). Residents aged 85 and above now make up 1.9% of the population and the numbers within this age group are rising rapidly.

3.4 Spatially the distribution of, and growth in, population varies substantially. Between 2002 and 2014, growth in population has been experienced in all ten districts, but it is evident that the core of conurbation continues to be the key driver of city regional demographic change. The population increase in Manchester, Salford and Trafford accounted for two-thirds of the total GM rise in the period 2002 to 2014. Figure 9 shows population change by ward between 2002 -2011, clearly highlighting the importance of the regional centre in population growth terms. The largest increase in population was in the city centre itself which added an additional 11,500 residents between 2002 and 2013.[17] Breaking the population down by age shows that cohorts in the 18-29 age brackets are more highly concentrated in and around the regional centre. Residents aged 65 and above, in contrast, are far less likely to be concentrated in the regional centre and, whilst older residents live right across the conurbation, there are particular concentrations around the fringes of GM.

3.5 Looking forward, Sub-National Population Projections forecast that GM's population will grow by an additional 310,000 residents by 2035 – the equivalent of an additional borough. The largest cohort will remain the 20 to 49 age group. However, the most significant growth rate will be in the 60 and over age group.

[13] Annual Mid-Year Population Estimates 2014
[14] ONS, Census 2001, 2011
[15] ONS, Annual Population Survey/ Labour Force Survey
[16] ONS Mid Year Population Estimates (2010 (revised 2013 estimates) – 2014)
[17] ONS, Mid Year Population Estimates - Data for 2002-2013

Figure 9: Population change by ward, 2002 - 2011



Source: ONS, Mid -Year Population Estimates

Labour market and skills

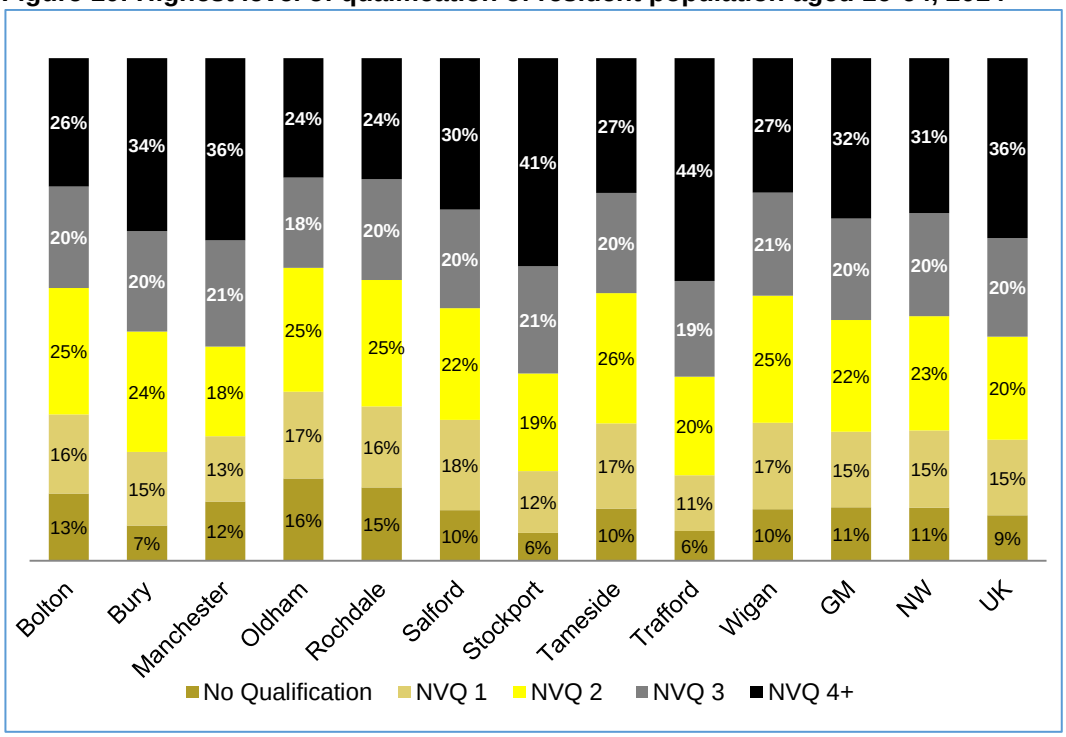
3.6 A comprehensive standalone analysis of labour market change and skills needs across GM has been completed to inform the Deep Dive work[18]. Key messages from this analysis include:

- GM has just over 1.2m residents in employment. This is equivalent to 69.0% of all GM residents aged 16 to 64, below the national average of 72.2%[19]. In some districts the employment rate is significantly below the GM average, for example Manchester, Oldham and Rochdale all have employment rates of less than 64%.
- The nature of employment in GM has changed substantially post-recession, mirroring national trends. There is increasing flexibility emerging within the workforce with growing numbers of self-employed and part time workers. Post-recession, full-time employment has increased by only 1.7%[20] (currently standing at around 903,400[21]), whereas self-employment has grown by 32% (now at around 154,700), flexible employment by 23% (currently around 70,300) and part-time employment by 12% (to 296,100).
- Proportionally fewer residents in GM are employed in the top three occupation levels (manager / senior official, professional, and associate professional and technical occupations) compared to the national average, despite a growth in the proportion of residents employed in those occupations in the conurbation in recent years. The average wage for GM is £25,500, 10% lower than the GB average (£27,600).
- Almost 600,000 residents in GM aged 16 to 64 have a qualification at level 4 or above. However, whilst the proportion of the population with a level 4+ qualification rose by 7.2% between 2008 and 2014 and the proportion of residents with no qualifications fell by 5.9%, England has done so to a greater extent and as result GM still lags the UK in terms of achievement in higher qualifications. The gap between GM and the UK average widened marginally in the period 2008 to 2014 from 3.7% to 3.8%. A third (32.0%) of GM residents have a level 4 or above qualification compared to 35.8% in the UK, despite a higher proportion of young people in GM (53% progressing to Higher Education after their Level 3 qualification , compared with the national average (49%).[22]
- Qualification achievement varies significantly by area. Oldham, Rochdale, Bolton, Tameside and Wigan all have above average proportions of residents without a Level 2 qualification, and a lower proportion of residents with a Level 4 qualification. In contrast, Stockport and Trafford have a significantly higher proportion of residents with Level 4 qualifications, shown in figure 10 overleaf.
- The proportion of pupils achieving 5 or more A*-C grades at GCSE (including English and Maths) fell from 60.2% in 2012/13 to 56.2% in 2013/14 and to 54.9% in 2014/15. The decline in performance was anticipated following reforms to GCSEs aimed at

[1818] See here: http://neweconomymanchester.com/media/1549/skills-analysis-2015-16-mastercopy-v5.pdf
[19] Annual Population Survey Jan-Dec 2014
[20] Annual Population Survey, March 2008 – June 2015
[21] Annual Population Survey Jan-Dec 2014
[22] Department for Education key stage 5 destination data for 2013/14

improving quality and rigour, however there is still a persistent gap in performance between GM and the national average for the state funded sector (the gap was 2.4 percentage points in 2014/15).

Figure 10: Highest level of qualification of resident population aged 16-64, 2014



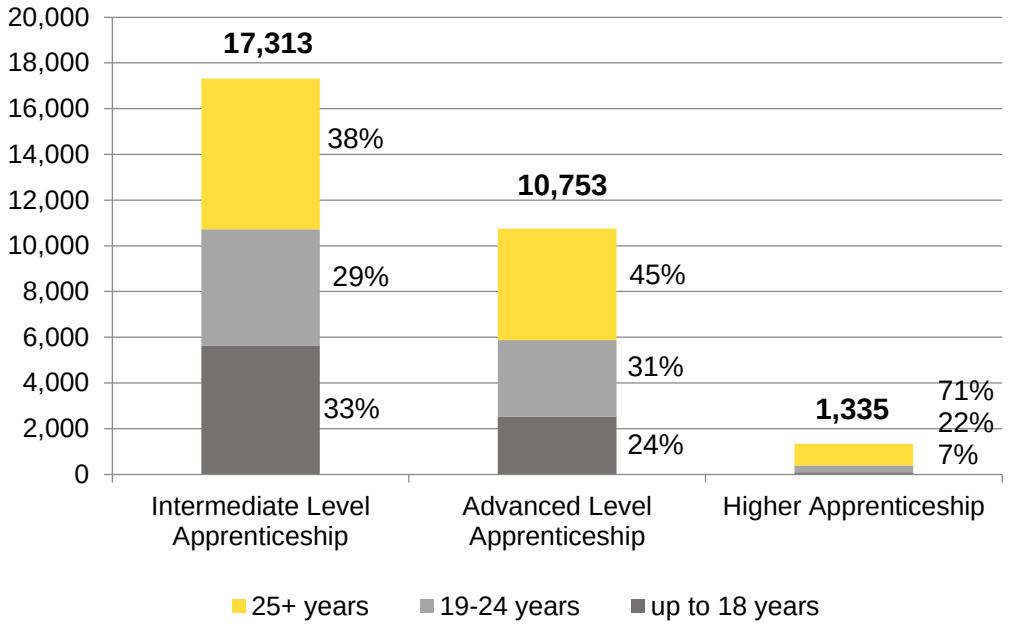
Source: New Economy analysis based on data from Annual Population Survey, Jan-Dec 2014[23]

- Within GM, differences in educational achievement are also apparent. Manchester, Oldham, Rochdale, Salford and Tameside have generally performed below the state-funded England average with respect to the proportion of pupils achieving 5 A*-C grades at GCSE including English and Maths since 2009/2010. GCSE performance on this measure in Bolton has been mixed, while Bury, Stockport, Trafford and Wigan have generally outperformed the national average.
- The take-up of apprenticeships in GM has fallen by about 10% over the last four years. There were 32,621 apprenticeship starts in GM in 2011/12, falling to 29,446 in 2014/15. The overall reduction in the number of apprenticeship starts was driven by a decrease in intermediate (Level 2) and advanced (Level 3) apprenticeships. Meanwhile, the number of starts on higher apprenticeships (equal to a level 4 and above) has been growing, although higher apprenticeships still account for only a small share of the overall apprenticeship delivery. The number of apprenticeship starts in GM has decreased across all age groups between 2011/12 and 2014/15, but particularly for adults (aged 25+), with a decrease of 11% over this period. Learners aged 25+ still account for close to half of all apprentices (42.1% in

[23] Residents with "other qualifications" are apportioned to Level 1 qualifications (55%), Lv2 qualifications (35%) and Lv 3 qualifications (10%), while residents with Trade Apprenticeships are apportioned to Lv 2 qualifications (50%) and Lv 3 qualifications (50%)

2014/15), while learners aged 19-24 account for just under one third (29.7% in 2014/15) and learners aged 18 or younger make up over a quarter (28.2%).

Figure 11: Apprenticeship Starts in GM by level and age, 2014/15



Source: SFA Datacube, 2014/15

- It is also evident that even by age five there are significant differences in educational attainment across the conurbation and this is a precursor for further skills challenges later in life. GM as a whole underperforms on school readiness and it is striking that only two districts (Trafford and Stockport) perform better than the England average.

Figure 12: % children achieving good level of development at the end of reception

Area	2013	2014	2015
Bolton	47.6%	54.2%	61.2%
Bury	51.1%	56.1%	65.8%
Manchester	46.6%	52.8%	60.9%
Oldham	41.1%	51.6%	57.3%
Rochdale	42.1%	50.2%	57.2%
Salford	52.9%	56.8%	61.4%
Stockport	54.1%	62.1%	67.9%
Tameside	41.8%	52.2%	57.8%
Trafford	61.2%	68.6%	73.4%
Wigan	37.7%	55.4%	63.8%
GM	47.3%	55.6%	62.4%
North West	50.3%	57.8%	63.7%
England	51.7%	60.4%	66.3%

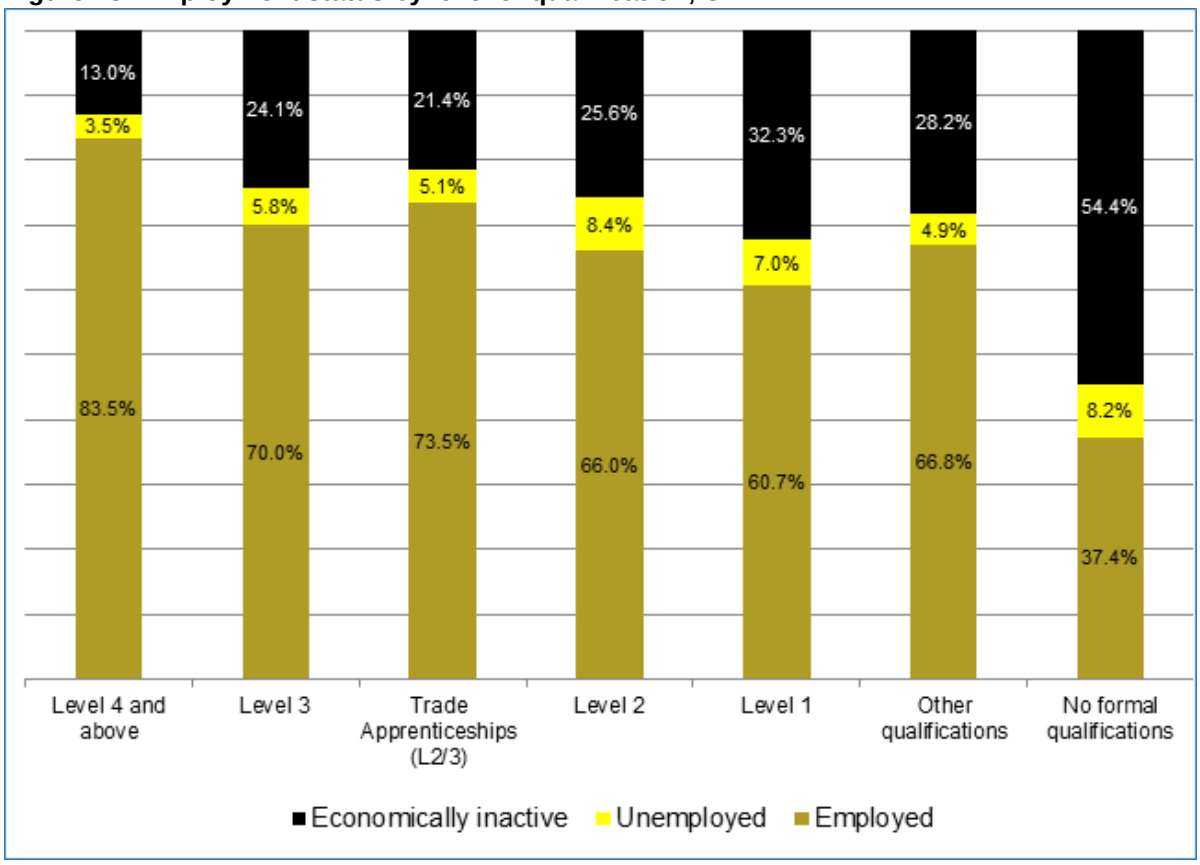
Source: Department for Education

3.7 GM also has significant concentrations of economic exclusion and disadvantage. More than 90,000 people were International Labour Organisation (ILO) unemployed in the 12 months to June 2015 and the ILO unemployment rate remains higher than the pre-recession level at 6.8% (the GB average is 5.7%). More widely, over 230,400 people received an out-of-work

benefit[24] in May 2014 representing 13.1% of the population, compared to a Great Britain average of 10.1%. Looking at the proportion of residents who have never worked or are long-term unemployed, highlights that the main clusters of neighbourhoods with entrenched worklessness are around the regional centre, Oldham, Rochdale and Bolton town centres, and to a lesser extent other town centres.[25]

3.8 Skills levels are a key factor in explaining the disparity in economic outcomes seen between districts and neighbourhoods across GM. As shown in figure 13, just 38% of residents with no qualifications are in work compared to 66% of those with a Level 2 qualification (5+ A*-C grades at GCSE) and 84% of those with a degree.

Figure 13: Employment status by level of qualification, GM [26]



Source: New Economy analysis based on data from Annual Population Survey, Jan 2014 – Dec 2014

3.9 There are equally strong correlations between skill levels and earnings and between skill levels and distance travelled to work. For example, as set out in figure 13, 31.5% of residents in work with a level 4 qualification travelled more than 10km to work compared to just 14.6% of those with no qualifications.

[24] Claiming one or more of jobseeker's allowance, unemployment-based Universal Credit, employment support allowance, incapacity benefit, or lone parent income support.
[25] Ibid
[26] Analysis by New Economy using the Annual Population Survey

Figure 14. Distance travelled to work by qualification

	Level 4+ qualifications		No qualifications	
	Number	%	Number	%
Less than 2km	50,847	12.7%	33,754	24.3%
2km to less than 5km	74,490	18.6%	34,228	24.6%
5km to less than 10km	91,081	22.8%	24,563	17.7%
10km to less than 20km	76,279	19.1%	13,114	9.4%
20km to less than 30km	22,390	5.6%	2,772	2.0%
30km to less than 40km	8,366	2.1%	1,118	0.8%
40km to less than 60km	8,477	2.1%	1,074	0.8%
60km and over	10,345	2.6%	2,213	1.6%
Work mainly at or from home	35,484	8.9%	12,586	9.1%
Other	22,548	5.6%	13,536	9.7%
Total	400,307	100.0%	138,958	100.0%

Source: Census 2011

3.10 Health plays a major role in determining the ability of residents to be able to contribute to, and benefit from, growth. GM residents as a whole lag behind the England average on most health measures. The life expectancy at birth for both males (77.8 years) and females (81.4 years) in GM is below the England average (79.6 years and 83.2 years respectively). In addition, in 2014/15, it was estimated that 19.9% of children in GM were classed as obese, higher than the England average of 19.1%; and local authorities in GM are among those in the country with the highest prevalence of high blood pressure, Type 2 diabetes and heart disease, all of which are strongly linked to a lack of physical activity.

3.11 Ensuring that all residents have information and guidance to enable them to lead healthy, meaningful and productive lives is critical. Health in GM, whilst on average being below national benchmarks, also varies substantially across the city region, and poor health acts as a further barrier to employment. The spatial patterns of health again directly correlate to employment, and the areas of highest proportion of healthy residents also have the highest proportion of residents working in high level occupations. Conversely, areas with poor health (indicated by low healthy life expectancy, high levels of Employment Support Allowance/ Incapacity Benefits claimants and low participation in sport and physical activity) correlate with areas with low levels of employment, or employment in lower level occupations.

3.12 As with skills levels there is a clear correlation between health and employment. Poor health is a particular barrier to residents being able to access employment opportunities and to stay, and progress, in work. The Employment and Support Allowance/Incapacity Benefit claimant rate is 8.1% in GM, above the 6.3% GB benchmark. As Figure 15 shows, over 67,000 people were claiming ESA for mental health conditions, accounting for nearly half (49.6%) of all ESA claimants. This was higher than in the North West (49.1%) and Great Britain (48.3%). Various physical illnesses accounted for the other half of claims, and within this, particularly 'Diseases of the musculoskeletal system and connective tissue' which accounted for 13.7% of claims. For Incapacity Benefit (IB) and Severe Disablement

Allowance (SDA), mental health conditions accounted for 45% of claims (3,850). Again, this was slightly higher than in the North West (43.4%) and in Great Britain (43.2%).

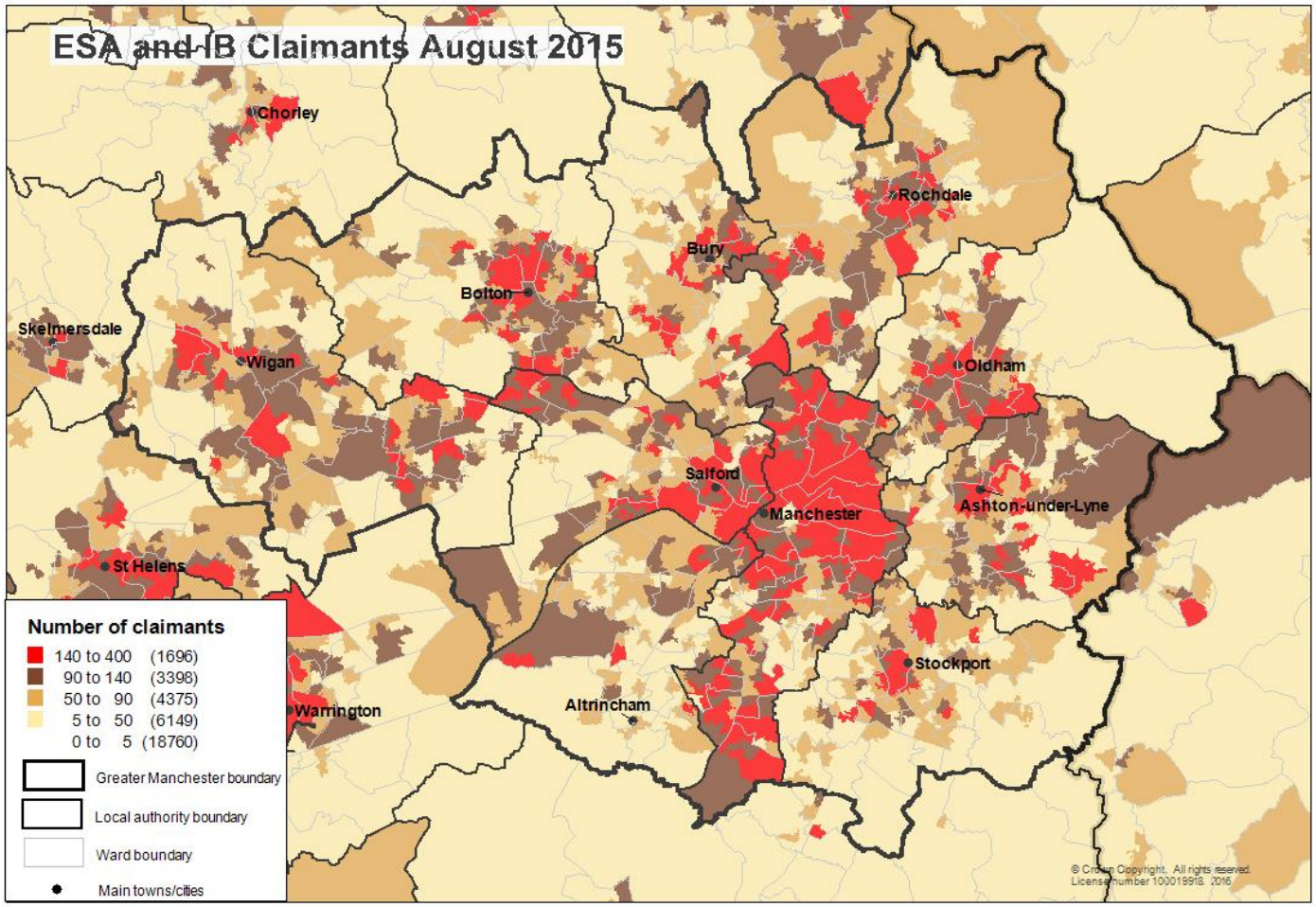
Figure 15. Employment Support Allowance claimants by condition, August 2015

Condition	Greater Manchester		North West		Great Britain	
	No of claimants	%	No of claimants	%	No of claimants	%
Mental and behavioural disorders	67,170	49.6%	167,650	49.1%	1,135,080	48.3%
Diseases of the musculoskeletal system and connective tissue	18,500	13.7%	45,660	13.4%	316,600	13.5%
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	11,910	8.8%	30,970	9.1%	221,720	9.4%
Diseases of the nervous system	7,660	5.7%	20,370	6.0%	147,830	6.3%
Injury, poisoning and certain other consequences of external causes	6,340	4.7%	15,610	4.6%	114,240	4.9%
Diseases of the respiratory system	3,410	2.5%	8,970	2.6%	53,640	2.3%
Other diseases	20,360	15.0%	52,000	15.2%	360,020	15.3%
Total	135,350	100.0%	341,230	100.0%	2,349,130	100.0%

Source: ONS, DWP Benefits, August 2015

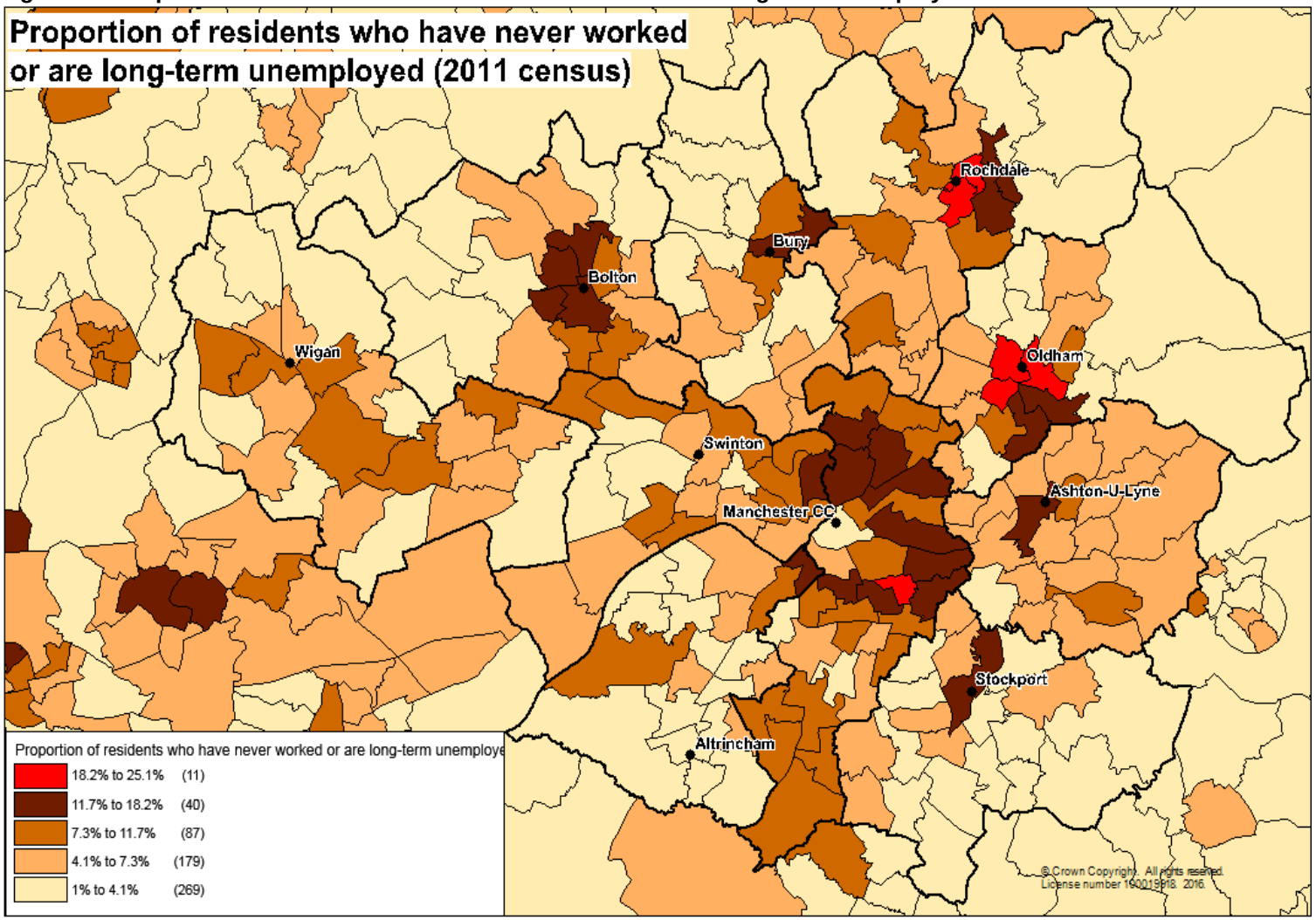
3.13 Looking at sub-district level, the map in Figure 16 shows there are areas with high proportions of residents claiming ESA or IB dispersed across the conurbation, although these tend to be concentrated around the regional centre, around the principal town centres and in locations with high concentrations of social housing. These correlate with areas affected by higher levels of unemployment and deprivation.

Figure 16: ESA and IB claimants in GM, August 2015



Source: DWP 2015

Figure 17: Proportion of residents who have never worked or are long term unemployed



Source: Census 2011

Earnings

3.14 Although the extent of low pay is sensitive to the measure used, it is clearly a common feature of the GM economy[27]. The number of people in GM earning less than the low-pay threshold (defined as two thirds of national median income, or £7.74 an hour in 2014) has increased during the decade up to 2014 (from 210,780 in 2004 to 233,500 in 2014)[28]. However when viewed as a percentage of the GM population this figure is stable, with approximately 22.4% earning less than the low paid threshold in 2004 and 22.5% in 2014. More people in GM earn less than the low-pay threshold than the UK average (21.2%).

3.15 However, the low-pay threshold is beneath the level of the outside-London living wage set by the Living Wage Foundation (£7.85 an hour in 2014; £8.25 an hour since November 2015). This is a level thought to be enough to maintain a 'basic acceptable' standard of living for an 'average worker'. The number earning less than this benchmark has grown sharply in recent years. For example, in 2013 the proportion of employees earning less than a living wage in GM was 21.7%, but by 2014 this had increased to 23.3%[29]. Provisional data released in December 2015 suggests the proportion has risen once more to just over 24%. In some parts of the conurbation more than a third of jobs pay less than the living wage (but note this is not the same as the proportion of residents who earn less than a living wage due to the impact of commuting).

3.16 New Economy has recently completed a programme of research to analyse the link between low pay and productivity issues in GM[30]. The key messages from this research relevant to the Deep Dive analysis include:

- Overall, GM's productivity[31] (as measured by GVA per job) lags the national average by more than 10%: GM's Gross Value Added (GVA) per job is £39,328 compared with the UK average of £45,093[32]. There are five sectors with productivity (GVA) of less than £30,000 per job in GM: retail; accommodation and food services; administrative and support services (including cleaning); health and social work (including care); and arts, entertainment and recreation (which includes leisure sector jobs). These sectors also generally correspond with the lowest paying GM sectors with a handful of exceptions (for example textile manufacturing is relatively productive, but low paying).
- The low productivity sectors account for a growing share of jobs. In 2000 they represented 35% of employment. By 2014 the proportion was 40%. They have grown at a faster rate in GM than the UK. They grew by 5.1% between 2000 and 2014 in GM and by 3.6% in the UK.
- Government spends over £1.5bn a year in GM on tax credits to supplement resident incomes. In 2012/13, some 219,000 GM residents received tax credits, 70% of whom were in work. GM has a higher dependence on the tax credit system than all other major city regions except Birmingham. The advent of the 'national living wage' set by the

[27] Findings in paragraphs 3.15 - 3.17 are all sourced from New Economy's Low Pay and Productivity in Greater Manchester report (July 2016) http://neweconomymanchester.com/publications/low-pay-and-productivity-in-greater-manchester
[28] Based on data from the Annual Survey of Hours and Earnings 2014
[29] This figure uses an average of the 10 Greater Manchester districts
[30] New Economy, Low Pay and Productivity in Greater Manchester, July 2016
[31] Productivity analysis is sourced from New Economy, Low Pay and Productivity in Greater Manchester, July 2016
[32] Based on data from GMFM 2015

Government of £7.20 from April 2016 for workers aged over 25 is estimated to benefit up to 18% of GM residents. The target of £8.70 an hour by 2020 will shift the legal pay floor to about 60% of median earnings – the highest ever.

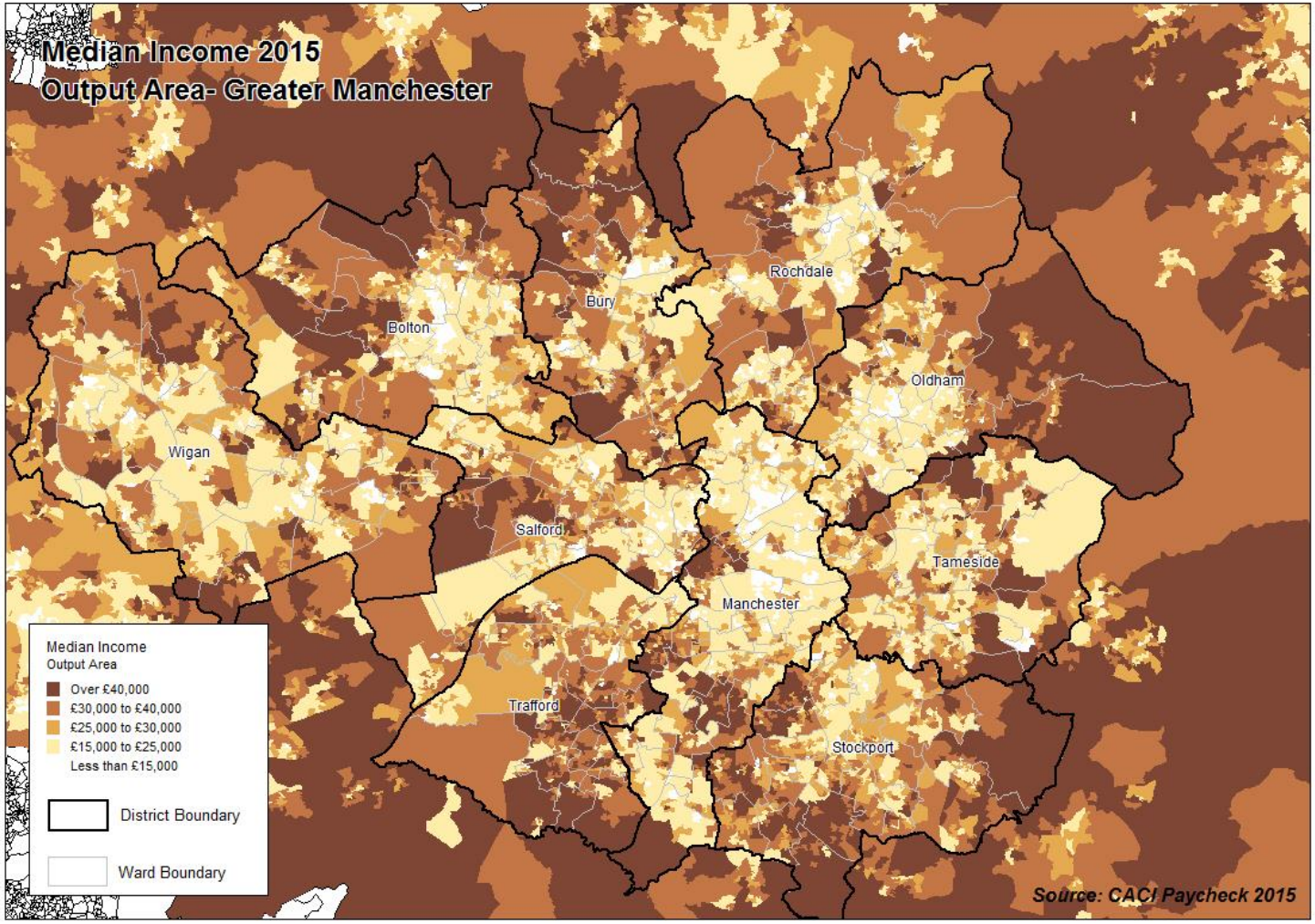
- Low paying occupations generally correspond with those with the lowest qualification levels, with retail being the single largest low pay sector. The exception to this is 'caring, leisure and other service' occupations (a broad category that includes care workers, as well as hairdressers, cleaners and auxiliary nurses), which can be characterised as having medium skills on average (two thirds have at least a level 3 qualification, a quarter have at least level 4).
- There appears to be limited upward mobility opportunities in GM's low paying labour market. Due to data availability only a short 15-month time period was analysed but this found about two thirds of workers (61%) who were low paid at the start of the period were still in low paid work at the end. This is in line with other research. Low paid workers were more likely to advance at work by changing employers rather than by increasing skill levels with the same employer.
- UKCES research[33] shows more GM employers are likely to pursue 'low value product market strategies' (business models based around competing on low cost, low skill, low specification products and services) than the UK as a whole.

3.17 Local income data shows significant differences across GM in resident earnings. Residents with the highest salaries tend to be located in GM's suburbs and towards the fringes of the conurbation. Indeed, many of the most prosperous households in the wider city region are located outside GM altogether. This is shown in figure 18.

3.18 Aligned with this, analysis of census[34] data shows that GM has lower proportions of residents in higher level occupations than the England and Wales average (26.9% of residents are in the top two occupational groups compared to 30.4% in England and Wales). Correspondingly GM has higher proportions of residents who work in lower supervisory and technical, semi-routine and routine occupations (35.3% compared to 33.1%) and residents who have never worked or are long-term unemployed (7.1% compared to 5.9%. This goes to the heart of one of the key productivity challenges facing GM. The main concentrations of residents who work in higher occupations are in the southern part of Trafford, the western and southern parts of Stockport, Chorlton and Didsbury in Manchester, which form part of a much larger area where there are high proportions of residents in higher occupational classes that extends through south Warrington, north Cheshire East, and much of High Peak. There are also clusters around the northern fringes of GM, extending into south Lancashire. Within GM, when students are excluded, the City Centre ward has the highest proportion of residents in higher occupations. Wigan has the highest proportion in GM of its residents aged 16+ in lower supervisory and technical, semi-routine and routine occupations (42.8% compared to GM average of 35.3%) and there is also a large area stretching through most of Rochdale, Oldham and Tameside into north Manchester with high proportions of residents working in the lowest three occupational groups.

[33] UKCES Employer Skills Survey 2013. https://www.gov.uk/government/statistics/employer-skills-survey-local-data
[34] Census 2011, table DC6114EW

Figure 18: Median household income levels across Greater Manchester, 2015



4 Sector Analysis Context

4.1 GM was the world's first modern industrial city and the birthplace of the Industrial Revolution. Whilst growth was initially driven by the textiles industry, the city rapidly developed to lead the way in all areas of Britain's global industrial might, with the label 'Made in Manchester' being a byword for quality and innovation. However, by the 1980s, GM had become synonymous with de-industrialisation, as traditional industries declined, factories closed and employment fell, with serious social impacts. GM has since the 1990s reinvented itself through a post-industrial revolution that has seen new investment, new industries and new employment attracted into the city region, alongside the continued development of its industrial base. GM's economic strength now is in its diversity: in contrast to many other cities in the UK, the city region is not reliant on a single sector or large employer for growth.

4.2 Recent growth has been led by the service sector, particularly **business, finance and professional** services, which has driven employment and output (GVA) growth over the last decade. Over this period, the employment structure of GM's economy has changed markedly – with a rapid decline in manufacturing employment (3.2% annual fall in employment between 1993 and 2014) and other industrial sectors, and service sector employment rising rapidly in its place. Business, Finance and Professional Services is the largest sector in the city region, accounting for 22.4% of employment. The sector has also seen some of the most impressive growth since 2005, growing by an average of 2.9% annually. This growth has resulted in the conurbation becoming a centre for financial and professional services of national, not just regional, significance.

4.3 GM's history means the conurbation still retains strengths in **manufacturing** and **logistics**. Manufacturing as a whole has seen employment decline by more than a third over the last decade, however the sector remains a significant, accounting for around 9% of total employment and 14% of GVA. The sector has in recent years grown its share of economic output, as manufacturers have become more capital intensive and concentrated upon related activities, such as design and after-sales services.

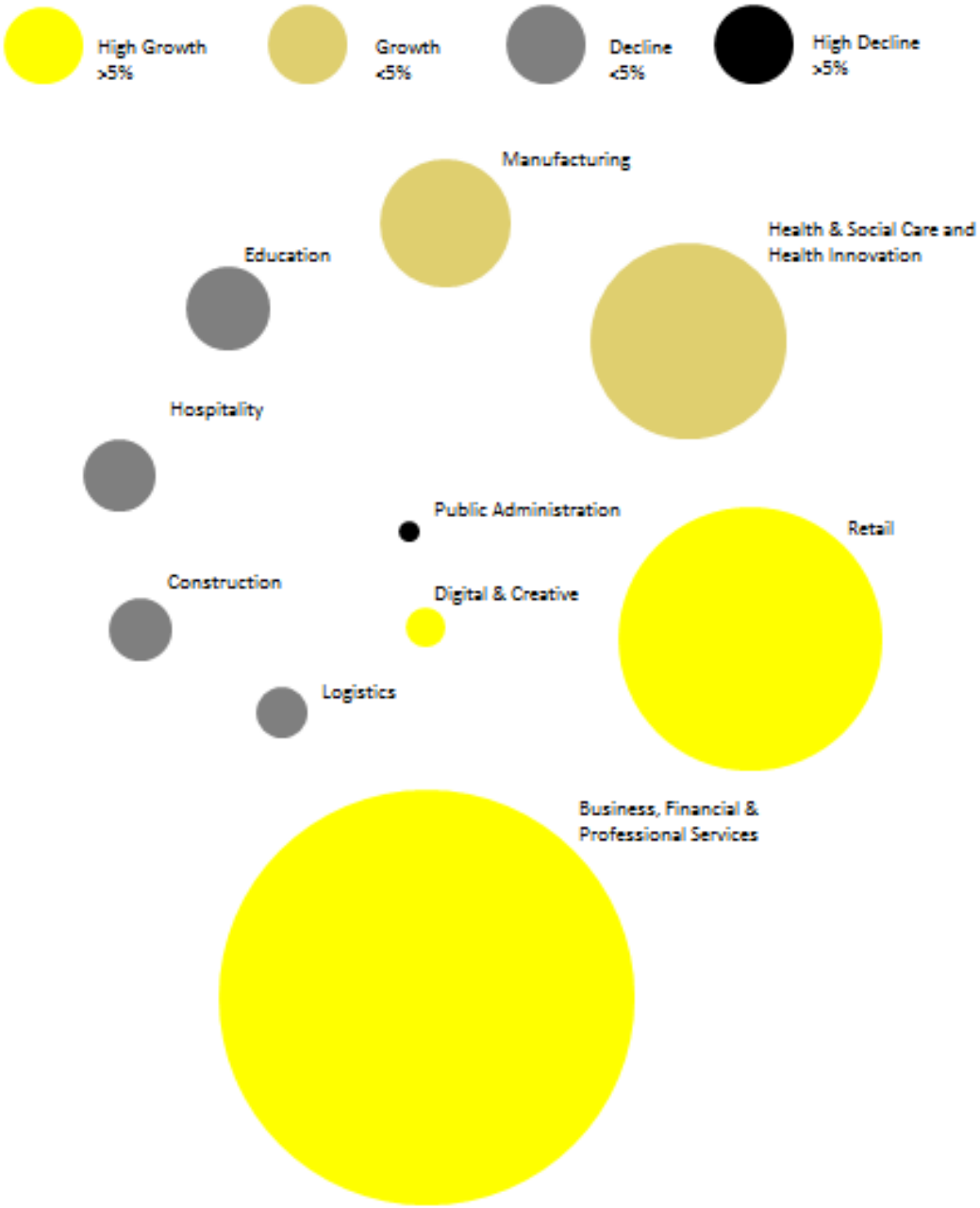
4.4 **Retail** and **hospitality & tourism** are critical sectors for employment in GM, employing 197,700 and 99,100 people respectively. They both have a strong offer that serves GM's large and growing population, while also acting as attractors for regional, national and international visitors.

4.5 **Health and social care** is this third largest employment sector in GM, which is in line with national trends. Although the majority of health employment and growth is within the public sector, the specialist and high-value health innovation sector is a critical part of GM's health economy. Whilst this is currently small in employment terms it is highly productive. The conurbation has particular niche strengths and a concentration of assets along The Corridor Manchester around GM's universities and main teaching and research hospitals, and these are forecast to deliver additional high-value employment for the conurbation over the coming decade.

4.6 Manchester has also developed its **creative and digital** industries to the stage where they represent one of the UK's biggest concentration of activity outside London and the South East. This specialisation is forecast to increase over the coming decade

4.7 **Construction** remains a significant sector in its own right, employing 54,000 people (with a further 25,000 self-employed), as well as a key enabler of GM's growth. **Education** and **public administration** are also major strengths and enabling sectors in GM, supporting economic development in its broadest sense.

Figure 19: Key sectors by employment size and GVA growth, GM, 201335



[35] Note that LCEGS sector hasn't been included in this figure as BRES Data is not available to enable a direct comparison

Sector reviews introduction

4.8 As part of the Deep Dive research detailed reviews have been undertaken for nine key sectors of GM's economy. For each sector, an analysis has been undertaken of the:

- Current make-up of the sector, covering the size, scale and relative importance to GM and geographic footprint, not constrained to administrative boundaries
- Recent growth rates and growth potential (using independent forecasts produced by Oxford Economics)
- Location of critical assets and institutions across GM
- Market opportunities and threats for the sector, including long-term trends which will shape the future scale, needs and location of the sector and key skills issues
- Spatial considerations of accelerated levels of growth in the sector

4.9 There are a number of overarching findings and messages from the sector analysis:

- There are a number of common global trends and changes that will drive growth (and decline) across all sectors. Key amongst these is technological change and the digital revolution which is breaking down boundaries between sectors (see Box 2)
- In-work productivity and the skills of the resident population remain the greatest brake on GM's economic potential across all sectors of the economy
- The majority of jobs in GM depend upon localised demand that will continue to grow as the population of the city-region expands
- The impact of the vote to leave the EU and 'Brexit' will have an impact on all sectors. Currently these are highly uncertain but the headline opportunities and risks are set out in Box 3
- The regional centre is a key location for all forms of employment, particularly high value services, although high value economic activity, especially in manufacturing, can be found across the city-region
- GM's eight principal town centres stand out as important concentrations of economic activity, collectively accounting for around 10% of employment in GM (with concentrations of jobs in retailing, leisure, public services, and local business and professional services). They are also important locations for GM's secondary office market
- GM has a globally significant concentration of science, research and innovation assets, which is a key factor that differentiates the city region from UK and international city competitors. The Corridor Manchester is the strongest single location with its concentration of university, NHS and private sector assets, although leading research is undertaken in the universities in Salford and Bolton and public/private facilities across GM.

Box 2: Cross-sector drivers of change[36]

There are several global economic and societal trends and changes that will drive growth (and decline) in the UK and GM. The list below is not ranked in order of importance, nor is it intended to be exhaustive, but each of the following will influence future growth:

- **Demographic change:** meeting the challenges and opportunities of an ageing population
- **Increasing levels of urbanisation:** three-quarters of the world's population is forecast to live in cities by 2045
- **Globalization:** the balance of international economic activity is shifting towards the emerging markets of both China and India
- **Innovation and technological diffusion:** for example, automation and robotisation increasing productivity and helping create more competitive markets
- **Big data and cyber security:** advances in data acquisition, storage, and analysis, along with increases in computing power
- **Education:** rising levels of education across the world, a blurring of the line between online and offline learning, and rise in lifelong learning
- **Transport:** technological advances are likely to transform transportation systems and effect mobility for individuals and society
- **Public sector innovation:** including new markets in health innovation, education provision, smart transport, and climate change
- **Climate change and environmental risk**: including rising demand on natural resources and the impacts arising from man-made climate change
- **Resource pressures:** the demands placed on resources, especially food and water, will increase as population size grows and income levels rise
- **Geo-political risks:** for example, addressing the ongoing threats of international terrorism.

Technological change and the digital revolution are breaking down boundaries between sectors; and will also substitute for labour in some sectors. This is arguably the biggest change affecting all sectors and all economies. The main disruptive technologies include:

- Big data and energy-efficient computing
- Satellites and commercial applications of space
- Robotics and autonomous systems
- Synthetic biology and regenerative medicine
- Agri-sciences
- Advanced materials and nanotechnology
- Low carbon energy sources

[36] Taken from a range of sources, including the Northern Powerhouse Independent Economic Review and a review of newspaper reports and grey literature.

Box 3: Sectoral impact of the vote to leave the EU and 'Brexit'

Following the EU referendum and the decision to leave the EU, the GMCA has been working extensively to develop a robust understanding of the key issues that will need to be addressed as the UK develops its framework for withdrawal from the EU.

It is clear that when Brexit comes there will be changes to trading relationships, the movement of labour and regulations and standards, which will have a direct impact on firms and sectors which trade and those in supply chains, with knock-on consequences across the whole of the economy. These new relationships will be crucial in determining the future productivity of the UK and GM economies.

In the meantime, the main impact is on expectations. There are opportunities for some firms because the fall in sterling makes UK exports more competitive however uncertainty is also feeding through into the real economy. GM firms are reliant on access to key export markets through their participation in major exporters' supply chains and EU rules and regulations impact all firms in all sectors. Specific immediate implications for sectors identified in the Deep Dive analysis include:

- **Manufacturing** is a key export sector in GM (27% of GM manufacturers export, more than twice the all industry GM average). Issues identified by the sector include: the tariffs applying to goods traded between the UK and EU – there is concern about the potential imposition of tariffs between the UK and EU, but also the risk of agreeing common external tariffs with the EU as part of a Customs Union which would significantly limit the scope for the UK to negotiate separate trade deals and could restrict manufacturers ability to grow into new markets. A key concern of manufacturers is that the process of having to apply tariffs can be as burdensome as the payment of the tariffs themselves; and rules of origin – linked to tariffs – which would apply if the common external tariff is not applied and means determining where the parts making up a good originated, and is a complex process where supply chains are global.
- **Financial, Business & Professional Services** is one of the city region's and UK's export strengths, but it is likely to be more difficult to negotiate new agreements around services, partly because they tend to require the free movement of people. Key issues include passporting of financial services, so that UK regulated firms can sell to markets in the EU without needing to get authorisations from other EU states; 'equivalence' of regulatory standards – as a fall-back if passporting is impossible, it will be essential that UK regulation is deemed to be equivalent to that inside the single market; and ability to bring skilled workers to the UK wherever they are based in the world.
- **Higher Education** is an important sector for GM and the city region's four universities are heavily engaged with international markets. Key issues identified by the sector include: access to collaborative funding streams, particularly Horizon 2020 and its successor. Mobility of researchers, where a general easing of visa requirements for researchers from all parts of the world is essential for UK science and innovation;

intellectual property and commercialisation, because withdrawal from the future Unitary Patent and Unified Patent Court would add to the burden for companies and universities seeking to secure IP and make the UK a less attractive destination for location of technological activities; replacing inhibitory legislation and regulatory procedures, for example the Clinical Trials Directive; and continuing to grow HE as a key export market, an important revenue source for the sector and major avenue for developing international business links through UK alumni. New visa or permit schemes need to support further growth in the number of overseas students.

- **Health and social care:** While the majority of employment is in delivering services to the local population, GM has a strong health innovation sector which has considerable potential for growth linked to new products and treatments (with potential for manufacturing businesses) and new service delivery (with implications for digital and technology companies). Key issues identified by the sector include: access to large numbers of workers from other countries who currently fill gaps in the UK workforce at all skill levels and the recognition of qualifications from other countries; and access to the European Medicines Agency so that pharmaceutical innovation and associated investment are not inhibited by having to duplicate approvals.
- **Digital** is a high growth sector in GM and is also one of the city region's most international sectors (over 40% of digital firms in GM have dealings with international markets, twice the all industry average). Key issues identified by the sector include: access to the Digital Single Market, consistency of UK and EU copyrighting rules, and equivalence between UK and EU data protection standards.
- **Retail and hospitality & tourism:** whilst many firms serve a local market, an important and growing component of the sector is the international market. Key issues identified by the sector include: new tariffs applying, particularly to food imports – which could be up to 50% if the UK did not have a free-trade agreement with the EU and fell back on WTO rules and access to a sufficiently large workforce, although the needs differ by region and by different types of businesses. Although requirements are often in low-skill occupations, there are also some high-skill needs in some parts of the sector (e.g. pharmaceuticals, opticians, arts) which are currently being met with EU nationals; and maintaining the UK's reputation as an open and outward facing country (and GM's reputation as an international city) in order to attract conferences and tourists.
- **Construction, Transport and Storage:** key issues include: investment in infrastructure underpins both these sectors, and needs to continue and be increased as ERDF funding comes to an end and the continued involvement of the European Investment Bank is determined; the volume of trade in goods between the UK, EU and the rest of the world which determines the transport and logistics support; access to the single aviation market which has reduced fares in the sector and facilitated greater international trading links; and access to skilled workers (particularly in construction) from other countries who currently fill gaps in the UK's workforce.

4.10 The sector reports highlight growth opportunities in existing and new employment locations in all districts, however the market is generally strongest to the centre, south and west of the conurbation, most especially in the highly dense and accessible conurbation core. Consultation with districts and developers has identified a number of key challenges in securing private sector investment from developers. These challenges – common to differing degrees across almost all sites in GM, including those where there is strong market demand – are:

- Sites having high remediation costs and/or requiring large scale infrastructure investment to come forward
- Low yields for employment uses limits developer interest in parts of the conurbation. This is exacerbated by the potential for high yields should the land be allocated for housing in some locations, meaning site owners 'hold out' for a change of designation
- Difficulties in identifying end-users for sites/premises which increases the level of risk for developers, especially where schemes are several years from completion.

4.11 The sector assessment work carried out for the Deep Dive analysis, combined with the Northern Powerhouse Independent Economic Review which has run in parallel, highlights that the city region has a number of prime 'capabilities' in which GM is specialised and distinctive, where we have concentrations of national and international class assets, and which have the potential to drive GVA growth.

4.12 GM has internationally significant opportunities in three of the four NPH prime capabilities (**manufacturing**, **health innovation**, and **digital**) and has a strong presence in the fourth (**energy**). In addition, although it is identified as an 'enabling' capability for the North as it does not have a pan-regional footprint, **Business, finance & professional services** is a significant strength for GM, as it is central to both GVA and jobs growth. GM also benefits from the strong interactions and linkages between the prime capabilities. Digital is particularly important as a capability that runs across and interacts with most parts of GM's economy.

4.13 Enabling and supporting growth in these prime capabilities will be critical if GM is to play its full part in a thriving Northern Powerhouse. These prime capabilities are central for GVA growth. However, the four Northern Powerhouse prime capabilities only account for around 10.5% of jobs in GM[37], and business, financial, & professional service for 23%, so employment opportunities will come from a much broader set of sectors[38]. This is comparable to the position across the Northern Powerhouse where the four prime capabilities and three enabling capabilities account for around 30% of employment.

4.14 Finally, it is important to note that there are two key attributes that the prime capabilities in GM tend to share. First, they all report a shortage of available skilled workers and identify this issue as a key barrier to growth, highlighting the importance of developing the skills base of GM's population. Second, they all, with the partial exception of financial and

[37] Excluding Energy/LCEGS, for which there is suitable SIC codes for direct comparison
[38] Business Register and Employment Survey, 2014

professional services, have linkages with GM's science, research and innovation assets. Capitalising on the commercial potential of these linkages to a greater extent than has been achieved in the past is a key challenge.

4.15 The remainder of this section summarises the detailed findings from the detailed sector reviews, namely:

- Manufacturing;
- Business, Financial and Professional Services;
- Digital and Creative Industries;
- Health and Social Care (including Health Innovation);
- Low Carbon and Environmental Goods and Services;
- Logistics;
- Retail and Wholesale Distribution;
- Hospitality, Tourism, and Sport; and
- Construction.

5 Manufacturing

Context

5.1 Greater Manchester's (GM) Manufacturing sector has undergone significant transformation over recent decades, reflecting broader national and international trends. As the global economy has been remodelled by the rapid rise of emerging economies across the world, there has been a significant shift away from large firms towards SMEs and micro-size businesses, typically employing less than 20 people, in niche or more advanced manufacturing industries.

5.2 Manufacturers have had to compete on their strengths and take a more strategic view of their supply chains, which has resulted in companies restructuring their operations away from competing primarily on price and towards a much greater emphasis on product quality, knowledge, innovation, customer collaboration and brand.

5.3 The sector is a leaner version of that of the 1980s and 1990s, but it is more flexible and better placed to adapt to a rapidly changing world. Its capital-intensive nature, international outlook and innovative focus means it has the potential to be a major driver of economic activity in Greater Manchester's future.

- **Advanced Manufacturing** is the innovative integration of technology-based systems and processes in the production of products to the highest level of quality and in compliance with industry specific certification standards.
- **Food and Drink Manufacturing** includes the processing of the products of agriculture, forestry and fishing into food for humans or animals, and includes the production of various intermediate products that are not directly food products.
- **Textiles Manufacturing** includes the preparation and spinning of textile fibres, textile weaving, the finishing of textiles, and the manufacture of made-up textile articles. The sector definition also includes apparel and leather products.
- **Other Manufacturing** covers the remaining aspects of the sector not included in the definitions above, including the manufacture of paper, coke, rubber, plastics and toys, the manufacture of jewellery, furniture and metal products.

5.4 While the total number of manufacturing jobs has been in decline for many decades, it remains one of GM's economic strengths, employing over 114,000 people, with high levels of productivity per employee and generating a Gross Value Added (GVA) of £7.7bn, equivalent to 14% of the economy.

5.5 Advanced manufacturing, identified as a Northern Powerhouse "prime" sector, makes up almost half (45%) of manufacturing jobs in GM (just under 50,000 employees in total) and has the highest productivity of any sector within GM at £72,000 GVA per employee.

5.6 Employment has increased in Advanced Manufacturing in recent years. Employment has also grown in textiles, by 3,000 in 2010, and one of the conurbation's historic strengths is now enjoying a renaissance after many years of job losses. Food manufacturing (20,000

employees) and Other Manufacturing (plastics, rubber, furniture, etc. with 33,700 employees), remain major employers, although jobs numbers have stood still, or in some subsectors declined, in recent years.

5.7 There are 8,340 companies in the Manufacturing sector in GM, and while medium and large companies are significant in food and drink, the other subsectors are dominated by small and micro-size companies.

5.8 Average levels of productivity (as measured by GVA per employee) in manufacturing in GM is 9% higher than the national average (£65,100 against £59,200 in the UK). This productivity is reflected in higher average wages, while a very large proportion of jobs in manufacturing are also full time. Productivity is higher than the UK average in all four major manufacturing sub-sectors analysed in this report.

The Growth Opportunity

5.9 Globally, demand for manufactured products will increase over the next twenty years, as a result of a growing population and an increasing number of middle class consumers, in particular within Asia and Africa. This growth in demand will include products from Advanced Manufacturing and technology intensive industries, including Aerospace and Pharmaceutical industries. New materials and methods of production such as 3D printing, additive and composite manufacturing are already changing the shape of production, and continue to offer new opportunities for technically sophisticated businesses.

5.10 While overall production will increase, international competition will also increase as countries move away from low-cost manufacturing to more skilled and value added production. At the same time, there is evidence of some production being brought back to the UK (re-shoring), driven by technology and shifting consumer changes, a need for quicker, more agile supply chains, and for better quality control.

5.11 In Advanced Manufacturing, GM has high concentrations of employment in Chemical Products, Manufacture of Precision Medical Instruments, and Engineering with Technical Service Activities. These subsectors are likely to provide further opportunities for growth. GM also has considerable opportunities in Advanced Materials and Textiles. This is based on applied research strengths within GM, a large cohort of successful advanced manufacturing companies, and the potential to develop first-to-market products.

5.12 Alongside major private sector companies and research, there has been significant investment in University research capacity and capability in the last five years. The University of Manchester's School of Materials is one of the largest materials departments in any European university and is located at the centre of one of the densest concentrations of material, textile chemistry and textile engineering research in Europe.

5.13 The £61m National Graphene Institute (NGI) which opened in March 2015 – with state-of-the-art facilities – will enable academics and their industrial partners to work side-by-side on new applications, accelerating the translation and commercialisation of research. NGI will link several research groups, all important in the development of key enabling technologies as well as academic R&D. The Graphene Engineering Innovation Centre – set to open in

2017 – will spearhead industry-led development in graphene applications in partnership with the academic sector and, with the NGI, will provide a critical mass of graphene expertise in Manchester.

5.14 The Sir Henry Royce Institute for Materials Research and Innovation – opening in 2019 – will allow the UK to grow its world-leading research base in advanced materials science, which is fundamental to industry and the national economy. The new Institute, supported by industrial partners, will have its £235m research centre in Manchester. Additionally, the BP Centre for Advanced Materials brings together leading strengths in four globally recognised universities to create an international centre of excellence in Advanced Materials research. These major assets will all provide GM and the Northern Powerhouse with an exceptional cluster of research, innovation and commercialisation capacity for Advanced Manufacturing and especially advanced materials.

5.15 Other related opportunities relate to local companies links to national and international supply chains, including sectors such as Energy, Aerospace, and Automotive. There are a number of manufacturing related growth opportunities in Low Carbon, Environmental Goods and Services (which are reported separately in the accompanying Deep Dive report for that sector) including potential in the circular economy and resource management, which are central to the de-carbonisation of industrial sectors and the achievements of a low carbon economy.

5.16 Despite the opportunities that GM has for growth in the sector, the central Accelerated Growth Scenario produced for GM by Oxford Economics (AGS-2015) suggests that the net decline in jobs seen over the past years will continue, with some 19,200 fewer jobs expected in the sector in 2035 compared to the level in 2015. However GVA is forecast to grow significantly under the AGS-2015, contributing an additional £2.6bn to GM's economy by 2035. This highlights that manufacturing growth will be driven by technological advancements and productivity gains rather than major job creation.

5.17 Job losses are likely to involve operator activity as automation and robotics reduce the need for labour while making companies more competitive. This net loss of jobs will not necessarily feed into a decline in demand for sites and premises however and there is a need to ensure GM has an appropriate offer to accommodate modern industrial facilities.

Key Challenges

5.18 GM has a number of world leading research centres in advanced materials, and there is the potential for growing the sector through the commercial application of research by local companies and new start-ups, as well as attracting new inward investment. However, the sector also faces several other challenges to growth, summarised below:

5.19 Many companies are operating in premises which are not fit-for-purpose and in locations which no longer meet the needs of competitive manufacturing companies. Such companies will require the provision of modern premises with space to grow, which are well connected by road (ideally near to motorway junctions) and/or rail hubs. These will typically be industrial estates outside of the urban core.

5.20 There is some pressure to convert redundant buildings to housing use, especially in urban areas where historic mixed use is being changed to predominantly housing; while distribution and logistics are more attractive for prospective developers in some locations. These factors are reducing the supply of industrial premises in some parts of GM.

5.21 There is also a reported reluctance for some companies to move from very low cost, older premises which are relatively inefficient to more modern and expensive premises which would allow for more productive manufacturing. As well as restricting growth and productivity in the sector, this also reduces developer appetite to provide new premises or up-grade existing ones.

5.22 There will be a shift toward higher-skilled occupations within manufacturing, including new skills related to innovative processes and technologies. Currently, there is already a shortage of skilled engineers in a number of manufacturing sectors. Leadership skills across all occupations are also cited by employers as a major challenge to raising productivity throughout manufacturing. International studies show that, across 34 countries whose productivity lags that of the US, 30% of their total factor productivity gap is explained by weaker management and leadership practices.

5.23 The ageing workforce will generate a regular supply of new opportunities (replacement demand) although this is likely to be for experienced labour, and there is already a shortage in some key manufacturing occupations. Current estimates indicate 10,500 employees will leave manufacturing each year, and many of these will have to be replaced. Equally, there remains an issue with the attractiveness of manufacturing to many young people and the numbers of students with STEM qualifications, which impact on the quality of apprenticeship candidates.

Spatial Considerations

5.24 While new investment and company growth will increase employment in some subsectors, as noted earlier, at the aggregate level there will be fewer manufacturing jobs, although productivity will increase. The ability of the conurbation to take advantage of growth opportunities will be determined by the availability of, and access to, a highly skilled and experienced workforce.

5.25 Manufacturing is an important source of local employment across the conurbation, and this will continue to be the case, even though total employment is forecast to decline. There will be considerable change over the next 20 years and companies and new processes and products will change the shape of industry, while new start-ups and inward investors will also impact on the market. Competing pressure for sites for other uses, particularly in the regional centre, may result in some companies needing to relocate to other parts of the conurbation.

5.26 GM's key differentiating opportunities for growth, compared with other UK locations, is the proximity of major assets in other sectors (such as Digital Industries and the dense concentration of Professional Services) and the concentration of research assets within Corridor Manchester. It is this inter-relationship between sectors which will be a major driver

of growth and innovation. GM also benefits from connections to international markets through Manchester Airport, Western Gateway with developments at Port Salford and Port of Liverpool that will allow increased access for trade. However there is evidence that GM's manufacturers export less than manufacturers elsewhere in the country and GM has no prime/Tier 1 exporters (although several exist in areas bordering GM and the nature of the sector means that many GM firms are in their supply chains).

5.27 In recent years, Advanced Manufacturing has experienced relative strong job growth in Bury, Salford, Manchester, Rochdale and Wigan and high absolute growth in Manchester and Salford. Employment in Food and Drink Manufacturing has remained static, and the main locations are currently in Wigan, Manchester, Bolton and Trafford.

5.28 The resurgence in Textiles has been concentrated in Manchester and Rochdale, with other centres including Bolton, Bury, Oldham, Salford, Tameside and Wigan. Other Manufacturing (which includes Metals, Rubber, Plastics, and Furniture) is spread across GM, with clusters within in Bolton, Oldham, Rochdale, Tameside and Wigan.

5.29 Growth locations for the sector are likely to continue to share common attributes across all of GM. Accessibility is a key requirement (being well connected by road and/or rail hubs) both in terms of being able to access a skilled workforce and being able to easily interact with supply chains within the region and beyond. In GM there are areas that are typically within industrial estates outside the urban core. Examples include those places with good access to multi-model facilities such as Port Salford (Western Gateway), Trafford Park, areas around Manchester Airport, as well as the A6 to Manchester Airport Relief Road which is underway and industrial estates / locations with good access to major motorway junctions on the M6, M60, M61, M62, and M66. Access to utilities networks in order to power significant electrical demands and waste management are also further key considerations linked to growth.

5.30 In addition, the Manufacturing sector benefits from proximity to major international centres of research excellence. These strengths help place GM at the heart of future growth in the UK's Manufacturing sector, as well as providing a key competitive advantage over other cities in the UK when looking to secure future inward investments. However, new job growth has not been concentrated around these assets.

5.31 Consultation undertaken during the Deep Dives also highlighted more needed to be done to understand specific property requirements and condition in certain parts of GM, which it was suggested was holding back growth and expansion of Manufacturing firms.

6 Business, Financial and Professional services

Context

6.1 Business, Financial and Professional Services (BFPS) is a broad sector encompassing banking and fund management, pensions and insurance, legal and accounting, management consultancy, architectural and engineering consultancy and real estate.

6.2 While London is a clear driving force behind the UK financial services industry, Greater Manchester (GM) thrives as a centre in its own right, particularly for domestic and regional markets.

6.3 This study looks at BFPS in total and then by the following subsectors:

- **Business Services** – includes the provision of a range of day to day office administrative services, as well as ongoing routine business support functions for others, on a contract or fee basis.
- **Employment Services** – includes activities of listing employment vacancies and referring or placing applicants for employment, and supplying workers to clients' businesses for limited periods of time.
- **Financial Services** – includes banking, insurance, reinsurance and pension funding activities, and activities to support financial services. It also includes the activities of holding companies and the activities of trusts and funds.
- **Professional Services** – includes specialised professional, scientific and technical activities. It also includes legal representation, preparation of legal documents, as well as other activities of civil law.

6.4 The sector is the largest contributor to the GM economy, accounting for 266,900 employees. In terms of output, the sector generates £15.5bn GVA, which is almost a third of GM's economy. The conurbation is the centre for a number of major regional and national firms operations, including for example: The Co-operative banking Group, BNY Mellon, Royal Sun Alliance Group, DWF LLP, Freshfields Bruckhaus Deringer, Eversheds KPMG and Addleshaw Goddard LLP.

6.5 GM is a leading UK centre for professional services (over 100,000 jobs) and also for business services (74,000 jobs). In financial services (almost 48,000 jobs) GM is well represented by a range of major as well as small and medium sized firms that are leaders in their field, in particular within services to support insurance and pension funding. It is also

one of the largest centres of private equity capital in Europe,[39] and an emerging centre for 'fintech'.[40]

6.6 Clusters of economic activity are mostly concentrated within the regional centre and around GM's town centres. Employment growth has been strong within Central Manchester, those areas close to the motorway network, MediaCityUK/Salford Quays and Trafford Park. Financial and Professional services employment has also seen growth in other centres including South Manchester (near the Airport) and in supporting Financial Services in parts of Bolton, Wigan and Stockport.

6.7 While productivity levels per head of employment are high in GM, exceeding those across the North West, they fall significantly short of the national average. There is almost a 20% gap with the UK average, although this is skewed by the high levels of GVA in the sector in London.

The Growth Opportunity

6.8 Between 2015 and 2035, Business, Financial & Professional Services are expected to create almost half (47.8%) of all new jobs in GM under the Accelerated Growth Scenario. The Accelerated Growth Scenario produced for GM suggests an increase of 95,000 jobs in the sector between 2015 and 2035, at a strong annual growth rate of 1.4% per annum. There will also be significant demand to replace the existing workforce that is leaving due to retirement. GVA growth will be higher than jobs growth, at 3.2% per annum, adding an additional £16bn to GM's economy by 2035.

6.9 Over the next ten years, all four subsectors are likely to change considerably as a combination of technology, market trends and competitive forces change the nature of many sector activities. While there are expected to be significant job losses in clerical and administrative positions, forecasts suggest these will be replaced with an emphasis on new higher-skilled occupations.

6.10 Outsourcing of support services will also be a key market driver, as companies from all subsectors look to reduce costs. GM is well placed for relocations from more expensive regions such as London and the South East of England, where back office functions are currently located at a cost premium.

6.11 Technology is driving growth in the sector by improving productivity and taking over routine tasks to allow employees to focus on higher value activities. Technological factors are expected to drive E-business, with improved internet access, and cheaper long distance communications which allow companies to connect with new clients in a global marketplace.

6.12 New developments in Financial and Business Services are likely to reduce some types of employment. The degree of disruption through innovation will favour those locations with the capacity to generate and up-scale new ideas and high-growth companies.

[39] Source: British Venture Capital Association (2015); and Consultation, including pro-Manchester http://www.manchestereveningnews.co.uk/business/manchester-europes-second-city-comes-9708081

[40] Source: Tech City and NESTA (2016): Tech Nation – Case Study on Greater Manchester

Key Challenges

6.13 In order to maintain its competitive position in the sector, GM will need to continue to strengthen its connectivity infrastructure with regard to both digital technology and transport infrastructure, through links to other leading centres in the UK, as well as international travel connections to the US, Middle East, Asia and China.

6.14 This emphasises the importance of GM's road, rail and air connections, including key assets such as Manchester Airport, GM's dense network of motorway connections, and its rail hubs which connect the conurbation with other cities. High Speed Rail will also contribute to stronger connections with other major BFPS centres.

6.15 While there is strong potential for GM to promote fintech and for other innovations in Business, Financial and Professional Services, there is a challenge in establishing GM as a leading location with the capacity to provide the type of support needed to scale up and accelerate innovative new businesses.

6.16 The expected levels of employment growth, even under baseline growth assumptions, will require the provision of a regular supply of new office accommodation, at competitive prices, to support growth across the BFPS sector. Bringing forward new commercial developments in areas where pre-lets are not available to support investment decisions will be a major challenge.

6.17 While there does not appear to be a major problem in the supply of skills at the current time, the future will see increasing pressure for skilled staff as a result of expansion in the economy, growing replacement demand from an ageing workforce, as well as competition for workforce skills and talent from other global financial and professional services locations. The main types of vacancies and skills shortages in the sector – identified through local and national surveys[41] and consultations with sector experts in GM – are in Associate Professional roles and relate to technical capabilities, for example: insurance actuaries; financial services staff that can combine digital and financial skills; and a shortage of legal associate professional/experienced paralegals. It is the case that the strongest demand in the industry is generally at Levels 3 and 4, but most learning starts in the sector in Further Education and Training are for qualifications at Level 2.[42] Focusing training support to match employers' needs remains a key challenge.

Spatial Considerations

6.18 In general, higher productivity, higher value sectors, such as Financial and Professional Services are concentrated in Manchester city centre, Salford Quays/MediaCityUK, Trafford Park, and smaller clusters within some town centres and well connected business parks. In terms of the likely future spatial pattern of growth, this pattern is expected to remain if firms can secure adequate and affordable office space.

[41] New Economy (2015): Review of Business, Financial, Professional Services Vacancies

[42] New Economy (2013): The Financial & Professional Services Sector in Greater Manchester: Sector Profile

6.19 Large professional service companies continue to favour the central business district of Manchester city centre. Grade A/B office space in Manchester city centre, central Salford, MediaCityUK/Salford Quays, and Trafford Park are locations that are expected to continue to appeal to companies that require highly connected locations and high quality facilities adjacent to other businesses of the same nature.

6.20 Outside of these key areas demand will likely be high for quality accommodation in business park locations with a high level of connectivity to the strategic road network. There are a number of successful business parks across GM that will continue to be popular for the Business Services and Employment Services subsectors. Firms benefit from the lower rents and ease of access by car within typical hours and shift working.

6.21 Town centres will also remain important locations for more price sensitive firms and the quality of the town centre environment will continue to be a key influencer for these companies.

7 Digital and Creative Industries

Context

7.1 Across Greater Manchester (GM) – and the North more broadly – the Digital and Creative Industries sector is disrupting traditional business models and providing strong growth in both employment and Gross Value Added (GVA). Digital, one of four prime capabilities identified for the Northern Powerhouse, benefits from critically important assets in GM such as MediaCityUK, the Sharp and Space Project and research expertise on the Corridor Manchester. These assets provide space for idea-sharing and access to talent that is important not only for the sector, but also for other sectors where technological change will contribute to further productivity growth. This is explored in more detail in the SIA of GM and East Cheshire.

7.2 Despite the importance of the sector to the UK's and GMs economy, the sector still suffers from challenges to accurately capture its scale and performance, in particular at local levels. Additionally, datasets are poorly equipped to capture the impact of the sector in other parts of GM's economy. Where possible, the report's narrative seeks to capture how innovation in the sector influences other industries.

7.3 This study looks at Digital and Creative Industries in total and then by the following sub-sectors:

- **Digital industries.** This is made up of various subsectors such as: Communications Equipment, Communications Services, Computing and Peripherals, Film/TV Broadcasting, ICT Equipment, Information Processing, Multimedia Communications, Multimedia Publishing, Multimedia Services, Software, Systems Integration, and Vision and Sound Equipment.
- **Creative industries.** This consists of a wide range of subsectors, including: Printing and Publishing, Film and Television Broadcasting, Advertising and Marketing, Creative Arts & Entertainment, Architectural Design, and Photography.

7.4 Even defined narrowly, the sector was the fastest growing in terms of employment in GM between 2010 and 2013 and joint fastest in terms of output growth.

7.5 GM has established strengths at an international scale in Computer Engineering, Hardware and Programming, Telecommunications and Satellites, Big Data, Data Analytics, Interactive Media / Simulation and Software Development and Smart Sensors, Detectors and Autonomous Systems. There are 54,400 jobs in the sector in GM with an even split of 28,300 jobs in Digital Industries and 26,100 in Creative Industries, and these combine to generate a total GVA of £3.1bn.

7.6 While the sector has experienced strong growth, levels of GVA per employee in the sector in GM (£51,200) fall behind the national average (£56,800).[43] There are also considerable variations between the two major subsectors. GVA per person employed in Digital

[43] Greater Manchester Forecasting Model (GMFM)

Industries in both the UK (£73,900) and GM (£66,200) is significantly higher than that in Creative Industries (UK £42, 600, GM £37,300).

7.7 However, in both cases, GVA is lower than the UK average, although the national figure is distorted by London as a global leader in both digital and creative sectors.

7.8 The variation in productivity also reflects the industrial structure within the two sectors (and arguably the difficulty in capturing the total economic value of Creative Industries). Digital Industries includes a number of high value added, high skilled subsectors such as: communications services, computing, ICT equipment, information processing, multimedia publishing and services. However, in the Creative Industries productivity is mixed, covering a range of subsectors such as film/TV broadcasting, publishing, advertising and marketing, arts and entertainment.

The Growth Opportunity

7.9 The importance of the Digital sector at a Northern Powerhouse scale and its ability to disrupt traditional business models give an opportunity to scale up and accelerate business growth across all sectors in GM in national and international markets. This will include new applications for digital technologies including health, business services, financial services and advanced manufacturing providing significant opportunities for existing and future entrepreneurs. The SIA of GM and East Cheshire highlights the importance of exploiting synergies between GM's areas of strength such as Health, Digital, Advanced Materials, Biotechnology and Energy.

7.10 InnovateUK identified convergence of different media platforms, the capturing and managing of value transactions and new approaches to data, as factors which will significantly affect the sector at a global and UK-wide scale.[44]

7.11 All of these trends make Digital Industries one of the fastest growing sectors in the global economy, and this is reflected in the GM growth forecasts. For creative industries, increasing demand for content in gaming, film, TV and advertising will lead to increased opportunities for creative production including film, drama and music, areas where GM has a number of strengths. Furthermore, the proliferation of media and creative platforms and services will also increase demand for independent production.

7.12 Across the sector, use of Big Data (using large analytics to identity trends and patterns in large and complex data sets) will provide opportunities for data companies to work in larger markets and a diverse range of sectors as well as extending a programme of demonstrator and test-bed projects such as CityVerve allowing whole systems testing. Other developments which will drive opportunities include cyber security, mobile and cloud computing.

7.13 The national importance of both creative and digital sectors has already been supported by the development of MediaCityUK at Salford Quays, where one in seven of the BBC's staff work, with over 1,000 specialising in digital applications. The presence of ITV and Channel

[44] Technology Strategy Board (2013): Creative Industries Strategy
https://connect.innovateuk.org/documents/3220887/3676376/Creative%20Industries%20Strategy%202013-2016?version=1.0

4 together with assets such as The Landing and The Sharp Project have enhanced its role as a genuine cluster of digital, media and creative firms in which specialisation is starting to take place and its position as a pan-northern asset and the leading creative, media and digital centre outside of London. In this context GM has major potential for 'North Shoring' (attracting firms from the overheated London and South East).

7.14 Employment in GM is expected to continue to increase markedly, growing over the next 20 years by 18,700 jobs at a rate of 1.2% p.a. under the Accelerated Growth Scenario (AGS 2015). The growth in GVA is even more marked with an annual forecast growth rate of over 3.6%, adding £3.7bn GVA to GM's economy by 2035.

Key Challenges

7.15 Digital and Creative is built upon the talent and innovation of its workforce, and many companies involved in the development of creative content and new forms of media place an emphasis on a young and high-skilled workforce. To sustain the sector, GM needs to continue to attract highly mobile and sought after young workers and entrepreneurs, in the face of intense competition from London and, to a lesser degree, other major UK cities. This target market is influenced by the quality of place and the combination of employment opportunities and lifestyle offer.

7.16 Similarly, there is a major challenge to address skill shortages identified in the Digital Industries sector. Skills shortages tend to be related to a lack of candidates with proficiency in current software (and hardware) skills rather than specific qualifications. At the same time employers are demanding not just up-to-date technical skills but also highly developed generic competencies in business management and communication. Strong learner demand is not translating into giving employers the skilled workforce that they need and the pace of technological change makes it difficult to devise and maintain an up-to-date curriculum in which employers have confidence. The structure of the sector (including prevelance of micro businesses and freelancers) makes skills development challenging and whilst there are many good initiatives in GM there is a lack of coherence and strategic framework. An approach is required to addressing digital skills shortages that facilitates much greater involvement of businesses in the sector working with schools from Primary level upwards, to develop curriculum approaches that start to develop the technical and generic skills needed.

7.17 While GM has some clustering of businesses in creative, digital and technology companies, in particular within Salford Quays, MediaCityUK and Manchester city centre, there is a major opportunity, and challenge, in scaling up smaller clusters of activity, in the same way other major digital clusters have flourished in other parts of the UK. This will require a broad range of support, including an investment environment which allows high-growth companies to remain in the conurbation as they expand.

Spatial Considerations

7.18 Growth in Digital and Creative Industries is likely to continue to be focused in places that are well-connected in terms of digital and transport infrastructure, have access to a strong talent pool, can offer a wide culture and leisure offer which is attractive to skilled workers, and have high quality urban environments.

7.19 Flexible business accommodation, with well-designed shared space to promote idea sharing and collaboration, will prove attractive to many micro-size and small businesses and those at the start up stage, particularly where located close to public transport links. Parts of creative industries, notably cultural, creative and artisan enterprises, will need inexpensive mixed-use space. This will be driven by a reduction in supply/choice as many older buildings in the regional centre and some town centres are re-developed for housing and higher value employment uses.

7.20 Manchester, with the Northern Quarter, the Sharp and Space Projects and the St. John development will continue to attract businesses within the sector. Corridor Manchester's R&D strengths will also prove attractive to new or relocating firms. At the same time, many companies will require less expensive office locations, and will look for premises outside of or at the fringe of main business districts.

7.21 Future strong employment growth in the sector will likely be focused around the main clusters of sectoral employment and growth in central and east Manchester, Salford Quays/ MediaCityUK and through into Trafford Park. MediaCityUK, with its anchor tenants of BBC and ITV providing an international profile, will also be important in attracting businesses to cluster in the area. A growth assessment recently undertaken by Ekosgen and Arup suggested that over the next 25 years, over 18,500 jobs could be created at MediaCityUK/Salford Quays based on a demand and supply side growth assessment. Whilst this will likely be in a range of sectors including BFPS, increasingly specialisation is likely in particular within the digital and creative sectors.

7.22 Further growth is also likely to be linked to smaller clusters in lower cost locations, such as those that exist within Bolton, Bury, Rochdale, and Stockport/North Cheshire. Growth is likely to come from spin-out from larger firms and new, typically micro-sized, firms. This demonstrates the flexibility of the sector, as these businesses can operate in any location, provided that the requisite digital infrastructure is in place. Indeed, the flexible nature of the sector suggests opportunities for growth exist linked to new developments across the conurbation, such as is being progressed at Ashton Old Baths, now running for over a year, Stockport Business and Innovation Centre and the Wayra/Hack Digital Enterprise Hub, launched in Oldham as a key part of the Independent Quarter. Growth opportunities also exist from micro businesses created by home workers in residential areas.

8 Health and Social Care (including Health Innovation)

Context

8.1 Devolution of health and social care provision in Greater Manchester (GM) is set to radically transform the way services in the health and social care sector are delivered, with the conurbation now responsible for a devolved £6bn health and social care budget as well as an additional £450m of transformation funding from NHS England.

8.2 *Taking Charge of our Health and Social Care in Greater Manchester*, the five-year plan for the sector in GM, outlines how devolution will enable a fundamental change in the way communities take care of their own health and the development of local care organisations.[45] This is especially important in the context of a growing and ageing population, with the plan outlining opportunities for greater collaboration across the health and social care system and an approach to reconfigure the Health Sector estate. This will include the consolidation of secondary care and a re-thinking of primary care delivery to meet local needs and to become more cost-effective.

8.3 Across GM, the health and social care sector employs 157,400 people, accounting for 13% of the total workforce. As the third largest sector in the conurbation, this employment generated a Gross Value Added (GVA) of £4bn in 2013, 7.6% of total GVA (excluding Health Innovation), though GVA at £23,700 per person employed is lower than the national average for the sector of £25,400 per person employed. While the majority of employment is in human health (96,100 jobs) the social care subsector is substantial, at 61,000 jobs; a figure which is likely to grow as the population ages. A large proportion of social care employment provides home-based daily care.

8.4 Distribution of employment in the conurbation is a function of both population and the location of NHS hospitals. As a result, Manchester has the greatest concentration of employment, followed by Stockport. Together, these two districts account for nearly two-fifths of the sector's total employment in GM. Health and social care is a key employer in Bury (19.4% of employment), while in Oldham it is 16.6% and is 15.1% of jobs in Tameside.

8.5 While public sector organisations account for the majority of employment in the sector, there are a growing number of private sector and voluntary organisations, including in the private acute medical sector which covers operations and treatments, psychiatric care and residential and social care for older people

8.6 Health Innovation, identified as one of the prime sectors for the Northern Powerhouse, is a growing area of activity which includes the development and manufacture of therapeutic and diagnostic treatments, as well as other types of research and experimental development in the field. Although a small and very specialist sector, health innovation has considerable

[45] http://www.gmhsc.org.uk/assets/GM-Strategic-Plan-Final.pdf

potential for growth linked to new products and treatments (potential for manufacturing businesses) and new service delivery (implications for digital and technology companies).

The Growth Opportunity

8.7 Employment in Health and Care is expected to increase by 24,300 jobs between 2015 and 2035 under the central Accelerated Growth Scenario, equating to growth of 0.7% p.a. GVA will increase by £2.6bn, at an average growth rate of 2.3% p.a. over the same time period.

8.8 At the global level, forecasts for increased demand for services and products, including pharmaceuticals and new treatments, show healthy growth as life expectancy increases and developing countries in Asia and Africa increase expenditure on health services. This provides an opportunity for the export of knowledge and products in the sector, especially with regards to the commercialisation of research. Similarly, at the domestic level new advances in treatments, pharmaceuticals and technologies will increase the healthcare which can be provided for conditions, pairing with the increasing number of people who require treatments for both serious conditions and general conditions such as obesity and diabetes. However, limited public sector funding for health in many advanced economies are increasing the imperative to provide health services in a more efficient manner, driving innovations in medical products and all forms of service delivery.

8.9 There are major opportunities in developing further linkages between the digital and health sectors, including specific health technology opportunities with a global and growing market in telehealth, which uses technology to deliver health-related services and information, such as enabling medical professionals to monitor patients' health remotely and tele-care. Many of the health-related opportunities are linked to diagnostic, therapeutic products and treatments which can provide better health outcomes.

8.10 Health Innovation in GM has been recognized as a major opportunity and as such, forms a key part of the SIA of GM and East Cheshire. It provides further evidence on the collective Health Innovation assets for the functional geography and the synergies that exist across sectors to drive further innovation within the city region.

Key Challenges

8.11 While devolution provides GM with an opportunity to reconfigure the health and social care system to ensure the best patient outcomes are delivered economically, and tailored to local need, there is a challenge to ensure supply chains are strengthened through procurement, including the commissioning of local clinical and technical services.

8.12 While GM has a number of leading research assets with growth opportunities in domestic and international markets, commercialising opportunities through inward investment, new start-ups and businesses based in the conurbation is a major challenge. Health Innovation Manchester (HInM), a new partnership, by co-ordinating and harnessing GM's considerable research capabilities in the academic and health systems, will speed up discovery, development and delivery of innovative solutions to the NHS, focussed on health informatics, building on GM's data capabilities and expertise in clinical trials and precision medicine.

8.13 By market, much of the growth potential in health innovation is based on accessing international markets and, while GM has specialisms and comparative advantages in medical testing equipment and services, advanced materials and textiles and eHealth/medical informatics, support may be required to help companies move from domestic sales to international sales in growth markets such as China and Asia. GM has a strong base of digital and technology companies with the potential to take advantage of e-health opportunities, providing the support to help business to scale-up and commercialise innovation may require new approaches to business acceleration.

8.14 Health and Social Care is a major source of employment across a range of occupations, many of which are highly skilled. The sector is facing persistent serious skills and recruitment challenges, and in recent years the NHS has had to actively recruit internationally to meet its workforce requirements. There are skills shortages and replacement demand (due to retirements) across a range of occupations and lower levels of public sector funding are allocated to training compared to other sectors.

8.15 The introduction of the National Living Wage and the Apprenticeship Levy poses a further challenge to employers, in particular within the care sector which has a lower median earnings compared to the average across all sectors. Limited public sector budgets and an increasing reliance on self-funding also limit the opportunity to increase wages to attract well qualified staff.

Spatial Considerations

8.16 In terms of the future location of growth, Health and Social Care organisations tends to align with the population's need for healthcare and social care service. Whereas health innovation firms tend to cluster around the sector's main assets and infrastructure, especially in the Corridor Manchester. As a result, there are two strands to the likely future spatial pattern of growth.

8.17 Focusing on Health and Social Care, population growth and the ageing of the population could see increased employment opportunities for all districts and particularly in those that have a higher concentration of older people across the periphery of the conurbation. Furthermore, the reconfiguration of primary care, the consolidation of secondary care, and the rationalisation of the Health sector estate – through the activities of the One Public Estate Programme and Community Health Partnerships – will have an important part to play in where Healthcare employment growth is located.

8.18 Future growth in relation to research and development and health innovation is likely to take place around the existing and emerging clusters of health-related research and innovation. The area from Corridor Manchester, MediPark (including University Hospital of South Manchester NHS Foundation Trust in Wythenshawe, potentially delivering around 4,500 new jobs and 250,000 sqm of new floor-space, through to key sites located just outside GM within Alderley Park and through health data at Sci-tech Daresbury will be the major focus of activity. Just outside GM, AstraZeneca's manufacturing plant at Hurdsfield in Macclesfield, Manchester Science Partnership's new Cheshire Campus at Alderley Park, and Sci-Tech Daresbury will contribute to the scale of the region's Health Innovation cluster.

9 Low Carbon and Environmental Goods and Services (LCEGS)

Context

9.1 The Low Carbon and Environmental Goods and Services (LCEGS) sector, also known as green or clean-tech industries, captures economic activity across all sectors and supply chains that deal with environmental issues, ranging from traditional pollution clean-up to renewable energy to complex, emerging low carbon and environmental solutions. With over 37,000 jobs and almost 2,000 companies, LCEGS is a growing and important sector for GM, with total sales estimated at £5.4bn. The sector therefore represents a major opportunity to create new employment in an area of expanding global activity.

9.2 Within GM, and the UK, there are opportunities for employment at all skills levels within the sector including potential to create a wide range of innovative activities, which demand high-levels of technical skills, alongside management and consumer product development skills. These will be supported by a growing Advanced Manufacturing subsector and associated services that help to meet domestic and global demands to cut emissions.

9.3 The UK's direct low carbon economy generated £26.2bn in GVA in the UK in 2013, making it five times larger than Aerospace, two and a half times the size of Pharmaceuticals, almost twice as big as Chemicals and equivalent to Food and Drink in GVA terms. According to research by kMatrix Ltd and Gyron LLP, the Low Carbon subsector makes the largest contribution to the overall LCEGS sectors with just under 20,400 employees and sales of £2.9bn in just over 1,000 firms.

9.4 The kMatrix Gyron report does however highlight that the figures for Low Carbon subsector are distorted by a large presence in alternative fuel sub-sector activities and these are generally low value added fuel supply and distribution dominated. If these activities are excluded from their definition then employment in Low Carbon subsector falls to just under 8,800 and sales turnover to £1.3bn[46]. However, this is likely to be an under estimate, as the cross-cutting nature of the sector makes accurate quantification difficult.

9.5 Many of the firms operating in the LCEGS sector operate in several other industry sectors, ranging from traditional energy generation to advanced manufacturing or building services. The kMatrix/ Gyron research identified key strengths for GM including:

- Low carbon building technologies (prototyping and design of technologies
- Manufacture, supply, installation of insulation and energy management systems and low carbon lighting)
- Renewable energy (including wind, geothermal solar-photovoltaics and biomass); and recovery and recycling (water supply and waste water treatment and waste management).

[46] kMatrix Ltd and Gyron LLP (2013) Greater Manchester LEP LCEGS Report May 2013 from kMatrix Ltd and Gyron LLP. See Technical Annex for further details on the approach used to define the sector

9.6 The Northern Powerhouse has identified energy as one of its four "prime" areas of strengths for the northern economy. GM benefits from key assets and significant annual expenditure on energy research.

9.7 Manchester Energy at the University of Manchester brings together over 600 researchers from across the University, supporting research and education across the energy spectrum (including nuclear research and in low carbon energy generation, transmission and storage) and Salford University Energy House which has been designed and developed to allow leading academics and researchers to conduct scientific research, to test installed technologies under laboratory conditions and improve the energy efficiency of hard to treat properties, in collaboration with industry.

9.8 Other long-term growth opportunities for the LCEGS sector in GM include:

- The GM Devolution deal
- Greater Manchester Climate Change and Low Emission Strategies Joint Implementation Plan (2016 to 2020)
- The commitment of the Northern Powerhouse to energy
- The implementation of national and local environmental policy in response to the global carbon reduction commitments set out in the Paris Agreement

The Growth Opportunity

9.9 The Low Carbon and Environmental Goods and Services is both a sector (made up of technical consultancy and advisory companies, manufacturers, and service and installation companies) and various markets over which public policy has a major influence (such as transport systems, decentralised energy generation, urban heat networks and retrofitting buildings in the public, commercial and domestic sectors). As such, the scale of opportunity is currently driven either by incentives/subsidies (which can change or be withdrawn) or regulation leading to increased standards and product and service innovation.

9.10 Major growth within LCEGS is likely to come from the drive for all sectors to be increasingly environmentally responsible. This includes a significant opportunity for businesses in GM with respect to energy efficiency retrofitting in buildings. Alongside specialist support to enable this, there will be a general need for the 'greening of the workforce.' Many of the skills needs therefore are likely to be based on the existing workforce gaining additional qualifications and skills that enable them to adapt quickly to new growth opportunities rather than complete retraining.

9.11 The Smart Cities' agenda creates growth opportunities and key projects include the Triangulum Project at the University of Manchester and City Verve Project amongst others which are testing new and innovative ideas.

9.12 Over the last two decades the label 'Smart City' has been applied to a family of technologies that can speed up the flow of things around the city and reduce the physical frustrations of urban life: free flowing traffic instead of jams, smart flows of energy and less waste and public services better targeted where they are most needed.

9.13 Low Carbon products and services growth opportunities include green building technologies and monitoring, street lighting systems and conversion to LED, advanced metering infrastructure, heat networks, and new energy generation, management and storage systems.

9.14 The circular economy – where industrial producers re-use and recycle resources – is also an opportunity for the LCEGS market. The circular economy concept places an emphasis on re-design and re-engineering as well as re-cycling the by-products of production processes, and will increase demand for technical support and innovation.

9.15 Demand for low carbon energy will evidently be affected by the policy and regulatory environment. To meet the UK's future energy demand and COP21 International commitments, the UK will need to invest in new energy infrastructure to replace existing assets and increasing demand. Therefore the choice is not if we invest, but how we invest in energy. The requirement for cost effective, low carbon energy is important and supports the sector as the UK strives for security of energy supply.

9.16 The forecast level of economic growth, nationally and in GM, will place a demand on waste water management services for the growing number of businesses. The national importance of increasing new housing development to support population growth will also increase the market for waste water management and municipal waste processing facilities across the North.

9.17 Increased house building will also lead to increased demand for materials and products from building technology firms. The demands placed on the electricity distribution network are likely to change dramatically over the coming years as a result of the drive towards electrification of heat and transport and to ensure delivery of Government targets relating to carbon emissions and air quality.

9.18 Electrification is a major component of national transport strategy and will make a major contribution to reducing carbon emissions. It will also lead to opportunities to create new products and services and, ultimately, create jobs and growth opportunities.

Key Challenges

9.19 The public and private investment pipeline in GM is a huge opportunity for the sector. For example transport investments, such as the Manchester to Leeds Rail Electrification, provide a major opportunity for low carbon construction technology businesses. However, there is a challenge to support GM's firms to take advantage of new commercial opportunities. Many growth firms are micro-size (less than 10 people) and are under-capitalised, which restricts their ability to bid for large contracts.

9.20 Similarly, the construction of new houses that will need to be undertaken to meet the needs of GM's growing population over the next two decades is a significant opportunity that GM LCGES firms can benefit from. The scale of population growth brings additional challenges in providing large sites capable of accommodating waste management and recycling facilities.

9.21 While GM has a significant business base in the LCEGS sector and some notable research strengths in Energy, ensuring that innovations are translated into commercial opportunities for Advanced Manufacturing companies in GM will also be a key future consideration.

9.22 A number of skills gaps have the potential to restrict growth. Challenges include: low carbon vehicle skills for mechanics; renewable energy and efficiency installation skills and specific technical skills relating to the design of new products.

9.23 The skills required in some of the technology areas will be very specific and the small number of learners in some areas will reduce the ability of providers to accommodate new areas of provision. Continual Professional Development will also be important to support existing professions to 'green the workforce', especially in the areas of energy efficiency, renewable energy, and refurbishment skills for domestic housing.

9.24 Future recruitment difficulties and skills shortages are forecast for the sector. Research by the Institute of Mechanical Engineers found 89% of those working in the sector believe the UK is not producing enough engineers; and just 13% of manufacturers believe government was doing enough to provide adequate Science, Technology, Engineering, , and Mathematics (STEM) skills advice to young people. Both these areas of work are critical to enabling growth in LCEGS. Alongside workforce development and skills, the sector faces several other challenges, in particular supporting the sector to translate research into commercial products. The UK Manufacturing Foresight Report identifies that the UK still falls behind its international competitors in terms of R&D investment.

Spatial Considerations

9.25 Given the breadth of sectors which Low Carbon and Environmental Goods and Services cuts across, there are business and employment opportunities in a range of manufacturing and service sector occupations. While there are key clusters of firms in both Manchester and Stockport, employment is fairly evenly distributed across the remaining districts, and employment growth is likely to continue to follow this pattern in future.

9.26 In addition, there is an opportunity to capitalise on new developments including the Western Gateway encompassing Port Salford which has land assets and developer interest that can generate significant growth in the Energy sector, alongside manufacturing, construction and logistics sectors.

9.27 Driven by population growth, there is likely to be demand for a limited number of new environmental facilities to serve local need. Locations right across GM which are well connected to transport infrastructure and can provide sufficient space for large processing plants at an affordable cost to the market will remain attractive to developers.

9.28 For professional and technical consultancy companies, strong locations, such as the regional centre, will continue to be attractive for employment growth. In the case of low carbon Advanced Manufacturing firms, the growth locations will align with those of the manufacturing sector more generally (detailed in an accompanying deep dive report), as the locational requirements are the same.

10 Logistics

Context

10.1 Logistics is an important part of GM's economy, as a business sector in its own right and as an enabler of the success of other businesses of all sizes and sectors – from corner shops to supermarkets, manufacturers to eBay entrepreneurs, and energy companies to waste management businesses across the conurbation. Indeed, this report draws from an independent study focussing on the medium to long-term opportunities for the sector in GM undertaken by MDS Transmodal[47] in 2014.

10.2 The Logistics and Distribution industries have changed radically in the last five years in response to changing consumer behaviours, with next-day and same-day delivery becoming increasingly commonplace, and significant growth in local distribution jobs. This has led to the development of Fourth Party Logistics Firms (4PL), businesses that act as a supply chain manager to deliver a comprehensive supply chain solution from national down to the local level.

10.3 The Northern Powerhouse areas of the North West, North East, Yorkshire and Humberside form part of a pan-northern road/rail/water freight offer, which include Manchester Airport, Liverpool 2, Port Salford/Western Gateway, Hull and Humber Super-port, the UKs largest, multipurpose port complex; and the E20 North European Trade Axis. GM is at the heart of the region's logistics sector, comprising 3,335 logistics businesses, and while many of these are very small, the industry is characterised by global and national companies such as TNT, Yodel, DHL, Amazon, Tesco and Asda.

10.4 Logistics is a major employer in GM. The sector accounts for 5% of total employment (60,400 jobs) and generates £2.5bn of Gross Value Added (GVA), equivalent to 4.7% of GM's economy.[48] This accounted for over two-fifths of the sector's total output in the North West, and 4% of the sector's total GVA nationally.

10.5 Major employment sub-sectors in GM include land transport (18,500 jobs), warehousing and support activities (22,500 jobs) and postal and courier activities (14,000 jobs). Whilst air transport accounts for a smaller number of jobs (5,300), GM has one of the highest concentration of freight forwarder companies outside Heathrow.

10.6 Productivity (as measured by GVA per employee) in the logistics industry is 20.8% below the national average (£33,600 against £40,600 in the UK), and by way of comparison, is just above half of the figure of GM manufacturing sector (£65,100). The gap in productivity between GM and the UK is in part due to many of the UK's major National Distribution Centres currently being located outside the region, in particular within the East Midlands. Supporting businesses to move up the value chain will help to drive productivity going forward.

[47] MDS Transmodal (September 2014): Greater Manchester Logistics Study
[48] Oxford Economics (2015): Greater Manchester Forecasting Model

10.7 Taking into account both employment directly captured under the logistics sector and logistics activities within other sectors, most notably within the wholesale sub-sector of retail and wholesale, employment is forecast to increase substantially.

10.8 This implies a rising demand for employment sites to accommodate the potential for growth. Historically, the main clusters of logistics employment surround the regional centre, Manchester Airport and along major transport routes (M62 to the north and M60/M6 towards the west). Employment is also high in Trafford (in particular Trafford Park), Rochdale, Wigan, and Bolton.

The Growth Opportunity

10.9 Globally, a growing population and increased demand for raw materials, commodities and manufactured goods will underpin the long-term growth of the Logistics sector. Domestically, changes in consumer behaviour are leading to more goods being delivered to pick up points and homes – termed “last mile” deliveries and providing opportunities for local jobs and growth in technology to reduce environmental impacts.

10.10 Capitalising on the significant potential of the Panama Canal widening, Liverpool’s Post-Panamax Terminal ‘Liverpool 2’ and Salford/Western Gateway provides significant scope for growth from global trade to be captured in Greater Manchester (GM) and the Northern Powerhouse area. Currently 91% of freight comes into ports in the South East, although 50% of that cargo is headed for the North. Liverpool SuperPort will allow the world’s largest container vessels to arrive at a centrally located UK gateway, offering a cost-effective option for moving goods in and out of the Midlands, the North of England, Scotland, Ireland and Northern Ireland.

10.11 Many National Distribution Centres (NDCs) are located in the golden triangle of Nottingham, Milton Keynes and Birmingham, offering access to the southern ports and the national population centres in London, the South East and the Midlands. There is the potential for GM to accommodate a higher share of the UK’s NDCs based on a concerted investment and a shift northward in sea-trade movements as a result of the Post Panamax shipping developments in both Liverpool and Salford.

10.12 However, given the typical size of an NDC is over 60,000 sq m, with some examples in the UK over 100,000 sq m, there are only a small number of sites that could accommodate this type of development in GM. The opportunity is also limited by the availability of Strategic Rail Freight Interchanges in the South East which would favour road haulage from the Midlands rather than rail from GM.

10.13 E-commerce represents the latest driver of change in logistics, and retailers and logistics firms are re-engineering their distribution networks and infrastructure to provide a complete management of the supply chain, including final mile delivery. This will increase demand for regional, local and urban distribution centres.

10.14 GM and the Northern Powerhouse will benefit also from significant investment in rail infrastructure, leading to increased capacity for freight services. High Speed 2 and the

Northern Hub offer a key opportunity to open up freight capacity on the West Coast Mainline, which is currently close to capacity.

10.15 Manchester International Airport and Global Logistics at Airport City also have the potential to allow GM to capture a greater share of the UK's and Europe's air freight market over the next twenty years, building on a large freight forwarding base, as well as the strong forecast growth of its passenger numbers and new international connections.

Key Challenges

10.16 Key drivers for change in the sector, and future challenges include: the impact of technology and changing consumer trends on service integration, changes to northern ports, sustainability and concerns for environmental impact and new regulation.

10.17 It is important that locations such as Port Salford/Western Gateway and Trafford Park have the facilities to take advantage of the Manchester Ship Canal's connection to Liverpool Superport, and new opportunities for port related freight. Taking advantage of these opportunities, for both imports and exports, and providing the transport infrastructure to support growth, will be important to growing the logistics industry in GM.

10.18 GM needs to ensure the availability of a sufficient employment land supply, connected to the strategic road network to take advantage of demand from general logistics growth and e-retailing. The *MDS Transmodal* study advises that GM should continue to bring forward suitable sites for Regional Distribution Centres. In addition, GM should also look to bring forward rail connectable sites through the planning process, particularly as these sites may also have the potential to serve, in part, as Urban Distribution Centres – common user consolidation hubs – with the potential to also incorporate innovative last mile eco distribution using electric delivery vehicles.

10.19 While well connected sites are often viewed as the major challenge in supporting growth in logistics, the industry is facing a number of skills challenges in supporting its day to day operations. Research by UKCES[49] highlights that the industry is not seen as a particularly desirable sector for young people and school leavers looking for future careers. There are also perceptions of unsociable working hours and a lack of understanding of the sector's importance to the UK economy and potential career development. It is important to promote the fact that the sector offers a range of occupations including many high-skill, well paid technical and professional positions (one-in-five jobs are graduate level), as well as drivers and semi-skilled jobs.

10.20 All areas of work in the sector are facing increasing challenges to ensure technology and ICT is used to its full potential. Just over a quarter of employers in recent UKCES research reported recruitment difficulties – and of these over half related to skill shortages. Skills challenges are particularly acute at middle and junior management, where more than a third of firms reported difficulties with organisation and planning skills.[50]

[49] UK Commission for Employment and Skills (2014): Understanding Skills and Performance Challenges in the Logistics Sector
[50] Ibid.

Spatial Considerations

10.21 The Logistics sector presents strong opportunities for growth, at different scales, across GM. Local distribution centres will continue to develop close to residential areas and there is particular demand for larger multi-modal sites to accommodate regional, urban and potentially national, distribution centres. This is evident both from the MDS Transmodal study and MIDAS' records of lost projects to other parts of the North West. These opportunities will build upon GM's strategic position along major north and south, and east and west transport connections.

10.22 Sites identified through the Deep Dive analysis that are potentially of GM significance should they be fully developed (given their scale, their suitability to meet the clear market demand for logistics sites, and their potential to accommodate housing growth) are:

- **Port Salford and Carrington (Western Gateway):** Building on growth from the widening of the Panama Canal and potential growth in container logistics, the only tri-modal opportunity in GM.
- **Logistics North:** Potential to develop Regional Distribution Centres which can serve GM, south east Lancashire, and Liverpool.
- **Heywood Industrial Park:** Taking advantage of motorway access and links to the regional centre and northern parts of GM.
- **The area around J25/26 of the M6** is attractive from a market perspective for distribution centres to take advantage of strong north/south and east west connections from the M6, M62 and East Lancs Road.

10.23 **Manchester Airport:** The airport offers significant bellyhold capacity direct to key locations worldwide such as to Dubai, now the largest international passenger airport globally. Global Logistics at Airport City provides additional space with direct access to the regional motorway network for specialist air freight forwarders and express/courier operators handling urgent or perishable cargo.

10.24 The list of sites above is not definitive and it will also be important to consider smaller sites that have the potential for logistics use and examples exist of such sites across GM including, but not limited to: Foxdenton (Oldham), South Lancashire Industrial Estate (Wigan); and Stakehill Industrial and Distribution Park (Oldham, Rochdale, Middleton).

11 Retail and Wholesale Distribution

Context

11.1 British Retail and Wholesaling is a success story that is continually evolving and incorporating new forms of shopping. Amid the talk of the decline of the retail sector the evidence in this Deep Dive highlights the fact that the retail sector as a whole is buoyant, with growing opportunities. It is also an important source of employment for around 4.5m people across the UK. The sector has seen substantial transformation, as consumers have increasingly combined different channels of shopping, both online and in-store, which has had a significant impact on the nature of work, as well as on the supply chains of retailers, wholesalers and distribution businesses.

11.2 The sector is a significant employer in Greater Manchester (GM), with almost 200,000 jobs (16.5% of total employment in GM) and over 20,000 companies. By subsector, Retail accounts for the majority of employment (123,000 jobs) many of which are part time. Wholesale is also a significant source of work, employing an estimated 58,000 people. In terms of economic output, the Retail and Wholesaling sector generates £6.7bn annually, equivalent to 12.7% of total Gross Value Added (GVA) in GM.

11.3 Across GM, the retail market is becoming increasingly polarised between a handful of large corporate chains, and a long-tail of small independent retailers. While independent retailing has been in decline for several years (in terms of number and market share), major chains have grown substantially – including their diversification into multi-channel retail. There is a clear hierarchy of retail centres in GM, led by Manchester city centre and the Trafford Centre, with other concentrations in GM's eight principal town centres.

The Growth Opportunity

11.4 The baseline forecast for GM suggests an extra 17,600 jobs by 2035, and an average employment growth rate of 0.4% per annum. This equates to an additional £4.3bn in GM's economy each year by 2035. However, the central Accelerated Growth Scenario suggests the number of additional jobs could be higher, growing by 26,300 employees from 2014 to 2035, this would equal a further £4.9bn GVA per annum in GM's economy by 2035. Over half of this growth will be within the wholesale sub-sector. There will also be significant demand to replace the existing workforce leaving the sector due to retirement. Replacement demand forecasts suggest this equates to 27,000 jobs per annum up to 2035.

11.5 In recent years, technological change, social media and increased consumer expectations have all contributed to a change in consumption patterns. This has already caused a fundamental change in the retail and distribution industries, as well as manufacturers and logistics businesses.

11.6 The growth of online shopping and growth in multi-channel shopping will continue and while much of the impact will be in changing how people shop, it will also enable some producers and retailers to both reach a larger, and sometimes a different, market, as well as increase their market share. In addition, there will also be more opportunities available to new

entrants and niche producers to enter the market. It will also have a significant influence on the future of customer fulfilment and distribution companies.

11.7 E-Commerce and customer expectations of speed in delivery will boost the wholesale and distribution sector over the next twenty years which will impact on town centres. Research from the Javelin Group forecast that by 2020 there will be 31% fewer non-food stores in the UK, and 21% less floor-space than at present. Growth in e-commerce will increase the need for regional and local distribution centres, as well as centres for sales returns; and the introduction of new pick-up points in existing retail centres. Larger multiple retailers throughout GM will need to consider how their high street locations could change or be enhanced to facilitate a greater level of click and collect sales, acting as a point for collection and returns of online purchases. The presence of Click and Collect is seen as a positive approach for most retailers, as it reduces costs of delivering to multiple homes and means people spend more in store when they come to collect the item that they ordered, providing this is supported at a town centre scale.

11.8 GM already benefits from strong existing distribution sites. *MDS Transmodal* have highlighted opportunities for expansion of Regional and Urban Distribution Centres (RDCs and UDCs) and potentially National Distribution Centres in GM, which have the potential to offer significant employment growth, in particular in locations near centres of population growth. [51]

Key Challenges

11.9 The major challenge in updating the role and purpose of town centres, particularly the eight principal centres, will be promoting them as locations that provide choice for retail consumers, alongside other reasons to visit. Increasingly, the leisure offer[52] of town centres will be important in complementing and strengthening their retail role, helping to attract and maintain larger multiple retail brands alongside their other uses such as housing, civic space and public realm.

11.10 There is a degree of uncertainty about how people will shop in the multi-channel era. There may well be a changing role for physical stores as more people shop online. 'Click & Collect' could become key to physical stores remaining competitive in the market for consumers' convenience. Businesses will also have to look to provide a customer 'experience' in order to retain footfall.

11.11 There will be significant demand within the sector to replace the existing workforce, many of whom are ageing. Replacement demand figures suggest that there could be up to 27,000 leavers from the sector per annum (mostly retirements) and there will be a requirement to fill many of these roles, potentially leading to recruitment difficulties.

11.12 The use of new technologies is leading to greater skills requirements, particularly in IT, while increased automation, such as self-checkouts, will reduce some roles but create new ones in technical support. New technology is also pervasive across Wholesale and

[51] MDS Transmodal, September 2014, Greater Manchester Logistics Study

[52] Detail of GM's leisure offer is not contained in this report but in the Hospitality, Tourism and Sport Deep Dive

Distribution industries[53]. As a result, the wider sector will see a marked increase in staff requiring IT-related qualifications and skills.

Spatial Considerations

11.13 While changes to consumer behaviour towards online retail will adversely impact high streets, the net impact of these changes in the larger context of change across GM remains unclear. Both population growth and the expansion of key growth sectors will lead to rising numbers of consumers and purchasing power. This suggests town centres, in particular those with concentrations of employment in sectors other than retail and those with higher residential populations, will see increased footfall and thus correspondingly growth in the retail sector. Given their existing strengths, Manchester city centre and the Trafford Centre would be expected to remain as the prime GM retailing locations.

11.14 Demand from the consumer for out-of-town Retail is likely to remain strong, mostly due to ease of access from the consumer perspective and the flexibility offered around floor space configurations for occupiers. It is likely that existing out-of-town locations such as Middlebrook retail park in Bolton or the Lowry Outlet Centre in Salford Quays will continue to perform well, and older facilities will be renovated to secure trading positions. At a larger scale, the Trafford Centre has developed to become the second most significant retail centre in GM (after the city centre), with a retail and leisure offer that attracts visitors from within and far beyond GM.

11.15 Online retail continues to be a significant growth area nationally and for GM. This presents opportunities for digital businesses that will cluster in areas where there are existing sector strengths. The growth of online retail will also drive increasing need for major logistics sites, alongside many new smaller distribution hubs that are close to customers to enable retailers to meet demanding delivery timescales.

11.16 GM already benefits from strong existing retailer distribution sites, for example ASDA has a distribution site at Kingsway Business Park in Rochdale and the Heywood Distribution Park site, as well as strong road and rail links across the UK. GM is also home to National Distribution Centres, including the 100,000sqm Shop Direct national distribution centre in Shaw Oldham. *MDS Transmodal*[54] have highlighted opportunities for expansion of Regional and Urban Distribution Centres (RDCs and UDCs) as well as potentially National Distribution Centres in GM, which could help stimulate growth opportunities for the Retail, Wholesale Distribution.

[53] Wholesale Distribution Industries largely focus on the sale of goods. Logistics (for which there is a separate deep dive report) largely focuses on transport.
[54] MDS Transmodal, September 2014, Greater Manchester Logistics Study

12 Hospitality, Tourism and Sport

Context

12.1 The Hospitality, Tourism and Sport sector is broad, encompassing hotels, restaurants, bars, conference and exhibition centres, libraries, museums, entertainment activities, travel agency services, gambling and betting, sports, amusement and recreation. The sector serves both a visitor market, incorporating both international and domestic business and leisure visitors, as well as a local market of residents who enjoy the leisure activities and attractions that Greater Manchester (GM) has to offer.

12.2 Manchester is England's most visited destination by overseas visitors after London and it ranks third among UK cities for hotels, with an annual average occupancy rate of 80%. GM has the largest museum sector and the highest concentration of producing theatres outside London, and continues to build on its international reputation for sporting events and live music. GM has a strong conference and business events sector, which is currently worth £823m. Manchester Central, along with other conference venues, has boosted GM's appeal for both business and leisure tourism.

12.3 While the visitor economy is more concentrated in the regional centre, GM has a significant Hospitality sector which provides employment opportunities across the conurbation, and fulfils an important role in creating an attractive place to live and work. Additionally, the sector provides an important part of the supply chain in other sectors, such as retail and transport, which benefit from rising visitor spend.

12.4 Over the past ten years GM has seen significant growth in the Hospitality, Tourism and Sport sector, so that it now provides 99,100 jobs, 8.2% of total employment. Food and beverage service activities, makes up 60% of employment in the sector (60,100 jobs) followed by employment within the sports activities, amusement and recreation activities (14,900 jobs) and the accommodation subsector (12,200 people).

12.5 The Hospitality, Tourism and Sport sector generates a core Gross Value Added (GVA) of £2.1bn. This is modest given the size of the employment base, though this is reflected in low wages in many parts of the industry. GVA per person employed is low relative to other sectors at £21,000, although it is marginally higher than the UK average for the sector.

The Growth Opportunity

12.6 A growing population, increasing employment and rising household incomes are expected to result in increased expenditure in the conurbation's leisure economy. Employment in Hospitality, Tourism and Sport is expected to increase markedly in the next twenty years.

12.7 The baseline forecast for GM suggests a net increase of 20,300 employees from 2015 to 2035. The central Accelerated Growth Scenario (AGS-2015) developed for GM suggests the number of net new jobs could be as high as 25,600, and forecasts GVA growth of 2.6%pa which could contribute to additional GVA of £1.7bn in GM's economy by 2035.

12.8 GM's growing hotel and serviced accommodation base is particularly dependent on the visitor economy, and typically benefits from business visitors from Monday to Thursday, and leisure visitors during both the week and weekend, including significant demand from visitors to football matches. Rising numbers of international visitors, in particular from China and Asia, will continue to present further opportunities for growth and rising demand for new accommodation.

12.9 Shifting consumer behaviours, such as older people spending more time travelling, and individuals looking for new experiences, will open up further opportunities for many cities, including those away from more traditional tourist hot-spots. New media platforms, travel comparator sites and promotional opportunities through social media will also allow companies in the conurbation to more effectively market their services and attractions nationally and internationally to a range of new visitors at much lower cost.

12.10 The business and conference market, which is already an important component of the tourism sector in the conurbation, is forecast to grow considerably. However, this market will become more competitive in the UK as new purpose built conference centres come on to the market, many of these supported by the public sector.

12.11 Improved connectivity by road, rail and air will continue to make it easier for visitors to undertake day trips and short stay breaks, while new long haul connections to Africa, Asia and China will increase business and leisure visitors from many countries.

12.12 The developments at Manchester Airport are a key opportunity for the sector in terms of the Airport being a northern gateway to the conurbation for international visitors.

Key Challenges

12.13 With rising global competition for both business and leisure visitors, the key challenges for GM are: to continue to strengthen the overall visitor offer including continuing to develop the depth and variety of the cultural offer; to persuade people to visit locations across the conurbation; to spend more; and to stay longer by changing a typical one-to-two day stay to a three-to-four day stay, or longer.

12.14 The conurbation has already benefited from significant investment in its leading cultural assets over a number of years and Factory Manchester adds another major venue of national and international significance. However, there is a major challenge over the next 20 years to continue to secure new investment in the light of increasing competition from other cities, and a tendency for major cultural investment to be focused on London.

12.15 Major events, promotional and subvention budgets have been used to attract visitors, business and leisure to the conurbation. Many cities, often capital cities, receive substantial Government support to attract international conferences. It will be a challenge for GM to compete effectively and provide the level of promotion and subvention support to match the budgets available to many capital cities.

12.16 While GM is well known for sport and live music, there is a further challenge in broadening visitors' perceptions in areas such as heritage and outdoor activities – where attractions are

less well known. New developments, such as the RHS Fifth Garden, will help open up new opportunities to raise GM's profile.

12.17 A final challenge is attracting people to work and remain in the industry. The sector suffers from high levels of staff turnover, and an ageing workforce poses risks to people leaving due to retirement. Increasingly, employers are recruiting internationally for experienced staff and this may not be sustainable in the long term. Potential labour shortages could also be exacerbated by rising demand for ICT skills across the industry, putting pressure on HR budgets that are already stretched through the large amount of money already spent by the sector on the induction and training of new staff.

Spatial Considerations

12.18 The high concentration of businesses and employment in Manchester city centre, Salford Quays and Media City, and Trafford correlates with the significance of visitor activity and attractions present in these districts and this trend is expected to continue, in particular within the accommodation subsector. This is already evidenced by a number of new confirmed hotel openings from 2015/16 onwards, new cultural attractions, and GM's restaurant offer continuing to go from strength to strength. However, rising disposable incomes, and forecast levels of growth in GM's economy, means there will continue to be significant additional Hospitality, Tourism and Sport employment opportunities across the conurbation. Here, GM's town centres are key employment sites. They remain a priority for districts and have an important role in place-making, providing vital functions for local communities in terms of employment and retail and also more broadly as a focus for social activity/leisure and for services. Collectively marketing the unique features of each town centre will attract both visitors and local residents to them.

13 Construction

13.1 The global construction market is facing major transformation as businesses continue to respond to the challenges of the economic crisis since 2008, begin to shift to green and sustainable construction, and seek to take advantage of the opportunities provided by the digital economy. The competitiveness and readiness of the UK construction sector will be crucial if the UK is to take advantage of these opportunities.

13.2 As well as being a significant employer in Greater Manchester (GM) in its own right, the Construction sector also supports and facilitates growth across other sectors within the economy. While public sector infrastructure investment has been a major foundation of growth in the sector, private investment is expected to lead growth in future, in particular opportunities linked to major new housing development; and new transport infrastructure.

13.3 Construction employs around 54,000 people in GM and generates Gross Value Added (GVA) of £3bn. GM has strengths in a number of areas, including: electrical and construction installation (16,200 employees); construction of residential and non-residential buildings (12,500 employees) and civil engineering (8,900). There are 9,200 companies in the conurbation, many of which are micro-size firms, and the industry also makes considerable use of self-employed sub-contractors to increase capacity.

13.4 The Construction sector delivers a much larger impact than its employment figures alone would suggest. The Montague Report in 2012 reported that for every £1m of housing output 12 jobs are supported, seven directly and five indirectly. While for every £1 invested in construction, £2.60 is generated elsewhere in the supply chain.

13.5 Construction firms are located across the conurbation, with particular concentrations in the regional centre, Trafford Park, Bolton and Wigan. Employment is similarly spread within firms registered around the conurbation, although on a day-to-day basis, a large proportion of actual employment activity is on-site.

Growth Opportunities

13.6 If GM is to deliver its growth ambitions, high levels of construction will be required to deliver the housing and employment identified. Moving from building between 3,000 to 5,000 new homes per annum as has been the case in recent history to over 10,000 will require a significant scaling up of activity in the construction sector.

13.7 Major infrastructure development, including new, road and rail projects; and major new developments (such as Port Salford/Western Gateway and Airport City) will provide new opportunities for the construction industry and its supply chain. The scale of this activity will increase considerably as HS2, HS3 and other Northern Powerhouse proposals are taken forward.

13.8 The wider benefits of construction are likely to increase as the use of innovative approaches to construction (e.g. digital modelling of building and material survey), new materials (e.g. concrete textile sheeting) and off-site construction (e.g. pre- and modular builds) and

increase opportunities for GM companies to become involved in manufacturing materials and products for the industry. These opportunities link to the development of GM's Low Carbon and Environmental Goods and Services sector.

13.9 Overall, Construction employment will increase considerably as the conurbation's economy grows. The baseline forecast for GM suggests an additional 19,000 jobs in the construction sector by 2035, adding an additional £1.7bn to the economy. The core Accelerated Growth Scenario for GM suggests a higher net increase of 22,400 jobs between 2015 and 2035 growing at a stronger average growth rate of 1.2%pa, and adding £2.0bn to GM's economy by 2035.

13.10 The Baseline Forecast and Accelerated Growth Scenario both highlight that companies in GM will have to compete for labour when there will be a high level of demand nationally for the same type of skills, potentially leading to further skills shortages in a sector that is already struggling to attract and retain skilled workers.

Key Challenges

13.11 The office and industrial premises market has been slow to recover from the recession and a lack of pre-lets in GM – required by many financial institutions to release funds for construction – has made it difficult to secure new development in many parts of the conurbation, as has the ability of many companies to afford rental levels of new property which justify commercial investment by developers. Another risk, with a direct impact on construction, is the ability of any conurbation to provide the scale and quality of residential and employment land needed to maintain a consistently high level of development over a sustained period.

13.12 The recent report, *North West High Speed Rail Skills Strategy & Implementation Plan* suggests a marked increase in demand for engineering and construction skills will add to demand from other parts of the construction industry leading to potential labour shortages. The report suggests LEPs across the Northern Powerhouse should work collaboratively to address the skills challenges faced by the industry.

13.13 The Royal Institute of Chartered Surveyors' Q4 2015 Construction Industry Survey highlights severe skills shortages in specific occupations, with particular problems finding experienced bricklayers and quantity surveyors. The UKCES National Employers Skills Survey also suggests that the sector is held back from reaching its full potential by staff not being fully proficient in their current roles. These problems are compounded by the fact that many firms are micro-size (employing less than ten people) and sole traders. Sector research by New Economy suggests many firms regard themselves as "too small to be able to afford to train staff internally", and four-fifths of companies in the sector in GM have no formal training budget at all.[55]

13.14 The Apprenticeship Levy, which the government will introduce from April 2017, with the aim of encouraging more employers to support apprenticeships, will not impact firms with payroll

[55] New Economy, 2013, The Construction Sector in Greater Manchester: Overview of Skills Issues. http://neweconomymanchester.com/downloads/2657-Construction-pdf

costs of under £3m a year (or £250,000 a month) - implying many construction firms are likely to be exempt (recent estimates suggest about 700 construction firms nationally will pay the levy) . This differs from the current situation whereby the threshold for firms to pay the levy of the Construction Industry Training Board was £80,000. However, irrespective of whether they pay the levy, construction firms of all sizes are likely to be affected by the government's wider apprenticeship reforms. An ageing workforce also means that industry will increasingly have to look for new sources of labour. The Greater Manchester Chamber of Commerce estimates that by 2020 around 19% of the workforce will be of retirement age.[56] At the same time both the rail industry and manufacturing are facing a similar challenge in terms of an ageing workforce and retirement. Many former skilled workers appear to have left the industry during the last down-turn and specialist skilled trades are in short supply. Employment & Skills Agreements in the construction industry could become standard to support skills development in the sector, in relation to Council developer activity, procurement of construction services, and also private sector commercial developments.

Spatial Considerations

13.15 The Construction sector is a key facilitator supporting growth of other sectors and the wider economy. In addition to housing provision across the conurbation, spatially, growth will be linked to development of key projects and sites including major schemes such as: the Northern Hub, HS2/HS3, Airport City, the Western Gateway, Salford Quays and City Centre Salford among others. The significant growth in housing and employment expected in the regional centre means that it will be a key location for construction activity. The location of these sites will not necessarily be linked to the location of employees and businesses given the nature of the sector.

13.16 As the construction industry is spread across the conurbation in terms of businesses and jobs, it is likely that any future growth in existing firms will impact across most of GM, and in particular where there are existing strengths, including in Wigan, Salford, parts of Tameside and Trafford, and Bolton. Ensuring that GM businesses have the skills and expertise to be able to maximise the potential of the residential, commercial and infrastructure demand over the next two decades is critical. A key opportunity and challenge is to ensure that GM residents are at the forefront of benefitting from the jobs that construction activity will generate in the city region over the next 20 years.

[56] Greater Manchester Chamber of Commerce, March 2015: Greater Manchester Construction Sector Pipeline Analysis. http://gmchamber-stage.s3.amazonaws.com/attachments/930/original.pdf

14 Conclusions and next steps

14.1 New Economy's Deep Dive work provides the first comprehensive analysis of city-regional economic change since the Manchester Independent Economic Review (MIER)[57], published in 2009.

14.2 The final report of the Manchester Independent Economic Review (MIER) concluded that GM's size and potential make it the leading candidate amongst provincial city-regions in terms of its potential long-term growth rate'. It argued that productivity improvements, in the broadest sense, would be key to realising that potential, to improving living standards across the city-region and to ensuring that all areas and residents of GM would be able to contribute to and benefit from future economic change. The research that underpinned the MIER described a city-regional economy that was diverse and increasingly inter-connected and whose dynamism depended primarily upon a resurgent conurbation core which played host to many of the city-region's key assets and higher-value economic activities, particularly within service sectors.

14.3 The MIER reported at a time when the impacts of the global financial crisis of 2007-08 were unfolding but was based mainly upon an analysis of changes that had taken place during the long period of national economic growth stretching back to the early 1990s. Since that time, economic change in GM has taken place in a very different context, characterised by global economic turbulence and domestic public spending constraints. As is the case for the UK as a whole, employment levels have held up better than they did in response to previous major economic shocks but there has as yet been no sustained recovery in productivity and living standards. At the time of writing the long-term economic impact of the vote to leave the EU is uncertain. In the aftermath of the referendum there is considerable uncertainty regarding both the process leading up to withdrawal and the impact that withdrawal will have on the UK economy. It is however clear that Britain's decision to leave the European Union will have implications for the sectoral growth trajectory of GM. When Brexit comes there will be changes to terms of trade, which will have a direct impact on firms which trade and those in supply chains, with knock-on consequences across the economy. These new relationships will be crucial in determining the future productivity of the UK and GM economies.

14.4 The Deep Dive Phase 1 research demonstrates that city-regional growth has been re-established since the recession and re-affirms the core messages of the MIER, that:

- GM plays a critical role within the Northern Powerhouse and is key to ambitions to promote national economic rebalancing
- The core of the conurbation continues to drive city-regional change, in terms of population as well as employment growth. This is driven by powerful market forces and appears generally positive for economic outcomes across the city region

[57] Manchester Independent Economic Review available at http://manchester-review.co.uk/

- Neighbourhoods exist across GM that have not equally felt the benefits of economic growth and the deprivation that results acts as a drag on the economic potential of the whole city region
- While there is significant disparity in economic performance and outcomes across GM, the gap between the best performing parts of GM and the highest performing areas nationally is even greater. The challenge is then not just about re-balancing the economy within GM but about bridging the productivity gap between GM and the rest of the country, especially London and the South East
- Improvements to in-work productivity and the skills of the resident population remain the greatest economic challenge facing the city-region.

14.5 The Deep Dive research confirms that productivity in GM lags behind the national average. Based on the most recent ONS figures, GVA in GM would be £10bn per annum higher if productivity (GVA per resident) matched the UK average. Roughly a fifth of this productivity gap is accounted for by GM's lower-than-average employment rate. The rest is due to lower than average levels of in-work productivity (GVA per job) in all of the main non-manufacturing sectors of the economy. It is therefore clear that GM must tackle under-performance in all its forms: driving higher order growth will be as important as increasing labour market participation.

14.6 The Deep Dive studies also confirm that high value economic activity, especially in manufacturing, can be found across the city-region and that the majority of jobs in GM depend upon localised demand that will continue to grow as the population of the city-region expands. However, GM as a whole appears to have lower levels of exporting and engagement with international markets which acts as a brake on productivity.

14.7 Looking forward, an assessment of recent research undertaken on second tier cities across Europe[58] suggests that the most successful cities have the following characteristics and attributes:

- High levels of innovation, often built around anchor public and private research assets;
- Diverse economic structures with nationally/internationally significant strengths across a range of sectors
- High levels of skills and human capital formulation in their resident populations
- Good connectivity, with well-integrated city regional wide transport systems and good national and international transport links to other cities
- Excellent 'place-quality' that offers a high quality of life to residents and a good business environment
- Strong strategic governance capacity

[58] ESPON (2013). Second Tier Cities and Territorial Development in Europe: Performance, Policies and Prospects. Available here: https://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/SGPTD/SGPTD_Scientific_Report_-_Final_Version_27.09.12.pdf

14.8 These observations provide the context within which a balanced approach to future development needs to operate. Based on this understanding of GM's economy, the remainder of this section provides the key messages from the Phase 1 Deep Dive work for the development of GM's strategic approach. This section does not seek to be comprehensive, rather it aims to identify where a modified GM approach could help to realise GM's economic potential and ensure that more parts of GM are able to contribute to, and benefit from, growth. There are of course a wide range of activities on both the growth and reform agenda – some of which are spatial and some thematic – which will continue to need to be delivered to secure prosperity across GM.

14.9 Delivering on GM's aspiration for all parts of the city region to have a strong and positive role is a significant challenge. GM's response will require a long-term, multi-faceted and coordinated approach which brings together planning, growth, transport, investment and reform activity – there is no silver bullet. This is the case not only with regards to locations for business and employment expansion but also with regards to how local people throughout GM are equipped with the skills and support to enable them able to play the fullest part in the labour market.

14.10 Given the broad base of GM's economy, the diverse nature of GM's asset base, and the inherent uncertainty of forecasting economic change even in the short-term (let alone the 20 year time horizon spatial planning requires), GM's strategy should continue primarily to seek to provide a supportive and flexible platform for market driven growth regardless of sector. That said, enabling and supporting growth in its prime capabilities will be critical if GM is to play a full part in a thriving Northern Powerhouse. In particular, GM needs to ensure that appropriate plans are in place to respond to the issues and opportunities identified in the Deep Dive analysis for manufacturing, digital, health innovation (linked to health and social care devolution) and business, finance & professional services. Ensuring that issues relating to skills development and utilisation, and commercialising GM's university research base, are addressed will be critically important.

14.11 Of the nine sectors analysed, the Deep Dive work most clearly identifies opportunities for a more interventionist approach to support enhanced levels of growth in manufacturing. The sector is still a major strength for the city region – accounting for 10% of jobs and 14% of GVA – and is GM's most productive major sector. However, despite growth in both employment and GVA terms since 2010, it remains vulnerable to decline. GM's Manufacturing Strategy, published by the GM LEP in 2015, sets out a strategic response to many of the issues identified in the Deep Dives, most recently through the successful launch of the Manufacturing Leadership Network. However the Deep Dive work highlights additional opportunities/challenges, in particular:

- Many firms (including those that are highly productive) are in old, inefficient premises but lack the funds and/ or growth ambition to move
- There is an apparent shortage of manufacturing sites across GM (and an absence of modern speculatively built manufacturing premises) due to the high cost and risk associated with developing these sorts of sites/premises and low returns

- Gaps in management/leadership and technical skills, alongside an ageing workforce, ageing owners of family-owned firms, and difficulty recruiting new entrants due in part to the prevailing image of some 'traditional' industries
- GM's manufacturing sector is SME dominated and lacks major prime and TIER 1 exporters. As a result there are lower levels than would be expected of exporting and innovation in the sector

14.12 There is a need for GM to drive its science, research and innovation base building upon the increasing global competitiveness of its universities, particularly the University of Manchester, Manchester Science Partnerships, and University Teaching Hospitals which are generally, but not exclusively, located around the Corridor Manchester. In addition there will be a need to ensure this activity is effectively commercialised to the benefit of, and working with, businesses across GM.

14.13 A significant up-scaling of GM's approach to skills formulation is required. However, focusing only on adult skills is not sufficient: unless GM addresses underperformance upstream in its education and training system, as well as in the very earliest years of a child's life, the uplift in skills outcomes that our economy and residents require will not be realised. Moreover, poor skills levels are often part of a wider picture of dependency for an individual and it will therefore be necessary to ensure wider place-based services are coordinated and focused on early intervention and prevention to ensure residents are well equipped for work.

14.14 However, it is important not to oversimplify the issue of skills and the inference should not be drawn that increasing qualification levels will 'solve' low pay, low productivity or high economic inactivity levels. There is evidence that there are also profound issues on the demand side: poor use of skills, inadequate job design and lack of career progression opportunities. As well then as skills formulation, it will be important to focus on supporting firms to develop higher skill and higher productivity business models and residents to progress up the earnings ladder if issues around low productivity, low pay and in-work poverty are to be addressed.

14.15 To remain competitive, GM needs to ensure that it has a range of employment locations that allow indigenous firms to grow and are attractive to regional and national investment. The Deep Dive work suggests a twin track approach needs to be taken. First, there is a need to continue to support existing and new locations/sites that are attractive to the market to remain competitive and to ensure that residents are able to access jobs in these locations by providing adequate transport options and by giving them the skills and capabilities to meet employer needs. Second, in parts of the conurbation where market conditions are weaker, there is a need to take a long-term integrated and multifaceted approach combining planning, growth, transport, investment and reform activity to respond to underlying economic weaknesses, reposition parts of the conurbation in the marketplace and create new sustainable growth locations.

14.16 Forecasts suggest that GM's population could grow by 295,000 by 2035 under AGS SNPP – the equivalent of a whole additional borough. To accommodate this growth, GM will not

only need to identify development locations that are already well served by existing physical and social infrastructure but those where a sufficient scale and density of development could support new physical and social infrastructure provision. This is a significant challenge, but capturing this population growth has the potential to be game changing for some areas in terms of retaining and attracting skilled residents, stimulating new 'local' jobs which will serve the new population, increasing rates of business start-ups and making areas more attractive for regional investment in the longer-term.

14.17 There is therefore an opportunity to use the strong market demand for new housing sites, which exists across the conurbation, as a catalyst for a long-term, integrated approach to address the underlying weak economic foundations evidenced in parts of the conurbation. As part of this it will be important to undertake site by site analysis of what makes for a sound functional market in different parts of GM, including what attracts people to live in particular areas (e.g. schools, amenities, transport etc.) and how this links to the need for investment models to unlock sites in all parts of GM.

14.18 The main town centres stand out from the research as locations where this long-term integrated approach could create sustainable economic growth locations in the future given their existing concentrations of population and jobs combined with their high levels of transport connectivity. The eight principal town centres collectively account for around 10% of employment in GM. However, they are currently less important as housing locations – only 1.4% of GM's total population lives in one of the eight principal town centres – and in general their housing offer is underdeveloped.

14.19 It is clear that the regional centre will be an important location for high productivity service/knowledge jobs and population growth over the next two decades and beyond. It will be important to continue to facilitate growth in the regional centre and to ensure that all GM residents have the transport options to access the jobs created. Economic performance is currently strongest to the south west of the regional centre, however major developments around the wider Piccadilly area in preparation for HS2 are both critical to the achievement of Northern Powerhouse ambitions and will extend higher value economic activity to the north and east of the regional centre, improving access to the opportunities of economic growth to residents of North East GM. More broadly residential and employment pressures will mean that space hungry industrial/services uses currently in the city centre are likely to be displaced in future years and there is an opportunity to keep these businesses within the city region so employment is not lost.

14.20 Finally, in terms of its current neighbourhood profile, GM has a considerable number of areas characterised by high levels of deprivation and these tend to be in neighbourhoods where there are high concentrations of social housing and/or low value private rented sector accommodation. There is also evidence from social housing providers that large amounts of public service reform activity is concentrated on their tenants. To reduce concentrations of deprivation in these areas and give them a stronger economic role, consideration may need to be given to the tenure mix to increase levels of home ownership and promote the development of higher quality private rented sector accommodation.

Next steps

14.21 The first phase of the Deep Dive work has provided an analysis of economic issues and opportunities across GM to better understand how all parts of the conurbation can have a strong and positive economic function to support future growth and to maximise the ability of all residents to share in its benefits. The research will feed into the on-going development of GM's strategic approach and key pieces of work, including the GMSF and GM's response to the RSA Inclusive Growth Commission.

14.22 A second phase of the Deep Dive work is now underway to develop a more detailed assessment of the actions identified in this first phase of the research. This will be focused around key drivers of productivity (Skills, Enterprise, Innovation, Competition and Investment) and employment and how these play out within the conurbation. The aim of this work will be to provide additional analysis at the lowest spatial level possible to allow GM-wide policies to be developed to improve productivity, based on a deeper understanding of how these policies would help close the performance gaps between the GM economy and the UK economy, as well as understanding the impact of these policies on inclusive growth in all parts of the conurbation.

14.23 As part of Phase 2 of the Deep Dive work a detailed study on the manufacturing sector will also be commissioned to test and confirm the opportunities/barriers to growth identified in the Deep Dive phase 1 study and identify the support requirements of the sector. More detailed analysis will also be undertaken on the current and future role of the regional centre in city regional economic and demographic change. The analysis is expected to be complete by the end of 2016.