

Britain's Western Powerhouse

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BRISTOL
CARDIFF
NEWPORT



GREAT
WESTERN
CITIES

DINASOEDD
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INTRODUCTION AND EXECUTIVE SUMMARY

Devolution to the nations of the UK, to our major metropolitan areas and to regional powerhouses is the big economic and political idea of our times. The context for this is a world that is rapidly urbanising and in which it is cities and their wider metropolitan areas that are propelling growth. In the UK following on from devolution to Scotland, Wales and Northern Ireland we have seen the emergence of the Northern Powerhouse, and, more recently, the Midlands Engine as vehicles for economic collaboration. Partly in response to the RSA City Growth Commission's proposal for a Severn Powerhouse, the three cities of Cardiff, Newport and Bristol published an initial prospectus for the Great Western Cities (GWC) in Spring 2015.

Metro Dynamics was commissioned to develop the economic case for a Great Western Cities Powerhouse, and to make recommendations about how agglomeration benefits could be accelerated across the region in order to increase the rate of growth. The case for Great Western Cities has many of the same features as the Northern Powerhouse, but a very different starting point. The Great Western Cities are already net contributors to UK plc, so unlike the Northern Powerhouse they do not need to overturn a deficit, but their rate of growth could be much higher still, unlocking additional value both for the region and the UK economy as a whole.

This is a time of great opportunity for the Great Western Cities. The UK Government and Welsh Government have signalled their intent to conclude a landmark city deal with the Cardiff Capital Region (comprising Cardiff, Newport and eight other local authorities). And the West of England (Bristol City Region) is also advancing towards a devolution deal. On both sides of the Severn there are major developments in the pipeline that will further boost the growth potential of the region. The emergence of the Great Western Cities Powerhouse can ensure that the full potential of agglomeration benefits are maximised.

Things happening in the region in the next few years:

Toll charging changes



Tidal lagoons



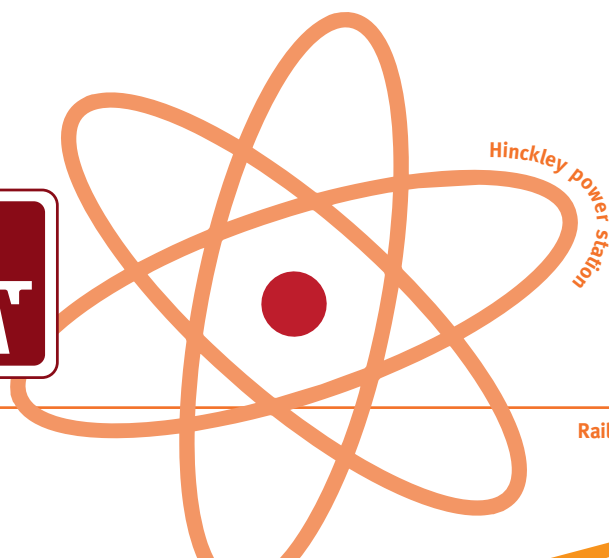
Housing Developments

The key elements of the report are as follows:

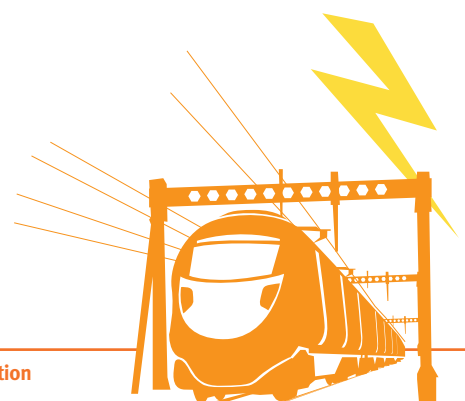
- **Economic geography of the GWC** – We outline what we consider to be the geographical extent of the Great Western Cities, based on the closest proxy we can get to the metropolitan areas of the three cities. In order to arrive at a unit which is workable in terms of robust data, we have had to use local authority areas. We set them out and the key data sources for them in the report.
- **A new model of global growth** – We analyse the main trends in urban growth, citing some of the most powerful factors that will be driving city growth in the next decades.
- **A typology of powerhouses** – The notion of ‘powerhouses’ has emerged in the UK in the last year or so, we set out a typology for the term, outlining the key characteristics. We also explore the relationship between devolution to metropolitan areas and voluntary agglomeration between these at a super city, regional and powerhouse level.
- **The economic potential of the GWC** – We outline the current functional market area across the GWC and analyse the potential for greater agglomeration in order to increase GVA across the region. Whilst the GWC area is already performing on UK trend we show how if output per capita could match London (based on 2014 figures) then this would lead to a GVA uplift of £31.7 billion per annum.
- **Improving connectivity to accelerate agglomeration** – We reveal that the connectivity case for GWC is even stronger than for the Northern Powerhouse. A key plank of the case for the Northern Powerhouse was based on the potential for development that was represented by the number of people commuting between Leeds and Manchester (1,248). The connectivity proposition was that if people already commute between these cities, imagine the economic dividend that could be achieved by increasing this. Our research shows that more people already commute between the Cardiff and Bristol metro areas (2,466), even though the distance is similar. Moreover, economic modelling undertaken by Peter Brett Associates has shown that a 20-minute reduction in journey times would result in a 60-year present value figure of welfare benefits of £1.38 billion.
- **Making the most of the renewable energy opportunity** – We set out the once in a generation opportunity that the Great Western Cities have to make their region a global centre for green energy and engineering. The unique conjunction of one of the world’s largest tidal energy resources, with developing green industry specialisms in the GWC, just as Paris 2015 set new targets on reducing CO₂ emissions, highlights the potential that the region has. But in order to make the best of the opportunity, the region needs a concerted strategy to balance energy generation with existing environmental and economic assets, to boost investment and to improve graduate retention in engineering, so that GVA per worker in this vital sector reflects real value.



M4 extension



Rail electrification



- **Building a GWC platform and coalition –**

The Great Western Cities took a bold initiative in publishing their initial prospectus in early 2015, but since then events have moved apace with the Northern Powerhouse and the Midlands Engine. We have seen a Northern Powerhouse trade delegation to China, and a reciprocal Chinese Premier visit to Manchester, and there has been significant new investment in infrastructure and marketing development for these Powerhouses. If the GWC is to live up to its potential, then it needs to cohere into a more powerful group, with a clear agenda. That means building on this report to establish a closer working relationship with businesses, universities and other stakeholders to strengthen the voice of the west in UK economic and public policy decisions.

In the report we make several recommendations for the GWC:

- Establish City Devolution Deals for Cardiff Capital Region and West of England (Bristol City Region), without these the powers will not exist at a city region level to build a GWC powerhouse.
- Develop a business case and lobbying campaign for ‘GWC Connect’ to build better connectivity between the GWC.
- Develop a marketing and investment strategy for the GWC, which helps make the case for similar levels of Government funding and trade mission support to that offered to the Northern Powerhouse and Midlands Engine.

- There is already significant innovation activity across the GWC – both within universities and amongst businesses in the area. Developing a fuller understanding of what already exists, alongside areas for potential collaboration and future development, will be important in supporting the desired step-change in economic performance. To that end, an innovation audit that identifies key areas of economic and research strength should be undertaken. This could then feed into the development of a region wide innovation strategy, linked to the Cardiff Capital Region Deal’s innovation work and the potential Science and Innovation audit.
- Establish a data observatory for the GWC, building on the location of the Office of National Statistics (ONS) in Newport and Bristol’s pioneering open data and digital work.

We hope that this report will be widely read and will prove a spur for further collaboration between the councils, businesses, universities and civil society organisations of the Great Western Cities. The potential is clear to see, now is the time to deliver.

WHAT ARE THE GREAT WESTERN CITIES?

Before exploring the potential of agglomeration it is first necessary to understand the geography of the Great Western Cities. A narrow focus on the local authority areas of Bristol, Cardiff and Newport would not reflect the economic realities of the wider impact these cities have on their hinterlands. It is arguably more realistic to consider the idea of the metro regions presented in the City Growth Commission's report, *Unleashing Metro Growth*. This identified a population of 1,485,907 people, resulting from the combined metro areas of Bristol and Cardiff².

Whilst such a definition of the geography for the Great Western Cities based on 'metro areas' is potentially the most appropriate, it encounters some statistical difficulties as data at this level is limited. To that end, the closest proxy for the metro definition is achieved by using the Bristol City Region (West of England) – the Bristol metro area – which comprises the local authorities of Bristol, Bath and North East Somerset, North Somerset, and South Gloucestershire. This area, currently referred to as West of England, reflects the current functioning economic area and corresponding LEP. The availability of data has also influenced the selection of the Cardiff metro. Statistically, Cardiff City and The Vale of Glamorgan, and Newport and Monmouthshire, are combined. Accordingly, the Cardiff metro area refers to those four local authority areas.

The economic influence and impact of the Great Western Cities do not fall neatly within the local authority areas. Indeed, it undoubtedly extends beyond them. However, due to the need to access data from both the ONS and other bodies, such as Eurostat, the local authority bounded areas were selected as the most effective representations of the metro areas. Throughout this report data is reported, where possible, on the Bristol and Cardiff metro areas. Nevertheless, in some areas data is only available at the level of Wales and South-West. Where necessary, such as in the discussion of graduate retention, this data is utilised.

What is clear is that the Great Western Cities, like other emerging powerhouses, will be confronted by issues around the current geography for which data collection occurs. New and innovative tools for ensuring that data is collected in ways that reflect the economic and social geography of powerhouses is something that should be considered as part of the Great Western Cities agenda.

²: Cardiff and Bristol, metro areas comprise the built-up areas of Cardiff and Newport in Wales, and Bristol, Bath, Filton, Frampton Cotterell, Winterborne, Keynsham and Saltford.

WHY THE GREAT WESTERN CITIES?

Although the Cardiff and Bristol metro areas independently make an economic net contribution to the UK, the Great Western Cities are well situated to build on their current economic performance. With significant skills in a range of areas, including the financial sector, engineering and the creative industries, there is the potential to maximise the benefits of 'constructed agglomeration'. Constructed agglomeration refers to a form of agglomeration that does not rely on a single core but it is based on collaboration between multiple cores aimed at achieving a larger scale and increasing the benefits typical of agglomeration economies.

Such benefits do not require the Great Western Cities to change their governance structures, rather it is about harnessing the potential economic benefits associated with agglomeration from a stronger economic position than many other areas of the United Kingdom.

However positive this position is, GWC has the ambition to do more by looking to drive agglomeration forces in ways that will benefit the metro areas themselves and those who live in them. Such forces would draw on the existing strengths of the GWC, including:

- a skilled workforce, including a higher number of working-age graduates than any other UK urban area;
- the presence of a number of universities in the area, including the Universities of Bath, Bristol, Cardiff, South Wales and the West of England (UWE), Bath Spa University, and Cardiff Metropolitan University. There is also collaboration between the universities, such as the formal GW4 Alliance of universities (Bath, Bristol, Cardiff and Exeter); and,
- the connectivity benefits that the electrification of the Great Western Railway, and the two metro transport systems, will bring.

Ensuring that the City Devolution Deals go through will help to put in place the necessary preconditions for the agglomeration which GWC embodies. Furthermore, the GWC Powerhouse would both complement and boost the City Devolution Deals.

A major difference between the GWC and the other powerhouses emerging in the UK is the cross-national dimension. Whilst such an approach might be unique in the UK, cross-national metro regions have long been in evidence in Europe, including Luxembourg (France, Belgium and Germany), Basel and Geneva (Switzerland, France and Germany), Lille (France and Germany), Saarbrücken (Germany and France) and Oresund (Sweden and Denmark). Indeed, according to Eurostat, in 2014, some 1.7 million residents in European Union 'Schengen' countries cross-border commuted on a daily basis. Whilst those cross-national metro regions may confront additional challenges compared to the Bristol and Cardiff metro areas, such as around taxation and pensions, they emphasise the growing trend towards agglomeration.

Cross-Border Collaboration: Oresund

The Oresund region, which spans parts of Denmark, including Copenhagen and Zealand, and Sweden, namely the region of Skåne, have long been linked. Although connected by a ferry service, increased connectivity was seen as central to enhancing economic performance and in 2000 a bridge between Copenhagen and Malmö was opened.

The potential of an expanded labour market, alongside opportunities to exploit economic complementarities were key to the project. Although the branding of the 'Oresund' area predated the bridge, it gave an added impetus to it both within Denmark and Sweden as well as internationally.

Denmark dominates the cross-border collaboration, with over two thirds of the 3.8 million inhabitants on the Danish side. Economically, activity in the Oresund Region covers 49% of the Danish economy compared to only 11% of the Swedish (2012 data).

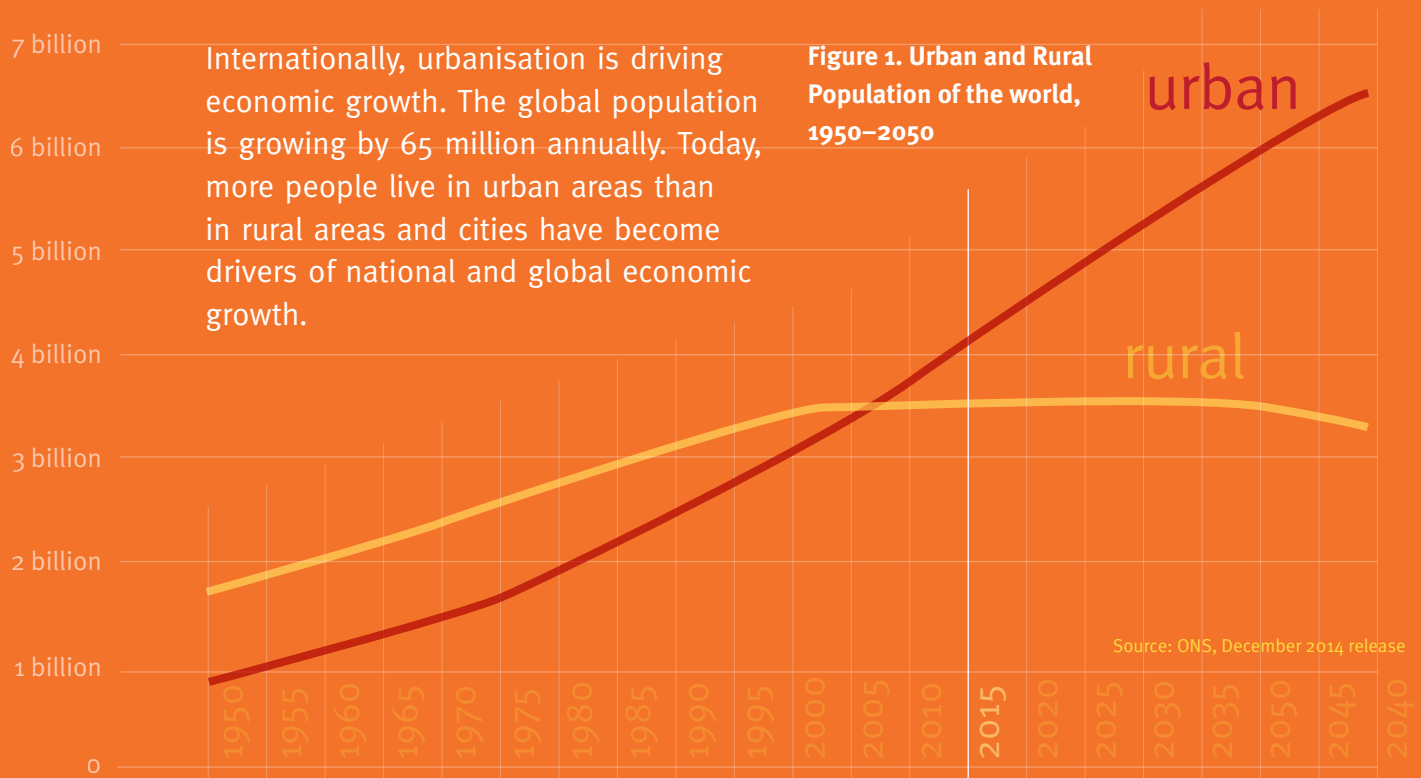
Regional strategies across the Oresund cross-border area share many economic growth sectors, including ICT and life sciences, and there are important economic and innovation assets, including a highly educated workforce, a significant amount of research and development spending, and a high

level of patent registration. There is the potential for even greater innovation, through the further exploration of cross-border synergies.

The financial and economic crises of 2008 led to some stagnation in further integration, particularly with regard to housing and the labour market. The equalisation of housing prices between the two areas, and a reduction in salary differentials, have been key factors in this. At the same time, wider challenges have emerged, driven by the need to address national differences, such as taxation and education systems.

Although the trans-national challenges of the Oresund collaboration are different from those of GWC, analysis for the OECD (2013) has identified a number of lessons that resonate. In particular, there is need for a sustained, strategic focus to ensure that the benefits associated with cross-border collaboration can be reaped. To that end, there is a need to curate and nurture the collaboration, putting in places measures to support it.

GLOBAL TRENDS



Internationally, urbanisation is driving economic growth. The global population is growing by 65 million annually. Today, more people live in urban areas than in rural areas and cities have become drivers of national and global economic growth.

The rapid urbanisation evident globally during the 20th century has highlighted the critical role cities play not only economically, but also socially. Cities are where the majority of people live and find employment, where innovation occurs, where businesses can flourish as a result of scale. They are drivers of economic growth, and their impact is felt far beyond their geography.

Work by McKinsey Global Institute has highlighted the role of 600 Cities³. By 2025, 25% of the world's population will live in 600 cities, contributing some 60% of global GDP, with most growth seen amongst cities with a population of up to five million. Although the clusters of cities envisaged by the research are on a much larger scale (with a radius of 200–500 kilometres) it highlights the way in which harnessing the benefits associated with even greater agglomeration will bring wider economic opportunities. At the same time, cities, and clusters of cities, will need to think innovatively as to how they present and market themselves on the global stage.

The growing focus on middle-weight cities has been accompanied by the increasing consolidation of metropolitan economies, defined on a geography that includes one or more cities and their neighbouring areas. In this regard, the Brookings Institution has highlighted the role of metropolitan economies in powering national

economic growth³. The world's largest 300 metropolitan areas were identified following the definition of metro area pertinent to the specific country in which they were located. It was found that in 2014 about a third of these 300 metros registered faster employment and/or GDP per capita growth than their respective national economies.

More specifically to the UK, the RSA City Growth Commission, which was set up to explore how cities could be empowered to unleash economic growth, also had its focus on metros. The commission recognised the importance of maximising the potential benefits arising from agglomeration and connectivity within and between metros in order to enable the UK economy to thrive. Universities, as a result of their contribution to the attraction and creation of a skilled workforce, as well as their ability to contribute to innovation, were also identified as 'anchor institutions' playing an increasingly important role in the economies of metropolitan areas. The GWC contains a number of universities, with a wide-range of specialisations. Harnessing their ability to create and support innovation will be crucial.

What is clear is that whilst cities may have driven growth in the 19th and 20th centuries, the 21st will be an era of groups or clusters of cities.

TOWARDS A NEW MODEL OF GROWTH

Arguments as to the advantages of agglomeration are not new. The benefits of the close proximity of a skilled labour force, the availability of specialised inputs and knowledge spill-overs have long been identified as to why agglomeration occurs.

Such benefits have enabled cities to become drivers of economic growth. Reflecting on the ways in which agglomeration works and the potential for it to take place across a wider spatial area is crucial to an understanding as to how the GWC agenda can transform already successful cities into ones whose contribution could be more significant.

The benefits of agglomeration can be identified, in short, as: **sharing, matching and learning.**

Sharing refers to the way in which firms benefit from being located in cities due to the increased access to a varied supply chain and a larger labour market. The second mechanism, enables better skills utilisation through more effective 'matching' between labour market supply and demand. Such matching contributes to greater productivity, from which both business and the exchequer benefit. The third mechanism, learning, has long been important but is becoming crucial to the knowledge-based economy. Innovation increasingly relies upon complex, non-codified information that is most effectively transmitted through face-to-face interactions. Agglomeration has facilitated such exchanges and enabled increased knowledge spill-overs, hastening the speed at which knowledge is acquired.

Whilst these benefits of agglomeration would be recognised by economists from the early 20th century, there is a new model of growth emerging that builds on this. Rather than individual cities benefiting from agglomeration, there has been a focus on inter-city collaboration where cities seek to strike a balance between competition and co-operation, whilst putting in place measures that will increase productivity and growth.

Agglomeration is not just, therefore, at the city level, but involves multiple cities.



THE EMERGENCE OF POWERHOUSES

The growing interest in agglomeration has occurred at a time when a local agenda has also been gathering pace. The Localism Act (2011) facilitates the devolution of powers and decision-making from the central government to the local level in England and in some areas in Wales. Agglomeration and devolution have coalesced, with 'devolution deals' including changes to governance structures, such as a commitment to combined authorities, being agreed with cities, including Greater Manchester.

In June 2014, a speech by the Chancellor of the Exchequer, George Osborne, marked the beginning of a radically new perspective on the UK's political geography with the announcement of the 'Northern Powerhouse'. What emerged from that speech was the idea of the 'powerhouse', an engine of growth constituted by a group of near-by cities. Since that speech there has been a continued emphasis on the potential of economic powerhouses, with further speeches and a trade mission from China.

CRITICAL TIMELINE FOR GREAT WESTERN CITIES

2014

- Summer – George Osborne makes Northern Powerhouse speech
- October– RSA City Growth Commission publishes its final report, recommending both city region devolution and bigger powerhouses.
- November– Greater Manchester signs Devolution Deal

2015

However, it is important to recognise that powerhouses are not in themselves units for devolution. Rather they refer to the areas where agglomeration economics has the potential to unleash economic growth, bringing greater prosperity and, in some areas, helping to rebalance the UK economy, by supporting cities outside of London/south-east England to improve their economic performance.

The scale of powerhouses in the UK is arguably much smaller than those identified in other areas, such as North America where the term 'mega-region' has proved more apt. Mega-regions like Bos-Wash, a corridor stretching from Boston through New York, down to Washington, Tor-Mon-Tawa (Toronto, Montreal and Ottawa) or So-Flo (Miami, Orlando and Tampa), are examples of what has already taken shape over past decades and on a larger scale. These mega-regions are the North American counterpart of what in the UK is the emerging smaller-scale phenomenon of economic powerhouses, of which GWC would constitute one, alongside the Northern Powerhouse and Midlands Engine.

In Europe, the phenomenon of the powerhouses manifests itself in different forms. There is the Flemish Diamond in Belgium comprising the four agglomerations of Brussels, Ghent, Antwerp and Leuven (population of over 5 million people); the Industrial Triangle in Italy, made up by the cities of Turin, Milan and Genoa, which long acted as an economic powerhouse, driving the Italian economy throughout the 20th century. Other areas include the Aarhus agglomeration in Denmark (0.8 million people); the Randstad in the Netherlands, consisting of the cities of Amsterdam, Rotterdam, The Hague and Utrecht (around 7 million people); and the Ruhr metropolitan region in Germany, consisting of several cities in the North Rhine-Westphalia (around 5.2 million people).

February – GWC launches its Powerhouse proposition

March – Severn Powerhouse/ GWC warmly supported by business and universities at Insider Magazine summit

July – George Osborne announces plan for major devolution to cities and Midlands Engine launched

September – Northern Powerhouse China Trade mission

October – Chinese Premier visits Northern Powerhouse and National Infrastructure Commission established

November – City Devolution Deals announced and Spending Review presented

March – Further Devolution Deals and Budget

TOWARDS A TYPOLOGY OF POWERHOUSES

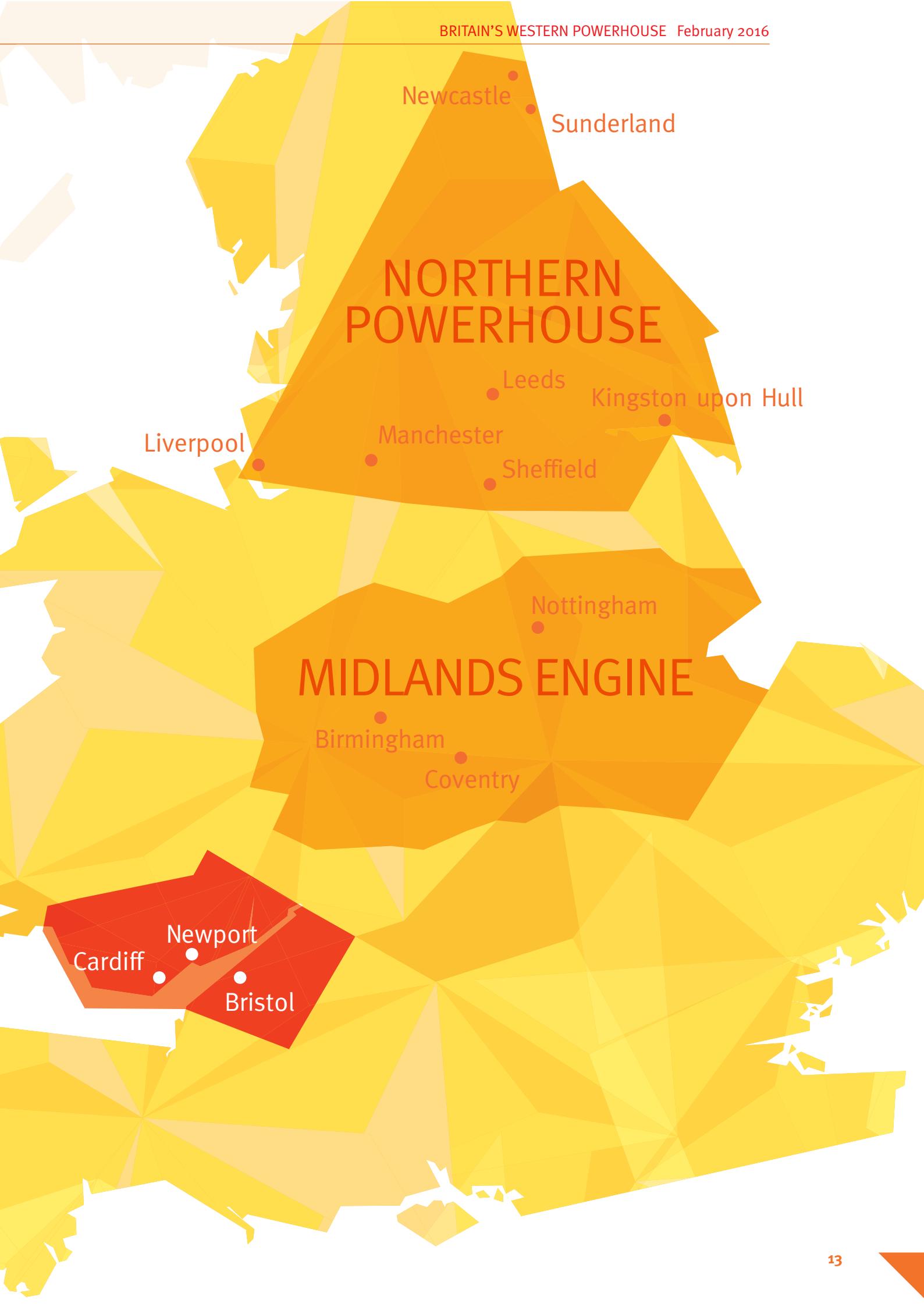
The emerging discourse around powerhouses in the UK emphasises the importance of developing an understanding and typology of them. This is particularly important given the European and British experiences of smaller-scale powerhouses/super city regions as compared to the larger, often North American, examples that have dominated much of the early literature. By analysing the agglomeration that has taken, and is taking place, it is possible to identify some common characteristics. These include:

- **Geographical proximity** – ‘super city regions’ result from the co-operation between cities and city-regions close to each other.
- **A population size of between 1m and 7m people** – with the Hanover (Germany) region (1.1 million) and GWC (1.8 million) at the lower end, and the Northern Powerhouse and Randstad (The Netherlands) (both around 7 million) at the upper end.
- **High levels of connectivity** – connectivity is a key element behind the creation of powerhouses and an important driver of the processes of agglomeration.
- **Collaboration** – a feature of powerhouses is the collaboration that emerges amongst key institutions. This may be governance institutions but can also be found in others, such as universities and other research centres.
- **History**, and the idea of a shared past, including shared cultural elements, is often used as a means to explain the proposed geography and the economic/administrative collaboration and to create a ‘renaissance’ narrative that looks back at past greatness as something to reach again and surpass.

As noted, powerhouses do not in themselves intrinsically act as units of devolution but it is evident in some that the focus on the potential of agglomeration economics has often been accompanied by the devolution of resources and responsibilities to the city level or combined authority level. In the case of the GWC, there is no intention for the powerhouse to be a unit of democratic governance or devolution. The focus will be on ensuring that Cardiff Capital Region and West of England (Bristol City Region) are successful in garnering City Devolution Deals, given their importance in driving forward wider agglomeration, and on building a cross-Severn collaboration between the two city-regions.



GREAT WESTERN CITIES



NORTHERN POWERHOUSE

Newcastle

Sunderland

Leeds

Kingston upon Hull

Liverpool

Manchester

Sheffield

Nottingham

MIDLANDS ENGINE

Birmingham

Coventry

Cardiff

Newport

Bristol

ECONOMIC SPECIALISATION AND GROWTH

To further understand the potential of the GWC, it is necessary to understand the current economy and its potential growth from greater agglomeration. It is already evident where skills and expertise exist, and where expanding the labour market has the potential to bring increased productivity and innovation. Although seeking to 'pick winners' is not an approach advocated, identifying areas of strength is important and will help the GWC to examine potential areas of greater collaboration and inform place-marketing activity.

Economic Growth Sectors and Industrial Specialisation

Each of the cities has identified economic growth sectors. Whilst it is unsurprising that there are overlaps within the Cardiff metro area, there are also synergies between it and Bristol metro area. This emphasises the potential of the expanded labour market to bring significant economic benefits, including improving knowledge flows and innovation, and enabling more effective matching of supply and demand.

Looking at growth sectors it is possible to identify where there is the opportunity to further develop synergies. These include creative industries, high tech industries and advanced manufacturing, as well as finance and professional services. It is important that the wider educational and training eco-systems in the GWC are aligned with the growth sectors if the full benefits are to be achieved by ensuring the availability of a skilled workforce.

At the same time, information on current specialisations in the GWC can point to sectors where agglomeration benefits might be quickly realised. Location Quotients (LQ) provide a local measure of the geographical concentration of industries. A location quotient of more than one shows a degree of specialisation within an area, whilst a location quotient of more than two suggests there is twice the number of employees in a sector than the average for Great Britain.

Table 1 (right) provides the LQs for the two metro areas.

However, what location quotients do not provide information on is the 'health' of a sector, whether it is growing or declining, whether it is innovative and, crucially in the context of the GWC, about the linkages that exist between sectors in different cities. As noted previously there are geographic limitations on the way in which data is collected. As part of the GWC agenda, considering ways in which a more dynamic collection of economic data, one that provides a more sophisticated real-time understanding of the economies and economic performance of the GWC, should be undertaken and the potential utility of a virtual data observatory examined.

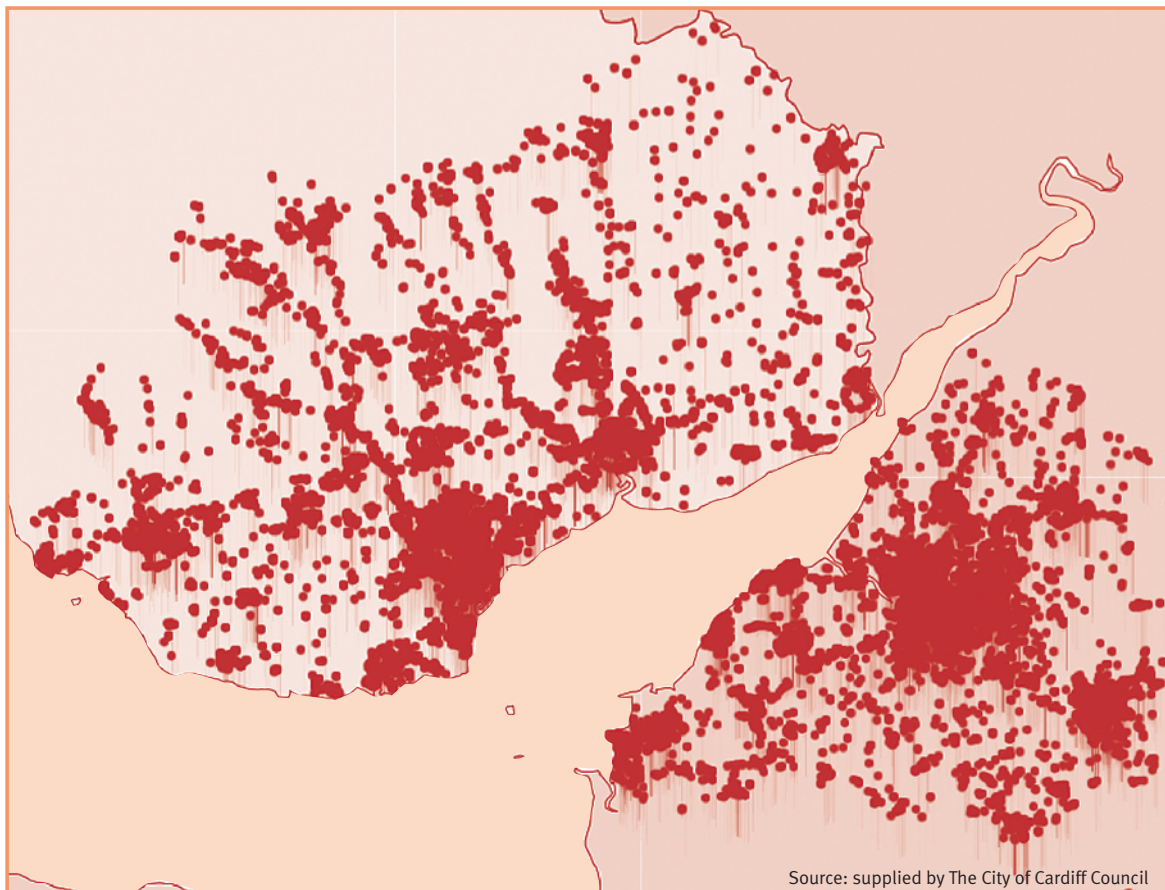
There are few sectors where specialisation is found across both metro areas, although some of those are likely to be as a result of the economic and social role of cities in the metros. For example, a figure of more than one in the 'public administration and defence; compulsory social security' sector. This could be explained by the presence of not only local authority offices, but the presence of the Welsh government as well as UK government offices, such as the Office of National Statistics and Intellectual Property Office (Cardiff metro area) and the Ministry of Defence procurement organisation (Bristol metro area).

However, there are a number of other sectors where there is a degree of specialisation that could reap agglomeration benefits. In particular, financial and insurance activities are above the national average in the metro areas. This can be further seen in the business density for the financial sector (*Figure 2*), which indicates that the greatest densities are to be found in the cities of Cardiff, Newport, Bristol and Bath.

Table 1. Location Quotients

	Bristol metro area	Cardiff metro area
Manufacturing	0.80	0.91
Electricity, gas, steam and air conditioning supply	0.49	2.86
Water supply; sewerage, waste management and remediation activities	1.39	1.07
Construction	0.99	0.87
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.95	0.95
Transportation and storage	0.93	0.79
Accommodation and food service activities	0.94	1.03
Information and communication	1.09	0.74
Financial and insurance activities	1.48	1.40
Real estate activities	1.13	1.04
Professional, scientific and technical activities	1.19	0.71
Administrative and support service activities	1.03	0.99
Public administration and defence; compulsory social security	1.14	1.57
Education	1.0	1.05
Human health and social work activities	1.08	1.18
Arts, entertainment and recreation	0.83	1.01
Other service activities	0.81	1.16

Source: own calculations based on BRES/ONS. Note: *Location Quotient* > 1 shows representation above national average.

Figure 2. Financial Sector Business Density

Analysis of LQs associated with the creative industries (Table 2) confirms a degree of specialisation in the Bristol metro area. There is some evidence of similar sectoral specific specialisation in the Cardiff metro area.

What, if any, links between the two metro areas exist in these areas is something that could be explored further. However, it does provide an area where agglomeration could bring potential benefits.

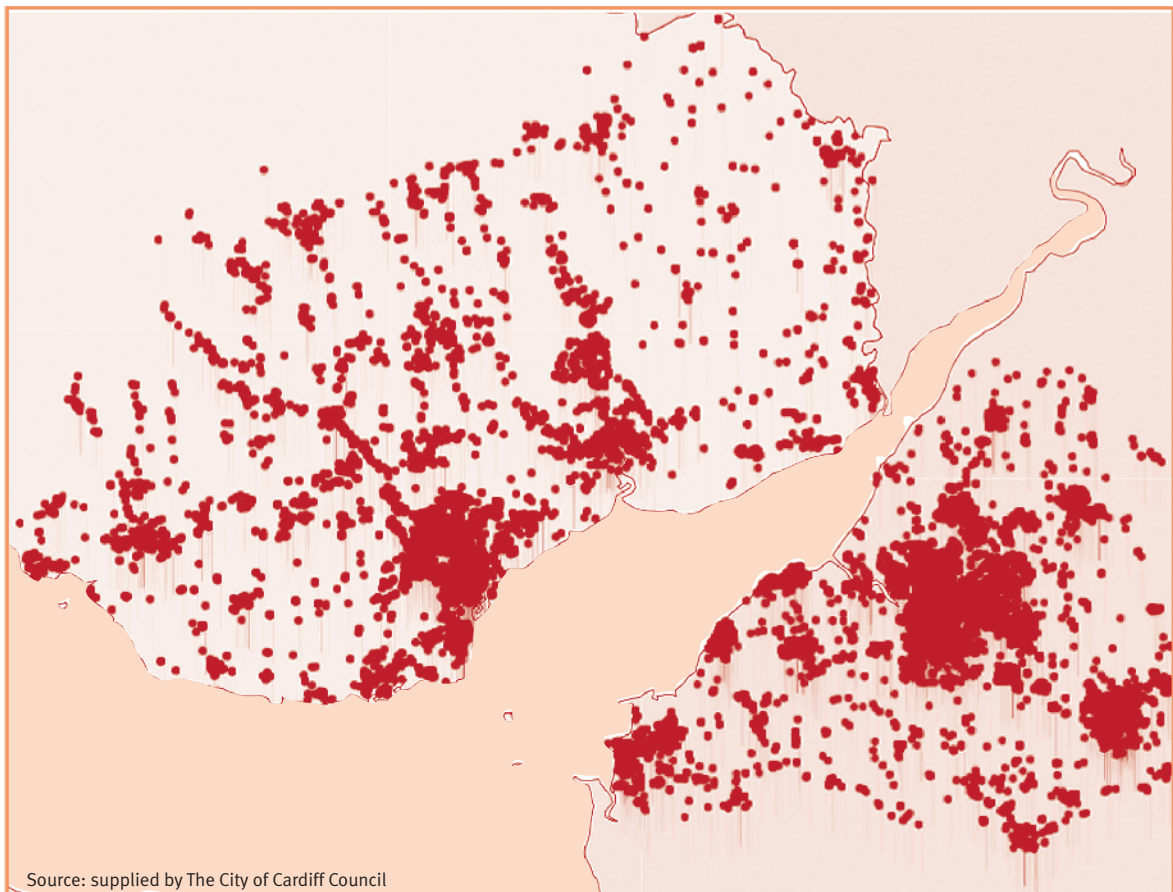
Table 2. Location Quotients – Creative Industries

	Bristol metro area	Cardiff metro area
Advertising and marketing	0.85	0.33
Architecture	1.58	1.49
Crafts	0.50	0.36
Design	1.08	0.54
Film, TV, video, radio and photography	1.05	1.24
IT, software, ad computer services	1.07	0.59
Publishing	1.16	0.41
Museums, galleries and libraries	0.53	1.47
Music, performing and visual arts	0.83	0.93
Total	1.03	0.76

Source: own calculations based on BRES/ONS using DCMS creative industries classifications.

The business density map for the creative industries (Figure 3) highlights the intensity in Cardiff, Newport and Bristol of these sectors. The creative industries are an area where greater collaboration and agglomeration could bring benefits by working with a wide-range of partners.

Figure 3. Business Density in the Creative Industries



Gross Value Added

Table 3 (*below*) details the GVA for both the Bristol and Cardiff metro area. In 2014 their combined GVA was £46.2 billion or £25,318 per capita. Arguably the key point is not to consider what the GVA is but to focus on what the potential for GVA uplift would be in the context of greater agglomeration across GWC.

Table 3. GVA (2014)

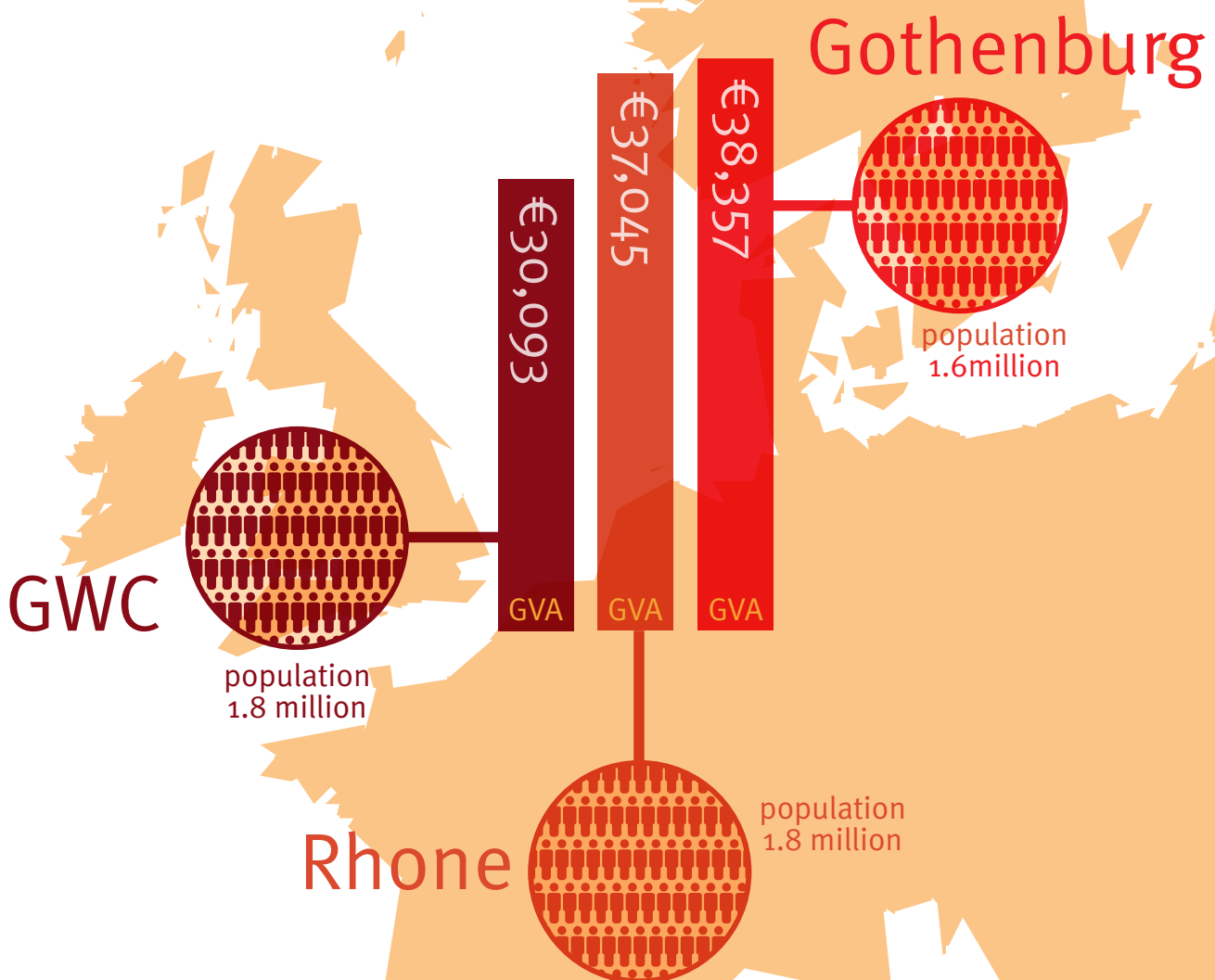
	Bristol metro area	Cardiff metro area
GVA	£30,826,000,000	£15,390,000,000
GVA per capita	£27,915	£21,342
GVA by sector (in millions)		
Agriculture, forestry and fishing	£91	£38
Production	£4,468	£2,113
<i>of which Manufacturing</i>	£3,620	£1,376
Construction	£1,785	£869
Distribution; transport; accommodation and food	£4,950	£2,405
Information and communication	£1,827	£575
Financial and insurance activities	£2,817	£1,346
Real estate activities	£3,306	£1,809
Business service activities	£4,122	£1,637
Public administration; education; health	£6,442	£3,974
Other services and household activities	£1,017	£621

Source: ONS, Regional Gross Value Added (Income Approach) NUTS3 Tables

Improvements in connectivity aimed at intensifying agglomeration forces in the GWC area could bring important benefits in terms of GVA uplift. The City Growth Commission's final report, *Unleashing Metro Growth*, taking Treasury growth projections between 2013 and 2030, calculated that if the Severn Powerhouse were to grow at the same rate as the projected UK average, the region would achieve an uplift of £782m. Indeed, if the GVA per head of the GWC (£25,318) was the same as London's (£42,666), the total uplift for the area would be £31.7 billion (based on 2014 figures).

The potential benefits could be even greater if similar European conurbations are considered. Following Eurostat classification of non-capital second-tier metro regions (2012), by comparing the GWC to similar ones in terms of population size, it becomes evident that the economic performance of the area could be even stronger if the potential of constructed agglomeration were to be fully realised.

Eurostat's most recent data on population and GVA at NUTS3 level indicate that in 2012 the GWC had a population of 1,786,624 people, and a GVA per capita of €30,093. Using the same dataset, the Gothenburg metro region in Sweden (1.6m people), for example, which has a significant banking and finance base and also an important engineering sector, had a GVA per capita of €38,357. The Rhone region in France, another second-tier metro region, had a population of 1.8m people and a GVA per capita of €37,045. These GVA per capita figures suggest that there is the potential for the GWC to improve its GVA per capita and that the uplift could be of a significant magnitude if the full benefits of agglomeration were to be achieved.



CONNECTIVITY

Connectivity lies at the heart of both the Northern Powerhouse and Midlands Engine, and has been identified as an area crucial to the success of the GWC. Indeed, connectivity is a crucial attribute associated with agglomeration, facilitating as it does a wide-range of economics benefits. In particular, these include:

- labour market supply and better labour market matching;
- labour productivity;
- knowledge spill-overs;
- business efficiency, such as through reliability savings; and
- competition, by access to suppliers and markets.

Before considering in greater depth the potential gains from increased connectivity, current commuting and travel to work flows should be examined.

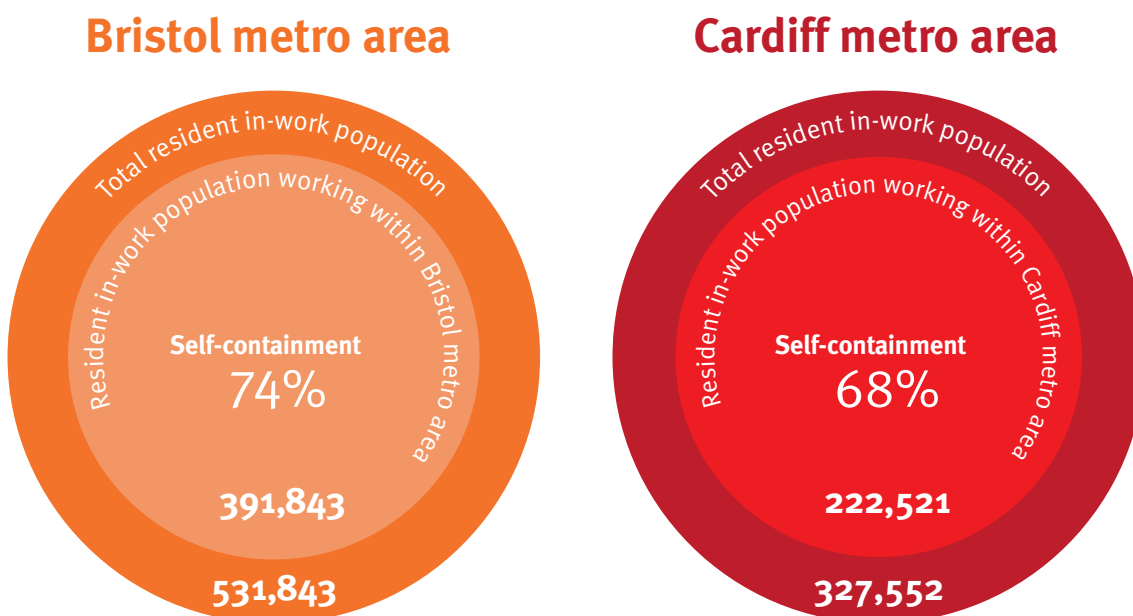
Travel to Work Flows and Self-Containment

The ONS defines a Travel to Work Area as an area where at least 75% of the resident working population also work (the self-containment percentage). In areas where the working population is more than 25,000, self-containment rates are acceptable at rates of 67% and above.

Focusing on the three cities reveals self-containment percentages of 53% (Newport), 58% (Bristol) and 63% (Cardiff).

However, when expanding this to the metro levels, the Bristol metro area self-containment figure increases to 74%, although for the Cardiff metro area, the self-containment figure is 68%. It should be remembered, however, that the wider Cardiff Capital Region, which includes ten local authorities, is a highly integrated economic area and when taken as a whole its self-containment level is 78%.

Table 4. Travel to work and self-containment level



Source: ONS, Census 2011 - All usual residents aged 16 and over in employment

Travel to work flows refers to the number of people (aged 16+) in employment the week before the 2011 Census moving between their local authority of residence and their workplace.

As the commuting (travel to work flows) data highlights, the links between Bristol and Cardiff, and Bristol and Newport, whilst higher than might be anticipated compared to other 'powerhouse' areas, are still limited, with significant potential for growth. For the three cities these flows were:

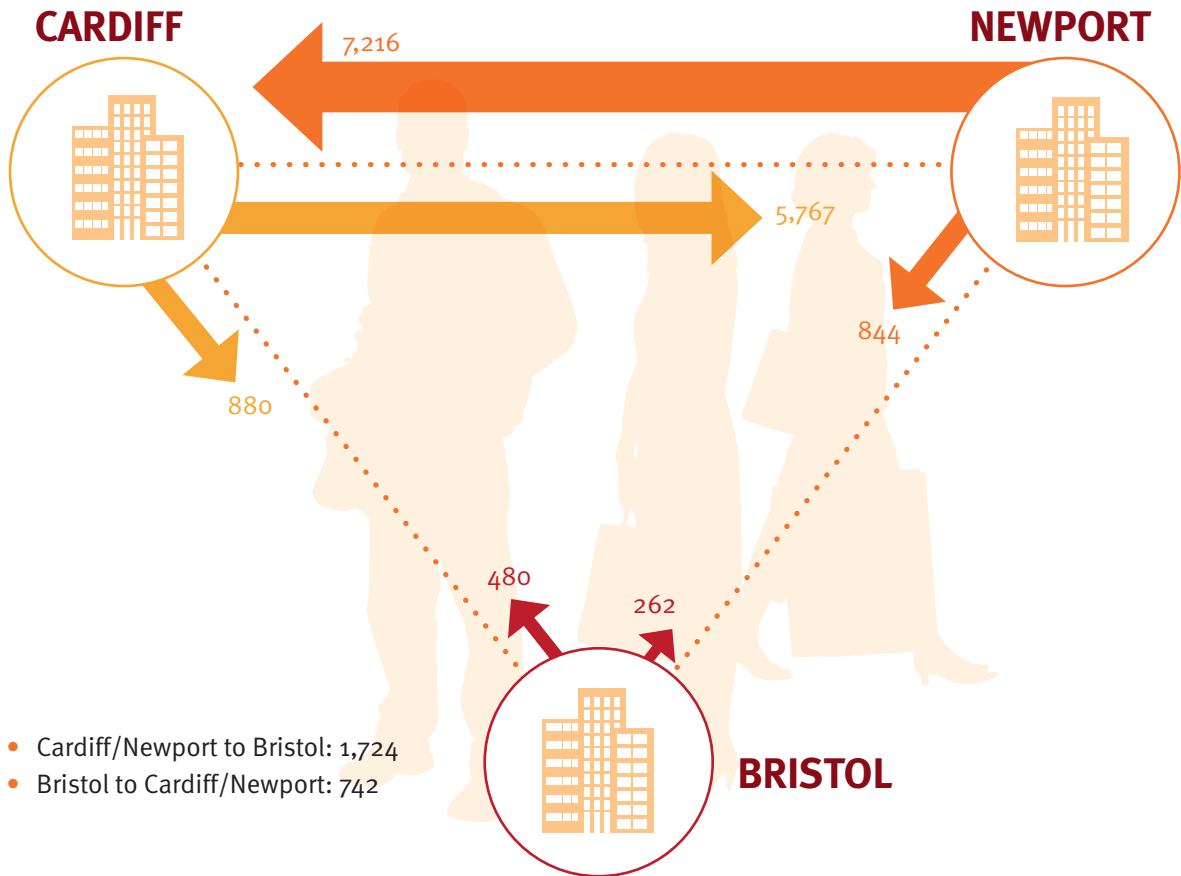
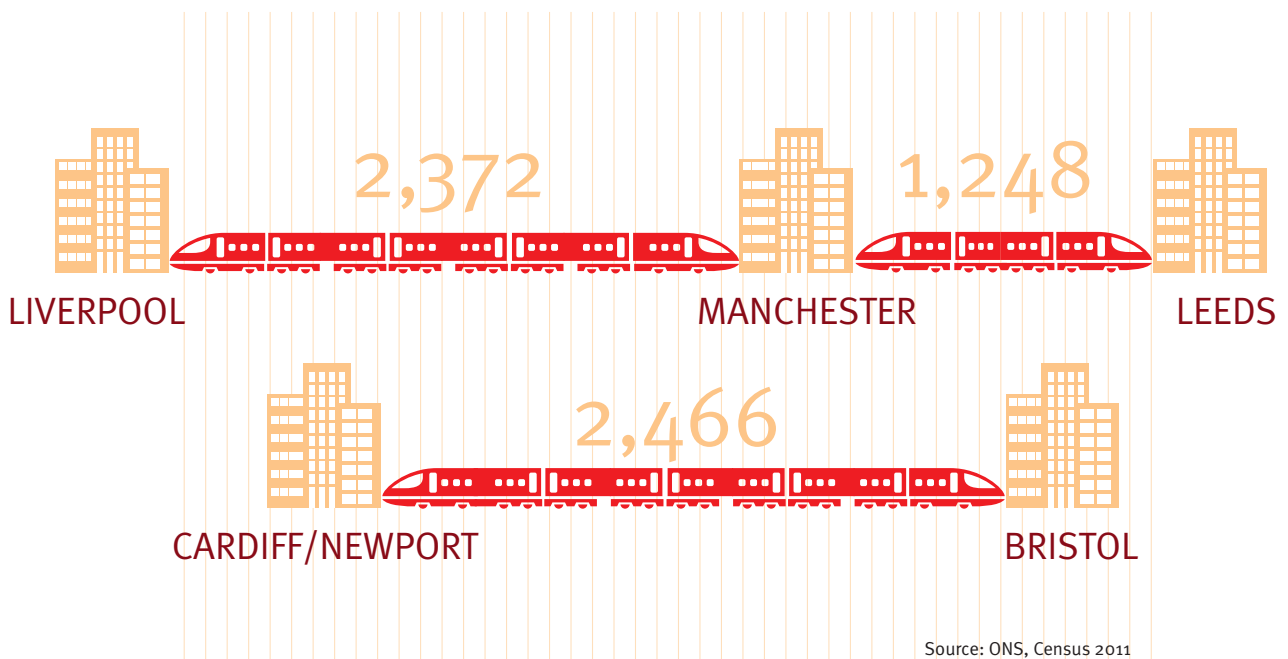


Table 5. Commuting volumes



Source: ONS, Census 2011

The commuting data suggests two key messages. The first, is that when compared to the Northern Powerhouse, where commuting is of slightly less travel time – c. 10 minutes between Manchester to Leeds and Manchester to Liverpool – there are already higher levels of commuting between Cardiff-Newport and Bristol (2,466). Manchester to Leeds has a commuting volume of 1,248 and Manchester to Liverpool has a commuting volume of 2,372.

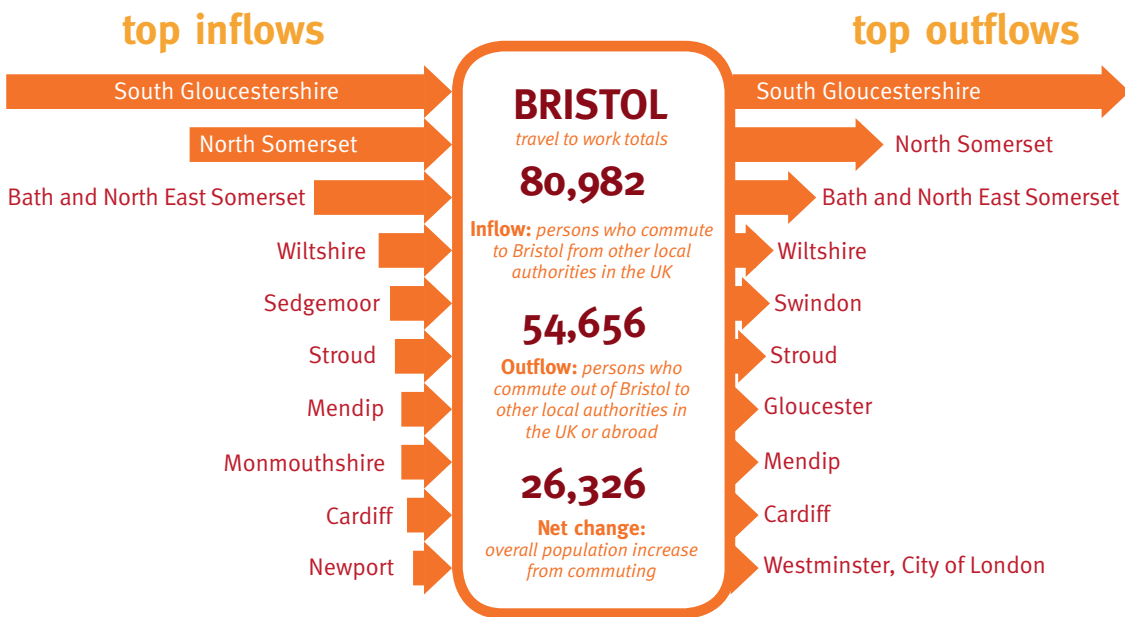
The second is that there is significant potential for the metro areas to create greater connectivity through integrated transport links, enabling the GWC area to benefit from an expanded labour market and the knowledge spill-overs

that usually accompany it. This should focus on creating strong public transport links, although the M4 extension will also contribute to greater connectivity.

However, it is also important to acknowledge that whilst transport will be crucial to that connectivity it may also be necessary to consider to what, if any extent, there is a need to ensure that people in the GWC look beyond their 'traditional' employment areas and that commuting across the entire GWC becomes common. Creating the infrastructure for connectivity is critical, but so too is the creation of mindsets that look for labour market opportunities across the entire GWC that greater connectivity will enable.

Figure 4. Travel to work flows – Bristol

Source: ONS, Census 2011



All categories: method of travel to work (2001 specification)

Figure 5. Travel to work flows – Cardiff

Source: ONS, Census 2011

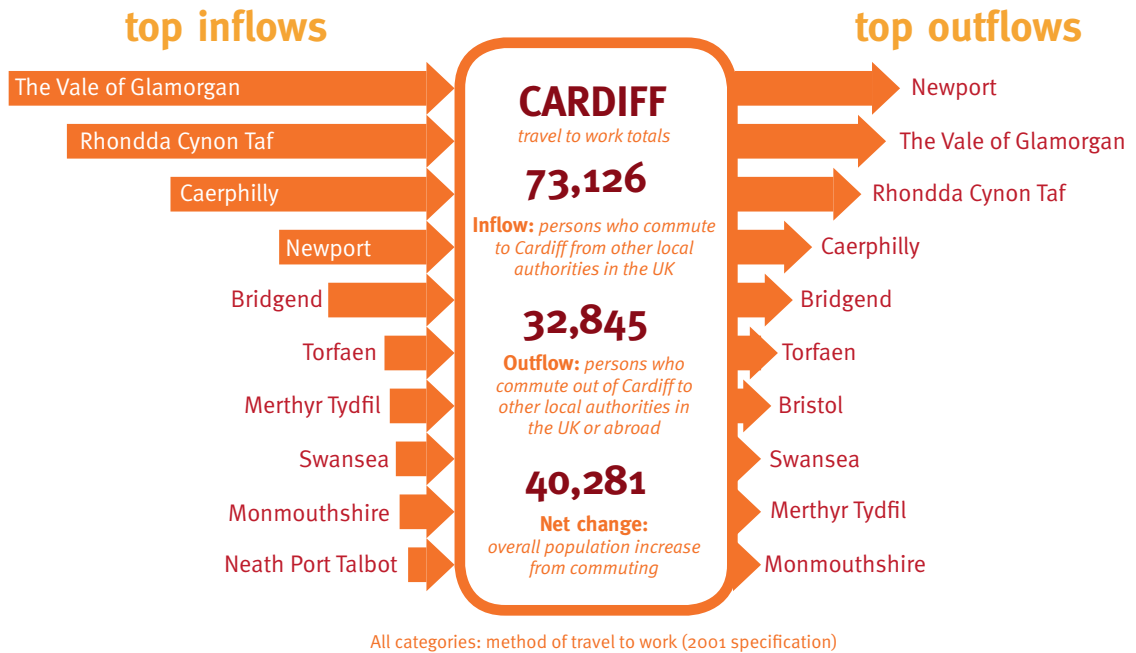
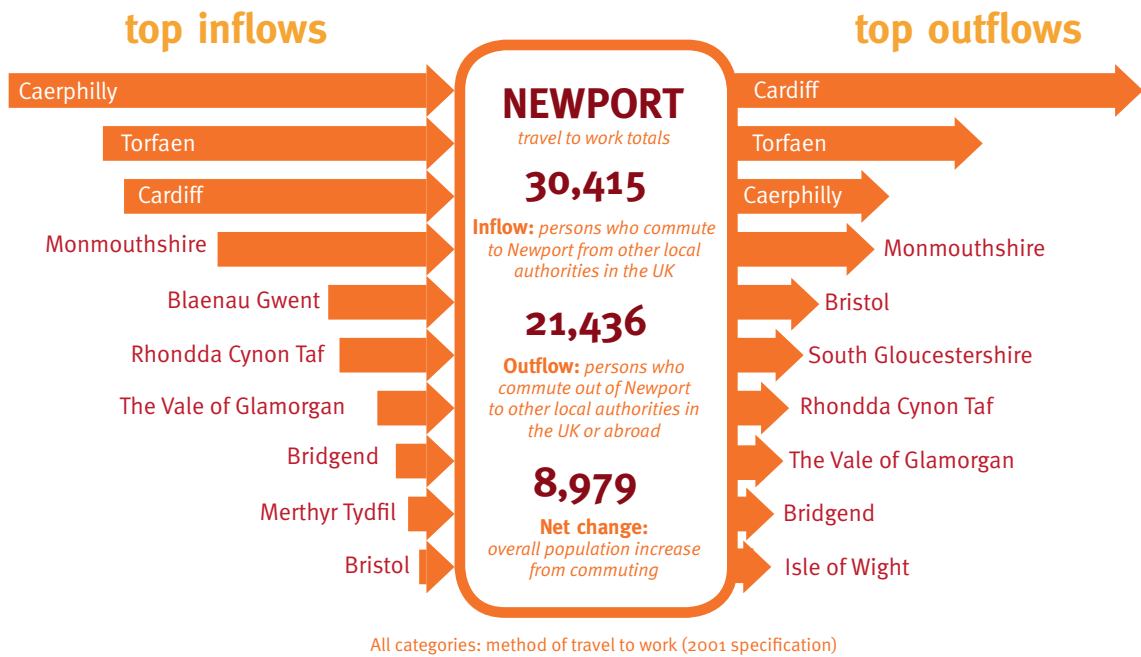


Figure 6. Travel to work flows – Newport

Source: ONS, Census 2011

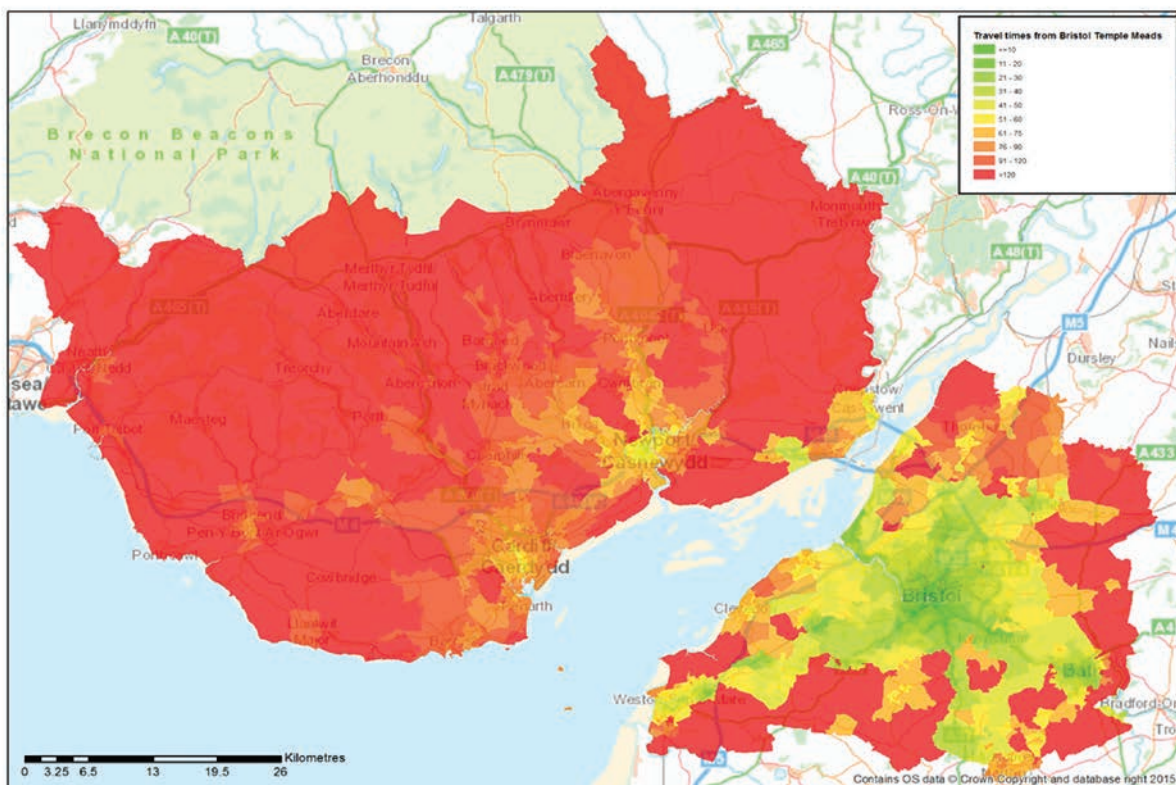


Improvements in connectivity, achieved through journey time reduction and increased service reliability, will have an impact on the economy by strengthening the positive externalities associated with agglomeration economies. This will effectively facilitate the concentration of economic activity and specialisation, strengthening the sectors already present, across GWC. Moreover, improved connectivity has the potential to contribute positively to broadening the distribution of housing demand across the region. Although this section is predominantly focused on public transport, the connectivity implications of the M4 expansion and the forthcoming changes in the tolling system on the Severn crossing should also be considered as part of the wider GWC connectivity agenda.

Although commuting flows between Bristol and Cardiff–Newport are higher than those found in other powerhouses, the data reveals the potential for a significant increase. Rail services between Cardiff and Bristol central stations is currently half-hourly, with journey times of approximately 50 minutes from Cardiff and some 30 minutes from Newport. Any reduction in journey time, or costs associated with commuting, would contribute to expanding the number of people willing to travel between the metros.

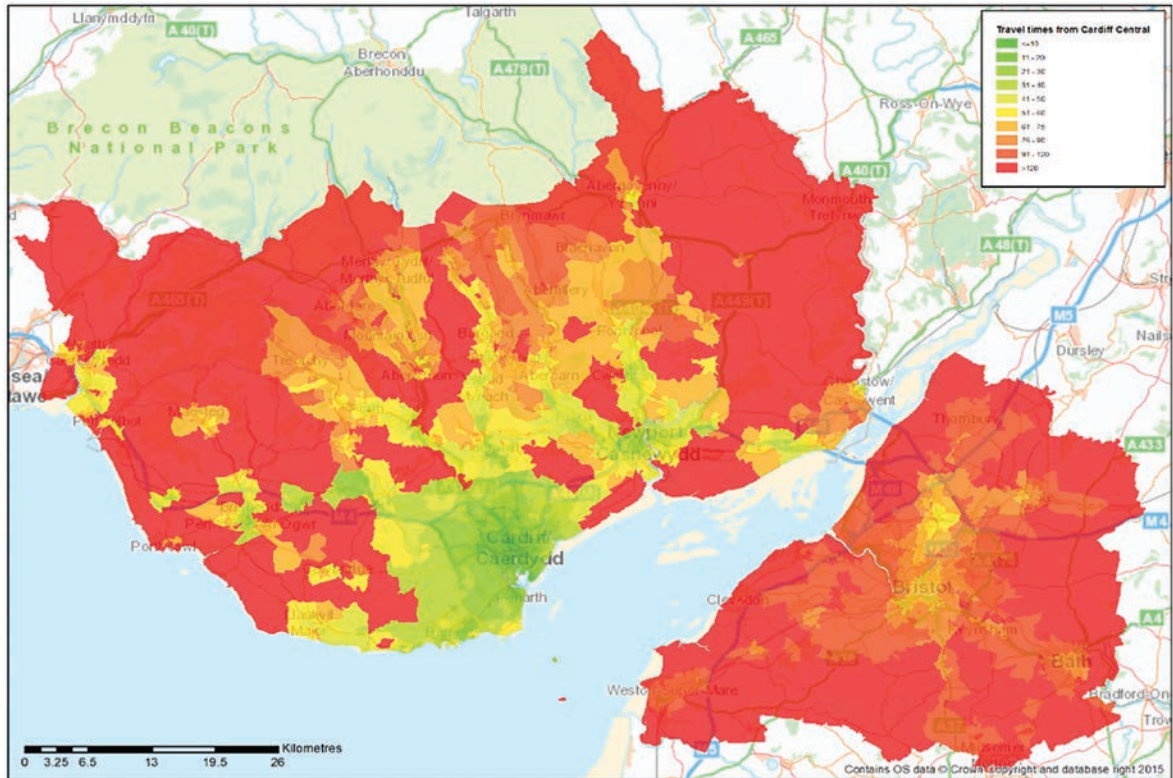
The three figures (Figures 7, 8 and 9) below illustrate the public transport journey times during the morning peak period resulting from the current level of public transport accessibility from the three cities. At present, accessibility is higher between Cardiff and Newport and between Bristol and the surrounding city region, while travel time accessibility between the two metro areas appears to be limited.

Figure 7. Travel Time from Bristol Temple Meads (public transport)



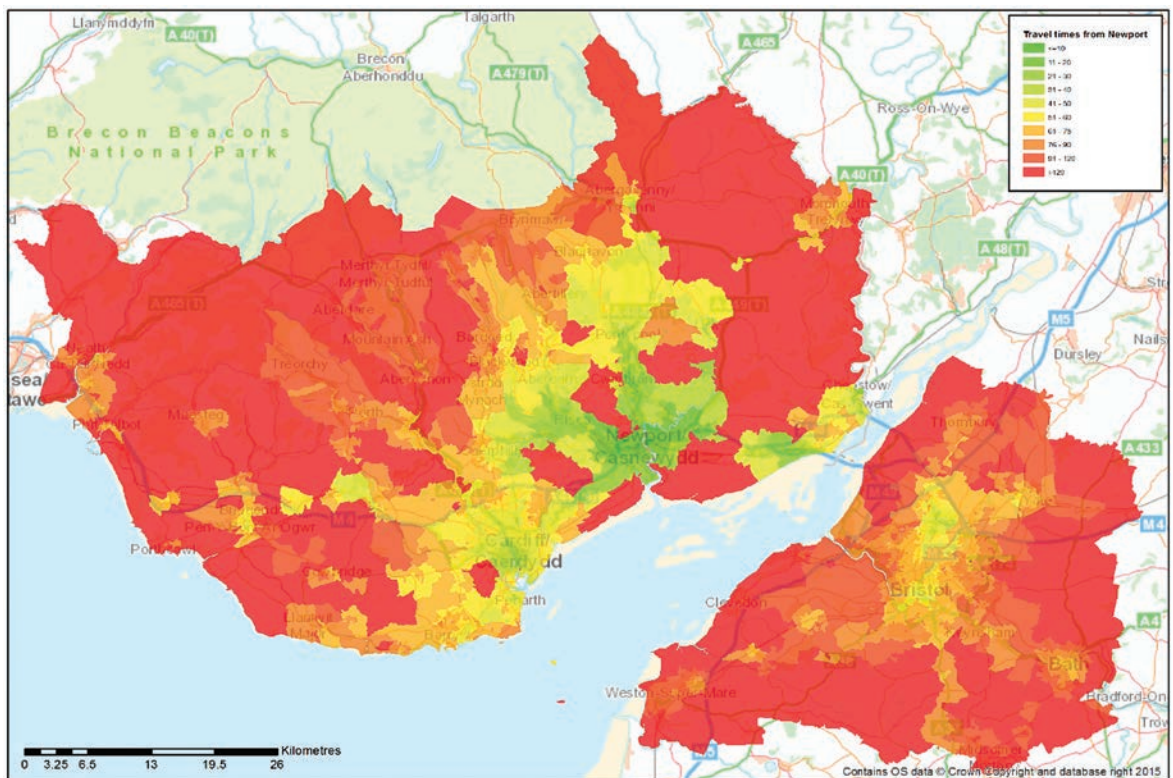
Source: Peter Brett Associates

Figure 8. Travel Time from Cardiff Central (public transport)



Source: Peter Brett Associates

Figure 9. Travel time from Newport (public transport)




Source: Peter Brett Associates

Electrification of the Great Western railway line is underway. This should enable some increase in passenger numbers, but it will be important that improved frequency and increased capacity via larger trains are also part of the improvements. It will also have the potential for a reduction in journey times between Cardiff Central and Bristol Temple Meads. A 10-minute journey time reduction between Cardiff and Bristol (pro-rata for passengers travelling to or from Newport) would amount to £9.3m for rail users in a single year. An additional £14.4m would accrue as wider impact benefits – generated primarily from the opportunities associated with agglomeration. Over a 60-year period, the total benefits for a 10-minute saving would amount to £631m (present value). A 20-minute journey time reduction would lead to annual benefits of £19.9m for rail users and £32.5m from wider impact benefits. The total 60-year present value figure for this 20-minute time reduction would be £1.38bn.

It should be noted that this appraisal does not take into account the likely labour market effects that could arise from improved connectivity. Undertaking the detailed economic analysis to examine the labour market effects has the potential to provide further evidence quantifying the economic impact of increased connectivity, thereby contributing to the development of a business case for 'GWC Connect'. Indeed, a GWC integrated transport network would boost the economy of the area and surrounding areas by unlocking the potential of an enlarged labour market and fostering knowledge flows across the wider region.

There are ambitious plans across both the West of England (Bristol City Region) and Cardiff Capital Region for transport infrastructure upgrades. The 'Cardiff Capital Region Metro' will create better, faster transport links (light rail, trams and improved trains and buses) across the Cardiff



A 20-minute journey time reduction would lead to annual benefits of £19.9m for rail users and £32.5m from wider impact benefits.

Capital Region. The MetroWest scheme is aimed at improving connectivity across the West of England, including by reopening rail lines and improving rail links and stations.

There is a powerful connectivity case to be made for the GWC, maximising the benefits of the City Regions' transport projects by linking them together. An integrated transport system that links the to-date separate 'Cardiff Capital Region Metro' and MetroWest projects should be considered. This should be developed in conjunction with Great Western Rail and be focused on reducing journey times, increasing capacity and frequency, and smart ticketing.

Securing business development funding analogous to the £5 million given for Midlands Connect will be crucial for a project of this scale. Such funding will enable the in-depth research and analysis needed to understand the impact of a GWC integrated transport system, and to make an effective business case for doing so. Given the centrality of connectivity for the GWC, engaging with the new National Infrastructure Commission will also be important.

Whilst there are evident benefits of enhanced connectivity across the GWC, it is important not just to focus on linkages between the two metros. Indeed, GWC connectivity should be considered both in a wider UK context, such as links to London and with other core cities in the Midlands and North, as well as internationally.

HS2, when completed, will significantly reduce journey times between Birmingham and Manchester and Leeds and there are strong economic benefits. An economic appraisal of HS2 suggested that the net benefits would be some £71 billion, with productivity gains equating to £53.8 billion. Given the impact of HS2, the GWC will need to ensure that they are not negatively effected by the increased connectivity between London and other agglomerations, such as the Midlands Engine and the Northern Powerhouse. To that end, it will be important for GWC to examine what measures could be put in place to improve journey times to the Midlands and further north, and connections with HS2 and specifically to consider the interventions needed to enable a future 'High Speed West' rail-link.

Nor should the international dimension be overlooked. As the GWC seek to further develop and promote economic growth sectors, ensuring that international companies and investors are able to travel to the GWC easily and quickly will be important.

Improvements in connectivity, achieved through journey time reduction and increased service reliability, will make an impact on the economy by strengthening the positive externalities associated with agglomeration economies. This will effectively facilitate the concentration of economic activity and specialisation, strengthening the sectors already present in the GWC including financial and business services, creative industries, ICT, aerospace and energy, and enabling the development of others.

RENEWABLE ENERGY

Renewable energy is one of the three key areas identified by the GWC as being central to their future growth. It offers the potential not only to pursue a greater focus on renewable energy within the GWC, but also to become an area of innovation, expertise and exporters to the world.

Fossil fuel generation still accounts for 99% of the region's current large scale energy output, and indeed major energy generators in the area produce nearly 30% of the South West's regional output and 25% of the energy generated across the whole of Wales. Table 6 (below) lists the main generating facilities in the area. However, renewable capacity has been gradually increasing since the first major installation in the 1990s – albeit mostly in small to medium scale facilities.

Table 6. Main generating facilities (>1MW) in GWC, (operational as at May 2015)

Operator	Project name	Fuel Type	MW
RWE Npower Plc	Aberthaw B	Coal	1,586
MPF Operations Limited	Severn Power	CCGT*	850
Centrica	Barry	CCGT	235
RWE Npower Plc	Aberthaw GT	Gas oil	51
Resonance	Solutia	Wind	5
British Energy	Hinkley Point B	Nuclear	955
Seabank Power Limited	Seabank 1	CCGT	812
Seabank Power Limited	Seabank 2	CCGT	410

*Combined Cycle Gas Turbine

Source: PBA from DECC Energy Production Data 2015

From the agreement of the 2015 United Nations Climate Change Conference in Paris, through to more local commitments to a transition towards a sustainable, low carbon economy – including in the Welsh Government's energy policy to Bristol's role as European Green Capital in 2015, there is a growing engagement with the need for renewable energy production and consumption.

Initiatives taking place across the region that further show the commitment of the GWC to an environmentally and more socially responsible future for the energy sector. An interesting example of this is the establishment of the Bristol Energy Company in 2015, a municipal energy company fully owned by Bristol City Council that will have an unrestricted market entry in early 2016. The energy company has set three ethical objectives: first, the reduction of social inequalities, including tackling fuel poverty and insecurity; second, a positive environmental

impact, including a focus on locally generated, low carbon energy, with longer-term plans to reinvest in green energy production; and, finally, an economically sustainable model, including generating a revenue stream for the local authority that is then reinvested into the city. Both Cardiff and Newport local authorities have expressed an interest in the work of the Bristol Energy Company and are keen to learn from it, including the potential expansion of the energy company across GWC.

The generation of energy from renewables is an area of growth in the GWC. At present the majority of renewable electricity installed capacity in the area is derived from photovoltaics, 67% in Bristol metro area and 50% in Cardiff metro area, and onshore wind technologies, with Cardiff metro area's installed capacity amounting to 26% and Bristol metro area's to 7% (Table 7).

Table 7. Share of renewable electricity installed capacity by type (2014)

Type	Bristol metro area	Cardiff metro area
Photovoltaics	67%	50%
Onshore Wind	7%	26%
Anaerobic Digestion	-	3%
Sewage Gas	6%	4%
Landfill Gas	6%	6%
Municipal Solid Waste	-	10%
Plant Biomass	5%	1%
Co-firing	9%	-

Source: own calculations based on DECC data

Note: calculations are based on DECC data recorded at local authority level; DECC warns that there are many sites where location information is not available local authority level

Although ultimately the GWC's renewable electricity installed capacity is only one per cent of the UK total, there is potential for the area to exploit the renewable energy sector and its growth, as the key engineering skills required for major renewable energy projects are already in the area and some of the world's leading marine energy technology developers are based there. In particular, marine energy is an area that offers significant growth potential, both in terms of production and with regard to innovation and exports.

The rich portfolio of energy resources – ranging from tidal and wave, to wind – will be crucial to the GWC, and to areas beyond. In particular, the Bristol Channel and Severn Estuary have been identified as an area of national strategic importance to meet the UK's low carbon energy future requirements and represents an ideal location for tidal energy generation. A number of tidal lagoons projects that would generate energy by exploiting tidal movement have already been proposed. Tidal lagoons will require significant civil engineering expertise, but there is also the potential for the GWC to look beyond this to seek to exploit other innovative marine energy technology, including tidal stream, which utilises the kinetic energy of the tide. This solution has large export opportunities and could push the GWC into the vanguard of marine technology development, with all of the positive consequences of this on manufacturing supply

chains. A good example of this is the work of the Marine Energy Accelerator Program, which has included the establishment of the Zhoushan-Bristol Partnership that has the potential to deliver significant future benefits for Bristol and UK in terms of two-way trade and investment. Zhoushan is a port city south of Shanghai, and a major hub for Chinese marine energy development. Bristol City Council used its networks and status as EU Green Capital 2015 to combine with industry-led initiatives (including a globally significant tidal energy business cluster) to complement and add value to UKTI's national objectives.

Local universities have expertise in 'New Energy Systems,' specifically marine renewables, and already offer accredited study programmes that contribute to the formation and consolidation of the skill base necessary to support the growth of the energy sector in general, and of renewables in particular. Moreover, GVA per worker in energy and related sectors exhibits already high values (Table 8). However, these figures could be even higher if some of the proposed energy projects were to be realised and the potential of the supply chain fully exploited. Building workforce capacity while increasing innovation by exploiting the existing research capacity and skills base to support the expansion of energy generation capacity could yield significant GVA improvements.

Table 8. GVA in energy and related sectors

	Bristol metro area	Cardiff metro area	UK
Utilities			
GVA (£million)	£451	£473	£31,546
GVA per worker	£103,339	£65,099	£95,416
Construction			
GVA (£million)	£1,294	£877	£96,175
GVA per worker	£28,224	£32,924	£45,597
Manufacturing			
GVA (£million)	£2,717	£1,273	£147,949
GVA per worker	£62,451	£47,809	£56,330

Source: PBA, Experian Data 2015

Note: It should be recognised that data in this table is for the metro areas and that analysis of data at the individual city level would produce significantly different figures. What this highlights is the need for greater availability of fine-grained data that reflects the reality of economic geography in metro areas.

The proposed strategy around the development of renewable energy, while maximising the economic potential and minimising the negative environmental effects, is the “balanced technology approach”. This approach considers the vast array of energy resources within the Bristol Channel and Severn Estuary area, the interdependencies of different energy producing technologies and the environmental and socio-economic impact that the combination of multiple solutions may have in the area. These solutions may involve tidal stream, capturing kinetic energy of tidal flows, wave, offshore wind, and tidal range technologies, which could include tidal lagoons and a small barrage. For the effective

implementation of such a complex approach, collaboration among the local authorities around the Bristol Channel and Estuary will be key. Steps in this direction have already been taken: in Autumn 2015 the Memorandum of Understanding establishing the Bristol Channel and Severn Estuary Energy Group was signed by the local authorities of Bristol, Cardiff, Newport, Devon, North Devon, Somerset, West Somerset, North Somerset, Sedgemoor and South Gloucestershire. The energy group sets out the basis for effective co-ordination among all partners and maximisation of the energy generation opportunities within the Severn Estuary and Bristol Channel.

PEOPLE AND SKILLS

Ultimately it is people who will be integral to the success of the GWC. Their qualifications, the jobs and opportunities available that attract and keep them in a place, effectively utilising their skills, as well as their ability to travel to work and their quality of life – from housing to access to a wide-range of amenities – are all factors that will contribute to making the GWC an economic success. The GWC are starting from a solid base, they now need to build on these foundations.

Institutions such as universities will also play a critical role. By creating and developing expertise and capacity within themselves, and amongst the wider community, universities can support the GWC to maximise the opportunities that agglomeration will bring for innovation and economic growth.

Population

Using the metro areas, the population for the GWC is 1.825 million. This is significantly greater than the 943,600 combined population figure for the cities of Bristol, Cardiff and Newport (2014 mid-year population estimates). By 2036, the population of GWC is projected to increase by 18%, reaching a total of 2.145 million people.

Table 9. Great Western Cities population by Local Authority (2014)

Local Authority	Population mid-2014	2036 projections
Bath and North East Somerset	182,000	198,400
Bristol	442,500	524,900
North Somerset	208,200	251,500
South Gloucestershire	271,600	316,700
Cardiff	354,300	458,544
Monmouthshire	92,300	90,334
Newport	146,800	170,941
The Vale of Glamorgan	127,700	133,727
Total	1,825,400	2,145,046
Bristol metro area	1,104,300	1,291,500
Cardiff metro area	721,100	853,546

Source: ONS, mid-year population estimates (2014); ONS, 2012- based sub-regional population projections; Statswales 2011-based local authority population projections for Wales, 2011 to 2036.

Housing

It is not only with regard to physical and labour market connectivity that the links between the Bristol and Cardiff metro areas should be considered. Housing is also an area where the relationships within GWC could be enhanced as a result of improvements in connectivity.

Currently the number of people transferring their residence between the metro areas is small, suggesting that they are seen as distinct housing markets. This, coupled with the commuting flows, suggests that there is strong potential to integrate the GWC more fully.

Table 10. Migration flows between Bristol and Cardiff metros

Migration flows (persons)	
From Bristol metro area to Cardiff metro area	2,030
From Cardiff metro area to Bristol metro area	2,140
Net change	110

Source: ONS, Migration Statistics Unit – moves during the year ending June 2014

Within GWC there are areas of projected growing demand for housing, particularly in Cardiff and in Bristol. Cardiff's Local Development Plan sets out the housing requirements between 2013 and 2026 as being 2,296 completions per year. While the Strategic Housing Market Assessment (July 2015) identified a housing need in the wider Bristol Housing Market Area of 85,000 homes of between 2016 and 2036, which corresponds to an average of 4,250 homes per year. There are a number of housing pressures already evident in Bristol, in particular demand is growing and there is an undersupply in the provision of new homes. At the same time, there is a shortage of affordable housing. Compounding these challenges is the limited number of strategic housing sites within Bristol.

However, within the Bristol and Cardiff metro areas there are also areas with significant planned housing developments that the creation of single housing market could help to ease. In South Gloucestershire, 5,700 homes are planned to be built in the next 10 to 15 years as part of a new neighbourhood development around Filton, just

outside Bristol. Newport's Local Development Plan anticipates a housing supply of 11,623 units between 2011 and 2026, which is above the projected housing requirement of 10,350 units over the same period.

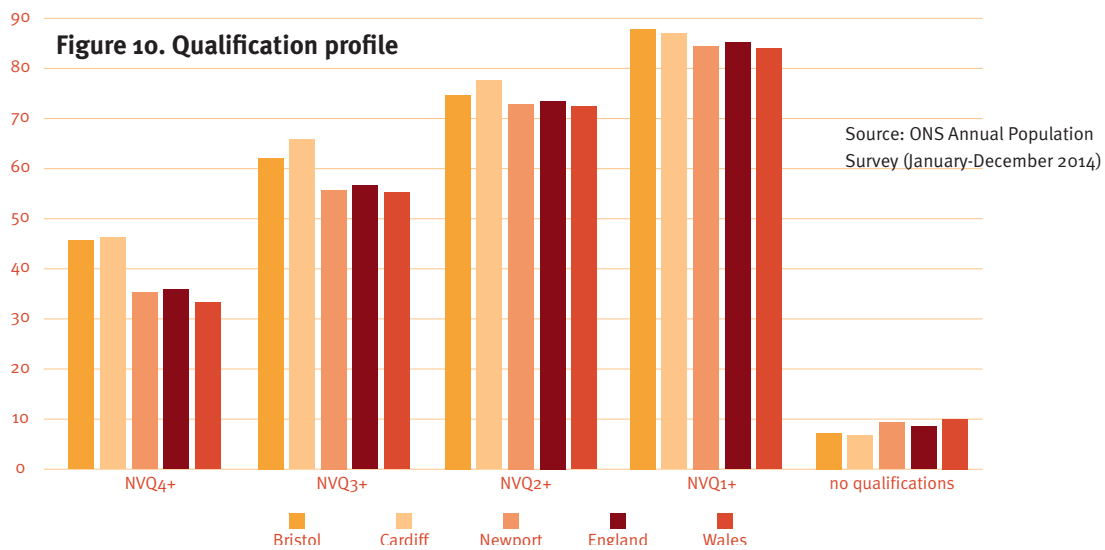
In Newport, a brownfield site at Glan Llyn will provide 4,000 new homes, with 2,200 of those completely by 2026. Although the number of completions stands at approximately 300, it is already emerging that some of those new residents are commuting to Bristol. Whilst in Cardiff, approval was granted by planning inspectors in January 2016 to the construction of 41,400 new homes (some 12,200 have already been constructed) by 2026.

Increased connectivity will help to broaden the housing area in which people can choose to live and work. To that end, integration of transport systems will be crucial. At the same time, GWC should explore the implications that greater connectivity and increased agglomeration will have on housing needs and provision across the area.

Qualifications, Skills and University

The step change needed to enhance GWC's economic performance to even higher levels requires a skilled workforce where those skills are fully utilised. This suggests that widening the labour market catchment area by improved connectivity could enable individuals to move to more productive employment opportunities,

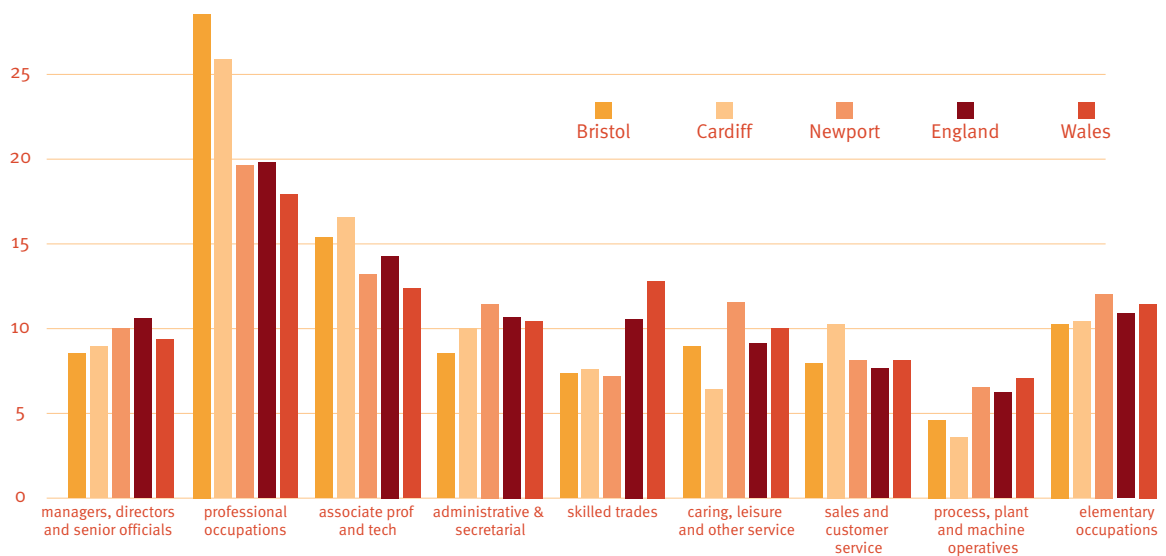
and contribute to informal knowledge transfers. The qualifications profile (Figure 10) of the three cities shows that Bristol and Cardiff have a greater proportion of their population at NVQ Level 4+ than both the English and Welsh averages. Newport is above the Welsh average and only 0.3% below the English average.



Comparing employment by occupation across the three cities highlights some interesting concentrations – with Newport having a higher proportion of managers, directors and senior officials than Cardiff, Bristol and the English and Welsh averages, as well as in the caring, leisure and other service occupations.

What is clear is that the labour market potential of GWC is significant. The benefits associated with agglomeration, with regard to increased skills utilisation, productivity, innovation and knowledge spill-overs, are likely to be realised if measures to support their exploitation are put in place, such as increased connectivity.

Figure 11. Employment by occupation (% of all in employment)



Source: ONS, July 2014-June 2015

The role of graduates

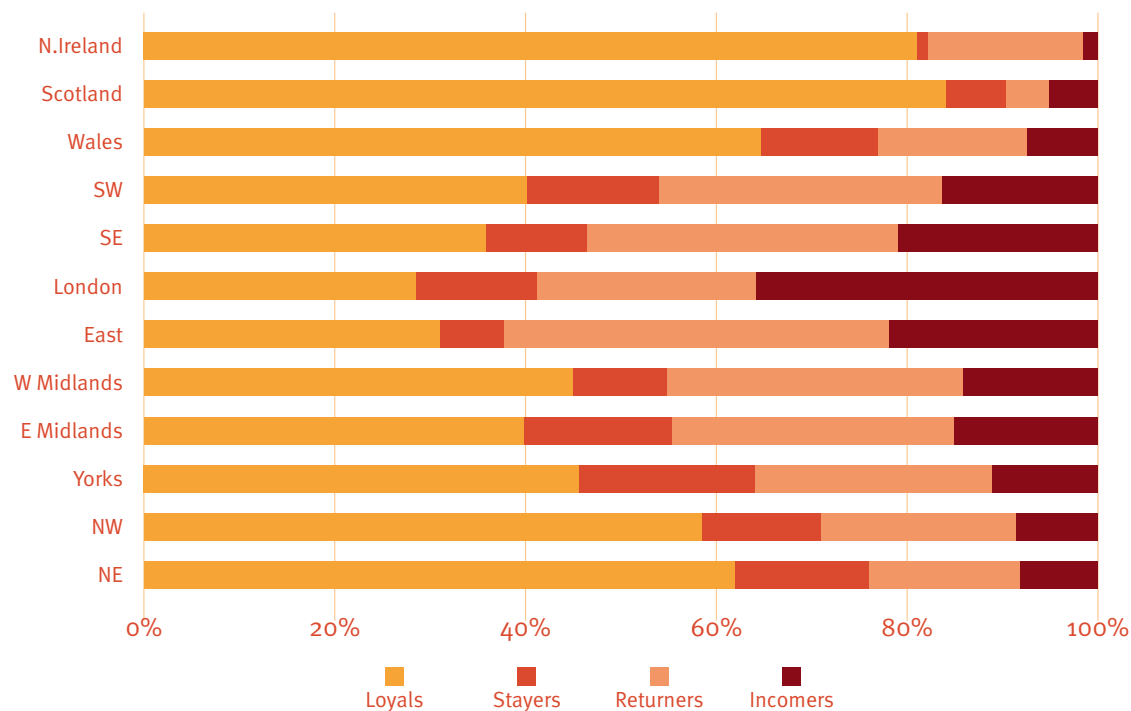
With a number of universities across the Bristol and Cardiff metro areas the potential skills base is even wider with effective graduate retention measures. Currently, the data on graduates who remain where they studied is weak. Although graduate destination data is collected, the number who come to a place to study and then remain there is less than clear. Furthermore, data is only available at the regional level, that is for Wales and the South-West, rather than at a more localised level, which would enable a more nuanced analysis.

The limited evidence available suggests that Wales is a net importer of students, but a net exporter of graduates⁵. There is a myriad of factors that contribute to this, including personal choice, but there are a number of key features, identified in a recent study by Cardiff University for Cardiff City Council which raise important issues. In particular, quality of jobs and wage levels are important considerations as to why students

leave. In Wales, five years after graduation 27% of non-migrant graduates (i.e. those that enter work in the same place as their domicile and university area) are employed in non-graduate jobs. Furthermore, a 2012 review of graduate salaries in the financial and professional services areas found that in Wales salaries were over 20% less than the UK average, and over 40% less than in London.

Figure 12 (below) shows that the devolved nations have much higher rates of graduate retention amongst their own residents. Amongst the devolved nations Wales is the most successful at keeping students who come to study, at some 12%. In the South West, some 14% of students who come to study remain, with 70% of students who had lived in the area before going to university choosing to remain there to study or returning after their studies were completed.

Figure 12. Graduates from 2012/2013 by region and migration category



Source: HESA's Destinations of Leavers from Higher Education 2012/2013

5: Cardiff University (Dr Adrian Healy) (2015) Cities, Productivity and Graduate Mobility.

It is evident that more detailed, localised data would aid understanding of the graduate cohort, although there are undoubted challenges in tracking student origins and destinations, particularly over the medium to longer-term.

Nevertheless, even with the limited data available, it is clear that there is the potential to further increase the qualified pool of labour available by encouraging students to remain. For the Cardiff metro area, a number of important issues to focus on have been identified. These include the need to:

- harness the opportunities of a wider labour market pool to attract high quality firms who both need graduate labour and provide graduates with the opportunities they seek;
- create more and better quality jobs, which provide graduates with opportunities to develop their career. This refers not only to graduate entry level jobs, but also longer term career opportunities;
- support local and smaller employers to recognise the value graduates can bring to their company; and,
- support smaller employers to increase their productivity, such as by placing soon to be graduates within local SMEs to support work in areas where such skills may be lacking.

The West of England LEP, which covers the Bristol metro area, has also identified the importance of boosting productivity and building growth capacity amongst SMEs as part of its skills priorities in 2016.

The GWC agenda may contribute to making the area more attractive for graduates to stay, by expanding the labour pool and improving the potential labour market outcomes, including career pathways.

The Role of Universities

The universities across the GWC, including those of Cardiff, Bristol, South Wales, the West of England (UWE), Bath, Bath Spa and Cardiff Metropolitan, are an important resource. With specialisms in areas including life sciences, digital, engineering and energy, the universities have can contribute to enhancing the innovation potential of the GWC.

Increased collaboration, aimed at enhancing the contribution of the universities to research, innovation and graduate retention, will help to drive the GWC's economic performance.

Indeed, considering how the universities can contribute to economic growth within the metro areas, through encouraging and supporting graduates to find work and remain in the area to harnessing the research and enterprise capacity within and across the universities, will be crucial to the success of the GWC ambitions.

Collaboration is already taking place in areas of economic importance. For example, the GW4 Alliance (comprising the Universities of Bristol, Cardiff, Exeter and Bath) are co-operating to foster growth in the creative economy. REACT (Research and Enterprise in Arts and Creative Technology) is a knowledge exchange hub resulting from the collaboration between the GW4 Alliance and the University of the West of England (UWE) and Watershed. It is designed to support collaborative research and development between businesses and universities.

There is the potential to push this collaboration further, with universities in the Cardiff and Bristol metro areas being encouraged to come together to focus on activities of economic benefit to the region. To that end, given the importance of marine and renewable energy, and engineering, to GWC, these are areas in which the universities could be supported to work together. The universities in the Bristol and Cardiff metro areas offer degrees relevant to the engineering or energy sectors, which could form the basis of such collaboration.

An important first step in this process would be a Science and Innovation Audit. The audits, awarded by the Department for Business, Innovation and Skills, support local organisations to map strengths in research and innovation which in turn can help to identify economic areas with global competitive advantage. Given the potential of the growth sectors identified in the GWC, such as advanced manufacturing, life sciences and other high-tech industries, such an audit could provide valuable data and information on how to build and enhance synergies across the GWC.

PLACE MARKETING

Place marketing refers to a strategy aimed at the promotion of a place within a country and to the rest of the world, with the specific intention of attracting new residents, visitors, resources and businesses. Most commonly associated with cities, it is often used as a tool for regeneration and transformative change. It can be associated to iconic developments or branding exercises as in the case of the Guggenheim Museum in Bilbao, whose exemplary architecture has become a motive of attraction along side the artworks within the museum itself. The European Green Capital Award, which Bristol held in 2015, is another example of how cities can increase their visibility by using a branding platform.

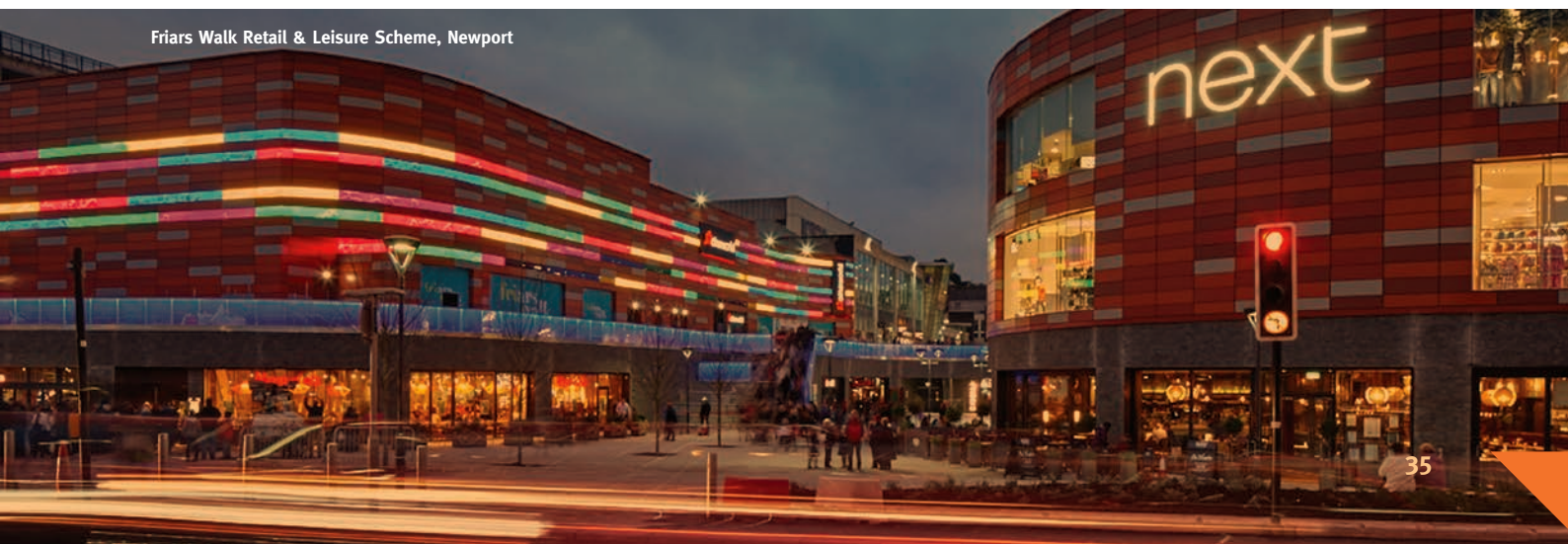
Globalisation has initiated competition for the attraction of skills, resources and businesses. In this highly competitive environment it is therefore becoming ever more important for places to promote their uniqueness and to seek to attract companies, consumers and residents. This inter-place competition goes beyond the mere marketing of a place's amenities to international visitors. It is principally about promoting a place as a desirable location for people to live and work, and for companies to conduct business and research and development by tapping into the local networks and skills pool.

As the shift from individual cities to a focus on agglomerations gathers pace there will be a need to rethink place marketing to something that promotes the wider area. In the case of the Great Western Cities there is an array of business sectors which effective marketing could promote including, the creative industries, ICT, financial services, and the aerospace industry. The West of England LEP, covering the Bristol metro area, has identified a number of Enterprise Areas and Zones as priority growth locations and investment

hotspots, while a series of initiatives are taking place in the cities of Cardiff and Newport – Newport Smart & Connected City is an example – to promote the cities' investment potential and their attractiveness to businesses. What emerges from a review of the many inward investment instruments available in the area (box below) is that though strategies and vehicles exist at the city and wider city-regional level, to date there is no unified strategy for the GWC region as a whole.

A joint place marketing strategy at the GWC level needs to be developed via coordination among the constituent members and relevant bodies to raise awareness of the GWC's skills and resources across the UK and internationally. Engagement with the Department for Business, Innovation and Skills, and the Welsh Government will also be important to secure support for international trade missions. The GWC's contribution to the UK economy is already significant and the appropriate level of investment could help unlock the region's growth potential and establish the GWC as a powerful economic engine of the West.

Friars Walk Retail & Leisure Scheme, Newport



INWARD INVESTMENT AND PLACE MARKETING

UK/Wales

UKTI is responsible for marketing the UK and bringing inward investment into the UK. To that end its work encompasses all of the GWC. In Wales, there is a joint protocol with the Welsh Government, and UKTI works jointly with the Welsh Government to market Wales overseas and to address enquiries about inward investment.

The Welsh Government also markets Wales overseas and co-ordinates all inward investment activity. There is an inward investment team, accompanied by sector teams who focus on priority sectors.

Bristol

Invest Bristol+Bath, established 2013. Inward investment agency, Part of West of England LEP.

Invest Bristol & Bath supports foreign direct investment, and regional and national companies in Bristol and Bath, offering advice and intelligence, support in relocation and recruitment and advice and intelligence. Invest Bristol & Bath team also undertakes trade missions as part of its efforts to attract companies to the region.

The agency's strategy is to develop a strong investment pipeline through research, long-term campaigns and projects through partners such as UK Trade & Investment (UKTI), the private sector, direct leads and networking, and providing compelling intelligence to prospective investors.

West of England LEP – Enterprise Zones and Areas (“investment hotspots”):

- **Bristol Temple Quarter** –(which has been approved for expansion with Bath and Somer Valley) focuses on creative, high-tech and digital industries, and includes a business incubator, which in November 2015 was named the best in the world
- **Emersons Green** (South Gloucestershire) – Science and technology, Research and Development, creative, digital, including Science Park and Composites Centre

- **Filton** (South Gloucestershire) – Advanced engineering and aerospace, technology, manufacturing, digital
- **Junction 21** (North Somerset) – Hub for Business, Legal and Professional services plus focus on research and development in food technology
- **Bath City Riverside** – Creative (media and publishing), micro-electronics and high value engineering focus
- **Avonmouth Severnside** (Bristol/South Gloucestershire) – Warehousing and storage, large scale distribution and logistics, environmental technologies, heavy industry and manufacturing

Business West – Runs contracts for UKTI in the South West, supporting SMEs develop international sales and entire new markets. West International Trade Team supports SMEs in the South West of England to develop their international sales.

Destination Bristol – a joint partnership between Business West and Bristol City Council promoting tourism development and overseeing city centre management and Business Improvement Districts in the city. Promotes both business and leisure tourism.

Cardiff

Cardiff City Council

The council undertakes its own marketing and lead generation activities within the advanced manufacturing, creative, life sciences, finance and professional services, and leisure sectors, alongside the Welsh Government. Focusing on promoting particular development sites to target companies, the council has also targeted UK Government departments as part of a public sector hub initiative. The council meets the Welsh Government regularly to share marketing and intelligence.

Cardiff Enterprise Zone – Focusing on financial and business services.

Through the **City Deal** process the ten local authorities of the **Cardiff Capital Region** have come together to drive and coordinate economic growth across the region. Working closely with the business community, the new arrangements will provide strategic economic and place leadership for the Capital Region. This will align infrastructure, investment and development strategy with skills and worklessness provision and support for innovation.

Newport

Newport Smart & Connected City is the council's inward investment/marketing body and promotes Newport as a place to invest.

The Newport Economic Development 2011–15 includes proposals to implement a Destination Marketing Plan & City Tourism Strategy to “ensure that the marketing of Newport is continued to attract new businesses and visitors to the area” and tackle apparent negative business perceptions of the town. It looks like this is still being undertaken – I can't find a copy online.

Newport Economic Network

This is a group of key city stakeholders set up in 2015 to co-ordinate economic development activity across the city. It brings together civic leaders, business leaders and representatives from education, leisure and housing to ensure we have better city wide engagement to plan the development of the city. The group has no formal statutory or decision making powers but will become the key forum for future city planning. It will also make the appropriate contribution to any new city region structures which are likely to emerge in the near future.

Newport City Summit

This is an annual event which provides all interested parties across the city with information about the future plans for the city. It helps to promote inward investment by ensuring all businesses are well appraised of developments which helps them to sell the city as a local for future investment.

RECOMMENDATIONS

1 City Devolution Deals

The immediate priority should be to ensure that the City Devolution Deal is in place for both the Cardiff Capital Region and West of England (Bristol City Region). The powers and resources that these will bring will be important and will also send a powerful message to governments about the seriousness of intentions in the area. The City Devolution Deal is a necessary precondition for the subsequent voluntary agglomeration embodied by the GWC agenda, which in turn will complement the City Devolution Deal.

2 Develop a business case for 'GWC Connect'

A business case is needed to sit alongside the agglomeration rationale, commuter potential and economic benefits of greater connectivity. This business case should be developed by representatives from local authorities, transport providers and business. Funding akin to the £5 million given to Midlands Connect should be sought. The focus should be on reducing journey times, increasing capacity and frequency and smart ticketing. Lobbying should be focused on the new National Infrastructure Commission.

3 Develop a marketing and investment strategy for the Great Western Cities

The government has prioritised marketing and investment support for the Northern Powerhouse, and the same process has begun for the Midlands Engine. The GWC is the western counterpoint to these and needs a similar approach. This will require:

- developing a GWC marketing and investment plan, linking together the main marketing and business organisations, to focus on the sectoral strengths of the GWC;
- engaging with both the Department for Business, Innovation and Skills, and the Welsh Government to gain support for an international trade mission, equivalent to that of the Northern Powerhouse;
- seeking government funding for developing the marketing case; and,
- considering the potential for ministerial sponsorship, such as that found in the Northern Powerhouse (Lord O'Neill) and the Midlands Engine (Sajid David).

Business and wider stakeholder engagement

Ultimately a large part of the success of the GWC will depend on strong business and university engagement and support, and their contribution to the shaping of how the agenda develops. The aim should be to develop the next stage of the GWC plan and to undertake qualitative research with the business community and its representatives across the GWC as to future priorities, particularly in relation to marketing, investment and sectoral support.

Data observatory

The definition of the geography for the GWC was driven partly by the level at which data was available. As part of the GWC agenda, a more dynamic collection of economic data is needed. It should provide a real-time understanding of the economic performance of the GWC, and also capture other important information, such as graduate retention rates.

The combination of open data in Bristol and the ONS in Newport should give GWC a competitive edge on economic, labour market and business data. Work should be undertaken with statisticians and open data scientists to develop a plan for a virtual economic observatory. This has the potential for the GWC to provide wider data on powerhouse agglomeration.

Universities as centres of excellence

The depth of expertise within the universities in the GWC is a critical asset. Harnessing this expertise will be important to the future development of the GWC. The potential for transformational research excellence funding on similar lines to the Northern Powerhouse, should be explored. This could take the form of a GWC 'Crick of the West' focused on environmental sciences. In the short-term GWC should support the GW₄ Alliance of universities in their application for a Science and Innovation Audit, which has the potential to highlight key areas of economic expertise, sectors for growth and research strength across the GWC.

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BRISTOL CARDIFF NEWPORT



Metro — Dynamics