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CARDIFF CAPITAL REGION PROFILE

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Introduction

This profile of the Cardiff Capital Region provides a detailed account of the area's regional context and devolved structure, performance targets, and data relating to key aspects of the economy, including: innovation, business, infrastructure, people, place and the environment.

The profile covers the governance structure, devolution arrangements, the geography and history of the region including a timeline of regional institutions, policies related to productivity, inclusivity and sustainability, performance targets and key data.

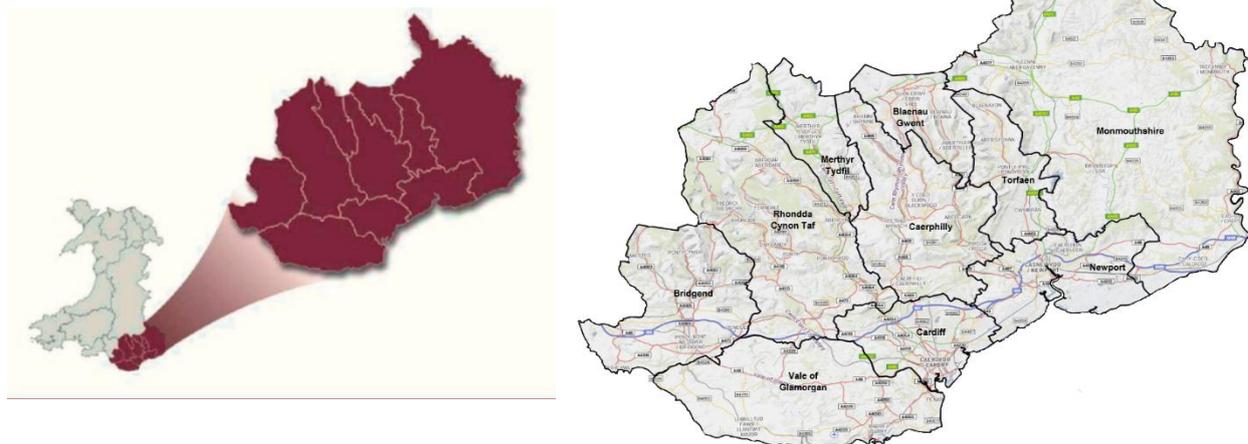
The Cardiff Capital Region City Deal

Cardiff Capital Region (CCR) City Deal is a regional development programme agreed in 2016 between the UK and Welsh Governments, and 10 local authorities in the South East Wales region (Cardiff, Newport, Caerphilly, Bridgend, Torfaen, Blaenau Gwent, Merthyr, Monmouthshire, Rhondda Cynon Taf and Vale of Glamorgan). It is one of three growth agreements - Swansea Bay City Deal was announced in 2017, the North Wales Growth Deal was announced in 2018 and the Mid Wales Growth Deal in 2019. The City Deals and Growth Partnerships function in a similar way as the Local Economic Partnerships in England.

The CCR City Deal is a 20 year investment which aims to develop and grow the region in line with the National Development Framework 'to bring about significant economic growth in the region through investment, upskilling, and improved physical and digital connectivity' (CCR, 2019a; CCR 2019d:4). Of this investment, £500m will be contributed by both the UK and the Welsh Government and at least £120m will be contributed by the local authorities over the fund's 20 years. £734m will fund the South Wales Metro and other investments will improve transport connectivity; increase skill levels; support people into work; increase house building; and support businesses to grow.¹ The City Deal has a target of creating 25,000 new jobs and a 5% increase in GVA by 2036 (CCR City Deal, 2016).

The South East Wales region corresponds to the former counties of South Glamorgan, Mid Glamorgan and Gwent. The region has the highest population density in Wales and it is the most urbanised part of Wales with the two cities of Cardiff and Newport and the previous industrial heartland of the South Wales Valleys. This also means that the region is the centre for a large proportion of the businesses in Wales. This has created a landscape of contrasts with big pockets of deprived and prosperous communities based in the region.

Figure 1: Local authorities in South East Wales



Source: CCR Skills Partnership (2019); Regional Economic Framework (2015), South East Wales

While the National Development Framework, the Wales Spatial Plan and Planning Policy Wales have all played an important role in shaping the development of the CCR, a more direct influence has been

¹ <https://www.cardiffcapitalregion.wales/about/>

the role of the Welsh and UK governments. Furthermore, the CCR and the City Deal and the industrial strategies have been just one key actor involved in the development of the region. The CCR Cabinet is responsible for the integrated strategic development plan of the region. The Cabinet is also responsible for the CCR City Deal which sets the direction and framework of regional economic growth and development including setting priority areas where investment and funds need to be allocated.

The 10 local authorities formed the CCR [Cabinet](#) to coordinate and oversee the delivery of the programme.

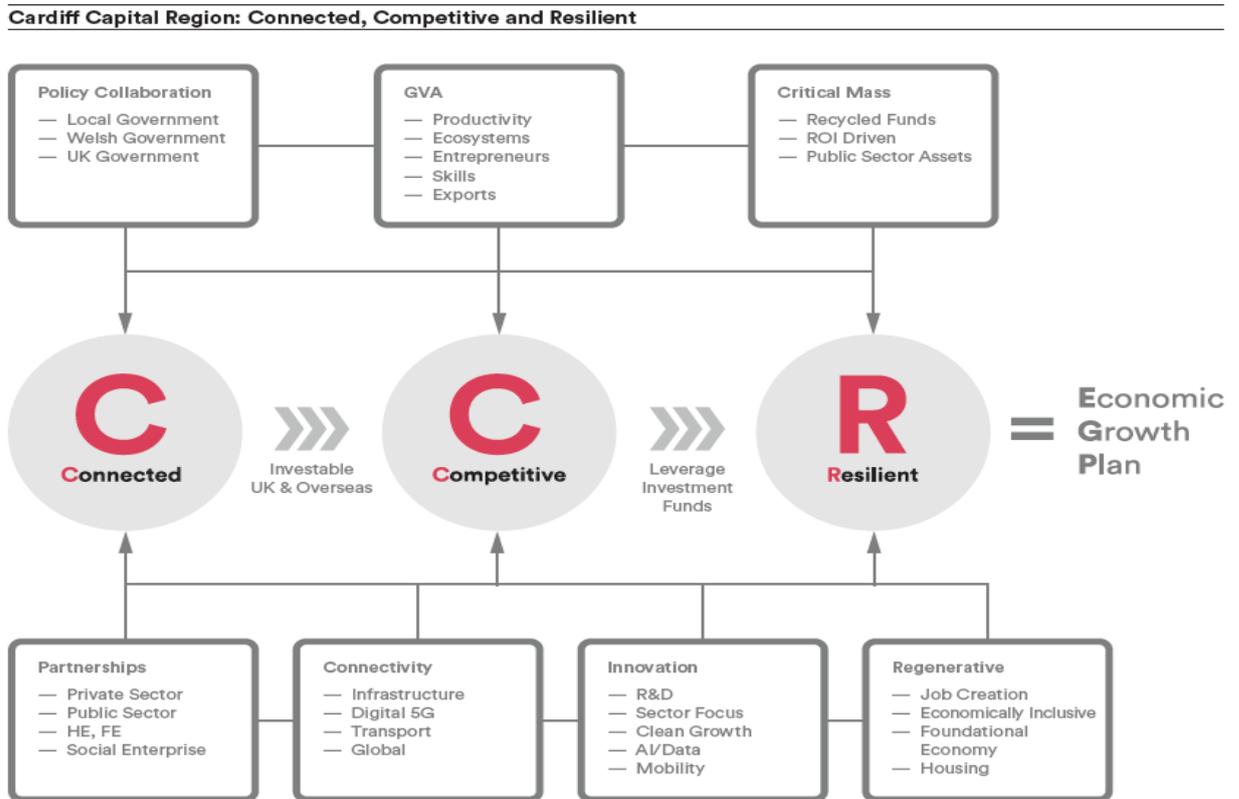
The CCR Investment Framework, developed with the regional economic growth partnership, outlines investment in the three priority areas of innovation, infrastructure and challenge. The investment areas reflect the priorities of the CCR's City Deal targets for connectivity, competitiveness and resilience (Figure 2) within its 20 year Industrial and Economic Plan. The investment plan focuses on deploying the £495m Wider Investment Fund and leveraging £4 billion additional private capital. Key business sectors include compound semi-conductors, fintech, cybersecurity analysis, artificial intelligence, creative economy, life sciences, transport engineering, energy and environment.

Priorities set for the CCR City Deal include:

- Mechanisms to support high growth sectors;
- The development of new facilities and employment sites;
- New approaches to public service delivery;
- The software academy in Newport and related programmes across the region;
- Investment in intellectual property creation and commercialisation;
- Adding value and complementing existing innovation support; and
- Developing a cyber-security academy with the University of South Wales.

It was also mandatory within the City Deal to develop partnership with the private, academic and third sector whereby common goals can be established along with agreed principles of working, to operate together and deliver project activity to create prosperity, reduce inequality and improve the environmental sustainability of the region.

Figure 2: South East Wales Economic Growth Plan



Source: CCR Industrial and Economic Growth Plan (South East Wales)

For a full overview of the governance structure for the CCR City Deal and the devolution arrangements in Wales see **Appendix A**.

Regional/National Policy Context

The following are the important strategic documents for both Wales and the South East Wales region:

- Regional Economic Framework (2015)
- National Development Framework (2019)
- Prosperity for All, Economic Action Plan (2017)
- South East Wales Regional Strategic Framework (2015)
- [CCR City Deal MoU](#) (2016)
- CCR City Deal, Strategic Business Plan and Wider Investment Fund
- [CCR Industrial and Economic Plan](#) (2019)
- [CCR Investment Framework](#) (2019)
- City Deals and the Regional Economies of Wales (2017)

The National Development Framework (NDF) is the key strategic document which embodies the key national priorities of a resilient, sustainable and a decarbonised economy in Wales and is the main development plan document for the period 2020-40. It sets the direction for areas where investments should be made such as infrastructure and development in Wales for the greater good (NDF, 2019; Webb et al, 2017). The NDF covers all Wales (national) and Strategic Development Plans (SDPs) cover regional and sub-regional planning with Local Development Plans (LDPs) covering local authority

level (NDF, 2019). SDPs and LDPs should be aligned with the objectives and national priorities within the framework at a regional and local level.

The Welsh Spatial Plan developed in the early 2000s was last updated in 2008 and provides high level strategic guidance and a framework for collaborative action (WG, 2016). It was adopted by the National Assembly for Wales in 2004 and covers a 20-year period. The plan identifies six different areas within Wales (North West, North East, Central, South East, Swansea Bay and Pembrokeshire).

The Regional Economic Framework for South East Wales focuses on economic growth, inclusivity and promoting wellbeing and sustainability and this informed the approach to the development of the South East Wales strategy.

The draft Local Government (Wales) Bill introduced in 2016 focussed on collaboration and merging local authorities for the effective delivery of services through a reformed legislative framework and regional strategies and frameworks (WG, 2015; NAWC, 2018).

Another policy that plays a prominent role in the economic development of Wales is the Planning Policy of Wales (PPW) which promotes economic, social, environmental and cultural wellbeing as embodied in the Planning (Wales) Act, 2015 and the Future Generations Act 2015. Both the PPW and the NDF are critical in the effective delivery of LDPs and SDPs at a national, regional and local level.

All planning policies and activities need to align and embed the goals in the Well-being of Future Generations Act (Wales) (2015) addressing four aspects of well-being, i.e. social, economic, environmental and cultural. These key principles of sustainability and well-being goals are embodied within NDF and PPW and used as guidelines for the City Deal and the Economic Action Plan. The delivery of these goals is also key with respect to any public and private investments initiated in Wales in partnership with the local authorities.

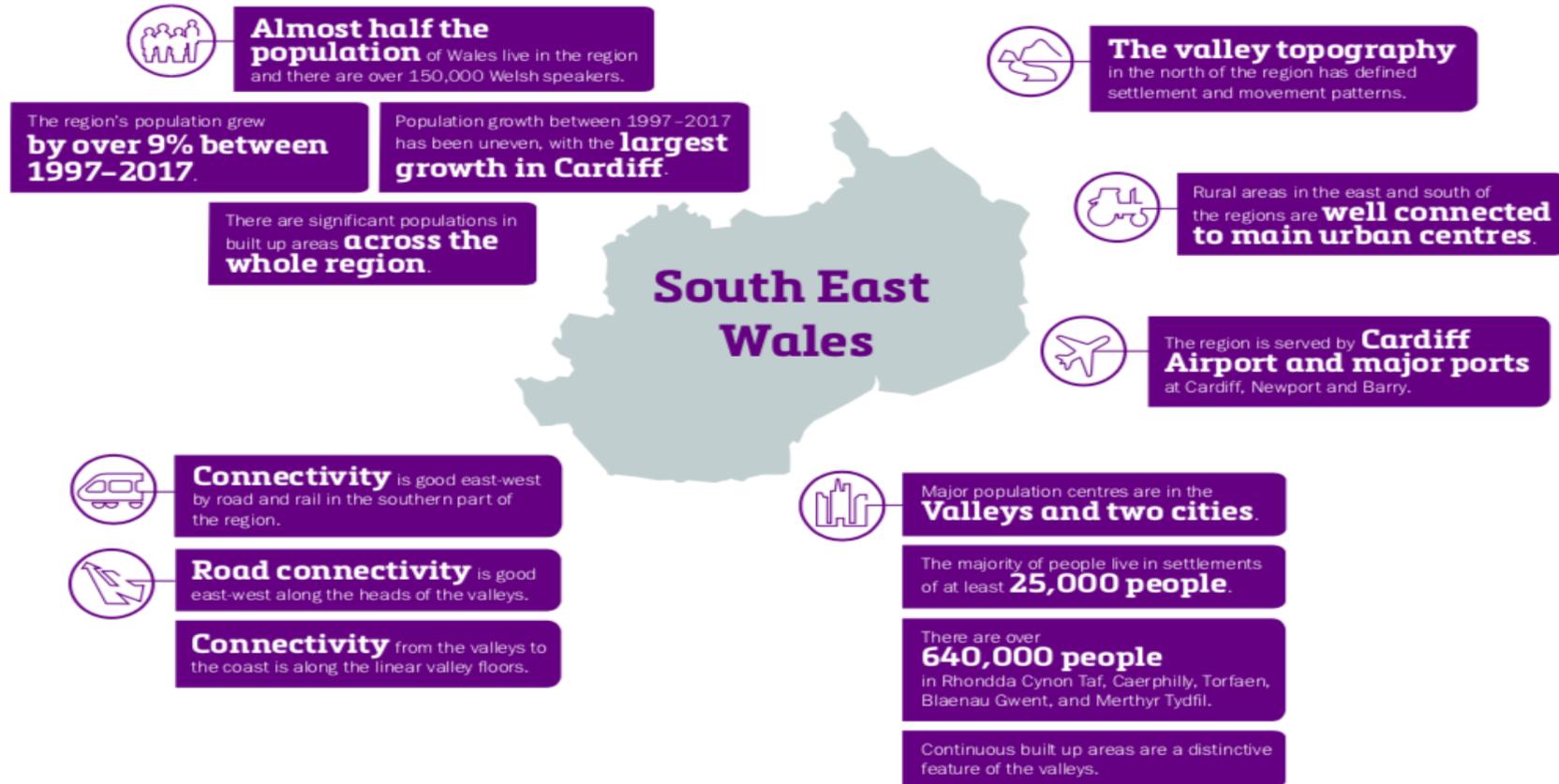
Figure 3 illustrates the positioning of both the PPW and the NDF as the overarching framework which ensures that key policies, developments plans, place plans and manuals have sustainability and wellbeing goals embedded within them as each of the four aspects of wellbeing have an association with the Future Generations Act. It also indicates how aims and objectives set in the NDF, PPW and the Wellbeing Plans are the overarching goals which underpins the LDPs and SDPs in Wales (see Figure A3 in Appendix A for more details).

Figure 3: The Policy and Planning Framework

Legislation			
Planning Policy Wales	NDF	Well-being Plans (Local/Regional Strategies, Plans & Evidence)	
Development Management Manuals	Development Plans Manual	Development Plans	Place Plans

Source: Planning Policy Wales, 2018

Figure 4: NDF's vision for the development of South East Wales



Source: National Development Framework 2020-40

The Devolution Process

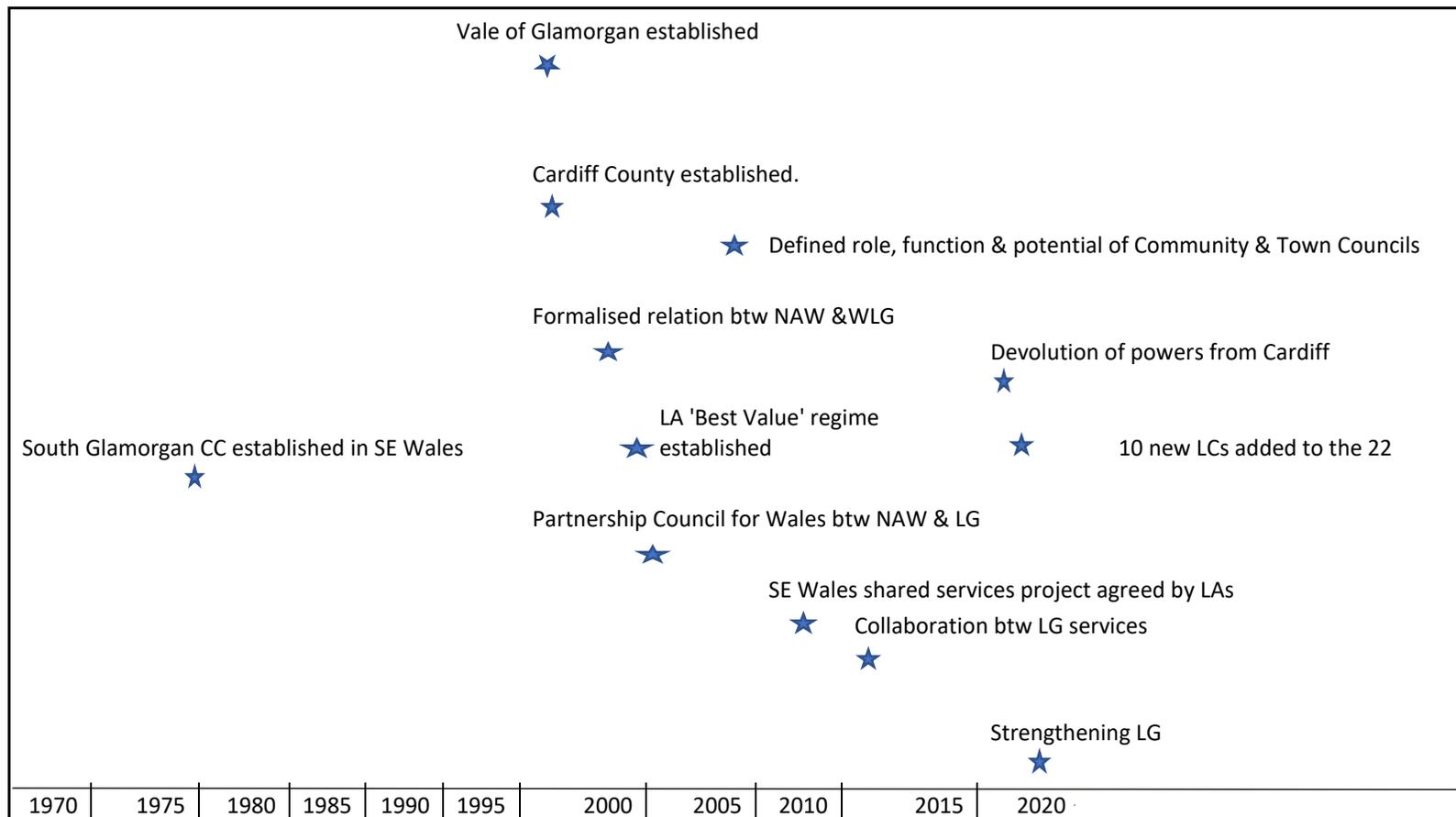
With the devolution of the local governance structure in Wales and the passing of the White Paper Consultation on reforming local government, there was a shift in emphasis on public service governance and effective delivery of services (NAWC, 2018). This section lists the local government institutions that devolved during the last 30-40 years following the Local Government Act in 1972 in which a two-tier Welsh system was created which comprised of eight county councils and 37 district councils.

Table 1 outlines the devolution process and accompanying legislation and Figure 5 presents a timeline of regional institutions in South East Wales over the past 30 years.

Table 1: The devolution of regional institutions during the last 40 years

Year	Devolution	Institutional Changes
1974	Local Government Act 1972	2 tier structure-8 CCs &37 DCs
1996	Local Government Wales Act 1994	Single county of 22 LAs
1998	Government of Wales Act	Formalised relationship
1999	Local Government Act	Best Value regime established
2003	The Second Assembly	Role, Function & Future Potential of Community & Town Councils in Wales
2007	The Third Assembly	South-East Wales Shared Services Project agreed by 10 LAs
2011	The Fourth Assembly	The Simpson Compact-collaboration between local govt. (only 6 specific regions)
2016	The Fifth Assembly	Devolution of powers from Cardiff Bay
2017	Local Council Election held	Adding 10 new LCs to the 22 Councils
2018	Strengthening local govt	

Figure 5: Timeline



Key Statistics

In Table 2, some key indicators related to prosperity, inclusivity and sustainability describe the performance of CCR. Figures for the UK are also provided as a baseline to assess regional performance according to latest data and over a 5-year period.

This data was used to develop a typology to assess the productivity, inclusivity and sustainability of all GB regions in relation to the nature of their economies and outcomes over time. Table 3 presents the results for CCR, indicating the performance of CCR and other Welsh regions in relation to all other regions in England (LEPs and CAs), Wales and Scotland. The results for CCR indicate that the performance in all three measures (prosperity, inclusivity and sustainability) is medium and has been constant between 2013 and 2018 compared to other regions.

Table 2: CCR performance on prosperity, inclusivity and sustainability (levels and change)

	LEVELS (2018)			CHANGE (2013-2018)		
	PROSPERITY	INCLUSIVITY	SUSTAINABILITY	PROSPERITY	INCLUSIVITY	SUSTAINABILITY
CCR	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM	MEDIUM
MWGD	LOW	MEDIUM	MEDIUM	MEDIUM	HIGH	LOW
NWGD	MEDIUM	MEDIUM	LOW	MEDIUM	LOW	MEDIUM
SBCR	LOW	MEDIUM	LOW	MEDIUM	MEDIUM	MEDIUM

Mid Wales Growth Deal (MWGD); North Wales Growth Deal (NWGD); Swansea Bay City Region (SBCR). LOW = Lowest quartiles; MEDIUM = quartiles 2 and 3; HIGH = highest quartile

Table 3: Key Statistics

	CCR		UK	
	2018	% Change 2013-18	2018	% Change 2013-18
PROSPERITY				
GVA per/hour	90.0	-0.379	100	2.0
Median gross weekly pay for full-time workers	516.7	7.44	568.3	9.8
Employment rate 16-64	73.2	7.01	75.0	5.3
% of total employees in low pay sectors ²	34.1	-2.84		
% of workers in high-skilled occupations (SOCs 1, 2, 3)	14.8	9.62	14.9	5.5
% of working-age population with NVQ Level 2+ quals.	73.5	5.15	74.9	3.7
INCLUSIVITY				
% in-work households with and without children receiving child and/or working tax credits	23.7	-27.96	22.1	-29.1
20:20 ratio of median weekly pay (gross), ft workers	2.20	-3.08	2.27	-0.02
Ratio of lq. house price to lq. earnings ³	5.3	1.92	7.3	11.1
Life Expectancy (females)	82	0.12	82.9	0.2
% of total connections receiving superfast broadband (>= 30 Mbits) (years = 2016-18)	55.6		55.3	36.5
% of workless households	16.5	-18.31	14.5	-16.2
SUSTAINABILITY				
CO2 per capita emissions (t) (years = 2017, 2013-17)	5.3	-20.89	4.5	-23.7
Total residual fuel consumption, tonnes of oil equivalent per capita (years = 2017, 2013-17)	0.21	-4.54	0.3	-9.3
Total transport energy consumption, tonnes of oil equivalent per capita (years = 2017, 2013-17)	.58	0	0.57	-0.3
Motor vehicle traffic per capita, vehicle miles ⁴	5530	5.03	5083	4.2
Municipal waste generation, tonnes per capita ⁵	.48	0	0.66	-4.3
% of household waste sent for recycling/reuse/composting ⁶	51.5	16.25	43.0	-0.5

² UK = Data for Great Britain

³ UK = Data for England and Wales

⁴ UK = Data for Great Britain

⁵ UK = Data for England, 2014-18

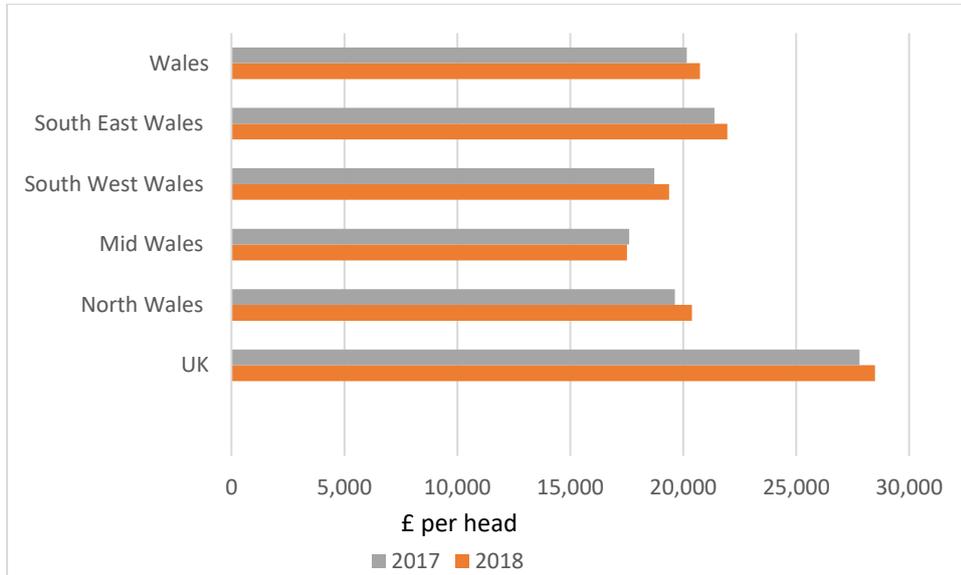
⁶ UK = Data for England, 2014-18

PROSPERITY	<p>£90 GVA per/hour (index) (UK=100)</p> <p>↓ -3.79% 2013-18</p>	<p>£516.7 Median gross weekly pay for full-time workers</p> <p>↑ 7.44% 2013-18</p>	<p>73.2% Employment rate 16-64</p> <p>↑ 7.01% 2013-18</p>	<p>34.1% of total employees in low pay sectors</p> <p>↓ 2.84% 2013-18</p>	<p>14.8% of workers in managerial, professional and technical occupations</p> <p>↑ 9.62% 2013-18</p>	<p>73.5% of working age population with NVQ2+ quals</p> <p>↑ 5.15% 2013-18</p>
INCLUSIVITY	<p>23.7% In-work households receiving child and/or working tax credit</p> <p>↓ -27.96% 2013-18</p>	<p>2.20 20:20 ratio of median weekly pay</p> <p>↓ -3.08% 2013-18</p>	<p>5.3 Ratio of lower quartile house price to lower quartile earnings</p> <p>↑ 1.92% 2013-18</p>	<p>82% Life Expectancy (females)</p> <p>↑ .12% 2013-18</p>	<p>55.6% of total connections receiving superfast broadband</p>	<p>16.5% of workless households</p> <p>↓ -18.31% 2013-18</p>
SUSTAINABILITY	<p>5.3 CO2 per capita emissions</p> <p>↓ -20.89% 2013-17</p>	<p>0.21 Total residual fuel consumption, tonnes of oil equivalent per capita</p> <p>↓ -4.54% 2013-17</p>	<p>0.58 Total transport energy consumption, tonnes of oil equivalent per capita</p> <p>0% 2013-17</p>	<p>5530 Motor vehicle traffic per capita, vehicle miles</p> <p>↑ 5.03% 2013-17</p>	<p>0.48 Municipal waste generation, tonnes per capita</p> <p>0% 2013-17</p>	<p>51.5% of household waste sent for recycling/reuse/composting</p> <p>↑ 16.25 2013-17</p>

Source: Labour Force Survey, ONS [accessed April 2020]

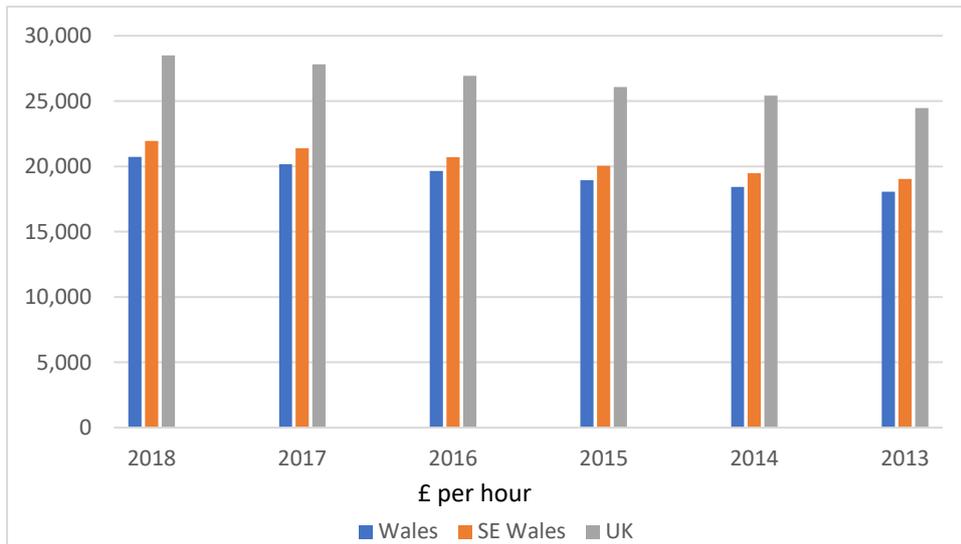
GVA per head in Wales was 73.1% of the UK average in 2015 and increased by 0.5% during the year (Welsh Government, 2020b). Even though Wales is growing at a slower rate in terms of GVA per hour worked when compared to UK as a whole, GVA for South East Wales grew at a slightly faster rate (3.1%) in 2015, when compared to Wales as a whole (3%) (Welsh Government, 2020b).

Figure 6: GVA per head in 2017 and 2018 for the Welsh regions and UK



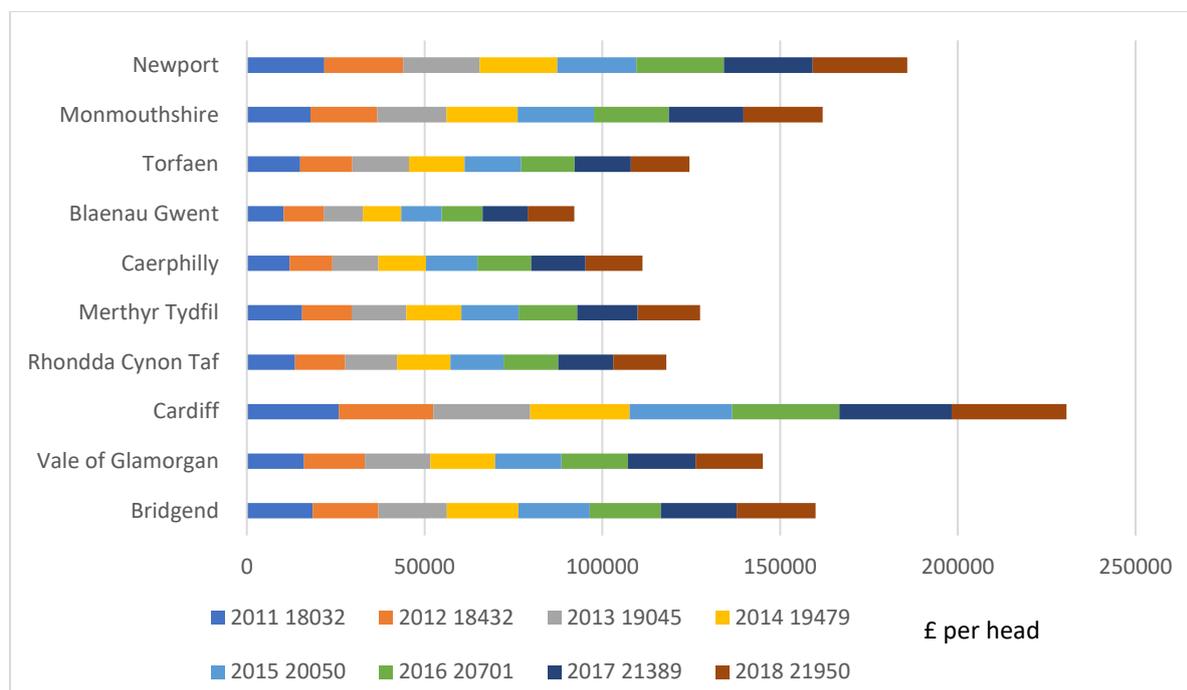
Source: Regional Accounts, Office for National Statistics [accessed April 2020]

Figure 7: GVA per hour worked from 2013-18 in UK, Wales and South East Wales



Source: Regional Accounts, Office for National Statistics [accessed April 2020]

Figure 8: Gross Value Added (£ per head) by local authority area (2011-18)



Source: Welsh Government, Annual Population Survey [accessed April 2020]

1. Innovation

Research and innovation drive economic growth and productivity. Investment in research and innovation available to Welsh Universities and the National Museum of Wales was approximately £79.5m in 2018-19 (NAWC, 2019).

Innovation activity has been found to be higher in East Wales than in West Wales especially with regards to product and service innovation even though its overall rank is much lower than England (PPIW, 2016). The focus has been on business and entrepreneurship innovation with new initiatives such as networking, incubating new companies and supporting existing firms and SMEs. In contrast, support for human capital necessary for the growth of innovation and markets received the lowest priority (Thomas et al, 2011).

CCR's Industrial and Economic Growth Plan outlines priority areas in innovation, infrastructure and challenge that aim to improve the business environment in the region. The innovation investments will target areas with growth potential and competitive strength with the possibility of leveraging significant return on investment in the future.

In addition to ongoing research, innovation and enhancements to the digital network, there have been a number of initiatives encouraging the design and creation of new products and services driven by high-tech industries. Investing in compound semi-conductors alongside investment in artificial intelligence, fintech and cybersecurity will contribute to building a more resilient future economy. This is dependent on building partnerships and collaboration between universities, research and development firms, start-ups and science parks.

To develop capabilities in compound semiconductor applications an investment of £50m has been made by the UK government to establish a new catapult centre in Wales. CCR has set priorities to invest in research and development and provide support for high value innovative businesses. Plans have also been included within the CCR City Deal for flexible and better use of data which could drive innovation across the public sector and the wider economy.

Higher education

Key to ensuring both innovation for industry and a skilled labour force is investment in higher education for development in research and innovation. The EAP sets out a plan to ensure that there is a steady supply of appropriately skilled and qualified people across the economy and that employers take responsibility for upskilling their workforce.

A BEIS report (2015:26) noted that Wales has an 'extensive research and development base in renewable energy and smart energy solutions, e.g. SPECIFIC (an EPSRC Innovation and Knowledge Centre), the Low Carbon Research Institute, and Cardiff University's £24m FLEXIS project which involves worldwide collaborations'.

The Higher Education Funding Council for Wales has made ambitious plans to develop a research base to boost science and innovation by partnering with universities in the region in order to contribute to the EAP. Their vision is presented in Figure 9.

Figure 9: Research and Innovation Vision by HEFCW



Source: Research and Innovation, (HEFCW, 2019)

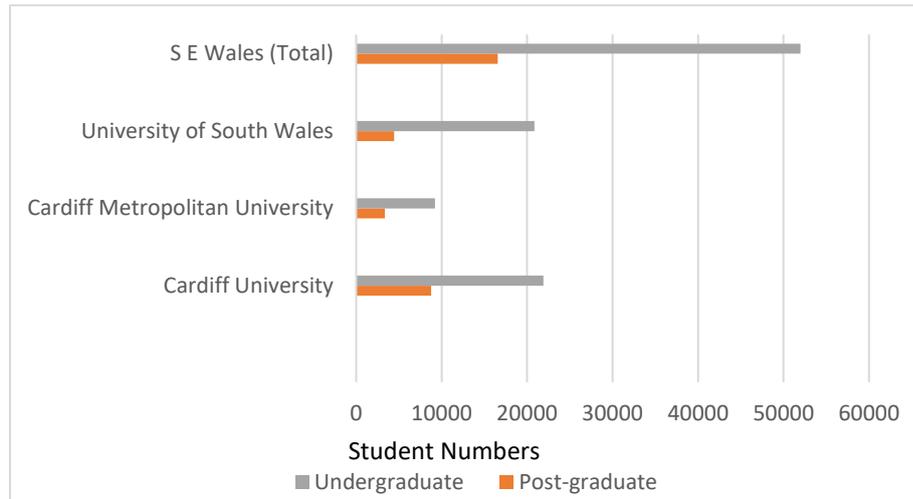
The South East Regional Economic Framework (2015) outlines the areas of academic expertise and research excellence in the region which have the potential to boost the local economy and promote economic development. The areas include:

- Cardiff University's Neuroscience and Mental Health Research Institute;
- Cardiff University Data Science Research Academy and the National Software Academy;

- Cardiff University School of Engineering; and
- University of South Wales Cybersecurity Academy.

Figure 10 shows enrolment in the higher education sector in South East Wales by the three universities in the region: Cardiff University, University of South Wales and Cardiff Metropolitan University. Cardiff University is the largest, and undergraduates are the largest group.

Figure 10: Number of students enrolled in higher education institutions in South East Wales (2015-16)



Source: Welsh Government (2020a)

A report from the National Assembly for Wales Commission (NAWC) showed that that funding for public sector research and innovation in Wales is well below England and Scotland (NAWC, 2019). The Diamond Review had stated that the higher education funding for Wales should be at least £71m per annum and is an essential funding source for research and innovation (Diamond Review, 2019). This disparity in funding between the nations has been a result of UK Government decisions and in order to address these imbalances and the consequences of different levels of investment, institutions like UKRI will need to make funding adjustments (Forth and Jones, 2020).

The allocated funding from HEFCW for the Welsh Government for 2019-20 is £148.9m, a reduction from £160.5m in 2018-19; but an increase from £126.6m in 2017-18. The Welsh government allocated additional funding in 2019-20 which enabled HEFCW to allocate funding to the following areas (HEFCW, 2019):

- £3.5m to new university-led activities for projects that enhance collaboration between higher education and further education in innovation and engagement activities;
- £1.8m to support university strategies for enhancing civic mission and community engagement, which included £200k for a Physics Mentoring Project;
- £10m for estates' capital developments; and
- £1.2m for the Institute of Coding.

Table 4: Higher education funding by funding council, 2018/19

Funding Council	QR Funding	Innovation & Engagement Funding
Research England	£1600m	£210m
Scottish Funding Council	£242m	£19m
Higher Education Funding Council for Wales	£71m	£0m
Foundational Economy Challenge Fund	--	£4.5m (experimental funding)

Source: HEFCW (2019)

Science parks

The Science and Innovation Audit for South West England and South East Wales is a joint collaborative partnership to harness the research strength and innovative industrial capacity to create and sustain a knowledge economy and lead in digital innovation and advanced engineering. The focus is on strengthening the following (BEIS, 2015):

- Aerospace;
- High value engineering;
- Microelectronics;
- New energy systems;
- Digital industries; and
- Environmental technologies.

Table 5 lists the number of new patents acquired by the three universities in the South East of Wales in the year 2018-19 according to the Higher Education Statistical Agency. Number of patents reflects the performance of the region in innovation and research which makes an impact on economic growth and productivity.

Table 5: Intellectual property: Disclosures and patents filed by or on behalf of the higher education provider

University	Number of disclosures	Number of new patents applications filed in year	Number of patents granted in year	Cumulative patent portfolio	Number of patents filed by an external party naming the HEP as an inventor
Cardiff University	81	50	37	335	83
Cardiff Metropolitan University	3	5	1	3	4
University of South Wales	1	1	1	31	0

Source: Higher Education Statistics Agency, 2018/19

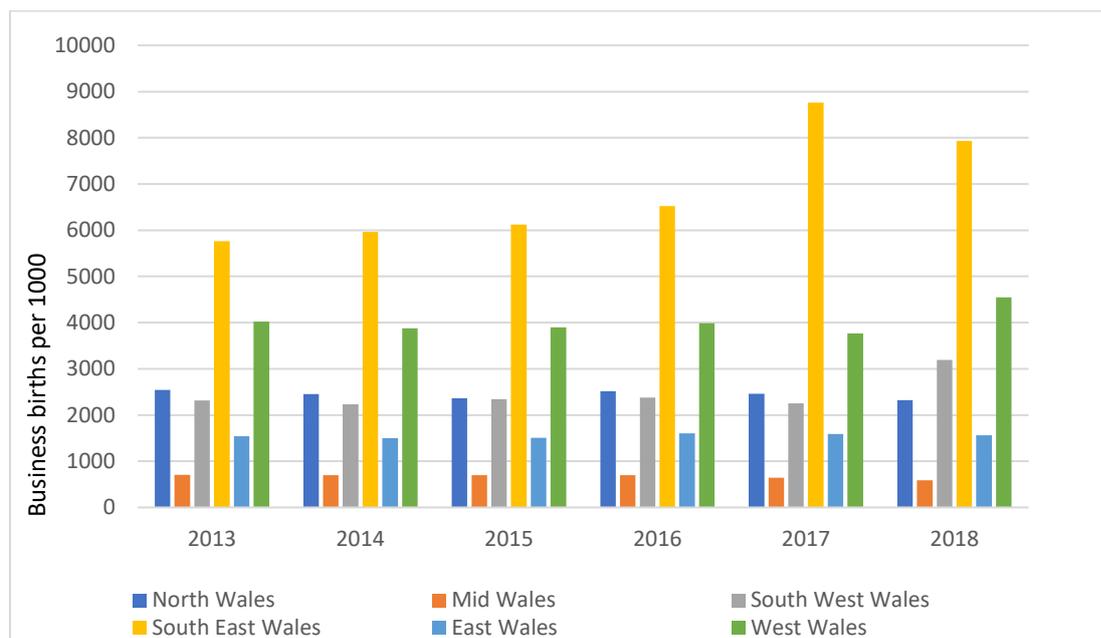
2. Business

Start-ups

Most of the start-ups in Wales are located in South East Wales (18% in 2017) and the main sectors are transport and storage (21%), wholesale or retail (19%), administrative and support services (15%) and construction (14.5%) (Kapitsinis et al, 2019).

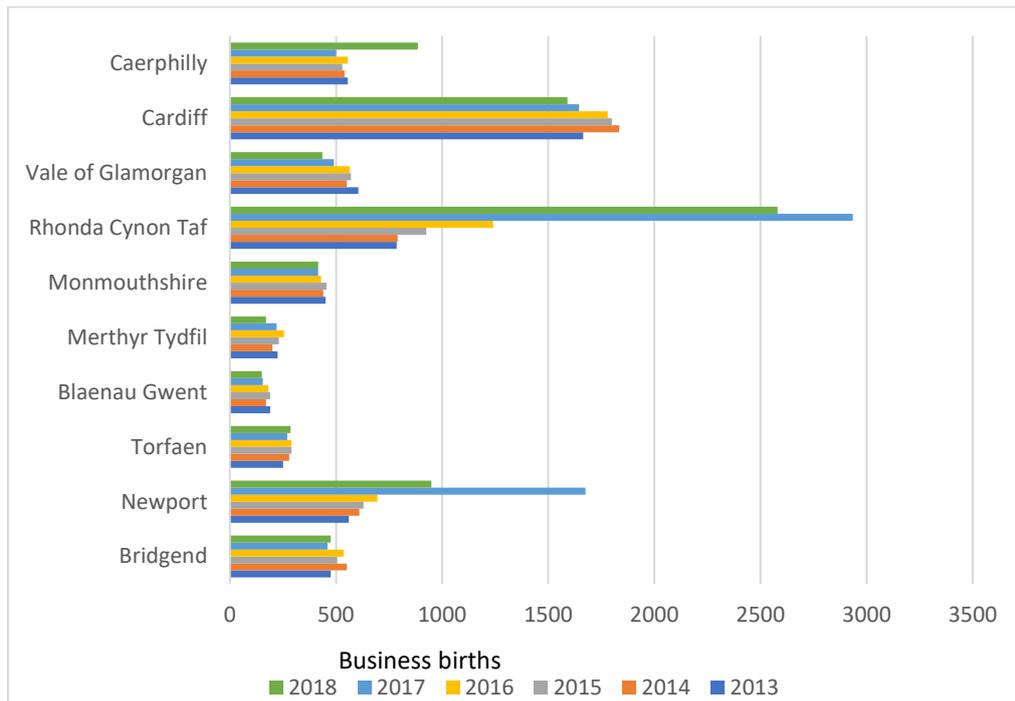
The Employability Delivery Plan for Wales 2018 has included youth entrepreneurship as part of the Business Wales Service, to ensure that there is a wide network of entrepreneurial role models in Wales across all sectors including schools, colleges, universities and the community setting - to inspire young people to develop ideas for business and to encourage start-ups (Welsh Government, 2018d). Such aspirations have been found to be particularly high among young adults and those with entrepreneurial skills. The Big Idea Wales programme offers bespoke support through workshops and boot camps to develop the skills of young entrepreneurs to make informed decisions (Welsh Government, 2018d).

Figure 11: Business births in the Welsh region from the period 2013-2018



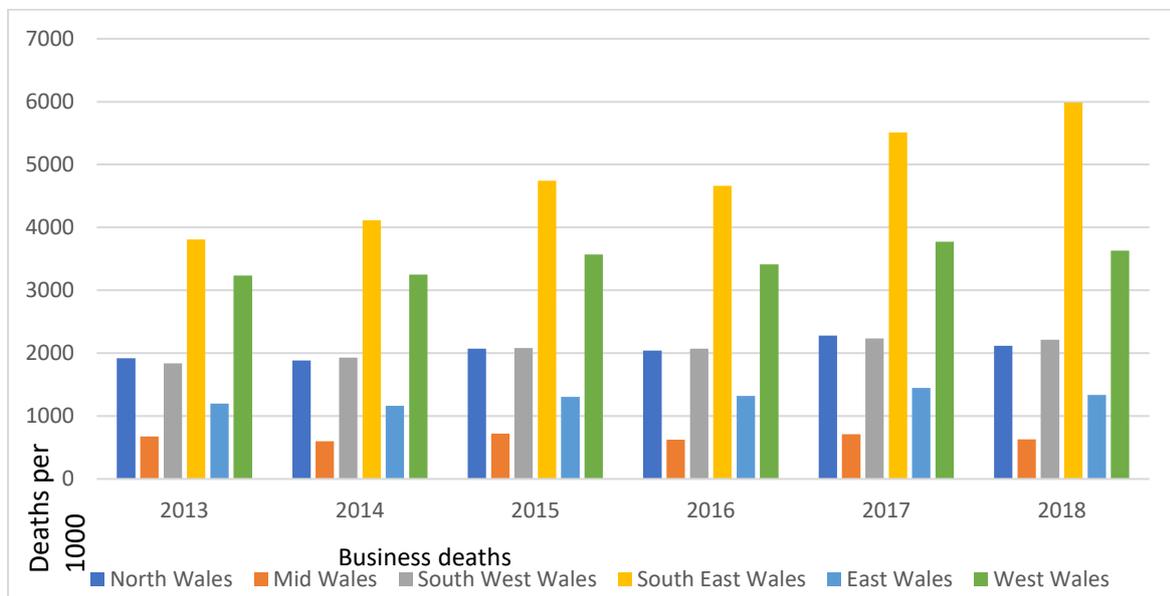
Source: Business Demography, ONS [accessed April,2020]

Figure 12: Business births in the 10 Local Authorities of South East Wales



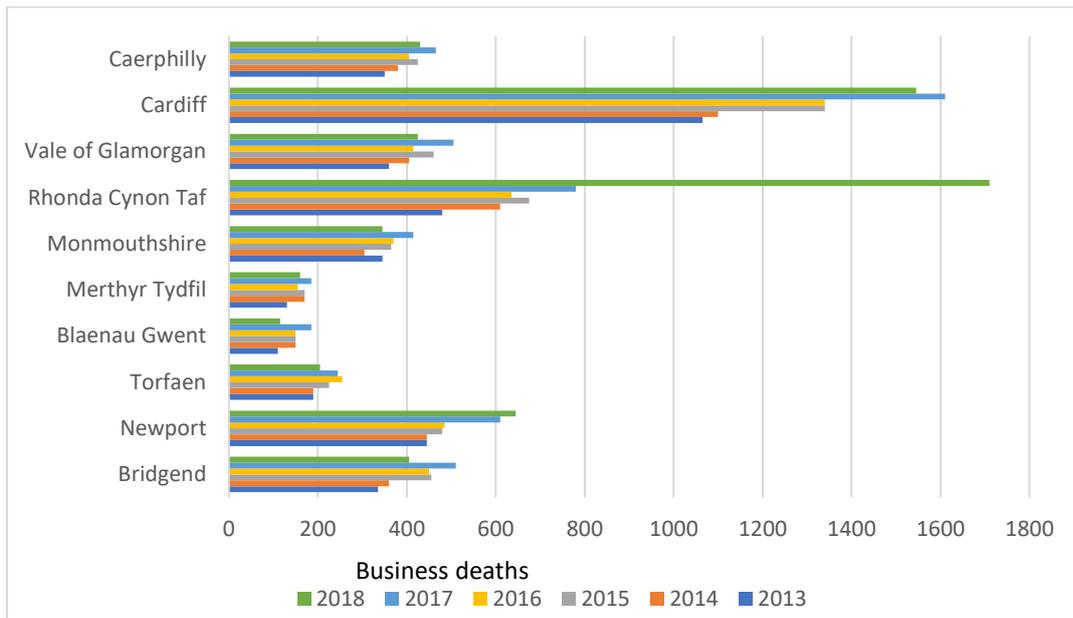
Source: Business Demography, ONS [accessed April,2020]

Figure 13: Business deaths in the Welsh region from the period 2013-2018



Source: Business Demography, ONS [accessed April,2020]

Figure 14: Business deaths in the 10 Local Authorities of South East Wales



Source: Business Demography, ONS [accessed April 2020]

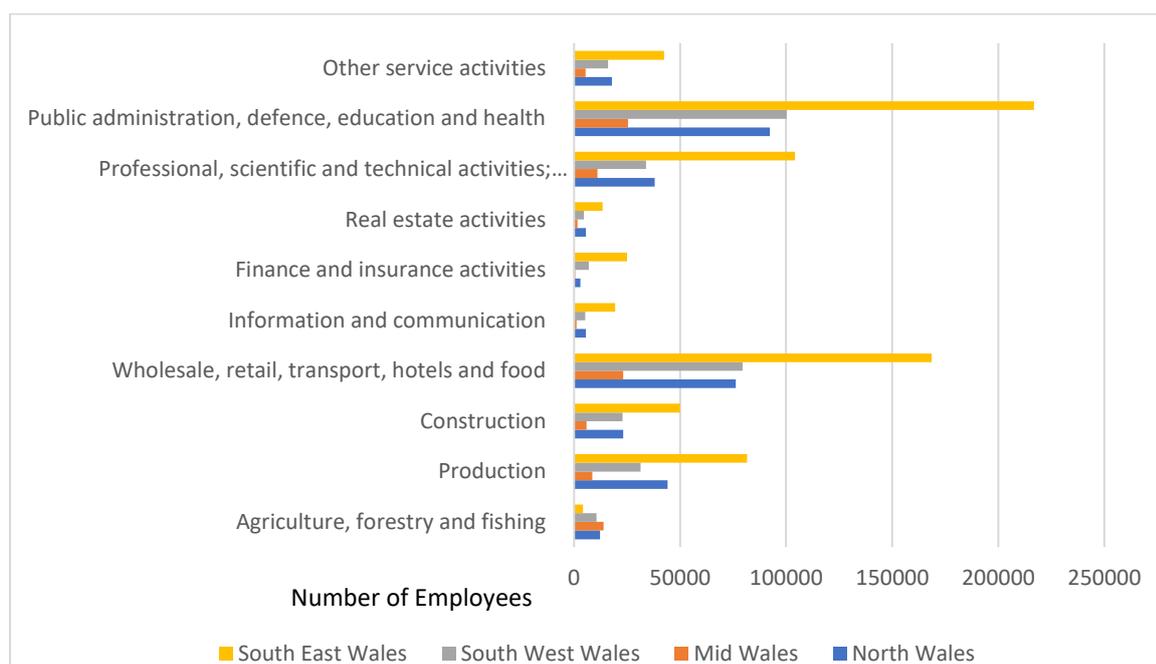
Key sectors

Table 6: Number of Employees by South East Wales Local Authority and Broad Industry in 2018

	Agriculture, forestry and fishing	Production	Construction	Wholesale, retail, transport, hotels and food	Information and communication	Finance and insurance activities	Real estate activities	Professional, scientific and technical activities; administrative and support service activities	Public administration, defence, education and health	Other service activities
Bridgend	100	9100	4700	14000	1800	600	800	7900	18300	3400
Newport	200	8400	5200	20600	2100	3500	1200	13300	21600	3600
Torfaen	200	6800	2600	8200	600	600	1100	3600	13000	1900
Blaenau Gwent	100	4200	1000	5000	100	300	400	1800	6200	1200
Merthyr Tydfil	100	3500	2000	6900	1400	200	600	2700	9500	1100
Monmouthshire	1900	5000	5100	13800	1000	1000	1300	6900	14400	2900
Rhonda Cynon Taf	300	11500	7100	21600	1000	900	1100	6700	24000	3300
Vale of Glamorgan	500	4100	3400	10200	1100	1200	1000	5000	12900	3500
Cardiff	600	16400	14700	56800	9700	16000	5100	48100	80700	18700
Caerphilly	200	12600	4000	11600	600	700	800	8200	16100	2800

Source: Annual Population Survey, ONS (2018)

Figure 15: Workplace Employment by Welsh region and Broad Industry in 2018



Source: Annual Population Survey, ONS (2018)

Skills development and employment plans in Wales have been based on the CCR Regional Skills Partnership which involves partnership and collaboration with educational institutions, industry and the Welsh government (CCR, 2019a). The CCR outlines the following priorities to address skills development and to address the problem of unemployment (CCR, 2019a):

- Creating opportunities to bring back the workforce who have been unemployed for a long time.
- Creating new jobs for the unemployed and increasing and adapting the number of apprenticeships or other skills programmes.
- Training people in relevant skills to enable them to compete globally.

CCR has also relaunched the CCR skills and employment board comprising a wide range of stakeholders including business entities, higher and further education, local authorities and the Welsh Government. The CCR and the Welsh Government have pledged to work with the Department of Work and Pensions to co-design future employment support in Wales from 2017, for people with disabilities and health conditions or those that have been unemployed for a long time (National Assembly for Wales Commission, 2017).

3. Infrastructure

CCR's Investment Framework sets out the three investment priorities: innovation, infrastructure and challenge; which are aligned to the CCR's targets of connectivity, competitiveness and resilience. A further £80m capital investment was made in next generation microelectronic assets at the Institute of Compound Semiconductor at Cardiff University (BEIS, 2015).

The investment priorities of CCR aim to stimulate economic growth in the region through upskilling, digital technology to improve connectivity and better transport facilities to provide more economic opportunities to the people living in the region and surrounding areas and to connect business, communities, jobs and services and facilities (CCR, 2016; Cardiff Capital Region, 2019a; WG, 2019).

This will be done through the deployment of £495m Wider Investment Fund along with the target of attracting an additional £4b investment from private finance (CCR, 2019). The priority areas of investment include schools and health infrastructure, transport, housing and telecommunications.

A major infrastructure project of CCR is the South Wales Metro. This aims to improve connectivity within the region alongside the development of Cardiff airport, digital connectivity and road and rail links (Welsh Government, 2015).

EU structural funds also play an instrumental role in progressing infrastructure development in Wales with a total of £721m spent in infrastructure projects in Wales covering a total of £740 for the period 2014-20 (WG, 2018b).

Areas where investments have been focussed include: improved telecommunication and transport links between east and west, developing the energy sector, investing in affordable housing, efficient public services, improving the quality of schools and developing the enterprise zones (Welsh Government, 2018). Investments in Wales funded by EU structural funds in 2018 include (WG, 2018b):

- £221m in enterprise zones;
- £185m in broadband providing superfast access to internet services in 691,000 premises;
- £124m in vibrant and viable places programme for flagship regeneration;
- £320m regeneration programme which led to a delivery of 1,851 jobs; supported 7,768 people into work and built 914 affordable and 961 market homes;
- £20m invested in 32 town for Town Centre Loan Plan which will further attract a £60m investment over the next 15 years;
- £263m invested in Wales to reduce the cost of flood and coastal erosion;
- The Welsh Government's Waste infrastructure programme invested £8.2m in Cardiff's Food and Organic Waste programme;
- The Welsh Government's Warm Homes Programme invested £104m for the period 2017-21 to create 25,000 warm and energy efficient homes. This has the scope to provide business employment for SMEs and large contractors in providing domestic installation services;
- £734m in the South Wales Metro; and
- A five year plan has been set out by the National Transport Finance Plan for the development of road, rail, bus and active travel improvements and includes £20m advanced manufacturing research institute and another £62m for a new broadband scheme to develop and improve a Superfast Cymru project (Welsh Government, 2018).

Broadband Technology

The annual report from Ofcom (2019) states that 165,000 homes in Wales (12%) have access to full-fibre broadband connections which is over 90,000 more than last year. However, the number of homes with access to superfast (at least 30 Mbit/s) broadband in Wales is currently at 93%, with ultrafast speeds (at least 300 Mbit/s) available to 31% of homes in Wales - a three percentage point increase from last year. The 10 local authorities in South East Wales are likely to have superfast broadband coverage mainly because most of the businesses are concentrated in these areas and so broadband services are likely to be better than rural areas.

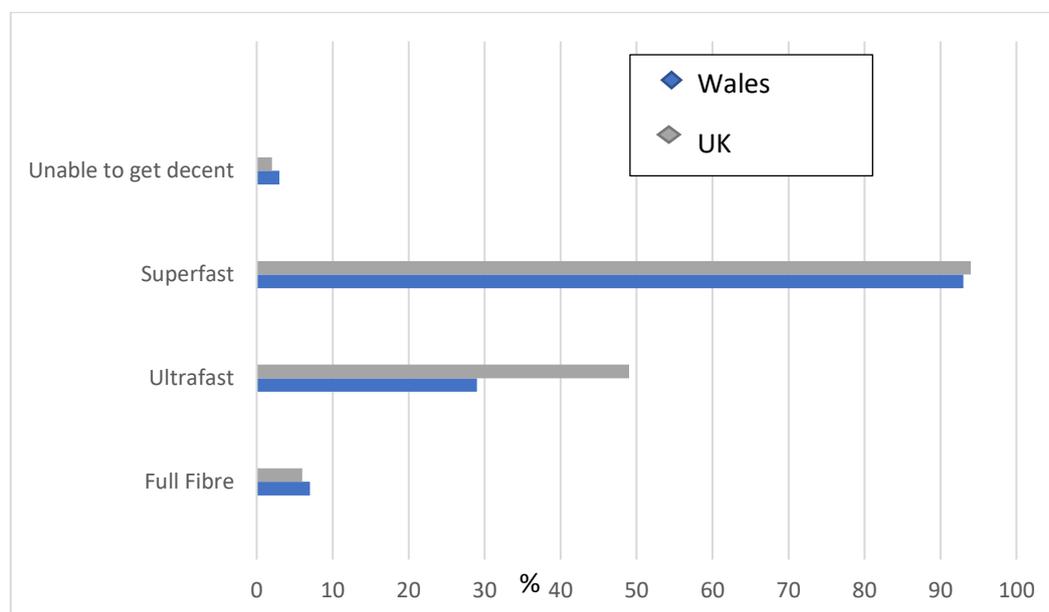
The gap in provision of broadband between Wales and the rest of the UK is greatest for ultrafast broadband (Figure 16). Table 7 shows the percentage of superfast broadband services coverage in South East Wales by local authority in 2019.

Table 7: State of broadband services by Local Authority in South East Wales in 2019

Local Authority	Current superfast coverage %
Caerphilly	97.9
Bridgend	98
Newport	97.4
Torfaen	97.1
Blaenau Gwent	98.1
Merthyr Tydfil	98
Monmouthshire	87.1
Rhonda Cynon Taf	98.5
Vale of Glamorgan	96.6
Cardiff	98.7
Caerphilly	97.9

Source: ISP News (2019)

Figure 16: State of Broadband Services in UK and Wales in 2019



Source: Ofcom (2019)

A key component of the development envisaged in the CCR Industrial and Economic Growth Plan (2019) is an innovative, superfast digital infrastructure system which involves moving to the next generation of broadband and developing the region as one of the fastest growing tech hubs in the UK. This involves:

- Exploring the case for direct international connectivity;
- Developing mobile infrastructure across 4G and 5G technologies;
- Increasing wi-fi services across public transport;
- Digital solutions for big problems, such as smart housing, citizen payments and open data challenges;

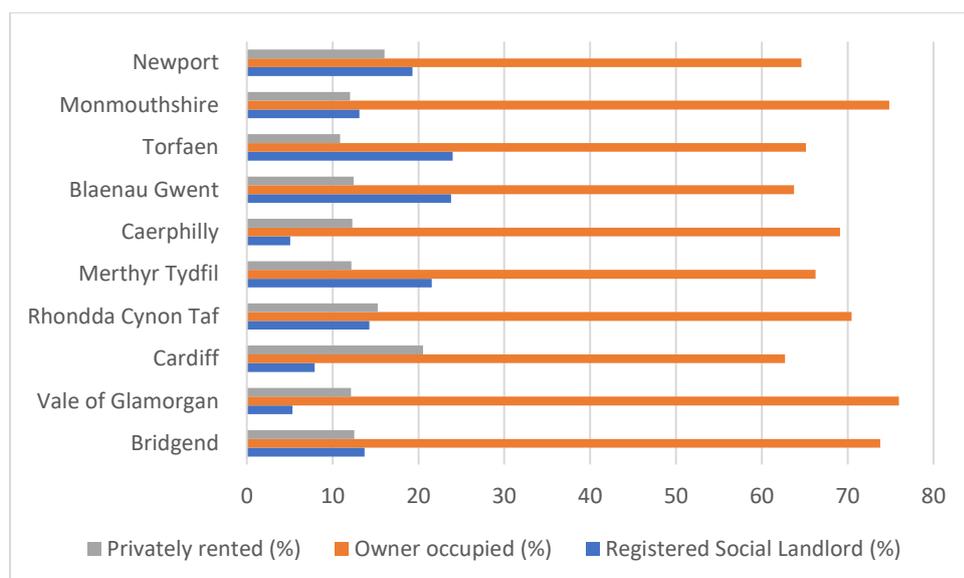
In addition to this, the Science and Innovation Audit have an investment focus on creating microelectronics, wireless, data analytics, autonomous systems, vision, remote sensing, satellite applications, cloud computing, quantum engineering, cyber security and virtual reality (BEIS, 2015). Business cases are currently being developed to create a digital innovation hub through collaboration

between universities and industries with the potential to develop smart cities, digital media, autonomous systems and digital health.

Housing

Figure 17 illustrates the dwelling stock estimates in South East Wales by local authority in the region. A housing investment fund has been set up by the City Deal to support housing growth and development in the region.

Figure 17: Dwelling Stock Estimates by Local Authority and Tenure for South East Wales



Source: Welsh Government (2019c)

4. People

The population of South East Wales was recorded as 1,532,828 in 2018 which is about 48.8% of the Welsh population. As the city of Cardiff is more developed than surrounding areas it accounts for 24% of the region's population. Rhondda Cynon Taff (240,131) and Caerphilly (181,019) are the next two populous cities with Merthyr Tydfil and Blaenau Gwent having the lowest (Welsh Government, 2019f).

The working age of the population in South East Wales increased by 2% between 2008 and 2018 compared to the rest of Wales (-0.2%). At the local authority level, both Cardiff (5.3%) and Newport (7.9%) recorded an increase in the working age population compared to the other local authorities in the region (Welsh Government, 2019f).

Table 8: Employment in Wales, UK and South East Wales

Rate of Employment %	South East Wales	Wales	UK
2019	73.4	73.5	75.6
2018	73.2	73.1	75.0
2017	71.8	72.4	74.7
2016	70.0	71.1	73.7
2015	69.5	70.3	73.2

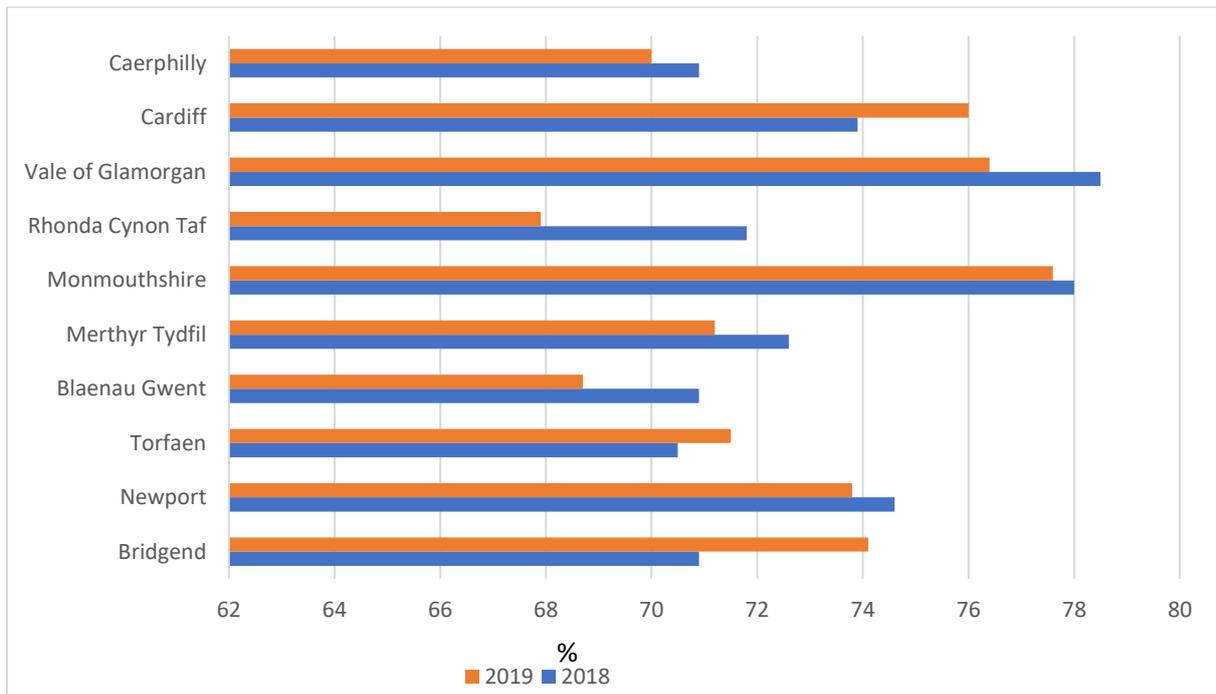
Source: Annual Population Survey, ONS [accessed May 2020]

Table 9: Unemployment in Wales, UK and South East Wales

Rate of Unemployment %	South East Wales	Wales	UK
2019	4.1	4.3	3.9
2018	5.1	4.6	4.2
2017	5.6	4.8	4.5
2016	5.1	4.7	5.0
2015	6.9	6.2	5.4

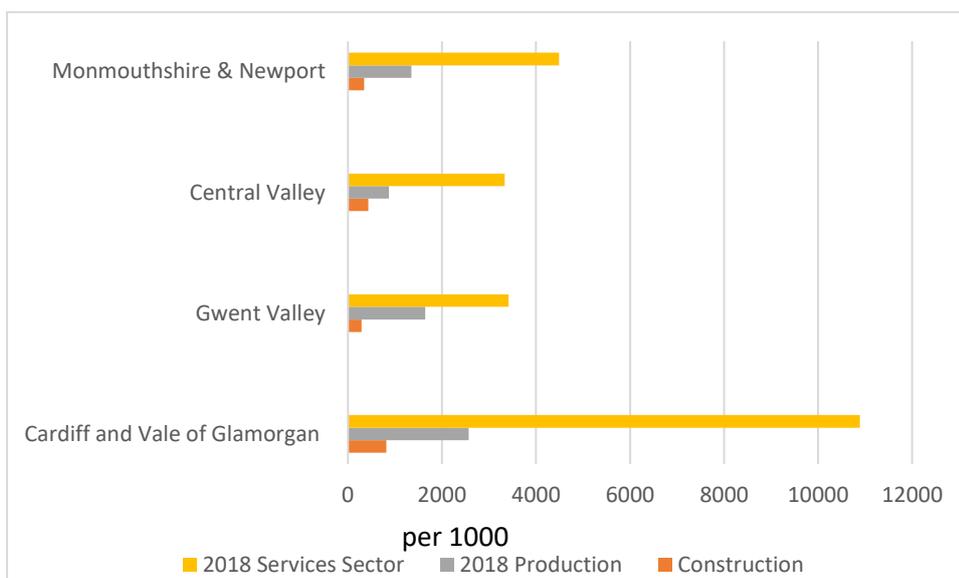
Source: Annual Population Survey, ONS [accessed April 2020]

Figure 18: Employment rate in South East Wales by Local Authority, 2018 and 2019



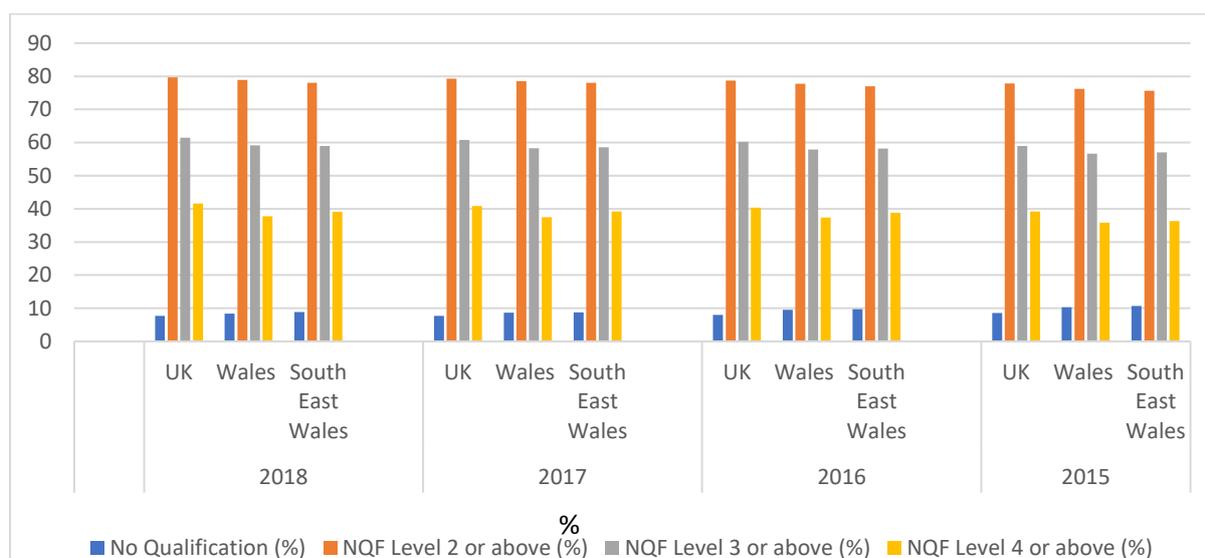
Source: Annual Population Survey, Office for National Statistics [accessed April 2020]

Figure 19: Employment by industry and local authority in South East Wales, 2018



Source: Regional Accounts, ONS [accessed April 2020]

Figure 20: Educational qualifications by region, 2015-18



Source: Higher Education Statistics Agency 2018/19

Labour market analysis undertaken by the Regional Skills Partnership identified the following sectors as critical for skills development in the region (CCRSP, 2019a). These include:

- Advanced materials and manufacturing;
- Automation;
- Construction;
- Financial, legal and professional services;
- Human foundational economy including education, health and social care;
- Digital;
- Aerospace; and
- Graduate retention.

5. Place

Index of Multiple Deprivation

Although South East Wales has two major urban areas and generates a large share of economic activity in Wales, it also contains a high proportion of deprived areas. Of the 10% of most deprived areas in Wales, 66% of them are in South East Wales (Regional Index of Multiple Deprivation, 2014). This is reflected in the fact that South East Wales contains eight of the top 10 most deprived areas in Wales - Caerphilly (St James and Twyn Carno), Cardiff (Splott), Rhondda Cynon Taff (Tylorstown and Pen-y-waun), Bridgend (Caerau), Merthyr Tydfil (Merthyr Vale) and Newport (Pillgwenlly), (Table 10).

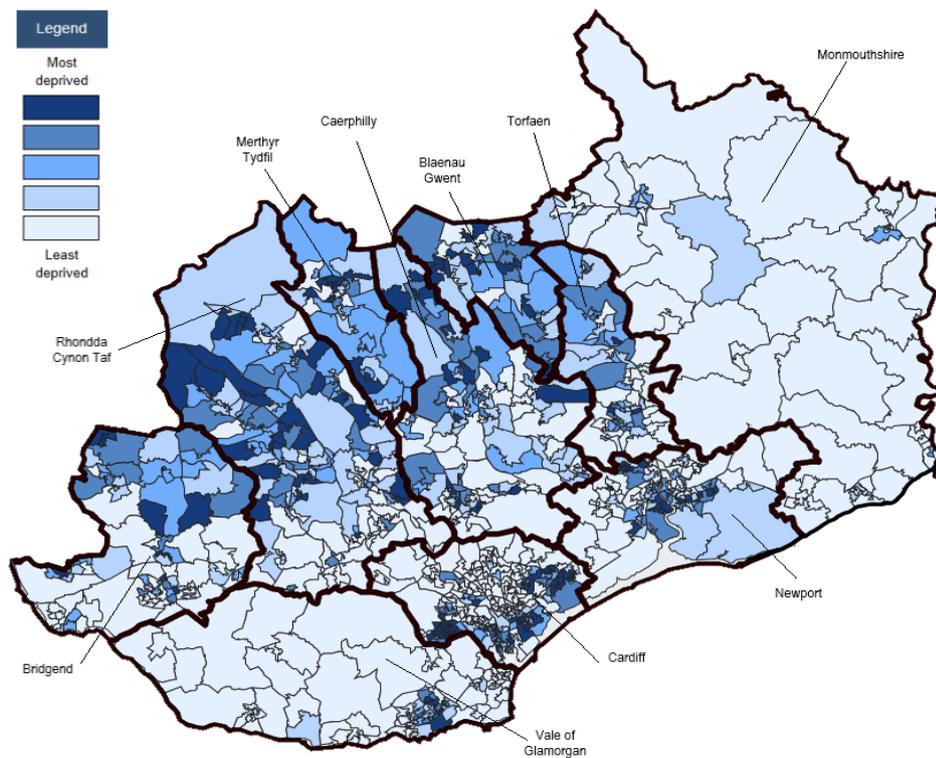
Table 10: Welsh Index of Multiple Deprivation, 2014

Economic Region	% of Total Number of LSOAs*	% of Most deprived 10% of LSOAs in Wales	% of Most deprived 20% of LSOAs in Wales	% of Most deprived 30% of LSOAs in Wales	% of Most deprived 50% of LSOAs in Wales
North Wales	22%	12%	13%	14%	18%
Mid and SW Wales	29%	21%	23%	22%	26%
South East Wales	49%	66%	64%	64%	56%
Wales	100%	100%	100%	100%	100%

Source: Welsh Government (2015b)

*The Lower Layer Super Output Area reports small area statistics in England and Wales (NHS Digital, 2020)

Figure 21: Areas of Multiple Deprivation



Source: Welsh Government (2015b)

Anchor institutions

Anchor institutions include hospitals, community organisations, higher education institutions, other academic institutions, cultural institutions including museums, libraries, performing arts facilities and a diverse body of businesses, enterprises and commercial bodies, all of which contribute to the growth and development of the economy. To support economic growth by boosting innovation and technology, a partnership between universities, anchor companies and other organisations is beneficial (Morgan et al, 2017).

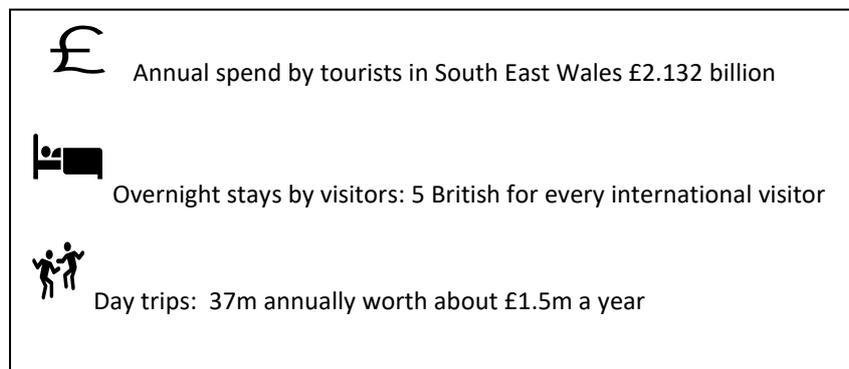
Studies have shown that anchor companies are unevenly distributed across Wales which makes it difficult for collaboration and partnerships to grow and develop in the region (Smallbone et al, 2015; Williams, 2017).

CCR consists of three Enterprise Zones which are Central Cardiff, Cardiff Airport and St. Athan and Ebbw Vale. Headquarters based in these include Admiral Insurance Group (global headquarters), Deloitte (Global Risk Assessment Centre), Atradius (UK headquarters), BBC (Finance Centre of Excellence).

Tourism

South East Wales has been a tourist hot-spot because of its iconic historical sites such as the Big Pit, Caerphilly Castle, Castell Coch and St. Fagans, along with its natural areas of outstanding beauty. Tourism contributes to the local economy through expenditure and job creation (South East Wales Regional Economic Framework, 2015).

Table 11: Tourism in South East Wales between 2014-16



Source: Welsh Government, 2018d

6. Environment

The Regional Economic Growth Plan for CCR outlined key priorities to support businesses in a sustainable way. These are decarbonisation, innovation, entrepreneurship and headquarters, exports and trade, high quality employment and skills development, research and development, automation and digitisation. The National Development Framework outlines the requirement of the Welsh Government to identify green belts through a strategic development plan to manage urban growth in South East Wales (NDF, 2019).

The Well-being of Future Generations Act (2015) made it obligatory for public bodies to meet well-being goals with sustainable development objectives. This includes a requirement to maintain a biodiverse and healthy ecosystem that can enhance and support a social, economic and ecologically resilient Wales. This requires partnership working between the local authorities and various stakeholders in order to uphold local food production, safe guard and create employment opportunities including green

jobs, assist in developing climate adaptation programmes to cope with climate stress such as floods, and build coastal resilience. This will be done through the maximisation of green infrastructure in managing water and temperature regulation; providing high quality greenspace for health and well-being; attracting inward investment in a sustainable way by ensuring that biodiversity, resilience and eco-connectivity continues to thrive and develop across the South East Wales region(WG, 2015b).

The Environment (Wales) Act (2016) made it mandatory to achieve the net emissions target of 80% reduction by 2050, through the interim targets for 2020, 2030 and 2040; and the five yearly carbon budget which sets out limits on the amount of emissions permitted in Wales.

The Welsh Government Natural Resources Policy (2017) stipulated actions to address air and noise pollution and to improve the ability of the natural environment to absorb pollutants through their greening programme. The programme includes building green infrastructure and planting trees including restoring sensitive habitats damaged by air pollution.

The Welsh Natural Resources Policy sets out the national priorities for the sustainable management of natural resources which includes delivering nature-based solutions, increasing resource efficiency and renewable energy and taking a place-based approach. The South East Wales Networked Environment Region, developed under the framework of the Wales Spatial Plan and in partnership with the Countryside Council for Wales, will address these objectives and promote sustainable development.

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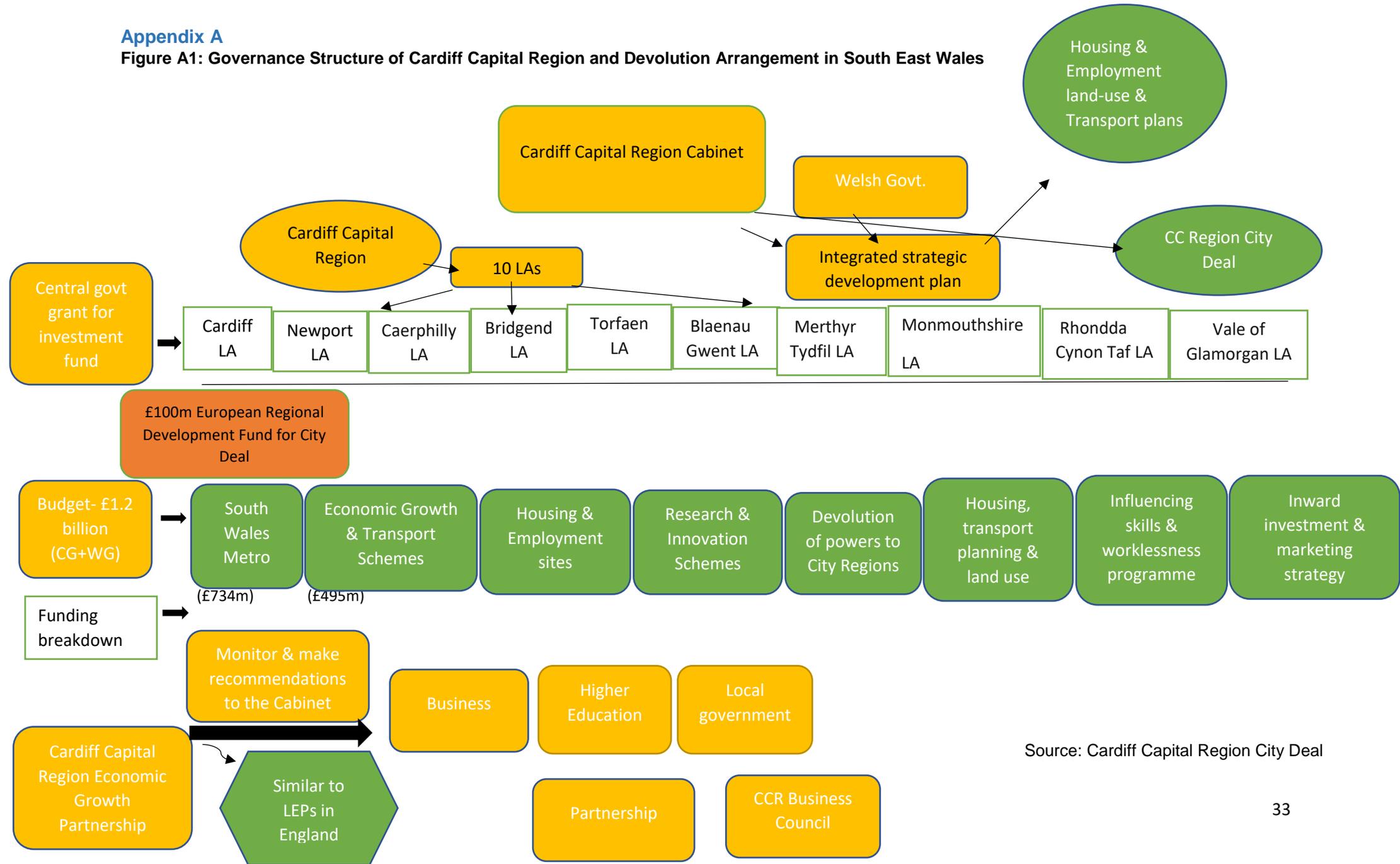
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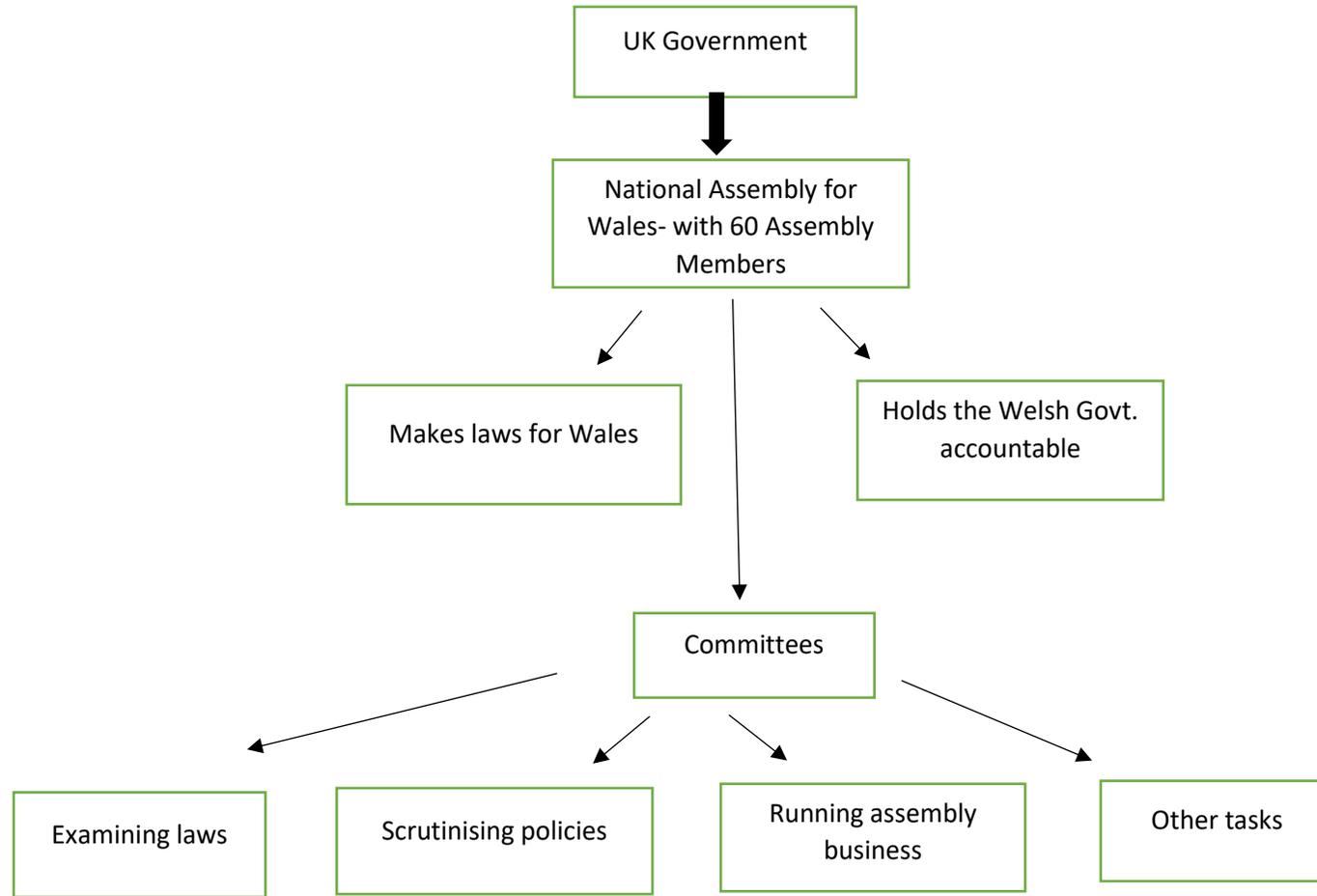
Appendix A

Figure A1: Governance Structure of Cardiff Capital Region and Devolution Arrangement in South East Wales



Source: Cardiff Capital Region City Deal

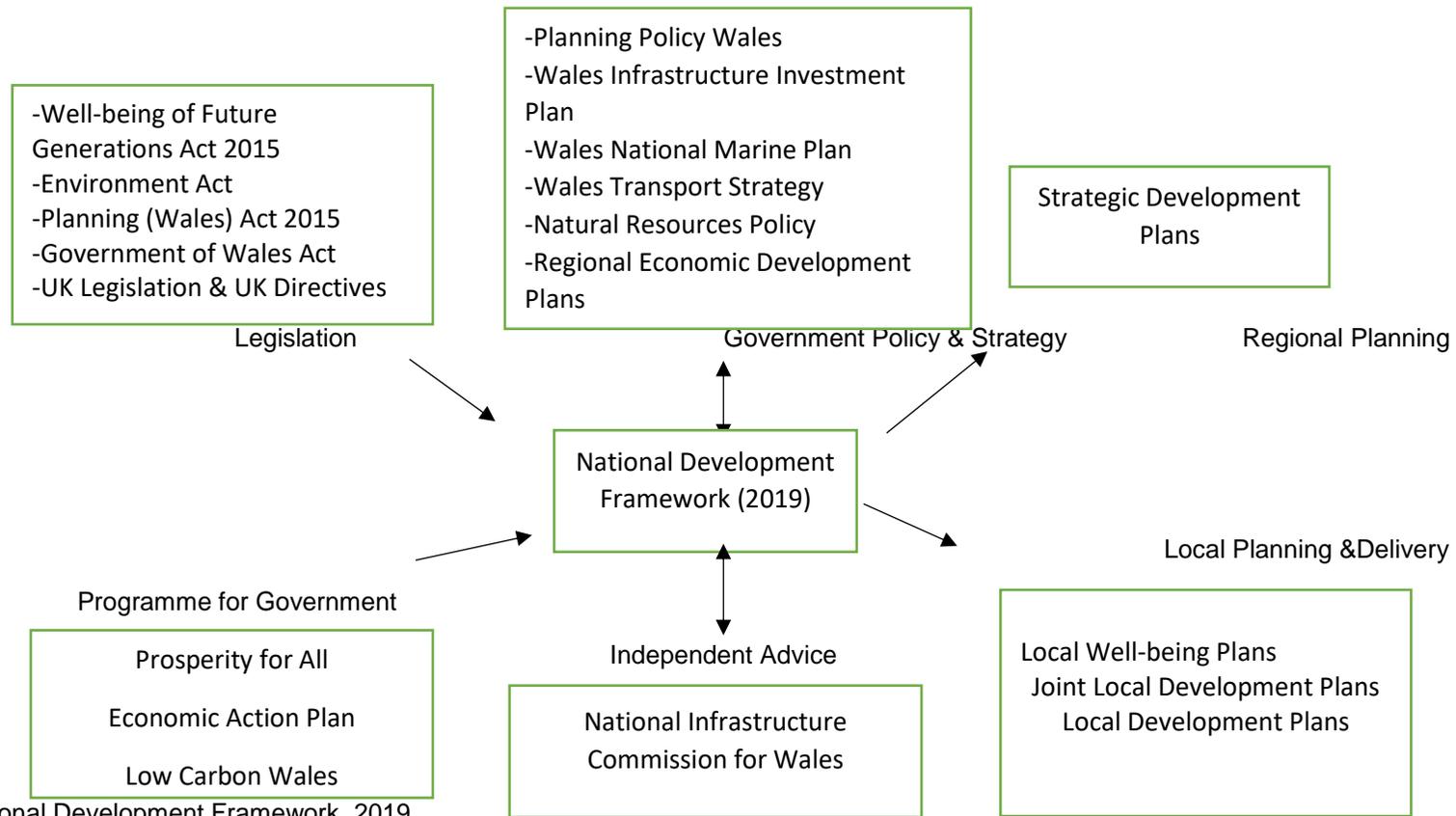
Figure A2: Devolution Structure in Wales in 2016



Source: Welsh Government, 2016

Figure A3 illustrates the influence of the National Development Framework on the various policies, strategies and development plans in Wales and indicates how the regions are supposed to design their economic development plans strategically through City Deals by aligning and embedding the objectives of the NDF along with the well-being goals. The National Development Framework is influenced by the Planning Policy Wales and the Wellbeing of Future Generations Act which helped shape not only the Welsh Government's strategy and policy planning but also regional policy planning in Wales. This includes planning policies such as the National Infrastructure Marine Plan, the Transport and Natural Resources Plan and includes regional economic planning through Local Development Plans, Strategic Development Plans and Local Wellbeing Plans. Priorities set out in both Planning Policy Wales and the National Development Framework influences all regional strategic planning in Wales including South East Wales.

Figure A3: The National Development Framework (NDF) relationship to other plans and policies



Source: National Development Framework, 2019

Figure A3 illustrates a two-way relationship between the various governments strategies and policies that helped shape the NDF on the one hand and includes the Transport Strategy, Welsh National Marine Plan and Low Carbon Wales plan. On the other hand, it provided a means of delivery and framework for maximising the potential outcomes.

The NDF and Marine Plan work together to provide a framework for the management of change around the coastal region. Co-ordination between marine and terrestrial planning is important to sustain and facilitate the development of port, harbour and marine businesses and associated enterprises; coastal communities; tourism opportunities; energy generation; and seascapes. The emerging Welsh National Marine Plan has informed the preparation of the NDF and, where relevant, should inform Strategic and Local Development Plans and decisions made through the development management process.

The Prosperity for All Economic Action Plan (Figure A4) sets out the Welsh Government's ambition to leverage support for the Economic Contract and Economy Futures Fund through the principles of Prosperity for All (Welsh Government, 2017):

- a) Public investment with a social purpose;
- b) Simplification;
- c) A stronger regional voice; and
- d) A focus on the long-term

Figure A4: Prosperity for All, Economic Action Plan



Source: Welsh Government (2017)

Appendix B

Industrial history and economic restructuring

Wales was the first country in the world to industrialise because of the prevalence of natural resources such as coal and water; and investment has been driven by the external flow of capital from elsewhere. In the subsequent years, the steady decline of the coal, steel and iron industry was not a deterrent in shifting the position of Wales. Instead, over the post-war period, Wales became adept at leveraging private and public funds nationally to fund investments (Medway, 2013). The Welsh Development Agency (WDA), established under a Labour government in 1975 identified and located potential new international sources of funds for Welsh economic growth (Meadway, 2013). These funds were used to invest in light manufacturing industry and with the availability of cheap labour, access to markets and WDA support, new investments were being made in the region. With the turn of the 21st century Wales continues to remain at the forefront of three key industries viz. aerospace, automotive and life sciences (Welsh Government, 2014).

Even though the jobs were poorly paid, 30% of all Welsh manufacturing employees were working in foreign-owned plants by 1992 (Medway, 2013). The Welsh economy grew faster than any other UK region or nation over this period, averaging a growth rate of 4.5% from 1986 to 1990, compared to a UK growth rate of 3.1% (Medway, 2013). However, with the onset of globalisation, the entire economic landscape of Wales transformed as manufacturing plants moved from Wales to other parts of the world where labour was significantly cheaper than in Wales. By 2009, Wales had fallen from one of the best to worst performing region or nation for attracting inward investment.

Studies have found that the GVA per capita in Wales is about 75% of that of the UK as a whole; GVA per hour worked in Wales is 84.6% (Meadway, 2013), an inevitable outcome of higher inactivity rates in Wales. The natural corollary therefore was to increase economic activity by creating more jobs to improve overall economic performance. Even though Wales was the first to industrialise and retained a higher output and employment in manufacturing than the UK average, yet the speed at which it declined illustrated the dangers of relying on external and high cost-sensitive investments (Meadway, 2013). Gradually, the region moved from manufacturing into the service sector even though it created poor quality jobs. For instance, only 60,000 net jobs were created in finance from 1979 to 2007, set against the 4 million lost in manufacturing over the same period (Meadway, 2013). From 1989 to 2008, the public sector contributed to 43.2% of GVA growth in Wales, with an exceptional 60.8% contribution in the period 1989–1996. Historically, the rate of productivity continued to decline within the service sector and this was further aggravated by the financial crash of 2008-09.

Areas where devolved powers can be exercised in Wales

The Government of Wales Act 1998 led to the creation of a devolved government in Wales with a 50.3% voting for a devolved National Assembly for Wales. The Government of Wales Act 2006 enabled the Assembly to pass primary legislation on devolved matters.

- As Schedule 7 of the Government of Wales Act 2006 allowed the National Assembly to legislate on devolved matters, the Welsh Government can officially exercise executive powers in 21 subject areas. These include agriculture, forestry, fishery, health and health services, economic development, environment, housing, social justice, tourism, devolved but limited taxation powers. Responsibility for fiscal and macroeconomic policy and public expenditure allocation across the UK remains with the HM Treasury.
- Devolved primary legislation takes the form of acts of the National Assembly and have the same status in law as acts of Parliament, and they only have effect in Wales. Secondary legislation

(orders, regulations and so on) is usually made by Welsh Ministers and approved by the Assembly.

- Current devolution plans within the UK allow for the development of national level plans within the devolved nations. With the establishment of the Local Government Act in 1972, it has given more scope to the national and regional policy making in Wales by local authorities. This not only led to the establishment of counties which have the power to pass legislations but also provide other services such as delivering strategies and targets, set and monitored by the Welsh government.
- UK legislation that applies to Wales may give the Welsh Ministers powers to make secondary legislation to implement it in Wales (WG,2016). For example, until the National Assembly passed the Housing (Wales) Act 2014, the framework for statutory homelessness services in Wales was found in the UK's Housing Act 1996. This piece of legislation gave priority to those in need of assistance and ran the risk of becoming homeless. This is illustrative of how a devolved government in Wales can pass legislation through devolved institutions such as law-making, funding and taxation to address issues that are critical to Wales and needs to be prioritised as a matter of urgency.