

Regional Employment & Skills Plan

South West & Mid Wales

July 2016



Regional Learning and Skills Partnership
Partneriaeth Dysgu a Sgiliau Rhanbarthol

South West & Mid Wales
De-Orllewin a Canolbarth Cymru



Ariennir yn Rhannol gan
Lywodraeth Cymru
Part Funded by
Welsh Government

Regional Strategic Planning for Local Skills

The geography of the South West and Mid Wales Regional Learning & Skills Partnership covers six Local Authority areas. This plan will support the work of the Swansea Bay City Region, the Growing Mid Wales Partnership and the Haven Waterway Enterprise Zone, by taking close consideration of the identified skills priorities for those areas and ensuring synergy where possible.



Contents

Foreword	3
Section 1	5
Background	
Section 2	9
Policy Context	
Section 3	23
Aspirational Economy	
Section 4	47
Foundational Economy	
Section 5	59
Skills Supply Information Summary	
Section 6	67
Conclusions & Recommendations	
Section 7	71
Annex and Acknowledgements	
Section 8	77
Sectors at a Glance	



Regional Learning and Skills Partnership
 Partneriaeth Dysgu a Sgiliau Rhanbarthol
South West & Mid Wales
 De-Orllewin a Canolbarth Cymru

**For more information contact the
 Regional Learning and Skills
 Partnership via info@rlpsww.org.uk**

Foreword

I am delighted to introduce the Employment and Skills Plan for the South West and Mid Wales region. This Plan has been developed in collaboration with employers; the Swansea Bay City Region Board; Growing Mid Wales Partnership and the skills providers across the region and sets out the priorities required to address the skills deficit and improve employment in the area.

The political landscape is changing and there are many opportunities for this region to improve its' economic transformation through new and exciting projects that will be transformational, creating new jobs and skills not only for the region but for the whole of Wales. The challenge ahead is to ensure that new and existing employees are prepared to grasp the emerging opportunities and our Employment and Skills Plan is the first critical step on this important journey.

The ambition of both the Swansea Bay City Region Board and the Growing Mid Wales Partnership is to transform the future economic success of the region through the delivery of key transformational projects. This will be achieved through:

- **Improved employer engagement**
- **Improving educational attainment**
- **Increasing skills in line with the aspirational projects**

The region is now at a pivotal point in respect of managing capacity to ensure the success of the economy. This success will require the growth and sustainability of a capable, flexible and competent workforce, achieving the appropriate levels of education and skills linked to our economic strengths.

During the next few years there are many key projects being developed within the region that will require a skilled and competent workforce, many of these skills will be new to the region and will need to be introduced into the Colleges and Universities or through Apprenticeship opportunities, building a knowledge-rich, creative economy. It is critical that the region responds to new and emerging opportunities, for example within manufacturing and engineering technologies of the new projects. This will demand the highest levels of education and skills development in our entire workforce, from the youngest apprentices through to the entrepreneurial leaders of our companies.

There will be a shift in the composition of the workforce over the next few years and this will be an opportunity for the region to be 'ahead of the game' and increase the economic opportunities, prosperity and importantly the GVA of the region. Critical to this achievement is the on-going skills development that will be required in the region over the next few years.

Examples of key projects emerging in the region include:

Aberystwyth Innovation and Enterprise Campus

A new state-of-the-art, internationally recognised facility to attract further research funding so that companies and researchers can undertake collaborative research projects to boost the bio-economy.

Aberystwyth Veterinary Hub

A joint venture between Aberystwyth University and Royal Veterinary College looking at the development of a veterinary School for Wales.

ARCH

Health and science working together on a multi-location high technology development based on future medical solutions.

Computational Foundry

The £31M Computational Foundry based at Swansea University's Bay Campus will transform Swansea and the region as a global destination for computational scientists.

IBERS

Research & teaching centre at Aberystwyth University in response to challenges in food security, bio-energy and sustainability.

Swansea Bay Tidal Lagoon

Harnessing indigenous, low carbon electricity supply that is both affordable and sustainable long-term.

Swansea Bay City Deal

Addressing the integrated universal themes and challenges of energy, health and well-being and economic acceleration through digital networks.

Yr Egin

The relocation of S4C from Cardiff to Carmarthen.

The development of these projects will offer a challenge for workforce development alongside other major infrastructure developments across Wales. These will require very similar skills including the rail electrification from London to Swansea; the M4 Improvement around Newport; the Cardiff Metro; the Circuit of Wales; Wylfa B and Hinkley Point.

Across these projects we expect growth and demand for investment in:

- **Engineering and innovative manufacturing**
- **Construction**
- **Healthcare**
- **Low carbon and environmental industries**
- **Creative and digital**
- **Financial and business services**

The role of businesses in setting the pace will be critical for the success of the region. This will be achieved through their investment in future skills, offering work placements and real-world exposure to young people to inspire and engage them in developing future technologies, products and services. For this to be achieved, we need to harness the passion and commitment of leaders, teachers and advisers. Their work with young people, the unemployed and those currently in work, should inspire and stretch the capabilities and aspirations of their students/employees.

This plan aims to set out how we will create an effective infrastructure to support the development of skills in the region that will lead to high levels of employment, a skilled workforce and prosperity in the region. This is a working document that will have an additional iteration during the Autumn which will focus on the additional skills requirements of some of the key projects including the City Deal and Tidal Lagoon as they progress through the approval stages. The plan update will also reflect any other major changes in the Growing Mid Wales and Haven Waterway Enterprise Board regions.

We welcome your feedback and comment on this document as we work to influence the skills development necessary to meet our challenging ambition for the region.



Barry Liles

Chairman Regional Learning and Skills Partnership

Section 1

Background

Regional Employment & Skills Plan South West & Mid Wales

1.1 Purpose

The Employment and Skills plan for South West and Mid Wales has been developed between January and July 2016 to inform and support the Welsh Government's strategic approach to the delivery of employment and skills, in conjunction with the other two Regional Skills Partnerships (RSPs).

In line with the Regional Learning & Skills Partnership's geography this plan aims to support the work of the Swansea Bay City Region and the Growing Mid Wales Partnership, taking close consideration of the identified priorities for those areas, ensuring synergy where possible. Both areas have challenges due in part to their differing geographies; ranging from the urban areas of Swansea with its wide employment make up and significant transportation links to the remote and rural areas of Mid Wales with low population densities and a large shared border with the west of England and the Midlands which are an important economic influence.

As identified by Welsh Government, July 2016 is the optimum time to influence future provision and there are a number of key curriculum areas which the plans aim to influence, these include:

1.1.1 Apprenticeships & Vocational Qualifications

Four sectors will be identified for a recommended increase and decrease of Welsh Government Apprenticeship investment.

1.1.2 Further Education

The priorities identified at a regional level will be considered as part of the Further Education (FE) and Local Authority (LA) planning process and will be articulated in guidance issued during the cycle.

1.1.3 Higher Education

The current DfES remit letter to HEFCW is explicit that Higher Education Institutions should; *'engage fully with, and take account of regional employment and skills plans when making decisions as to where to prioritise higher level skills delivery, including undergraduate routes where appropriate'* and that; *'work on skills demand, supply and utilisation in each of the regions should be reflected in institutional plans, ensuring delivery meets economic priorities'*.

Therefore, as a result skill shortage areas in degree and post-graduate qualifications will be identified in conjunction with the identification of good practice in Higher Education interaction with industry.

1.1.4 Traineeships

An element of the plan will state how interventions to support NEETS/ young people (including those funded using ESF) are complementary and do not duplicate Welsh Government mainstream programmes.

1.2 Process

1.2.1 Phase one - Demand

Phase one sees the identification and contextualisation of the key demand drivers for the region. Such information has been gathered from a range of both primary and secondary data and intelligence of both a quantitative and qualitative nature.

Integral to phase one is the analysis of a range of secondary evidence gathered from a plethora of sources, which include but are not limited to - Welsh Government, UK Commission for Employment and Skills and the Annual Population Survey. This secondary labour market intelligence (LMI) allows deduction of the region's performance in terms of the economy and education.

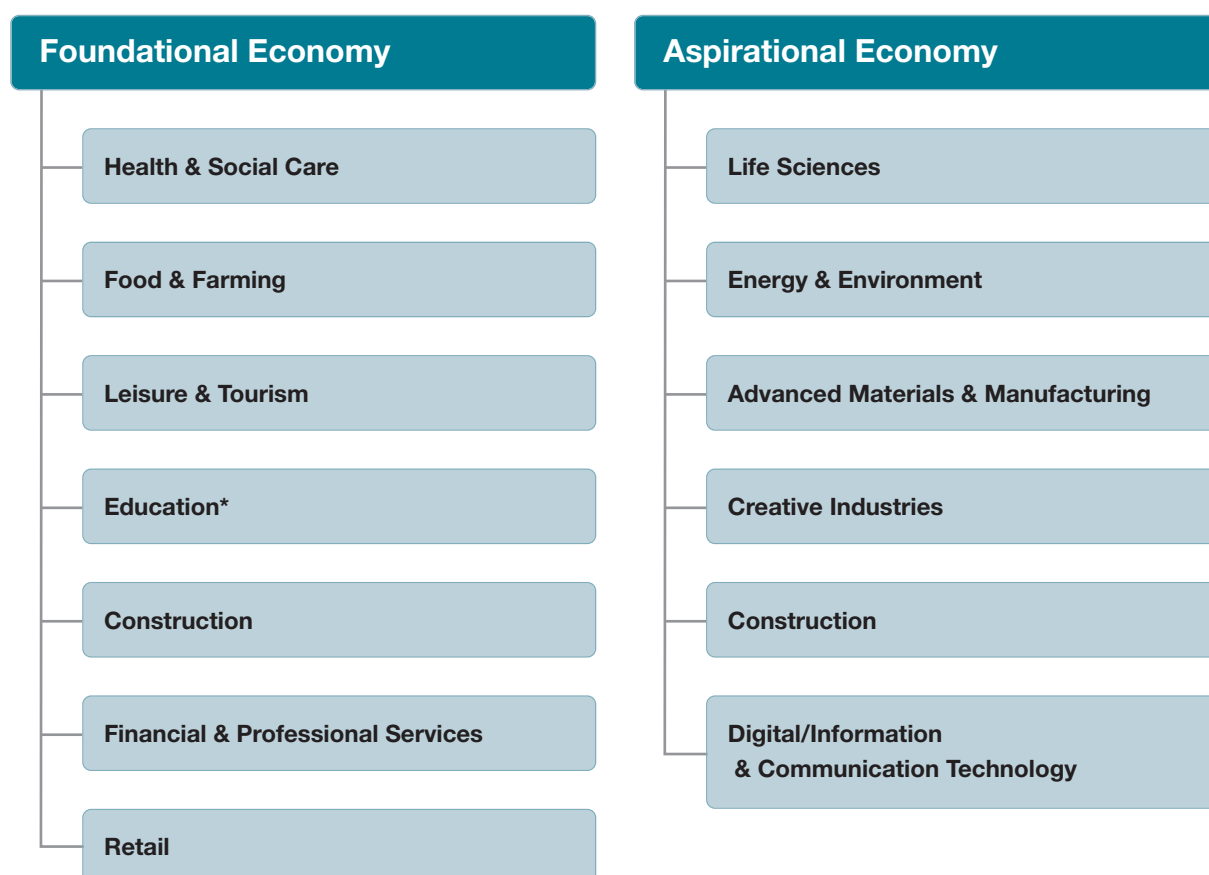
A further aspect of this phase and one which complements the aforementioned secondary LMI is employer led intelligence sourced from two primary research exercises into the workforce and skills needs of large companies in South West and Mid Wales. A large company survey was commissioned by the RLSP and WG to look specifically at companies with a workforce of over 150 employees and undertaken throughout April. An additional survey was disseminated electronically by the RLSP targeting all business types across the region and conducted between April and June. The findings have been analysed and combined to form the employers voice element of this plan. This level of employer engagement aims to confirm that this plan has considered not only secondary labour market intelligence but also the ‘real-time’ needs of the key employers within the region.

1.2.2 Phase two - Supply

Phase two will allow the opportunity for further engagement with employers, providers and key stakeholders. This engagement will underpin the work undertaken by the RLSP in the analysis of the curriculum supply information against the demand information identified during phase one. It is during this time that the appropriateness of curriculum provision will be determined and whereby recommendations will be made at a sector level.

1.2.3 The Sectors

The sectors focussed on in this plan have been included as they are deemed of significance to the region. Where possible these sectors have been categorised as pertaining to the aspirational or foundational economy, however, some sectors do show an over-lap between the two.



*Education is being identified as a sector as it is a key economic driver for the region.

Therefore for the purpose of this report it will be focussed on as being separate to the public sector.

1.3 Structure

Section 2

provides a policy context focussing primarily on mid to long term global challenges and trends and short term challenges for Wales and the UK, including local economic developments. This information is supported with the most recently available labour market intelligence where possible.

Sections 3 and 4

are split by the aspirational and foundational economies. Within each section are; an overview of the regional context, sector profiles and information on capital investments and major projects where possible.

Section 5

contains a summary of the skills supply within the regions' further and higher education institutions.

Section 6

outlines the conclusions & recommendations which have been drawn and agreed by the RLSP board.

Section 7

contains supporting annex documents and acknowledgements.

Section 8

details the full versions of the sector infographics found within the sector profiles.

Section 2

Policy Context

Regional Employment & Skills Plan South West & Mid Wales

2.0 Global Economic Trends and Future Challenges

The global economy continues to expand with increasing employment and the continued digitalisation of sectors placing a high emphasis on the employment and skills requirements of individuals.

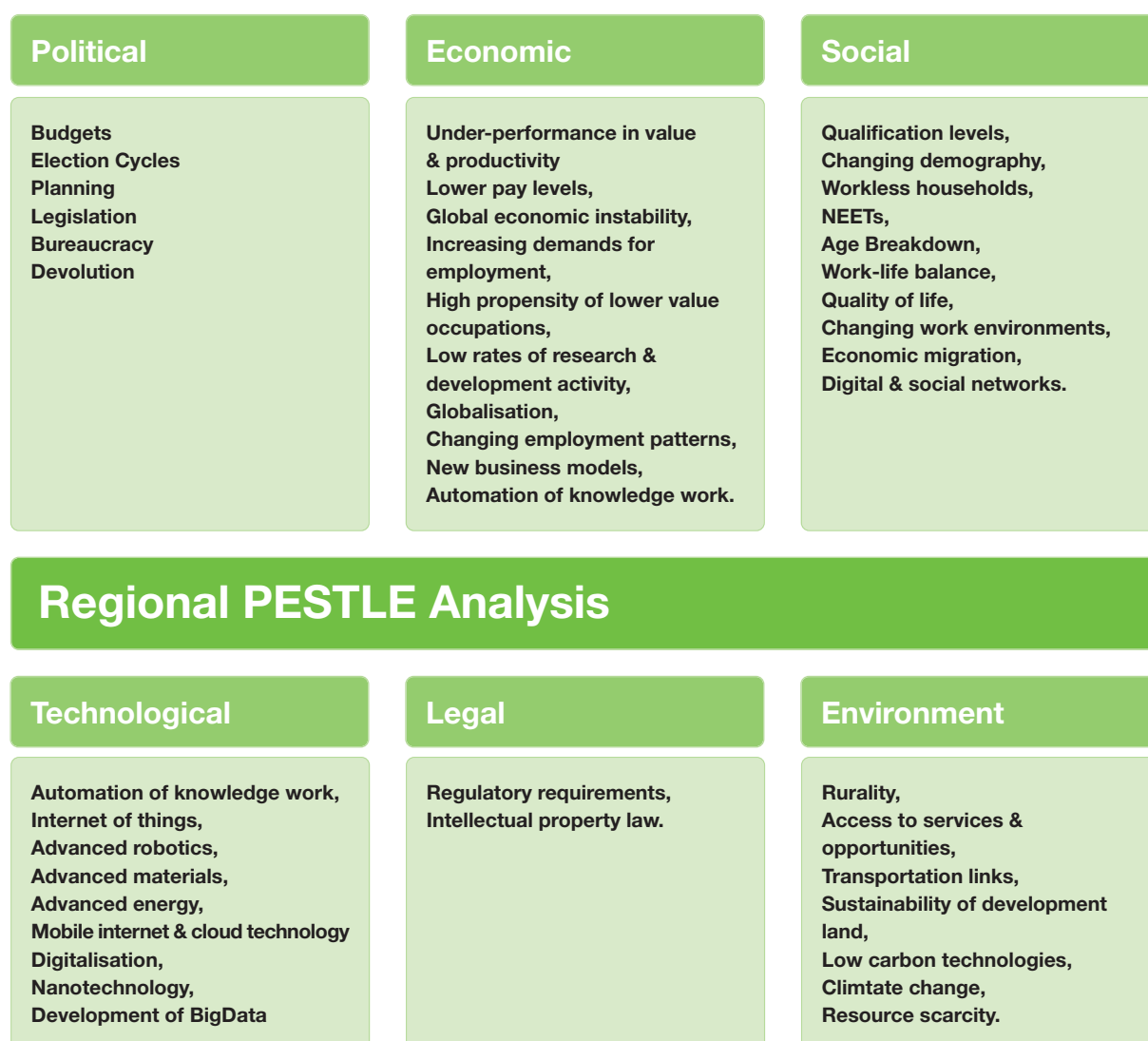
2.1 Global Trends to 2030

Economic change within the region will be driven by global trends that will change the way that individuals work and participate in the economy. These changes range from technological advancements to societal changes and a change in the population structure.

These drivers of change will be in the large part global and will influence the region both directly and indirectly, it is important to understand these changes to identify the opportunities that they will provide and to maximise the potential of the regions' enterprises and people.

For the region to succeed as a 21st century knowledge economy there is a need to look beyond 'future proofing' the present to preparing for and embracing the future.

Please refer to the regional PESTLE¹ below, to see the political, economic, social, technological, legal and environmental challenges and factors which could affect the region in the future.



The SWOT² analysis depicted adjacent details the strengths, weaknesses, opportunities and threats for the region.

Regional SWOT Analysis



2.2 Demographic and Societal Changes

Population changes will have a significant impact upon the regional workforce and the economic activity of the region. Overall global populations are rapidly expanding with the population doubling to over 7 billion within 50 years and a further 2 billion will be added to the population in the next 40 years³. Population growth has in recent times been led by emerging nations, however, the effects of migration may have an impact upon the population growth within the region.^{4 5}

¹ RLSP analysis. ² RLSP analysis

³ The Future' – Steria

⁴ <http://rlp.infobasecymru.net/IAS/themes/people/populationdata/tabular?viewId=1158&geold=1&subsetId=42>

⁵ <http://rlp.infobasecymru.net/IAS/themes/people/ethnicityandmigration/tabular?viewId=547&geold=1&subsetId=42>

The ongoing trend of 'Western Aging' will have a significant impact upon the demographics of the population and therefore its workforce. *'Those aged 65 and over will become a much larger share, rising from 17 percent to 30 percent of the population. Those aged 80 and over will rise from 5 percent to 12 percent and will become almost as numerous as the young population in 2060.'*⁶

At a regional level these trends are substantiated, with population estimates indicating that regional averages compare negatively with national averages. For instance, the regional average of individuals aged between 0 and 15 sits significantly lower (16.8%) than the national average (17.9%). Additionally, the proportion of individuals aged over 65 within the region reads 2.4% higher than national averages.⁷

The increasingly aging population and extended retirement age will have a profound impact upon the workforce structure with intergenerational working becoming increasingly evident and a workforce spanning 3 generations will be increasingly likely. *'The average age of the UK's labour force will increase over the coming decade, today's largest age band of workers is set to shift from 44-46 to 54-56 by 2020.'*⁸ There will be an increasing demand on employer's ability to maximise the knowledge and experiences of its older workforce whilst providing opportunities for the younger age groups. It is also important to note from a skills perspective that *'around 90 per cent of the current labour force have the potential to be active in the labour market a decade from now'*⁹

In addition, medical developments have meant that people are living with a greater number of chronic conditions which can affect their ability to participate in the workforce. However, technological advancements and further developments may also enable more individuals with chronic conditions to participate in the workforce.

2.3 Qualification Levels of the Workforce

Skills distribution in the UK as a whole presents challenges to productivity insofar as there are a large proportion of individuals with relatively few or no qualifications. A more specific and perhaps concerning issue is that the UK has a high proportion of its working population with poor basic skills of numeracy and literacy. Wales suffers from these aspects even more than the UK as a whole. However, analysis indicates that whilst this is the case, the percentage of those holding no qualifications in Wales has fallen year on year since 2002 and continues to do so. The most recent statistics show that 10% of the Welsh working age population hold no qualifications compared with 9.0% at a UK level. Closer inspection indicates that regional averages sit at 10.5%.¹⁰

⁶ *The Future' – Steria*

⁷ <http://rlp.infobasecymru.net/IAS/themes/people/populationdata/tabular?viewId=1158&geold=1&subsetId=42>

⁸ <https://www.gov.uk/government/publications/jobs-and-skills-in-2030>

⁹ <https://www.gov.uk/government/publications/ukces-employer-skills-survey-2015-uk-report>

¹⁰ <http://rlp.infobasecymru.net/IAS/themes/education/qualifications/tabular?viewId=588&geold=1&subsetId=42>

2.4 Technological Changes

Technological advances have had the greatest impact upon economies and employment with the development of the digital age. The continued advancements in both fixed and mobile communications has facilitated a significant increase in global trade.

‘Companies, entrepreneurs and individuals have more opportunities to participate. Governments and multinational companies were once the only actors involved in cross-border exchanges, but today digital technologies enable even the smallest company or individual entrepreneur to be a “micronational” that sells and sources products, services and ideas across borders.’¹¹

The UK Government Office for Science predicts that *‘the Internet is set to enter a second transformative phase, with a web of data adding structure, meaning and re-usability to online data and documents.’¹²* This also supports the trends towards the usage of ‘Big Data’ for analytics as well as cloud computing on a commercial scale.

The potential for 3D printing and other advanced manufacturing technologies could significantly alter the way that products are manufactured globally. This could cause a shift from a ‘just in time’ logistics approach to a location based ‘just in time’ manufacturing approach.

As with the majority of the priority sectors in the region, research and development within Higher Education is driving the development of technology that has the potential to capture investment from across the globe.

‘Although workers in some industries may be displaced by technology, this does not mean that businesses will be at risk of failing. Indeed, for many businesses the increased opportunity to automate their processes and functions will lead to improved productivity, profitability and competitiveness.’¹³

‘The UK’s continued economic and technological success will rest on the ability of political, business, education and public sector leaders to anticipate correctly the future skills requirements and to provide the right education and training for developing them.’¹⁴

‘While technology is on the whole likely to create more (and generally) better paid jobs than it destroys, some industries are likely to lose more jobs to machines than the new technologies will create.’¹⁵

Further technological advancements including the availability of superfast fibre connections and cloud based computing will facilitate a greater level of remote working. This will be beneficial for employees as they will be able to have greater control of their work life balance, however, it poses significant challenges for businesses to adapt systems and processes to facilitate remote working and to move away from location based approaches.’

¹¹ <http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/global-flows-in-a-digital-age>

¹² <https://www.gov.uk/government/publications/technology-and-innovation-futures-uk-growth-opportunities-for-the-2020s>

¹³ <http://www2.deloitte.com/uk/en/pages/technology-media-and-telecommunications/articles/transformers.html>

¹⁴ <http://www2.deloitte.com/uk/en/pages/technology-media-and-telecommunications/articles/transformers.html>

¹⁵ <http://www2.deloitte.com/uk/en/pages/technology-media-and-telecommunications/articles/transformers.html>

2.5 Employment Patterns

Regional unemployment and NEET levels¹⁶ compare positively with national averages and have seen positive trends over recent years, however both remain an issue that serve as an inhibitor of sustainable economic growth.

Unemployment levels have reduced by 0.9% between 2013 and 2015 at a regional level to 5.8%, comparing positively with the national average of 6.2%.¹⁷

The roles undertaken by the workforce will change dramatically in the future with a significant increase in the need for 'creativity'. A study conducted in 2011 by IBM identified creativity as the most important leadership competency for the successful enterprise of the future'.¹⁸ It is anticipated that 'non routine' activities which cannot be automated, such as innovation, leadership and sales, will dominate employment, and that by 2015, 40% or more of an organisation's work will be 'non-routine' up from 25% in 2010.¹⁹

The ability to attract and retain talent is foremost for many business leaders '97 percent of CEOs in a PWC global survey said that having the right talent is the most critical factor for business growth.'²⁰ This demand has the potential to create an hour glass workforce structure with a highly skilled, highly waged and mobile workforce at the top and a lower waged, lower skilled base with little centre ground.

Presently the region suffers from the opposite trend; the flask structure favours lower skilled and lower waged occupations. The labour force survey indicates that at a regional level 11.8% are employed in elementary occupations, a figure which exceeds national averages of 11%. Furthermore, the regional average for employment within caring personal service occupations and leisure, travel and related personal service occupations (11.6%) is significantly higher than national averages at 9.3% for the UK and 10.8% for Wales.

Furthermore, a significantly lower proportion of the regions labour force are employed within managerial, directors & senior officials (9.8%) and professional occupations (15.7%) which can be deemed high value occupations.

2.6 Gross Value Added (GVA) and Growth

GVA is the measure of the value of the wages and profits from goods and services produced in a given area. It is therefore a reliable indicator of the strength and performance of the economy. Most recent statistics indicate that not only is less produced for every person working in Wales but the economy continues to grow less than the UK average.

For instance, regional breakdowns show that unsurprisingly London had the highest GVA per head at £42,666, whilst Wales had the lowest at £17,753. Additionally, the figures indicate that on average every person in the UK generates £24,616 per head (an increase of 4.6% on 2013) but in Wales the average has risen by only 2.4%.

¹⁶ <http://rlp.infobasecymru.net/IAS/themes/education/post-16education/pupildestinations>

¹⁷ <http://rlp.infobasecymru.net/IAS/themes/economy/employment/employmentstatus/tabular?viewId=556&geold=1&subsetId=42>

¹⁸ *The Future' – Steria*

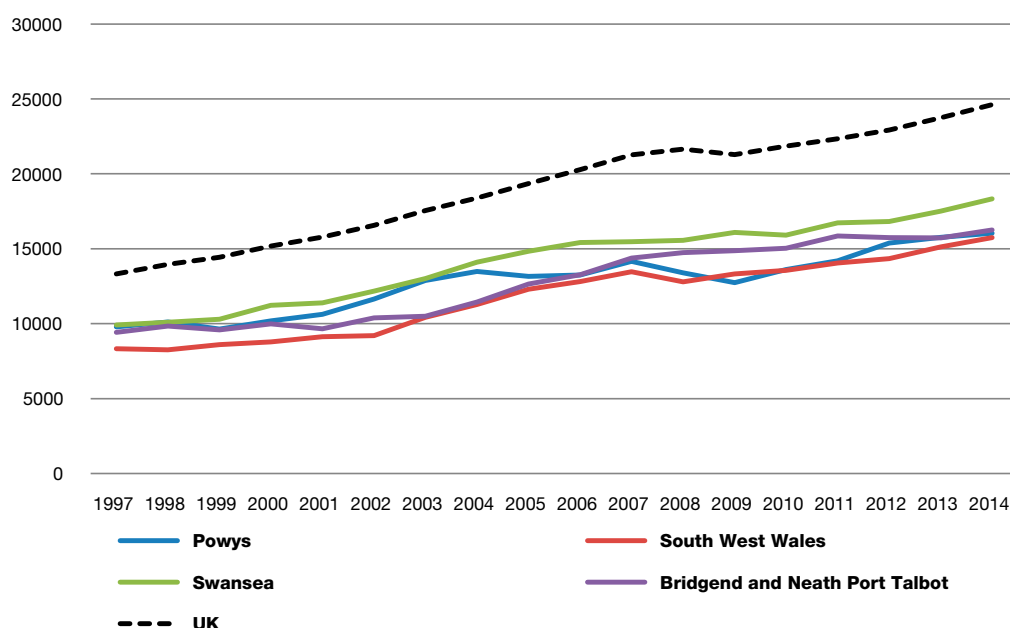
¹⁹ *The Future' – Steria*

²⁰ *The Future' – Steria*

2.6.1 GVA per Head

The GVA per head is a significant indicator as it shows the economic performance of individuals within the sub regions allowing for comparisons with the UK average.

Figure 1: GVA £ per Head

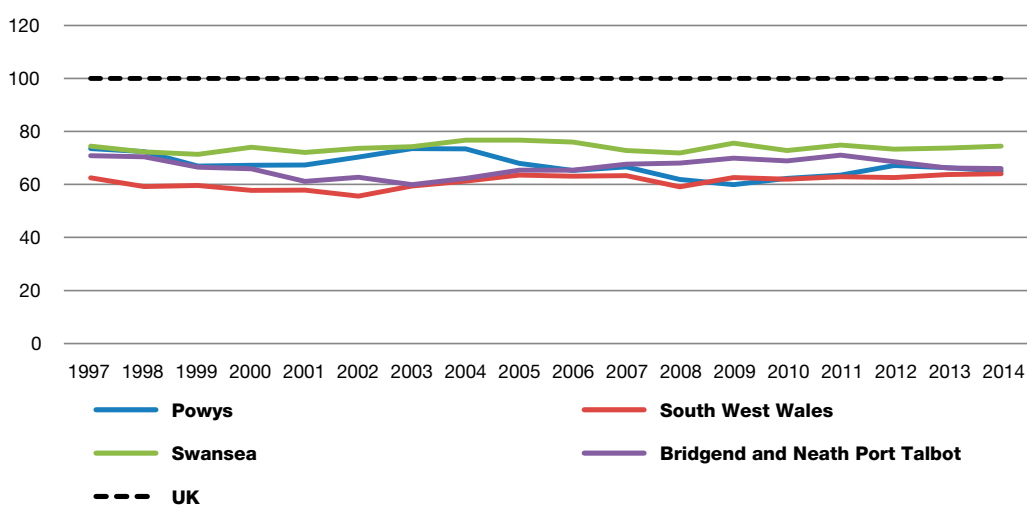


The region alongside the UK has seen an increase in the GVA values per head since 1997 however the figures remain significantly below the UK average across the time series.

2.6.2 GVA Indexed

The indexed GVA values provide an indication of the economic performance across the region and the UK and relate to relative performance with the UK average of 100. This allows economic performance to be analysed relatively and without the effects of growth.

Figure 2: GVA Indexed



The economic under performance of the region is highlighted when reviewing the indexed GVA values. The region has consistently failed to achieve above 80% of the UK average values across the period 1997 – 2014. The highest performing sub region is Swansea with performs to 74.4% and the lowest was South West Wales with 64%.

Addressing this issue requires a fundamental shift in the way resources are targeted as well as the general attitude towards economic growth and sustainability. There is a need to focus on investing in infrastructure, skills and improving the conditions within which businesses in Wales operate.

At a regional level, 84.4% of operating business are deemed micro-sized enterprises, indicating that they employ less than 10 individuals.²¹ This highlights the need for continued support for businesses of this size in particular to support growth and expansion.

2.7 Climate Change and Sustainability

Climate change and sustainability will present a number of opportunities and challenges for the region. The effects of climate change on a global scale may increase the demands on food supplies.

A demand for low carbon energy sources for the region will provide a number of opportunities as the region is well suited geographically, particularly with respect to the location of renewable energy technologies.²² As these technologies develop there will likely be a downscaling of cost which in turn could provide further opportunities for the utilisation of technologies. Further developments in Smart materials and battery storage have the potential to significantly improve the effectiveness of renewable energy sources.

2.8 Global Urbanisation

Globally the world's large and mega cities are the primary drivers of economic growth and the majority of future growth is forecast to occur in the city region areas. *'20 of the world's largest 50 cities will be in Asia by 2025, up from only 8 in 2007. In 2010 the urbanisation of the world reached 50 percent and it is expected that by 2030, 6 out of 10 will be city dwellers. By 2050 it is forecast that 70 percent, of the then nine billion people, will live in cities.'*²³

Evidence of a trend towards urbanisation, particularly amongst the younger population is visible in the projections. This urbanisation has the potential to create a two tier economy between rural and urban areas within the region.

Economic migration of skilled labour is not an isolated issue for the region; it is reflected in the wider EU which *'suffers a net loss of graduates to the rest of the world. It loses some of its brightest to the US and the return rates are actually falling.'*

2.9 Innovation and Research & Development

To create the much needed step-change in Wales' level of wealth generation, innovation and research and development are key. Innovation *'contributes directly to productivity growth and creates sustainable, high-value jobs and we can choose to take steps to help us become a more innovative region.'*²⁴

²¹ <http://rlp.infobase.cymru.net/IAS/themes/economy/businesses/tabular?viewId=595&geoid=1&subsetId=42>

²² *Energy and Environment – A Detailed Analysis for South West and Central Wales, 2015*

²³ *The Future' – Steria*

²⁴ <http://gov.wales/docs/det/publications/140313innovationstrategyen.pdf>

In the 2012 Global Innovation Index report the UK was rated 5th out of 141 nations. Wales benefits from many of the same positive underpinning characteristics for innovation, such as a business friendly environment and access to a first class research base, as the rest of the UK. This is a positive foundation on which to build. Wales has 4.9% of the UK population, but only 1.6% of UK industrial R&D. To improve this key performance indicator for a Knowledge Economy, it is essential to attract large companies to Wales: 97.5% of industrial R&D is in large companies, which also tend to pay higher wages than SMEs, and will therefore help to tackle Wales' low wage economy problems.

However levels of R&D in Wales are significantly below what we are capable of. Indeed we have a strong academic base and there are many large anchor companies with a presence here, however business R&D is particularly low when compared to other parts of the UK and globally.

The innovation strategy for Wales identifies five key themes where efforts should be concentrated:

- **improving collaboration,**
- **promoting a culture of innovation,**
- **providing flexible support and finance for innovation,**
- **innovation in government,**
- **prioritising and creating critical mass.**

High-tech clusters tend to include a range of different sized companies operating in symbiotic relationship with each other. Larger companies cascade quality standards and high value-added activities down supply chains. To create high-tech clusters, it is important for the Higher Education and Public sectors to engage proactively in the development of supply chains, and to attract investment from large companies.

2.9.1 Higher Education in Further Education

The development of enhanced learning routes including vocational routes places an emphasis on the role of higher education within further education with a greater emphasis on collaboration. 'There should be a more holistic and regional view of post-16 education in Wales, supported by stronger regional planning. Collaboration between higher and further education providers needs to be strengthened so that progression and even simultaneous study in both sectors can become a reality.'²⁵ As a result of the review undertaken a series of recommendations have been produced which emphasise the importance of enhancing the provisional offer of Higher Education in Further Education 'This is the time for consolidating provision, strengthening collaboration and building joint partnerships with industry.'²⁶

The University of Wales Trinity Saint David Group is a Dual Sector University, through the merger of Coleg Sir Gâr (2013) and Coleg Ceredigion (2014), to create a system of education providing progression routes from entry level to doctoral studies within the region.

Swansea University has established the College University Skills Partnership (CUSP), which works with Further Education Colleges to develop skills pathways which meet the needs of companies with growth potential. Within CUSP, Swansea University works with three independent Further Education Colleges in SW and Central Wales Regional Learning Partnership and one Further Education College in North Wales Economic Ambition Board.

²⁵ *Review of higher education in further education institutions – Welsh Government - 2015*

²⁶ *Review of higher education in further education institutions – Welsh Government - 2015*

2.10 The Policy Context

The policy landscape provides an important backdrop to the development of this plan. It is quite comprehensive, covering a range of relevant themes at the European, UK, Welsh, and local levels, from economic growth opportunities to youth unemployment.

Figure 3: Overview of the policy landscape influencing SW & MW



2.11 The Rural Challenge

The geography of large areas of South West and Mid Wales is classified as rural with very low population densities and poor access to services. This has a significant impact on the equality of opportunity for individuals in these rural areas and remains a barrier in accessing skills. This can include higher costs for providers delivering training including apprenticeships and also significant challenges relating to the recruitment and retention of trained staff.

Although each area and county has its' own mix of challenges there are a number of specific issues faced by Mid Wales including:

- **Equality of access – there are significant barriers for people living in Mid Wales to access training and employment, such as transport and infrastructure.**
- **Lack of Diversity – the range of jobs are not available in rural Mid Wales which results in people moving away from the area to work. The employment can also be very seasonal; temporary or part time due to the high dependence on the service sector; public sector and tourism industry.**

- **Access to FE/HE is limited – there are a number of areas across the Mid Wales region where it is difficult for students to access training and there are many examples in Powys where post 16 education opportunities are only available across the border in England.**
- **Increased cost of providing services in the rural areas.**

As a result there is a need to identify the demand for skills within the rural context to determine the best way to ensure that rural businesses and those living in rural areas are able to access the skills required.

2.12 The Urban Challenge

There are also challenges posed within the urban areas of the region as it has been recognised that cities are the greatest drivers of global growth and this is also relevant to the UK as it is where the majority of income is earned and where a majority of knowledge intensive businesses are located.

‘Cities are where the majority of wages are earned in Britain, and where the majority of welfare spending takes place. Cities account for 54 percent of the population, but generate 63 percent of all wages in Britain. They are also home to 71 percent of all knowledge intensive business services jobs, which tend to be higher skilled and better paid.’²⁷

The city of Swansea has been identified by the centre for cities as a low wage, high welfare economy which has a significant challenge. *‘The causes of high welfare spend in these cities are much more fundamental, and are likely to be due to long term structural weaknesses in their economies.’²⁸* This highlights the challenges faced by the urban economy to deliver growth that is sustainable and benefits all residents. This will create additional skills challenges in particular within the knowledge intensive business services roles that dominate the modern urban economy.

2.13 The European Policy Agenda

At the European level, there are a number of key policy commitments of relevance to the development of this plan. In Europe 2020 and Horizon 2020, ambitious targets are set to stimulate economic growth that is ‘smart, sustainable, and inclusive’. Smart growth is premised on the need to encourage knowledge development and innovation; sustainable growth on the need for efficiency, competitiveness and improving environmental sustainability and inclusive growth on delivering social and territorial cohesion.

The drive for innovation and economic growth is highlighted within the European structural and territorial cooperation funds for 2014 – 2020 which place a strong emphasis on building innovation capacity and improving competitiveness.

2.14 UK Policy Perspectives

The UK’s policy direction also bears a strong influence on SW&CW. In the *Heseltine Review and Growth Plan*, focus is placed on competitiveness, flexibility and economic re-balancing, with an acknowledgement that growth in the past has been overly concentrated in particular industries and locations, namely the South East of England. Encouraging business start-ups and supporting SMEs are seen as key policy levers, as is an educated workforce, in terms of achieving flexibility in the UK economy.

²⁷ <http://www.centreforcities.org/publication/cities-outlook-2016/>

²⁸ <http://www.centreforcities.org/publication/cities-outlook-2016/>

The UK Government's *Industrial Strategy* report identifies priority sectors that have the potential to make a greater contribution to future growth and employment. These include advanced manufacturing; knowledge intensive traded services; and enabling sectors, such as energy and construction. Sectors that the current UK Government has concentrated its efforts on supporting are stated in the plan for Growth as including: healthcare and the life sciences; advanced manufacturing; construction; digital and creative industries; retail; professional and business services; the space industry; and tourism, which show clear signs of growth in SW&MW.

The emphasis of the UK government on localism and decentralisation has led to the formation of 'city deals' and 'growth deals' to directly fund a range of interventions to drive economic development. *'City Deals and Growth Deals in particular focused to varying degrees on certain aspects of youth employment programmes, adult skills provision and vocational training in order to respond to the needs of specific localities.'*²⁹

Many of the city deals that have been proposed to date have a clear skills element including a responsibility for the development of skills strategies and skills partnerships within the city region areas to improve demand led skills responses. *'There is a growing consensus that local partners can play an important role in delivering more demand-led employment and skills systems.'*³⁰

An additional recent policy development within the UK government has been the announcement of the development of apprenticeship levies for UK businesses. *'In the summer budget [2015], the government announced the introduction of a levy on large employers to help fund 3 million new, high quality apprenticeships this parliament to support the development of the skills base and help to drive productivity over the longer term. The levy is intended to be both simple and proportionate.'*³¹

The system follows a similar principle to that of co-investment which places and emphasis on employer ownership of training. *'We think it is right that the new funding system rewards those employers who commit to both their own growth and the growth of the wider economy by using apprenticeships to get the skills they need.'*³² It is the intention of the UK government that the levy will be made available directly to businesses to support their apprenticeship needs. *'The best way to make sure that individual employers get the high quality apprenticeship they want is to put the purchasing power directly in their hands and the policy intention is that employers will be free to choose what apprenticeship training they buy.'*³³

There is a need to further understand the devolved context and implementation for the apprenticeship levy and how its implementation may apply to the region. In particular how it may affect the current delivery model for apprenticeships and how intercompany apprenticeship activity which is currently not well recognised will be incorporated.

A further UK wide policy that we need to further understand is the impact upon the region of the implementation of the National Living Wage for the over 25s which has increased the minimum wage to £7.20 per hour. This will have a positive impact on the regions lower paid workers; however, it may also impact on employers' ability to retain staff, therefore there is a need to increase the value and skills base of each employee.

²⁹ *City Deals and Skills – UKCES/Centre for Cities - 2015*

³⁰ *City Deals and Skills – UKCES/Centre for Cities - 2015*

³¹ *Apprenticeships Levy: Employer owned apprenticeships training – August 2015*

³² *Apprenticeships Levy: Employer owned apprenticeships training – August 2015*

³³ <https://www.gov.uk/government/consultations/apprenticeships-levy-employer-owned-apprenticeships-training>

2.15 Key Policy Responses in Wales

Policy development in Wales reflects the recurring themes in Europe and the UK, with a clear recognition of the role that sustainable employment and a skilled labour force can play in promoting both economic growth and poverty alleviation. Skills policy for Wales is primarily identified within the Skills Implementation Plan which highlights the significance of developing ‘skills system in Wales that supports our future competitiveness, helps us evolve into a highly skilled society as well as tackle poverty, and is sustainable against the backdrop of ever scarcer resources.’ The policy statement also reinforces the role of regional skills partnerships in identifying and responding to the skills challenges.

Co-investment is representative of the wider reform agenda required across the skills system in Wales to ensure it remains competitive and sustainable into the future. Implementing a co-investment policy is essential if we are to redress the financial pressures facing post-19 skills delivery in Wales. This includes the gap in employer investment in skills compared with the UK average.³⁵

The emphasis on employment and growth as an important component of wellbeing is reinforced by the Wellbeing of Future Generations Act included under the theme of a more prosperous Wales; these priorities are also reflected in the Anti-poverty Action Plan, Child Poverty Strategy, and Welfare Reform Report, and in underlying programmes, such as Communities First and Families First.

Directly linked to the tackling poverty agenda is the devolution of the work programme. A review determined that its performance in Wales has been poorer than the UK average.³⁷ This indeed poses issues for the national economy and in turn regional and local economies especially given that the majority of impacts are felt by those furthest away from the labour market. A call for the devolution of employment programmes to Wales poses both opportunities and threats. Through devolution there would be better alignment of skills provision to support unemployed people into sustained, meaningful employment. This would in turn build a stronger, sustainable economy locally and nationally.

However, *‘consideration of the potential to devolve all or part of the employment system, including the Work Programme, is a complex issue as it is intrinsically linked to the benefit system. Benefit regulations will remain a responsibility for UK Government, including the conditionality and sanctioning aspects of the programme.’*³⁸

Budgetary concerns also pose a challenge and are a key consideration. Potential financial implications on Wales require further assessment to ensure that the level of support that could be provided aligns with demands.³⁹

The requirement to achieve more targeted and sustainable growth is highlighted within the Economic Prioritisation Framework for European funding; *‘in order to maximise the impact of EU funding more can be done to ensure that investments build on what has been achieved to date and are better joined up with other investments being made by the Welsh Government, the private sector and others.’*⁴⁰

The education policy landscape has undertaken a significant period of change and evolution which has seen the formation of regional educational consortia to support school improvement. Significant changes have been undertaken through the formation of Qualifications Wales to manage, oversee and regulate qualifications including those for 14-19 year olds.

The Donaldson review in particular highlights a number of areas of reform in terms of the education system in Wales. The overarching aim is to develop;

³⁸ <http://www.assembly.wales/laid%20documents/gen-ld10378/gen-ld10378-e.pdf>

³⁹ <http://www.assembly.wales/laid%20documents/gen-ld10378/gen-ld10378-e.pdf>

⁴⁰ <http://gov.wales/funding/eu-funds/2014-2020/looking/epf/?lang=en>

'ambitious, capable learners, ready to learn throughout their lives; enterprising creative contributors, ready to play a full part in life and work; ethical informed citizens of Wales and the world; and healthy, confident individuals ready to live fulfilling lives as valued members of society.'

This will be achieved by adopting a number of changes which include but are not limited to;

- **Replacing the existing key stages with 'progression steps' at ages 5,8,11,14 and 16, which will provide educators and parents with a 'road map' for pupils tailored to their specific needs.**
- **Introduction of three 'cross-curriculum' responsibilities of all teachers – literacy, numeracy and digital competence.**
- **External, standardised testing to provide important benchmarking information – but its frequency "kept to a minimum" in view of its impact on the curriculum and teaching and learning.**
- **Programme of professional learning to be developed to ensure that the implications of the review for the skills and knowledge of teachers are fully met.**

Professor Hazelkorn's review of post compulsory education for Welsh Government 'Towards 2030' identified a number of recommendations for improving the post compulsory education system in Wales. This included a greater emphasis for developing a more 'joined up' approach *'Develop an overarching vision for the post-compulsory education system for Wales based upon stronger links between education policy, providers and provision, and social and economic goals to ensure the needs of Wales are future-proofed as far as practicable.'*⁴¹ It also places a significant emphasis on further developing an improved supply led approach to the delivery of post compulsory education *'Create a better balance between supply-led and demand-led education and research provision shifting away from a market-demand driven system to a mix of regulation and competition-based funding.'*⁴²

Clearly, there are new and growing expectations in relation to the education system. With new conceptions of knowledge becoming more apparent in society and increased pressure on individuals to possess the correct mix of skills it is apparent that the education system should be well-equipped to meet these needs.⁴³

2.16 Local Policy Priorities

Economic development with the South West and Mid Wales regions is driven by the Swansea Bay City Region and the Growing Mid Wales Partnerships, created to provide the drive and leadership required to enhance economic growth opportunities through a cross-sectoral approach. As a result of the proposed developments there will be significant skills requirements that will require coordinated interventions. Both of these partnerships are continuing to develop new proposals to boost economic growth and support the regional economies.

At the local level, regeneration and growth plans emphasise the regional commitment to joint working. Collaboration with the Public Service Boards ensures alignment between Single Integrated Plans and the Regional Delivery Plan for Employment and Skills. Regional commitment to joint working continues to support the development of a culture that is more sustainable and efficient.

³⁸ <http://www.assembly.wales/laid%20documents/gen-ld10378/gen-ld10378-e.pdf>

³⁹ <http://www.assembly.wales/laid%20documents/gen-ld10378/gen-ld10378-e.pdf>

⁴⁰ <http://gov.wales/funding/eu-funds/2014-2020/looking/epf/?lang=en>

⁴¹ <http://gov.wales/docs/dcells/publications/160310-hazelkorn-report-en.pdf>

⁴² <http://gov.wales/docs/dcells/publications/160310-hazelkorn-report-en.pdf>

⁴³ <http://www.uwtsd.ac.uk/media/uwtsd-website/content-assets/documents/wcee/successful-futures.pdf>

Section 3

Aspirational Economy

Regional Employment & Skills Plan South West & Mid Wales

The sectors within the economy that can be deemed as aspirational are high value and high growth sectors and are an important source of investment and GVA growth. The employment within these sectors typically require higher skills levels with a greater number employed in the higher occupational groupings, wages also tend to be higher to reflect the demand for skilled individuals and a greater number are in full time employment.

The nature of many sectors within the aspirational economy will mean that there is a significant need for higher level skills which will increase the pressure and requirements on the skills infrastructure to deliver the required level skills. *'Alongside a demand for more graduates there will be demand for a greater number of workers with higher – but not necessarily degree level – qualifications.'*⁴⁴

The development of personnel remains at the forefront of the development of businesses with *'92% of UK CEOs highlighted the people agenda as their top priority'*⁴⁵ Evidence suggests that there is a continued potential for growth with *'66% of UK CEOs expect to see their headcount increase'*⁴⁶ which in turn has significant impacts on the skills and abilities required to compete in the global skills market. This need for a positive skills and development environment is reflected in the analysis of PWC's CEO Survey *'What's needed now is a focus on training and creating a positive environment for personal and professional development to try and close the skills gap'*⁴⁷.

It is important to highlight however that 'new' labour supply alone will not be the only supply to the labour market as there remains a significant number of individuals who require up-skilling to a higher level. *'While this indicates a shift towards a more highly skilled – and in particular, graduate-based – labour force, even by 2020, the majority of the working age population (53%) will still hold zero, low or mid-level qualifications.'*⁴⁸

The Swansea Bay City Region Board places a strong emphasis on the economic development opportunities which will be provided by the digitally connected infrastructure. These are identified within the themes of the Swansea Bay City Region city deal proposal; 'The Internet Coast'.

There is an important requirement to ensure that an equal opportunities approach is taken with regards to access to higher education provision for those with a less advantaged socio-economic background, this was highlighted by research undertaken by WISERD into access to higher education. *'Young people from more advantaged socio-economic backgrounds are much more likely to participate in higher education than less advantaged peers'*⁴⁹. The research also highlighted that although a social disadvantage is a barrier to entry into higher education it is not a barrier to attainment. *'Higher education students from socially disadvantaged backgrounds are equally likely to attain a 'good degree' as those from more advantaged backgrounds'*⁵⁰

⁴⁴ Supply and demand for higher level skills – Universities UK - 2015

⁴⁵ PWC CEO Survey 2016 – PWC - 2016

⁴⁶ PWC CEO Survey 2016 – PWC - 2016

⁴⁷ PWC CEO Survey 2016 – PWC - 2016

⁴⁸ Supply and demand for higher level skills – Universities UK - 2015

⁴⁹ Access to Higher Education – WISERD - 2015

⁵⁰ Access to Higher Education – WISERD- 2015

3.1 Large Aspirational Projects

Swansea Bay City Region

- **Swansea Bay City Deal: The Internet Coast**
- **Swansea Bay Tidal Lagoon**
- **A Regional Collaboration for Health (ARCH)**
- **Computational Foundry**
- **Yr Egin**

Mid Wales

- **Aberystwyth University IBERS Campus**
- **Aberystwyth Innovation and Enterprise Campus**
- **Aberystwyth Veterinary Hub**
- **Centre for Excellence in Rural Health and Social Care**
- **Technology Enabled Care Services**

3.1.1 Swansea Bay City Deal: The Internet Coast

The recently announced City Deal for Swansea Bay is a substantial commitment to the economic development of the Swansea Bay City Region. The focus of the proposal is for Swansea and the wider city to become a leading location for the development of internet based technologies and is focused around three core areas.

‘The Internet of Energy: To create a smart and effective ‘Future Energy System’ that will integrate the region’s multi-billion asset base in renewable and conventional energy production and the testing and commercialising of integrated Future Energy Systems’⁵¹

‘The Internet of Health and Wellbeing: To advance health and wellbeing by delivering a network of health science ‘medi parks’, wellness centres and other assets. Building on a new digital architecture we will transform the delivery of health and social care in the region and contribute to the advancement of genomic medicine in analytics and diagnostics in the UK via network based solutions.’⁵²

‘The Internet of Economic Acceleration: To provide the UK plc with the resilience of a new Swansea Bay international internet gateway between London and North America by developing infrastructure in partnership with the private sector that will simultaneously establish Swansea and its hinterland as a ‘City of Innovation’.

The enhanced digital connectivity of the city region will have significant impacts upon the skills requirements for the region in particular the requirement for greater higher level computing skills which are required to support digital growth.

³⁸ <http://www.assembly.wales/laid%20documents/gen-ld10378/gen-ld10378-e.pdf>

³⁹ <http://www.assembly.wales/laid%20documents/gen-ld10378/gen-ld10378-e.pdf>

⁴⁰ <http://gov.wales/funding/eu-funds/2014-2020/looking/epf/?lang=en>

3.1.2 Swansea Bay Tidal Lagoon

The Swansea Bay Tidal Lagoon is a significant project which has the potential to have both long and shorter term skills implications. The proposed project which is awaiting the final approval from the UK government will see the construction of the world's first purpose built tidal lagoon for the production of electricity.

The proposal hopes to deliver:

- **'The world's first, man-made, energy-generating lagoon, with a 320MW installed capacity and 14 hours of reliable generation every day,**
- **Clean, renewable and predictable power for over 155,000 homes (equivalent to 90% of Swansea Bay's annual domestic electricity use) for 120 years,**
- **Large-scale tidal power connected to the National Grid, as other power stations are closed down,**
- **An important contribution towards national carbon emission reduction targets – over 236,000 tonnes of CO2 saved each year,**
- **An opportunity to develop a world-leading tidal range industry in the UK,**
- **Significant employment and value creation in Wales,**
- **Community and tourism opportunities in sports, recreation, education, arts and culture,**
- **Conservation, restocking and biodiversity programmes,**
- **Coastal flood protection.**⁵³

The project will have a high impact on skills particularly within the construction phase which require a high number of skilled engineers and specialist construction staff.

3.1.3 A Regional Collaboration for Health (ARCH)

ARCH provides a strategic link between the regional Health Boards of Abertawe Bro Morgannwg and Hywel Dda and higher and further education. A number of activities are being developed within the umbrella of the collaboration including significant potential investment in the development of a wellbeing centre at Delta Lakes, Llanelli.

*ARCH will aim to 'develop and implement new service models based on the principle of care being provided closer to home. Expanding access through the development of new infrastructure and redeveloping and redefining the use of existing infrastructure will radically transform patient pathways across the region.'*⁵⁴

3.1.4 Computational Foundry

The £31m Computational Foundry based at Swansea University's Bay Campus will transform Swansea, West Wales and the Valleys and the nation as a global destination for computational scientists. The Foundry will establish an internationally renowned, digital ecosystem for world-class computational science research that brings together interdisciplinary research and addresses grand challenges for the economy and society under the three themes of Sustaining Life; Enhancing Life; and Securing Life. It will continue to build capacity in Swansea University's globally recognised research strengths computational science.⁵⁵

⁵³ <http://www.tidallagoonswanseabay.com/the-project/proposal-overview-and-vision/51/>

⁵⁴ <http://www.swansea.ac.uk/medicine/enterpriseandinnovation/aregionalcollaborationforhealtharch/>

⁵⁵ <http://www.swansea.ac.uk/campus-development/baycampus/informationonkeybuildings/thecomputationalfoundry>

3.1.5 Yr Egin

The development of Yr Egin and the relocation of the headquarters of broadcaster S4C to Carmarthen will be a significant investment in the creative industries in the region. This will include developing a co-production space as well as significant educational links with UWTSD. The development is within the final planning phases with a forecast for completion by spring 2018.

3.1.6 IBERS Campus

The Institute of Biological, Environmental and Rural Sciences (IBERS) is an internationally-recognised research and teaching centre providing a unique base for research in response to global challenges such as food security, bioenergy and sustainability, and the impacts of climate change. IBERS' scientists conduct research on genes and molecules, whole organisms and the environment.

With 360 members of staff, IBERS is the largest Institute within Aberystwyth University, teaching 1,350 undergraduate students and more than 150 postgraduate students. IBERS is home to the National Plant Phenomics Centre, and the BEACON Centre of Excellence for Biorefining - a £20 million partnership between Aberystwyth, Bangor and Swansea Universities.

An independent report conducted in April 2014 concluded that for each £1 of public funding invested the activities conducted at IBERS generated £12.18 of benefit for the UK economy.

3.1.7 Aberystwyth Innovation and Enterprise Campus

A new state-of-the-art, internationally recognised facility to attract further research funding so that companies and researchers can undertake collaborative research projects to boost the bio-economy. The research is expected to generate innovative new products, services and spin-out companies in sustainable food, health, biotechnology and renewable energy sectors.⁵⁶

3.1.8 Aberystwyth Veterinary Hub

A joint venture between Aberystwyth University and Royal Veterinary College looking at the development of a veterinary School for Wales with a cluster of veterinary focused businesses and laboratory services, providing a much needed hub of veterinary expertise, with a focus on farming and livestock science.

3.1.9 Centre for Excellence in Rural Health and Social Care

The Centre for Excellence in Rural Health and Social Care (CfERH) is being set up by the Mid Wales Healthcare Collaborative to lead the way in accessing and undertaking relevant research to inform the models of prevention, treatment and care that need to be implemented to improve the health and wellbeing of the communities and population within Mid Wales. In collaboration with partner organisations, the CfERH will inform the development of services that deliver appropriate access to services, based on principles of informed patient choice, prevention, diagnosis and self-care.

The CfERH will establish a network of relevant individuals, research units and groups, from within Wales and further afield to access and verify evidence to support the research, innovation and development agenda and enable decision-makers and policy colleagues to be fully cognisant of the scope, opportunities, issues and challenges in implementing prudent healthcare within the context of a rural environment.

⁵⁶ <https://www.aber.ac.uk/en/news/archive/2014/12/title-161032-en.html>

The CfERH will also work with professional bodies and Higher Education Institutions (HEIs) to ensure that structured education and training programmes for doctors, dentists, nurses, midwives, pharmacists, allied healthcare professionals, paramedics, optometrists, social care staff and any other relevant professional groups devising or delivering care to our rural communities are available to equip them with the skills and knowledge to deliver high quality care in rural areas.

3.1.10 Technology Enabled Care Services

The Mid Wales Healthcare Collaborative is leading on the development of a Telehealth Strategy for Mid Wales which will introduce new ways of delivering care with digital technologies. This will include establishing of Bronglais General Hospital as a centre for excellence in telehealth for Mid Wales.

3.2 Skills Requirements in the Aspirational Economy

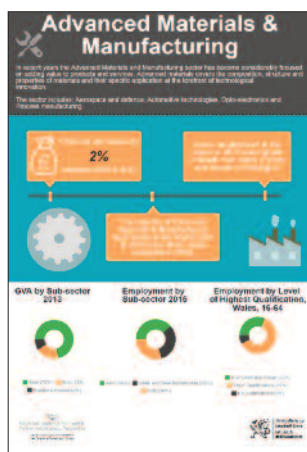
There remain a number of significant skills challenges with aspirational economy that are not sector specific, in particular when referring to skills shortage vacancies the lack of specialist skills is of particular concern. *'The stand out skill shortage was a lack of specialist skills or knowledge needed to perform the job role. This was mentioned as being, at least in part, the cause of almost two thirds of skill shortage vacancies (64 per cent).'*⁵⁷

There is a requirement to ensure that new entrants to the economy hold not only the technically required roles but also the employability skills required by employers. *'The skills employers find most lacking in university and college leavers are a mix of job-specific skills and general employability-related skills; a majority also cite lack of work experience.'*⁵⁸

A significant challenge facing higher education both within the region and the UK is the divergence of graduates into other subject areas, creating higher level skills shortages, including STEM. *'While as many as 27% of current higher education students are on courses related to science, technology, engineering and maths (STEM), there may be a blockage in the talent pipeline: it appears that many are choosing to eschew current paths in industries with a high density of skills shortages.'*⁵⁹ This is a concern for the region when combined with the challenges faced by existing skills migration and an increasing requirement for higher skilled workers within the regions' STEM related industries.

3.3 Sector Analysis within the Aspirational Economy

3.3.1 Advanced Materials and Manufacturing



Please see Sectors at a Glance for full illustration.

⁵⁷ Employer Skills Survey 2015:UK Results – UKCES 2016

⁵⁸ Supply and demand for higher level skills – Universities UK - 2015

⁵⁹ Supply and demand for higher level skills – Universities UK - 2015

In Wales, manufacturing has a long tradition and will provide a key component to delivering a balanced economy.

In recent years the advanced materials and manufacturing sector has become considerably focused on adding value to products and services. Manufacturers are not just competing on cost but provide value by delivering products and services through innovation and processes.

The manufacturing base in Wales has capability in the following sub-sectors:

- **aerospace and defence,**
- **automotive technologies,**
- **high value manufacturing,**
- **foundation industries.**

Advanced materials is an important part of the sector. It covers the composition, structure and properties of materials and their specific application at the forefront of technological innovation. In the future; high value products will focus on taking advantage of new materials such as composites, nanotechnology, optoelectronics, printable electronics and silicon electronics.⁶⁰

The advanced materials and manufacturing sector is an industry of importance for the region both in terms of economic output and employment numbers. Sector employment at a Wales level sits at 12.2% of the total workforce in Wales compared to the UK average of 8.4%⁶¹. The manufacturing sector within the region employs slightly less than the UK average at 8.3%, however, within the Swansea Bay City Region area specifically, 10% of individuals are employed within the sector.

Skills challenges are an important risk for the manufacturing sector as it can prevent both the normal continuation of business as well as expansion. *'There is an increasing risk that these growth plans will be restricted because of problems in accessing employees with the required skills. Three quarters of employers surveyed say that finding employees with the right skills is one of their key business concerns, and almost half say it is their main concern.'*⁶². This is of particular relevance to smaller manufacturers who may not have the adequate funding or facilities to complete training 'Large companies are more likely to have a training budget (90%) than small companies (41%), but anecdotal evidence suggests that a wide range of ad hoc training is offered by firms of all sizes.'

The manufacturing sector, along with many others, has a requirement for replacement demand therefore there is a need to ensure that there is a sufficient pipeline of skilled individuals to support the sector. Jobs created by replacement demand will be those created due to the departure of workers which consequently have to be filled by new workers. This replacement demand could be as a result of but are not limited to permanent departures from the labour force through retirement or occupational mobility.⁶³

⁶⁰ <http://gov.wales/topics/businessandeconomy/sector/advanced-materials-and-manufacturing-sector/?lang=en>

⁶¹ <https://stats.wales.gov.uk/Catalogue/Business-Economy-and-Labour-Market/People-and-Work/Employment/Jobs/Employees-Only/Business-Register-and-Employment-Survey-SIC2007/employeejobsinwales-by-industry-year>

⁶² *Skills for Growth – EFF 2014*

⁶³ <https://core.ac.uk/download/files/153/6818497.pdf>

Advancements in digital technologies have had a significant impact upon the development of the advanced manufacturing sector allowing for process automation. For this reason the connectivity of a modern manufacturing facility is viewed as essential to the operation of production facility; '91% of manufacturers say a high speed internet connection is as essential to business as electricity and water.'⁶⁵

Net employment demand is positive for all occupations: up to 2022 there is a net demand for employment in every occupation group of AM&M in Wales – despite total numbers of employees in the sector for some occupations declining.

Professionals and Associate Professionals are in greatest demand: Around 580 professionals are required per annum up to 2022 and a further 360 associate professionals and 240 skilled trades per annum over the same period.

Drivers of Change (in order of effect on business performance)

- **Competitiveness,**
- **High rate of technological change,**
- **Increasing consumer demand,**
- **New markets,**
- **Globalisation,**
- **Legislation and Regulation,**
- **Employee Age Profile,**
- **Environmental drivers,**
- **Mergers & Acquisitions.**

Mid Wales

- **No demand for training – staff fully proficient,**
- **Expense of training,**
- **Time issues,**
- **Training supply issues,**
- **Lack of ambition from employees.**⁶⁶

Skills Challenges

- **'Skills mismatches in the sector have also been recognised, such as the ability of professionals and managers in adequately researching drivers of change in order to develop effective market strategies.'**

⁶⁵ *What is Industry 4.0? – EFF 2015*

⁶⁶ http://semta.org.uk/images/pdf/LMI_Advanced_Manufacturing_Report.pdf

Significant Challenges

- Sustaining a commercially viable business
- Acquiring the desired skills to maintain a high level of quality of production
- Competition from low cost economies and economic slowdown generally

Drivers of Change

- Market forces, competition and the economy generally
- The demand for quality products
- Price competition and the consolidation of competitors

Recruitment Difficulties

- Difficulty in recruiting specific skilled positions in Engineering, Manufacturing, Science, Business Development and Design.
- Difficulty in recruiting sewing machinists in textile manufacture
- Difficulty in recruiting individuals with a 'can do' attitude generally
- Mechatronics
- Hardware and software engineers
- Production operators
- Line leaders
- Bakery mixers
- Fork lift truck drivers

Barriers to Training

- The cost of release and the cost of training are seen as barriers to training for some whereas others believe there are no barriers to training.
- Smaller companies feel providers don't necessarily recognise their training needs as being current and therefore train internally.

Work Readiness of New Entrants

- General consensus that new entrants to the sector are not 'work ready'
- Basic skills of new entrants need improving; e.g. verbal reasoning, writing skills, numerical and social skills.
- Work ethic and general attitude can be poor

Swansea Bay City Region

The Swansea Bay City Region skills group has identified the advanced manufacturing and engineering sector as being a key focus point for the region. This has been evidenced by a report for the skills group which investigated the supply of skilled individuals to the advanced manufacturing and engineering sectors.⁶⁸ Swansea University has invested significantly in engineering provision based on Open Innovation, co-locating industry with academic expertise. The Haven Waterway Enterprise Zone also provides a significant opportunity to enhance the links between the advanced manufacturing and energy environment sectors.

Baglan Energy Park Baglan Energy Park is a well established and successful private and public sector initiative led by St. Modwen, Neath Port Talbot Council and the Welsh Government.

⁶⁷ RLSP Large company survey & electronic survey (April- June, 2016)

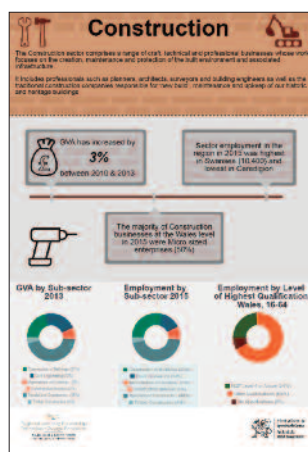
⁶⁸ <http://www.rlp.org.uk/wp-content/uploads/SBCR-AMM-and-Engineering-January-2016.pdf>

Situated adjacent to the M4, Baglan Bay Energy Park is emerging as one of the region's premier business locations with a broad range of commercial tenants. These include Montagne Jenuesse, RWE and Netalogue. Another unique selling point is the Park's on-site power generation which provides competitively priced electricity to businesses there via a combined-cycle gas turbine power plant. Having attracted world-class inward investment from a wide range of companies, Baglan Energy Park has won numerous awards, including, BURA (British Urban Regeneration Award), in recognition of its sustainable regeneration best practice.

Growing Mid Wales

Whilst there is an established advanced manufacturing base within the region there does exist a niche research and development sector with a significant capacity to contribute to the overall success of the Welsh economy and supporting regional strategy. Key examples are located in the Severn Valley. In some respect rural isolation can be an attractor particularly where research and development are concerned but access to high quality communication is critical. The Wales Aero-Space Strategy highlights the downstream services sector including earth observation technologies as an emerging opportunity with a significant cluster in the region with the Aberystwyth Centre for Space and Earth Monitoring.

3.3.2 Construction



Please see **Sectors at a Glance** for full illustration.

Construction remains an important sector that makes a vital contribution to social and economic activity within Wales and the UK as a whole, underpinning growth and ambition. However, it has suffered as a result of the recession, particularly in respect of jobs and training.

Specialist skills, from design through to the installation of new types of products and materials, will be needed to meet the high specification and low energy requirements of new buildings and infrastructure in the future. At the same time, offsite manufacturing and prefabrication has the potential to substantially increase as the industry moves from recession to recovery.

In Wales, there is considered to be scope to improve existing workforce skills to meet the requirements of current public sector refurbishment programmes and to reduce the reliance on skills brought in from outside Wales or overseas. There is a need to further invest in research and development within Wales to stay on the leading edge of change.

Studies show that provision adequately serves traditional and core aspects of construction. However, hard to fill vacancies for certain trades are prevalent, which are likely to be derived from the overall structure of qualifications within these areas. However, constraints on physical resources and expertise mean that employer demand for training in new and specialist areas is, currently, largely unmet.

Analysis of data provided by Ofqual on built environment-related vocational qualifications in Wales, substantiates evidence from the Skills Provision in Wales research that gaps exist in provision relating to the following priority skills/occupational areas in Wales:

- **Earth Moving Equipment;**
- **Heavy plant materials (because of the size of the equipment and the space required);**
- **Heritage (including specialist skills needed to retrofit historic/listed buildings);**
- **Interior wall insulation (the Arbed programme for regeneration in Wales has led to increased demand for these skills);**
- **Prefabrication, timber framing and pods;**
- **Scaffolding;**
- **Steeplejacking;**
- **Street Works.**

Training and development in these skill areas requires facilities, equipment and space not available to any of the individual colleges or other providers and that the only available facilities for such training are some distance from Welsh employers, in England.

Most recent forecasts predict that Wales is projected to see annual average output growth of 7.1% over the five years to 2020, stronger than any of the English regions and other devolved nations.⁶⁹ Employment growth is also projected to average 2.9% a year between 2016 and 2020, culminating in a workforce of 129,900 individuals by 2020.

CITB forecasts dictate that;

‘Out of the 28 occupational categories, 27 are forecast to see growth, with demand particularly strong for construction professionals – civil engineers, architects, surveyors and some managers. A number of the trades are also likely to experience employment demand growth in excess of 3% a year over the forecast period.’⁷⁰

Furthermore, Wales’ annual recruitment requirements is projected at 5,440 per year on average, this in part is due to the high net outflows of the workforce to other areas of the UK.

The age profile of the construction industry in Wales, for both professionals and contractors alike, matches that of many other UK industries. It is mature, ageing and has undergone significant change over the past 10 years. Coupled with a long-standing tendency towards early retirement and difficulties recruiting teaching staff – it is important to ensure there remains capacity within existing training provision to cope with the necessary recruitment of new trainees over the coming years, as well who will train the trainers of the future.

For professional, managerial and manual occupations, the workforce has generally been distinguished by a decline in the share of the younger groups in total employment and a rise in those aged 45 and over. Indeed professional trades such as architecture, mechanical and civil engineering could lose 33% of their manpower due to retirement in Wales – which compares with 18% for the UK as a whole.

Despite efforts to encourage younger people to consider construction as a desirable career choice at every level (for example via CITB’ Positive Image campaign within schools), the industry has an age profile that is biased towards the 35-54 age groups.

⁶⁹ http://www.citb.co.uk/documents/research/csn%202016-2020/csn_wales_2016.pdf

⁷⁰ http://www.citb.co.uk/documents/research/csn%202016-2020/csn_wales_2016.pdf

The under-representation of women remains a priority for the construction sector in Wales as it does in the UK. Currently, women account for 11% of employment in the sector, compared with 13% for the UK as a whole. In Wales, nine in ten women employed in construction work are in non-manual off-site roles.

The National Status Quo research (2012) established from employers and industry stakeholders that the following professional occupations and associated skills/knowledge needs need to be urgently addressed in order for the UK to meet the requirements of the EU 2020 energy efficiency targets:

- **Energy Advisor/Assessor (wide-ranging skills and knowledge needs)**
- **Architects (low carbon design skills; whole life costing)**
- **Planners (understanding of energy efficiency targets)**
- **Civil engineers (understanding of low carbon materials and installation processes; knowledge of energy efficiency targets)**
- **Surveyors (understanding of energy efficiency targets and impacts of energy efficiency measures – or lack of them)**
- **Site supervisors (understanding of the processes and quality standard of completed work needed to meet low carbon requirements).**

Research carried out to inform the 2011 BRE report 'Delivering Low Carbon Skills Wales – Low Carbon New Build Learning Project' identified the following intermediate skills issues associated with core construction trades:

- **Understanding of sustainability issues;**
- **Understanding of specific requirements of legislation;**
- **Understanding of the planning stage around orientation effects;**
- **Implications of the effect of one technology or solution on other areas of design and build;**
- **Understanding of how people will live in their houses and therefore how to design for that.**

Specific skills issues around sustainability were found to include:

- **Air-tightness requirements;**
- **Benefits of particular micro-renewable technologies and how to install and integrate them with other elements;**
- **Quality requirements to meet the code, and;**
- **How each trade affects adherence to the code.**

In addition, small builders struggle to cope with cost and time for training, don't have the capacity to bring in experts and local specialists can be rare. Opportunities for improvement, as identified by the Status Quo research, might include sustainability education for trades; more knowledge-sharing from completed schemes; creating champions within businesses; creation of knowledge around fabric first solutions; and creating standard details for achieving the desired levels.

Construction Wales Innovation Centre

The development of the Construction Wales Innovation Centre (CWIC) with CITB and UWTSD is a significant development to support the construction sector within the region. The national centre will provide state of the art facilities to support the development of construction professionals. Construction is due to begin towards the end of 2016 with a view to opening to businesses and learners in 2018.⁷¹

⁷¹ <http://www.citb.co.uk/news-events/wales/citb-establishes-landmark-construction-wales-innovation-centre-with-uwtسد/>

Employers Voice⁷²

Significant Challenges

- Salary/pay inflation rates affecting staff retention
- The continuity of contracts
- The lack of qualified labour
- Replacement demand due to retiring staff

Drivers of Change

- The short term outlook taken by the industry when forward planning
- Inward investment (especially in tidal energy)
- Skills shortages and the need to further investigate alternative approaches to building

Recruitment Difficulties

- Difficulty in recruiting construction commercial staff (QS)
- Difficulty in recruiting qualified plater fabricators

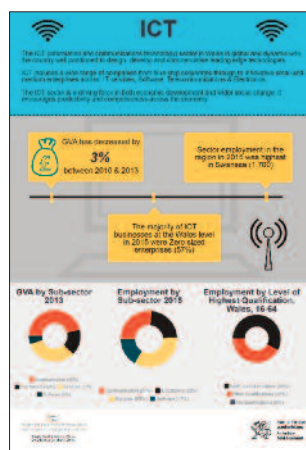
Barriers to Training

- Real life experience is needed due to low margins and precision required on projects
- With several major infrastructure projects in the pipeline within the region there is no provision available for Groundworks/Civil Engineering operative training.

Work Readiness of New Entrants

- General consensus that entrants are not always work ready
- Pay expectations do not match productivity levels

3.3.3 Digital/Information & Communication Technology



Please see Sectors at a Glance for full illustration.

The ICT sector is of significant importance within both the UK and the region of south west and mid Wales. As well as supporting a significant number of individuals in employment the sector supports comparatively high wages;

*'In 2015, the average gross weekly earnings for all full time staff working in the tech industries was 37% higher than the all industry average.'*⁷³

⁷² RLSP Large Company Survey & electronic survey (April- June 2016)

⁷³ https://www.thetechpartnership.com/globalassets/pdfs/research-2016/datasheet_techindustry_march16.pdf

The industry also employs highly qualified workers; *'Tech industry workers tend to be much more highly educated than other workers and in 2015 62% of workers held some form of HE qualification.'*⁷⁴

The largest sector within the UK tech economy is the software and services sector which accounts for a total of 63% of the employment within the ICT industries.

The ICT sector in Wales is proportionately smaller than that of the rest of the UK with the Welsh ICT industry accounting for just 2% of the UK's ICT economy, compared with 4% of the whole economy. The Welsh Government utilises a different definition for the ICT sector which does not include the software element.

Skills Challenges

The knowledge intensive nature of the ICT sector raises a number of skills challenges. To attempt to address these challenges localised research work to identify challenges was undertaken by the Swansea Bay City Region skills group and the RLSP.⁷⁵ This research identified that there were a number of different challenges faced by individuals who wished to pursue a career within the ICT sector and that barriers existed for companies to recruit talented individuals.

Drivers of Change/Demand⁷⁶

- **Digital by default,**
- **Cloud and remote computing,**
- **Super and Ultrafast broadband technologies,**
- **Cyber security,**
- **Process automation, including the automation of knowledge work,**
- **Multi platform technologies,**
- **Gaming.**

Regional skills challenges include:⁷⁷

- **Programming languages/coding,**
- **Dynamic database skills including SQL Server,**
- **Web development including HTML and PHP,**
- **Cyber security skills,**
- **Visualisation,**
- **Network engineers.**

Swansea Bay City Region

The ICT sector has been identified as a key economic driver for the region by the Swansea Bay City Region and forms the basis for the city deal proposal entitled 'The Internet Coast' which is being developed with the UK treasury. This includes the development of a number of themes based around utilising connectivity as a driver of economic growth and include the internet of energy, the internet of health and wellbeing and the internet of economic acceleration. Swansea University had the greatest number of 4* (International Significance) Computer Science submissions in Wales in the 2014 REF, is building the Computational Foundry on the Bay Campus.

⁷⁴ https://www.thetechpartnership.com/globalassets/pdfs/research-2016/datasheet_techindustry_march16.pdf

⁷⁵ <http://www.rlp.org.uk/wp-content/uploads/SBCR-ICT-Report-January-2016.pdf>

⁷⁶ <http://www.rlp.org.uk/wp-content/uploads/SBCR-ICT-Report-January-2016.pdf>

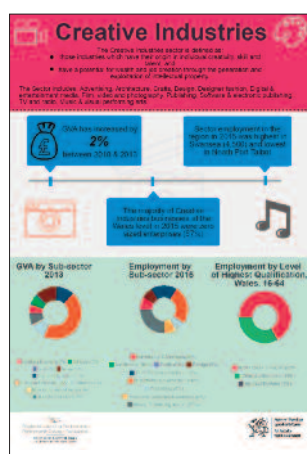
⁷⁷ <http://www.rlp.org.uk/wp-content/uploads/SBCR-ICT-Report-January-2016.pdf>

Growing Mid Wales

The majority of ICT activity in Mid Wales is centred around Ceredigion and Aberystwyth University. This in part is due to the Computer Science Department at Aberystwyth having a ranking of 11th in the UK and first in Wales according to the Research Excellence Framework. Specialist activities and expertise include industrially relevant computing with the potential to develop technological transfer activities to enable business growth.

Furthermore, Aberystwyth University is also a partner in the High Performance Computing Wales project, providing integrated supercomputing services for businesses and researchers across Wales and beyond.

3.3.4 Creative Industries



Please see **Sectors at a Glance** for full illustration.

The Creative Industries (CIs) are sectors of the economy which use creative talent for commercial purposes. They create jobs and wealth by exploiting intellectual property.

The CIs are made up of the following subsectors:

- **Advertising and marketing;**
- **Architecture;**
- **Crafts;**
- **Design: product, graphic and fashion design;**
- **Film, TV, video, radio and photography;**
- **IT, software and computer services;**
- **Publishing;**
- **Museums, galleries and libraries;**
- **Music, performing and visual arts.**

The Welsh Government states that the CI sector in Wales employs over 30,000 people and generates over £1.8 billion annual turnover. Evidence gathered via Creative Skillset (the Sector Skills Council for Wales' CI sector) suggests that employment across Creative Skillset's footprint alone is expected to increase by 45% between 2012 and 2022, rising from 37,200 to 54,100 employees. Of specific importance to Wales is the fashion and textiles sub-sector with the turnover of businesses in textiles and manufacturing solely reaching approximately £121 million.

The sector remains relatively resilient to the recession and forecasts predict significant growth in the number of jobs – 7,000 more people by 2017 in Wales (150,000 more across the UK).⁷⁸

⁷⁸ *Creative Blueprint Summary Wales June 2008: Creative & Cultural Skills)*

Across the UK nearly half, 49%, of the workforce are in associate professional and technical roles (jobs which have specialist skills and usually a high level vocational qualification). This is where much of the growth will be.⁷⁹ Half of future jobs will require a degree level qualification.

The industry has high numbers of freelancers, part-time workers and self-employment, not only actors and musicians, but also animators, radio production and television staff. As it becomes more competitive and costs are cut, jobs are less likely to be full-time or permanent.

In Wales, employers generally do not have problems recruiting; only 4% experienced difficulty in filling vacancies. This is far lower than the UK average (24%) for the industry.

Drivers of Change/Demand:

- **Rapid developments in digital technology,**
- **Media convergence,**
- **Changing models of content production & consumption,**
- **Globalisation,**
- **Highly competitive global markets**
- **Ageing workforce.**

Barriers to Training

- **Accessing finance for training,**
- **Can't spare staff time,**
- **Lack of appropriate training to meet needs,**
- **Lack of time.**

Skills Challenges

High value industries require high level skills – this is pertinent for the CI sectors which operate in highly competitive international markets. These industries require special attention and measures to ensure that they can engage with the skills system in a way that will be beneficial to their success. It is also noted that there is an appetite for training within the sector from new entrants to CPD.⁸⁰

Whilst in many areas of the creative industries competition for jobs is fierce and more people apply than there are jobs. The following roles are in short supply:

- **Broadcast Engineering,**
- **Visual Effects (VFX),**
- **Graphic design roles in advertising and design businesses,**
- **Skilled Archaeologists,**
- **Visitor Relations Occupations in the Cultural Heritage Industry e.g. museums,**
- **Design and textile technology in the Fashion Industry.⁸¹**

⁷⁹ Sector Skills Agreement for the Creative and Cultural Industries, February 2010

⁸⁰ 4 Creative Skillset Cymru – Key Skills and Training Priorities for the SW and central Wales region 2015-2020

⁸¹ Strategic Skills Assessment for the Creative Industries, January 2010)

Specific skills shortages for the region:

- **Multi-platform,**
- **Creative talent,**
- **Welsh language,**
- **Multi-skilling,**
- **Finance,**
- **Technical,**
- **Software,**
- **Technology,**
- **Business,**
- **IP,**
- **Sales and Marketing,**
- **Leadership & Management.**

Employers Voice⁸²

Significant Challenges

- Very competitive markets
- Recruiting people with the desired qualifications
- FE/HE provision meeting the requirements of the sector
- Lack of skilled Welsh speakers in the industry
- Lack of funding and investment
- Attracting bigger projects into Wales or outside Cardiff

Drivers of Change

- Technology
- Technical competencies and digitalisation
- Changing audience demand and behaviours

Recruitment Difficulties

- Difficulty in recruiting developers, Welsh speaking camera operators, sound recorders and producers.
- Specialist hair and make-up artists

Barriers to Training

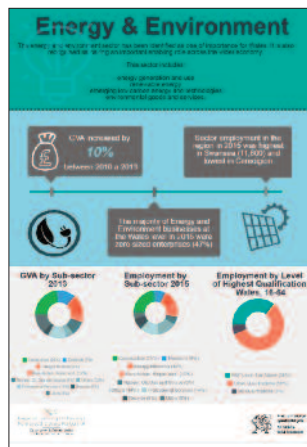
- General consensus dictates that there are no barriers to training

Work Readiness of New Entrants

- General consensus dictates that new entrants are not 'work ready'
- A lack of real-life work experience
- Expectations of education leavers are too high.

⁸² RLSP Large Company Survey & electronic survey (April- June 2016)

3.3.5 Energy and Environment



Please see Sectors at a Glance for full illustration.

The Energy and Environment (EE) sector is fast becoming one of prominence and unrivalled importance in Wales. It provides the foundation for sustainable development and is constantly changing in line with developing technologies, policies and markets. The sector is inclusive of energy generation and use, renewable energy, emerging low carbon energy technologies and environmental goods and services.

The sector has exhibited exponential growth over recent years both in terms of employment and its monetary contribution to the local and national economy. This growth is set to continue as the demand for renewable and innovative forms of energy generation increase in line with changing policy and targets. Evidence suggests that during a period of economic unrest the sector has out-performed the majority of other sectors across Wales.

Drivers of Change/Demand

A significant driver for growth is the Welsh Government's energy policy which has set ambitious targets for low carbon energy generation in Wales. As a result, the Welsh Government recognises that the energy and environment sector is one of the fastest growing sectors in Wales.

Further drivers of change/demand include:

- **Ageing workforce,**
- **Image of the sector,**
- **Staff turnover,**
- **Expansion demand,**
- **Global competition for talent.**

Barriers to Training

- **Inconvenience of courses,**
- **Lack of time to give or receive training,**
- **Risk of poaching of staff,**
- **Fluctuating demand for skills.**

Skills Challenges

Currently, Wales suffers with above average vacancy levels in the energy and utility sector compared with the rest of the UK. Especially for associate professionals, administrative / clerical staff, and sales and customer services staff - in spite of offering higher than average hourly wages.⁸³

⁸³ <http://www.ukces.org.uk/assets/ukces/docs/publications/evidence-report-62-energy.pdf>

For the energy and utility sector in particular, skills shortages span information technology, communication (written and oral), team working, customer handling and office admin skills, and both Welsh and foreign language skills. Some organisations report weaknesses in numeracy and literacy, and 'high level' skills of problem solving, planning and organisation, and strategic management. Finally, technical/practical skills are cited by approximately half, and over three quarters mention job specific skills as being in short supply.⁸⁴

The 'Skills and Occupational Needs in Renewable Energy Report' draws similar conclusions, reporting skill shortages for engineers and technicians in wind, solar, hydropower, geothermal, and bioenergy sectors. Within wind energy, they cite a shortage of project developers, service technicians, data analysts; electrical, computer, mechanical and construction engineers. The solar sector faces shortages for installers and maintainers, and building inspectors. Meanwhile, hydropower companies identify shortages among operations and maintenance engineers/technicians. In the geothermal sector, trainers and geothermal engineers are needed, as well as Bioenergy R&D and design engineers, and service technicians.

The 'Skills for a Green Economy Report' also emphasises a lack of engineers and corresponding skills. Skills gaps are highlighted in the waste-to-energy subsector include anaerobic digestion, which is a relatively new area for development. Gaps are also identified in biomass systems design, production of feedstock, mechanical handling and fuel delivery and storage. In the wider low carbon energy sector the report identifies skills deficiencies in: mechanical, structural, aeronautical and sub-sea high voltage engineers; turbine technicians and competencies in coping with harsh marine environments.

A report by a collaboration of government departments revealed evidence of demand for a light green workforce with more generic green skills across firms and sectors that will give businesses a competitive edge. The report further specifies these skills as lifecycle analysis/costing; carbon literacy for procurement; planning, impact assessment and risk management; leadership and management; sustainable procurement; resource efficiency skills and financial management. There is also evidence of demand for generic cross sector skills across the Low Carbon Resource Efficient Economy (LCREE) such as management, leadership and communication that will help to drive green transformation throughout organisations.

It has been noted that in addition to the basic skills provided by existing courses, more specialised skills in certain areas, as well as skill sets that cross existing occupations are required. For example:

- **New low carbon energy skills: Skills needed in the development, construction and operation of renewable technologies, and which do not currently exist outside of the low carbon energy sector, and;**
- **Transferable low carbon energy skills: Skills needed in the development, construction and operation of low carbon energy technologies, and which are similar to skills already existing outside the sector and require minimal additional training for transfer to the low carbon energy sector.**

Working Futures data predicts modest growth across the energy and utility sector as a whole over the next decade, but states how other sources suggest that growth could be significantly higher, especially in relation to energy generation. In particular, it is anticipated that there will be greater demand for higher level skills (Level 4+), in wind and marine generation and nuclear new build programmes.

The energy and utility Sector Skills Assessment indicates priority areas for action for the energy sector as a whole, but with particular relevance to Low Carbon initiatives. It notes the importance of ensuring that higher level skills can be delivered by identifying the following key areas for development:

⁸⁴ Davies et al 2012

⁸⁵ Energy Sector Skills Research – 2014 – Miller Research

- Employers Voice
- ⁸⁶

- **Dependant on the size of the organisation and the nature of the main business activity.**
- **Skills requirements are so specific that entrants start with a level of basic skills, meaning they have to undergo role specific training which can take anything from a few months to years.**

Financial & Professional Services

India's Financial and Professional Services sector has been the backbone of economic growth and development. India's Financial and Professional Services sector includes banks, insurance companies, and professional service providers. The sector is a major contributor to India's GDP and is expected to continue to grow rapidly in the coming years.

There are a number of key sub-sectors within the Financial & Professional Services sector, including:

- Banking and Finance:** This sub-sector includes banks, non-bank financial institutions, and insurance companies. It is the largest sub-sector within the Financial & Professional Services sector.
- Insurance:** This sub-sector includes life insurance, general insurance, and reinsurance companies. It is the second largest sub-sector within the Financial & Professional Services sector.
- Professional Services:** This sub-sector includes law firms, accounting firms, consulting firms, and other professional service providers. It is the third largest sub-sector within the Financial & Professional Services sector.

The Financial & Professional Services sector is a key driver of India's economic growth and is expected to continue to play a major role in the country's development in the coming years.

The infographic is titled "Financial & Professional Services" and features a blue and white color scheme. It includes a timeline of growth, a central box about sub-sector growth, and three donut charts showing the composition of the sub-sectors in 2013 and 2016. The charts are divided into four categories: Banking & Finance (blue), Insurance (orange), Professional Services (green), and Other (grey).

Growth Trends:

- GVA has increased by **12%** between 2010 & 2013.
- Asset deployment in the region in 2013 was highest in the **₹100-200 crore** band and lowest in the **₹10-20 crore** band.

Sub-sector Growth:

The majority of Financial & Professional Services in the Metro zone in 2015 were Top 2000 companies (76%).

Sub-sector Composition (2013):

- Banking & Finance: 55%
- Insurance: 25%
- Professional Services: 15%
- Other: 5%

Sub-sector Composition (2016):

- Banking & Finance: 50%
- Insurance: 25%
- Professional Services: 15%
- Other: 10%

Employment by Level of Highest Qualification, Metro, 16-24:

- Graduate: 45%
- Postgraduate: 35%
- Diploma: 10%
- Below Graduate: 10%

Source: Ministry of Finance, Government of India (2013-2016)

Legend:

- Banking & Finance (Blue)
- Insurance (Orange)
- Professional Services (Green)
- Other (Grey)

Disclaimer: The data is for the Metro zone only. The data is for the year 2013-2016. The data is for the Metro zone only. The data is for the year 2013-2016.

⁸⁵ *RLSP Large Company Survey & electronic survey (April- June 2016)*

The financial and professional services sector encompasses a number of different areas and is primarily made up of service based industries. The sector ranges from legal and financial services through to professional consultancy and similar occupations.

The financial services sector which covers the areas of banking and insurance is a critically important industry for the UK as whole. *'The UK is the leading exporter of financial services across the world. Its trade surplus in financial services is double that of the next largest trade surpluses recorded by Luxembourg, Switzerland and the US.'*⁸⁷

The financial services sector is also a highly productive industry which contributes significantly to the economic performance of the UK. *'At 11.8% of the economy, industry output is above the 7.4% combination to UK employment, indicating that productivity levels are well above the average for the UK economy overall'*⁸⁸

Although the financial services sector is traditionally associated with 'the city' in London and the South East the industry has a significant presence within Wales and the south west and mid Wales regions

The legal sector also forms an important element of the financial and professional services sector and has been an area of growth for the UK. *'Solicitor demographics indicate that the profession, overall, has grown by 34.8% between 2004 and 2014. As at July 2014, 130,382 solicitors held current practising certificates. During the decade from 2004-2014, the proportion of practising certificate holders who are women increased from 40.5% to 48.2%.'*⁸⁹

Although the sector faces a number of external challenges relating to the provision of a number of legal services there remains a strong demand for employment. *'Significant numbers of barristers, solicitors and other legal professionals and associated professionals are likely to be needed between 2015 and 2020. An additional 58,000 workers needed within the legal activities sector.'*⁹⁰

Demand/Change Drivers

- **Digitalisation of services**
- **Regulatory changes**
- **Increasing customer expectations**

Employers Voice⁹¹

Significant Challenges	Drivers of Change
<ul style="list-style-type: none"> • Digital transformation and awareness • Ability to recruit the right level of talent in specialist fields. 	<ul style="list-style-type: none"> • Government digital agenda • The requirement to extract greater insights from data to understand customer behaviour.
Recruitment Difficulties	Barriers to Training
<ul style="list-style-type: none"> • Specifically in the IT/Digital space due to market value salaries and geographical locations. 	<ul style="list-style-type: none"> • Accessing courses in the higher education sector that are aligned to the needs of the business can be a challenge.

⁸⁷ <https://www.thecityuk.com/research/key-facts-about-uk-financial-and-related-professional-services-2016/>

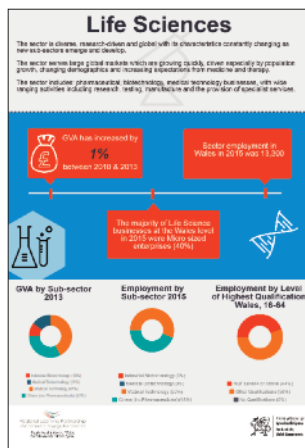
⁸⁸ <https://www.thecityuk.com/research/key-facts-about-uk-financial-and-related-professional-services-2016/>

⁸⁹ <http://www.lawsociety.org.uk/support-services/research-trends/future-of-legal-services/>

⁹⁰ <http://www.lawsociety.org.uk/support-services/research-trends/future-of-legal-services/>

⁹¹ RLSP Large Company Survey & electronic survey (April- June 2016)

3.3.7 Life Sciences



Please see **Sectors at a Glance** for full illustration.

The Life Science sector is a small but increasingly significant sector within South West and Mid Wales and is an important growth area. In 2014 the RLSP launched an in depth study into the life science sector in South West and Mid Wales entitled 'Life Science, Skills for Life'. This analysis identified a number of conclusions and recommendations to promote the development of the life science sector in particular the importance of developing an indigenous skills pathway for developing life science sector in the region.

The sector covers Medical Devices, Medical Diagnostics and Pharmaceuticals through to Synthetic and Industrial Biotechnology. It also includes Medical Technology businesses, with ranging activities including research, testing, manufacture and the provision of specialist services.

The role of developing coherent skills strategies and pathways has been highlighted as critical to the continued success of the sector due to the high reliance on individual knowledge.

*The pharmaceuticals and bioscience industries have shown commitment to developing and delivering training pathways across all skills levels. In particular, there has always been a strong sector emphasis on recruiting highly able graduates and postgraduates, and training them to deliver intensive research and development programmes usually in collaboration with academia. As the sector landscape changes the delivery of higher level skilled employees remains a challenge.*⁹²

Drivers of Change/Demand

A significant driver of demand within the life science is the Welsh Government's strategy for science which places a significant emphasis on the development of research and innovation capacity with the science sector, there are also a number of additional external demand drivers which include:

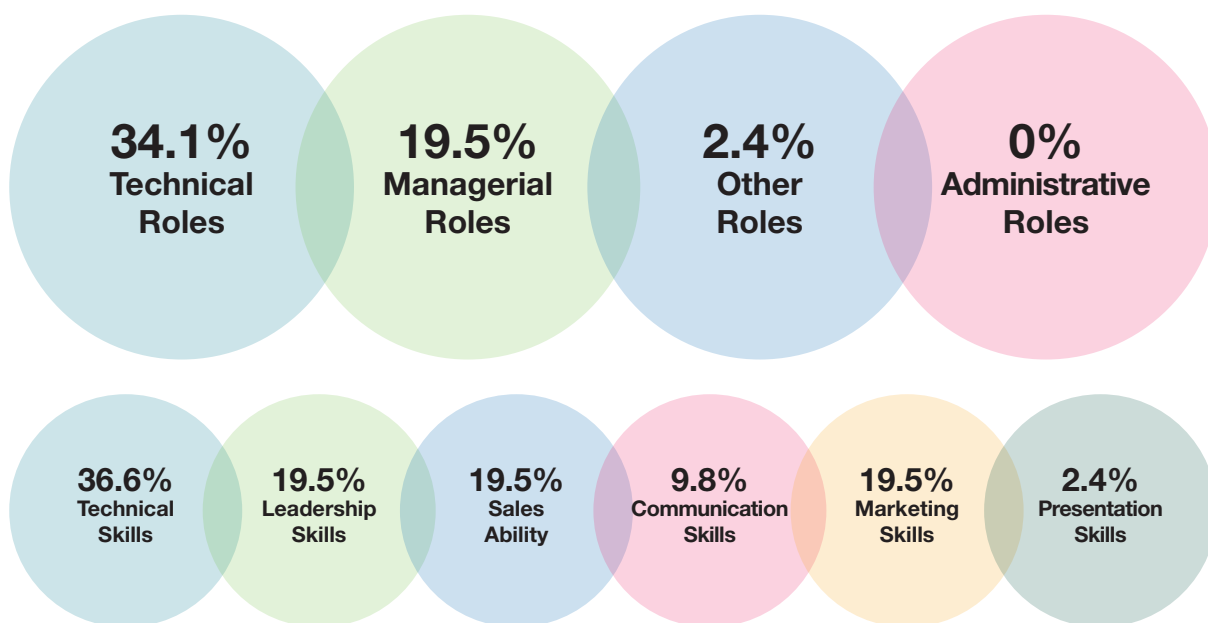
- **An aging population is driving demand for healthcare solutions**
- **Industrial biotechnology**
- **Enhanced computer modelling and 'big data' solutions**
- **Regulatory requirements**
- **New manufacturing techniques**
- **'tailored' healthcare for chronic conditions**
- **Wearable technology**

⁹² Biovision Cogent 2010

Skills Challenges

The employer survey conducted as part of Life Science: Skills for Life identified a number of recruitment issues within different roles as well as a number of skills and aptitude deficiencies.

The primary area of skills issues within the sector regionally were in the area of technical roles and skills, highlighting the significant challenges faced with the highly technical nature of the industry, in particular with the manufacturing processes. Evidence also suggested that although the majority of companies recruited from the local labour supply for technical and managerial roles they were increasingly likely to recruit from UK or European sources.



Specific skills challenges for the region include⁹³:

- **Good laboratory practice,**
- **Regulatory understanding,**
- **Scientific research,**
- **Product development,**
- **Leadership and management,**
- **Production techniques,**
- **Quality assurance,**
- **Computer analysts.**

Swansea Bay City Region

The Swansea Bay City Region skills group have identified the life science sector as being of importance to the development of the region and links with significant developments including the development of the ARCH programme and the progression of the Life Science Hub. Swansea University has developed a cluster of Life Science companies within two incubation facilities (Life Science 1&2), supported by R&D and Data Science.

⁹³ Life Science – Skills for Life (2014)

Growing Mid Wales

The Life Science sector is represented in the region through a number of private sector businesses and there exists an opportunity assist the development of this sector further. Aberystwyth University is also well positioned to act as a catalyst to develop this sector particularly around plant and animal science, Biological Environmental and Rural Science, veterinary science skills, and The Centre for Excellence in Rural Healthcare being developed by the Mid Wales Health Collaborative.

Section 4

Foundational Economy

Regional Employment & Skills Plan South West & Mid Wales

Sectors within the foundational economy are required to support the overall function of the economy and will utilise predominantly local expenditure, sectors include retail, social care and the public sector. The foundational economy has typically lower skills levels, occupational groupings and wages, the sector also has a higher number of part-time employees.

The foundational economy can be considered as a new economic entity and has been described as;

*'Large, mostly unglamorous, rather heterogeneous, and is distributed across the country. It is an economy that meets everyday needs by providing taken-for-granted services and goods such as care, telecommunications or food.'*⁹⁴

The nature of the foundational economy means that a number of occupational groups can fall under the category which have been identified as having skills gaps.

*'By occupation, there had been a particularly marked increase in the density of skill shortage vacancies amongst machine operatives since 2013 (from 25 per cent of all vacancies to 33 per cent). Skilled trades continued to be the occupation with the highest density of skill-shortage vacancies (43 per cent).'*⁹⁵

As a result of the low wage nature of much of the foundational economy there are significant challenges faced by employers through the introduction of the national living wage for those aged over 25, however, it also provides a significant opportunity for those who may have become entrenched in low paying jobs. Due to the recent implementation of the living wage the full impacts of the policy onto the foundational economy have not been fully evaluated.

4.1 Relationship with the aspirational economy

A number of sector areas can be defined as both aspirational and foundational, for example where a 'day to day' service is provided and an additional level is provided to support economic growth and inward invest. An example would be the financial services sector where everyday financial transactions form part of the foundational economy while more advanced financial transactions can form part of the aspirational economy.

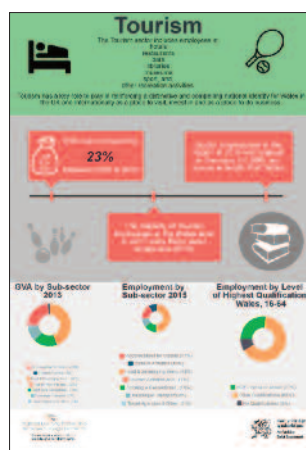
Sectors that can be considered as operating across both the aspirational and foundational economy include:

- **Financial and professional services**
- **Construction**

⁹⁴ <http://www.cresc.ac.uk/medialibrary/workingpapers/wp131.pdf>

⁹⁵ *Employer Skills Survey 2015:UK Results – UKCES 2016*

4.2 Tourism



Please see Sectors at a Glance for full illustration.

The tourism sector in Wales encompasses all tourism, hospitality and leisure activities within the region and is of significant importance both in terms of the numbers employed as well as the ability to attract inward investment and expenditure.

By 2020 the hospitality and tourism workforce in Wales is projected to grow by 4,700 people. Taking into account replacement demand this means that 35,900 people will need to be recruited to the sector over the next seven years. (People 1st, 2013)⁹⁶

Research undertaken by people 1st highlights both regulation and legislation as potential future barrier to growth in Wales, examples could include food hygiene and health and safety requirements.⁹⁷

Labour turnover rates stand at 20 percent in hospitality and tourism, higher than a number of other sectors, but in line with the UK sector average.

In Hospitality and tourism, 21% of employers reported skills gaps, compared to 13% for the whole economy.

Within the region a large number of important tourist locations including the Brecon Beacons National Park, the Pembrokeshire Coast National Park and the Gower peninsula AONB. These areas are home to a significant number of accommodation and hospitality services as well as attraction services which each have a range of skills challenges.

An additional challenge for the tourism sector is the seasonal nature of a number of roles, these place a number of additional challenges onto the sector including a significantly above average replacement demand requirement.

The 2015 Demand and Supply assessment undertaken by the Regional Learning Partnership identified tourism as an area where there was an undersupply of provision in a number of areas including higher level chef and catering skills as well as general hospitality.

⁹⁶ State of the Nation Report 2013: Wales Executive Summary – People 1st 2013

⁹⁷ State of the Nation Report 2013: Wales Executive Summary – People 1st 2013

The following areas have been identified as skills gaps within the tourism industry:

- **Higher level culinary skills**
- **Customer service skills**⁹⁸

Swansea Bay City Region

The development of the Swansea Bay City Region as a tourism destination forms an important part of the region's regeneration strategy. This places an emphasis on exploiting the natural beauty of the region and developing a wider range of attraction and accommodation options.

Growing Mid Wales

Tourism and recreation are a key sector for the region with a number of opportunities for significant impacts along the coast and in the Brecon Beacons and Cambrian Mountains as well as opportunities to develop activity tourism and existing themed brandings. The partnership has already prioritised the strategic development of the Vale of Rheidol railway as the southern gateway of the Wales' significant tourist attraction narrow gauge themed marketing. The region's higher education institutions present specific opportunities for the development of niche business tourism and conferences.

Employers Voice⁹⁹

Significant Challenges

- Recruitment of qualified staff

Drivers of Change

- Tourism and education

Recruitment Difficulties

- Difficulty in recruiting all office administration staff
- Qualified and experienced instructors
- Trainee instructors
- Drivers – Trailers and vans maintenance staff
- We developers
- Chefs
- Individuals with a level 3 qualification in childcare

Barriers to Training

- Real life experience is what is required and traditional FE and HE courses cannot deliver this.
- Demand for an apprenticeship qualification that can be delivered by the business.
- Lack of formal training available on a part time basis – seen as low-skilled work therefore university graduates aren't attracted.
- Need to develop part-time/one day courses to up-skill staff in certain areas, these include but are not limited to customer service, food preparation, marketing, social media, HR etc.

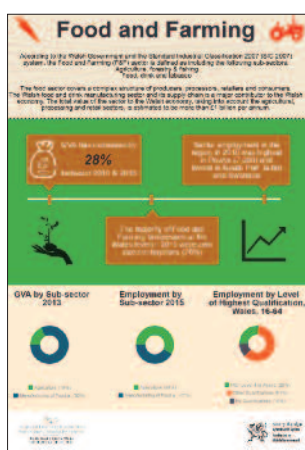
Work Readiness of New Entrants

- Wrong training and provision of qualifications, therefore entrants are not work ready.
- Not always – Some highly educated people have no customer service skills or realistic expectations of the working world.

⁹⁸ RLSP – Demand and Supply Assessment, 2015

⁹⁹ RLSP Large Company Survey & electronic survey (April- June 2016)

4.3 Food and Farming



Please see Sectors at a Glance for full illustration.

Recent research conducted collaboratively by the Welsh Government, Sector Skills Councils and industry partners, indicates that the food and drink supply chain is important to the Welsh economy in terms of employment, income and the contribution it makes to tourism.

The research estimates that the supply chain makes up approximately 18% of the total Welsh workforce, and generated over £6 billion in 2010, performing well in a challenging economic climate. The report, 'The Welsh Food and Drink Skills Project', states that there are 27,515 local business units in the food and drink supply chain which employ approximately 230,000 workers - representing the largest combined industry of employment across Wales. Direct employment in the Farming sector in Wales accounts for 70,000 workers.

The food and farming sector is a significant part of the foundational economy and encompasses a large part of the food and drink supply chain and includes primary production and agriculture as well as the manufacturing and preparation of food and drink. This is an area where traditionally the region has a strong presence and has a number of established brands and producers.

The sector is also characterised by a significant level of self employed individuals, particularly within land based roles with 48% of individuals being self employed compared to 15% of the normal workforce.¹⁰⁰

According to evidence stated in 'Working Futures 2012-2022', the greatest demand will be for the following job roles:

- **Animal Care Workers**
- **Veterinarians**
- **Veterinary nurses**
- **Production managers in manufacturing**
- **Biological Scientists & Biochemists**
- **Environmental Health Professionals**
- **Fishing & Agricultural Workers**

¹⁰⁰ https://www.lantra.co.uk/sites/default/files/The-UK-Land-based-and-Environmental-Sector_Skills-Assessment-Update-Spring-2014_0.pdf

The sector is one of importance to the region with specific major growth areas, for instance;

- **Food technology and food processing have been identified as areas of importance for the Haven Waterway Enterprise Zone.**
- **There is well-established production and processing capacity across the Mid Wales region with a number of regionally important companies situated in the counties, including; Dunbia, Randall Parker Foods, Rachel's Dairy etc.**
- **Furthermore, Horeb is home to one of three Food Innovation Wales locations in the region at the Food Centre Wales.**
- **Aberystwyth is also home to several important Welsh Agricultural organisations such as Organic Centre Wales and Hybu Cig Cymru.**
- **One of the largest and most recently developed UK livestock markets is situated in Welshpool.**
- **Development of a Veterinary School in Aberystwyth, (which is also aligned to the Life Sciences' sector.**

Employers Voice¹⁰¹

Significant Challenges

- Competition for customers from restaurant chains
- High reliance on migrant workers

Drivers of Change

- Economic conditions and eating out trends

Recruitment Difficulties

- No recruitment difficulties as location is preferable allowing recruitment from a large pool of labour
- Electrical engineer
- Mechanical engineer
- Process manager

Barriers to Training

- No clear barriers to training
- Drivers now require Certificate of Professional Competence which has to be obtained externally and paid for

Work Readiness of New Entrants

- General consensus that new entrants are work ready

¹⁰¹ RLSP Large Company Survey & electronic survey (April- June 2016)

4.4 Education

The education sector within the region forms a significant part of the foundational economy and ranges from primary level through to further and higher education. The sector has a critical role in supporting the supply of skilled individuals into the labour market therefore there is a requirement to ensure that there is an appropriately skilled supply of individuals into the sector.

The Regional Learning & Skills Partnership along with the regional education consortia ERW undertook a detailed study into the future recruitment demands of the sector. This identified a number of recommendations including ‘strengthening CPD practices, collaboration, career pathways for future leaders, teachers as leaders, leadership, Welsh language skills and special education needs skills. Also noted is the need to prepare for the ever evolving changes in curriculum and digital skills.’¹⁰²

The following specific skills were identified within the education sector:¹⁰³

- **Welsh language**
- **Digital literacy**
- **Special Educational Needs**
- **Secondary level**
- **STEM subject**
- **Leadership and management**

Employers Voice¹⁰⁴

Significant Challenges

- Funding and improving the skills of young people

Drivers of Change

- Cuts to public services
- Improving skills and standards

Recruitment Difficulties

- Recruitment difficulties in some vocational areas where vocational skills are high but teaching skills are poor

Barriers to Training

- Very little teaching staff development in Wales. Much of the development is provided internally.

¹⁰² <http://www.rlp.org.uk/wp-content/uploads/Workforce-Analysis-for-Schools-in-ERW.pdf>

¹⁰³ *Workforce Analysis for Schools in ERW, 2015*

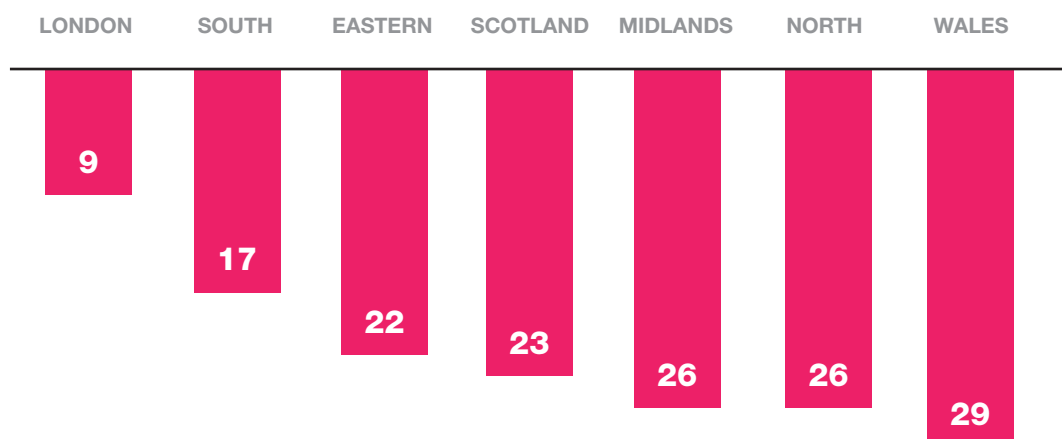
¹⁰⁴ *RLSP Large Company Survey & electronic survey (April- June 2016)*

4.5 Retail

The retail sector is a significant employer regionally within the region and operates across a number of markets from general retailing to more specific and niche markets.

An issue for concern is the increasing rate of store closures within Wales, this has in part been driven by a change in consumer behaviour and a shift into online shopping. Research from the British retail consortium highlights that up to 29% of stores have closed, or are at significant risk of closing, by 2018 the highest rate in the UK.

2012 - 2018



Percentage decline in store numbers by region¹⁰⁵ – BRC Retail 2020

The implementation of the living wage has been highlighted as a potential issue for the retail sector which may have a disproportionate effect on areas of low economic growth.

*'£9 per hour by 2020 is forecast to be equivalent to at least 70 percent of median earnings in many other parts of the country and will force employers to consider if they can afford these roles. This will be most acute in regions where economic growth is weakest.'*¹⁰⁶

The following areas have been identified as skills requirements within the retail sector:

- **Customer service skills**
- **Leadership and management skills**
- **Digital literacy skills**

¹⁰⁵ Retail 2020: Fewer but better jobs – BRC 2016

¹⁰⁶ Retail 2020: Fewer but better jobs – BRC 2016

Significant Challenges

- **Costs**

Drivers of Change

- **Competition**

Recruitment Difficulties

- **Difficulty recruiting staff that want to work more than 16 hours per week across all roles.**
- **Technicians**
- **Sales executives**
- **Service advisers**

Barriers to Training

- **No apparent barriers to training**

4.6 Health and Social Care

The health and social care sector is an important element of the foundational economy as it supports health and wellbeing across all age groups. The social care sector can be defined as *“Social care supports people of all ages with certain physical, cognitive or age-related conditions in carrying out personal care or domestic routines. It helps people to sustain employment in paid or unpaid work, education, learning, leisure and other social support systems. It supports people in building social relationships and participating fully in society.”*¹⁰⁸

The health and social care sector within the region has been identified as an area of significant growth for the region due to a rapidly aging population and a demographic profile which has a greater number of older people than the UK average. The care sector is highly regulated placing a significant emphasis on qualification requirements for staff.

The health care sector provides a more dedicated and specialised care and supports a number of high skill high wage jobs. The sector is primarily within the public sector and has therefore seen limited spending growth however demands on services remain and will increase in line with an aging population. There are also significant links with the life science including areas of personalised care and new and innovative treatment techniques.

The skills needs identified within the health and social care sector include:

- **E-health and digital care skills,**
- **Domiciliary care,**
- **Dementia care,**
- **Early years care.**

¹⁰¹ RLSP Large Company Survey & electronic survey (April- June 2016)

¹⁰⁸ Accessed electronically via http://www.ilis.co.uk/uploaded_files/dilnott_report_the_future_of_funding_social_care_july_2011.pdf

Swansea Bay City Region

The health sector is a key focus of the Swansea Bay City Region regeneration has significant links to large scale projects such as the ARCH programme and links with the Swansea Bay City Deal.

Growing Mid Wales

Health and social care is a key employer across the region serviced by two Health Boards, Bronglais General Hospital, a network of Community Hospitals, Primary and Community Care services and a raft of social care services in the Public, Private, and Third Sectors. This sector is facing greater challenges than ever before with financial pressure on both medical and social care. The Social Services and Well Being Act aims to engage services more closely with local communities and increase opportunities for third sector provision.

The Centre for Excellence in Rural Health and Social Care will ensure training and job opportunities for new types of roles e.g. generic workers, with the right skills to work in Mid Wales. The Centre will provide opportunities to attract grant funding for exploring these opportunities across the region.

Employers Voice¹⁰⁹

Significant Challenges

- Constant changes and reductions in funding
- Local authority and NHS staff changes and morale
- Increased competition
- Increased energy costs
- Workforce availability and finance
- Age profile
- Increased demand for services with reduced funding
- Suitable training to ensure appropriately skilled workforce.

Drivers of Change

- Government policy
- Clinical improvements/research/ technology/ patient need/ expectation
- Weather
- Voices and experiences of people who use mental health services
- Reduction in funded places for over 25s
- Professional Bodies Guidance and Policy

Recruitment Difficulties

- Difficulty recruiting for catering roles
- Specific medical and clinical staff groups (related to national shortages)
- Recruitment difficulties due to all staff needing to be qualified to level 5
- HR and administrative roles
- Appropriately qualified care staff

Barriers to Training

- Most training is done internally as it isn't cost effective to outsource
- Taking people out of the workplace for training makes it difficult to manage service pressures.
- Frameworks for qualifications do not meet the demands
- Training provided at sites of significant distance to Mid Wales

¹⁰⁹ RLSP Large Company Survey & electronic survey (April- June 2016)

4.7 Wholesale and Logistics

The wholesale and logistics sector plays an important role in the foundational economy through assisting the logistical movements of goods and services across the regional economy. The logistics sector encompasses road, rail and sea based transportation alongside associated activities including warehousing and sorting. Wholesaling refers to non consumer facing retail and can incorporate a range of different activities from general to specialist wholesaling. In addition the increasing development of online shopping is placing a greater emphasis on to the door retailing placing demands on delivery and courier staff as well as sorting staff.

Within the wholesale and logistics sector an aging demographic profile has been highlighted as a significant area of concern considering the licensing and regulatory demands for driving heavy goods vehicles. The high cost and age limitations of training for a HGV licence has been seen by many as a barrier to entry into the logistics sector.

Specific skills requirements within the wholesale and logistics sectors include:

- **HGV and Class 1 drivers**

4.8 Employer Skills Priorities

There have been a number of secondary research studies undertaken at both a Wales and UK level to identify the current and future skills requirements. One of the largest activities undertaken is the employer skills survey undertaken by UKCES which is the most comprehensive survey of its type.

Increasingly to address identified skills gaps employers are seeking a number of different ways to engage with learning and development opportunities including a growth in digital learning techniques such as e-learning. *'Use of online training or e-learning and of other self-learning was common among training employers (45 per cent and 38 per cent respectively), and generally increasing, particularly for online training and e-learning.'*¹¹⁰

4.9 Demands of Regional Large Companies

It is important to recognise the role of large companies with over 250+ within the South West and Mid Wales region as although companies within this size bracket.

To support the understanding of the skills requirements of the large companies within the region the RLSP alongside LSKIP in South East Wales commissioned with funding support from Welsh Government a detailed study into the skills requirements of large companies within south and mid Wales.

Below are some of the reports key headlines with a full version of the South West and Mid Wales report available within the annex.

Manufacturing accounts for 38% of large private sector units (18 companies), highest sub sectors included food (5 units) and Metals (5 units). The next largest sector was wholesale and retail which accounted for 19% of companies (9 companies).

¹¹⁰ *Employer Skills Survey 2015:UK Results – UKCES 2016*

Within the area of workforce demographics it was highlighted that large companies employ a high number of full time staff with over 70% respondents indicating that they employ between 75 - 100% of staff full time. The role of replacement demand was also highlighted as there were high numbers of staff within the 55+ and 40 – 54 age categories. The numbers were particularly high across some sectors [verify].

Within the category of training delivery 'In-house training' was identified as the most likely source of training, followed by independent training providers. Two thirds of large companies also utilised E-learning with the greatest use in the regulatory/health and safety areas. Within the areas of training delivery traditional apprenticeships are the most popular training schemes (half of respondents) and graduate programmes noted by a quarter. There was also interest expressed in shared apprenticeship and graduate schemes.

When skills shortages are reviewed the majority are considered to be an ongoing as opposed to a new problem and over a third of the roles appear to have an impact on growth. An area of high training needs was identified within Computing and IT skills as well as with 'soft skills'. This is important with regards to recruitment as the majority of businesses expect to recruit over the next three to five years, over 70% because of staff turnover and almost 65% through expected growth, just 20% noted investment as the reason.

Section 5

Skills Supply Information Summary

Regional Employment & Skills Plan South West & Mid Wales

To understand the requirements of skills within the region it is essential to identify what individuals are progressing through the skills supply chain. To support this a number of sources of information have been supplied by Welsh Government to facilitate the analysis of supply.

5.1 Understanding the Skills Supply

To support the analysis of the supply of skills into the labour market there is need to encompass as many skills based routes into the labour market as possible, this includes assessing the routes through both further and higher education. The approach utilises the number of enrolments onto different subject areas during individual academic years to give an indication of the supply potential.

5.2 Further Education

The further education sector is an important provider of skills for the region. Delivery within the further education is primarily classified by the qualification types as either 'vocational' work focused and competency based or generic qualification types.

5.2.1 Full Time Vocational Education

The current 15/16 full time vocational and planned 16/17 activity is displayed below by the number of enrolments.

	March 2016 Planned 15/16	March 2016 Planned 16/17
Sector 1 - Health and Public Services	2,194	2,029
Sector 2 - Science and Mathematics	157	101
Sector 3 - Agriculture Horticulture and Animal Care	366	338
Sector 4 - Engineering and Manufacturing Technologies	1,181	1,216
Sector 5 - Construction Planning and the Built Environment	1,327	1,282
Sector 6 - Information and Communication Technology	687	654
Sector 7 - Retail and Commercial Enterprise	1,272	1,189
Sector 8 - Leisure Travel and Tourism	969	892
Sector 9 - Arts Media and Publishing	1,396	1,248
Sector 11 - Social Sciences	65	40
Sector 14 - Preparation for Life and Work	799	806
Sector 15 - Business Administration and Law	800	720
	11,213	10,515

The highest number of planned enrolments for 15/16 is within the health and public services (2,029), construction planning and built environment (1,282) and the arts, media and publishing (1,248) sectors.

5.2.2 Part Time Further Education

The part time further education information is provided as a number of 'guided contact hours' as opposed to the number of learners enrolled to a single subject area any single learning activity may take a range of time. The information provided includes the planned delivery for the 15/16 academic year as well as the planned delivery for the academic year 16/17 as a comparison.

	March 2015 Return Final Planned 15/16 Delivery	March 2016 Return Final Planned 16/17 Delivery
Sector 1 - Health and Public Services	43,306	110,822
Sector 2 - Science and Mathematics	0	644
Sector 3 - Agriculture Horticulture and Animal Care	5,500	17,515
Sector 4 - Engineering and Manufacturing Technologies	41,750	35,488
Sector 5 - Construction Planning and the Built Environment	54,655	92,239
Sector 6 - Information and Communication Technology	3,362	6,758
Sector 7 - Retail and Commercial Enterprise	31,819	32,814
Sector 8 - Leisure Travel and Tourism	9,466	4,670
Sector 9 - Arts Media and Publishing	660	9,043
Sector 10 - History, Philosophy and Theology	0	0
Sector 11 - Social Sciences	1,671	0
Sector 12 - Languages, Literature and Culture	1,930	11,082
Sector 13 - Education and Training	20,902	2,911
Sector 14 - Preparation for Life and Work	180,729	189,088
Sector 15 - Business Administration and Law	68,240	81,585
	463,990	604,659

The largest number of planned part time guided contact hours is within the preparation for life and work sector with 189,088 planned guided contact hours, this is followed by the health and social care sector (110,822) and construction planning and built environment (92,239). Large increases in planned guided contact hours are seen within the health and public services sector as well as the construction, planning and built environment.

5.2.3 Part Time NVQ

The total number of part time NVQs delivered by further education within the workplace is displayed as a total number of planned learners. The breakdown is not available by subject or sector level.

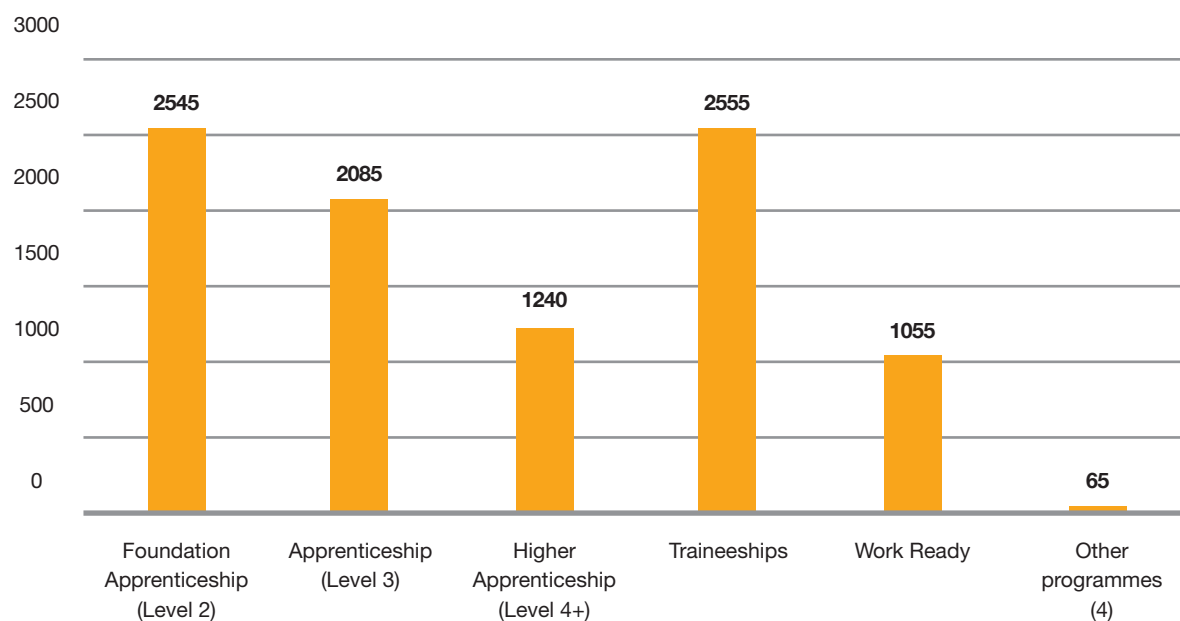
	March 2015 Return Final Planned 15/16 Delivery	March 2016 Return Final Planned 16/17 Delivery
NVQs delivered in the workplace	1,830	1,230

There is a planned reduction in the numbers of NVQs delivered within the workplace between academic years 15/16 and 16/17 of 600 learners.

5.3 Work Based Learning

The graph below displays the distribution of starts in work based learning activities across the region for the academic year 14/15 and includes apprenticeships from foundation (level 2) to higher level (level 4+).

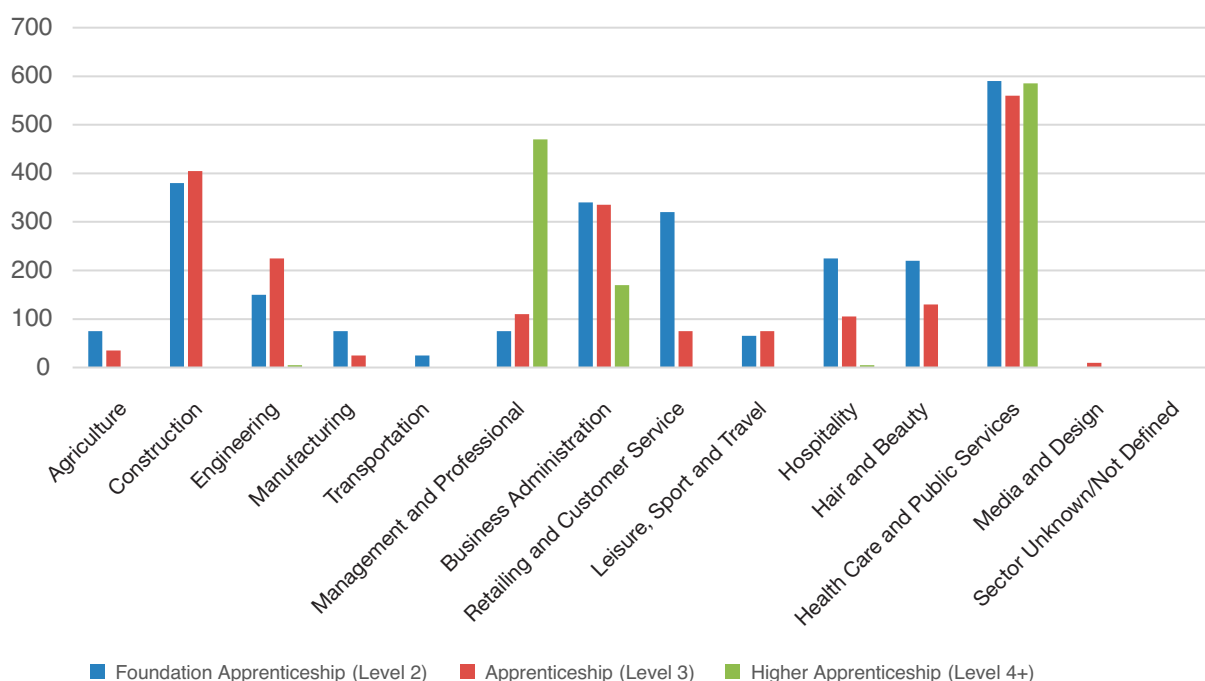
Regional WBL Activities



The work based learning provision within the region is focused around apprenticeships as well as traineeships. In total there were a total of 5,870 apprenticeship starts from levels 2 to 4+ in 2014/15 as well as a total of 2,255 traineeships and the 1,055 work ready programme activities.

The distribution of apprenticeship starts during the academic year 14/15 is shown in the below table by subject area and level of apprenticeship.

Apprenticeship Starts 14/15 by Subject Area



The highest number of apprenticeship starts are at levels 2 with high numbers of enrolments in the health and social care, construction, business administration and retail sectors. Similarly the level 3 apprenticeships were high in health and social care, construction and business administration in addition there were a greater number of levels 3 apprenticeships in engineering. Higher level apprenticeships were only started in 5 subject areas including health and social care, management and professional, business administration, engineering and hospitality.

5.4 Higher Education

5.4.1 Understanding Higher Education Data

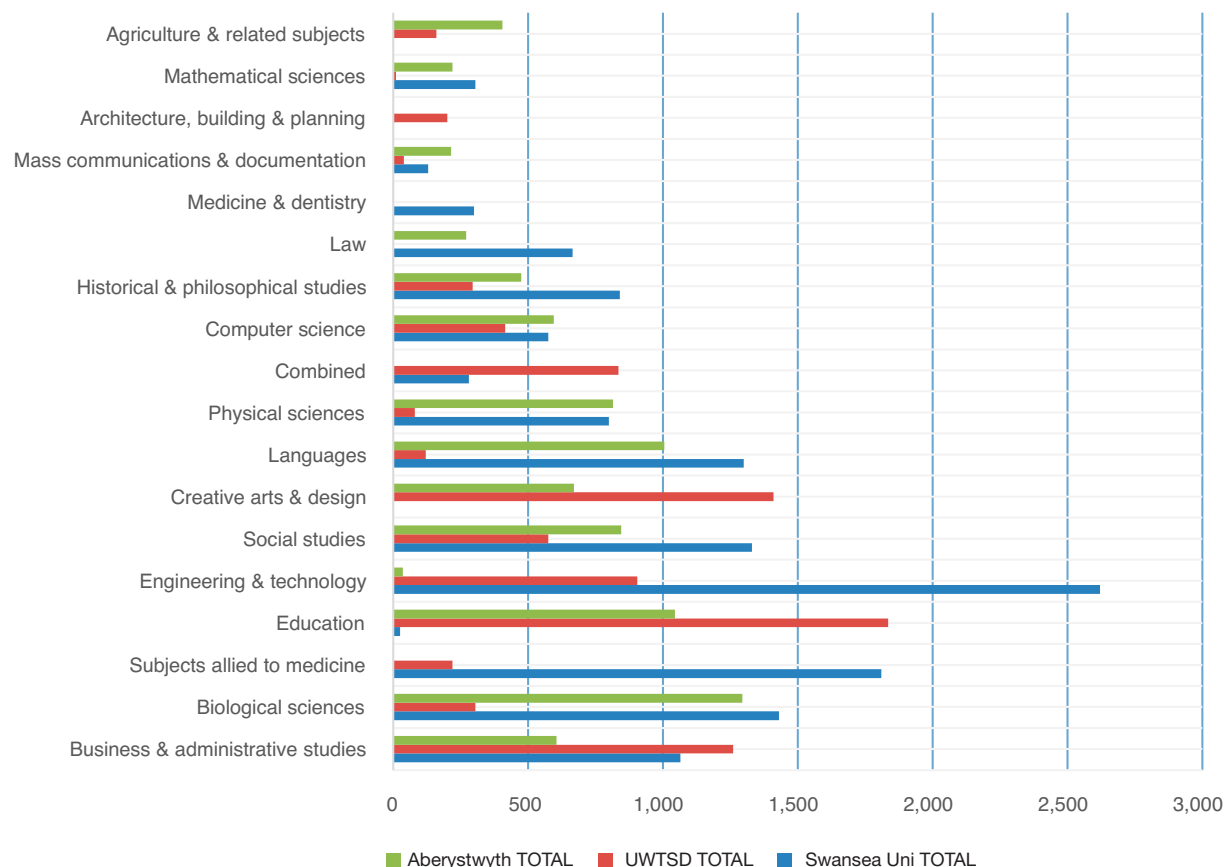
The information for higher education is sourced from the HESA dataset and includes the number of enrolments to the three universities physically located within the region on an undergraduate and postgraduate basis for the academic year 14/15. Data from the Open University in Wales is not included due to the distance learning model utilised which was not provided on a geographic basis.

The information includes the enrolments to broad subject areas as well as information regarding if individuals are enrolled on part-time or full-time courses of study.

5.4.2 Undergraduate Enrolments

The total number of enrolments of undergraduate students across the region's universities by subject area is displayed below.

Undergraduate 14/15



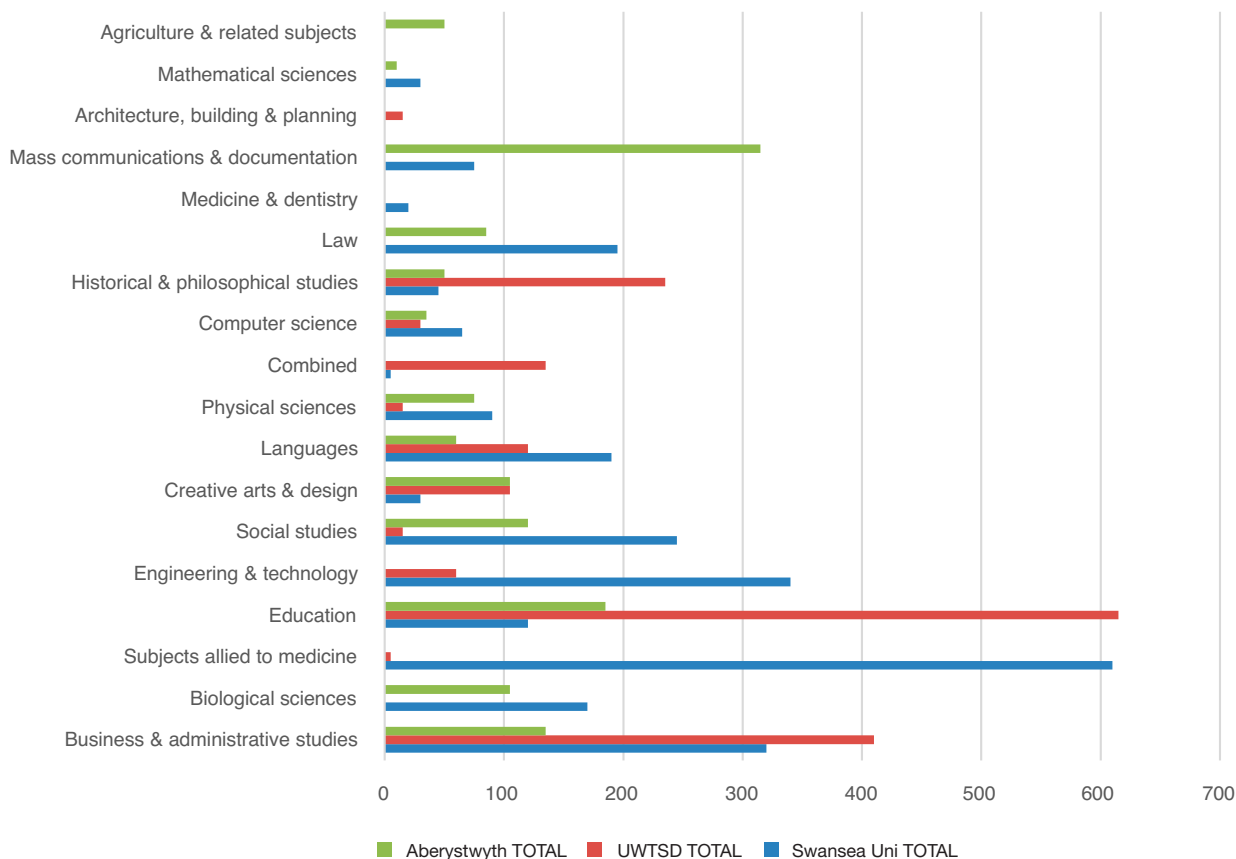
Within the region's three higher education institutions there were a total of 30,625 undergraduate enrolments. The highest number of undergraduate enrolments was at Swansea University with a total of 13,465 undergraduate enrolments, this followed by UWTSD with 8,660 enrolments and Aberystwyth University with 8,600 enrolments.

In relation to the subject areas studied the highest number of enrolments was within the engineering and technology subject area with a total of 3,560 enrolments across the 3 institutions, this is followed by biological sciences with 3,030, business & administration studies with 2,930 and education with 2,905 enrolments.

5.4.3 Postgraduate Enrolments

The graph below displays the number of postgraduate enrolments within the region, postgraduate enrolments include those studying for level 6 or above qualifications including masters and PhDs.

Postgraduate Enrolments 14/15



The highest number of postgraduate enrolments are within the areas of education with a total of 920 postgraduate enrolments, with the highest number 615 enrolled at UWTSD. The next highest areas for postgraduate enrolment was business and administrative studies with 865 and subjects allied to medicine with 615 postgraduate enrolments.



Section 6

Conclusions & Recommendations

Regional Employment & Skills Plan South West & Mid Wales

To support the development of the recommendations a range of evidence has been utilised including consultation with both employers and providers. Evidence has been collected from a range of sources including the secondary evidence outlined throughout the employment and skills plan as well as primary evidence collected both through employer surveys and consultation.

Information on the demand requirements has been cross-referenced with data provided for the supply of qualifications across on a regional basis using the supply information provided by Welsh Government. Areas have been identified as either requiring an increase in provision at certain levels or a decrease depending if there were viewed to be growth in employment opportunities or challenges to sustainable employment for education leavers.

This process was completed with providers to ensure the data being used reflected the ‘on the ground’ realities of the sector and also provided an opportunity to identify any negative effects of the potential changes. Due consideration is required for any changes to provision to ensure equality of opportunity for individuals to progress into employment regardless of gender, socio-economic status or geographic location.

Key Messages

1. Growth of the aspirational economy is essential to delivering transformational growth within the economy. There are a number of identified opportunities for development and investment and it is essential that the skills are available in the workforce to capitalise on this potential.
2. Basic skills within numeracy, literacy and digital skills are a requirement across all sectors within the economy. Employer evidence suggests that a lack of these skills in the workforce hinders productivity and growth. Therefore, there is a need to ensure that entrants to the labour market are equipped with the required level of numeracy, literacy and digital skills.
3. The foundational economy within the region supports a number of key employment sectors and has a number of higher level skills requirements. To sustain the foundational economy requires an understanding of the needs of the sectors and a stable supply of skilled individuals.
4. Progression into the labour market for both the aspirational and foundational economies requires clear pathways and opportunities. Where progression routes exist or are well-established there is a need to ensure that these opportunities are accessible to individuals across the region regardless of potential barriers. In addition, there is a need to develop clear progression routes where they are currently less-established.

Sector-based Recommendations

5. FE provision within the construction sector should become more specialised at higher levels to meet the needs of employers and the future skills needs of the sector generally.

Entry and level 1 vocational qualifications remain an important entry route to the sector and provide important employability related skills allowing progression.

Recommendation

There should be an increase in level 2 and 3 specialist construction provision in both vocational and work-based learning to ensure an adequate supply of skilled individuals to the sector. Entry and level 1 vocational provision should sufficiently support this.

6. The development of the Swansea Bay Tidal Lagoon and other significant energy developments across the region provide a high demand for a number of engineering roles. These roles require specialist knowledge for which there is currently insufficient provision across the region.

Recommendation

There should be an increase of level 3+ vocational and work-based learning provision within specialist engineering areas, including; electrical engineering, fabrication and welding and civil and marine engineering. There is a need to ensure that skills pathways to higher level skills are available, including graduate and post-graduate levels.

7. The IT and Telecoms sector is fast-paced and growing rapidly, developments such as the internet coast and superfast exploitation create a substantial opportunity for the region. Provider and employer consultations indicate that provision and qualifications in the area are not fit for purpose. Furthermore, there is also the issue of a lack of quality instructors with the correct expertise to deliver provision.

Recommendation

In the first instance, qualification frameworks should be reviewed to ensure that provision is timely and in line with the needs of employers and the sector generally. Engagement within the sector is largely male-dominated, therefore more needs to be done to ensure the sector becomes attractive to females both for learners and instructors/educators. There needs to be an increase in both vocational and work-based learner numbers, primarily at levels 2 and 3. There is a need to ensure that skills pathways to higher level skills are available, including graduate and post-graduate levels within ICT and computing.

8. The Leisure and Tourism sector is one of importance to the region and evidence suggests that there is a lack of appropriate provision available to support the sector. Employer consultation indicated that there are a number of barriers to training in the sector, these include but are not limited to - the lack of flexibility of courses, staff time and cost (this is especially the case for micro and small enterprises).

Recommendation

Provision within the sector should be focussed on specialised business development and customer service and not so focussed on the travel element of the sector. Provision delivered on a largely part-time basis and in short intervals would allow the flexibility demanded by employers.

9. With developments including the Bay Studios, Yr Egin and the relocation of S4C to Carmarthen, the Creative Industries sector is becoming more prevalent in the region. This has brought with it a focus on the appropriateness of the media and design provision currently on offer in the region. Employer consultation and secondary evidence suggests that there is a high demand for individuals with digital media and broadcasting skills, as well as those with specialised technical skills and those with high calibre Welsh skills.

Recommendation

There should be a reduction in traditional performing arts courses coupled with a far more specialised offer within the arts and entertainment sub-sector. Furthermore, where possible, provision should be offered bilingually or through the medium of Welsh.

10. Factors such as an ageing workforce and rurality have placed considerable emphasis on the Health and Social Care sector within the region. Its supporting function for the foundational economy and key developments such as the ARCH project and the Mid Wales Health Collaborative substantiating its importance for the region. Whilst provision in the area is adequate there continues to be demand from learners.

Recommendation

Provider consultation suggests that there is a continued demand for access to nursing courses from learners. However, potential supplier issues at HE level have been indentified, therefore the appropriateness of these progression routes should be reviewed and then highlighted to learners to meet the growing demand. There is significant cross-over with the Life Science sector and therefore there is a need to ensure that skills pathways to higher level skills are available, including graduate and post-graduate levels.

Section 7

Regional Delivery Plan Annex and Acknowledgements

Annex 1 – Labour Market Summary

Table 1
Economic Activity¹

Variable	Carmarthenshire (%)	Ceredigion (%)	Neath Port Talbot (%)	Pembrokeshire (%)	Powys (%)	Swansea (%)	Wales (%)	UK (%)
Economic activity rate - aged 16-64	75.5	67.3	70.5	76.6	79.8	74.8	74.9	77.7
Employment rate - aged 16-64	71.0	64.3	65.6	72.6	76.7	68.5	70.3	73.5
% aged 16-64 who are employees	57.9	47.8	59.5	58.7	55.7	60.1	60.2	63.0
% aged 16-64 who are employees	12.1	15.7	5.4	12.9	20.6	8.0	9.5	10.1
Unemployment rate - aged 16-64	6.0	4.4	7.0	5.1	3.8	8.3	6.2	5.4

Table 2
Employment by Occupation²

Variable	Carmarthenshire (%)	Ceredigion (%)	Neath Port Talbot (%)	Pembrokeshire (%)	Powys (%)	Swansea (%)	Wales (%)	UK (%)
Managers, directors & senior officials	8.0	10.3	8.2	10.4	12.1	8.7	9.5	10.3
Professional occupations	14.5	17.1	15.6	14.7	14.4	18.4	17.4	19.7
Associate professional & technical occupations	10.6	10.1	11.1	10.1	13.2	11.8	12.4	14.0
Administrative & secretarial occupations	9.2	10.8	10.6	7.8	9.2	13.0	10.1	10.7
Skilled trades occupations	16.3	16.7	12.4	13.5	19.4	12.2	12.6	10.7
Caring, leisure & other service occupations	10.1	8.3	12.2	14.6	9.8	11.7	10.6	9.2
Sales & customer service occupations	10.6	6.6	8.5	7.5	5.5	8.1	8.1	7.7
Process, plant & machine operatives	7.8	5.5	9.6	7.5	5.7	3.8	7.0	6.4
Elementary occupations	11.9	13.7	11.1	11.6	10.3	11.6	11.4	10.8

¹ Annual Population Survey – ONS - 2015 ² Annual Population Survey – ONS - 2015

Table 3
Qualification Levels³

Variable	Carmarthenshire (%)	Ceredigion (%)	Neath Port Talbot (%)	Pembrokeshire (%)	Powys (%)	Swansea (%)	Wales (%)	UK (%)
NVQ4+	31.5	32.2	27.7	31.9	36.5	33.8	33.6	36.9
NVQ3+	51.9	60.4	47.2	51.8	60.1	54.1	54.8	57.2
NVQ2+	71.4	80.0	67.5	69.3	79.4	71.1	72.2	73.4
NVQ1+	82.8	88.7	79.6	84.3	88.7	82.1	83.6	84.8
With other qualifications (NVQ)	4.7	4.3	4.9	4.8	3.6	5.1	6.0	6.5
With no qualifications	12.5	7.1	15.4	11.0	7.7	12.8	10.4	8.8

Table 4
Median Earnings – Workplace Analysis⁴

	Total Annual Pay £	Full-time Annual Pay Gross median £	Part-time Annual Pay Gross median £
Carmarthenshire	18,668	23,437	10,454
Ceredigion	19,464	21,740	7,912
Neath Port Talbot	21,721	29,171	10,191
Pembrokeshire	17,084	21,789	9,348
Powys	18,372	22,713	#
Swansea	19,295	23,630	10,053
Wales	20,233	24,733	9,291
UK	22,487	27,645	9,275

³ Annual Population Survey – ONS - 2015

⁴ Annual Survey of Hours and Earnings – Workplace Analysis - 2015

Table 5
Benefit Claimants⁵

Variable	Carmarthenshire (%)	Ceredigion (%)	Neath Port Talbot (%)	Pembrokeshire (%)	Powys (%)	Swansea (%)	Wales (%)	UK (%)
Total	17,000	5,060	17,870	10,540	8,630	23,670	292,480	4,708,930
JSA	1,750	510	1,470	1,620	740	2,590	35,670	580,410
ESA & Incapacity Benefit	9,890	2,960	10,520	5,390	4,890	13,780	161,500	2,490,530
Lone Parent	1,080	310	1,340	810	540	1,880	24,120	424,130
Carers Allowance	2,420	670	2,780	1,570	1,290	3,050	40,740	643,570
Others on Income related benefits	320	120	290	240	190	430	5,620	97,220
Disabled	1,310	410	1,300	750	800	1,660	21,210	402,830
Bereaved	230	90	170	160	180	280	3,630	70,230

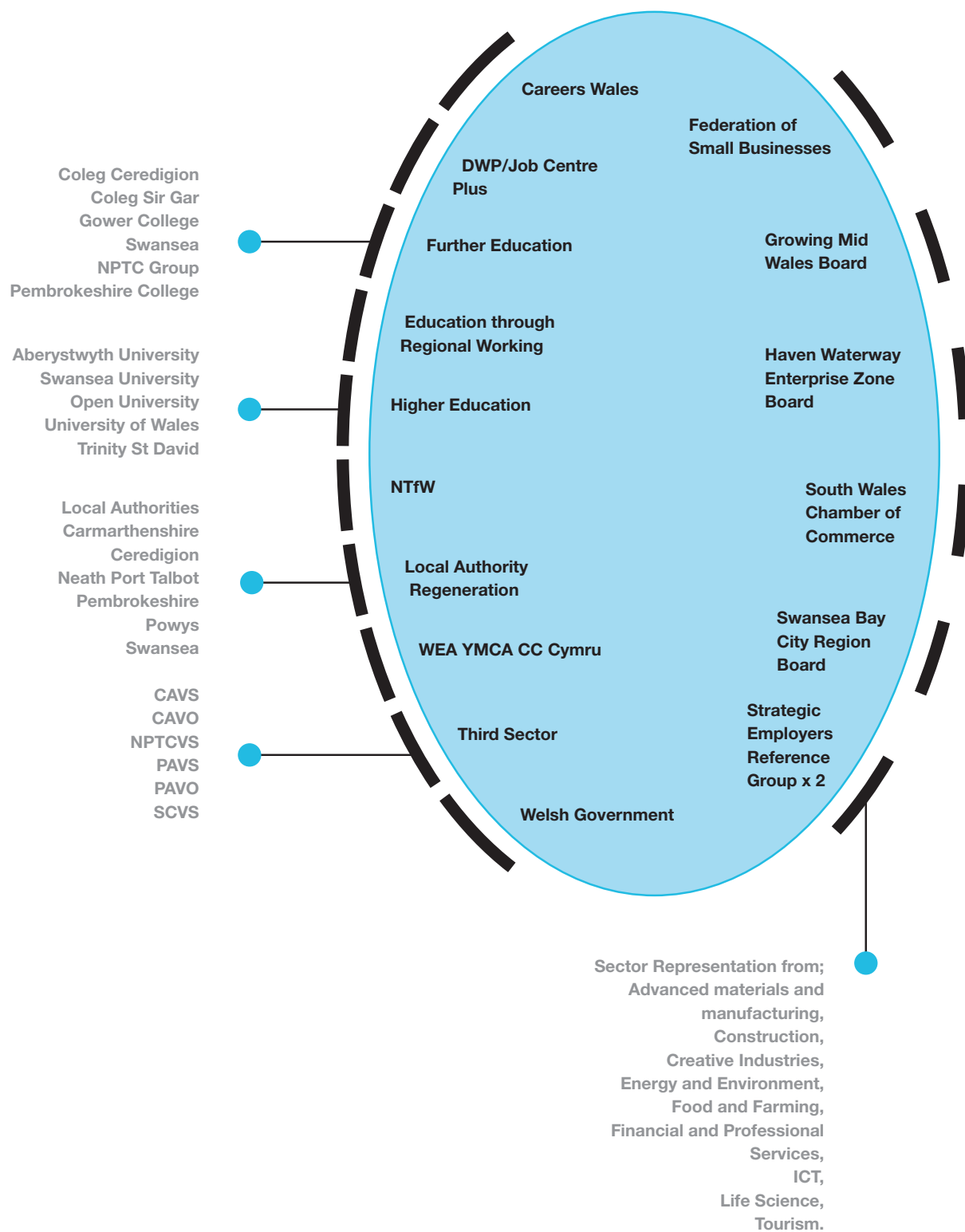
⁵ Benefit Claimants – Working Age Client Group - 2015

Table 6
Businesses
by Industry⁶

Variable	Carmarthenshire	Ceredigion	Neath Port Talbot	Pembrokeshire	Powys	Swansea
Number of Businesses	8915	4585	3795	6415	9800	7750
Agriculture, Forestry & Fishing	24.2	30	3.3	21.9	33.8	3.1
Production	5.2	4.5	8.0	5.3	4.4	5.2
Construction	9.6	9.2	11.5	9.6	8.6	9.9
Motor trade	3.4	3.1	3.0	2.8	2.8	3.7
Wholesale	3.4	2.9	3.3	3.0	3.0	4.0
Retail	9.9	9.7	12.1	9.7	7.1	12.8
Transport & Storage (including Postal)	3.2	2.4	4.5	2.6	2.7	3.0
Accommodation & Food Service	6.7	8.0	8.7	11.3	6.1	9.2
Information & Communication	2.2	2.4	3.0	2.0	2.2	4.3
Finance & Insurance	1.2	0.9	1.8	1.4	1.0	2.5
Property	1.7	2.5	2.0	1.7	1.7	3.4
Professional, Scientific & Technical	6.8	5.6	9.1	8.3	6.9	11.1
Business Administration & Support Services	6.7	6.1	7.5	6.2	6.6	7.6
Public Administration & Defence	1.5	1.3	1.7	1.3	1.3	1.0
Education	2.3	1.9	3.3	2.0	2.0	2.7
Health	5.9	4.5	8.6	4.8	4.3	8.2
Arts, Entertainment, Recreation and Other Services	6.0	5.2	8.6	6.2	5.4	8.2

⁶ <http://rlp.infobasecymru.net/IAS/themes/economy/businesses/tabular?viewId=597&geold=1&subsetId=42>

In Association with the Regional Learning & Skills Board



Contents

**Illustration 1**

Advanced Materials & Manufacturing

**Illustration 2**

Construction

**Illustration 3**

ICT

**Illustration 4**

Creative Industries

**Illustration 5**

Energy & Environment

**Illustration 6**

Financial & Professional Services

**Illustration 7**

Life Sciences

**Illustration 8**

Tourism

**Illustration 9**

Food & Farming

Section 8

Sectors at a Glance



Advanced Materials & Manufacturing

In recent years the Advanced Materials and Manufacturing sector has become considerably focused on adding value to products and services. Advanced materials covers the composition, structure and properties of materials and their specific application at the forefront of technological innovation.

The sector includes: Aerospace and defence, Automotive technologies, Opto-electronics and Process manufacturing.



GVA has decreased by
2%
between 2010 & 2013

Sector employment in the region in 2015 was highest in Neath Port Talbot (7,600) and lowest in Ceredigion



The majority of Advanced Materials & Manufacturing businesses at the Wales level in 2015 were Micro sized enterprises (35%)



GVA by Sub-sector
2013



Aero (72%) Auto (19%)
Plastics & Rubber (9%)

Employment by
Sub-sector 2015




Aero (38%) Metal and Steel Manufacture (32%)
Auto (30%)

Employment by Level
of Highest Qualification,
Wales, 16-64



NQF Level 4 or Above (32%)
Other Qualifications (61%)
No Qualifications (8%)

Employment by Occupation 16+, Wales 2015

 **Managers, Professionals & Associate Professionals**

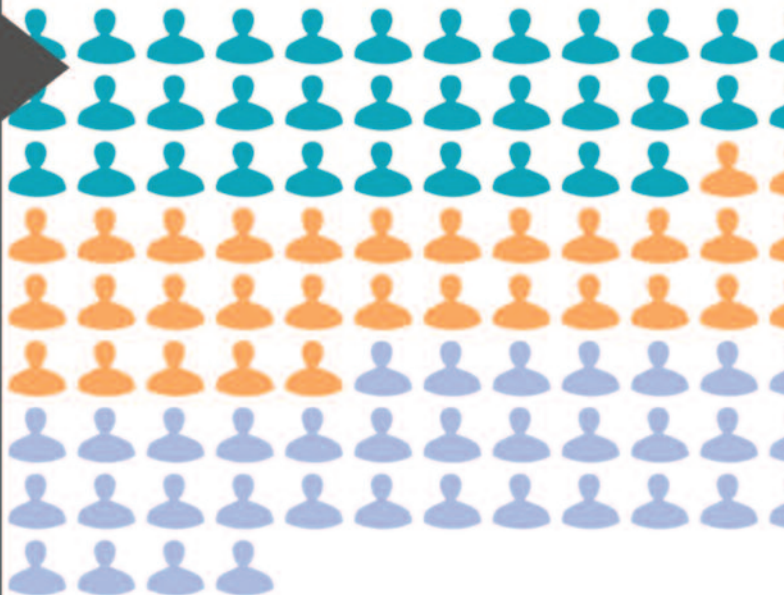
34%

 **Administrative, Skilled Trades & Personal Services**

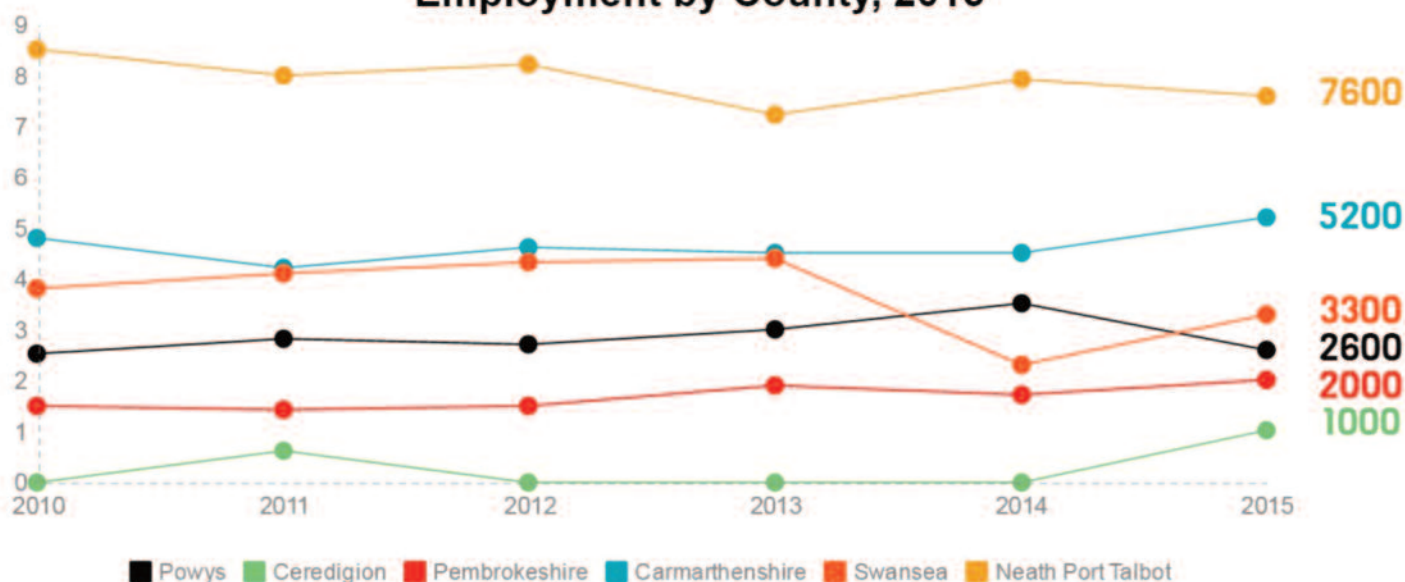
31%

 **Sales, Process Operatives, Elementary**

35%



Employment by County, 2015



Employment by Gender, 16+, Wales 2015



Male (81%) Female (19%)

Employment by Full-time/Part-time 16+, Wales, 2015



Full Time (94%) Part Time (6%)

Employment by Age, Wales 2015



16 - 24 (11%) 25 - 49 (56%) 50+ (33%)



Construction



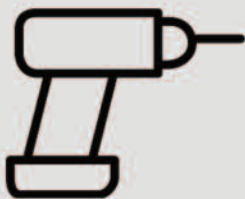
The Construction sector comprises a range of craft, technical and professional businesses whose work focuses on the creation, maintenance and protection of the built environment and associated infrastructure.

It includes professionals such as planners, architects, surveyors and building engineers as well as the traditional construction companies responsible for 'new build', maintenance and upkeep of our historic and heritage buildings



GVA has increased by
3%
between 2010 & 2013

Sector employment in the region in 2015 was highest in Swansea (10,400) and lowest in Ceredigion



The majority of Construction businesses at the Wales level in 2015 were Micro sized enterprises (50%)

GVA by Sub-sector 2013



- Construction of Buildings (21%)
- Civil Engineering (22%)
- Manufacture of Construc.. (6%)
- Construction Services (2%)
- Specialised Constructio.. (45%)
- Timber Construction (4%)

Employment by Sub-sector 2015




- Construction of Buildings (29%)
- Civil Engineering (14%)
- Manufacture of Construc.. (5%)
- Construction Services (4%)
- Specialised Constructio.. (44%)
- Timber Construction (4%)

Employment by Level of Highest Qualification, Wales, 16-64




- NQF Level 4 or Above (24%)
- Other Qualifications (68%)
- No Qualifications (8%)


Employment by Occupation 16+, Wales 2015

 **Managers, Professionals & Associate Professionals**

27%

 **Administrative, Skilled Trades & Personal Services**

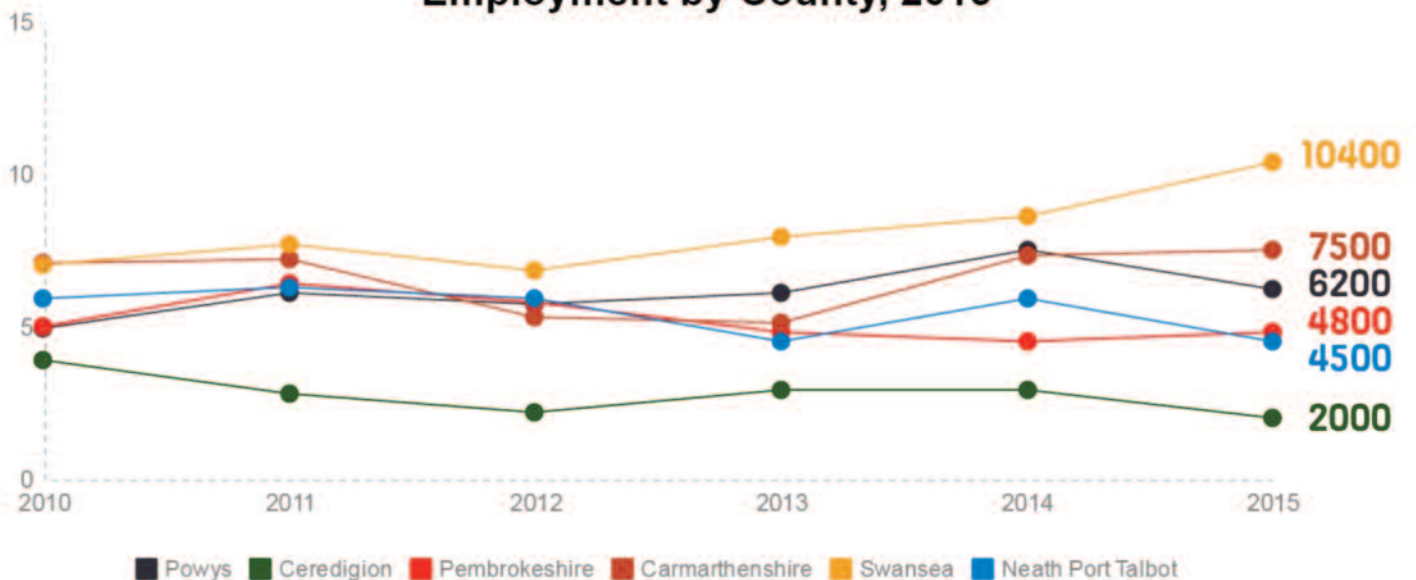
55%

 **Sales, Process Operatives, Elementary**

18%



Employment by County, 2015



Employment by Gender, 16+, Wales 2015



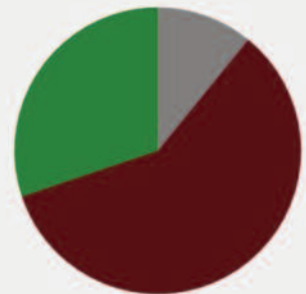
Male (90%) Female (10%)

Employment by Full-time/Part-time 16+, Wales, 2015



Full Time (90%) Part Time (10%)

Employment by Age, Wales 2015



16 - 24 (11%) 25 - 49 (59%) 50+ (30%)



ICT



The ICT (information and communications technology) sector in Wales is global and dynamic with the country well positioned to design, develop and commercialise leading edge technologies.

ICT includes a wide range of companies from blue-chip corporates through to innovative small and medium enterprises across: IT services, Software, Telecommunications & Electronics.

The ICT sector is a driving force in both economic development and wider social change; it encourages productivity and competitiveness across the economy.



GVA has decreased by
3%
between 2010 & 2013

Sector employment in the region in 2015 was highest in Swansea (1,700)

The majority of ICT businesses at the Wales level in 2015 were Zero sized enterprises (57%)



GVA by Sub-sector 2013



■ Communication (46%)
■ Electronics (16%) ■ Services (33%)
■ Software (5%)

Employment by Sub-sector 2015



■ Communication (27%) ■ Electronics (22%)
■ Services (34%) ■ Software (17%)

Employment by Level of Highest Qualification, Wales, 16-64



■ NQF Level 4 or Above (58%)
■ Other Qualifications (42%)
■ No Qualifications (0%)




Regional Learning Partnership
Partneriaeth Ddysgu Ranbarthol

South West & Central Wales
De Orllewin a Canolbarth Cymru




Ariennir yn Rhannol gan
Lywodraeth Cymru
Part Funded by
Welsh Government


Employment by Occupation 16+, Wales 2015

 Managers, Professionals & Associate Professionals

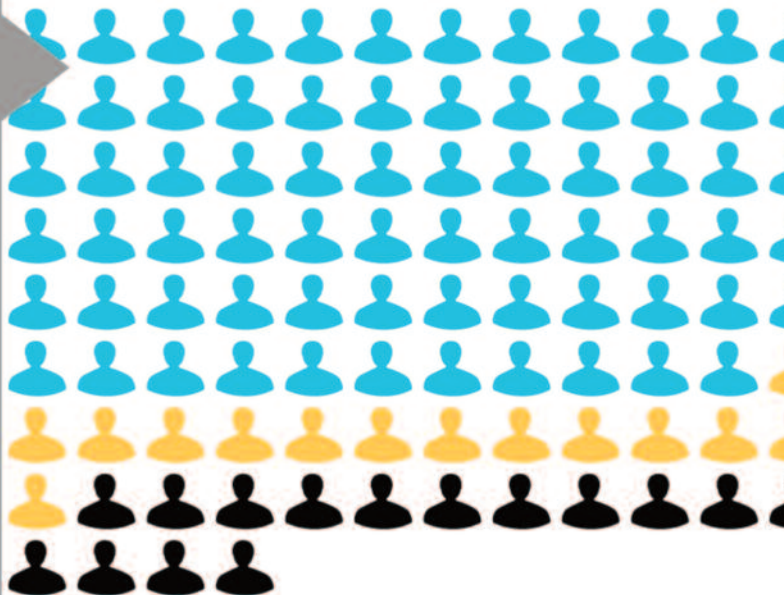
71%

 Administrative, Skilled Trades & Personal Services

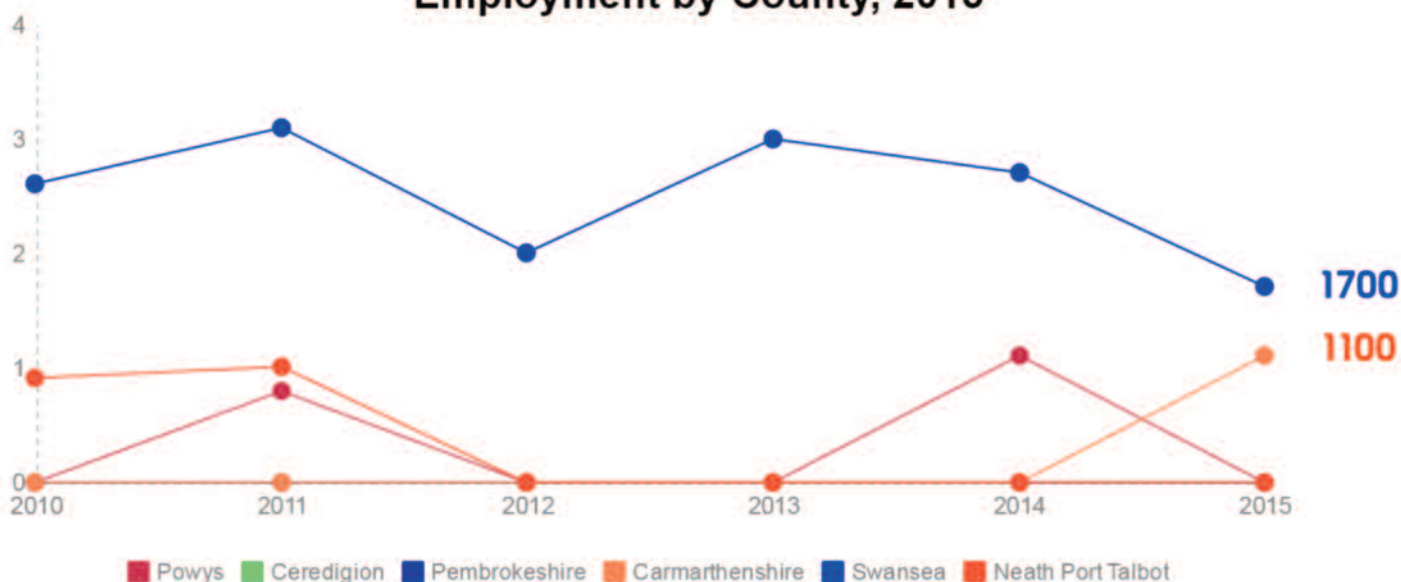
14%

 Sales, Process Operatives, Elementary

15%



Employment by County, 2015



Employment by Gender, 16+, Wales 2015



■ Male (75%) ■ Female (25%)

Employment by Full-time/Part-time 16+, Wales, 2015



■ Full Time (93%) ■ Part Time (7%)

Employment by Age, Wales 2015



■ 16 - 24 (7%) ■ 25 - 49 (63%) ■ 50+ (30%)



Creative Industries



The Creative Industries sector is defined as:

- those industries which have their origin in individual creativity, skill and talent; and
- have a potential for wealth and job creation through the generation and exploitation of intellectual property.

The Sector includes: Advertising, Architecture, Crafts, Design, Designer fashion, Digital & entertainment media, Film, video and photography, Publishing, Software & electronic publishing, TV and radio, Music & visual performing arts



GVA has increased by
2%
between 2010 & 2013

Sector employment in the region in 2015 was highest in Swansea (4,500) and lowest in Neath Port Talbot



The majority of Creative Industries businesses at the Wales level in 2015 were zero sized enterprises (57%)



GVA by Sub-sector 2013



■ Advertising & Marketing (5%) ■ Architecture (7%)
■ Crafts (1%) ■ Design (14%)
■ Film, TV, Video, Radio .. (11%)
■ IT, Software & Computer.. (45%) ■ Publishing (10%)
■ Museums, Galleries & Libraries (-0%)
■ Music, Performing & Vis.. (7%)

Employment by Sub-sector 2015




■ Advertising & Marketing (8%)
■ Architecture (0%) ■ Crafts (0%) ■ Design (8%)
■ Film, TV, Video, Radio .. (18%)
■ IT, Software & Computer.. (26%)
■ Publishing (7%)
■ Museums, Galleries & Libraries (8%)
■ Music, Performing and V.. (25%)

Employment by Level of Highest Qualification, Wales, 16-64




■ NQF Level 4 or Above (67%)
■ Other Qualifications (33%)
■ No Qualifications (0%)


Employment by Occupation 16+, Wales 2015

 **Managers, Professionals & Associate Professionals**

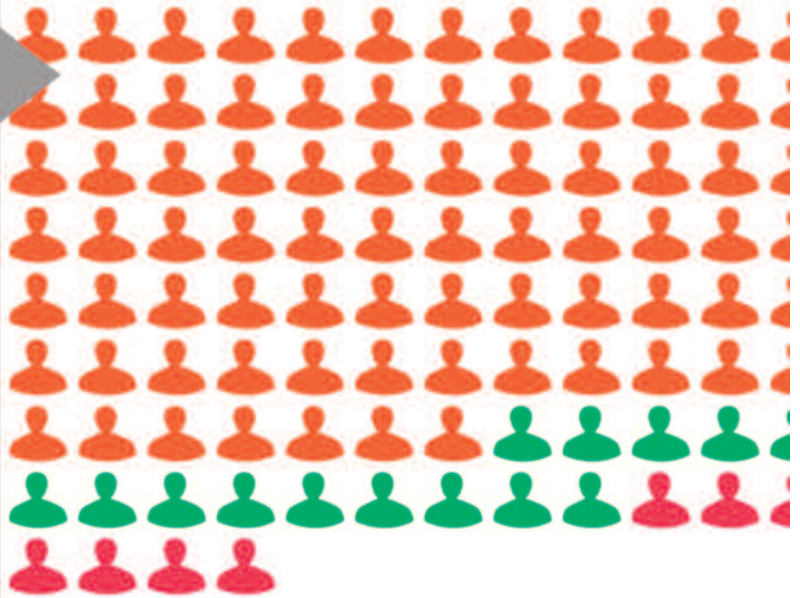
79%

 **Administrative, Skilled Trades & Personal Services**

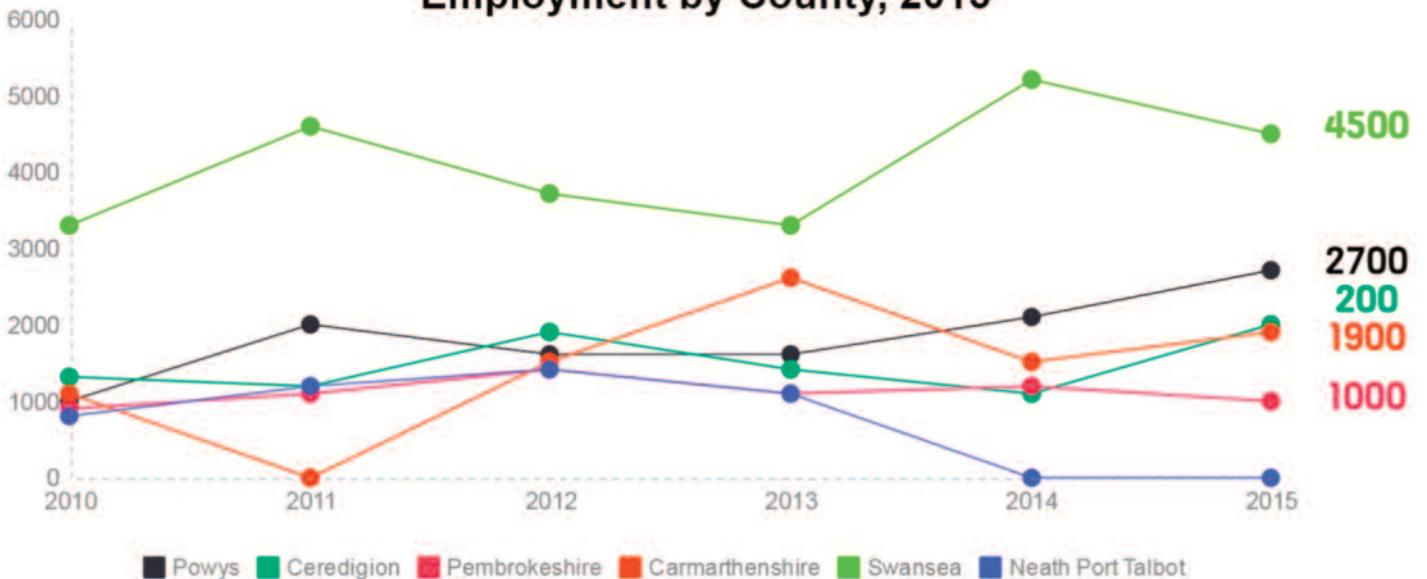
14%

 **Sales, Process Operatives, Elementary**

7%



Employment by County, 2015



Employment by Gender, 16+, Wales 2015



Male (61%) Female (39%)

Employment by Full-time/Part-time 16+, Wales, 2015



Full Time (73%) Part Time (27%)

Employment by Age, Wales 2015



16 - 24 (10%) 25 - 49 (57%) 50+ (32%)

Energy & Environment

The energy and environment sector has been identified as one of importance for Wales. It is also recognised as having an important enabling role across the wider economy.

This sector includes:

energy generation and use
renewable energy
emerging low carbon energy and technologies
environmental goods and services.

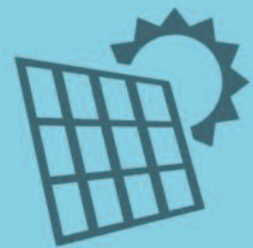


GVA increased by
10%
between 2010 and 2013

Sector employment in the region in 2015 was highest in Swansea (11,600) and lowest in Ceredigion



The majority of Energy and Environment businesses at the Wales level in 2015 were zero-sized enterprises (47%)



GVA by Sub-sector
2013



Construction (26%) Electricity (7%)
Energy Efficiency (9%)
Manufacture, Repair and.. (12%)
Nuclear, Oil, Gas and Source (6%) Others (12%)
Professional Services (14%) Recycle (8%)
Utility (5%)

Employment by
Sub-sector 2015



Construction (23%) Electricity (9%)
Energy Efficiency (10%)
Manufacture, Repair and.. (10%)
Nuclear, Oil, Gas and Source (6%)
Others (14%) Professional Services (14%)
Recycle (8%) Utility (5%)

Employment by Level
of Highest Qualification,
Wales, 16-64



NQF Level 4 or Above (35%)
Other Qualifications (58%)
No Qualifications (6%)

Employment by Occupation 16+, Wales 2015



Managers, Professionals & Associate Professionals

39%



Administrative, Skilled Trades & Personal Services

34%

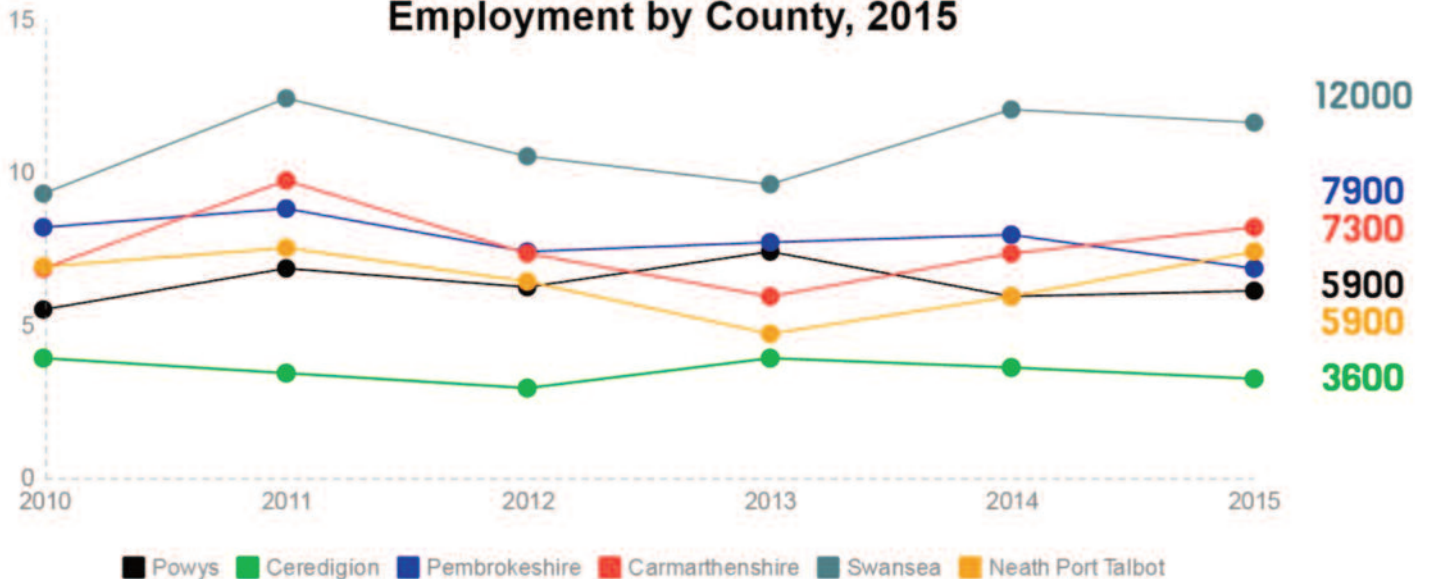


Sales, Process Operatives, Elementary

26%



Employment by County, 2015



Employment by Gender, 16+, Wales 2015



■ Male (77%) ■ Female (23%)

Employment by Full-time/Part-time 16+, Wales, 2015



■ Full Time (82%) ■ Part Time (18%)

Employment by Age, Wales 2015



■ 16 - 24 (9%) ■ 25 - 49 (58%) ■ 50+ (33%)

Financial & Professional Services

Wales' Financial Services sector has an impressive foundation in retail banking and general insurance. Wales' Professional Services sector includes legal, accountancy and corporate services.

There are a number of key sub-sectors within Financial & Professional Services sector in which Wales has a significant presence; these include: Cards and payments, Asset finance, Fund administration, Mortgage administration, Securities trading, Insurance, Legal services, Shared service centres and Business process outsourcing.



GVA has increased by
12%
between 2010 & 2013

Sector employment in the region in 2015 was highest in Swansea (13,200) and lowest in Pembrokeshire



The majority of Financial & Professional Service businesses at the Wales level in 2015 were Zero sized enterprises (76%)



GVA by Sub-sector 2013



Employment by Sub-sector 2015



Employment by Level of Highest Qualification, Wales, 16-64




Banking & Payments (9%) Distribution (3%)
Finance & Accountancy (7%) General Insurance (7%)
Legal Services (3%)
Professional Business Services (70%)
Savings & Investment (2%)


Banking & Payments (8%) Distribution (8%)
Finance & Accountancy (12%)
General Insurance (9%)
Legal Services (6%)
Professional Business Services (53%)
Savings & Investment (3%)

NQF Level 4 or Above (55%)
Other Qualifications (43%)
No Qualifications (2%)


Employment by Occupation 16+, Wales 2015

 **Managers, Professionals & Associate Professionals**

62%

 **Administrative, Skilled Trades & Personal Services**

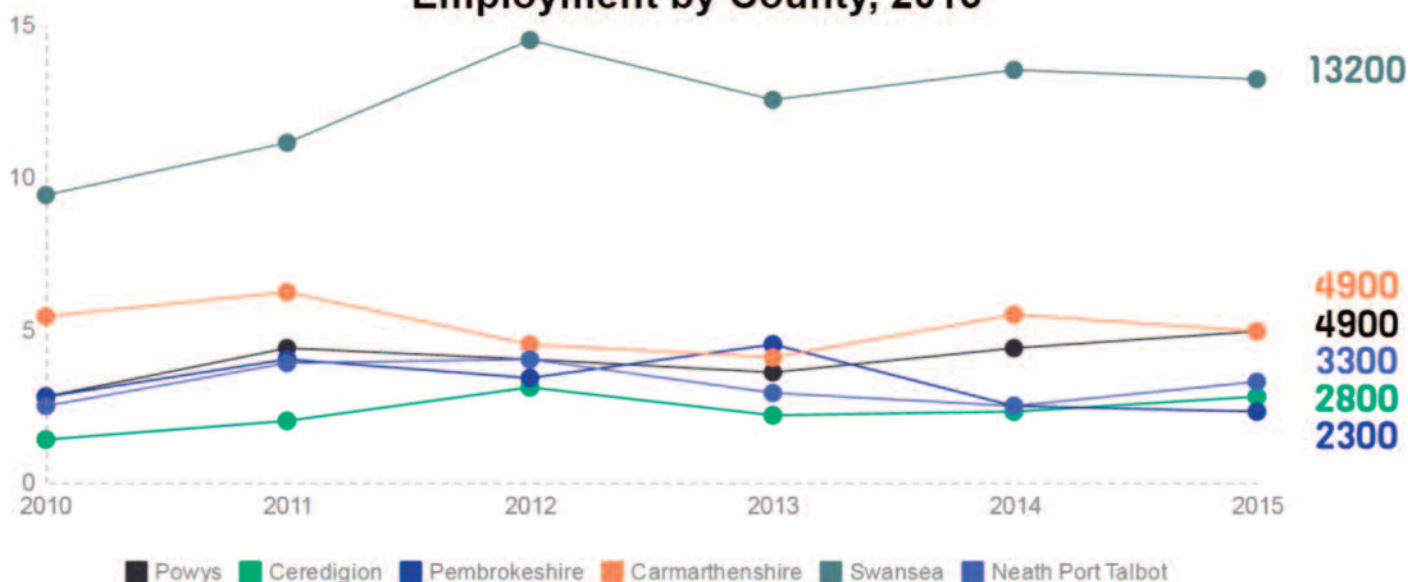
27%

 **Sales, Process Operatives, Elementary**

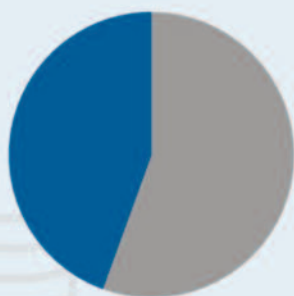
12%



Employment by County, 2015

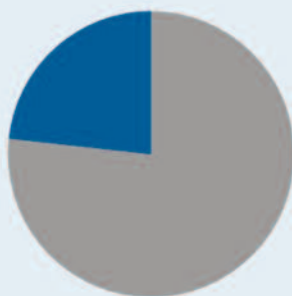


Employment by Gender, 16+, Wales 2015



Male (56%) Female (44%)

Employment by Full-time/Part-time 16+, Wales, 2015



Full Time (77%) Part Time (23%)

Employment by Age, Wales 2015



16 - 24 (10%) 25 - 49 (57%) 50+ (33%)

Life Sciences

The sector is diverse, research-driven and global with its characteristics constantly changing as new sub-sectors emerge and develop.

The sector serves large global markets which are growing quickly, driven especially by population growth, changing demographics and increasing expectations from medicine and therapy.

The sector includes: pharmaceutical, biotechnology, medical technology businesses, with wide ranging activities including research, testing, manufacture and the provision of specialist services.



GVA has increased by
1%
between 2010 & 2013

Sector employment in
Wales in 2015 was 13,300



The majority of Life Science
businesses at the Wales level
in 2015 were Micro sized
enterprises (40%)



GVA by Sub-sector
2013



- Industrial Biotechnology (10%)
- Medical Biotechnology (15%)
- Medical Technology (42%)
- Others (inc Pharmaceuticals) (32%)

Employment by
Sub-sector 2015




- Industrial Biotechnology (0%)
- Medical Biotechnology (0%)
- Medical Technology (55%)
- Others (inc Pharmaceuticals) (45%)

Employment by Level
of Highest Qualification,
Wales, 16-64




- NQF Level 4 or Above (44%)
- Other Qualifications (56%)
- No Qualifications (0%)


Employment by Occupation 16+, Wales 2015

 **Managers, Professionals & Associate Professionals**

51%

 **Administrative, Skilled Trades & Personal Services**

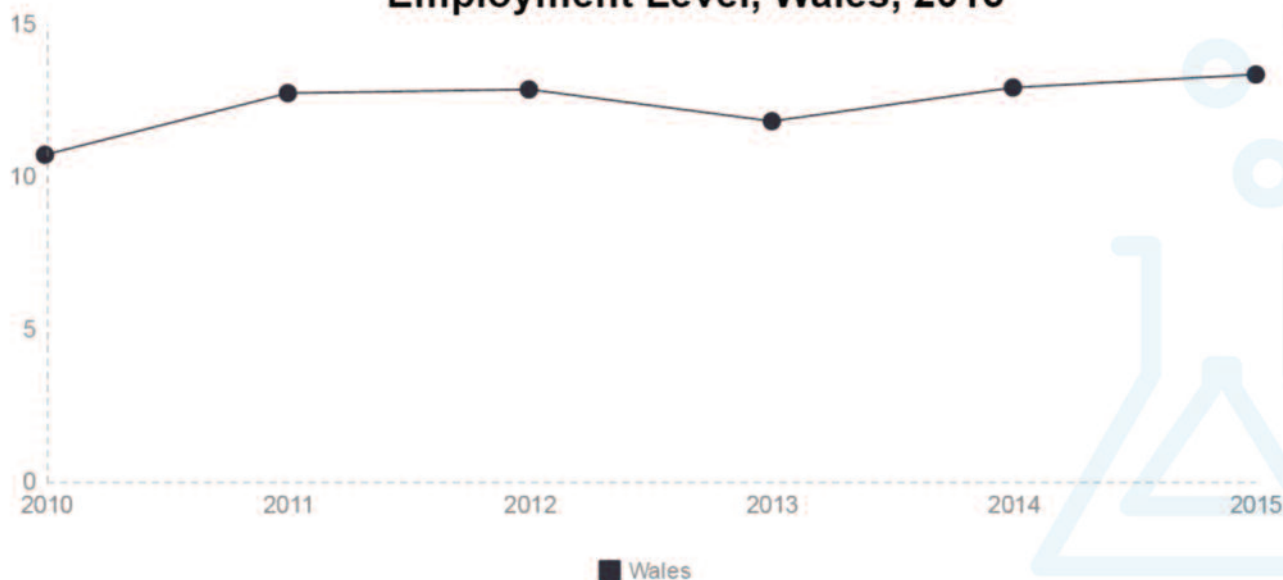
23%

 **Sales, Process Operatives, Elementary**

26%



Employment Level, Wales, 2015



Employment by Gender, 16+, Wales 2015



■ Male (67%) ■ Female (33%)

Employment by Full-time/Part-time 16+, Wales, 2015



■ Full Time (92%) ■ Part Time (8%)

Employment by Age, Wales 2015



■ 16 - 24 (0%) ■ 25 - 49 (66%) ■ 50+ (34%)

Tourism



The Tourism sector includes employees in:
hotels
restaurants
bars
libraries
museums
sport, and,
other recreation activities.



Tourism has a key role to play in reinforcing a distinctive and compelling national identity for Wales in the UK and internationally as a place to visit, invest in and as a place to do business.



GVA has increased by
23%
between 2010 & 2013

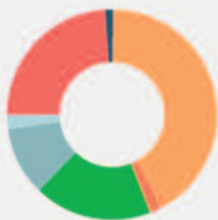
Sector employment in the region in 2015 was highest in Swansea (10,900) and lowest in Neath Port Talbot



The majority of Tourism businesses at the Wales level in 2015 were Micro sized enterprises (61%)



GVA by Sub-sector 2013



- Accommodation for Visitors (24%)
- Cultural Activities (1%)
- Food & Beveraging Servi.. (42%)
- Tourism Activities and .. (2%)
- Sporting & Recreational.. (18%)
- Passenger Transport (11%)
- Travel Agencies & Other.. (2%)

Employment by Sub-sector 2015




- Accommodation for Visitors (17%)
- Cultural Activities (10%)
- Food & Beveraging Servi.. (48%)
- Tourism Activities and .. (1%)
- Sporting & Recreational.. (14%)
- Passenger Transport (9%)
- Travel Agencies & Other.. (2%)

Employment by Level of Highest Qualification, Wales, 16-64




- NQF Level 4 or Above (27%)
- Other Qualifications (65%)
- No Qualifications (9%)


Employment by Occupation 16+, Wales 2015

 **Managers, Professionals & Associate Professionals**

32%

 **Administrative, Skilled Trades & Personal Services**

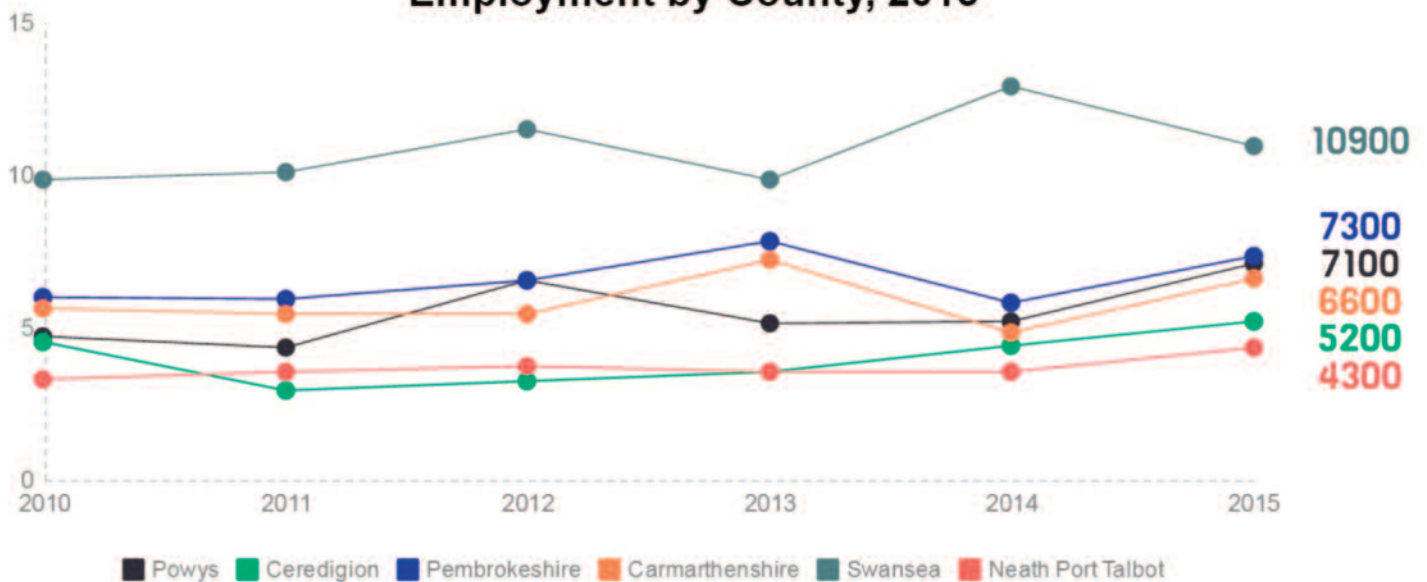
23%

 **Sales, Process Operatives, Elementary**

46%



Employment by County, 2015



Employment by Gender, 16+, Wales 2015



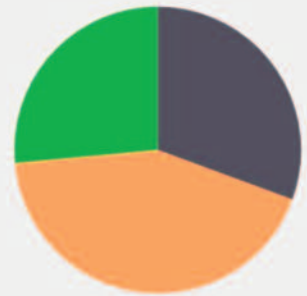
Male (53%) Female (47%)

Employment by Full-time/Part-time 16+, Wales, 2015



Full Time (57%) Part Time (43%)

Employment by Age, Wales 2015



16 - 24 (31%) 25 - 49 (43%) 50+ (26%)



Food and Farming



According to the Welsh Government and the Standard Industrial Classification 2007 (SIC 2007) system, the Food and Farming (F&F) sector is defined as including the following sub-sectors:
Agriculture, forestry & fishing
Food, drink and tobacco

The food sector covers a complex structure of producers, processors, retailers and consumers. The Welsh food and drink manufacturing sector and its supply chain is a major contributor to the Welsh economy. The total value of the sector to the Welsh economy, taking into account the agricultural, processing and retail sectors, is estimated to be more than £1 billion per annum.



GVA has increased by
28%
between 2010 & 2013

Sector employment in the region in 2015 was highest in Powys (7,000) and lowest in Neath Port Talbot and Swansea



The majority of Food and Farming businesses at the Wales level in 2015 were zero sized enterprises (76%)



GVA by Sub-sector
2013



■ Agriculture (18%)
■ Manufacturing of Food and drink (82%)

Employment by
Sub-sector 2015




■ Agriculture (58%)
■ Manufacturing of Food and drink (42%)

Employment by Level
of Highest Qualification,
Wales, 16-64




■ NQF Level 4 or Above (26%)
■ Other Qualifications (61%)
■ No Qualifications (13%)


Employment by Occupation 16+, Wales 2015

 Managers, Professionals & Associate Professionals

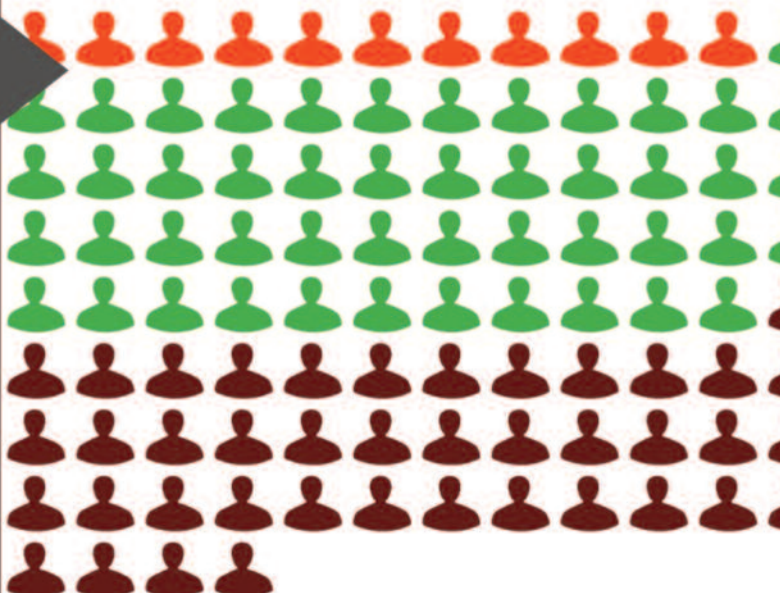
11%

 Administrative, Skilled Trades & Personal Services

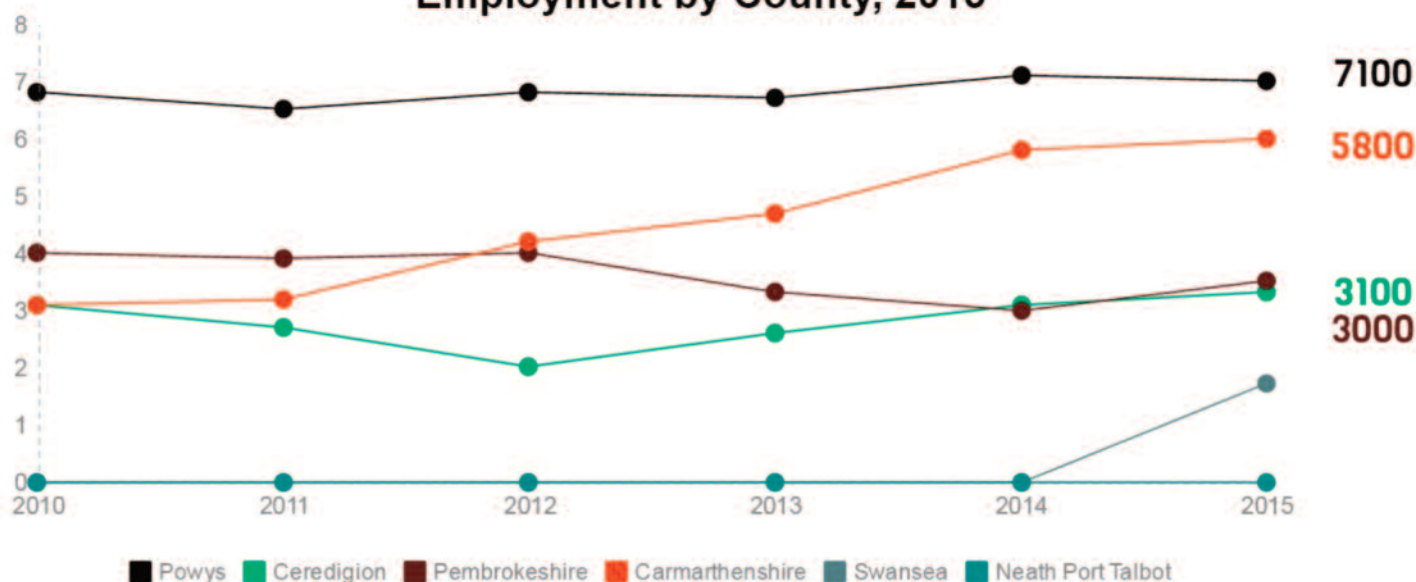
48%

 Sales, Process Operatives, Elementary

41%



Employment by County, 2015



Employment by Gender, 16+, Wales 2015



Male (67%) Female (33%)

Employment by Full-time/Part-time 16+, Wales, 2015



Full Time (84%) Part Time (16%)

Employment by Age, Wales 2015



16 - 24 (8%) 25 - 49 (47%) 50+ (45%)



Regional Learning and Skills Partnership
Partneriaeth Dysgu a Sgiliau Rhanbarthol

South West & Mid Wales
De-Orllewin a Canolbarth Cymru