

# **South East Wales Demand/Supply Assessment**

**30 September 2015**

## LSkip Employment Skills Board Preface

The South East Wales Employment and Skills Board (ESB) believes our Regional Skills Partnership to be operating amid an extremely challenging five year period for the ten counties of the South East of Wales. Yet opportunities arising from government infrastructure and private industry investment plans have the potential to significantly change the current economic landscape. A City Deal for the Cardiff Capital Region, accelerated development across the three South East Wales Enterprise Zones including Cardiff Airport, and the establishing of close ties between the Great Western Cities, as well as £10 billion of planned infrastructure investment, represent a huge opportunity but also a challenge. Even if only some of the potential developments occur, the potential of this time can only be exploited with the support and growth of skills in the region's workforce.

- A radical change of approach will be required to respond to current trends in the local economy. A widening gap is forecast between our average GVA at £23/hr and that of the UK (currently we are at 77% of the UK average)<sup>1</sup>; earnings rates at just 86% of those in the UK; and within region an 18% variation between the youth unemployment rates of Heads of the Valleys and that of Cardiff, with youth unemployment at over 20% in RCT, Blaenau Gwent and Torfaen. Meanwhile UKCES forecasts 13.5million vacancies across the UK by 2022 with just 7 million entering the workforce from schools and colleges. ESB therefore believes it is essential to develop an employment pool to meet the needs of growth companies and inward investment. Furthermore collaboration over a shared vision and approach to addressing the wider challenges will be required by Industry, skills providers and government.
- ESB believes that traditional learning, training models and qualifications need radical change to refocus on outcomes rather than rigid adherence to existing accreditation. Training the workforce across the age range to deliver the skills industry needs will require the development of new, relevant and progressive qualifications, approaches and pathways. Delivering functional/key essential skills in numeracy, literacy, ICT and employability for people across the age range who are NEET or lack qualifications will help to build an employee pool/register particularly focussed on areas of high unemployment. Renewed government support for apprenticeships over the past five years is particularly welcome and can be further improved through full engagement with industry, particularly in the light of the proposed training levy likely to be introduced in 2017.
- Apprentice completion rates in Wales at 84% are far higher than in England (69%) with data including large numbers from the 25+ age bracket. Apprenticeships for the older employee are particularly important when looking at the introduction of mandatory skills qualifications and as a lever to getting unemployed people back into work. Recent changes in government policy to reserve financial support for apprentices under 25 may benefit from review in the light of the importance of the 25+ and 50+ workforce particularly around replacement jobs.
- Upskilling of the 25+ and the 50+ to meet demand for new skills is currently more difficult due to funding cuts. ESB believe that these groups could be prioritised within a successful City Deal bid, to offer targeted training support, especially when complimented by European funding opportunities. It may be helpful to establish regional and sub-regional targets as part of the City Deal which could then look at funding opportunities to support growth and enhanced productivity based on skills.

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<sup>1</sup> <http://gov.wales/statistics-and-research/priority-sector-statistics/?lang=en>

- ESB is keen to ensure that full consideration is given to an ageing workforce, given that 90% of demand for employees is anticipated to be replacement demand in the next ten years. Older employees, already resistant to taking formal qualifications, are likely to need regular upskilling to meet new technical demands. . Local, part-time and bite-size delivery are key as a means to extending their working lifetimes, together with proper recognition of the value of their experience and reliability.
- The board would welcome a cluster initiative driving full engagement with industry, vertically by sector and horizontally by size which is critical to a better understanding of future skills both by workforce size and researching the changing skills needs, information which is currently only available from outdated and confused government LMI. A taskforce with Welsh Government to address access to local data and market information with a drive towards consistency would be welcome.
- There is a need for Welsh Government openness and transparency about investment projects; their size, the degree of probability (with updates) and access to available impact assessments. ESB consider that for the partnership to be effective it is essential to have sufficient advance warning to advise stakeholders in order to put in place necessary skills delivery.
- A broad strategic partnership across providers including local Independent Training Providers (ITPs), FEI and HEIs, prepared to operate flexibly to respond to shared intelligence and offering specialist delivery may allow the building of specialist clusters of interest similar to the German Mittelstand concept where large industry and SMEs come together around a focussed training and research offer. There is an on-going challenge in understanding how higher level skills help to deliver growth through efficiency and innovation.
- Marketing of the region with full engagement from industry, institutions, Local Authorities and Welsh Government will assist with retention of a skilled workforce amongst those leaving education, including graduates, in the region.
- ESB would like to see a review of the FE accreditation process particularly for bite size/ bespoke modules which can prove time consuming and expensive, for delivery and paying for external accreditation of these sub awards (e.g. to Edexcel). A single college may spend £5-6 million per annum for accreditations. Government may wish to engage with the Colleges and Awarding bodies to either negotiate on price and process around existing arrangements or support (perhaps via Qualifications Wales) some quality assured self-accreditation of courses at Levels 1 and 2. Money could be saved to focus on delivering skills responsive to company needs with the possibility of collaborating on delivery of internal courses run by company academies. Providing confidence in standards is maintained, openness to the accreditation of short courses and learning created in collaboration with sector needs, may improve engagement and help meet industry time frames for new content and skills delivery, both for existing companies and inward investors.
- ESB would propose examining some alternative scenarios for FE delivery alongside traditional apprenticeships, e.g. specialist training delivered in the classroom one day and four days on the job training as a pre-apprenticeship, with the possibility of portability of accreditation.

The Board believes consideration should be given to a review of post 16 school delivery and potential savings from reducing overlap with FE. Those delivering vocational awards may be able to use money saved to encourage engagement between schools/FE/ITPs and industry and develop a co-investment strategy to maximise the value of learning for those planning to leave school and education directly for work.

## Approach and Methodology

This Assessment will meet Welsh Government guidance for ‘a wider Demand/Assessment ... for the economic priorities for the region, detailed sector breakdown of the current workforce, projected employment and skills gaps and key recommendations. This wider evidence base will be ... for use within Welsh Government even though [WG] have been very clear that [WG] focus for prioritising funding in Year 1 will be on Apprenticeships and deployment of FE funding.’

The assessment will seek to highlight sectors in the South East Wales economy which would significantly benefit from changes to volumes of learning and skills delivery supported by Welsh Government/European funding streams, and through learning and training routes, both public and private.

In this context the Assessment/Plan uses available Labour Market Information (LMI) and research to identify key sectors of the South East Wales economy which will be important over time, as well as their associated skills and training needs, their future potential needs, and comparing this with current learning and skills delivery. We understand that considerable complexity makes this a long term task which can best be addressed at a detailed level and intend to proceed in stages and by sectors, looking at both demand and supply, in order to ensure that it is effective.

Initially we are focussing on four sectors: Advanced Materials and Manufacturing (AMM); Financial and Professional Services (F&PS); Construction, and Information Communications Technology (ICT), with ICT being considered as impacting across all sectors. Delivery is being considered in the context of Apprenticeships, Work Based Learning (WBL), Further Education (FE) and Independent Training Providers (ITPs).

Beyond these sectors, future demand side plans will be guided by the ESB and include the Foundational Economy Sectors (including Catering and Hospitality – Tourism) and in time each of the other Welsh Government priority sectors.

Future consideration of delivery will be broadened from Further Education, ITPs, WBL and apprenticeships to include post-16 schools provision, Higher Education including Higher Education (HE) in FE, industry delivery including SSCs, Wales Union Learning Fund (WULF), large company training schemes and ‘academies’.

This current South East Wales Demand/Supply Assessment has been informed by the [South East Wales Employment and Skills Report](#) published on 24<sup>th</sup> June 2015. The Report references a range of evidence and online data which is regularly updated. Supporting evidence and data includes Welsh Government policy statements, statistical reports and forecasts from the UK and independent sources, including but not limited to StatsWales, ONS, NOMIS, Data Unit Wales, South East Wales Skills Observatory (SEWSO), Cambridge Econometrics and UK Commission for Employment and Skills (UKCES).

It is recognised that there may be inconsistencies arising from sources using differing statistical breakdowns by sector and by region and by release date. Ascertaining Gross Value Added (GVA) by sector and subsector, region and sub-region is challenging. For example, anomalies relating to SIC2007 4 Digit, SOC and BRES definitions affect analysis for SE Wales because ‘manufacture of furniture including kitchen, household and office furniture’ is ‘Not in a Sector’ which means high growth innovative manufacturers such as ‘Orangebox’ may not be included.

The Assessment Plan is as referenced in the Executive Summary of the report focussing on:  
Responding to growth and opportunities:

Infrastructure investment and enterprise zones  
 Foundational economy  
 Adult skills development  
 Entrepreneurship – SMEs and Spin-out companies  
 Skills utilisation and under-utilisation  
 STEAM (Science, Technology, Engineering, Arts and Mathematics)  
 Employer Engagement

### **Establishing Demand and Supply – Sources of Information**

South East Wales Employment and Skills Report

	Updated Desk research and fresh LMI
	Forecasts and Projections – UKCES <sup>2</sup> – Cambridge Econometrics
	Independent research shared with LSKIP by company institution or sector
Employer Engagement	Evidence from sector skills councils, clusters, by association or forums
	Ongoing links being developed with Anchor and regionally important companies (RICs)
	Trade Union links with employers where unions are recognised
	Anecdotal evidence from industry experts and representatives
	Primary/secondary research from the ESB (Employment and Skills Board)
Delivery and support	Delivery reported by public and ITPs
	Forecast delivery including European projects as they come online
	Changing and developing modes of delivery including OU - online
	Company in-house training delivery emerging from employer engagement
Support	UK and Welsh Government initiatives and other subventions
	European (ESF and ERDF) funding information currently developing
	Industry sector support, independent and private initiatives

### **Future developments impacting on this assessment plan**

The Demand/Supply Assessment is an evolving plan and will undergo significant change in the light of future developments in the South East Wales Region.

- Cardiff City Deal estimated in excess of £1 billion<sup>3</sup> (an initial case was submitted by the 10 regional local authorities, working in partnership, for 4<sup>th</sup> September 2015).
- Cardiff Capital Region project due for review in Autumn 2015 may significantly impact.
- Confirmation of Welsh Government Infrastructure Investment Plan<sup>4</sup> (WIIP expected in 2015-16)
- Developments across the UK with the introduction of the industry apprenticeship levy
- Mapping of emerging European ESF and ERDF projects will impact on skills and training funding

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<sup>2</sup> The UK Commission’s Employer Skills Survey 2013 is the definitive source of data on employer investment in skills in the UK ... comprises interviews with 91,000 UK Employers ... just fewer than 6000 ... employers in Wales

<sup>3</sup> The City Deal (should it go ahead) is likely to be a key feature in future assessment plans as the UK Treasury plans to recoup the (largely infrastructure) investment from future personal and business tax receipts arising from new jobs created with increased GVA.

<sup>4</sup> Wales Infrastructure Investment Plan (WIIP) 2014

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LSkip ESB Board

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## Introduction

Welsh Assembly Government policy documents indicate that, by 2020, Wales is expected to have substantially reassessed and restructured its skills base to meet the higher skills levels required to fulfil jobs of the future in South East Wales. This long-term strategic approach, over the next five years, will involve engaging with employer demand, learning and skills delivery and existing and new employees as individuals and as supply/customer and demand/beneficiary.

The South East Wales Regional Skills and Innovation Partnership (LSkIP) has been requested to produce a Demand/ Supply Assessment annually for the period 2015-2020. As part of this Assessment LSkIP has been asked by Welsh Government to provide a plan focussed on Work Based Learning (WBL), allocations of Apprenticeships and Further Education Deployment of Funds 2016-17 (Post 16) as part of an overview of skills demand and supply across the region. This has been discussed and agreed by the South East Wales Employment and Skills Board (ESB) of the Learning and Skills Innovation Partnership.



## Economic context

South East Wales has about 50% of the Welsh workforce and enterprises representing all sectors and has real potential to benefit from Government and European support and investment. Through development of a more highly skilled and better paid workforce the region has an opportunity to meet desired growth in GVA and taxation arising from increased prosperity. A clear regional growth strategy from Welsh Government (similar to Cardiff Capital Region) will enable an agile response to the changing demands on the workforce. **To close the gap in GVA with the UK, to expand and prosper, a strategic step change in the quality and skills of the workforce and from training providers is needed.**

The Cardiff Capital Region is strategically positioned with close links to the English Midlands via the M50-A465 in the North and served in the South by the M4 corridor, A470 and Great Western Railway, to be further improved by the Metro. Cardiff Airport development may prove key for international access. **Improving commercial access to the region, and potential for workforce mobility, North and South, will generate increased interest in business investment in the Heads of the Valleys and the accelerated growth of Cardiff as a commercial hub.**

The Wales Infrastructure Investment Plan (WIIP) which includes major projects focussing on transport, communication and housing, offers opportunities for future growth. Improved road, rail and housing infrastructure offers a means to this end. WIIP lists circa £10b of projects identified in the Cardiff City Region which will create immediate and significant employment opportunities and identified skills demand. This correlates with the Local Authority Capital current expenditure programme (CEW) estimated at £2.2billion in South East Wales over the next three years. **Initially skills demand is likely to be in construction with strong secondary skills demand in the sector.**

WIIP projects such as 'Superfast Cymru' broadband offer significant future commercial opportunities to businesses from micro/SMEs to large companies. Innovation skills are needed to ensure the opportunities arising from exploitation of ICT are maximised<sup>5</sup> across all sectors. Trained staff offer higher level skills and better jobs with higher GVA. **A focussed cross-cutting ICT skills offer having identified needs is key to benefitting businesses across every sector.**

Industry and skills deliverers (public and private) will need to collaborate closely together and with government, locally and nationally, to ensure that the potential long term benefits of WIIP are maximised, particularly at a time of reduced funding resources for training and skills. **A long term learning and skills innovation strategy of collaboration between industry and skills and learning providers and government, is needed to help improve training in the workforce and overcome skills deficits which may limit growth and economic prosperity across the region.**

UKCES 2014 reports 16% of establishments reported skills gaps estimated at over 33,000 staff in the region needing training, up 2% year on year (2013-14). Companies reported more than 1 in 20 staff were not proficient at their jobs. **There is clear demand for high levels of training in the existing workforce.**

Of just under 20,000 vacancies recorded in the year (2013) over 6,000 (30%) were hard-to-fill or skill-shortage vacancies which reflect the need for a focussed programme of training to deliver skills across manufacturing, financial services, tourism, education and public administration sectors, which

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<sup>5</sup> Computer programming and design skills, online marketing, digital forensics, financial and professional services (all with UK and international export potential).

are all currently struggling with around 6% skills vacancies. **This may in part offer some insight to the widening gap between GVA in the UK and Wales and if overcome may help reverse the trend.**<sup>6</sup>

62% of companies invest in the training of staff at a cost of £800 million in the region. Of these 50% would like to train more. This would cost industry around £248m - but generate equal revenue for the Independent Training Provider (ITP) sector. Apprenticeships are playing an increasing part in generating skills for industry and as part of a co-investment strategy. Employer-designed apprenticeship frameworks are effective and remain current. **As a flagship policy in Wales the number, breadth, level and age range of apprenticeships should be increased.**

At UK level Chancellor George Osborne is committed to introducing a levy on UK employers to fund new apprenticeships, which he sees as reversing the long-term trend of employer underinvestment in training that has resulted in a fall in external training course attendances from 141,000 to 18,000 over the past decade.<sup>7</sup> Mr Osborne said: 'The levy will support all post-16 apprenticeships in England. It will provide funding that each employer can use to meet their individual needs. The funding will be directly controlled by employers via the digital apprenticeships voucher, and firms that are committed to training will be able to get back more than they put in. There will be formal engagement with business on the implementation of the levy, which will also consider the interaction with existing sector levy boards, and further details will be set out at the Spending Review [November 2015]'. It appears that the devolved Assemblies will have the final say over the levy in each nation. **The Board and LSkip stakeholders will take a view on the levy proposals, as they unfold. Currently focused on large employers, there are questions over the relationship with SMEs that this will engender, and also how the levy may be administered in Wales.**

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<sup>6</sup> Relying on government statistics going in to or coming out of a recession (2013) can lead to distortions and consequently current figures may not be considered as reliable when projecting figures.

<sup>7</sup>CBI briefing note July 2015

# Demand Identified from the South East Wales Employment and Skills Report

## Regional Profile

- 1.5 million people - 48% of Wales population live in South East Wales
- Population of Wales is forecast to increase by 5.4% by 2020
- Population of Cardiff is forecast to increase by 40% over next decade.
- 665,000 workers and 90,000 businesses are based in the region
- Cardiff City Deal, Cardiff Capital Region, Great Western Cities and 3 Enterprise Zones
- 228,000 of South East Wales workforce work in Cardiff
- 368,400 or over 50% of the regional workforce are in the Foundational Economy<sup>8</sup>
- 8% of workforce unemployed – 5% in Monmouthshire, 13% in Blaenau Gwent
- Youth unemployment is 26% in Blaenau Gwent, 22% in Rhondda Cynon Taf and 20% in Torfaen
- 49 Anchor and Regionally Important Companies are based in South East Wales
- South East Wales region has over 50% of the Welsh workforce in FPS, ICT, AMM, CI
- 1% of businesses employ 40% of workforce
- 95% of businesses employ 33% of workforce
- 90% of new jobs in the next 10 years are forecast to be replacement jobs
- 1 job is forecast to be created through growth for every 8 replacement jobs
- £2.2 b (est) South East Wales LA Capital Programme Constructing Excellence in Wales (CEW) report (current to 2018 + ongoing)
- 78% of firms in Wales are dissatisfied with quality of careers advice for young people<sup>9</sup>
- Skills growth demand UK - 73% Construction, 69% Manufacturing, 52% ICT, 52% Engineering Science<sup>10</sup>
- UKCES forecast 2020 – 13.5m vacancies with 7m entering the workforce from education

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<sup>8</sup> The Foundational Economy<sup>8</sup> workforce includes public administration, retail services, distribution, education, health and social services e.g. those sectors not in the Welsh Government's designated 'Priority Sectors'.

<sup>9</sup> CBI - Inspiring Growth - 2015

<sup>10</sup> CBI - Inspiring Growth - 2015

## Understanding the Business Structure in Wales

When looking at the business structure of Wales and in particular the relationship between company size, employment and turnover size really counts. 95% of companies are 'micro' (0-9) employing 34% of the workforce but producing just 14 % of turnover, whilst less than 1% of companies are 'large' but employ 38% of the workforce and produce 64% of turnover.

## Entrepreneurship

The number of enterprises in Wales per 1,000 population is below that of the UK other than in Monmouthshire. Entrepreneurship is key to growth. In addition to bank investment, entrepreneurs and micro companies need to be supported with business and finance skills, business support and mentoring.

The focus on training the entrepreneur can create confusion. The US model looks at funding the individual with a brilliant idea, putting in support, and buying into the IP for a high risk but high return. The UK approach generally looks for a solid business plan, minimised risk and an exit route. This can make entrepreneurs difficult to fund in Wales or the UK and IP may be lost to less risk averse foreign investors. The University spinout company model may offer useful experience, supporting innovation which may not always be a strong point in larger companies, although there are examples of large companies establishing subsidiaries to test market opportunities. For start-ups and Micro companies innovation is a key element connected to HE, often with highly qualified staff.

## Enterprises by size<sup>11</sup>

Stats Wales		Number			Percentage of total			
		Enterprise count	Employment	Turnover (£m)	Enterprise count	Employment	Turnover (%)	
All size bands		231,110	1,058,500	116,643	100	100	100	
All size bands	Micro (0 -9)	218,745	359,900	16,505	94.6	34	14.2	
	Micro (0 -9)	Zero	177,060	195,900	6,230	76.6	18.5	5.3
		1-4	31,075	90,700	5,736	13.4	8.6	4.9
		5-9	10,610	73,400	4,539	4.6	6.9	3.9
	Small (10 -49)		8,740	164,300	11,689	3.8	15.5	10
	Small (10 -49)	10-19	5,645	78,100	5,154	2.4	7.4	4.4
		20 -49	3,095	86,200	6,535	1.3	8.1	5.6
	Medium (50 -249)		2,030	130,000	13,597	0.9	12.3	11.7
	Medium (50 -249)	50 -99	1,135	59,100	5,573	0.5	5.6	4.8
		100 -199	720	55,300	6,548	0.3	5.2	5.6
		200 -249	175	15,600	1,476	0.1	1.5	1.3
	Large (250 +)		1,595	404,300	74,851	0.7	38.2	64.2
	Large (250 +)	250 -499	440	45,100	6,715	0.2	4.3	5.8
		500 -999	355	52,900	23,629	0.2	5	20.3
		1,000 +	800	306,300	44,507	0.3	28.9	38.2

<sup>11</sup> The StatsWales figures are based on the worldwide size of company not on the size of the company in Wales. This is misleading.

There are significant training and skills issues related to company size. 77% of enterprises are recorded as having zero employees (ie, they are one person operations) are difficult and expensive to reach and have issues around freeing up time and finance for training courses.<sup>12</sup> Many of these 'one man/woman bands' may be 'lifestyle' choices. Levels of employee qualification tend to be higher as an average.

However training is important for growth and innovation across all companies. Micro companies (0-9) have an average life of 14 years and the highest level of company births and company deaths. There were more business deaths (10%) than births (9.2%) over the whole economy in Wales in 2012. Financial and Professional Services, Creative Industries and ICT had more births than deaths with Construction and Tourism having more deaths than births proportionately. Training and support for succession planning, leadership and management is key for company consolidation to grow from micro to small and medium size companies to large.

The Federation of Small Businesses (FSB) reports strong demand for training, largely externally provided by ITPs. Improved skills may enable growth of Micro to Small and Medium companies (10-249) which is a step change with 5% of all Small enterprises delivering 22% of turnover. Further growth is an issue with less than 1% (2000) in the Medium grouping (50-249) offering little opportunity to expand the number of large companies.

#### [Anchors and Regionally Important Companies](#)

Large companies offer significantly more training to their employees at all levels and of all types, much of which is delivered internally. They take on the greatest number of new recruits and express satisfaction with the quality of students. In-house training is targeted and current. WG engagement with Anchor and Regionally Important Companies is important but could be more focussed to take advantage of skills development if there was better sharing of knowledge of large companies.

Engagement at a local regional level between Anchors and RICs and large companies (250+) is economically and strategically important for skills.<sup>13</sup> By better understanding current skills gaps and shortages companies remedial activity may help unlock opportunities to share training for cross sector skills e.g. quality assurance (QA) which is essential in industry and transferable e.g. between food manufacture and pharma manufacture.

Training to overcome high level skills shortages in the exploitation of new products and development of an entrepreneurial culture may be shared across start-ups and micro companies and larger companies which need to rapidly exploit new products.

Lower salaries in parts of the South East Region, plus higher levels of unemployment may offer a significant opportunity for growth, attracting investment for both inward and indigenous companies to grow new products and expand production, providing there is a skilled employment pool.

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<sup>12</sup> FSB report Training and Skills policy reflects a future demand-led strategy across all sectors and all enterprises. Welsh Government (StatsWales) recognises an enterprise when it is VAT or PAYE registered. This includes 41% of companies in Wales of Zero size (no employees – single owner) to the largest 800 companies with 1000+ employees (Average 3,750) in the Large company group (250+ employees)

<sup>13</sup> Further research is necessary on large companies as StatsWales data gives no indication of Welsh-based employees' company name or sector linked to the data making it at best virtually useless and at worst positively misleading.

Information arising from Anchor and RICs is important to the Assessment. With Welsh Government assistance an approach has been made to Anchor and RI Companies with an information request. Nine companies have responded from different sectors and the information has been included under relevant sectors. Overall the response by sector reflected businesses as either static or growing, often with significant levels of recruitment. Most indicated that they train internally using their own resources and academies. Further meetings are due to take place in the future with the Anchor and RICs group talking directly with LSKIP Board members and staff to develop strong links to better understand the training and skills innovation needs of these companies for the future.

## Replacement Jobs

Occupational Forecasts show 'replacement' as a significant share of employment [all Wales] 2022.<sup>14</sup> **Forecast Growth** of 10%-20% in Welsh workforce:

Occupation	Replacement jobs	Share of Welsh workforce
Senior management	66,000	9%
Professional occupations	153,000	19%
Caring leisure and other services	89,000	10%
Technical and associate professional	71,000	11%

**Forecast Decline** of 3%-12% in Welsh workforce:

Occupation	Replacement jobs	Share of Welsh workforce
Elementary	48,000	11%
Sales and customer service	36,000	10%
Skilled trades and occupations	49,000	14%
Administrative and secretarial	52,000	10%
Process plant and machine operatives	23,000	7%

Replacement jobs are highest in professional occupations, caring, leisure and other services, technical and associate professional and senior management. These roles will often need higher level skills and qualifications which may prove particularly challenging when addressing older and more experienced people seeking to move up from within the workforce. Senior management replacement jobs at 66,000 are likely to prove important in the context of succession planning. Even where there is a forecast decline in workforce numbers the number of replacement jobs can be high e.g. administrative and secretarial jobs are set to fall by 10% but are forecast to need 52,000 replacement jobs.

Action is needed to overcome the challenges of those occupations which are in sectors which are in decline and also perceived as in some way less desirable such as in heavy industry and engineering. There are 120,000 replacement jobs across elementary, skilled trades and occupations and process, plant and machine operatives. These jobs are likely to require enhanced skills as change and technology becomes more integrated into the workplace. Currently in the AMM sector there are only 9% of the workforce is aged 16-24 and less than 18% of the workforce are women.

The care sector replacement demand is a specialist area which will require continued attention. The Social Care Workforce Development Partnership (SCWDP) supports training in the Social Care workforce by subvention through local authorities e.g. City of Cardiff delivered over 24,000 training courses across all levels in 2015 paid for with assistance of a 70% grant from Welsh Government.

<sup>14</sup> UKCES Working Futures 2012-2022

The overall number of jobs for females is set to grow in 'senior management', 'professional occupations', 'associate professional', 'sales and customer service', 'caring ... services' (between 8K and 26K) but a steep decline is forecast in administrative and elementary groups (-19K and -12K) and in the under-represented process plant and machine operatives and skilled trades (-6K - 40% and -3K -13.9%).

## Co-investment

62% of companies train staff at a cost of £800 million in the LSKIP region; of these 50% would like to train more. This would generate around £248m of revenue for the training sector. 53% of companies in the Cardiff City region offered on the job training and 49% offered off the job training (some offer both).

A challenge may be that due to funding cuts in this year training providers reduce or even cease to deliver training to the over 24 year old group unless there is a funded route available from Welsh Government or other funding sources (e.g. City Deal, European Funding) or an alternative support framework for essential skills (e.g. WULF, ACL). The effort for the private provider to get companies to commit to co-funding may be too great and the margins on the course costs too narrow to ameliorate the risk or offer flexibility in negotiating a strike price.

The Levy likely to be brought in across England in 2016/17 will ensure large industry co-investment in skills. As currently envisaged by the Chancellor this is likely to generate funds for apprenticeships that can be directly utilised by the companies themselves. If instituted in the same way in Wales as England this may cause problems for SMEs unless large companies can be encouraged to buddy up with them as suppliers or some other way.

## Workforce

Profile by company and sector<sup>15</sup>

Sector	GVA <sup>16</sup> 2014	Wales Workforce 2014	SEW Workforce	% of Wales WF 2014	Largest proportion enterprises company size band 2013	Largest proportion employees company size band 2013	% Self employed by sector
ICT	£44 (2)	28800	14500 (8)	50	Zero	Large	<10%
FPS	£51 (1)	116400	65400 (3)	56	Zero	Large	<20%
AMM	£34 (3)	87900	44100 (6)	50	Micro	Large	<5%
LS	£24 (4)	12900	4300 (10)	33	Large	Large	<10%
F&F	£14 (9)	46700	9800 (9)	21	Zero	Large	<45%
CON	£20 (6)	110700	48300 (5)	44	Micro	Micro	40%
FES (NP)*	£16 (7)	752200	368400 (1)	49	[Large]	Large	<10%
E&E	£23 (5)	148800	72700 (2)	49	Micro	Large	<30%
TOU	£14 (8)	123700	59300 (4)	48	Micro	Large	<25%
CI	£13 (10)	47700 <sup>17</sup>	24000 (7)	50	Zero	Large	<40%
		1332400 <sup>18</sup>	644600				15%

\*NP Not in a Priority Sector

<sup>15</sup> ONS

<sup>16</sup> BRES (Business Register Employment Survey) 2013 n.b. GVA by Priority Sector is not available – figures are calculated by using Annual Business Survey (ABS) proportions from Office of National Statistics (ONS)

<sup>17</sup> Based on the updated DCMS Creative Industries classification

<sup>18</sup> This total will not equal the sum of the individual priority sectors as there is overlap between several sectors

GVA is forecast to grow across all sectors to 2020 in Wales but annual growth is forecast to continue to lag behind the rest of UK with the exception of manufacturing.

### Building and retaining an available workforce

With significant subventions available to attract companies to the region how can we develop a sufficient employment resource pool to meet their demand for high quality skilled people? This is a competitive situation, not like the period during which the WDA was active, when big industrial plants were closing and there was a surplus of labour to fill low quality jobs. Is unemployment a possible plus given the availability of workforce in development areas such as the Heads of the Valleys?

### Ageing Workforce<sup>19</sup> - problem or possible solution

A significant percentage of replacement jobs will arise from retirement from the workforce. Of the 13.5 million vacancies forecasted by UKCES to be needed by over the next ten years there are forecast to be 7 million people leaving school and college<sup>20</sup>.

By 2020 36% of the UK population will be over 50 with the majority of 65 year olds living beyond 80 (ONS). The Chartered Institute for Personnel and Development (CIPD) survey looked at workers in the 50+ age group of which 54% of those aged 55 and over plan to work beyond the state pension age.

The challenge may be for companies to retain an older workforce and consider how provision can be made to train or upskill those aged 50+ within current delivery frameworks. Research indicates that there are inherent benefits to employers to pursue this avenue, as older employees bring experience, flexibility, and loyalty together with a greater likelihood of continued productivity during a handover period, improving succession planning with transfer of skills and knowledge through working with younger employees. A further research outcome<sup>21</sup> indicates the 50+ employee, retrained or upskilled, is likely to remain with a company longer than a 20 year old for reasons including family, housing social background, and desire to remain in a stable workplace when approaching retirement.

### Retention of skills in area - apprentices, trainees and graduates

Retention of a skilled workforce across the region is of paramount importance if Cardiff Capital Region is to remain competitive and the City Deal to become a reality. Key concerns for employees are:

- Quality jobs offering long term security - marketed by company and sector
- Good quality of Life - marketing the region
- Locally available relevant training for existing workforce
- Developing apprenticeships by sector, company and shared apprenticeships
- Positive approach to an ageing workforce - training people with roots in the community

### Diaspora - Encouraging experienced and/or recently qualified to return to Wales

By using a skills retention approach, encouraging people to return to Wales who may have qualified in Universities outside Wales

Skills shortages in Wales – bringing in the teachers, trainers and lecturers

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<sup>19</sup> Chartered Institute of Personnel and Development (CIPD 2011) <http://bit.ly/1hvBlk1>

<sup>20</sup> UKCES 2010

<sup>21</sup> NTFW special report (2015)



### Experience in the Workforce

Further research is required to look at skills gaps and how they are created, whether through changing work practices and technology demands and the percentage arising from losing an experienced workforce, and dealing with a shortage of experience in managing the workforce (Leadership and Management), understanding of the supply chain, and knowledge of customers.

## Workforce Mobility

While recognising the desire for Welsh Government to focus regional skills delivery on “Skills That Respond to Local Need” there may be a particular risk in looking at employment and skills needs of South East Wales without acknowledging the impact of its surrounding regions.

Elements of the workforce employed in the region are highly mobile, particularly those with skills or leadership capabilities in high demand. This is clearly evidenced within the South East Wales region when looking at the draw of Cardiff (over 100k commuter journeys into Cardiff daily), the development of the Metro and Cardiff Capital Region, but the flow may also be across national and regional boundaries both in and out when looking at demand across sectors. The workforce already freely travels the M4 corridor and The Great Western Cities partnership initiative may be seen as formally promoting a shared skills workforce in the longer term.

In the relatively short term, construction projects such as EDF Hinkley Point, the projected Swansea Tidal Lagoon and Anglesey Wylfa nuclear power station may create skills shortages in other regions affecting South East Wales investment projects such as the M4 relief road and significant house construction projects in Cardiff.

Recognising this reality is important when considering training a local workforce to meet anticipated localised demand.

## Cardiff City Region City Deal

The City Deal, whereby UK treasury offers to lend money (up to £1bn) for city region development, brings a real opportunity for the region to grow and develop over the next ten years. If a bid for the loan is successful, the money is paid back by the increased tax revenue accruing from the increased GVA of the region.

An expression of interest has been submitted, and the full bid will be submitted by the end of 2015. There is a ten year timeline for completing activity, but it may be possible to start with an initial bid and subsequently expand the activity during the ten year period.

Partnership working between local authorities and Welsh Government is in place, but there is a need to grow private sector involvement. LSKIP’s work with Anchors and RICs may assist here.

A skills element has been specifically mentioned in the initial expression of interest, and this will be expanded in the main bid. Evidence from LSKIP’s Employment and Skills Report (March 2015) and the Demand/Supply Assessment Report will support ongoing work.

If successful, the activity could help to reverse the growing difference in GVA between Wales and the UK, especially as it could bring a step change to GVA and gross wages – creating wealth, supporting entrepreneurship and reducing the UK dependency of circa £4billion support to the region.

It could also help indigenous and embedded Welsh-based companies to grow, as well as encouraging inward investment. Building these companies into value-added supply chains with a shared skills agenda could lead to sustainable growth.

Implications for ESF funding will need to be considered if the City Deal bid is successful.

## Mittelstand

The establishment of a Cardiff City Region supported in part by funding made available under a City Deal is intended to strengthen the area by focussing resources, reducing duplication and building close links across the whole area. With about 50% of the Welsh workforce and enterprises, together with three universities and five further education colleges with several campuses across the region, there is an opportunity to improve employment, GVA, local spend, tax receipts and prosperity.

The German Mittelstand model for growth originated as a result of German unification when Low-tech East German companies, heavy in manufacturing and engineering but lacking investment and subsidised by the state, were compared with their hi-tech, productive West German neighbours. Low skills levels and growing unemployment made it clear that action was necessary to improve opportunity and skills, transfer knowledge and share business best practice with new, small companies being created through entrepreneurial ambition.

This was achieved through clustering of the new SMEs around major anchor companies and centres of skills training learning and research innovation. These became centres of excellence where not only knowledge but best practice in training and skills are shared. Built around large companies who are directly involved in the prosperity of the local area, supported by research and training facilities and companies, regional specialisms are identified and developed.

Large companies who otherwise might be confronted by skills shortages or limited by a stretched supply chain are able to work together with SMEs, transferring knowledge and sharing training facilities to develop the employment pool. SMEs are given some security as they take on the role of supplier to large companies, initially locally but as they mature far more widely. This company relationship offers some security for banks to offer long term loans.<sup>22</sup>

Wales has a particularly constricted Small and Medium size company statistical profile. Some consider this is less pronounced in South East Wales – the figures suggest a different story. Targeted training towards medium and small companies (over 7,000 with 10-49 employees) to support growth particularly among ‘Mittelstand’ companies in South East Wales may be an area with significant impact.

The challenge for Wales is of growing and maintaining so-called ‘Mittelstand’ companies, typically high growth, high tech, lean companies with a strong international outlook. In Germany ‘Mittelstand’ companies work closely with universities and researchers and operate as clusters delivering discrete services or products as part of the supply chain for locally based large companies.

This approach directly relates to Enterprise Zone needs – benefitting existing as well as inward investing businesses.

**Action: to engage with the challenge of inter-company inter-provider inter-regional collaboration sharing skills and a strategic approach to grow and prosper.**

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<sup>22</sup> Initially loans were guaranteed by central government at the time of Unification in 2003 some predicted their demise due to narrowing of credit availability and a record number of firms collapsing. *Mittelstand* companies continue to employ 70% of Germany’s workforce

## Skills and Training Investment

The size of companies impacts on their overall skills and training investment profile.

According to FSB statistics 76,300 companies in Wales are sole traders. Together with companies with less than 10 employees these are particularly difficult to reach using conventional face-to-face learning and training delivery owing to practical issues of releasing staff time, particularly those with multiple responsibilities in the workplace.

SMEs have an average age of 14 years in the hands of the original owners. By contrast Mittelstand companies in Germany appear to be routinely established with substantial investment for longevity.

Businesses as SMEs face significant succession issues with 83% of Federation of Small Businesses aged 45+ and 49% of members aged 55+. Encouraging businesses to look at succession planning and taking steps to ensure that this action is supported is a key policy for FSB.<sup>23</sup>

**Action: to consider the challenge surrounding growth and succession planning offering training to give a better understanding of the Leadership and Management issues.**

## Skills Shortages and Gaps

### Skills-Shortages

Skills-Shortages or Skills Shortage Vacancies (SSVs) are commonly identified as 'Hard to fill' vacancies where applicants exhibit a lack of knowledge, experience or qualifications for an available position. Qualifications required for a job may be at any level. One method of identifying skills-shortages across sectors on a continuous basis is through analysis of job vacancies advertised. Direct interviews as undertaken by UKCES and other agencies offer an alternative view from those companies that engage with the telephone researcher.

Identifying skills shortages and hard to fill vacancies through monitoring advertised employment opportunities can offer a snapshot of the current demand but does not give a clear indication of the future needs of companies. UKCES reports an average of 14% skills shortages in companies (2013).

### Skills Gaps

Skills Gaps reflect a lack of skills proficiency found by employers within their existing workforce. It is possible that there are multiple skills gaps exhibited in a single role. Skills gaps may arise as a result of changes in working practices or specific skills requirements e.g. changing use of ICT. They reflect a current lack of proficiency in certain skills areas amongst members of the workforce.

The *Leitch Review* emphasised that 'reports' of skills deficiencies should not be regarded as indicators of employer demand for skills *per se*. These measures are products of the way employers recruit and use skills in the workplace, and do not show the full extent of demand for skills.<sup>24</sup>

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<sup>23</sup> Wales Cooperative Centre – Social Business Wales programme – This programme aims to promote the benefits of employee-owned businesses and also support the facilitation of Management Buyout (MBO?) processes. Advisors can work on developing a long term strategy and structures for business owners to organise a phased transfer of ownership and ultimate sale of the business but this would still enable the business to continue and not end with the retirement of the original owner.

<sup>24</sup> UKCES Skills Almanac 2010

In addition to perceived skills gaps some employers may also suffer from “latent skill gaps”.<sup>25</sup> Such gaps exist where employers do not recognise the skills they need to sustain their businesses in the long term.

If LMI is to be valuable it requires interpretation to turn it from Information to Labour Market Intelligence. For example understanding future potential skills gaps and shortages can only really be understood through direct employer research achieved by employer engagement.

ICT outside the ICT industry suffers from continued skills gaps owing to the rapid change in the technology and software demands.

UKCES 2014 reports 16% of establishments reported skills gaps estimated at over 33,000 staff in the City Region needing training, up 2% year on year. Companies reported more than 1 in 20 staff were not proficient at their jobs, a year-on-year increase.

There were just under 20,000 vacancies recorded of which over 6,000 (30%) were hard-to-fill or skill-shortage vacancies, the highest levels in manufacturing, tourism, financial services, education and public administration, all around 6%. This may in part offer some insight to the widening gap between GVA in the UK and Wales, something which would benefit by being addressed.<sup>26</sup>

Manufacture and Tourism reflected the highest density of skills gaps at over 10% (2011-13). Energy and Environment reflected a significant reduction in Skills Gaps and density down to 1.8%.

Vacancies were generally high in the Foundational Economy, Health and Social work and Education. Skills Shortage Vacancies were low at less than 5% with Manufacturing and Tourism slightly higher although this still saw significant SSVs in skilled trades and caring and leisure of over 1200 people.

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<sup>25</sup> (Bosworth *et al.*, 2004)

<sup>26</sup> These figures offer a broad indicator as UKCES does not use the same sectoral breakdown as the Welsh Government Priority Sectors

## Changing Skills Needs Company Perspective – (Skills Gaps)

UKCES undertook interviews with Welsh companies which indicated the adult skills needing improvement or updating.<sup>27</sup> Where skills gaps are recognised by companies directly they should be encouraged to address them directly through investment.

Percentage of workforce reported by companies/establishments	Skills gaps – e.g. skills gaps exhibited by company employees requiring training
46%-55%	Technical/practical job specific (53%) Planning and organising
36%-45%	Problem solving Advanced IT or software
26%-35%	Team working Strategic Management Customer handling Basic Computer literacy/IT
16%-25%	Oral and written communication skills (English and Welsh)
6%-15%	Numeracy and Literacy Foreign language skills

## Drivers for Change

The drivers which employers recognise as a need to improve and update their workforce skills:<sup>28</sup>

Percentage of companies/establishments	Reasons given for needing to improve, update or upskill the existing workforce
50%-75%	New legislation or regulation (mandatory) Employees need to acquire new skills
40%-50%	Introduction of new technologies Introduction of new practices Development of new products

It is clear from the UKCES research that the introduction of legislation including mandatory regulations will require companies and establishments to train in order to meet their statutory requirements.

<sup>27</sup> UKCES 2013 12 month snapshot

<sup>28</sup> UKCES Survey 2014

## SECTOR SUMMARIES

### Financial and Professional Services FPS

South East Wales region has over 50% (82,500) of the total Financial and Professional Service sector workforce in Wales of 128,000<sup>29</sup> with over 40,000 employed in Cardiff.<sup>30</sup> FPS is at the heart of the Cardiff Enterprise Zone with a high level of infrastructure investment linked to the construction and ICT sectors. The largest subsectors in the industry are Professional and Business Services employing (45,000), Banking, Finance and Accountancy and General Insurance (over 6,000). Wales' only FTSE 100 Company is Admiral based in Cardiff.

Over 10,000 students are taking business-related courses in South Wales with 900 graduates entering the workforce annually from local universities trained in Financial and Business Service related subjects in 2015.

### Apprenticeships

UKCES records an increasing trend in skills gaps in the FPS sector amongst 20% of employees. This need to refresh skills is reflected in the increasing take-up of apprenticeships by the sector's workforce where nearly two thirds of apprenticeships (1960) are undertaken by those aged 25+.<sup>31</sup> Entry level apprenticeships stand at about 300. **Workforce demand is across all qualifications levels e.g. contact centre through legal and senior management.**

Apprenticeships data from Careers Wales from 2014/15 indicate that 24% of all apprenticeships are in the Financial and Professional Services sector. This is up 2% from 2013/14 and a steep increase in numbers (by 1500 apprenticeships) from 2012/13.

The Welsh Government financial and professional services sector team has offered a snapshot of new jobs currently available by way of a 'Partial jobs list' by SIC Code<sup>32</sup> which indicates 2,169 current jobs vacancies (excluding Flintshire, Swansea and 'out of area'). Of 442 jobs created through Welsh Government support in South East Wales region, 60 have a salary of £50,000 or over.

Higher level [Graduate] apprenticeships linked to a graduate programme may benefit from ESF funding in the current round provided a high level of sector support and engagement is offered.

University of South Wales is offering a range of awards for the first time in 2015/16 including ACCA (Platinum Approved Learning Partner), CIMA (Premium Learning Partner) and ICAEW (ACA) tuition at Newport City Campus and further ACCA and ACA tuition available at USW Cardiff Campus (Atlantic House, Tyndall Street). The Open University offers a broad range of FPS sector-related courses including free introductory courses through Openlearn<sup>33</sup> e.g. Introducing Corporate Finance.

FE provision indicates 1,023 full-time students and 1,762 part-time students planned into 2015/16 which is a 20% increase in full-time provision. 75% of full-time students are taking a Business Administration/Studies course while 10% are taking an accountancy qualification. Engagement with industry to confirm the value of the FE Business Studies qualifications may be valuable.

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<sup>29</sup> BRES Source: Annual Business Inquiry/Business Register and Employment Survey, Office for National Statistics (2013)

<sup>30</sup> 24 February 2015 Employee jobs by LA 4 digit SIC SEW

<sup>31</sup> Only Health and Social Care have higher numbers at 3,765

<sup>32</sup> 06.08.2015 (BETS - Sector and Business)

<sup>33</sup> [http://www.open.edu/openlearn/search-results?as\\_q=finance](http://www.open.edu/openlearn/search-results?as_q=finance)

### FPS Company Snapshot

A South East Wales-based FPS sector company is planning to expand its workforce by several hundred jobs ranging from analysts to senior managers with salary range from mid twenty thousand to in excess of seventy thousand pounds. The company has set aside in excess of £1.5 million to undertake training for over one thousand, four hundred staff of which over 80% will be directed to professional qualifications (CPD) and the remainder to performance and leadership skills.

Large anchor companies often have in-house training opportunities, company academies or are able to offer mentoring (buddying) on-the-job training. Qualifications may be offered as internal or external credit often calling on Professional bodies for accreditation.

In this case the company has close engagement with the local college and Careers Wales to identify and recruit apprentices and with local universities to attract graduates. Through engagement with trade associations and National Skills Academies the company is able to engage with Welsh Government and European Social Fund supported initiatives and schemes. Sector relevant institutes and associations are also able to deliver professional qualifications recognised across the sector.

Sought-after skills at all levels include excellence and attention to detail, knowledge of ICT, communications skills, team leadership, work prioritisation and organisation and for technical analyst positions a knowledge of research and report writing, SQL and data manipulation and management. A relevant legal background may also prove valuable and offer an opportunity to specialise.

This company is not experiencing skills shortages currently although it believes that it may in the next three to five years. This may suggest that for city-based companies the current level of HE and FE delivery together with apprenticeship opportunities and in-house professional training is sufficient to service needs. Anecdotally it has been reported that jobs within a city environment with large companies offer a life style and level of security which enhances the likelihood of employee retention but this may not be true for companies in other parts of the region.

### Advanced Materials and Manufacturing AMM

The Advanced Materials and Manufacturing sector includes a wide range of sub-sectors ranging from established manufacturing industry which continues to deliver a strong manufacturing output and will continue to do so over the next decade to newer innovative companies which may provide the basis for rapid growth and greater productivity from emerging technologies to build prosperity for the region.

AMM is the fifth largest sector in South East Wales with over 38,000 in the workforce (50% of the total Welsh workforce)<sup>34</sup> and delivers 17% of turnover. It has high growth, punching above its weight<sup>35</sup> with GVA of £34 third highest after FPS and ICT. Manufacturing bridges a number of sectors from medical and pharmaceuticals, food and drink manufacturing, electronics, automotive and aerospace.

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<sup>34</sup> Total Welsh AMM workforce 81,400 Miller Research (2012)

<sup>35</sup> SEMTA Labour Market Intelligence Research into the Advanced Materials and Manufacturing Sector in Wales 12/2014 – 19% growth 2008-2011



## Key Subsectors

Four subsectors are forecast to have significant numbers of vacancies over the next five years including Aerospace with 8000 vacancies including for highly skilled managers, professionals and technicians; Electronics 1,500 specialists across the UK including designers, experimental research, bespoke manufacturing, circuit design and control systems; Automotive forecasts 20,000 replacement jobs with a high demand for associate professionals/technicians to address emerging technologies and innovation, new product design and quality skills, and Food manufacturing with 4,000 replacement jobs with high level skills in sales, business, environmental and food technology. All of these are considered Hard to Fill Vacancies.

## Replacement Jobs Skills shortages and demand

The UKCES forecast is for 36,500 growth and replacement jobs in the sector in Wales while there are currently only 9% of 16-24 year olds in the workforce and less than 20% are women. A narrower definition for the sector than that adopted by LSkip excluding manufacturing, used by SEMTA/Miller research, forecasts replacement demand of 7,600 with replacement demand of about 2,000 per annum across Wales to 2022.

By occupation SEMTA/Miller Research suggests that there are latent skills shortages of over 2% in every occupational group from Professional engineer and scientist to process plant and machine operatives. Only administration and elementary occupations show skills shortages less than 2% with skills gaps higher in this group. All occupations also show skills gaps of between 1.5% and 2.5%. If these figures are consistent across South East Wales there is an urgent need to address them through improving skills delivery.

Over 30% of companies researched in the sector reported critical skills shortages in senior roles of scientists and technologists, technicians and skilled or craft occupations. Commercialisation of innovation in manufacturing is reported as a key skill shortage.

Management skills including team leadership, business improvement techniques, lean, supply chain management and quality improvement are all strong cross cutting skills which have impact across all sectors.

CNC machine operation and programming, Computer Aided Design (CAD) and Computer Aided Engineering all rank highly in skills needs. Advanced Materials Engineering is rated as of highest need in the aerospace industry and perhaps surprisingly composites manufacturing is not mentioned specifically by Miller in the automotive subsector – an area of particular importance in components for the car and motorcycle/superbike sector. Metals is a key subsector of AMM in Wales which broadens the skills needs to include chemistry as an important STEM subject for the future workforce.

While the total workforce is forecast to reduce over the next five years the overall numbers employed across this sector are large with a very large number of replacement/growth jobs. The challenge lies in maintaining numbers of students training in this broad subject area, retaining them in the area and marketing the sector to ensure strong levels of recruitment in area.

The Manufacturing sector is well supported by SEMTA as a sector skills council for Science, Engineering and Manufacturing Technologies with a broad range of training packages and apprenticeship frameworks delivering across the UK.

## Construction CON

The Construction sector is key to the development of the South East region with a wide range of infrastructure investment projects in the pipeline which will impact across the region touching every Local Authority. £10 billion of investment has been identified for the region planned to be delivered over the next seven years. The Cardiff City Deal and Cardiff Capital Region developments might also have a significant role in shaping investment projects e.g. Metro. Construction projects have a major impact on skills during the short construction period and a far longer term impact on the wider economy at a local level once completed e.g. A465 widening and Circuit of Wales impact on Blaenau Gwent.

### South East Wales profile

SEW has over 5,200 enterprises in the construction sector, and has a fluctuating growth/replacement job demand of over 20,000 in the next five to seven years as projects come on stream. CITB has identified Annual Recruitment Requirement of 5,690 jobs over the period. The construction workforce is traditionally understood to be very mobile and the impact of major out-of-area infrastructure projects is likely to have a significant impact on the local labour pool.

Clear advance information from Welsh Government about the progress of specific construction infrastructure investment projects will help to develop a local delivery plan. Hinkley Point, Swansea Tidal Lagoon and Wylfa nuclear project on Anglesey are all likely to impact on the local workforce. South East Wales is within Hinkley Point's 90 minute 'local' catchment area and a major company has indicated that they are drawing skilled labour from South East Wales. With over £2.75 billion of housing projects identified in Bridgend, Cardiff and Caerphilly there are likely to be particular skills shortages.

### The Top Ten Construction Projects

From Wales six projects in the South East region are currently under way and four projects due to start over the next three years

Location	Project	£m	Start	Sector
Merthyr Tydfil	Water (Framework)	1,500	10/14	Infrastructure
Rhondda Cynon Taf	Mixed use development	200	2/15	Private/Commercial
Monmouth	Trunk Road dualling	180	3/14	Infrastructure
Rhondda Cynon Taf	Energy Plant	170	5/14	Infrastructure
Cardiff	1000 homes	150	2/15	Housing
Caerphilly	Housing Asset management	142	4/14	Housing

Top ten planned projects in Wales include four projects in the region which are considered secure.

Location	Project	£m	Start	Sector
Bridgend	7000 homes	2000	5/16	Housing
Newport	Guided busway	1000	1/18	Infrastructure
Caerphilly	Motorway (relief road)	800	4/18	Infrastructure
Cardiff	2150 homes & 6 commercial units	500	5/15	Housing

### CITB ARR Breakdown of Occupational Roles

To assist with workforce planning it would be helpful for Welsh Government and Industry to be transparent about time frames and the degree of probability for each major project. CITB have offered an interim overview of the local construction sector in Wales as a snapshot prior to delivery of CITB's Construction Skills Network forecast planned for January 2016. This interim report identifies an annual recruitment requirement of 5,690 4.9% of base employment and nearly 3x the expected UK figure. Twelve skills areas where there are potential skills shortages.

<b>Occupational Area</b>	<b>Annual Recruitment Requirement 2016-2020</b>
Senior Executives and Business Process Managers	140
*Construction Project Managers	-
Other Construction Process Managers	-
*Non-construction Professional, Technical, IT, and other office based staff	910
*Construction trades supervisors	140
*Wood trades and interior fit-out	810
*Bricklayers	590
Building envelope specialists	110
*Painters and decorators	400
Plasterers	110
*Roofers	110
Floorers	-
Glaziers	-
Specialist building operatives (nec*)	-
Scaffolders	10
Plant operatives	80
*Plant mechanics/fitters	150
Steel erectors/structural fabrication	-
*Labourers	780
Electrical trades and installation	200
Plumbing and HVAC trades	-
Logistics	-
Civil Engineering operatives (nec*)	10
*Civil Engineers	180
*Other construction professionals and technical staff	640
*Architects	90
Surveyors	230
<b>Total (SIC 41 43 71.1 and 74.9)</b>	<b>5690</b>

\*Occupations with an asterisk indicate a potential skills shortage although all areas are at risk.

In addition to the skilled trades identified there is a forecast annual requirement of over 1,000 civil engineers, construction professionals and technical staff, architects and surveyors. In addition there is also a requirement expressed for over a thousand Senior Executives, Business Process Managers, Professional Technical, IT and other office-based staff although no project managers are identified. Employees taking these roles may be expected to be highly qualified and have undertaken a number of years of higher level study.

Discussion between providers and the construction industry in Wales would appear to be urgent in order for providers to gain a better understanding of these longer term training needs to enable local HE, FE and apprentice provision to meet delivery needs.

CITB refers to a National Training Facility for Wales which may have direct and significant value for the North Wales Prison Project and Wylfa Nuclear and for the Swansea Tidal Lagoon initiative. Further details of the likely location of such a training facility and the FE colleges associated with it will offer a clearer reflection of its potential and delivery lead-in times.

CITB has undertaken some research into the availability of training resources amongst FE providers in the region. They indicate trade skills could be well supplied for entrants to forecast demand

although there is little evidence of opportunities for older workforce upskilling, re-skilling and continued trade development utilising new materials and techniques.

Apprenticeships data indicates that just 6% of apprenticeships are in construction and 11% in engineering. The majority of apprenticeships are taken up by 16 to 24 year olds. Construction has one of the lowest levels of workforce qualified to Level 4 (18 %) and the second highest level with no qualifications at 7.6%,

Practical requirements need to be addressed e.g. for scaffolding<sup>36</sup> whilst specialist skills and accreditation needs to be available e.g. Triple Bar for the nuclear industry. Providers in South East Wales may benefit from collaboration across courses sharing staff training and facilities. For some specialist training it has been suggested that extra- regional collaboration may work e.g. utilising Coleg Cambria resource to train in South East Wales meeting skills needs for Hinkley Point which may then prove transferable for Wylfa nuclear.

Better understanding of needs is likely to assist skills and training providers with development of specialist courses at a range of levels across Wales e.g. rail electrification at Coleg y Cymoedd, Nantgarw offering sustainability for a flexible and mobile workforce and strong skills support for the construction industry.

## ICT Sector

The ICT workforce (SIC): Wales has 28,800 South East Wales 14,500 with a forecast industry requirement of 3,600 jobs per annum including replacement jobs<sup>37</sup>. GVA is estimated to contribute over 75% over the average per employee.<sup>38</sup> The number of people employed as technical specialists is forecast to increase by 33% to 1.6 million in the UK by 2024. The rate of growth is forecast to be lowest in Wales (25%). Highest growth is forecast for web design/ developers (57%) and programmers/software developers (49%) with technical directors (39%) and technical personnel in all areas of over 20% with operators in least demand at 10% growth.<sup>39</sup>

The ICT sector may be considered across three areas with each area including various sub-areas i.e. hardware manufacture (Advanced Materials Manufacturing, Government and Military), Personal Communications (Entertainment and Recreation, Social Networking) and Essential Services (News and Information, Public Services). Sector specialist employment is forecast to be at a similar level both within/outside the technical industries at 28%.

## Cross Sector Employment in ICT

A broader cross-sector employment forecast of Welsh IT & Telecoms professionals produced by e-skills, now Tech Partnership, by sector (as a proportion of the total workforce) in 2020 may need to be enhanced in specific sectors with the advent of Superfast Cymru. Spikes may be expected in the financial sector e.g. IX Cardiff and with the advent of Financial Technology specialist companies (Fintech). There is significant demand for ICT skills across sectors including online promotion for tourism, online retail and hybrid voice and online call centres where there is increased evidence of (on-shoring) growth.

Sector % of IT & Telecoms professionals	2020 (% of total)
Computer/related	20%

<sup>36</sup> Scaffolding training requires 10m clearance inside

<sup>37</sup> E-Skills Technology Insights 2012 Wales

<sup>38</sup> Tech Insights: The Digital economy 2015 £91,800 to the UK economy compared to an average of £51,300

<sup>39</sup> Tech Partnership employment bulletin September 2015

Other Business Activities	11%
Post & Telecommunications	9%
Public Administration & Defence; Compulsory Social Security	8%
Education	6%
Financial Intermediation, (excl Insurance & pension funding)	6%
Construction	5%
Health & Social Work	5%
Retail Trade, Except of Motor Vehicles & Motorcycles, Repair of Personal & Household Goods	5%
Other	25%

### ICT Manufacturing and Specialist Industries

South East Wales is a centre for global chip manufacturing technology which cuts across innovative technology including wireless, photonics, solar, infrared and computational speed and green energy/ power control systems.

The sector includes IQE (Cardiff) which supplies wafers for 2 billion wireless chips and more than one billion optoelectronic chips each year. IQE is a rich example of an industry, education, government collaboration running an Open Innovation Programme. IQE is a Welsh Government anchor company recognised as a Welsh-based global leader in the design and manufacture of advanced semiconductor wafer products.<sup>40</sup> The 'Collaborate to Innovate' programme is intended to bring together regional capabilities to develop new products, engagement with the regional partners including Cardiff University and ESTnet (The Electronics and Software Technology Network for Wales) improving understanding in this sector.

IQE has partnered with Cardiff University in a Joint Venture to establish a European cluster in Wales to develop Compound Semiconductor technologies. Other partners include Alacrity Foundation and the National Software University.

### ICT Skills Shortages Snapshot

EST ICT industry feedback 2015<sup>41</sup> indicate immediate skills shortages and gaps particularly amongst developers and skilled workforce

Location	Company	Skills Shortages
Llantrisant	Bespoke software	Developers: Skilled Developers (gen)
Cwmbran	Cloud authentication services	Developers: Java HTML5
Teforest	Business service	Developers: Sage erp
South East Wales	Agency Recruitment	Developers: Various Software development
Caerphilly	Critical business IT applications	Developers: Skilled higher level staff (struggling to meet WG investment recruitment targets)
Bridgend	Outsourcing, application and infrastructure services	Developers: Various - (75 hard to fill vacancies) looking at apprenticeships as a solution
Cwmbran	Media connectware and multiscreen worldwide	Various (20 hard to fill vacancies)

<sup>40</sup> [www.openiqe.com](http://www.openiqe.com)

<sup>41</sup> 07.2015 EST ICT

Cardiff	IT support company	Skilled Network and Project managers (30)
Cardiff Office with US parent	Security and bespoke software service company	Security/Forensic computing (67 vacancies) Developers (right attitude/skilled/US parent) Using the USW pipeline of graduates & internships Apprenticeships with Cardiff & Vale Developing a Local IT Board National Software Academy (graduate recruits)

## Apprenticeships

Welsh Government Framework refresh rates show 560 apprenticeships completed in 2013/14 with about 80% of these in the 25+ age group. Anecdotally the sector prefers to employ new recruits with good maths skills and then to train on-site as this enables them to keep in step with new developments in technology. Existing employees are constantly challenged by new innovation in business and social hardware platforms, software and applications.

## Superfast Cymru Exploitation

As Superfast Cymru comes online with enhanced broadband delivery to 96% of Welsh businesses a drive to train companies in the use of superfast high speed broadband and the exploitation of the technology for commercial benefit will be a priority.<sup>42</sup>

Welsh Government approach is closely aligned with the Tech Partnership which has changed from its inception as e-Skills, a sector skills council, to become a powerful UK-wide partnership of employers collaborating to develop skills for the digital economy. It is important to engage with and exploit the potential of this partnership linked to existing high quality academic and training courses from local universities to promote growth in South East Wales.

Tech Partnership is engaged in developing a significant number of apprenticeship frameworks to meet the anticipated demand across the UK for a million new digital jobs which are estimated to generate additional GVA of £8.7 billion.

Leading edge technology is being employed in the region with the Regional Peering exchange for Cardiff officially opened in October 2014. The exchange was built as part of a small number of regional exchanges to keep high volume traffic local and secure. The exchange is located at BT Stadium House, Millennium Stadium, in the Central Cardiff Enterprise Zone.<sup>43</sup>

## ICT and Games industry

There are a number of issues that arise when seeking to offer training in the fast moving digital games industry where both programming and hardware are rapidly changing. UK government is fast-tracking a new Level 3 qualification in video game design, animation and visual effects to overcome an acute skills shortage. However industry practitioners suggest a two-year vocational course will already be out of date when students enter the industry and that mathematics A-level would be more appropriate to a work placement and apprenticeships.

## Women in ICT

Of the 1.18m IT specialists working in the UK in 2014 just 17 % of tech specialists working in the UK are women with just 8% of girls sitting computing 'A' level. Only one in ten of IT directors and

<sup>42</sup> Tech Partnership Progress Update 2014-15 Skills for the Digital Economy

<sup>43</sup> <https://www.linx.net/events/regional/Wales/M2/Cardiff.html>

programme and software developers are women. However, this is not a result of disinterest in the product as in the user (games and applications) community as over 50% of the computer games playing community are women. This would suggest that there is no inherent resistance to the technology but rather an issue of perception early in the education and training cycle with some commentators recommending intervention with school children aged 10-14 years old.

### ICT in Education

Education Minister Huw Lewis and Welsh Government has responded positively to The Donaldson report<sup>44</sup> which identifies digital competency being as important as literacy and numeracy skills recommending that this is reflected in future curriculum design as being a skill to be developed across the curriculum.

Competency in ICT is a key skill essential for a modern workforce at all levels and regardless of age. The rapid change in digital technology over the past three decades continues to challenge the skills of an ageing workforce. Despite the challenge of connectivity in large parts of Wales the internet is considered ubiquitous by industry and an essential skill which must be made available for all.

### Foundational Economy Sector FES

#### Size

A vibrant Foundational Economy sector is important to the overall economy of the region and employs about 360,000 people<sup>45</sup> well over 50% of the South East Wales workforce. It returns over £10b to the local economy, about £1b more than the combined priority sectors. Wages earned locally are spent locally boosting businesses which create employment and pay taxes benefitting the economy. GVA is higher than the Creative Industries and Tourism and weekly wages (£541) are higher than Financial and Professional Services (£490), Food and Farming (£300), Tourism (£421) and Construction Sectors (£525).

The Foundational Economy includes Wholesale and Retail, Health and Social Care, Public Administration and Defence, Education and Non-market services catering and hospitality, transport and storage. A number of sectors cross over creating statistical anomalies. **Detailed analysis of Foundational Economy by subsector, currently outside Welsh Government priority sectors will be important for the next report.**

#### Skills Needs

There is a broad spectrum of skills needs in the Foundational Economy which are important for improving all levels of productivity and service delivery. For example the retail sector includes logistics, accountancy, international trade, personnel and customer services, property and management. Large retailers often provide extensive training for new recruits e.g. John Lewis offers in-house training with induction, career progression opportunities and attractive placements for students. Access to retail outlet SMEs may be possible through FSB Wales members.

Skills may be supported directly by FES sub-sector e.g. by Welsh Government via Local Authorities for Social Care Workforce Development Programme (SCWDP) with a grant of £8,159,000 which covers 70% of the cost of the programme (£11,655,000 in 2014/15).<sup>46</sup> This subvention recognises

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<sup>44</sup> Successful Futures, Independent Review of Curriculum and Assessment Arrangements in Wales, Professor Graham Donaldson CB, February 2015

<sup>45</sup> Welsh Government Statistics 2015 Not in a priority Sector exc Tourism

<sup>46</sup> <http://gov.wales/docs/dhss/publications/140615workforceen.pdf>

skilled staff as the principle resource for social services providers. Local Authorities are responsible for drawing up costed plans and administrating the drawn down grant. The grant supplements LA own training resources. In 2014/15 Cardiff City Council delivered 24,000 training days.<sup>47</sup>

Comparative Economic Benefit to South East Wales figures based on workforce and average earnings	workforce	Wage Average £/wk		£/annum	Spend in local economy?
<b>Foundational Economy</b>	360,000	£541	52	£28,132	£10,127,520,000
i.e. Health and Social Services	97,000	£541	52	£28,132	£2,728,804,000
<b>Priority Sectors</b>	338,000	£526	52	£27,352	£9,245,000,000
AMM	52,600	£605	52	£31,460	£1,654,796,000
Financial and Professional	51,900	£490	52	£25,480	£1,322,412,000

Creating a skilled employee pool with a range of functional and key skills to gain employment in the foundational economy is important for maintaining prosperity in communities across South East Wales and to support core services in growth areas such as health and social care. In common with all sectors training new and existing workforce in the use of high level skills and addressing new technology issues is important with rapidly changing ICT demands and the growth of on-line services.

## SUPPLY – TRAINING PROVISION

### Levels of Qualification Demand<sup>48</sup>

LSkip has a significant challenge to drive up higher level qualifications to match those across the UK. In almost every sector in Wales the percentage of the workforce achieving a level 4 qualification has a lower percentage than the UK average. There is a -7% difference in Financial and Professional Services and Life Sciences and -6% in Construction and Energy and the Environment when compared with the UK average. ICT is the exception where UK levels are matched at 63.1%,

Between 2005 and 2013 the percentage of the workforce with level 4 qualifications in Advanced Materials and Manufacturing decreased from an already low base of 27.8% by 13.5% and in Construction from 18.1% by 2.4%.

There has been a significant reduction in the percentage of those totally without qualifications across AMM (-73.1%) and CON (-46.1%) and a reduction of unqualified workforce in all other sectors of around 50% with the exception of the already highly-qualified Creative Industries (-5.9%).

By sector, of the workforce achieving no qualifications, Advanced Materials /manufacturing, Construction and Energy and Environment sectors have a greater percentage of the workforce with no qualifications while Financial and Professional Services, Tourism, Food and Farming sectors and Creative Industries (14.2%) sectors have fewer unqualified in the workforce compared to the UK average. Maintaining support and aspiration for those who have engaged is important for FE and ITP delivery.

<sup>47</sup> City of Cardiff Social Care Workforce Programme 20114-15 S.C.W.D.P. One Sector – One Workforce

<sup>48</sup> LMI Higher Level Skills 141130



## FE Level Engagement and the Value of Learning - Qualifications and Certificates

There were 67,860 students enrolled in FE in 2013/14 of which 40,155 (59%) were part time and 22,650 (33%) full-time students. This is an increase of 20,000 students compared with 47,200 students enrolled in FE in 2012/13 of which 20,540 (44%) were full-time and 26,660 (56%) were part time. The biggest increase in student numbers has been in part-time and work-based learning.<sup>49</sup>

Over 75% of Learners fall into the 25-50 (19,990) and 50+ age range (6,740). About 33% of these learners (8924) fall into the 'Preparation for Life and work' Sector subject area. Of these 4,618 are in the Adult basic education subject area and 2,372 are in the ESOL subject area (English for Speakers of Other Languages) total 6,990. Of these 73% are delivered by Coleg Gwent (3,462 learners) and Coleg y Cymoedd (1,689 learners)

There is a strong positive outcome for Learners engaging through FE activity, WBL and Adult Community Learning and the local economy. Full time learners leaving FE destination data shows under 8% of Learners recorded as Seeking work/unemployed<sup>50</sup> with activity success rates across all three areas of over 80% reflect a high level of learner engagement

The FE sector saw a 92% learning activity completion rate with the WBL apprenticeship success rate at 84% rate and Adult Community Learning 86%. 68% of traineeships led to work, employment or further learning at a higher level. Adult Community Learning had a positive progression for 55% of active participants.<sup>51</sup>

WBL apprenticeship framework successes for 2013/14 are consistently high at over 80% across all subject areas at foundational and apprentice level. Higher level apprenticeships in the social care and health sector had success of above 75% although in Business Administration and Law success stood at under 50%. All apprenticeship numbers are increasing across all levels and subject areas.

Higher level apprenticeships merit further monitoring with a termination rate at level 4 of approaching 14% in the current year 2014/15<sup>52</sup>. Numbers are low at under 2,000 in comparison to levels 1, 2 and 3 of over 260,000, but are under review.

Continued monitoring of progress in developing apprenticeships is required to ensure that this increasingly popular route meets both the learner and industry needs. With an increasing push for numbers (doubling in 2012/13) there is evidence of higher levels of early drop-out and programme transfer affecting over one in ten of apprentices. Frameworks may not always prove to be adequately tailored to meet local industry needs in the LSKIP region.

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<sup>49</sup> O June 2015ns

<sup>50</sup> Further-education-work-based-learning-and-community-learning-in-wales-statistics excludes Not known

<sup>51</sup> <http://gov.wales/docs/statistics/2015/150331-learner-outcome-measures-further-education-work-based-adult-community-learning-2013-14-en.pdf>

<sup>52</sup> LLWR records are subject to change

FEI Delivery Broad Subject Area Delivery showing increase/decrease 2014/15 – 2015/16<sup>53</sup>

Planned Full time FE Vocational Programme South East Wales Colleges by subject sector and FE College 2015-16	Bridgend	Colleg Gwent	Merthyr Tydfil	Cardiff & Vale	Colleg Cymoedd	All SE Wales	+ / (-) 2014/15	% of total learners by subject
<b>Health public services and care</b>	378	1268	270	489	975	3380	(58)	18.46%
<b>Science and Mathematics</b>	74	135	14	50	127	400	69	2.18%
<b>Agriculture, horticulture and animal care</b>	305	358	0	0	9	672	75	3.67%
<b>Engineering and manufacturing technologies</b>	208	522	112	404	370	1616	72	8.82%
<b>Construction, planning and the built environment</b>	323	617	132	585	542	2199	101	12.01%
<b>Information and communication technology</b>	103	438	84	247	322	1194	13	6.52%
<b>Retail and commercial enterprise (Hair, beauty, catering)</b>	245	724	121	516	523	2129	105	11.63%
<b>Leisure, travel and tourism</b>	162	349	117	348	326	1255	24	6.85%
<b>Arts, media and publishing</b>	429	794	270	459	251	2203	75	12.03%
<b>Access to HE Humanities History, Philosophy and Theology</b>	0	40	0	32	68	140	27	0.76%
<b>Preparation for life and work</b>	151	512	146	680	546	2035	416	11.11%
<b>Business, administration and law</b>	50	399	78	248	248	1023	216	5.59%
<b>Access to HE</b>					66	66		0.36%
<b>Totals</b>	2428	6156	1344	4058	4373	18,312		

<sup>53</sup> Welsh Government figures subject to change

## Adult Community Learning

ACL provision is defined in Delivering Community Learning for Wales as “Flexible learning opportunities for adults, delivered in community venues to meet local needs”.<sup>54</sup> There are three distinct types of provision:

- ACL delivered by LAs via a franchise arrangement with a FEI 59%
- Other ACL delivered by FE institutions (this includes all provision delivered in Wales by the YMCA Wales Community College and the Workers Education Association (WEA) Cymru) 21%
- ACL provision directly delivered by local authorities 20%

## Youth Employment and Training

In 2014 80% of 16-18 year and 37% of 19-24 year olds were in some kind of education or training.<sup>55</sup> 32% of 16-18 year olds were in part-time or full time employment. 61% of 19-24 year olds were in full or part-time work. 11% of 16-18 and 21% of 19-24 year olds were not in employment, education or training (NEET). The percentages of NEET for both groups was unchanged from the previous year.

Of the 34,726 part-time learner provision offered in 2014 by FE Colleges in the region 31% was taken up by essential skills ‘Preparation for life and work’. Coleg Gwent delivers about 45% of this provision, Cardiff and Vale College 20% and Coleg y Cymoedd 15%. 65% of delivery is for Adults 25-50 and 20% for learners over the age of 50.

NTfW have experience in this area having provided training through a network of quality assured Work-Based Learning providers<sup>56</sup> to employed people in literacy, numeracy and ESOL up to and including level 2 offered access to essential skills qualifications. Provision is tailored to individual needs and may be contextualised to their workplace. Participants can gain one or more of the identified Essential Skills Wales qualifications in Communication, Application of Number, ICT and Certificate in ESOL Skills for Life – Speaking & Listening) up to level 2.

## Functional and Key skills – Numeracy Literacy and ICT

Vocational skills training is a key focus for development in South East Wales. Essential skills to enter the workforce have been central to government policy over the past ten years. This focus has also been reflected in recent changes to the Welsh Baccalaureate with its increased emphasis on work experience and work placements, to improve candidates’ CVs. Practical skills arising from the workplace are central to apprenticeships.

A focus on delivering contextualised training in essential skills in the form of functional and key skills may prove productive when dealing with hard to reach or older learners with few/no qualifications including ICT for entry to employment and for the existing workforce who may need upskilling.

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<sup>54</sup> [Delivering Community Learning for Wales](#)

<sup>55</sup> <http://gov.wales/docs/statistics/2015/150729-participation-young-people-education-labour-market-2013-2014-provisional-en.pdf>

<sup>56</sup> NTfW Essential Skills in the Workplace (ESiW) Programme

## Training and Skills Delivery

There is a wide and increasingly diverse range of opportunities to deliver training from traditional teaching, work-based learning, apprenticeships and on-line (distance) learning. The key is to find smart delivery modes which reach the learner and keep training relevant and up-to-date. E.g. Training the Trainers – expensive new training around technology, equipment, mandatory practice and legislation can be delivered to local high level staff, providers and company in-house mentors/trainers in order that they can train others in the workforce.

Triangulating engagement building Industry to institutional and learner links supported by government/European funding strengthens the potential to support best practice. Wales has achieved an 84% success rate with apprenticeships, 15% higher than England, supported as a flagship policy by Welsh Government with cross-party support and high levels of industry engagement. NTFW compares the average return to the economy for apprenticeships as £74 per £1 invested against £54 per £1 invested in an HE degree with a typical apprentice framework costing £4,000-£16,000 compared to at least £27000 per undergraduate degree<sup>57</sup>.

Over 60,000 apprenticeships successfully attained learning activities in 2013-14 at percentage rates of over 80% at Foundation Apprenticeship and Apprenticeship level. Higher Apprenticeships achieved just under 70%. High achievement rates suggest that apprenticeships are a successful route to training. 64% of apprentices who are successful gain employment within the same company and a third of apprentices gaining promotion in the first year of employment.

Apprenticeships address skills gaps, and help address the numbers of young people not in education employment or training (NEETS). Apprenticeships are flexible, targeted at Intermediate level (equivalent to GCSE A\*-C), Advanced level (Equivalent to A level), Higher apprenticeships (Level 4, 5, 6 HNC, HND, Foundation degree and which can lead to a degree or other HE award). Across the UK there are 280 types of apprenticeship covering over 1500 job roles from practical skills to social care and more academic roles such as accountancy.

Shared apprenticeships encourage apprentices to move between a group of companies to gain a breadth of experience without putting extra strain on the broad training capability of single companies. Research by UHOVI in the Heads of the Valleys indicates that 87% of companies interviewed would be happy to share training and trainees. Development of Ebbw Vale Enterprise Zone programme 'Aspire' offering a rolling commitment of 25 apprentices across local companies from September 2015 and may demonstrate a 'best practice' model for future shared apprenticeship initiatives.

The CBI response to UK Government Levy proposals reflects the importance of an employers' role in designing content for industry standard frameworks. Content should be designed to meet the needs of companies planned to meet new and existing professional and technical certificates/awards.

In 2014 there were 8,901 opportunities arising from 6,804 distinct industry vacancies across all sectors. Currently the proportion of 25+ apprentices is significantly higher in Health, Public Services and Care sector, Financial and Professional Services, Retail, ICT while higher numbers of 16-18 year old apprentices are seen in Construction, Hair and Beauty, Manufacturing.

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<sup>57</sup> NTFW Arad research <https://www.ntfw.org/wp-content/uploads/2015/09/Value-of-Apprenticeships-EN.pdf>

## On-line Delivery – Digital Inclusion<sup>58</sup>

The Open University offers a wide range of online learning and training resources using the OpenLearn system with tasters across all subject areas offering an introduction through ‘free’ learning in your own time as MOOCs – Massive Open On-line Courses. Free introductory courses offer relevant subjects eg. CyberSecurity – Understanding the Principles.

Identifying and developing on-line delivery may offer a valuable route to reaching this part of the workforce. The Open University estimates development of a bespoke MOOC (Massive Open Online Course) is between £20K and £30K. *Currently OU has no engagement with Welsh Universities.*

## Wales Union Learning Fund

WULF supports a wide range of learning with particular strengths and opportunities arising from their engagement with the workforce through Union Learning Representatives. The Wales Union Learning Fund, through TUCs automatic engagement with employers which recognise unions, may be able offer direct assistance in this developing and challenging area.

## Independent Training and WBL Providers

NTFW members include 18 providers (includes the consortiums) teaching around 240 different qualifications delivered as 553 courses in venues across Cwm Taf, Gwent, Cardiff and Vale, Western Bay (includes Bridgend).<sup>59</sup> Over 90% of courses are Work Based Learning, either Traineeships or apprenticeships.

NTFW Provider Routes and locations (by sub region)	Western Bay	Cwm Taf	Gwent	Cardiff& Vale	All SE Wales
<b>Health public services and care</b>	32	25	24	27	108
<b>Science and Mathematics</b>					
<b>Agriculture, horticulture and animal care</b>	4	5	7	4	20
<b>Engineering and manufacturing technologies</b>	25	11	16	17	69
<b>Construction, planning and the built environment</b>	21	11	17	17	66
<b>Information and communication technology</b>					
<b>Retail and commercial enterprise (Hair, beauty, catering)</b>	20	17	18	19	74
<b>Leisure, travel and tourism</b>	16	12	11	14	53
<b>Arts, media and publishing</b>	3	2	2	2	9
<b>Preparation for life and work</b>					
<b>Business, administration and law</b>	28	26	32	41	127
<b>Totals</b>	<b>158</b>	<b>118</b>	<b>134</b>	<b>139</b>	<b>541</b>

<sup>58</sup> OpenLearn <http://www.open.ac.uk/wales/study/free-online-learning-open-university/pathways-success>  
FutureLearn <https://www.futurelearn.com/courses/categories> OpenLearn <http://www.open.edu/openlearn/>  
Free Courses <http://www.open.edu/openlearn/free-courses/full-catalogue?source=freecoursespage> Lists 700+ free short courses from 1 – 55 hours Introductory to M level <https://app.hiive.co.uk/> Resource operated by Creative Skillset Sector Skills Council Ltd. *Funded with co-investment from UKCES*

<sup>59</sup> NTFW members

ITPs can find it difficult to offer hands-on technical support for applied programmes without access to the necessary equipment. Provision of 'kit' through workshops and technical facilities is traditionally found through HEIs and FEIs who have had investment capability over time. Much of this kit may be under-utilised particularly during long vacation periods.

Course fees for private provision range from about £75 to £150 plus around £18 administrative charge per student for general courses with professional courses charging around £300 with certification attached and exceptionally upwards of £400 for special courses such as professional cookery with associated facilities.

There may be opportunities to encourage Universities, Colleges or enterprises with their own training facilities to share and collaborate together and/or with other companies, perhaps those in their own supply chain, sharing training expertise. External training professionals could be invited to participate with a win-win outcome delivering a qualification as an outcome to trainees successfully completing the course. This could help to overcome short term local skills shortages as well as offering in the longer term an opportunity to staff to upskill.

### First Campus Employability Activities with School Age Learners

First Campus' strategy for 2014-2017 is one of HEIs working together to promote long term vocational and employability skills for School Age Learners, to encourage career aspirations, including work experience through direct access to sector businesses and establishments both public and private. First Campus is part of the 'Reaching Wider' policy including raising awareness of the world of work, pathways to further education and improving employability skills.

### HE Engagement

**The next LSKIP report assessment will have a focus on HE delivery and HE in FE across South East Wales. LSKIP leads for HE and for FE in South East Wales will work together to ensure that LSKIP is able to offer clear feedback to the sectors and vice versa establishing a strategic partnership.**

Universities in South East Wales are working together to meet the needs of various sectors and are already engaged in demand led planning. HE is looking to address need across sectors offering a response to Employer Upskilling and to Inward Investors in the region. HEs in the region are currently offering support to ICT, Computing and Cyber Security, Life Sciences, Food, Maths and Applied Maths for Industry, Financial Legal and Professional Services, Aeronautical and Aviation, Automotive Sector, Creative and Cultural Industries and for the Foundational Economy, Health, Nursing, Dentistry, Podiatry and Social Care, Education and Youth Services, Crime and Social Justice and supporting Social Policy Development, Leadership and Management.

Delivery in these sectors is currently based on existing demand led provision from students, industry and government and represent teaching, training, upskilling and in many instances research that supports South East Wales and beyond. It may be argued that the work that goes across the UK and internationally is as important for the economy of South East Wales as the regional need at a particular time.

HE funding is direct from Students, Research Grants and Partnerships with Industry and Welsh Government. Curricula planning cycles are usually for five years although they may shorter on bespoke funded projects responding to industry and government feedback on gaps in provision. The regional skills partnership provides a potentially useful source of dialogue to inform HEI planning processes.