

Inquiry into Apprenticeships
Evidence from e-skills UK

Inquiry into apprenticeships in Wales

e-skills UK response

e-skills UK welcomes the Enterprise and Business Committee inquiry into Apprenticeships in Wales.

e-skills UK is the Sector Skills Council for Business and Information Technology¹. We are responsible for UK IT standards and qualifications and cover software, internet, computer gaming, IT services, telecommunications and business change.

Our response provides a summary of key messages using the Terms of Reference for the Inquiry as guidance and addresses the key issues individually. We have only answered those key issues where we feel we our knowledge and experience can add value. This input is substantiated by supporting annexes, referenced in the response.

e-skills UK would be happy to provide further information to the Inquiry on Apprenticeships and our supporting work in Wales.

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All data is sourced from e-skills UK Technology Insights 2011 unless otherwise specified.

¹ See Annex A for more information on e-skills UK.

Key messages for the Inquiry into apprenticeships in Wales

This section summarises key messages from e-skills UK, the Sector Skills Council for Business and Information Technology to the Inquiry.

We believe there is greater potential to use the apprenticeships system to better support the Welsh economy and economic renewal priority sectors. IT Apprenticeships are currently under utilised in Wales, but employer demand for Apprenticeships is growing to address current and future skills issues and fulfil growth potential. We want to help Apprenticeships to become as popular a route into IT as graduate entry is today, turning around the current under-representation of Apprentices in IT.

Employer demand in Wales is frustrated by three main factors: lack of availability of suitable programmes; lack of awareness; and difficulties with the process. We suggest the following are key development areas to improve Apprenticeship take up and effectiveness in Wales:

- > Development of suitable programmes to meet employer and individual demand
- > Increased awareness amongst individuals, employers and partners to expand take up
- > Improved systems and processes to ensure Apprenticeships work effectively

Development of suitable programmes

The following programmes are suggested as areas for development in Wales, based on our experience of good practice from elsewhere, to meet the needs of employers in the IT & Telecoms sector.

- > **Level 3 Apprenticeships** - development of suitable Level 3 Apprenticeships is crucial to engaging more employers in the sector in Wales and providing progression places for successful Pathways to Apprenticeships students. Employers in the sector need to see much greater progression through Apprenticeships to meet their skills needs which are predominantly level 3 and higher.
- > **Sector Managed Apprenticeships** are key in driving up employer engagement, delivery standards and in increasing take up through better matching of suitable individuals and employers. A sector managed apprenticeship model encompasses greater sector involvement, raising awareness of the benefits to employers and of apprentice opportunities. Raising standards of delivery to meet employer needs goes beyond the statutory delivery standards making Apprenticeships fit for purpose in the eyes of employers, and raising the credibility of IT apprenticeships with Welsh employers
- > **Higher apprenticeships** are increasingly required in Wales to meet employer demand for higher skills levels in the workforce. Furthermore HAs promote Apprenticeships as a viable routes for individuals who don't want to take the HE route at age 18, without excluding them from higher education.

These programmes also address the issues of awareness and process.

Increasing awareness

Increasing awareness is vital to raise individual and employer engagement and uptake of with Apprenticeships in Wales.

Employers - There is significant opportunity to expand use of Apprenticeships in both small and large businesses. There is a need to:

- > Strengthen links between employers and FE and training providers, building on the cases of good practice in Wales.
- > Make information more accessible to employers, particularly for those large employers outside of the industry itself who could take on an IT apprentice (for example those in the public sector).
- > Involve employers more heavily in Apprenticeships through models such as the Sector Managed Apprenticeships so that Apprenticeships gain credibility in the sector, leading to greater availability of Apprenticeship places.

Individuals - Apprenticeships in the IT & Telecoms sector are now rightly promoted as an effective route to a high paying professional career in a growing sector. We need to build on interest in the sector and apprenticeships. Awareness and uptake amongst individuals needs:

- > More and better careers guidance, based on labour market intelligence and information about available Apprenticeships.
- > Focus on encouraging more mature and female apprentices in the sector.
- > Parents, teachers and careers advisors to promote relevant further study and a career path in IT.
- > Greater promotion of the sector as high growth and high skill with excellent earning potential and career prospects through industry backed materials.
- > Relevant qualifications and apprenticeship pathways that are valued by industry and delivered by quality higher and further education providers.

Improving the process

The standards and Apprenticeship frameworks are based on labour market intelligence and extensive employer consultation and we strongly recommend this continues to be the case. The development and maintenance of the standards and frameworks in Wales is now under threat due to the change in commissioning under Universal Services. Specific funding is now required for e-skills UK to continuously review the Apprenticeship frameworks and develop the Higher Apprenticeships in Wales.

Improved systems and processes are key to ensuring Apprenticeships in the sector in Wales work effectively supporting expanding provision as well as raising delivery standards. In terms of the current system we feel that:

- > Priority sectors, such as ICT, should be able to benefit through enhanced funding adult apprenticeships, particularly where experience is required.
- > Funding needs to be a) of reduced complexity to avoid confusion amongst employers b) made more flexible to respond to changes in employer demand c) reflective of the resources and complexities of delivery.
- > The current system creates competition between training providers and educational institutions that prevents effective partnership working to the detriment of the sector.

Key Issues

This section sets out evidence from e-skills UK in response to the key issues posed by the Inquiry.

How effective is employer involvement in the apprenticeship system in Wales? Has this changed as a result of the current economic circumstances? Are employers able to find sufficient numbers of young people with the skills and aptitudes that they require? Do relationships between employers and training providers work effectively? Are apprenticeships still limited to certain sectors?

IT Apprenticeships are currently under utilised in Wales, despite the need for new recruits to fulfil growth potential in the sector. Recent survey data from the UKCES concluded that, across the UK, only 2% of employers in the IT industry across the UK currently have staff undertaking Apprenticeships, compared to 5% for all sectors². The sector in Wales is very much at the start of building up demand for IT professional Apprentices.

Employer demand for Apprenticeships is growing to mitigate current and future skills issues

ICT is an economic renewal priority sector in Wales, contributing 5% (in excess of £1.2billion) to Wales GVA and employing nearly 40,000 people. More than one in ten (13%) of employers in Wales with IT & Telecoms professionals report gaps in their skills. Furthermore growth in the sector is predicted to grow strongly to 2019 with employment in the IT industry expected to grow nearly five times faster than average employment growth in Wales. Over 3,000 new entrants to the IT & Telecoms workforce are needed in Wales each year to meet projected growth and replacement requirement. (See Annex B)

Demand for Apprentices in the sector is growing but employers in the sector need to see much greater progression through Apprenticeships to meet their skills needs which are predominantly level 3 and higher. 44% of IT & Telecoms professionals working in Wales hold a degree level qualification compared to 26% of all workers across Wales. However, just 24 Level 3 IT professional apprenticeships were delivered by 5 providers in 2011/12. Higher Apprenticeships in Wales could be considered for funding, particularly for high skilled, high value sectors such as IT & Telecoms

Employer demand in Wales is frustrated by three main factors: lack of availability of suitable programmes; lack of awareness; and difficulties with the process.

There are just five providers of IT professional Apprenticeships in Wales as Training Providers have typically concentrated on traditional routes such as engineering and construction.

IT user Apprenticeship delivery in Wales is more widespread leading to our focus in on encouraging employers and training providers to provide IT professional apprenticeships. We would welcome the move from 'IT user' apprenticeship to 'IT Applications Specialist' which is designed to help and support people new to roles in which they use IT intensively.

As yet, there are few established **training provider-employer relationships** in the sector and a high level of resource/involvement is required to provide placements and jobs for apprentices. Provision of the Level 3 IT professional Apprenticeship in Wales is particularly limited with 24 certificates issued in 2011/12. (see Annex C)

However, where employers *are* involved this produces good results. Examples of this include Acorn working with EADS to develop a small apprenticeship scheme, and Swansea ITEC developing relationships with employers who are looking for L3 learners.

The low level of employer engagement with IT apprenticeships has increased with the Pathways to Apprenticeships project e-skills UK is running this year (see Annex D). The pathways programme has leveraged employer interest with increase in numbers of employers offering work experience and looking at the opportunities for Level 2 apprenticeships.

Large employers in the sector in Wales including BT, Logica and the NHS have shown strong interest in IT professional apprenticeships as a result of the Pathways to Apprenticeship programme. The continuing growth of the sector, gender imbalance and the decline in take up of IT related courses in school and HE, mean that employers are facing a shrinking

² UKCES, UK Employer Perspectives Survey 2010, January 2011

recruitment pool and are looking for alternative recruitment sources such as Apprenticeships.

Interest is growing in the Level 3 apprenticeships and we believe there is opportunity to increase both employer demand and training provision in this area to meet the needs of the sector. Our Sector Priority Fund bid to Welsh Government is seeking to engage increasing numbers of employers in apprenticeship pathways

One of the issues is in **take up amongst small businesses**. There are more than 112,000 IT & Telecoms workplaces in Wales –two thirds of existing employees (67%) are based in small or medium sized companies. However, the current economic climate makes it even harder to engage with employers, particularly SMEs who are cautious about taking on new apprenticeship commitments.

Across the UK we find that **Apprenticeship delivery** is not as consistent as employers would like. The Sector Managed Apprenticeship (GIF funded in England, see Annex E) is setting out to provide a good quality standard with technical training and skills profiles for apprentices that are fit for purpose in the eyes of employers. We see programmes such as this and the Pathways to Apprenticeships as key to increasing the credibility of IT apprenticeships in Wales with Welsh employers.

We also believe the funding system is complex and employers in Wales find it difficult to navigate. It is notable that training providers with IT Apprenticeship contracts currently get a higher funding rate for delivering IT User apprenticeships than IT professional apprenticeships. This is as unhelpful and not in line with the increased resources and training hours necessary to deliver the Professional apprenticeship. A change to funding rates would help increase the provision of IT professional apprenticeships..

Has the number of apprentices employed by local authorities, and the public sector generally, increased or decreased? Should the public sector be recruiting more apprentices?

Data collected by e-skills UK does not show the extent of IT professional and IT user apprenticeships in the public sector. However, we know that the public sector in Wales is a big employer generally (over one third of the workforce work in Public Administration, Education & Health) and also employs a significant proportion of IT professionals. Over 9,000 IT & Telecoms professionals work in the public sector equating to 36% of all IT & Telecoms professionals employed in Wales and 2% of the total public sector workforce³.

IT user apprenticeships are also particularly appropriate to many public sector workers.

Additionally, the public sector is sometimes one of the main employers in rural areas and so can offer good training opportunities in areas where there are fewer IT companies. Therefore we believe the public sector has a role to play in raising the number of IT apprentices where there are job opportunities. NHS and Local Authority involvement in IT apprenticeships would benefit North Wales in particular.

The Welsh Government is encouraging Community Benefits clauses in public sector contracts which can be used to promote the employment of trainees and apprenticeships. Is this an effective mechanism for increasing the numbers of apprentices?

We would suggest that there probably needs to be more than promotion of recruitment. We understand that the inclusion of apprenticeship schemes in contracts works very well in construction where contracts come with stipulated apprenticeship recruitment numbers but this may not be appropriate for all sectors or for small contractors.

³ e-skills UK analysis of Labour Force Survey, 2011

What is the average profile of an apprentice, for example age, gender, employment sector? Is this profile changing and, if yes, what are the reasons for this? The National Training Federation for Wales reports that the average age for an apprentice is 26. What are the reasons for this? Are apprenticeships generally successful from the perspective of the apprentice? Have apprenticeship completion rates changed in recent years? In practice, are apprentices guaranteed a job at the end of the apprenticeship?

IT apprentices tend to be quite young however we believe that this is due to funding favouring 16-24 year olds and the nature of apprenticeships in Wales being FE based which attracts school leavers predominantly.

Whilst young apprentices are encouraged in a in a sector where the proportion of the workforce in the sector aged 16-29 has fallen from 32% in 2001 to 19% in 2009, employers tell us that they would also welcome more mature apprentices.

The sector is also missing out on a large proportion of the talent pool, with only 18% of IT professionals in the workforce being female. This situation is replicated in IT related education and also in Apprenticeships where we estimate that just 11% of Apprentices are female. e-skills UK has met with Chwarae Teg and is formulating a Memorandum of Understanding to work together, promoting IT careers to female pupils and women throughout Wales.

There are good completion rates for IT apprenticeships with over 80% of leavers attaining the full apprenticeship frameworks at Levels 2 and 3 in 2010/11⁴.

Do Careers Wales and Jobcentre Plus provide effective support for people wanting to find apprenticeships? Does the new Apprenticeship Matching Service, run by Careers Wales, work effectively/

We have not seen much evidence that employers and colleges in the IT sector are engaged with the matching service. The service could be better publicised to employers and potential apprentices. There is also a role for SSCs in brokering apprenticeships and the "Sector Managed Apprenticeships" (see Annex E) illustrates how this might work in Wales. Currently the "IT Talent" pool model offers managed access to prospective apprentices who apply to over-subscribed schemes in large companies.

e-skills UK has good relationship with Careers Wales and work with them on several projects. As the L3 IT apprenticeships are developed we would be keen to work with Careers Wales further to develop referral and recruitment systems. This would also be a good opportunity to work with JobCentre Plus.

Why do young people decide to be apprentices? What factors influence their decision?

Are apprenticeships an attractive option for young people of all abilities or are apprenticeships seen as a second best option compared with higher education? Are attitudes changing and if yes, what are the reasons for this?

We believe attitudes are changing in both young people and employers. The economic climate and HE fees may have impacted on the numbers now looking at Apprenticeships but IT professional apprenticeships can be seen as a really unique opportunity for young people who are often attracted to Apprenticeships due to the opportunity to earn as they learn.

Young people also recognise that employers (in the IT sector in particular) are looking for experience as well as qualifications and apprenticeship work experience is seen as valuable in a competitive job market.

⁴ Source of data: Lifelong Learning Wales Record reported in SDR 56/2012 National Comparators for Further Education and Work-Based Learning: 2010/11, April 2012

The rapid rise in salary for trained IT people will make this seem a really good choice of career - median gross weekly earnings of IT & Telecoms professionals in full time employment at £590 per week are 34% more than the overall median figure for workers in Wales.

Neither do Apprenticeships have to be taken at the exclusion of Higher Education. Our approach is to promote progression routes to further encourage Apprenticeships for those who don't want to take the HE route at age 18, without excluding them from higher education. For example this works through progression to a L3 apprenticeship and a Higher Apprenticeship. This benefits both the individual and also the sector, where the majority of the current workforce is highly skilled and progression to higher skills levels is encouraged.

Are apprenticeships fully understood by those who have most influence on the choices of young people for example parents/carers, careers teachers in schools, teachers generally? Is there too much complexity and choice of programme?

We would suggest that rather than too much complexity and choice of programme, there is a lack of information getting through to those who have most influence on choices of young people.

e-skills UK undertakes extensive careers attractiveness work to address this, based on sector LMI and working with Careers Wales. In order to encourage young people, parents, teachers and careers advisors to consider relevant further study, Apprenticeships and a career path in IT we need to:

- > Promote the sector as a high growth, high skill sector with excellent earning potential and career prospects for young people and adults.
- > Ensure that IT-related qualifications and curriculum in Wales are valued by industry and delivered by quality higher and further education providers.
- > Continue to strengthen links between employers, universities, FE and training providers
- > Ensure teachers and lecturers have access to relevant CPD in order to deliver an industry endorsed curriculum.
- > Develop apprenticeship pathways with colleges and employers as a viable alternative to higher education.
- > Incentivise schools, colleges and universities to deliver qualifications relevant to the priority sectors including ICT.

How effective is Welsh Government policy on apprenticeships? How does its policy of apprenticeships fit into its wider economic and skills strategies?

We would like to see greater Government support and directed funding for Apprenticeships in priority sectors including ICT.

In terms of expanding Apprenticeship provision we would like to see:

- > Small companies and those new to Apprenticeships benefit from the quality of programme usually only available to large organisations.
- > The creation of a more cost effective delivery model, leveraging experience, existing investment and willingness to invest further for the good of the sector.
- > An increase in the attractiveness of Apprenticeships to prospective recruits, enabling easier recruitment for employers through the creation of an IT Apprentice Talent Pool for the sector in Wales.

There is clear demand for Level 3 Apprenticeships but the restrictive funding system is inhibiting development. For example we believe the current funding system:

- > restricts FEIs from offering more courses as funding has already been allocated, taking out the flexibility to respond to changes in employer demand.
- > is complex and not very transparent to those working in the system or employers
- > creates competition between training providers and educational institutions that prevents effective partnership working to the detriment of the sector.
- > could benefit priority sectors through funding adult apprenticeships, particularly where experience is required.

Are the Sector Skills Councils (SSCs) promoting and supporting apprenticeships effectively? How does the capacity of SSCs affect their performance in this area?

e-skills are the Publishing Authority for Welsh Apprenticeship frameworks in the Business and Information Technology sector.

In our role as an SSC e-skills UK maintains the National Occupational Standards and Apprenticeship Frameworks for the sector and have operated an ongoing programme of continuous development to ensure they both meet employers' needs. To 31st March 2012 this was part of our core work funded by our strategic funding. From April 2012, this is no longer the case as development and maintenance of NOS and Apprenticeship frameworks now comes under Universal Services (US) funding.

In Wales this means e-skills UK will no longer be able to continuously review the Apprenticeship framework nor develop Higher Apprenticeships unless specific US project, or alternative, funding can be obtained. There is therefore a danger that the existing framework will not meet changing employer needs and the demand for a higher apprenticeship framework may not be met.

e-skills UK is currently working on three specific apprenticeship development projects that may be of interest to the inquiry. These projects are creating innovative pathways to IT careers, attracting talented candidates from a range of sources and diversifying recruitment.

Pathways to Apprenticeships programme (See Annex D)

The Pathways to Apprenticeships (PtA) programme in IT is currently running in 10 colleges across Wales and has attracted 120 learners in its first year. The programme is a 12-month college-based course that allows learners to "fast-track" and gain at least one vocational Level 2 IT qualification that gives them the skills and knowledge to take on a full apprenticeship at level 3. The e-skills UK PtA Manager has met with all 12 participating colleges to monitor the delivery of the programme and support with regard to delivery issues. Good relationships have been established and e-skills UK will continue work with Welsh Government, and employers and providers to develop MA options for pathways graduates.

However, there is significant disjoint between the PtA and full apprenticeship availability – the PtA programme is generating potential Apprentices but there is a lack of training provider and employer places for them.

We are currently seeking funding for the development of Level 3 Apprenticeship, building on the success of Pathways to Apprenticeships, through the Sector Priority Fund. Funding to support the engagement of a large number of employers is vital for the success of this.

The Sector-managed Apprenticeship programme (See Annex E)

The sector managed apprenticeship programme aims to create a step change in the uptake of apprenticeships in the IT sector through a new model of Apprenticeship recruitment and delivery. This Growth and Innovation Fund project shows how employers can take the lead in promoting apprenticeships in their own sector. It involves working in partnership with a range of employers to create a sector-managed apprenticeship – in other words, an apprenticeship that will be managed by a major technology company with years of experience in apprenticeships, thus giving other employers the benefit of a large organisation's expertise on delivery. e-skills UK, with employers, is developing the content and approach, and to ensure the apprenticeship is relevant, appealing and accessible to employers in the sector.

Higher level apprenticeship programme

We are continuing to develop an already established higher level apprenticeship programme to act as an alternative to traditional graduate recruitment. This apprenticeship scheme will allow employers to attract talent at an early age, and make it possible for a larger number of employers to recruit at this level. We are currently working with employers to define the requirements and technical content in order to establish a national programme of excellence.

Our strategic objective to “Inspire future talent” aims to motivate talented students to pursue IT & Telecoms related careers, and better prepare all young people for work in a technology-enabled world. We work with schools and colleges, through the following programmes to develop the pipeline of talent:

- > **Make IT Happy** – the competition (in partnership with PITCOM) for primary schools encourages students to explore the possibilities of IT and the internet.
- > **Computer Clubs for Girls** – the award winning CC4G inspires female students to think about technology and IT careers by engaging them on subjects close to their hearts. In Wales clubs are supported by sponsors (Employers, Local Authorities and HEIs) who fund and provide support for the clubs.
- > **Behind the Screen** - the ‘Behind the Screen’ curriculum project is addressing the curriculum and delivery issues with ICT in schools. EADS is helping to develop course material based on data management. This work is planned to happen in the spring of 2012 and will include schools and awarding bodies.
- > **Big Ambition Wales** - the EIF funded BigAmbition Wales project reaches out to 14-19 year olds encouraging them to follow IT related education and careers. The website achieved over 13,500 hits by mid February.

More information on these programmes can be found in Annex F.

Is European funding being used to support apprenticeships effectively?

ESF funding has been used to deliver the Pathways to Apprenticeships programme in Wales.

Following on from the success PTA in IT project, we are pleased to have been able to submit an expression of Interest for the Sector Priority Fund, to extend the Level 3 Apprenticeship in Wales. More information about this bid is provided in Annex D.

Are there examples of good practice apprenticeship systems in other countries that Wales can learn from?

Yes, we believe that the work we are undertaking in England in Sector Managed Apprenticeships is a good example of how employers in the sector can come together to expand apprenticeship take up, provision and raise standards. Please see Annex E for more detail.

In addition e-skills UK has undertaken an employer matching service in Northern Ireland that pairs up potential apprentice employers with employers who already provide apprenticeships so they can share best practice, for example on in-house training and on appropriate training providers.

We would suggest it is worth looking at the Apprenticeship systems used in Europe and Australia. These work well as they are well-established and highly promoted educational choices.

- > In Australia, apprentices can begin aged 14 with the consent of the employer - this gives them increased experience and an alternative to staying within mainstream education. There are government supported Apprenticeship Centres, as opposed to varied training providers and awarding bodies, which makes it easier to distribute and manage funding and employers.
- > In Germany, Apprenticeships are part of the dual education system and are often a pre-requisite to both many jobs and also Higher Education courses. The vast majority of people complete apprenticeships before going on to University and are seen as experts in their field.

The key points to learn from would seem to be the emphasis placed on availability and the promotion of apprenticeships as a way of gaining expertise as well as tying in with HE courses.

Annex A: e-skills UK Overview

This annex provides background information on e-skills UK, the Sector Skills Council for Business and Information Technology.

As the SSC for Business and Information Technology, e-skills UK works on behalf of employers to ensure the UK has the technology skills it needs to succeed in a global digital economy.

Our work covers software, internet, computer gaming, IT services, Telecommunications and business change. e-skills UK takes the lead on the IT-related skills needs of business leaders and managers and of individual workers in all sectors (IT users).

We are an employer-led, not-for-profit company, and were rated as 'outstanding' in the re-licensing review of all SSCs by the National Audit Office (NAO) and UKCES. We bring together employers, educators and government to address the technology-related skills issues no one party can solve on its own and provide advice, services and programmes that have a measurable impact on IT related skills development in the UK. The membership of the Employer Board for Wales can be found in Annex F.

Our [strategic plan for Wales](#) sets out a coherent skills strategy that enables the nation to create the skills needed for a digital economy and to derive maximum benefit from the power of technology to transform competitiveness and productivity. We work with partner organisations to deliver on three strategic objectives to ensure Wales is world class in delivering maximum value from technology both in business and in society more widely:

- > **Inspire future talent:** Motivate talented students to pursue IT-related careers and better prepare all young people for work in a technology-enabled world.
- > **Support IT professionals:** Develop the IT professional skills pool as the best in the world for deriving business benefit from technology.
- > **Increase digital capability:** Trigger increased investment in the IT capability of all individuals and businesses in every sector.

Delivery on these objectives is underpinned by employer engagement across the sector, authoritative research, a continually developing sector qualifications and learning strategy and effective strategic partnerships.

e-skills are the Publishing Authority for Welsh Apprenticeship frameworks in the Business and Information Technology sector.

In our role as an SSC e-skills UK maintains the National Occupational Standards and Apprenticeship Frameworks for the sector and have operated an ongoing programme of continuous development to ensure they both meet employers' needs.

Annex B: Summary of IT & Telecoms sector in Wales

This annex sets out the background to the IT & Telecoms sector in Wales.

Technology is key to Wales and the rest of the UK's economic revival

- > The IT & Telecoms industry contributes 5% (in excess of £1.2 billion) of Wales total GVA and is recognised as a priority sector. Nearly 40,000 people are employed in the sector in Wales, and within that, 30,000 in IT & Telecoms occupations.
- > ICT is an economic renewal priority sector in Wales and the Software, Computer Games and Electronic publishing industries are also considered to be part of the Creative industries priority sector in Wales.
- > Technology is the key ingredient for global competitiveness in the private sector and for efficiency in the public sector.

The importance of IT employment, growth and current demand

- > Overall 39,000 people work in IT & Telecoms in Wales. 16,000 people are directly employed in the IT & Telecoms industry itself and 23,000 people work in IT & Telecoms professional roles in other sectors of the economy.
- > Globalisation means that IT & Telecoms work in Wales is increasingly focussed on higher value, highly skilled roles. Growth in the sector is predicted to continue strongly to 2019 with employment in the IT industry expected to grow at 1.21% per annum, nearly five times faster than the predicted average employment growth for Wales
- > Over 3,000 new entrants to the IT & Telecoms professional workforce are needed in Wales each year to meet projected growth and replacement requirements.

Demand for entrants to the sector continues with around 900 advertised vacancies in Wales each quarter, predominantly for Development, Design and Support roles. Across the UK, the propensity for skills shortages is intensifying as the shortfall between the number of 'ready candidates' in the IT & Telecoms labour market and the number of advertised positions continued to increase⁵.
- > Around 1 in 10 (13%) Welsh companies with IT & Telecoms professionals report gaps in their skills, most often in their technical and business skills. Requirements are predominantly for intermediate and higher level skills.

Education supply

- > Whilst IT related Higher Education remains an important source of talent for the sector's labour force requirements, the pipeline of future talent is compromised by issues related to IT education.
- > In particular, the uptake in schools and colleges and lack of IT apprentices and the pervasive gender imbalance across IT education and in the sector remains, restricting the available labour pool.

⁵ e-skills UK, e-skills bulletin Quarterly Labour Market Review Q1 2011, 2012.

Annex C: Information and Communication Technology Apprenticeships Overview

This annex provides a brief overview of Information and Communication Technology Apprenticeships in Wales.

e-skills are the Publishing Authority for Welsh Apprenticeship frameworks in the Business and Information Technology sector.

In our role as an SSC e-skills UK maintains the National Occupational Standards and Apprenticeship Frameworks for the sector and have operated an ongoing programme of continuous development to ensure they both meet employers' needs. To 31st March 2012 this was part of our core work funded by our strategic funding. From April 2012, this is no longer the case as development and maintenance of NOS and Apprenticeship frameworks now comes under Universal Services (US) funding.

IT, Software, Web and Telecoms Professional

The apprenticeship programme for IT, Software, Web & Telecoms Professionals is flexible enough to accommodate almost any IT job role, including technical support, software and web development. The frameworks cover the technical, business and interpersonal skills needed for each IT role at 3 levels:

Level 2 – [Apprenticeship](#) (Foundation Apprenticeship in Wales)

Level 3 – [Advanced Apprenticeship](#) (Modern Apprenticeship in Wales)

Level 4 – [Higher Apprenticeship](#)

IT User

The apprenticeship programme for IT users in Wales is available at Levels 2 and 3 and is designed to help and support people new to roles in which they use IT intensively. The frameworks include an integrated competence and knowledge qualification and learners have to complete the ITQ Diploma. This framework is now IT Application specialist in England.

Apprenticeships in Wales: supporting data

In the year April 2011 to March 2012, 54 Apprenticeship certificates were issued by e-skills UK for IT professional Apprenticeships in Wales and 623 for IT user. Whilst the number of IT user apprenticeships increased on the previous year, IT professional apprenticeships declined, although encouragingly there were more at Level 3. The breakdown of the data is as follows:

	IT Professional				IT User		
	Level 2	Level 3	Total		Level 2	Level 3	Total
April 2010 - March 2011	60	7	67		461	157	618
April 2011 - March 2012	30	24	54		439	184	623

Five training providers were registered as supporting IT professional apprentices in Wales in 2011/12: Acorn Learning, CADCentre (UK) Ltd, Deeside College, Pathways Training and Swansea ITEC Ltd.

Annex D: Pathways to Apprenticeships (Wales)

This annex provides an overview of the PTA programme in Wales and forward plans for L3 Apprenticeship progression.

Pathways to Apprenticeships in IT (2011/12)

The Pathways to Apprenticeships programme in IT is currently running in 10 colleges across Wales and has attracted 120 learners in its first year. The programme is a 12-month college-based course that allows learners to “fast-track” and gain at least one vocational Level 2 IT qualification that gives them the skills and knowledge to take on a full apprenticeship at level 3. Learners study a varied curriculum, concentrating on a mixture of technical and business skills and the framework also has a heavy emphasis on work experience and the additional employability skills these placements can offer learners.

The IT programme is part of a wider Pathways to Apprenticeships project, which is ESF funded until 2014 and has been successfully running in Wales since 2009. The programme was set up by the Welsh Government in response to recent economic downturn; the rise of unemployment in the UK, especially amongst young people; combined with the decline in apprenticeships being offered by employers.

In terms of vocational routes, Pathways to Apprenticeships has 10 participating colleges in Wales with 120 learners, enabling learners who wished to pursue the apprenticeship route to obtain valuable knowledge and skills in their chosen vocational area, while apprenticeship funding and models were developed to increase apprenticeship provision with employers.

The Pathways to Apprenticeship Programme has built up capacity and a pool of talent at level 2, ready to move on to level 3 apprenticeships. There is a clear demand, both from employers, educational institutions and learners in Wales for an Apprenticeship in IT at Level 3 in order to accelerate growth and the economic contribution of new recruits.

Sector Priority Fund Round 2 EOI

e-skills UK is hoping to take this forward through a Sector Priority Fund Round 2 project to develop and deliver a Level 3 Apprenticeship in IT Professional programme for Wales, for delivery starting in the 2012/13 academic year. This funding would be allocated to approved apprenticeship providers, and could possibly be used to subsidise employers in a model similar to that of the Young Recruits Programme.

As the official issuing authority for the IT sector apprenticeship frameworks, e-skills UK, in consultation with employers, FEIs and other training providers, would adapt the existing Level 3 Apprenticeship framework, to reflect current skills gaps and match employer need. This framework would be endorsed by e-skills UK as an SSC and delivery would take place within FEIs and with Private Training Providers (PTP) across Wales

- > This programme would create a pool of talent to sustain the IT sector, which in turn, contributes greatly to the Wales GVA and employment growth.
- > The programme would develop a much-needed Level 3 progression route for Level 2 PtA learners
- > Would provide FEIs with the chance to pilot L3 delivery and in the mean time, secure sustainable funding to continue delivery post SPFP funding
- > Meet identified skills gaps and employer needs and meet demand in growth of sector
- > Would secure partnerships between PTPs and FEIs who have long been in “competition” for funding
- > Creates jobs and skills in an identified priority sector in Wales

Annex E: Sector Managed Apprenticeships

This annex provides an overview of the Growth and Innovation Fund project "Sector Managed Apprenticeships" underway in England.

Background to the project: broadening the entry routes into IT

With over half a million new IT & Telecoms professionals needed in the next five years, working across all sectors of the economy, ensuring a ready supply of enthusiastic and well-educated recruits is critical. The graduate route will always be an important source, but as a result of recent changes in university entry, employers increasingly need to broaden their search if they are to find tomorrow's IT professionals.

IT apprenticeships are a recent success story for a growing number of employers of IT professionals - a carefully structured and delivered programme of IT technical learning and experience is now turning out high-quality employees in IT professional roles.

Sector-Managed Apprenticeships – a Gold Standard

As the official body for publishing the IT apprenticeship frameworks, e-skills UK is working in partnership with a range of employers to create a set of innovative apprenticeship Gold Standards. These guarantee a rounded programme of technical and employability skills for young people – thus promoting the growth and sustainability of the IT sector.

The Sector-Managed Apprenticeship programme has been specifically developed to allow businesses of all sizes to offer high quality, innovative and up-to-date IT apprenticeships. At the heart of these apprenticeships are the e-skills Apprenticeship Gold Standards, designed by leading employers across the sector, and delivered by approved employers and training providers. The Sector-Managed Apprenticeship programme has received co-investment from the UK Commission for Employment and Skills through the Growth and Innovation Fund.

Benefits for employers

For employers who have not embarked on an apprenticeship yet, this programme offers the assurance that the recruitment and learning of the apprentice will be fit for purpose and good quality, enabling the employer to focus on the integration of their apprentice within their business.

In addition employers benefit from:

- > A Gold Standard workbook which maps out progress throughout the apprenticeship giving both employer and apprentice clear standards for expected achievement.
- > A set of sector-defined tools that establish national benchmarks & standards of quality in IT professional apprenticeships, e.g.:
 - Best Practices (for apprentices and employers)
 - Target learning outcomes for technical and non-technical skills
 - An on-line monitoring and tracking tool for skills development
- > Additional on-line learning support through the National Skills Academy for IT subscription service

- > A programme of employer-led activities that bring apprentices from different employers together, to get a broader view of the IT sector and to form a professional network of apprentice IT professionals.

What does “Sector Managed” mean?

The programme is a collaboration between e-skills UK, the National Skills Academy for IT, and a growing number of sector employers, with BT being a founding member and most prominent in its contribution.

For apprentices - The programme ensures that the delivery of IT professional skills and learning for IT apprentices is of the same high quality, no matter which employer provides it.

For employers - The experience of sector management for an employer will depend on their chosen route to offer apprenticeships. This can be broadly divided into large organisations and small organisations.

For large organisations with their own scheme and a number of apprentices being trained at the same time, the employer will be supported by the Sector Management Team in creating a programme that reflects best practice, is approved by the National Skills Academy for IT, and uses the sector created assets described in the benefits above.

For small organisations – the sector managed programme enables participation in a training programme offered by a training organisation that is approved by the National Skills Academy for IT. These training partners are known as Sector Managed Delivery Partners. This enables smaller organisations to offer an apprenticeship which mirrors schemes offered by large employers, but without the administration and management overhead.

The role of BT in Sector Managed Apprenticeships

BT has been successfully providing award-winning IT and Telecoms apprenticeships for over 20 years. It has invaluable experience in recruiting top-quality candidates, and creating and managing development programmes that support technical apprentices in becoming fully productive professionals.

BT is a key member of the Sector Management Team, alongside e-skills UK and the National Skills Academy for IT. BT has contributed its body of knowledge, assets, and experience to the Sector Management Apprenticeship programme to help set the Gold Standard and benefits package.

BT takes an active role in managing the network of Delivery Partners, offering smaller organisations open entry to the Sector Managed Apprenticeship programme. BT is using its tried and tested management methods to ensure the Delivery Partners can successfully train IT apprentices into junior IT professionals.

Annex F: e-skills UK programmes and activities in Wales

This annex provides an *overview of current e-skills UK programmes and projects in Wales.*

ITMB

ITMB is helping to drive up the numbers of graduates in Wales with the right skills. The University of Glamorgan is newly delivering the employer-led e-skills UK Information Technology for Business Honours degree (ITMB) which provides students with the sophisticated skills they need to get ahead in the IT sector.

The students get the chance to regularly meet and network with industry leaders from over 60 leading organisations across the UK. Results from universities across the UK who have ITMB graduates show that the degree is delivering a greater number of graduates with skills that meet industry demand: Of the 195 graduates in 2011 (across the UK), 76% graduated with either a 2:1 or 1st class degree, compared to 51% of all computing students. 85% of the 2011 ITMB graduates were found to be employed and the further 15% were in further education within six months of graduation, compared to 13% of Computing graduates who were unemployed a year after graduation. Student satisfaction is high with 97% of current students saying they felt the course was preparing them well for their future career. 30% of students on the ITMB degree are female, more than double the average for computing courses in HE overall.

ITMB Foundation Degrees

e-skills UK has worked with HEFCW and Welsh Universities having identified employer need for work based learning foundation degrees that mirror the ITMB Degree, blending business and technology skills. Two HEFCW regions secured funding to develop new ITMB foundation degrees and these are now in development.

BigAmbition Wales

BigAmbition Wales is an EIF funded project. The BigAmbition careers programme has a strong emphasis on reaching 14-19 year olds, encouraging them to follow IT related education and careers. The website achieved over 13,500 hits by mid February 2012.

Behind the Screen

The 'Behind the Screen' curriculum project (to address the curriculum and delivery issues of ICT in schools) continues with plans with EADS to develop course material based on data management. This work is planned to happen in the spring of 2012 and will include schools and awarding bodies.

Computer Clubs for Girls (CC4G)

Schools running CC4G (Computer Clubs for Girls) in Wales are now being supported by sponsors who fund the cost of a school's CC4G license, sponsors provide employee volunteers to help run the clubs. Nine schools in Wales are being funded by 6 universities including Swansea Metropolitan and Glamorgan Universities and Swansea and Pembrokeshire local authority also fund 15 CC4G clubs. BT, HP and EADS also fund CC4G in Wales. The CC4G programme is specially focused on inspiring girls into IT.

Make IT Happy

Is a competition for primary schools across the UK to encourage young people to show us how they use IT to contribute to a healthier life for students, the school community and even for those in the wider community. Twelve winning schools from across the UK will be awarded £1,200 each, and from these entries 3 overall winners will be chosen to receive additional cash prizes. All winners will be invited to attend an awards ceremony in June 2012 at the Houses of Parliament. This is third annual competition run in conjunction with PITCOM. Last year a Welsh school won the UK prize.

The Developing a Programming Pool (DaPP) Pilot Project.

27 unemployed graduates were recruited to the pilot, a Welsh Government funded initiative that is a partnership between e-skills UK, University Wales Cardiff, Job Centre Plus and Careers Wales. Of the 27 participants who commenced on the programme, 11 have secured employment during the programme or within a month of completion; 4 have set up their own business, or are working for self; and a further 10 are having interviews, of which 7 are on second round interviews.

Pathways to Apprenticeships (see Annex D)

In terms of vocational routes, Pathways to Apprenticeships has 10 participating colleges in Wales with 120 learners, enabling learners who wished to pursue the apprenticeship route to obtain valuable knowledge and skills in their chosen vocational area, while apprenticeship funding and models were developed to increase apprenticeship provision with employers.

National Skills Academy for IT

The National Skills Academy for IT was launched in 2011 and has been created by employers to promote excellence in IT learning and development. Subscription to the Skills Academy provides instant access to online courses and resources that helps to boost IT Professionals careers prospects and solve everyday technical problems that employers encounter. It also provides access to training packages that meet skills that are in immediate demand by employers, such as .Net, JAVA etc. e-skills UK is working with Software Alliance Wales, embedding the NSA subscription offer within their European funded support programme for SME'S and IT professionals for convergence areas in Wales. Over 100 subscriptions have been utilised since November 2011.

Cyber security

e-skills UK is working with Iestyn Pugh on the development of a possible cyber security qualification for SME'S in Wales. Security is a key driver of future skills needs in the sector. Discussions are at an early stage, but opportunity exists to work in partnership in developing a qualification that can be delivered through the e-skills UK National Skills Academy for IT. We have been asked to identify what parts of the NSA offer can be packaged to create an appropriate Cyber Crime offer for the SME market. We hope to take this project forward in near future.

Annex G: e-skills UK Employer Board Wales

This annex provides an list of the employers on the e-skills UK Board in Wales.

Rick Cooper	Director of Alcatel University	Alcatel Lucent
Ronan Miles (Chair)	Director of BT collaboration	BT
David Edwards	Assistant Director University services	Cardiff University
Greg Jones	CIO	DFTSSC
Richard Sheppard	Director	Draig Technology
Mike Greenway	Commercial Director	EADS
Non Rhys	Policy officer	FSB
Charlie George	Account Executive	Fujitsu
Ian Clarke	Business Development Manager	General Dynamics
David Morgan	Marketing Director	HP Services
Jo Preece	Wales Manager	HPC Wales
Steve Richard	Policy Director Wales	Logica
Paul Uden	Head of Skills & Economic Affairs	Microsoft
Cenydd Burden	Head of EMEA Client Services Delivery	Mitel
Christine Bamford	Head of OD	NLIAH
Gwyn Thomas	CIO	Welsh Government

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