



Lancashire
Enterprise Partnership



DIGITAL SKILLS
PARTNERSHIP
LANCASHIRE

Lancashire's Digital Landscape 2019



European Union
European Social Fund
Investing in jobs and skills

Digital
Lancashire/



LANCASHIRE SKILLS
& EMPLOYMENT HUB

Lancashire's digital sector baseline

Business base

The digital sector in Lancashire has 2,480 digital businesses, the majority of which are micro businesses. This accounts for 5% of the business base. Half of the 2,480 businesses are classified as Computer Programming and Consultancy businesses. Blackpool, Fylde and Wyre and Preston, Chorley and South Ribble have the largest number of digital businesses, constituting around 6% of all businesses in each Travel to Work Area (TTWA).

Lancashire's Digital sector is growing, with a 30% growth rate between 2012 and 2018 and an increase of 3% for the number of employees and this is forecast to grow by 8% by 2028. The largest digital sector employment growth has been seen in West Lancashire at 38% equal to 250 employees. The rate of business growth is slower than for the North West (35%) and nationally (36%).

Employment

Employment in the sector stood at almost 18,775. Employment growth in the sector was around 3% during 2012-18. Though modest, this was a higher rate than for the wider North West, which experienced a fall in employee numbers for the digital sector by 5%. However, employment density in the sector is relatively low, equating to around 58% of the England average.

The wider digital workforce in Lancashire is 21,500 strong: the majority of digital workers – around two thirds – work in sectors other than the digital sectors, underlining the increasing importance of digital skills across the economy.

GVA

The digital sector in Lancashire is estimated to have a GVA of around £1.02bn, accounting for 3% of total GVA in Lancashire – this is relatively small in comparison to other sectors, e.g. Manufacturing at 20%. GVA per filled job is estimated to be almost £66,000, much higher than the Lancashire average – an increase in digital roles would boost the average GVA per filled role significantly. It should be noted, however that this figure is somewhat less than GVA per filled job in the Digital sector nationally. The sector in Lancashire has experienced GVA growth of 14% since 2012 and is expected to increase by a further 36% by 2028.

Skilled and Productive Workforce

Increasing prevalence of digital technology is driving demand for digital skills. These skills are no longer optional, meaning that there is increasing competition for digital workers: employers are competing for a constrained supply of workers – not just within Lancashire, but nationally.

Lancashire businesses identify a range of skills across digital marketing, data analysis, programming, design and CRM that are key to their operations and for business growth and innovation plans. The ability of businesses across Lancashire to find workers with the digital skills they need will increasingly determine their success. Specific demand for programming, systems and network skills is consistent with the demand more widely in England and elsewhere in the UK.

However, many Lancashire businesses report considerable vacancies and skills gaps in their Digital workforce across these areas. Marketing, data analysis and software programming are common skills gaps in the incumbent Lancashire digital workforce. This picture is not unique to Lancashire as skills shortages in the county are consistent with other parts of the UK. Almost one third of business surveys reported vacancies within digital roles and many proving hard to fill due to lack of suitable candidates. Freelance contractors are frequently used to plug skill gaps. Whilst 16% of Lancashire digital businesses reported that they made use of apprentices,

preference for experience, and the (small) size of businesses are often barriers to making greater use of apprentices to meet skills gaps.

Skills supply for the sector is therefore a challenge. Lancashire businesses reported that barriers to digital workforce development include lack of clear career pathways into digital employment, and the necessary skills not being developed adequately by the education system. A lack of diversity in the digital workforce in terms of age and gender, creates an additional barrier to Digital employers in accessing a wider pool of talent. There is a need to drive effective recruitment processes and create cultures and environments that help to attract females and younger employees to enhance diversity. The creation of pathways for the current workers in other occupations/sectors to acquire the skills they need to move into (higher-skilled) digital roles, and to adapt to increasing digital skills needs within the current role can help to meet this skills supply challenge.

Access to affordable and relevant training and development is also a challenge in Lancashire – businesses often deliver their own in-house or on-the-job training to try and meet skills needs. It is anticipated that technological change will be a significant driver of training and development needs in the future. Around one-third of jobs are expected to change radically as a result of automation over the next 15-20 years, and existing workers need to have the skills to adapt to the coming changes.

There is a growing focus on better aligning skills provision with the needs of local economies, through closer business engagement in the curriculum. This is one of the factors underlying the introduction of T-levels and the introduction of occupation-focused Apprenticeship standards. However, this is placing additional demands on businesses, many of which are small and may not have the capacity to respond. There are also issues regarding being able to provide enough Apprenticeship / other work experience opportunities across Lancashire, because of the micro and small nature of the business base.

There needs to be more awareness raising of digital occupations and the diverse range of skills they require, beyond traditional technical skills. Other actions that can address the skills supply challenge include:

- Increased availability of work placements;
- Improved communication/collaboration between education providers and industry;
- Increased importance placed on digital and commercial skills across education provision;
- Increase, or highlight, the availability of Apprenticeships for older learners, including those looking to re-train; and
- Raising the profile of the sector and area, for talent attraction and retention, particularly in light of competition from other, larger urban areas such as Greater Manchester.

Future Workforce

Recent curriculum changes in education have impacted on the uptake of digital skills for the future workforce. In schools, a move from ICT to Computer Science has driven a small increase in take-up of digital-related qualifications. However, the picture in Lancashire is mixed. Whilst Blackpool (16.7%) was in the top ten areas in England for proportion of pupils studying Computer Science in 2017, Blackburn with Darwen was in the bottom 20 in England at 8.6%.

In contrast to schools, at FE level starts on digital-related courses have decreased across Lancashire at just under 1,000 – a decrease compared with the previous year, with an average year-on-year decrease of 19% across all the TTWAs. Just less than half of all students starting digital courses were at level 2 or lower, with 26.5% studying Level 3 courses – more than half of digital courses started in Lancashire were students aged over 25. Additionally, more than six out of ten students studying digital courses were in study for ICT for users. This is arguably focusing on 'softer'

Digital literacy skills rather than 'harder' Digital capability skills such as programming or data analysis.

Evidence indicates an upturn in Digital Apprenticeship starts in 2018/19, in contrast to the 400 starts in 2017/18. Additionally, the number of Digital Apprentice Achievements in 2017/18 has increased by 11% over the same period. However, there is a high attrition rate for Digital Apprenticeships (though the reasons for this are unclear), and the achievement rate is lower than for all subject areas (57% v. 83% in 2017/18). Over three-quarters of apprenticeship starts were in ICT for practitioners, with less than 20% in ICT for users and the remaining 3% in Media and Communication. Two out of five Digital Apprenticeship Starts were by the 19-24 age group and just less than a quarter were aged 25 or above. The number of Digital Apprentices who are aged over 25 in Lancashire increased by 42% between 2016/17 and 2017/18.

Across the four universities there were approximately 2,245 students studying computer science-related subjects in the 2017/18 academic year. Undergraduates studying for computer science related degrees make up 4.1% of the total undergraduates, and computer science related postgraduates make up 2.7% of the postgraduate total. At HE level, student numbers in Lancashire have increased over the period 2014/15 to 2017/18; however, whilst there has been an increase in Computer Science and Games Development, there has been a decrease in Information Systems and Software Engineering – a key area for Lancashire businesses. This is a particular challenge as HESA's Destinations of Leavers from Higher Education 2016/17 data shows that Computer Science graduates have the highest unemployment rate 6 months after graduation (9% of First Degree Computer Science graduates in England, compared to 5% overall).

Education providers point to a number of challenges that impact on learning, and ultimately the supply of skills required by businesses. The constant evolution in digital roles and jobs creates challenges for providers in keeping the curriculum – and teachers – up to date with changing technologies and skills needs. A programme which facilitates more extensive education-business engagement with the digital sector could help to address this.

Nationally determined changes within the education sector have significant impacts in Lancashire in terms of the subject choices made by young people and their subsequent entry into digital-related learning. Having a clear focus on digital priorities for Lancashire, and the pathways through which learners and the existing workforce can acquire the skills needed can help to ensure national changes do not negatively impact skills development in Lancashire.

Employers looking to fill digital roles require prospective employees to have both digital and non-digital skills e.g. communication skills, sales and marketing, team-working abilities etc. Creative skills such as design are often as important as technical, computer-related skills. Providers need to ensure that students are provided with opportunities to gain these skills as well as more technical skills as part of their digital curriculum.

An additional challenge is that many of those who acquire very high level digital skills within Lancashire are subsequently lost to the local labour market as they move out of the area. There is a need both to strengthen links to local employers during and immediately after higher education studies (e.g. through work placement and internship schemes) but also to help people already working in intermediate or technician digital roles in Lancashire acquire the specialist knowledge they need to progress into higher level roles.

Inclusive Workforce

Access to the internet has been a priority for Lancashire LEP and will go some way to improving digital literacy. Whilst Lancashire has 97% coverage in terms of broadband connectivity, it is poorly served by fibre optic networks. Of the Lancashire residents surveyed, 92% had access to the internet and more than half of respondents considered themselves to be digitally competent. Although a quarter considered that at best they only have basic competency, with limits on the digital tasks that they can complete.

In line with findings from other national surveys, 8% of residents stated not to have any of the essential digital skills, whilst only 14% have all the essential digital skills across all the skills categories. There are specific areas in particular that were less likely to have essential digital skills like Burnley and Pendle, and challenges regarding certain categories of essential digital skills in areas such as Lancaster and Morecambe.

Age appears to be the most defining factor determining digital skills levels as the proportion without basic skills is increasing with age. Further, of the 8% who couldn't access the internet, more than half said it was because it "is not for people my age" suggesting they are choosing not to use the internet more than any other barrier. Help is most frequently sought from friends and family in order to complete tasks rather than seeking support from a service provider. Residents are most frequently using the internet for general information (80%), shopping (71%) and banking (69%). Fewer Lancashire residents have used the internet to make online applications.

Recommendations

Digital skills provision needs to change rapidly. Many of today's digital occupations did not exist ten or fifteen years ago. Rather than attempting a fine-grained forecast of future needs, the focus for public sector investment in education and skills in Lancashire should be on providing core digital skills – at school, at college and at university – which can then be built on and further developed by those seeking to work in digital roles. These are likely to include skills such as problem-solving, critical thinking and creativity, which can be applied in both digital and non-digital roles.

Consequently, the following recommendations are made.

Future-proofing digital skills

1. Technological change is driving demand for new skills, and this will continue to be the case in future. Strategic partners and education providers should identify ways to respond to technological change, and provide core digital skills through education and training. The focus here

should be on strong digital 'principles' and future-proofing the capability of learners, rather than specific skills. This will equip education leavers and entrants to the digital sector with a grounding in software programming, network design, systems development, user experience, etc. as well as an ability to be agile and adapt to emerging technologies, new programming languages, and so on. Building this approach into digital education courses is essential, but ways to establish some digital principles in other courses should also be explored. Embedding digital principles will allow for a more knowledgeable, skilled and agile workforce that can easily diversify from a traditionally non-digital area of work to one more digitally focused should they want to or should they have to due to technological developments.

- This recommendation underpins all other recommendations set out below, and in particular Recommendations 6, 9, 10, 11 and 15 in terms of skills provision, up-/re-skilling and future-proofing skills and capability development.

Addressing strategic and cross-cutting issues

2. A clear, focused set of digital priorities for Lancashire should be developed. Whilst there are a number of initiatives and strategies existing and emerging at the local level, a pan-Lancashire approach that links in with existing strategies and plans, to reflect the increasing importance of Digital skills to the Lancashire economy is needed. This will help to co-ordinate and join up efforts, to better co-ordinate resources. Mapping out all initiatives, strategies and actors in detail may be required to underpin this.
3. Recognising the competition with other areas for Digital skills, partners should develop a communications and PR position to help promote the local Digital industry, as well as the Lancashire area more widely. As well as the comparative strengths of the Digital sector, this approach should seek to emphasise non-employment factors such as quality of life and lower cost of living where Lancashire is at a distinct advantage to other areas of the North West, and indeed England.

4. Strategic, industry and education partners must better understand factors affecting choices made by young people regarding education subjects, employment and career pathways. As part of this, the role of parents, peers and other key influencers should be better understood. This will help to better target careers advice regarding Digital sectors and roles in Lancashire and should be embedded in the work of the Lancashire Enterprise Adviser Network and Careers Hub.
5. Alongside this, partners must ensure that key influencers have access to up-to-date industry and technical knowledge about the Digital economy generally, but also about Lancashire's Digital sector. This is important to provide an accurate representation of the digital sector, and to showcase a balanced range of role models. This will help to better inform both young people and older workers seeking a career change, break down perceived barriers (particularly those related to gender stereotypes, and counter any misconceptions around the Digital sector and Digital roles that may exist.
6. Links between local digital employers and education institutions must be strengthened, so that:
 - o Education providers can identify ways to improve the relevance of education for local Digital businesses, thereby enhancing the skills supply to local employers;
 - o Employers can improve access to work placements, and help to upskill and facilitate knowledge transfer to educators and careers advisors in schools and colleges; and
 - o Strategic partners can work to ensure better skills alignment – industry, education, training and workforce development resources targeted to deliver the best possible outcomes – for Digital employers in Lancashire. The Skills Advisory Partnership, and regular updating of LMI will be key components of this.

Business base

7. The potential pool of recruits for Digital employers in Lancashire needs to be widened. A significant part of this will be recognising the importance of under-represented groups in achieving not only a more balanced and inclusive workforce, but in widening the talent pool that employers have access to. The Tech Talent Charter and the lead set by the LEP and LDSP in signing up to the Charter is critical here. In addition, partners should work across stakeholder groups to identify different possible career pathways into the Digital sector and roles, including re-training or returner programmes. These pathways should recognise the value of non-Digital training, qualifications and skills that those presently working outside the sector can bring to the Digital workforce (e.g. design skills are relevant to user experience, for example).
8. Strategic partners in Lancashire should work with employers to identify digital skills needs specific to employers, and explore ways of providing support to engage Digital training providers in a way that makes such training more accessible, and meets the training and development needs of Lancashire's Digital businesses. Part of this may require the identification of 'clusters' of employers who have common skills needs, to help make (bespoke) training provision viable. Similarly, partners need to work to raise awareness and uptake of the plethora of existing business support provision available to Digital businesses in Lancashire, such as the Fast Track Digital Workforce Fund.
9. Given the anticipated continuing technological change and evolution, businesses should be supported to help future-proof the skills of their incumbent Digital workforce, and in upskilling those in intermediate roles. This will help to create a 'ladder' of employment and career progression opportunities in Lancashire, and grow the skills of Digital workers in the area.

Education Provision

10. Recognising the way in which curricula govern what is taught particularly at schools and FE colleges, consideration should be given to ways in

which core digital skills (e.g. principles of programming or web development, rather than specific programming languages, and an ability to adapt and learn new techniques/languages quickly) for digital roles and companies can be developed early on in education, and at each stage of the education pathway by providers in Lancashire. This should be within both Digital and non-Digital subject areas, recognising the increasing importance of Digital to daily lives, and also to business operations and productivity throughout the economy.

11. As part of this, education providers in Lancashire should work together to explore ways to build in the aligned skills – problem-solving, critical thinking, design and creativity – into the Digital curriculum, and across education provision more widely, so that education leavers have a transferable skillset that is increasingly important to Digital roles.
12. In line with support on access to training for Lancashire's digital business base, strategic partners and education providers should examine ways in which smaller businesses can be supported to access Apprenticeships. Evidence suggests that smaller businesses often feel they do not have the capacity to support a young person on an Apprenticeship programme or cover all aspects of an Apprenticeship Standard in the work place that an Apprentice needs to cover. A solution to this may be to use a shared Apprenticeship model across a number of different small digital employers.
13. In line with Recommendations 4 and 5 regarding understanding education and career choices, education providers and strategic partners should work together to identify ways to address issues of equity and equality – notably the gender imbalance, but also under-representation of minority groups – at all stages of the education and career pathway. Addressing this 'leaky pipeline' of talent into the Digital sector and into Digital roles in Lancashire is a key part of addressing the gender imbalance in the sector, and in enabling access to a wider pool of Digital talent for employers in Lancashire.

Digital Inclusion

14. In line with efforts to increase Digital inclusion in Lancashire, strategic partners should recognise the role that wider digital skills (digital literacy, familiarity and competency in use of different digital systems) play in capability for Digital skills in employment. This can help enable pathways into Digital employment and careers for different parts of Lancashire's population, including for harder to reach groups, and for older workers seeking a change in career.
15. Strategic partners should seek ways to develop broader Digital skills, particularly amongst older workers, as a way of developing an additional pool of potential workers for digital businesses in Lancashire.