

Gloucestershire Local Skills Improvement Plan (LSIP)

Prioritised Findings - Digital Industries

1. Introduction

Digital professional services are of significant importance to Gloucestershire and the UK as a whole, with UK annual revenue within the UK's cyber security industry alone worth an estimated £10.1bn, up 14% on the previous year, supporting 52,700 employees¹. Nationally cyber security is a £132 billion global opportunity with a forecast 10.5% Compound Annual Growth Rate until 2028². In 2021, IT, software and computer services' GVA nationally exceeded £42 billion, an increase of almost 40% over the past decade.

For the purposes of the Gloucestershire Local Skills Improvement Plan, Digital Industries are the prioritised focus of service provision within professional services and ICT primarily focussed on B2B service provision – cyber security, IT and telecoms services, consultancy and technology/platform developers or providers. For any SIC code alignment, this most closely ties with Digital Sector, Professional Services and IT and Telecoms industrial classifications, with cyber-security as a sub-sector not holding its own SIC classification and predominantly within software and service provision.

DCMS figures from 2021 suggest there has been a 31.5% growth in individuals working in the digital sector from 2011 - 2020³, with both turnover and employment growth more than double the rate of the economy as a whole, requiring a significant expansion of the UK's current digital workforce⁴. According to Professor Kamal Bechkoum, Head of the School of Computing and Engineering at University of Gloucestershire "[...] between January to May 2022, there were approximately 870,000 technology and digital job vacancies open across the UK as demand for tech products and services hiring in the sector rises to heights not seen in the past decade." ⁵. It is seen as vital for the sector to be visible and attractive to younger people, with greater awareness of career options and progression pathways made available to those making decisions about careers⁶.

The skills need risk is to ensure learners receive appropriate future proofed education to ensure the region can continue to grow the sector effectively at a rate higher than the national average. The opportunity is to capitalise on the region's leading position and facilities within Digital Industries. We have delineated these opportunities into three types of skills priorities:

- *Skills Shortage Occupations reflecting the current supply and demand;*
- *skills for new technology (upskilling of existing occupations and new occupations), and;*
- *granular skills requirements reported by employers.*

¹ <https://www.gfirstlep.com/news/gloucestershire-wins-government-backing-for-exciting-new-cyber-status/>

² <https://www.great.gov.uk/international/content/investment/opportunities/cyber-security-in-gloucestershire/>

³ <https://www.gov.uk/government/statistics/dcms-sector-national-economic-estimates-2011-to-2020>

⁴ From Tech Nation Report 2018, <https://technation.io/wp-content/uploads/2018/05/Tech-Nation-Report-2018-WEB-180514.pdf> in the public domain

⁵ <https://www.glos.ac.uk/content/employers-in-desperate-need-of-cyber-graduates-warns-university-expert/> University of Gloucestershire article 2022

⁶ From Uk Cyber Sectoral Analysis 2020, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957960/UK_Cyber_Sectoral_Analysis_2020_Report_V2.pdf in the public domain

Please note we have not at this stage delineated needs within sub-sectors of Digital Industries or service provision but expect to further engage within Phase 2 project delivery as identified prioritised actions for deep-dive, refinement and further exploration.

Regional post-16 technical education towards Digital Industries within the region are delivered by all non-specialist FE providers located here (South Gloucestershire and Stroud College, Gloucestershire College, Cirencester College) alongside delivery via University of Gloucestershire (particularly, degree apprenticeships) and Independent Training Providers. Current T-Level provision towards this sector includes Digital Business Services, Digital Production, Design and Development and Digital Support Services, as well as Management and Administration.

2. Labour market intelligence trends for the Gloucestershire region

Gloucestershire has a working age population of over 393,000 and an employment rate of 82% suggesting a domestic labour market (not including those who work to travel) of over 330,000 people. Of the economically active workforce in Gloucestershire, 42% (134,400 people) have a qualification level of NVQ 4+⁷ or equivalent – above the average for the South West (41.9%) but below the average for England (43.5%). In terms of low skills, only 4% of the county's economically active workforce (12,700 people) have no qualifications, a figure which is already below average and falling⁸. Gloucestershire, in similar with other regions but with a higher ratio of people in the 50-59 age band compared to other regions against a stable overall population size, may well be facing an imminent issue of declining worker availability in the coming decades⁹.

The total GVA of the South West in 2019 was £140bn, and the digital sector contributed 4.2% to this. Whilst the growth in economic output across the South West's digital sector is relatively weak (3.4%, 2014-2019) and slower than the UK's Digital Sector, it is considerable faster than the South West's economy as a whole. Gloucestershire's total GVA in 2020 was approximately £18.323 billion, of which the Information and Communication sector contributed 5% of this¹⁰.

Home to GCHQ and the National Cyber Security Centre (NCSC), Gloucestershire has the largest cluster of cyber businesses outside of London, with its own cyber cluster representative body, Cynam, which is active at promoting the region, cluster and opportunities on a national scale. Other nationally significant developments and facilities include the £1 billion Golden Valley cyber campus which will include the National Cyber Innovation Centre (NCIC). Gloucestershire has long been a home to significant professional services and IT service cluster, with over 1,000 cyber security professionals and more than 120 firms involved in cyber related activities as of June 2022¹¹.

Gloucestershire is the second largest cyber cluster behind London; Cheltenham has the highest density of cyber businesses in the country, with 620 businesses across the county and increasing. The [Golden Valley Development](#) with its' nationally significant cyber-business park is expected to contribute

⁷ To see equivalence in national qualifications, please visit <https://www.cityandguilds.com/qualifications-and-apprenticeships/qualifications-explained/qualification-comparisons>

⁸ From G First LEP Local Industrial Strategy 2019 https://www.gfirstlep.com/downloads/2020/gloucestershire_draft_local-industrial-strategy_2019-updated.pdf in the public domain

⁹ - From Gloucestershire County Council strategy 2022-26 <https://glostext.gloucestershire.gov.uk/documents/s79635/1Covering%20report%20-%20Council%20Strategy%202022-26.pdf> in the public domain

¹⁰ [GFirst LEP - Jobs and Economic Bulletin - August 2022 Department for Digital, Culture, Media & Sport: Assessing the UK's Regional Digital Ecosystems \(publishing.service.gov.uk\)](#)

¹¹ From G First LEP Article 2022 <https://www.gfirstlep.com/news/gloucestershire-wins-government-backing-for-exciting-new-cyber-status/> in the public domain

substantially to the growth of the cyber-tech cluster, with 11,000 jobs expected to be created through this development alone¹².

The Cyber Resilience Alliance (formed 2017) reports that the combined region it represents (Worcestershire, Gloucestershire, The Marches, and Swindon & Wiltshire) is the leading region in cyber security outside of London, with an estimated 5% UK market share of activity yet only 3% of the population¹³. According to DCMS 'Assessing the UK's Regional Digital Ecosystems' report of 2021:

"Digital employment in the wider South West (estimated at 160,000 in 2019) is weighted towards digital occupations in businesses not traditionally in the digital sector, indicative of higher demand for digital skills in non-digital sector industries, such as Aerospace, Energy, and the Public Sector, all large employers of digital occupations. Demand for digital occupations is dominated by Gloucestershire, Wiltshire and the Bath/Bristol area, accounting for 72% of digital occupation online job postings over the 2019-2020 period¹⁴."

This report also states that there is high demand for Embedded Software Engineers across the South West with the location quotient above the UK average, although largest demand is Software Developers, with 20% of job adverts in 2019-2020 for this sector. For a further breakdown of wider needs within the South West in this sector, we recommend reading the full report. Please note that there is a reported lack of data on labour shortages in Digital Industries in Gloucestershire:

"There is no central method of collecting and collating data on labour shortages and employer recruitment needs so this presents challenges in terms of getting an up-to-date or real time picture and for providers to develop targeted training programmes to support these.¹⁵"

We recognise that recent initiatives towards new provision for this sector have not yet necessarily impacted the local talent pipeline in a significant way, but there are already regional projects to ensure additional learning opportunities and imperatives to direct local learners towards pathways and careers within this sector. G First LEP's Skills Strategy report states:

"The recent increase in cyber and digital provision at Levels 4 to 7 provides stronger pathways into cyber and digital careers. Along with Cynam's, the colleges' and universities' and GFirst LEP's work to establish more extensive and deeper links with local cyber and digital employers, this should result in a pipeline of talent for local employers and opportunities for those achieving these qualifications to gain local employment opportunities. This in turn will help retain a number of young people in-county who may have sought to study and then work elsewhere."

¹² From G First LEP Skills Strategy 2022-27 <https://www.gfirstlep.com/downloads/2022/gfirst-lep-gloucestershire-skills-strategy-2022-27.pdf>. In the public domain

¹³ From the Cyber Resilience Alliance Report 2018 <https://www.cyberresiliencealliance.org/wp-content/uploads/2018/07/Cyber-Resilience-Alliance.pdf> in the public domain

¹⁴ From DCMS Assessing the UK's Regional Digital Ecosystems 2021 [Assessing the UK's Regional Digital Ecosystems' in the public domain](#)

¹⁵ From The Labour Market Challenge Info and Discussion paper for Economic Scrutiny Committee Jan 2022.pdf, Gloucestershire County Council 2022 <https://glostext.gloucestershire.gov.uk/documents/s87570/Labour%20Market%20Challenge%20Info%20and%20Discussion%20paper%20for%20Economic%20Scrutiny%20Committee%20Jan%202022.pdf>

3. Job postings and forecasts to meet replacement and expansion need (existing staff leaving the sector's workforce either into different sectors or retirements and new employment generation against expected sectoral growth).

The National Foundation for Educational Research (NFER) has recently published up to date sectoral analyses of the replacement and additional labour needs by sector and LEP geography under the Skills Imperative 2035, led by Warwick Institute for Employment Research & Cambridge Econometrics¹⁶.

For the Gloucestershire area¹⁷ between 2020 and 2035, the Digital sector (which we have taken to be represented by Information Technology and Professional Services industrial groupings) is expected to grow between 2020 and 2035 – a net increase of 5,000 FTE – or 12% of 2020's estimated workforce of 41,200. In proportion to the wider Gloucestershire economy Digital is expected to be largely flat (comprising 11.7% of the regional workforce in 2035, marginally up from 11.57% in 2020).

It is worth noting that both component parts of this sector were adversely affected by the COVID-19 pandemic, so the 2020 baseline figures are less robust than in other areas of the economy less impacted by restrictions. The NFER notes 'Also, the Professional services and Arts and entertainment, Media and Information technology sectors experienced a decrease in the employment level in 2020, but the employment level in these sectors is also expected to return to the pandemic level by 2025, due to these sectors being part of the supply chain for most other sectors.'¹⁸

There were 24,888 online job postings in Gloucestershire in January 2023, a monthly increase of around 4,014 job postings when compared to the December 2022 figure of 20,874. According to the DfE's findings, employment within Information Technology is expected to grow by 0.9% between 2020-2035, while employment by Professional Services predicted to increase by 0.7%.

Programmers and software development professionals as in January 2023 were the fifth most posted job role in the region, at 2.6% of all posts (a total of 652)¹⁹. Other roles within this sector that are highly posted are IT Business Analysts (+290), Architects and Systems Designers, IT User Support Technicians, IT Operations Technicians and IT and Telecommunications Professionals, all between 100 and 200 live postings. Within roles associated with professional services, the top jobs postings were for primarily sales roles (at almost 700), with 'Management Consultants and Business Analysts' and 'Business and Financial Project Management Professionals' next but significantly lower, at around 150 live postings each.

Unsurprisingly, software developers and programmers are highest needs within this sector, with these roles remaining high across a number of sectoral jobs postings in the region. As per the analysis in the regional digital ecosystems report from Department for Digital, Culture, Media and Sport (DCMS) above, demand for Software Developers in the South West represented 20% of digital occupation job adverts in 2019-2020, "highlighting the increasing demand for innovative software and accelerating growth in technology"²⁰. We have relied on the referenced data from DCMS for sector specific insight as well as publications from GFirst LEP, in particular the Economic Bulletins.

¹⁶ [The Skills Imperative 2035: Occupational Outlook – Long run employment prospects for the UK, Baseline Projections \(nfer.ac.uk\)](https://www.nfer.ac.uk/publications/occupational-outlook-long-run-employment-prospects-for-the-uk-baseline-projections/) and <https://www.nfer.ac.uk/key-topics-expertise/education-to-employment/the-skills-imperative-2035/>

¹⁷ <https://www.gov.uk/government/publications/labour-market-and-skills-projections-2020-to-2035>

¹⁸ [The Skills Imperative 2035: Occupational Outlook – Long run employment prospects for the UK, Baseline Projections \(nfer.ac.uk\)](https://www.nfer.ac.uk/publications/occupational-outlook-long-run-employment-prospects-for-the-uk-baseline-projections/) page 52

¹⁹ <https://www.gfirstlep.com/downloads/economy/gfirst-lep---jobs-and-economic-bulletin---january-2023.pdf>

²⁰

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1020407/Digital_Regional_Ecosystems_report_v9.1.pdf page 115

4. Occupational Priorities (shortages within occupations)

We have attempted below to show some of the existing roles' needs and forecast requirements to indicate where sectoral needs may be met via existing courses, with or without micro-interventions.²¹. We have not as yet looked at these shortages in relation to current supply volumes from colleges and ITPs, therefore these priorities are here for discussion with providers at this stage.

We have attempted to RAG rate needs (Red, Amber, Green, with Red being most pressing needs) in terms of absolute numbers and percentage workforce requirements to highlight to most pressing existing role shortages within this sector.

Role	Need forecast	R	A	G	Priority/possible action and funding source. Growth in:
Software development professionals, software engineers and programmers	652 current vacancies and significant expected increase in demand	x			Software Developer L4 and 6 Apprenticeships/16 to 19 FE/T-Level and HE
IT Business Analysts	(+290 current vacancies and significant expected increase in demand over short-medium term	x			Apprenticeship L3-5 / 16 to 19 FE/T-Level
Architects and Systems Designers, and IT and Telecommunications Professionals	Around 200-250 current vacancies, demand likely to increase as sector grows		x		Full time HE / Apprenticeship L7
IT User Support and Operations Technicians			x		Apprenticeships/16 to 19 FE/T-Level and HE
Cyber security professionals	<i>Although current postings are hard to delineate against other sub-sectoral needs, due to the concentration and significance of this area of activity, we expect significant additional employment opportunities around the existing and future nationally significant facilities and operations</i>	x			Cyber security technician/technologist/professional Apprenticeships L3/4/6 16 to 19 FE and HE
Business, Financial and Management Professionals					Apprenticeship L / 16 to 19 FE/T-Level and HE
Business/Data Analyst				x	Apprenticeship L / 16 to 19 FE/T-Level
Project managers				x	Upskilling via Project Management Apprenticeship L4/6
Systems architects				x	Apprenticeship L / 16 to 19 FE/T-Level

5. Occupational Opportunities – Skills for new technologies

We can identify some of the more imminent technological needs within this sector, and there is current demand for these technologies, but it is limited in volume. However, it is expected that there will come a point relatively soon, where many of these technologies will grow rapidly in volume. We have therefore broken down technological and expected sectoral needs into broad areas or specific to a technology.

There is expected to be significant change across the sector with AI, automation and machine learning integration and understanding, alongside (further into the future and therefore not referenced in this cycle of LSIP activity) the implications of quantum computing on ICT and cybersecurity in particular. Needs within cybersecurity are likely to grow significantly as more areas of industry turn towards increasing digitalisation. Suggested wider growth technologies both through our own research and existing intelligence include data usage, analysis, data science and visualisation. In the next section of the report, we provide a more granular identification of employers stated needs.

Currently, our priority is that colleges and other providers of training for these occupations, gear up their practical facilities and as far as possible begin (if not already), to offer the upskilling and awareness needed alongside new occupational programmes where there is local demand or expected imminent local demand. We hope to have discussions with providers and stakeholders about how demand could be stimulated further and timing of growth.

Occupations	Management and Professionals	Software developers and programmers	Other Roles
Technology			
AI/Machine learning (including Large Language Models (LLM) and/or Natural Language Processing (NLP) such as ChatGPT)	Awareness and understanding	Upskilling for use	Upskilling for use
Cloud development	Awareness and understanding, upskilling for use	Upskilling for use	Upskilling for use
Application security Internet of Things (IoT) and connectivity security	Awareness and understanding	Upskilling for use	Upskilling for use
Advanced and new coding languages in coding, computer science, data science	Awareness and understanding	Upskilling for use	Upskilling for use
Automation	Awareness and understanding	Upskilling for use	Upskilling for use
Blockchain	Awareness and understanding	Upskilling for use	Upskilling for use
AR/VR	Awareness and understanding, upskilling for use	Upskilling for use	Upskilling for use

6. Businesses Reported Skills Needs - Granular Business Intelligence via LSIP

Please note that the LSIP research will continue until April 2023 in the first phase, with additional needs, refinements, deep dives and any identified new foci to continue longer term until May 2025. These below skills needs findings are based on the initial 3 months of LSIP research and delivery and hopefully indicate (in a no way comprehensive manner) expected 'direction of travel' in the final report. As any additional needs are identified and verified we will share prior to report release with stakeholders in the most appropriate identified means.

The LSIP has worked to gather current in-depth business intelligence on perceived unmet needs, understanding of current delivery and potential economic and technological changes. The intention of the LSIP research methodology is to add current and granular intelligence to existing understanding and not to replace prior research into skills needs, particularly those datasets which could be considered statistically robust.

We have divided these findings into approximated areas of need, and -alongside the sections above on occupational shortages and industrial trends – expect these to form a reasonably comprehensive picture intended to address current and expected unmet needs within the sector, both in terms of interventions in existing provision (micro or modular) and identification of potential new provision (although this falls primarily towards in-work and modular needs due to the methodology utilised in the LSIP primary research phase). The areas these are outlined under are:

- Critical Workplace, Core and Transferable skills
- Core Digital Skills
- Sector Specific, Technological Change and Digitalisation Skills Needs
- Decarbonisation, Sustainability and Alignment to the UK's Net Zero Strategy Skills Needs
- *Systemic/Labour Market/Other reported needs*

We have indicated where we believe businesses have reported these needs most significantly in terms of where they fit within career and occupational progression (from new entrants through to experienced) and believe these are areas of funding and provision that align more or less closely:

Experienced Current Employees (upskilling, modular, CPD)	Experienced/Occupationally Competent New Employees (upskilling, skills gaps, new work functions)	Career movers from another sector (part experienced and/or direct/linked training eg Boot Camps)	Those in both work and formal training e.g. apprentices	Younger/New Entrants/non-experienced 16-19 and adults
In-house, innovation/Adult Education Budget (AEB) /Local Skills Improvement Fund (LSIF)	In-house/bespoke/Innovation /AEB/LSIF	AEB, Bootcamps, Other DfE e.g., certificates of future technology, In-house, LSIF	Apprenticeship	T-Levels, other 16 to 19 vocational, Vocational Higher Education and preparatory

We do not intend to be prescriptive in suggestions where FE Providers (and others) may see an ability to respond to LSIP skills needs findings, more to indicate where we see opportunities for action that align with occupational progression, life stages and current (particularly mainstream) funding mechanisms. These therefore represent the options we want to discuss with providers.

Employers have expressed a strong view that young recruits are often not work ready in terms of essential skills and work related basic digital skills. It is therefore a priority for us to explore the possible implementation of "Skillbuilder" essential skills system (or similar) into pre-16 and academic post-16

education across the area. We would also aim to build these skills into post-16 vocational programmes and Apprenticeships (where they are not already there) so that employers themselves will also continue to develop these skills in the workplace.

There is wide recognition within the sector that a number of key and reasonably mature technologies are likely to be incorporated into this sector much more comprehensively, although there is some reticence to adopt too widely until demand signals turn into actual demand, particularly against balancing current demand in traditional needs with lack of available workforce. These roles and technologies are consistently mentioned:

- Augmented Reality (AR)/Virtual Reality (VR), Virtual Production and wider use of ‘green screen’ technologies
- Videography, animation and motion graphics
- Coding, software engineering
- Artificial Intelligence (AI) both as a product and a tool
- Cloud development
- *Various sub-sets of Computer Aided Design (CAD) including graphic design, graphic interfaces and User Experience (UX)*

Critical Workplace, Core and Transferable Skills

Need Statement	PROVISIONAL PRIORITY	Experienced Current Employees (upskilling, modular, CPD)	Experienced/Occupationally Competent New Employees (upskilling, skills gaps, new work functions)	Career movers from another sector (part experienced and/or direct/linked training e.g. Boot Camps)	Those in both work and formal training e.g. apprentices	Younger/New Entrants/non-experienced (16-19) and adults
Soft skills reported as needing development in new entrants: <ul style="list-style-type: none"> • General people skills (including recognition of changes across generations) • Communication (including written) • Confidence & self-motivation • Organisation, Problem solving, troubleshooting • Teamwork and leadership • Administration and time management 	1. Explore the implementation of Skillbuilder (or similar) and work entry skills in pre 16 and post-16 academic education (as in other priority sectors)					X
<ul style="list-style-type: none"> • Both email and telephony communication specifically requested – etiquette, tone, terminology 	Part of 1 above				X	X
Support in people and workforce development: <ul style="list-style-type: none"> • effective onboarding • mentoring • shadowing best practise • recruitment 	2. Manager short course programme for the sector	X	X	X		

• Mental health and resilience						
How to develop growth strategy and effective business planning	Part of 2 above	X	X	X		
Understanding financial viability and budgets within roles including forecasting	Part of 2 above	X	X	X		
Wider needs for sales and client interaction awareness	3. Workshops programme for customer facing and other roles	X	X	X		
Additional skills in short supply in some areas of existing workforce and new entrants: <ul style="list-style-type: none"> • Bids and procurement • Marketing • H&S, liability and compliance 	Part of 3 above	X	X	X		

Core Digital Skills

Need Statement	PROVISIONAL PRIORITY	Experienced Current Employees (upskilling, modular, CPD)	Experienced/ Occupationally Competent New Employees (upskilling, skills gaps, new work functions)	Career movers from another sector (part experienced and/or direct/linked training e.g. Boot Camps)	Those in both work and formal training e.g. apprentices	Younger/New Entrants/non-experienced (16-19) and adults
General IT and office systems literacy: <ul style="list-style-type: none"> • Outlook • diary and calendar management • appropriate terminology and tone in internal and external digital communications • Excel • CRM and database usage 	4. Training in basic practical digital, data management skills	X	X	X	X	X
Additional requirements for presenting and webinar skills including data visualisation	Part of 4 above	X	X	X	X	X
Further initial understanding of project management and methodologies such as Agile, Scrum and JIRA	5. Project management programme for relevant staff	X	X	X	X	
How to effectively onboard and induct in hybrid and remote roles	Part of 2 above	X	X	X		
Data and security needs across wider roles; <ul style="list-style-type: none"> • GDPR and data protection best practise • Filesharing and security • Breaches and responses 	Part of 4 above	X	X	X	X	

<ul style="list-style-type: none"> •Cybersecurity principles •Transparency and risk management 						
Some senior roles would like additional training in setting up in-house and online course provision	5. Develop an offer (probably fee charged) by providers to support in house training development and delivery	X	X	X	X	X
Digital marketing understanding and principles: <ul style="list-style-type: none"> •Planning •Advertising •Social media •Email marketing 	6. Digital marketing short course programme	X	X	X		
Principle of IP protocols in wider roles	Part of 4 above	X	X	X		
Understanding the differences and benefits of digital versus physical communication	Part of 4 and 6 above	X	X	X		

Sector Specific and Technological Change

Need Statement	PROVISIONAL PRIORITY	Experienced Current Employees (upskilling, modular, CPD)	Experienced/ Occupationally Competent New Employees (upskilling, skills gaps, new work functions)	Career movers from another sector (part experienced and/or direct/linked training e.g. sBoot Camps)	Those in both work and formal training e.g. apprentices	Younger/New Entrants/non-experienced (16-19) and adults
Software engineering and coding widely needed and expected to be embedded in most roles in future (admin, IT, business, software, especially python, C++ html). Existing unmet need for fullstack developers and developers, QA/test engineers and technicians	7. Technical upskilling programme for existing software engineering staff (see also occupational skills shortages section above)	X	X		X	
Data usage, analysis, data science and visualisation growth areas across service provision	Part of 7 above	X	X		X	
Needs in existing workforce (especially more senior) for understanding technological advancements and impact of digitalisation – to incorporate foresighting and adoption, digital service provision	Part of 7 above	X	X			

AI, automation and chatbot integration and understanding – efficiency, role change, productivity. Significant changes expected to services and roles pan-sector	Part of 7 above	X	X		X	
Understanding effective software and service integration and rollout	Part of 7 above	X	X		X	
Increasing adoption of ‘consultancy mindset’ and client needs focus – commerciality, proposition planning and delivery, evaluation and lead conversion	Part of 7 above and check Apprenticeships content	X	X		X	
Design thinking methodologies, UX and product design, client experience, principles of CAD	Part of 7 above	X	X		X	
How to adopt change and increase resilience	Part of 7 above	X	X		X	
Understanding changes to the commercial service marketplace – export, global markets, growth & strategy	Part of 2 above	X	X	X		
How to develop ‘to-market’ strategies for diversification and new product development, product lifecycles	Part of 7 above	X	X		X	

Net Zero Skills

Need Statement	PROVISIONAL PRIORITY	Experienced Current Employees (upskilling, modular, CPD)	Experienced/ Occupationally Competent New Employees (upskilling, skills gaps, new work functions)	Career movers from another sector (part experienced and/or direct/linked training e.g. Boot Camps)	Those in both work and formal training e.g., apprentices	Younger/New Entrants/non-experienced (16-19) and adults
Systemic sustainability within service provision: data, storage and data centres, cloud computing	Part of 4 above	X	X	X	X	X
Energy usage, efficiency and reduction	8. Programme on “achieving net zero” for the sector	X	X	X	X	X
How to develop a framework for internal sustainability	Part of 8 above	X	X	X	X	X

planning specific to service provision and ICT						
Understanding sustainability standards inc. ISO14001	Part of 8 above	X	X	x	x	X
Climate change and impact on economies and businesses, including mitigation	Part of 8 above	X	X	x	x	x
Effectively communicating sustainability internally and externally, understanding and leveraging consumer demand	Part of 8 above	X	X	x	X	x
Sustainable investment and potential impacts	Part of 8 above	X	X	X	X	X
Understanding travel impact and mitigation	Part of 8 above	x	X	x	x	X
Additional partial needs: embodied carbon, offset and carbon credits, footprint calculation	Part of 8 above	X	X	X	x	X

Local Skills & Labour System Feedback

Please note that although these are not explicitly skills needs, these are other issues highlighted by employers and stakeholders that may require addressing alongside interventions in provision directly.

Need Statement	PROVISIONAL PRIORITY	Experienced Current Employees (upskilling, modular, CPD)	Experienced/ Occupationally Competent New Employees (upskilling, skills gaps, new work functions)	Career movers from another sector (part experienced and/or direct/linked training eg Boot Camps)	Those in both work and formal training e.g. apprentices	Younger/New Entrants/non-experienced (16-19) and adults
Sectoral preferences for short, flexible, modular and online delivery (especially in respect to shorter term contractual delivery and longer term qualification lengths)	As all above	X	X	X	X	X
Sector reports difficulties recruiting experienced employees and lack of diversity in new entrants to software development roles	For Part C LSIP					
Some employers recognise difficulties in recruiting industry professionals into teaching due to disconnect in salaries and expectations	9. Teacher recruitment and retention initiative across the area (see also other priority sectors)					

Some employers report new entrants have unrealistic progression expectations within roles and difficulties with retention	For Part C LSIP					
Some professional service providers expect shrinkage due to economic climate	For Part C LSIP					
SMEs report issues with apprenticeship requirements and capacity within employer, including financial, reportage and mentorship	10. Investigate specific issues re Apprenticeships				x	x
Sector has little knowledge of T-Levels and where they fit within existing provision	11. Colleges communication pack/events for T-Levels				x	X
Some employers report issues with sponsorship and licensing for experienced foreign nationals to enter country for employment	For Part C LSIP					