CIOS DIGITAL SKILLS ASSESSMENT

Assessing the Digital Skills within the Cornish Workforce

July 2025

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FOREWORD

In 2022, I had the privilege of leading CIoS (Cornwall and the Isles of Scilly's) first deep dive into its digital skills landscape. The resulting report was more than a snapshot in time; it became a catalyst for change. It guided investment, shaped strategic thinking, and sparked collaborative programmes such as *Digital Futures Cornwall*, helping to bridge the region's growing skills gap and set a course toward a more digitally confident future.

This new report, *Assessing the Digital Skills in the Cornish Workforce*, builds powerfully on that foundation. It sharpens our understanding of CIoS unique skills needs across Distinctive, Core and Foundational sectors. It speaks directly to today's realities, where technology evolves quickly and where strong partnerships between educators and employers are vital. To meet the region's future needs, education must be a priority. Curriculum development should be dynamic, industry-informed, and regularly validated through meaningful engagement with the local business community and teachers.

Equally critical is talent retention. One of the main reasons highly skilled people leave a region is the belief that long-term, fulfilling careers don't exist there. But Cornwall's digital ecosystem is diverse, resilient and growing. We must do more to showcase local opportunity and success, not only to those already in work, but to students, apprentices and emerging talent who might not yet see a future for themselves here.

This is something I care deeply about. Through my own work as a Director at TECwomen CIC, I've seen how role models, local visibility and practical exposure can shift perception, especially among girls and underrepresented genders. Our *TECgirls 2025 TEC Attitudes Report* found that less than 2% of students surveyed in Cornwall (all genders) are interested in a coding-related job. Only 10% of students said they want to be an engineer, with that figure dropping to less than 2% for girls. These are not just statistics. They are signals. Signals that we must do more to engage, inspire and excite young people about the potential of the digital sector.

There is much to be optimistic about. The recommendations in the *Assessing the Digital Skills in the Cornish Workforce* report around flexible training, cross-sector collaboration, employer-led curriculum input, and ethical use of AI point to a joined-up and agile approach. The renewed focus on success stories, peer-to-peer learning and visibility of opportunity can and should drive cultural change. These are not just educational improvements; they are economic imperatives.

So, to policymakers, funders, education leaders and employers: this is your call to action. Engage with the people building local digital skills programmes. Co-create the skills offer that you want to see. And most of all, help the next generation understand that a digital career in Cornwall is not only possible, it is powerful, future-proof and worth staying for.

"*The digital economy isn't waiting and neither should we. Now is the time to co-create, connect, and make Cornwall's digital future a shared success story".*

-- **Suzanne (Manson) Terry**
Author of the 2022 CIoS Digital Skills Report and
Operations Director at TECwomen CIC

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INTRODUCTION

CHARTING CORNWALL'S DIGITAL FUTURE

This report builds upon the foundation of a previous Cornwall Council report, a significant piece of research that informed the strategic development of the sector and led to outcome and actions that have been delivered in partnership with stakeholders and policymakers in Cornwall. Recognising the evolving societal landscape and emerging challenges, now is an opportune time to revisit, update, and realign our understanding of Cornwall's digital and technology skills ecosystem.

This assessment offers a structured analysis across three specific domains:

- Digital Skills in Cornwall
- Education and Digital Skills in Cornwall
- Addressing Key Gaps and Strategic Recommendations

Drawing upon a range of open-source quantitative and qualitative data, alongside insights from key stakeholder interviews, this report creates a comprehensive picture of Cornwall's current digital and technological standing. It incorporates perspectives from the Good Growth Strategy, emphasising the critical role of digital skills development in achieving the strategy's ambitious targets, and explores the potential implications of failing to meet these goals.

By leveraging recent academic literature to define and categorise "digital" skills, this report establishes a clear framework for mapping the high demand and proportionally low supply of digital skills within Cornwall. Moreover, the report reviews national government initiatives aimed at addressing educational gaps for both pre-18 and post-18 learners in the digital skills sphere.

The findings presented in this report underscore a critical need for targeted interventions to address existing skills disparities, enhance economic opportunities, and promote a more inclusive digital future for Cornwall, recognising its key role in the UK and regional skills ecosystem.[1]

The key action is to reduce the digital exclusion of the region, boost the availability of skilled staff who understand and will adopt more tech-based roles, and deliver more targeted skills through local routes.

[1] Velthuis, S. et al. (2024) 'Regional varieties of 'left-behindness' in the EU15', Regional Studies, 59(1). doi: 10.1080/00343404.2024.2417704.

CHALLENGES IN THIS REPORT

The UK faces a persistent challenge in quantifying and mapping digital and technology skills across its workforce, with critical gaps in reliable data undermining strategic decision-making. Despite the establishment of multiple national initiatives to address skills shortages, publicly available insights remain fragmented and lack the granularity needed to inform targeted interventions.[2] Current analyses often rely on indirect proxies—such as GCSE attainment trends, labour market fluctuations, and broad economic activity metrics—which fail to capture the nuanced realities of digital skill requirements across industries and regions.[3]

There is a significant lack of understanding, at a quantitative basis, to aid in creating a confident picture of digital and tech skills across the UK. Whilst there has been numerous 'boards' stood up at a national level to build on the skills and workforce picture[4], the most recent and potentially promising of which is the new Skills England body,[5] very little relevant information has been published. Inferences between GCSE level migration, labour market stability and economically active measures have been used to 'build a picture' of demand yet significantly lacks any granular information to aid in decision making processes.

Why is this? A number of explanations can be given to excuse this: unprecedented shifts and development in 'types of industry' at a global scale, economic shifts over the past 20 years, political ambitions regularly steering outcomes in similar parameters. Whilst a difficult environment, there is a considerable need for reflection by national government on its incapacity to stabilise the picture: the development in 'SIC' and 'SOC' codes between 2007, 2010 and 2020, with no commonality in reporting between the two different pictures; the lack of transparency for a significant portion of the self-employed workforce, specifically data detailing which industry the workforce is aligned against; consistent changes in reporting parameters and release dates, causing perpetual mis-alignment to what the 'local' economic picture looks like.

Similarly, defining what digital skills are and where they are required can be difficult. Advancing this, identification of occupations and industry classifications are somewhat restricted. Notwithstanding the above challenges, SOC and SIC code are notorious for being inaccurate. As such, whilst we have relied on the ONS derived data throughout this report, we have reviewed alternative platforms such as DataCity, Lightcast and Cambridge Econometrics outputs. The absence of a standardised framework for identifying "digital skills" compounds these issues. While tools like ONS datasets, DataCity, and Lightcast offer alternative perspectives, inherent limitations in traditional classification systems persist.[6] SOC/SIC codes remain prone to inaccuracies, particularly when mapping emerging tech roles to legacy occupational categories.[7]

[2] The UK Workforce Digital Skills Gap: FutureDotNow, 2023
[3] The Prince's Trust: Decoding the Digital Skills gap, 2024
[4] Skills and Productivity Board: UK Government, 2022
[5] Skills England: UK Government, 2025
[6]The Prince's Trust: Decoding the Digital Skills gap, 2024
[7] The UK Workforce Digital Skills Gap: FutureDotNow, 2023

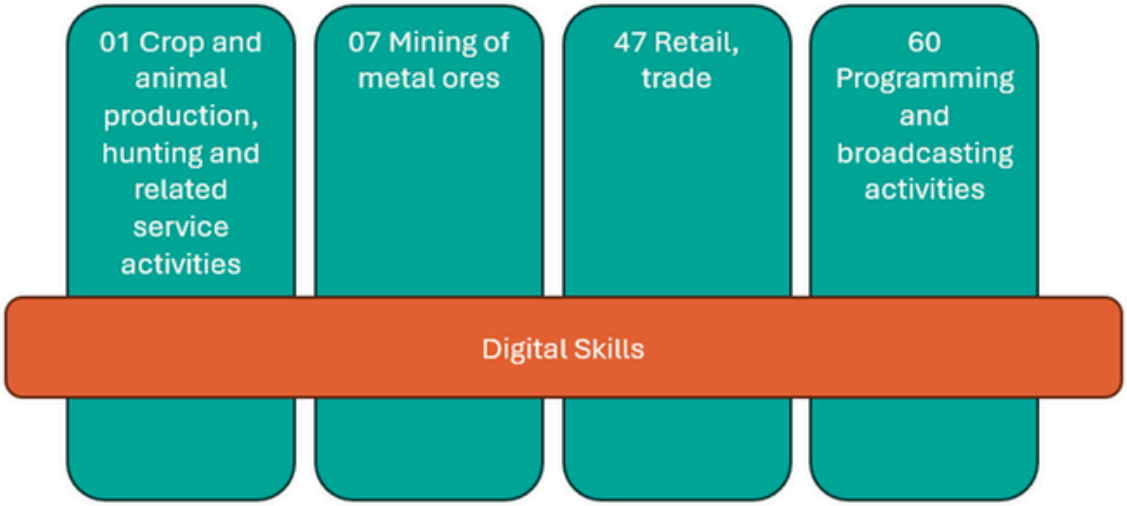
Whilst all significant challenges with severe impacts on this assessment, every effort has been taken to ensure transparency in the data reported below. Illustratively, this nominally is focused on the reporting levels between the 2007, 2010 and 2020 SIC/SOC's. At each point the data is marked as either the former or the latter. This does impact consistency in approach with data: yet this assessment clearly shows the growth, gaps and demand of digital skills in Cornwall and the Isles of Scilly.

APPROACH TO THIS REPORT AND THE CONCEPTUALISED MODEL

Skills are a difficult entity to measure or map. There are roles that are specialist, such as being a doctor: you are a specialist in the medical landscape of treatment and prevention; or being a programmer with the specialism to build apps or software. These are very specific roles: however, there is much more involved with measuring skills. Illustratively, skills can include 'problem solving', 'critical thinking', 'financial understanding' and much more. Determined in some arenas as 'soft skills' or perhaps better as 'core skills' or 'power skills', these are the skills that are difficult to measure.

Until recently, this is where 'digital skills' have been categorised and arguably, may remain. Technology is an everyday experience: from social media to reading an excel sheet to plugging your hours into a timesheet. Digital skills is an underpinning facet of everyday life. There are areas where digital exclusion, attitudes towards technology differs [8] – yet in the general sense, society is a digitally enabled environment. European academic analysis shows that around 35% of European citizens still lack basic digital skills, which 'excludes them from the job market'.[9]

In the greater context, within this report, digital skills are viewed as a 'horizontal' industry. Whilst there are very clear 'vertical sectors', such as the traditional Sector Industry Classifications: Food, Accommodation and so on. Whereas, 'digital' is integrated into all industries. Therefore, is a 'horizontal sector'.[10] To aid in visualisation:



[8] OECD City Network on Jobs and Skills: Digital Skills and Digital Inclusion, 2023
[9] Digital skills: a Deep Dive, European Union, 2023
[10] Ibid

As such, this report addresses the cross-sector element of 'Digital Skills' by adopting a 'three-tiered approach' to understanding the differing elements of digital skills in the workforce and labour market.

1. Everyday use: such as social media, internet news, shopping online
2. Intermediate use: such as administration, use of standard Microsoft packages like Word, Excel etc.
3. Specialist/advance use: such as programming, CAD design, software development etc.

For the purpose of this report, we will be focusing on tiers 2 and 3.

The use of tiers has been adopted in this assessment based on academic research into digital skills, ensuring alignment to other studies and building a picture within Cornwall that can be easily compared to other regions.[11]

Recently the UK government have undertaken a range of activities to start unpicking the skills understanding in the workforce and labour market. These include the Unit for Future Skills and the Skills and Productivity Board (both now either subsumed into or superseded by Skills England). The former is noted to have specific roles and priorities:

Roles	Priorities
• improve coverage and timeliness of jobs and skills data to provide a robust foundation of research and data • structure and improve access to the data by linking up data sets, mapping educations, and jobs at local levels and providing tolls that enable exploration of the data • provide insights to enable learning, thinking and discussion on skills data and research • offer a programme of communications and events as a centre of expertise for skills data and future insights on the labour market	• an improved careers pathways dashboard, providing more detail on which qualifications support employment within a local area • a skills demand dashboard showing what types of jobs are being advertised within a locality • conducting research projects on future skills demand forecasting and a UK-specific skills taxonomy • gathering feedback from users to help shape the unit's products and longer-term priorities

[11] Bertrand A. et al. (2024) 'Digital Skills at Work - Conceptual development and empirical validation of a measurement scale', doi: https://doi.org/10.1016/j.techfore.2024.123279

Whilst not easy to find, the data provides real insights into skills at a local level. Most notably, and most impressively, is a study undertaken on the Skills Supply between 2012 to 2023.

The Skills Supply study develops a better understanding for 'skills, knowledge and abilities held by different parts of the population based on their current and most recent jobs'. The study provides qualification 'mismatches', understanding of skills in the local area and enables gap analysis on skill shortages – all down to Local Authority level, against 4-digit SOC codes.[12] The Skills Study underpins the approach to quantitative and qualitative analysis for Cornwall's skill picture.

For this assessment, the following categories have been identified best fit to portray the digital skills representation in Cornwall:

1. Engineering and Technology
2. Programming
3. Quality Control Analysis
4. Technology Design
5. Working with Computers
6. Computers and Electronics

Enveloped in the earlier described '3-tiered' approach, 1-4 are grouped under Tier 3, with 5 and 6 grouped under Tier 2.

Skills are mapped to a number of different occupations, hence the tiered approach to understanding digital skills in Cornwall. As such:

-For Tier 2, the grouped skills (5. Working with Computers and 6. Computers and Electronics) equates to 207 individual occupations. This tier equates to 52.5% of all occupations.

-For Tier 3, the grouped skills (1-4) equated to 93 individual occupations.[13] This tier equates to 23.6% of all occupations.

[12] We greatly advise all users to review the methodology for this data.
[13] There were a number of jobs that sat across both tiers; as such, any duplication roles have been removed from Tier 2.

EXECUTIVE SUMMARY

This new study reveals a complex interplay of data gaps, economic challenges, and skills mismatches hindering Cornwall's ability to fully leverage emerging digital and technology-driven industries. The analysis reveals persistent skills deficits, particularly in the critical area of technology, compounded by limitations in data collection and uneven industry growth. Limited tracking of rural-urban divides in digital access and employer training investment hampers targeted interventions.[14] While national trends emphasise digital competencies and there is local growth in select tech sectors, Cornwall's labour market demonstrates a unique industry structure that needs to be addressed with targeted initiatives.

Cornwall's digital landscape presents a paradox: while the region boasts a thriving tech sector, it struggles with foundational barriers to inclusion. Addressing these challenges requires targeted strategies that prioritise affordability, accessibility, and tailored interventions for rural communities. Bridging the digital divide is essential not only for individual empowerment but also for unlocking Cornwall's economic potential in an increasingly digital world.

The analysis reveals a deeply entrenched skills deficit. A more granular understanding of the labour market and its industry base must be recognised by training providers and local industry stakeholders. Similarly, available jobs in Cornwall often do not reflect industry growth due to a demand for newer "softer" digital skills (e.g. cloud technology) rather than traditional technical proficiencies.

KEY FINDINGS AND CHALLENGES

- **Data Gaps and Inconsistencies**: The assessment underscores a consistent lack of granular, reliable data on digital and technology skills across Cornwall, hindering effective decision-making. This is exacerbated by inconsistent reporting frameworks and the absence of self-employment data, resulting in a skewed picture of skills availability and workforce dynamics. National initiatives, although present, suffer from poor publicity and underutilisation, further hampering local efforts.

[14] The UK Workforce Digital Skills Gap: FutureDotNow, 2023

- **Defining Digital Skills:** The categorisation of digital skills into basic, intermediate, and specialist tiers highlights the need for targeted interventions at the intermediate and advanced levels, which are critical for driving economic growth. The horizontal nature of digital skills, integrated across all industries, emphasises the need for cross-sector initiatives rather than isolated efforts.

- **Economic and Demographic Constraints:** An aging population, higher economic inactivity among those aged 16-64 (driven by long-term sickness and early retirement), and lower-than-average wages create a challenging environment for workforce upskilling and reskilling. A high rate of self-employment, while potentially indicative of entrepreneurial activity, may also reflect a lack of stable employment opportunities and underemployment, reducing the need to increase skills.

- **Skills Mismatch and Shifting Skillsets:** Approximately 76% of occupations in Cornwall require digital skills, yet a significant skills mismatch persists, particularly at the intermediate and advanced levels. A shift away from "hard-core" technical expertise toward "soft-skilled" digital competencies present a new challenge, requiring adaptability and continuous learning. Existing gaps in advanced coding frameworks is underrepresented. The conceptualised model indicates that a significant proportion of the Cornish population is digitally under-skilled, supported by Consumer Data Research Centre (CDRC) data highlighting lower-than-average internet and device usage.

- **Limited Opportunities for High Growth Sector Uptake:** Existing training models favour larger business needs, which are underrepresented across Cornwall's industries. Smaller business support, with a higher emphasis on support and flexibility, appears to be underrepresented, hindering sector growth overall. Cornwall's labour market is more digitally and technologically driven in skill requirements, even if parameters of skills have evolved over the 13-year period, it still stands removed from the South West as a digital driver.

- **Skewed Sectoral Growth:** Skewed Sectoral Growth: Despite some sectors, such as cybersecurity and IT industry seeing overall high growth, the current growth in smaller specialised sectors has less support within the sector. This requires strategic intervention, and more accessible training/upskilling to support a broader industry base. 76% of businesses report skills shortage harm profitability, and 48% believe the education system inadequately prepares young people for work[15]. Paradoxically, 58% of workers nationally report inadequate employer provided training.[16]

[15] Disconnected: exploring the digital skills gaps, World Skills UK & Unlocking the UK's potential with digital skills, Microsoft
[16] Skills Gap statistics UK 2023, Oxford College

- **The stakeholder interviews that support this study** show that across the economy of Cornwall & the Isles of Scilly, there are several critical roles necessary for sector growth, emphasizing higher-level skills over digital inclusion. They highlight the rapid obsolescence of curricula and the need for regular updates through employer feedback. Distance to training is a significant issue, necessitating solutions for businesses to fulfill their own training needs. Apprenticeships are seen as a viable route, while bootcamps are considered too basic for most employers. There is a need for power skills, including leadership, which can be taught via virtual courses. Particular sectors face specific challenges, too. We found that:

    - The **agrifood** sector faces challenges due to the predominance of smaller employers who lack awareness of digital tools' benefits. There is potential for digital innovation to drive efficiency, productivity, and profitability. Showcasing successful case studies and peer-to-peer learning are recommended to demonstrate practical applications of digital tools.

    - The **space** sector, meanwhile, focuses on data skills. There is a need for electrical engineering skills locally, which are currently lacking in FE and HE institutions. Data skills such as software development, programming, data visualization, and AI are crucial. The sector benefits from cross-sector collaboration, particularly in using space/GIS data for various applications.

    - In the **digital** sector, software engineering is identified as a main gap. While it is possible to find local talent, there is a preference for remote working to attract the best candidates. FE and HE institutions are not delivering the required skills, leading to a reliance on in-house training through academies and similar. There is a need for employer involvement in qualification delivery to ensure relevance and quality.

    - The **creative** sector struggles with finding technically savvy staff and digital tools for business operations. There is a need for a directory to connect businesses with digital support services. Internships are valued for testing new skills without long-term commitments. Ethical use of AI and better understanding of digital tools were also highlighted as a key focus point.

    - The **georesources** sector faces gaps in AI and machine learning, metallurgical skills, and financial modeling. There is potential for exporting digital/AI-enabled geological evaluation services. The sector needs to attract skilled individuals by making Cornwall an aspirational place to live and work. Outreach to local schools and improving FE/HE teaching are essential. Government investment in the midstream value chain and collaboration with complementary sectors are recommended.

- The manufacturing sector does not face significant gaps in basic digital skills like using Excel, thanks to a good network of training providers. However, there are gaps in more advanced skills such as coding, CNC, and AI. Senior teams and leaders often lack digital expertise, which can hinder organisational progress. Apprenticeships and younger workers are seen as crucial for the sector's future, with a need for digital components in standard apprenticeships. Upskilling mid-career specialists is also necessary to handle day-to-day digital challenges.

Across these sectors, common themes emerged as to how these gaps can be addressed. By addressing these challenges through coordinated efforts between local authorities, educational institutions, and businesses, Cornwall can better position itself to meet the growing demand for digital skills while fostering economic resilience. Without addressing skills disparities, even high-growth sectors risk being constrained by labour shortages, undermining the region's potential to capitalise on its unique industrial strengths.

RECOMMENDATIONS

1.Improve Data Granularity and Transparency: Invest in enhanced data collection mechanisms at the local level to obtain granular insights into skills supply and demand, with particular attention to self-employment figures; and advocating for transparent national data reporting methodologies to enable accurate comparisons and robust benchmarking. This will involve leveraging national initiatives, such as Skills England and Get Britain Working, to align local strategies with broader skill demand trends. Key focal points of this will be the creation of a local Get Cornwall & Isles of Scilly Working Plan in line with government guidance on outcome indicators; and the further development of a dedicated Workforce & Skills Observatory for Cornwall & the Isles of Scilly.

2. **Transform Digital Skills Training and Flexible Frameworks:** expand access to digital skills training at all education levels, ensuring that curriculum emphasises both intermediate and advanced skills that are directly aligned with local industry needs. Promote innovative apprenticeship models tailored to the operational needs of smaller businesses, potentially through collaborations with third-party organisations that specialise in customised skills development and small business support. Develop more modular training frameworks to better reflect industry-based demand, not training support. This could include curriculum reform - moving beyond isolated computing lessons by embedding digital skills across subjects (e.g., data analysis in maths, email writing in English).[17] And even teacher training, which again could also include investment in upskilling educators, as 61% of computing teachers lack formal training, hindering effective digital skills delivery.[18]

[17] The Social Switch Project
[18] Ibid

3. **Invest in Local Workforce Development Initiatives:** Encourage local employers to create entry-level positions and allocate resources for on-the-job training programs that effectively bridge the gap between academic education and practical employment requirements. Implement structured schemes designed to reskill and upskill existing workers, enabling them to acquire the advanced competencies necessary to thrive in rapidly evolving, growth-oriented industries.

4. **Develop Programs to Reduce Digital Exclusion:** Design and launch highly targeted programs to reduce digital exclusion among vulnerable populations, placing a high priority on providing affordable access to reliable internet services, necessary devices, and essential digital literacy training. These programs must have a higher emphasis on digital device use, for work and personal life.

5. **Promote Industry Understanding and Engagement**: Facilitate enhanced collaboration and communication between local authorities, educational institutions, and diverse business sectors to develop a deeper understanding of the ever-changing skill requirements. Foster an ongoing dialogue on industry trends and specific workforce needs, establishing sector-specific workshops and forums that provide local employers with opportunities to share insights and contribute to the curriculum design. Utilise employers in sense-checking new curricula to ensure they are needed.

6. **Targeted Investment for Future Industries**: align digital investments with strategic investments seeking to foster the development of emerging industries with significant growth potential, in fields such as renewable energy, advanced manufacturing, and critical minerals extraction, Cornwall Airport Enterprise Zone and Goonhilly Space hub to help ensure regional benefits.

7. **Leverage Alternative Support Frameworks**: Large scale training frameworks have demonstrated a lack of effectiveness. Local action that empowers business support agencies and smaller training providers should be more thoroughly explored and supported, seeking niche and emerging skill-based frameworks that can enable growth for local communities. As supported by University of Exeter research, targeted industry requirements, delivered by industry-expert educators, enable a better-skilled workforce for the future.

By implementing these comprehensive recommendations, Cornwall can effectively enhance its skills base, substantially reduce digital exclusion, and solidify its competitive positioning in the marketplace. These coordinated measures will allow the region to take advantage of the unique opportunities presented by the rapidly evolving digital economy.

SECTION 1:

NATIONAL DIGITAL SKILLS LANDSCAPE

NATIONAL LANDSCAPE

The United Kingdom faces a significant and persistent digital skills crisis that threatens economic growth, workforce resilience, and social equity - with implications for both urban and rural communities. A persistent and historic digital skills crisis, with 7.5 million workers (18%) lacking workplace digital competencies – of which nearly 2 million of those were unable to 'do any of the essential skills in the workplace' - and 13 million adults lacking essential digital skills for daily life – accordingly to the Lloyds Bank UK Consumer index 2023.[19] While 82% of jobs require digital proficiency, only 35% of non-working adults can perform all 20 essential tasks outlined in the government's framework.[20]

Despite the 2015 Essential Digital Skills (EDS) Framework outlining critical competencies—communicating, handling information securely, transacting online, problem-solving, and safety—awareness remains low, and 22% of adults remain digitally excluded, including 40% of working-age individuals.[21] Regional disparities are evident, with no UK region exceeding 50% workforce proficiency in all 20 essential digital tasks, and rural areas facing compounded challenges due to infrastructure gaps.[22] Rural areas face exacerbated challenges, including limited access to high-speed internet and training providers, perpetuating regional disparities in opportunity.

The economic impact is severe: the skills gap costs the UK £63 billion annually.[23] While 82% of jobs require digital proficiency[24], 27% of workers lack sufficient skills for their roles, and 58% report inadequate employer-provided training.[25]

Cybersecurity and data skills shortages further exacerbate the crisis. Despite being a high-growth sector, 39% of UK businesses reporting cyber breaches in 2023.[26]

[19] Digital Skills Crisis: NCFE, 2020 & Digital Skills and Careers: House of Commons Library, 2024
[20] The UK Workforce Digital Skills Gap: FutureDotNow, 2023
[21] Digital Skills Crisis: NCFE, 2020
[22] The Essential Digital Skills Gap: FutureDotNow
[23] Digital Skills and Careers: House of Commons Library, 2024
[24] The UK Workforce Digital Skills Gap: FutureDotNow, 2023
[25] Skills Gap Statistics UK 2023: Oxford College, 2023
[26] Digital Skills Crisis: NCFE, 2020

Technical roles remain undersupplied: 62% of businesses report technical skills gaps in AI and data roles, while 46% struggle to recruit for machine learning and programming positions.[27]

Apprenticeships and employer-led training are underutilised, with only 23% of workers receiving digital upskilling.[27] Pooled models could alleviate SME burdens, particularly in rural areas where infrastructure limitations hinder cloud and AI adoption.[28]

Critically, misconceptions about digital literacy persist. Nearly half of 18–24-year-olds lack full competency in workplace digital tasks, undermining assumptions about "digital native" readiness. Meanwhile, older demographics face systemic exclusion, with only 23% of over-65s meeting baseline requirements. These gaps intersect with infrastructure limitations; rural businesses report slower adoption of cloud technologies and AI tools compared to urban counterparts, stifling productivity and innovation.

Policy and education gaps persist. IT subject uptake at GCSE has declined by 40% since 2015[30], and 45% of households with children fall below the Minimum Digital Living Standard.[31] The EDS Framework, though foundational, lacks integration into regional development plans.[32] Urgent reforms—including curriculum modernisation, employer incentives, and rural broadband expansion—are critical to closing the gap and ensuring national competitiveness.[33] Without intervention, 20% of the workforce risks being under-skilled by 2030, disproportionately affecting rural communities and widening socioeconomic divides.[34] When we take this into an already underskilled economy, such as Cornwall, the picture becomes even more stark.

SETTING THE SCENE IN CORNWALL

Cornwall's history is rich and complex. Its cultural specificity stems from its constitution in a people – the Cornish – with their own language and national minority status. Its economic specificity stems from its strategically important natural advantages, including primary resources that led the first industrial revolution followed by a long and protracted deindustrialisation whose consequences are still felt locally. Despite increasing funding and recognition, this has left significant economic challenges and contradictions.

[27] Quantifying the UK data skills gap: National Government, 2021
[28] Digital Skills Crisis: NCFE, 2020
[29] Digital Inclusion: What the main UK datasets tell us, Good Things Foundation 2024
[30] Digital Skills Crisis: NCFE, 2020
[31] Digital Inclusion: What the main UK datasets tell us, Good Things Foundation 2024
[32] Digital Skills Crisis: NCFE, 2020
[33] Digital skills and careers: House of Commons Library, 2024
[34] The Prince's Trust: Decoding the Digital Skills Gap, King's Trust 2024

Demographics:
Cornwall accounts for 0.95% of the England and Wales population but has a disproportionately older demographic, with 7% more residents aged 65+ and over 2% fewer aged 0-15. Cornwall's population is growing and aging at a rate far exceeding the UK average.[35]

Economic Activity:
Economic inactivity among those aged 16-64 in Cornwall (21.9%) aligns with the GB average (21.6%) but exceeds the South West (19.2%).[36] Notably:

- The "long-term sick" category is significantly higher in Cornwall (35.4%) compared to the South West (28.8%) and GB (28.2%).
- Cornwall has a higher proportion of retirees (17.5%) than the South West (15.9%) or GB (12.9%), suggesting earlier retirement trends.
- Self-employment rates are notably higher in Cornwall (13.3%) than GB (9.2%) or the South West (11.5%)[37].

Wages and Productivity:
Cornish wages are considerably lower than national averages:

- Full-time workers earn 14% less weekly and 16% less hourly than GB averages.[38]
- Productivity is among the lowest in England's legacy Local Enterprise Partnership (LEP) areas, with Gross Value Added (GVA) per hour worked 22% lower and Gross Household Disposable Income (GHDI) per head 11% lower.[39]

Poverty and Housing:
Cornwall presents a paradox of high poverty levels alongside some of the highest house prices in the UK, exacerbated by low wages.

Trends and Opportunities:
Despite these challenges, Cornwall's GDP per head rose from 70% of the UK average in 2020 to 74% in 2021, with productivity growing by 40% since 2008—outpacing the UK average growth of 33%.[40] However, reliance on tourism and lower educational outcomes remain barriers to sustainable economic development.[41]

This data underscores the need for targeted strategies to diversify Cornwall's economy, reduce reliance on fragile industries, and address persistent socio-economic inequalities while leveraging recent growth trends.

[35] Population estimates - local authority based by five year age band – Nomis 2023
[36] Economic inactivity (Jan 2024-Dec 2024), ONS APS, Nomis
[37] Employment and unemployment (Oct 2023-Sep 2024), ONS APS, Nomis
[38] Earnings by place of work (2024), Median earnings in pounds for employees working in the area, Nomis
[39] Regional gross disposable household income, UK - Office for National Statistics & Gross disposable household income - ONS
[40] Ofcom Find 5 percent of UK people do not have internet home access; ISPreview, 2025
[41] Digital Inclusion: Inclusion Cornwall, 2019-2023

SECTION 2:

DIGITAL SKILLS IN CORNWALL

ATTITUDES TO DIGITAL

Understanding attitudes to Digital in Cornwall is important for understanding some of the contextual paradigms at play. As explained earlier in this report, Cornwall has a high number of early retired and an accelerated rate of aging of the population. Relatedly, there is a lower-than-average younger population. Whilst digital skills are not limited to age boundaries, age is key demographic determinant of attitudes to Digital.

Over recent years, studies of attitudes to digital have increased significantly yet are limited to the national landscape. Attitudes can be attributed to a multitude of different reasons; within Cornwall the most notable is financial wellbeing of the household. Nationally, it is estimated that around 5% of households do not have access to the internet at home; equating to 2.7 million people.[42] In Cornwall, most recent figures from the 2019 Digital Inclusion Strategy shows around 13% of the CIOS population had never used the internet. [43] Data further shows that around 9% of families in the UK lack a laptop, desktop or tablet at home.[44] This divide, driven by wealth, contributes to limiting opportunities in and towards the workplace.

Whilst significantly limited, there is some information at a lower geographical level. The Consumer Data Research Centre (CDRC) has recently updated their 'Local Internet content' classifications - specifically, the 'Internet User Classifications' (ICU). This dataset goes down the Lower Super Output Area, mapping each LSOA against 10 categories:

Group	Group Name
1	e-Cultural Creators
2	e-Professionals
3	3-Veterans
4	Youthful Urban Fringe
5	e-Rational Utiliarians

Group	Group Name
6	e-Mainstream
7	Passive and Uncommitted Users
8	Digital Seniors
9	Settled Offline Communities
10	e-Withdrawn

There are 8 indicators within this dataset; for the purposes of this assessment, we have specifically targeted the 'internet use frequency' indicator and grouped analysis where internet use is 'zero' or 'less than once a month'. As touched upon above, internet access and use is a major barrier for any digital skill role or opportunity. As such, this includes IUC Groups: 'Passive and Uncommitted Users', 'Digital Seniors', 'Settled Offline Communities', 'e-Withdrawn'. [45]

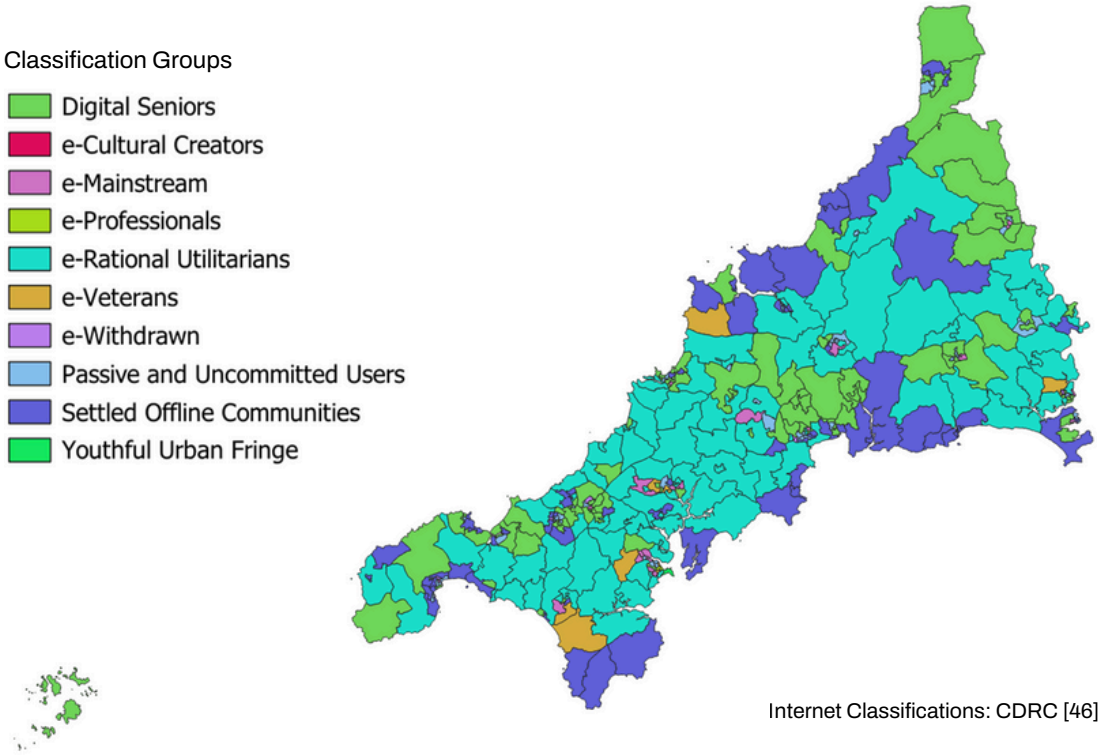
This paints a very stark picture of barriers to digital and technology upskilling for Cornwall:

Cornwall	**62%**
South West	43%
England and Wales	46%
Dorset	37%

This table shows that 62% of Cornwall residents represents those with infrequent or no use of the internet. This is significantly higher than South West and England and Wales averages. Contextually, we have selected Dorset as Cornwall's 'clustered neighbour' for comparison.[46] Summarising, at a foundational basis, digital and technology upskilling already has significant barriers within Cornwall – much more than other similar local authorities.

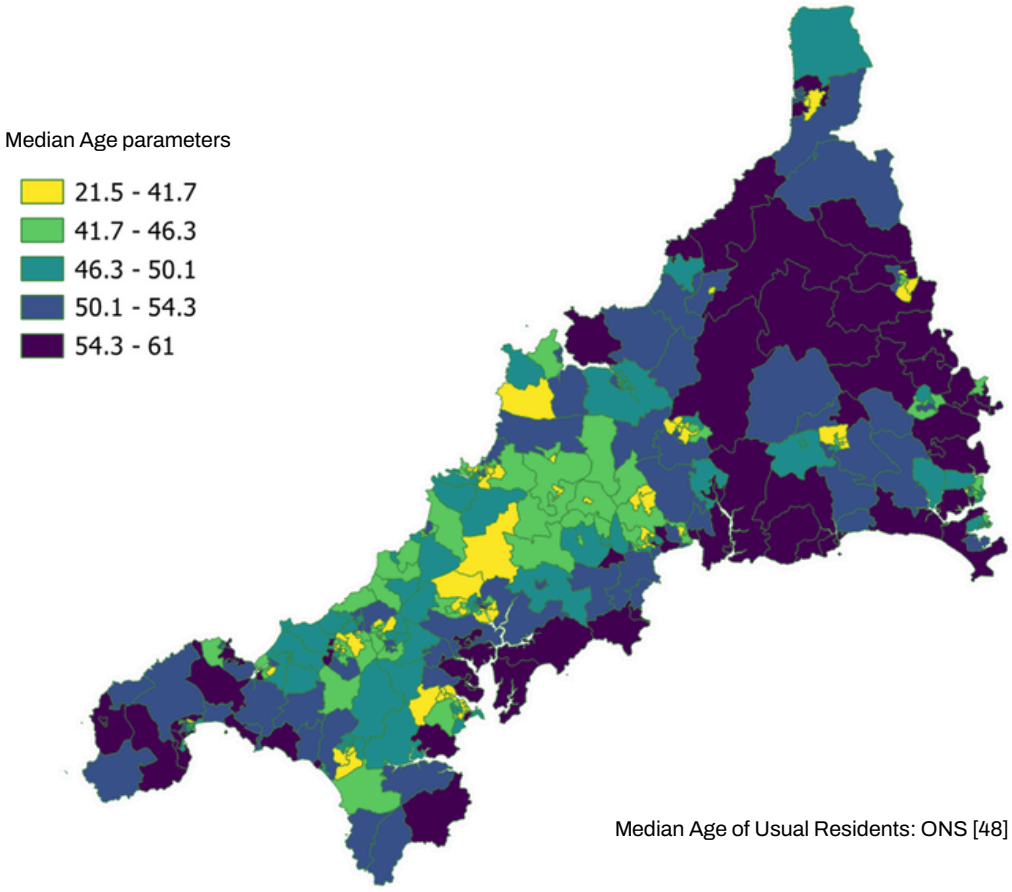
Reviewing this with a 'place based' perspective, we can see that those areas which are within the selected 4 IUC groups largely sit in very large rural and coastal areas. These areas typically have low population density and are 'hard to reach'. We can see that the other 6 IUC's sit within built up areas, such as Truro, Falmouth and Newquay. Surprisingly, St Austell and Penzance – examples of other 'well connected' areas in Cornwall – are largely labelled as 'settled offline communities'.

[42] OFCOM find 5 percent of UK people do not have home internet: ISPreview, 2025
[43] Digital Inclusion: Inclusion Cornwall, 2019-2023
[44] Children without internet access during lockdown: Children's Commissioner, 2020
[45] Internet Classifications: CDRC, 2025
[46] Clustering Similar Local Authorities. 2024



Internet Classifications: CDRC [46]

Immediately, age inferences are called into question as a plausible excuse for such IUC labelling, especially with the median age of Cornwall sitting at 47 years old.[47] This suggests that, particularly in Cornwall, the immediate 'upper age' would be a significant barrier, but it is not.



Median Age of Usual Residents: ONS [48]

[47&48] Median age of people in Cornwall, ONS 2021

When comparing both maps, it suggests that digital attitudes are not closely aligned with age. Specifically, where contextual perspectives would suggest the older the resident the worse the digital attitudes, this is not the case in Cornwall. In support, recent studies show 48% of 18–24-year-olds lack full digital competency[49], alongside only 23% of over 65's meeting all requirements for digital competency.[50]

Digital exclusion in Cornwall has profound economic consequences. Limited access to technology hinders workforce development and exacerbates poverty. Households lacking digital tools face higher costs for essentials and reduced access to job opportunities. Gross Household Disposable Income (GHDI) in 2021 was 91% of that for UK average.[51] Despite Cornwall's growing tech sector—characterised by creative hubs and educational initiatives like Falmouth University's Games Academy—the local demand for digital skills far outpaces supply. Similarly, infrastructure has a significant part to play within this realm of upskilling: particularly where digital attitudes are lower, infrastructure is also poor. Illustratively, almost half of the Cornish population are not on the mains gas network, whereas nationally this number is 14%.[52] Yet, Cornish households have a high 'broadband accessibility' following significant funding by Superfast Cornwall since 2019.[53]

THE DIGITAL SKILLS PICTURE IN CORNWALL

Cornwall's skills landscape reveals significant disparities between workforce capabilities and occupational demands, as highlighted by the Skills Supply model and complementary datasets. While the region possesses pockets of specialised expertise, systemic gaps in digital and technical competencies persist, creating challenges for economic growth and labour market efficiency.

The Skills Supply model, derived from census data, estimates the proportion of Cornwall's population equipped with skills for specific roles. For example, while 3,900 residents possess skills aligned with Chief Executive roles, 113,300 have competencies suited to debt, rent, and cash collection occupations. Crucially, nearly all occupations in Cornwall now require intermediate digital skills, reflecting broader national trends toward digitisation. However, critical shortages exist in priority areas such as IT user support, electrical/electronic trades, telecommunications engineering, and business analysis – roles classified as "skill-shortage vacancies" nationally.

The Skills Supply model suggests that nearly every occupation in Cornwall requires at least a level of intermediate digital skills.

[49] The UK Workforce Digital Skills Gap: FutureDotNow, 2023
[50] Ibid
[51] Gross disposable household income - ONS
[52] Responding to the cost of living challenges: Cornwall Council, LGA, 2023
[53] Cornwall-UK Steps towards a digital rural region - European Network for Rural Development

If we take the Skills dashboard from the National Government Future Skills Board, it states that there are significant skills-shortages in IT user support technicians, electrical and electronic trades, telecommunications engineers, management consultants, design and development engineers and business analysts – all of which are identified as priority areas within the 'skill-shortage vacancies' on a national basis. With a similar picture reflecting in the 'hard to fill' vacancies, with IT User support technicians sitting at 70%. [54]

Occupation	Hard to Fill vacancies	Skills-shortage vacancies
IT User Support technicans	70%	61%
IT Specialist managers	64%	51%
Web design and development professionals	57%	39%
Information and technology telecommunications professionals	50%	46%
IT Operations technicians	44%	37%
Programmers and software development professionals	36%	32%
Business and related associate profressionals	32%	29%
IT business analysts, architects and system designers	19%	8%

[[54] Unit for Future Skills - jobs and skills dashboard: Dept. of Education

Whilst duplicating this data is more difficult at a lower geographical area, Lightcast data can provide vacancy postings and demand at a Cornish level.

Lightcast vacancy data – filtered to Cornwall - for 2021–2025 underscores this mismatch: IT business analysts, architects, and systems designers saw 1,016 job postings (394 unique)[55], with a median posting duration of 26 days, indicating persistent recruitment challenges. Notably, sample sizes for some roles were too small for ONS publication, suggesting acute scarcity of qualified candidates.[56] Analysis of advertised roles reveals stark disparities: 56% of Tier 2 roles (133 occupations) had no Cornish residents meeting skill requirements, including nursing, bookkeeping, and analyst positions. IT trainers ranked lowest in available skilled personnel. In Tier 3, 86% of roles (74 occupations) lacked qualified applicants in Cornwall, particularly in advanced digital/technical fields like CAD and architectural technicians. Conversely, in Tier 1, there were instances where supply outweighed demand – e.g., 1,000+ residents qualified for IT director roles (10 postings) and IT business analysts (30 postings).

Reflecting on this, whilst minimal in comparison, shows stark similarities between a national and local picture.

If we continue reviewing the Cornish population and skills appropriateness for advertised roles, a stark picture continues to emerge: 62% of occupations advertised in Cornwall had no residents with digital skills appropriate for the role. [57]

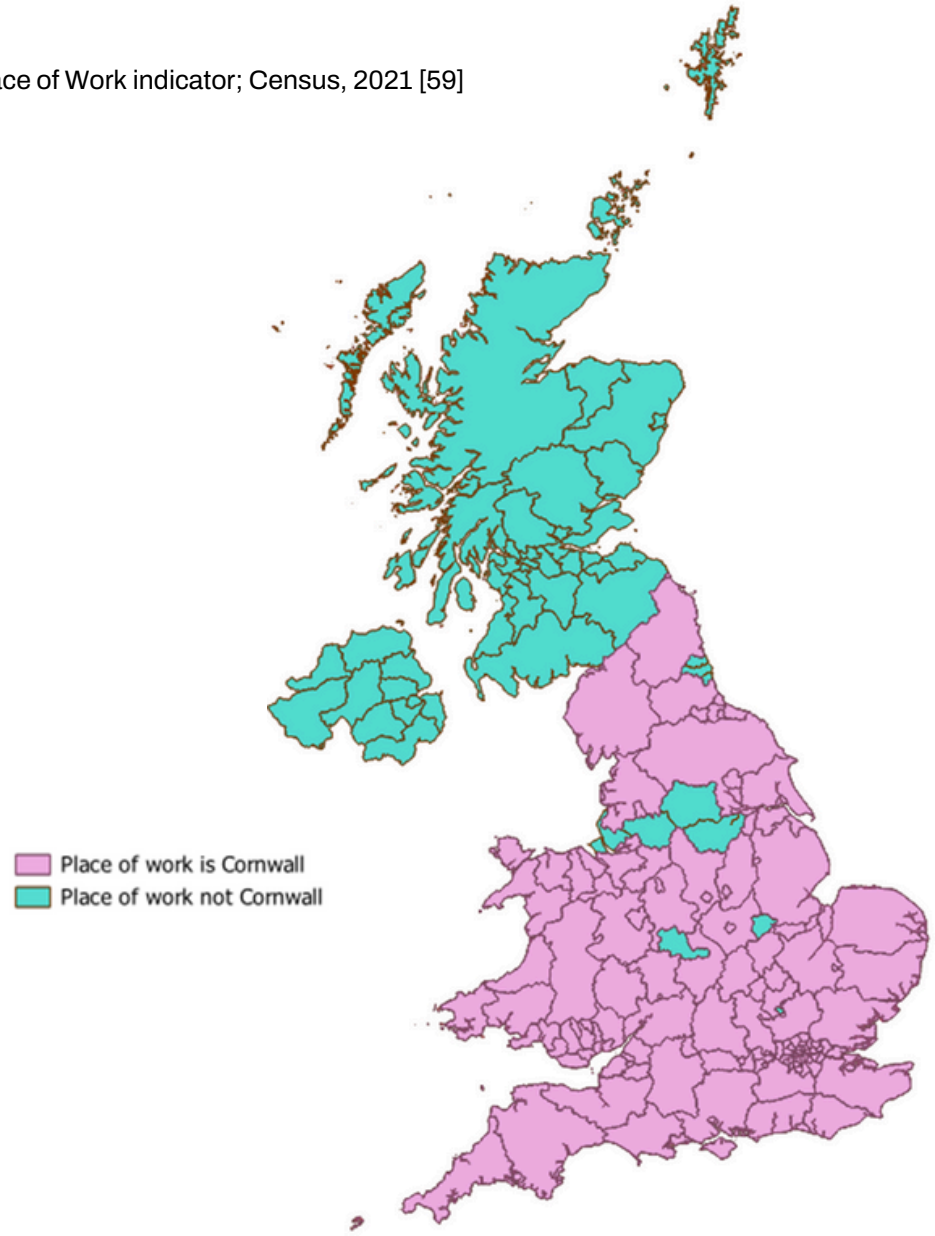
Another skills publication from the UK government which looks at qualification 'mis-match' estimates shows that Cornwall's qualification alignment mirrors broader regional patterns: 24.5% of the workforce is overqualified, while 26.2% are underqualified relative to role requirements. At the Regulated Qualifications Framework (RQF) level, lower qualifications dominate among long-term residents, whereas inward migrants disproportionately hold higher credentials. This dichotomy is visualised in geographic data, where areas with significant commuter populations exhibit higher skill concentrations.

Furthermore, Cornwall ranks 32nd among 37 UK ITL2 regions for population skills alignment with local vacancies, reflecting systemic challenges in retaining and attracting talent.[58] While Cornwall's 50% "just right" qualification match aligns with authorities like Dorset and Devon, its rurality, reliance on tourism, and limited large employers exacerbate skills deficits. The national skills-shortage framework amplifies these challenges, particularly in sectors requiring advanced digital competencies.

Migration data reflects that those inward residents – by that, those having moved into the authority – are more likely to be highly qualified.[59] Similarly, data shows that there is a high volume of people whose 'place of work' resides in Cornwall, yet there 'home residence' is elsewhere:

[55] Lightcast, 2025
[56] Annual Population Survey, Jan-Dec 2021, Nomis
[57] Which skills are employers seeking in your area? ONS, 2024
[58] Ibid
[59] Place of work indicator, Census 2021

Place of Work indicator; Census, 2021 [59]



If we dig into this a little deeper, we can review this model against specific occupations.

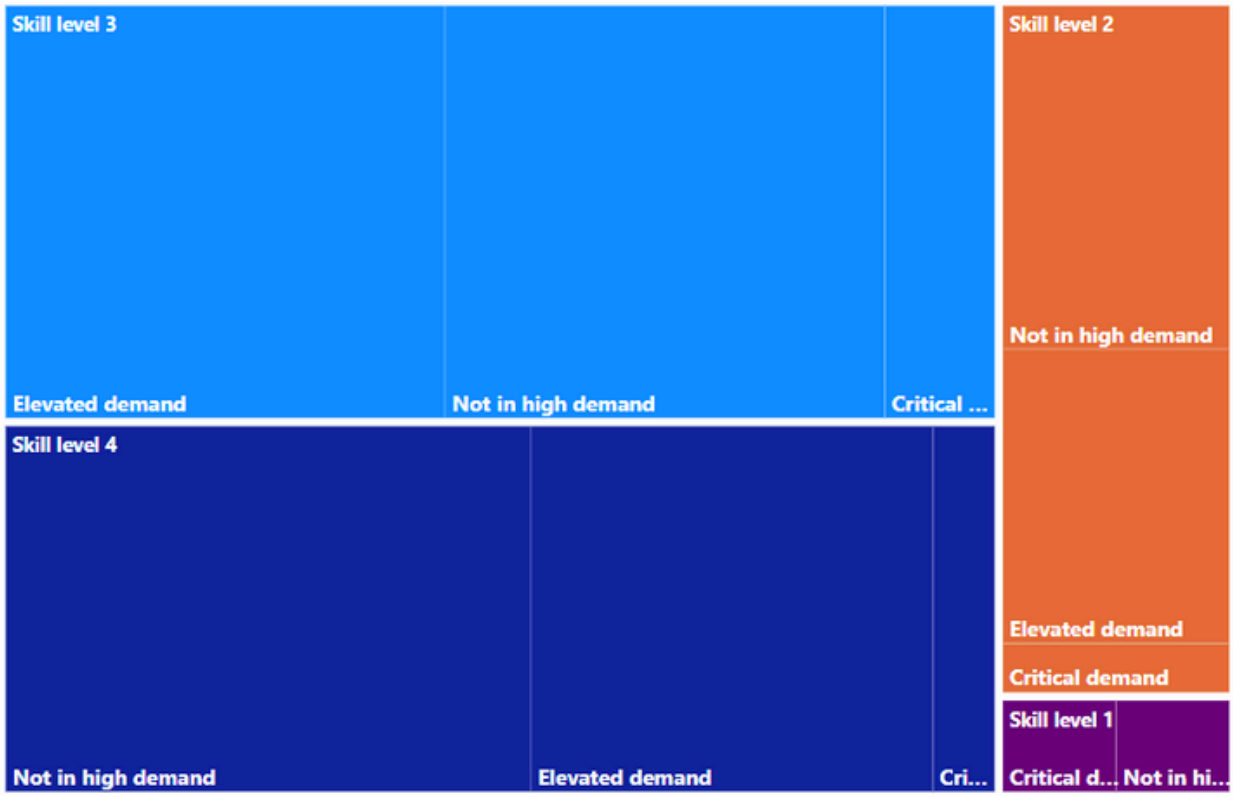
The Tier 1 occupational analysis highlights significant disparities in workforce skills alignment with industry demands across Cornwall. While roles such as Architect demonstrate full skills compatibility (100%) within the local population, others like Computer System and Equipment Installer show only partial alignment (33.3%), with two-thirds of workers lacking the qualifications required for these positions. Notably, the IT and engineering sectors exhibit the most pronounced skills gaps, reflecting systemic challenges in meeting occupational standards. These imbalances underscore the urgent need for targeted training programs and workforce development strategies to address critical shortages and better align local skills with Cornwall's evolving industrial demands.

[59] Place of work indicator, Census 2021

DEMAND AND SHORTAGES

At a national level, occupational demand reflects critical and elevated shortages in key sectors. The Occupations in Demand data release highlights acute needs in roles such as IT User Support Technicians, aerospace engineers, and broader engineering and technology positions. While granular local data remains limited, Tier 1 analysis aligns with this trend, identifying similar skill gaps in Cornwall – particularly in IT and technical roles. Mirroring national patterns, local skills shortages are evident in areas like IT support, where vacancies persist despite workforce availability. Tier 2 analysis further underscores this alignment, with critical demand for middle-management roles such as logistics directors, warehousing coordinators, and financial/accounting technicians. Notably, some Tier 1 roles – including cybersecurity positions – are paradoxically classified as "not in high demand," suggesting regional mismatches in prioritisation or market readiness.

Skill-level categorisations (ranked 1–4)[60] reveal inconsistencies across high-demand occupations. Under the "digital skills" umbrella, Tier 1 and Tier 2 roles deemed critical or elevated span skill levels 2–4, highlighting varied competency requirements even within priority sectors.



Nation wide skill level and demand, ONS [60]
Note: Where the bigger the square, the higher the demand but he shortage of skills. Level 1 are roles like ground works; Level 2 are roles like cleaning and housekeeping/tyre, exhaust and windscreen fitters; Level 3 are skilled, manual roles such as mechanics, boat repairs, chefs; with Level 4 being highly skilled, technical roles such as Architects, cyber security professionals, IT project managers, physical scientists etc.

[60] Measuring skills and qualifications - Skills in Demand, ONS, 2024

Lightcast's analysis of Cornwall's vacancy trends (2012–2025) reveals shifting skill priorities. In 2012, "hard" technical skills like SQL and Java dominated postings, whereas 2025 data shows a pivot toward platform-specific competencies (e.g., Apache Airflow, ETL frameworks) and niche applications (e.g., echocardiography, aerospace quality systems). This transition suggests evolving employer expectations, with reduced emphasis on foundational coding skills in favour of integrated tools.

Comparative analysis with the South West region highlights Cornwall's distinctiveness: while neighbouring areas prioritise specialised technical skills (e.g., computer graphics) and soft skills (e.g., communication, problem-solving), Cornwall's market remains disproportionately focused on digitally enabled, platform-driven competencies.

Profiling of online job-seeker data reveals further disconnects. In Cornwall, traditional technical skills (e.g., coding, systems design) are well-represented in applicant profiles, whereas proficiency in modern platforms (e.g., AWS, embedded coding tools) lags. This gap contrasts with broader regional and national trends, where soft skills dominate applicant profiles outside Cornwall, and England-wide data retains stronger representation of both hard and platform-specific skills.

Further promoting this theory, we can review specific skills within recent job advertisements and map against online person profiles. This approach provides the opportunity to review the demand in a skill, against the availability of that skill within profiles.

At a Cornish level – specifically reviewing Tier 1 skills – we can see that the traditional 'hard skills' are well represented within online job profiles.

Whereas, if we filter to review the data to reflect skills that are more aligned with understanding existing 'platform/low code' software(such as Microsoft) , we see a very interesting picture.

Meanwhile, with small numbers, we can see a clear picture of 'missing skill' representation with applications that use coding tools, rather than the coding skills themselves.

To further understand the skills picture in wider perspective, we can look to the industry picture within the economic area. As explained earlier in our approach to this assessment, SIC/SOC codes come with significant difficulties in reliability. As such, we can analyse using the Data City platform instead.

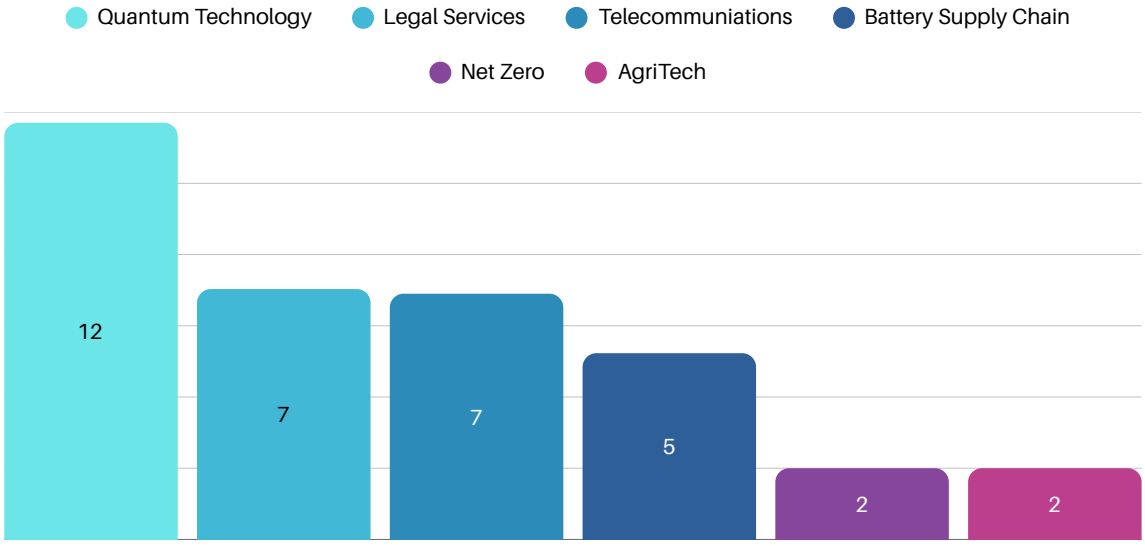
Data City provides a real-time look into the industries of the UK. For Cornwall, the data shows a very different picture to what we typically understand the economic industry make-up to be. The platform has developed 'Real Time Industry Classifications' (RTIC's) which provide a comprehensive view on actual industry practise in Cornwall, rather than the utilisation of SICs from the ONS.[63]

In the following analysis, we have chosen to review the data in terms of 'Location Quotients' meaning that the data compares the local presence of an industry with the national presence of the industry.[63] By using the data in this way, we can review the statistically significant industry classifications for Cornwall. This approach uncovers Cornwall's unique industry drivers, which diverge from conventional ONS classifications and may explain localised skill-demand anomalies.

Cornwall's Real-Time Industrial Classifications (RTIC) data reveals a distinctive concentration of economic activity within digital and technology sectors, marked by significantly higher Location Quotients (LQ) compared to national averages. This specialisation underscores the region's strategic pivot toward innovation-driven industries. However, this growth contrasts sharply with persistent skills gaps, raising critical questions about employer practices and workforce origins.

Cornwall Employee Count by RTIC Industry:

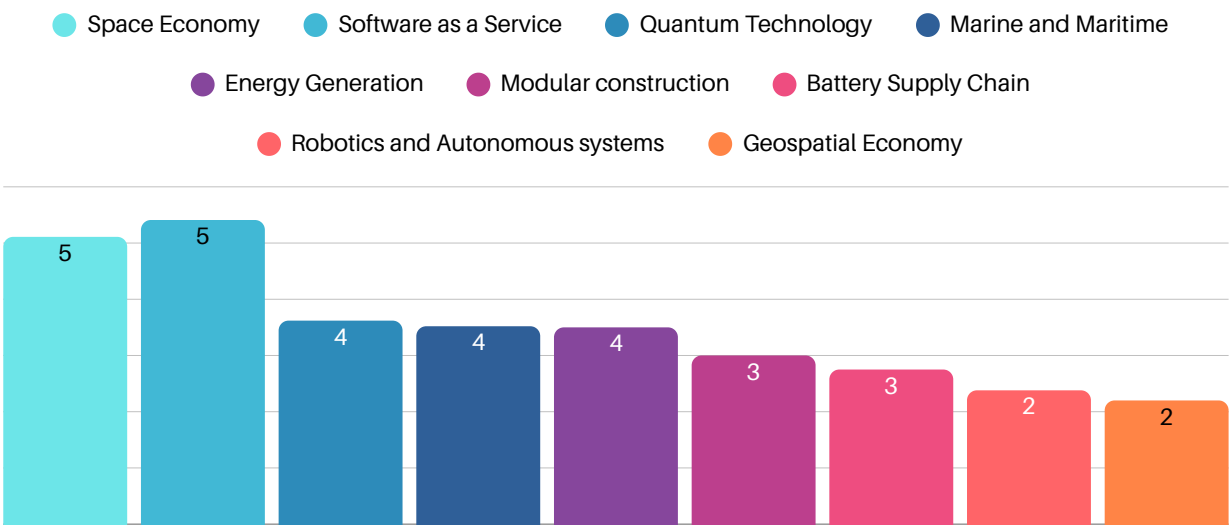
Where '2' means you are twice as likely to find the industry in Cornwall as you would across the nation



[63] I.e. they measure the presence or size of the industry against what would be expected for an area of this size, based on the national average for the industry. A value of 1 means that the proportion of companies in industry X in an area is the same as the proportion found nationally. This means you are equally as likely to find industry X in an area as you would across the nation.
A value of 2 means you are twice as likely to find industry X in an area as you would across the nation.
Conversely, a value of 0.5 means you are half as likely to find industry X in an areas as you would across the nation. (DataCity, 2025)

Cornwall Sector Count by RTIC Industry:

Where '2' means you are twice as likely to find the industry in Cornwall as you would across the nation



When contextualised against vacancy data, a paradox emerges: despite robust sectoral growth in areas like Analytics, SaaS, and Green Tech, employers may face challenges in aligning recruitment strategies with local skills availability. Potential explanations include mismatches between advertised role requirements and actual competencies within Cornwall's workforce, or reliance on remote hires from outside the region – something addressed in the stakeholder interviews summarised below. The latter scenario is plausible given Cornwall's historically lower skill alignment with high-demand roles, as evidenced by Lightcast data showing prolonged vacancy durations and recurring postings for specialised IT/engineering positions.

The RTIC-driven specialisation suggests Cornwall's industries are either cultivating niche local talent pools or drawing skills from external sources. Given the region's ranking as 32nd among UK ITL2 37 areas for population skills alignment with vacancies, the latter appears more likely. This dichotomy highlights systemic challenges: while Cornwall attracts investment in cutting-edge sectors (e.g., geo resources like geothermal energy and critical minerals), its educational and training infrastructure may lag behind employer need.

The remote workforce might provide further explanation for the over-representation of certain digital industries in Cornwall. High representation of remote workers, moreover, could lead to lack of local talent availability as the requirement within the local workforce is not present. Similarly, there could be a lack of harmonisation between Cornwall's industrial ambitions, its skills environment and, as a consequence, the sustainability of both.

To aid us in answering these questions, a number of stakeholder interviews have taken place as below.

INDUSTRY LED INTERVIEWS

As part of the research, both to sense check the findings from the extensive quantitative analysis and to generate a more nuanced understanding of the sectoral Cornish experience we spoke to a number of enterprises and digital experts. The series of stakeholder interviews, which were conducted across some of the main Distinctive, Core and Foundational sectors in Cornwall and the Isles of Scilly reveal significant gaps in digital skills availability and provision. These gaps are impacting the growth and efficiency of businesses and organisations in the region. This summary synthesizes the insights from the interviews, focusing on the critical roles needed, the challenges faced, and potential solutions to address these gaps. The following section highlights the core messages that were passed on to us through this exercise.

CORE MESSAGES

Higher-level skills start with digital literacy and digital confidence: Digital reluctance within Cornwall is at higher level than in most other locations in the UK – this may be, at least in part, down to a business mix dominated by small enterprises and micros. Whilst digital inclusion is not the primary focus for this study it is important to recognise that getting things right early in the education system very much is. That requires a confident, trained, and resourced school system backed up by virtual teacher-training and the chance for young people to see the role of digital in the workplace. Plus, the opportunity to recognise the often very high levels of digital competency/skills that they already have and that have a very direct link to their employability and successful careers.

If we are to establish one or two priorities here, they must be firstly embedding digital skills in teachers and curricula delivery and secondly ensuring a coordinated programme of work placements and school visits. Some employers are exemplary in their work with schools and a system to recognise and reward this, is perhaps overdue.

Employer-led and sense check (and help inform) curricula before major Cornish delivery of new programmes: Digital enterprises are acutely aware that curricula become out of date very quickly. A focus for a digital business/forum within Cornwall should be sense-checking what is to be delivered when funding permits new programmes. It should also help identify what new programmes target and prioritise. Ideally digital programmes in Cornwall should sit within something akin to a 'Tech Cornwall CPD Programme' – to a degree this already exists through Tech Cornwall - and this could be expanded. A role of the employer's group could be to regularly update a list of Cornwall's 5 essential digital skills. The role of the LSIP needs clarifying here, as it could be a legitimate home for the employer voice.

Use the current business concerns over AI to launch masterclasses with FE and HE partners: There is much current concern and interest over the potential from AI. Logically this can be utilised to bring cutting-edge expertise in business and academia to help inform Cornish enterprises decision making. Partners such as Tech Cornwall will be key to delivering these. The focus should be building on the expertise in Cornwall to support enterprises that may currently not be major users of AI and help ensure major digital enterprises and innovators are in touch with national and international new and emerging practice.

Signposting and a virtual offer: In a large local authority area with distance to training a real issue - businesses need to be able to fulfil their own training needs without relying on long journeys to courses. Isles of Scilly highlight the distance challenges, so emphasis needs to be on digital training. This will have to be via signposting to courses through business clusters, sector groups and chamber bodies. The digital sector in Cornwall is well networked currently – but this should not be taken for granted.

Young Tech Leaders, students, and apprentices: Stakeholders in partners such as Tech Cornwall could work together to help link the newer member of the data and digital community. One of the primary reasons highly skilled people leave an area is that they cannot see that a long-term successful career is possible there. The diversity and strength of the Cornish digital sector is considerable and bringing together tomorrow's digital and tech leaders should demonstrate this diversity, indicate what is possible from a career in Cornwall and retain skilled workers. This offer could reach out to current digital students and apprentices.

Current learning offer: The offer from the Cornish skill system (and, more widely, the British) is varied but elements such as Bootcamps may be helpful for most employers needing generic IT skills (introductions to AI and Cloud etc.) but are not likely to be a primary route for Digital Employers. They do though help create a generally more digital workforce. Specialist provision can be directed through masterclasses, virtual short courses and modules that will almost all be self-learning. Apprenticeships came in for some criticism but will remain critical for delivery of skills.

Exploring with employers how they are able to retain learners is particularly important, as some complain that they invest time and money in this form of learning only for the apprentices to leave. This is a national problem.

Power skills: It may seem to an outside audience that we need to stress power skills/core skills within a digital and tech report, but when interviewing enterprises in the sector, this is a real concern. We are particularly referencing skills such as:

- Leadership
- Team working and collaboration
- Problem solving
- Communications
- Creativity
- Emotional intelligence
- Resilience
- Lifelong learning.

The very particular challenge here is that once past school and college (and HE) most courses that are viable in a semi-rural and large geography such as Cornwall are likely to be virtual. This work therefore needs to be an emphasis for larger mainstream programmes – but innovating within virtual delivery is worth exploring.

Placements and Internships: Employers would welcome more internships and placements and often utilise what is already there.

There is a need to hide the wiring (this is true for the whole skills offer): With a plethora of funding pots and routes (and more to come) there is a need to make sure that the front door for both business and learners are clear, and that the complexity is hidden. AI could have a role here in understanding requests via web forms and signposting to available courses.

SECTOR LESSONS

Specific sectors face specific gaps and challenges, some of which are summarised below as case studies:

GEORESOURCES

Cornwall's unique geology holds the key to commercially extracting critical minerals and metals essential for modern technology, as well as providing carbon-free geothermal heat. This geographic advantage is a huge opportunity for the region's future jobs and growth.

The global demand for critical minerals highlights Cornwall's importance as Britain's breadbasket of the future, offering a crucial foundation for the nation's prosperity and security. Domestic supply chains are vital for national security and economic growth, encouraging proactive investment from the National Wealth Fund in these industries within Cornwall.

According to our interviews for this report, many of the necessary skills to exploit these resources already exist locally, but more needs to be done to develop them, especially among young people. Skills in mining, mineral processing, and geothermal energy can create substantial, non-seasonal jobs in communities that currently lack such opportunities.

Cornwall’s georesources cluster includes national champions like Cornish Metals, Cornish Lithium, and Geothermal Engineering Ltd, along with a range of supporting companies. This diversity requires a broad skill set, drawing from STEM fields like geology and engineering, as well as humanities and social sciences for crucial work in ESG (Environmental, Social, and Governance) and community engagement.

The sector is expected to create up to 3,000 direct, highly skilled jobs with high economic value. The wider economic impact, often calculated with a multiplier of up to five, could make a significant difference to the local economy. For example, Cornish Lithium employs 105 people, and starting salaries at Cornish Metals have been as high as £60,000, roughly double the national average.

To support the industry's growth, we heard that it is essential to recruit, train, and retain the right talent. Young people need to be inspired early on about the fulfilling and lucrative career opportunities available, from junior to senior leadership roles. The mineral extraction sector, a part of Cornwall's history, is now vital for the energy transition and modern life. According to our interviews, the focus must shift from nostalgia to educating young people about modern mining, which is being transformed by digital technology and AI.

According to interviews and existing evidence, the georesources sector is held back by the following digital skills gaps:

- **AI and Machine Learning**: There is a growing focus on using AI for mineral exploration and geological modelling. This expertise could be developed locally and exported globally. The sector has massive potential to use historical, contemporary, and satellite data to explore mineral reserves, but current educational provision needs to do more to equip graduates with these skills.
- **Chemical and Metallurgical Processing**: Modern mining operations are world-class and digitally advanced. Traditional skills have been reshaped by technology, but this isn't always reflected in the available workforce or training programs.
- **Financial and Business Modelling**: Contemporary mining requires high-end computer skills to navigate dynamic markets. For example, real-time modelling of rock value can dictate which part of a mine to exploit next, requiring high-level digital skills often sourced from other sectors.
- **Environment and Sustainability Experts**: Crucial for a company's "social license to operate," these roles require knowledge of biodiversity, stakeholder engagement, science communication, and regulatory planning. This requires policy experts who can navigate complex legislation during periods of rapid growth.

Interviewees identified several responses to these issues:

- **Making Cornwall an Aspirational Place to Live**: The region needs to attract and retain talent from both local and global pools, competing with other desirable industries worldwide.
- **Reaching Out to Local Schools:** Companies are working with schools to raise awareness of the connection between modern society's needs (like mobile phones and EVs) and the minerals that make them possible. Initiatives include STEM skills sessions, career fairs, and bootcamps. The sector is also collaborating on apprenticeships, like a new Lab Technician program with Truro & Penwith College, made viable by multiple employers pooling together.
- **Improving Knowledge in Further/Higher Education**: There is a need to ensure that local educational institutions keep their curricula up to date with the latest industry practices and research.

- **Investing in the Midstream Value Chain:** To create a sovereign supply of key materials, the government should help build and strengthen local recycling, processing, and refining facilities. This allows resources to be sold in a factory-ready state, capturing more value within Cornwall.
- **Collaborating with Other Sectors**: The phased growth of the georesources cluster creates opportunities to work with other growing industries in Cornwall, such as space, defense, and offshore wind. These sectors share a need for skilled trades like fitters and electricians, allowing for collaboration in drawing from a common labor pool.
- **Hiring Locally:** Companies are prioritizing local hiring for vocational skills in mechanical and electrical engineering, which are essential for general operations once mines are in production. This commitment to local employment is seen as a key part of social value and a license to operate.

In sum, Cornwall has a tremendous opportunity to provide the resources - vital metals, minerals, and carbon-free heat - needed for the energy transition and to achieve net-zero. It is crucial that this resurgent industry, which once shaped Cornwall's past, is properly resourced to train and equip the workers who will make its future happen. Digital skills are at the heart of this transformation, running through the industry like a rich seam of ore.

MANUFACTURING

In the manufacturing sector, businesses generally feel confident about basic digital skills like using Excel, and the presence of a strong network of training providers means they can usually find the support they need. Past government funding was seen as successful in providing training programs, and the work done by Oxford Innovation was particularly valued for its hands-on approach of assessing a business's needs and showing how digital tools can help. However, this supportive landscape is now shrinking due to funding changes.

While basic skills are covered, there are perceived gaps in more advanced areas like coding and CNC (Computer Numerical Control). AI is also recognised as a significant upcoming challenge, and businesses need to be able to futureproof their workforce against potential skills shortages in the next 3-5 years. The sector should focus on skills that are adaptable and transferable across industries, such as production engineering and programming. It was suggested that to address these gaps at the digital frontier, there should be a focus on three key groups.

Leaders and Senior Management

A major challenge is that many senior teams and business owners lack a deep understanding and awareness of digital technologies. Without this expertise at a leadership level, companies risk falling behind the rapid rate of change. While some specialist manufacturers may not require broad digital knowledge, a lack of it can be a significant barrier. There are also difficulties in finding skilled CTOs and IT directors within Cornwall, forcing companies to look outside the region and pay a premium.

A potential solution is to create a culture of shared information and best practices, similar to past initiatives focused on lean manufacturing. This could be achieved with funding for a sector lead working with organisations like Tech Cornwall or a dedicated subgroup within the Cornwall Manufacturers Group (CMG). However, businesses themselves must also be proactive in engaging with these communities to bolster their knowledge.

Apprentices and Young Workers

Apprentices and younger workers are considered the future of the sector. There's a strong belief that the young talent is available and that the opportunity lies in developing digital-specific or digitally-integrated apprenticeships. Specific areas ripe for growth include mechatronics, which is needed to handle advanced technologies, and cybersecurity. There is also a need for skills in application development to create bespoke in-house solutions.

Instead of only having standalone digital apprenticeships, it was proposed that Further Education providers should weave digital components into existing engineering apprenticeships. A body like Tech Cornwall could assist in this effort, making traditional engineering apprenticeships more rounded and relevant to the contemporary workplace, especially for smaller companies. The role of AI in future apprenticeships is still an unknown, as its industrial applications are not yet fully clear.

Upskilling and In-House Specialists

For day-to-day challenges, many manufacturing firms currently "muddle through" by relying on the most tech-savvy member of their staff. While most rely on outsourced IT companies for basic services like PC and phone support, there is a growing desire to bring more expertise in-house. Companies often prefer to handle tasks internally, and this is increasingly extending to technologist functions. This is particularly true for cybersecurity, which is often outsourced without a full understanding of the needs.

To achieve this, we heard that senior management must foster a culture of internal innovation. Programs like those run by Oxford Innovation can help by connecting companies with small ‘proof of concept’ projects, enabling them to develop expertise internally. The key is to have an internal hunger for innovation and a willingness to support talented employees in pursuing new skills.

Bootcamps, particularly for welding and fabrication, have been a great success in retraining the adult workforce. These have been extremely popular and have helped people find new jobs or even start their own enterprises. However, finding courses that align with family constraints can still be a barrier for those looking to retrain.

We heard about several fundamental issues must be addressed to support the growth of a skilled manufacturing workforce among these three groups:

- Transport and Housing: A lack of transport infrastructure is a major barrier for many young people who do not drive. This severely limits their access to job opportunities. Housing is also a significant issue.
- Basic Functional Skills: Beyond technical skills, a focus on foundational skills like punctuality and performance is crucial for retention and productivity. This ensures that employees can thrive once in a position.
- Funding and Continuity: Funding for training programs needs to be long-term and stable. The current short-term, year-by-year funding pattern creates job insecurity and a frantic rush to offer as many courses as possible before funding expires. A three-to-five-year funding model would provide much-needed continuity.
- Bringing Industry Experts into Education: There is a significant struggle to attract people from industry into teaching positions due to a major pay gap. The Further Education sector, which is the most underfunded education sector, needs a creative solution, such as a dedicated fund to bolster pay, to entice professionals to teach and share their skills.
- Manufacturing as a Standalone Sector: Manufacturing should be recognised as its own sector because it is foundational and provides for all other sectors identified in the regional growth plan. Truro and Penwith college has responded to this need by consolidating its focus on core skills like welding, fabrication, and electronics maintenance, while also developing facilities for more specialist areas like composites and nuclear.

AGRIFOOD

The core issue for agrifood (and one frankly for most sectors) was that because of the predominance of smaller employers or micros - people simply do not know what they need. There are some large and exemplar employers in Cornwall in this sector, but for many (not all) including the larger ones - margins are tight and whilst they would benefit from digital innovation, they struggle to find the time to embrace it. Sector experts are confident that there is lots of innovation potential and real quality in the sector in Cornwall.

In previous years Cornwall has benefited from investment through ESIF and SPF that has enabled some sector innovation and experimentation.

Without these as ‘nails to hand innovation on’ digital and tech awareness raising needs to be targeted through a combination of sector organisations and business events – that incorporate innovation driven enterprises and applied research.

The following are likely to be common outcomes for all programmes of this kind:

- Efficiency
- Productivity
- Innovation
- Profitability

With most enterprises needing pragmatic business management digital support such as operational tools and software, AI, and websites. Showcasing practical examples was particularly favoured – demonstrate what works and why.

SPACE

Space focuses on upstream (sending things to space) and downstream (using what comes back - largely data). The latter should, for now at least, be the emphasis for digital investment in Cornwall. The skills for the upstream sector will realistically have to be brought in from elsewhere. Should a programme become medium-longer term established then this could change. But for now, the upstream elements are unlikely to guarantee jobs right now. Nonetheless some generic skills that could be used should this happen – would be beneficial to the economy anyway.

The exception would be to ensure there are electrical engineering skills locally - both technician (level 3 and level 4) and engineer (L6 and L7). There sems a real gap in this area/field in Cornwall in both FE and HE. This is a surprise as there are definitely jobs in Cornwall needing these skills – with huge potential for many more associated with Green Energy, Offshore Wind and even with the expansion of nuclear and marine manufacturing in Plymouth.

For the data skills in the Space sector - it is a very dissipated group of individuals and small enterprises that tend to focus through centres like Newquay Spaceport, Goonhilly and Penryn campus - finding reasons to bring them together is useful - perhaps with other data sectors. Core skills needed will be:

- Software development
- Programming and coding
- Data visualization
- Data analytics
- Data manipulation
- Data validation
- Machine learning and AI

The Cornwall Satellite Applications Catapult was successful at a critical piece of innovation - getting other sectors to understand the potential from space/GIS data - and to use that in areas such as agriculture, mining, offshore wind, environment, local government, and agriculture. Ensuring people have the skills locally to use the resultant data is the key ask here.

The space sector often looks for level 6 and level 7 qualifications. Courses such as the University of Exeter's MScs in data analytics are ideal and expansion of this provision in Cornwall would be welcomed.

GREEN ENERGY AND OFFSHORE WIND

The Offshore Renewable Sector in Cornwall can be broken down into three phases:

- Development (procurement, financing etc) – where we are now
- Manufacturing and Construction
- Operational

The Operational Phase is essentially running mini-power stations and there is a need to avoid breakdowns. That requires detailed condition monitoring against a large amount of instrumentation. Core digital skills will underpin a way of working that can be summarised as 'inspect-process-action' and include:

- Data collection
- Real-time analysis and interpretation
- Condition monitoring

There is a planned marine centre at Newquay Airport, and likely core digital skills will be around instrument monitoring. People will need to understand both the hardware side and the data side.

There will be fibre optic cables linking the physical arrays to the shore for monitoring – supported by satellite system (more monitoring) and drones, potentially via Goonhilly. You need both in case one fails. Routine maintenance will be via large offshore vehicles, but unplanned operational repairs and maintenance will be needed, and this will have to be local. There are also security needs to that should not be overlooked in terms of digital monitoring, satellites, and similar technologies.

The Manufacturing and Construction Phase will require traditional engineering and skilled trades – however there is still much to be decided about where manufacturing and erection of the turbines will take place. Channel Gateway (Portland) seems the most obvious geography – but there will be competition for this. The distance between construction and erection in the sea needs to be reasonable otherwise costs are too high and weather can play a part. Construction and fitting will require a lot of robotics and associated relatively new engineering skills.

In terms of definite Cornwall activity – there will be work on the anchors and moorings that is likely to be centred in ports like Falmouth.

Generic skills available locally will include:

- Mechanical engineering
- Problem solving
- Data set up and analytics
- CNC programming

Simply to maintain current activity and grow in line with likely predictions assumes an availability of mechanical and electrical engineering skills (College and University) and a list of the kinds of skills that would entirely be being taught in these programmes should include:

- Condition monitoring
- Fatigue analysis
- Instrumentation
- CNC programming
- Data analysis
- Design
- Logistics
- Modelling
- Communications (including drones and satellites)
- Weather and marine science and analysis (weather is a major risk)

There will be knock-on needs in other sector such as Contract management (like International Federation of Consulting Engineers).

SOFTWARE DEVELOPMENT

Software businesses have a need for a mix of occupations including developers, software engineers, project managers, scrum masters, business analysts and data scientists. There is a real need for software engineers. This has led local employers to reach out far beyond Cornwall for staff – despite an avowed preference for local workers. With remote working so common in the sector, this is unsurprising.

This preponderance of remote working does limit the potential for innovation – making the event that takes place in the region of a greater importance. Niche specialisms are likely to remain the preserve of remote working, but there should be no need that most roles in the sector to have to operate this way.

Headforwards's Digital Academy is an interesting development that seems to have been driven as a demand side response to a sector that struggles to keep their curricula up to date. Their ability (and willingness) to utilise different funding models is of particular note. However, there should be concern that as (certainly for Cornwall) one of the larger employers in this sector – they rely on training their own and not on people from FE or HE.

"We often find it hard to employ people from Universities because many degrees are so out of date"
Headforwards, 2025

CREATIVE AND CULTURAL

The sector reports that the main digital skills ask in Cornwall is for:

- Tools for running the business
- Internships and placements
- Ensuring new staff are digitally confident
- Technically savvy staff

"There's always an ask for more tools, digital tools to help them with things like marketing and with application writing. There's a curiosity to understand AI better and to use it ethically and I think there's also quite a lot of conversations around how they, when they are looking for technical staff with digital skills, they can't find them, so sometimes they're looking for those tools that they can use themselves if they're a very small business or they're looking to take on that first employee or their next employee and they're struggling to find people that fit the bill that have got all the skills they need."
-- We Are Creative

Enterprises tend to look for people to help with websites, branding, tracking ticket sales, paid social media etc. rather than higher level digital skills though roles requiring these do exist especially for media industry jobs and game industry jobs.

There is a need for a central hub of some kind to make sure the very disparate sector workforce has somewhere to look for good practices and new ideas on where digital could impact on their business.

The sector is always looking for ways to test how a potential new employee who will have differing skills could work in their business without the risk (increasing overheads). So digital internships are a really good option to de-risk the recruitment process.

HOW GAPS CAN BE ADDRESSED

Across these sectors, some common themes emerged as to how these gaps can be addressed:

Employer Involvement in Curriculum Development: Regular sense-checking of curricula with employers is crucial to ensure they remain relevant and up-to-date. This can be facilitated through employer groups or partnerships with organisations like Tech Cornwall. Employers should be actively involved in the design and approval of courses, ensuring that the skills taught align with industry needs. This collaboration can take the form of advisory boards, regular feedback sessions, and pilot programs where employers test and validate new curricula. By integrating employer insights, educational institutions can create more targeted and effective training programs that directly address the skills gaps identified in the region. In particular, HEIs or FE providers might be approached to lead on filling gaps in electrical engineering skills to take advantage of jobs in areas as diverse as robotics, manufacturing (and maybe space).

Flexible and Accessible Training Solutions: Given the distance challenges in Cornwall and the Isles of Scilly, businesses need flexible training options that can be accessed remotely. Virtual courses and self-learning resources are essential to provide continuous learning opportunities without the need for physical presence. Online platforms offering modular courses, webinars, and interactive learning experiences can help employees acquire new skills at their own pace. Additionally, creating a centralised digital training hub that aggregates various courses and resources can simplify access and ensure that businesses are aware of available training options. Apprenticeships and internships should be promoted to provide hands-on experience, allowing individuals to apply their learning in real-world scenarios.

Showcasing Success Stories: Organising events and showcases to demonstrate successful digital innovations can help smaller businesses understand the benefits and practical applications of digital tools. These events can feature case studies, live demonstrations, and interactive sessions where businesses can see first hand how digital solutions have been implemented successfully. Partnering with larger, more innovative companies to share their experiences can provide valuable insights and inspire smaller businesses to adopt similar practices. Peer-to-peer learning should be encouraged, with opportunities for businesses to network, share challenges, and collaborate on solutions. Creating a repository of success stories and best practices can serve as a valuable resource for ongoing learning and inspiration.

Cross-Sector Collaboration: Collaboration between sectors with similar skillsets can help address common digital skills gaps. For example, the space sector's data skills can be applied in agriculture, mining, and other industries. Establishing cross-sector working groups or forums where representatives from different industries can share knowledge and explore collaborative opportunities can foster innovation and skill development. Joint training programs and workshops that bring together participants from various sectors can facilitate the exchange of ideas and best practices. Additionally, leveraging existing infrastructure and expertise from one sector to support another can create synergies and enhance overall digital capabilities.

Attracting and Retaining Talent: Making Cornwall an attractive place to live and work is essential for drawing skilled individuals. This includes promoting the region's lifestyle, technological infrastructure, and career opportunities. Marketing campaigns that highlight the unique benefits of living and working in Cornwall, such as its natural beauty, vibrant community, and cutting-edge industries, can help attract talent. Offering competitive salaries, career development opportunities, and a supportive work environment can also enhance retention. Creating a welcoming and inclusive community for professionals, with networking events, social activities, and support services, can further strengthen the appeal of the region.

Improving FE/HE Provision: FE and HE institutions need to invest in relevant teaching and attract inspirational lecturers. Partnerships with employers can help ensure that courses meet industry needs. Institutions should regularly review and update their curricula to reflect the latest industry trends and technologies. Investing in state-of-the-art facilities and resources can enhance the learning experience and better prepare students for the workforce. Establishing strong links with local businesses through internships, guest lectures, and collaborative projects can provide students with practical experience and insights into real-world applications. Additionally, recruiting lecturers with industry experience and a passion for teaching can inspire and motivate students.

Government Investment: Government support for developing the midstream value chain and local production facilities can create demand for skilled labor and drive sector growth. Strategic investments in infrastructure, research and development, and innovation hubs can stimulate economic activity and attract businesses to the region. Providing grants, subsidies, and tax incentives for companies that invest in digital skills training and development can encourage more businesses to upskill their workforce. Collaborating with industry associations and educational institutions to design and implement targeted training programs can ensure that government initiatives align with the needs of the local economy.

Ethical Use of AI: Providing clarity on the ethical use of AI and digital tools can help businesses confidently adopt new technologies. Developing guidelines and best practices for AI implementation can ensure that businesses use these technologies responsibly and effectively. Offering training and resources on ethical AI can help employees understand the implications and potential risks associated with AI. Creating forums for discussion and collaboration on AI ethics can foster a culture of responsible innovation. Additionally, showcasing examples of ethical AI use in various industries can provide practical insights and inspire confidence in adopting these technologies.

INDUSTRY PROJECTIONS

Industry growth projections offer valuable insights into potential economic trajectories, though their predictive character requires cautious interpretation. Three distinct models highlight opportunities and challenges for Cornwall's labour market, emphasising the interplay between sectoral growth and skills availability.

Lightcast's Tier 1 and Tier 2 forecasts reveal a mixed landscape. High-growth sectors like Renewable Energy (+12.4% employment change by 2033), Creative & Cultural (+15%), and Advanced Manufacturing (+13.7%) contrast with declines in Marine (-11.6%, potentially attributable in part to the inclusion of tourism-dependent marine services within the definition) and Retail & Wholesale (-7.5%). Notably, Space & Digital (+10.5%) and Agri-Food (+10.1%) align with Cornwall's strategic priorities, while foundational sectors like Health & Social Care (+1.8%) and Education (+1.4%) show limited growth despite high vacancy rates (16.1% and 3.5% of total vacancies, respectively).

Tier 1 projections:

Area	% Change of vacancies between 2024-2033
Cornwall	3.9%
England	4.3%
South West	3.5

Tier 2 Projections

Area	% Change of vacancies between 2024-2033
Cornwall	3.3%
England	4%
South West	3.2%

Continuing the Lightcast analysis, Cornwall Council's Good Growth Plan, defined by Data City's RTIC classifications, identifies baseline growth trends. While sectors like Critical Minerals (+1.5%) and Waste Management (+20.5%) project modest employment gains, their vacancy shares remain low (0.2% and 0.4%, respectively). Conversely, Administrative Services (22.1% of vacancies) and Professional Business Services (4.6%) face significant recruitment challenges despite moderate growth projections.[64]

Furthering refining the skills gap against projections, this breakdown shows that there is a 'high vacancy vs low growth' paradigm; where Health & Social Care covers 16.1% of vacancies, yet with 1.8% growth – whereas accommodation accounts for 3% of vacancies, and 13.5% growth. With a digital perspective, advanced manufacturing works along similar lines.

Yet, overall, there is a picture of growth – even without interventions.

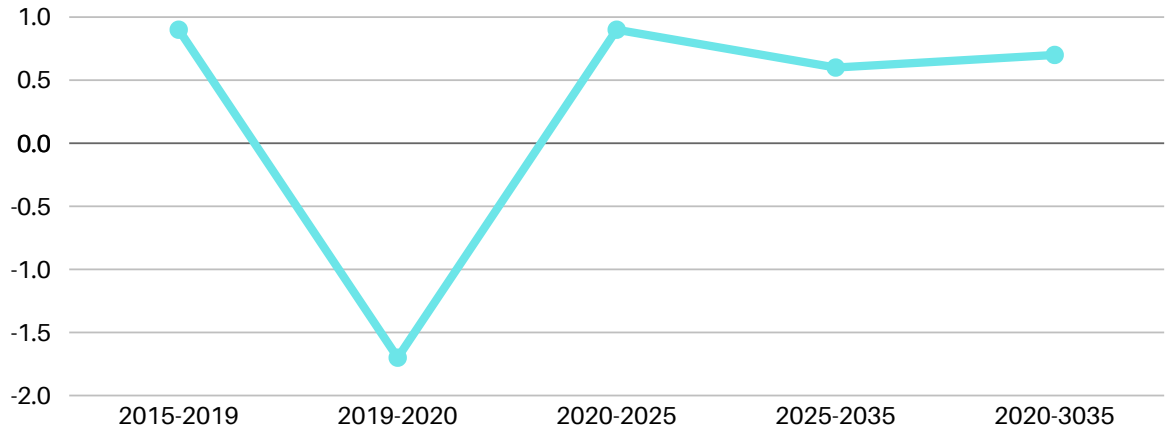
Reflecting this against skills required, whereby skill disparity is high in Cornwall, inference can be made that unless there are interventions for all the necessary industry sectors, this growth may not be achieved. The industries show substantial differences in vacancy proportions, with the key question whether they will be filled or left vacant by the Cornish population.

The third, and final, projections model we review is one undertaken to aid Local Skills Improvement Plan's across the nation.[65]

[64] LightCast, 2025 & see Appendix 1 for full table.
[65] Labour market and skills projections: 2020-2035, UK Government (LSIP-Cornwall)

This presents a starkly conservative outlook. Projecting just 0.7% total industry growth (2020–2035) and 31,000 new roles, it implies stagnation without intervention. This contrasts with Cornwall's 40% productivity growth since 2008 (outpacing the UK average) and ambitious capital projects like Langarth Garden Village (£300m) and Falmouth Docks modernisation. The model posits limited upskilling opportunities and reduced attraction for external talent – a scenario at odds with Cornwall's £10bn development pipeline and space sector's 164% growth since 2010.

Industry Table 1: Employment by Industry Sector (CIOS Projections): **All Industries [66]**



The divergence between optimistic sectoral projections and pessimistic macro models underscores systemic risks:

- Critical Skill Gaps: Growth in high-value sectors (e.g., critical minerals extraction, FLOW tidal energy) depends on addressing shortages in technical and digital competencies.
- Intervention Priorities: Targeted initiatives are required to align training programs with employer needs, particularly for IT user support, engineering trades, and green tech roles.
- Balanced Strategy: While Lightcast and Good Growth data emphasise sector-specific opportunities, the LSIP model warns against complacency, highlighting the need for scalable solutions to attract and retain skilled workers.

[66] Labour market and skills projections: 2020-2035, UK Government (LSIP-Cornwall)

SECTION 3:

DIGITAL SKILLS EDUCATION

EDUCATION IN CORNWALL

The United Kingdom's digital skills landscape is marked by a persistent tension between growing industry demand and systemic educational shortfalls. Nationally, over 7.5 million working adults lack essential digital competencies, contributing to an estimated £145 billion in cumulative GDP loss between 2018 and 2028 due to inadequate digital skills in the workforce.[67] Despite government initiatives such as T Levels and Skills Bootcamps, participation in IT education continues to decline, with GCSE entries for computing subjects falling by 40% since 2015. Apprenticeships, though critical for bridging skills gaps, remain underutilised—only 6% of all apprenticeships focus on ICT roles—and rural regions face compounded challenges due to fragmented infrastructure and limited employer capacity.[68] These issues reflect broader inequities: urban centres often benefit from concentrated investment, while rural areas struggle with patchy broadband access, fewer training providers, and lower awareness of emerging tech pathways.

Within this national context, Cornwall's experience offers a microcosm of both opportunity and entrenched barriers. Cornwall's tech sector is the fastest-growing in the South-West, yet local education provisions struggle to align with industry needs.[69] Alarmingly, a third of Cornwall's secondary schools no longer offer Computer Science GCSEs, effectively closing doors for students in these areas. This exclusion is particularly acute in communities with high Indices of Multiple Deprivation (IMD), where limited digital literacy and access to technology perpetuate cycles of disadvantage. For instance, 15–20% of Cornish adults lack reliable internet access, and schools in deprived areas often face resource constraints that hinder the adoption of digital curricula. These systemic gaps risk leaving Cornish youth ill-prepared for a regional economy increasingly reliant on tech roles in cybersecurity, software development, and data analysis.

[67] The UK Workforce digital skills gap: FutureDotNow, 2023
[68] The UK's Digital Skills Gap: navigating the challenges of digitalisation, 2023
[69] Digital Futures Cornwall: Cornwall opportunities, 2024

Efforts to address these challenges reveal both innovation and fragmentation. Skills Bootcamps, funded through the Department of Education, have enabled over 1,000 learners in Cornwall to transition into tech careers, with courses in coding and cybersecurity proving particularly popular.[70a] Similarly, apprenticeships in fields like software development are available through local providers, supported by 95% government subsidies.[70] However, uptake remains inconsistent, partly due to small and medium-sized enterprises (SMEs)—which dominate Cornwall's economy—lacking the resources to mentor apprentices or navigate bureaucratic funding processes.[71] While initiatives like Superfast Cornwall's Digital Champions network have made strides in grassroots digital literacy, their impact is often localised and underfunded.

The absence of granular data complicates progress. For example, some SPF-funded programs lack publicly available metrics on course completion rates, job placements, or long-term career outcomes, making it difficult to evaluate their effectiveness.[72] Similarly, while national apprenticeship statistics highlight growth in ICT roles, Cornwall-specific data is sparse, obscuring the true scale of regional disparities.[73] This opacity extends to education: the nine secondary schools without Computer Science GCSE options are concentrated in areas where IMD ratings for child poverty and digital exclusion are highest, yet targeted interventions remain rare.[74] Without addressing these structural inequities, efforts to "level up" digital skills risk reinforcing existing divides.

Cornwall's path forward hinges on collaborative, place-based strategies. Retaining Computer Science GCSEs in schools through partnerships with organisations like Tech Cornwall is critical to nurturing early interest in tech careers.[75] Expanding pooled apprenticeship models, where multiple SMEs share training resources and costs, could reduce barriers for smaller employers.[76] Meanwhile, publishing detailed SPF data on digital skills outcomes would enable policymakers to identify gaps, such as low participation among women or older learners, and tailor programs accordingly. [77]

Since the introduction of Shared Prosperity Fund (SPF) funding in Cornwall, a diverse range of educational pathways has been developed to benefit local residents.[78] Much of the following insight is drawn from , one of the regions largest digital skills collaborations, which unites 10 leading partners—many of whom are among Cornwall's largest employers and foremost providers of digital training.[79]

[70a] Digital Futures Cornwall, 2024 & Cornwall Space Cluster, 2025
[70] Digital Futures Cornwall: Cornwall opportunities, 2024
[71] New Skills Programme: Cornwall Council, 2024
[72] Digital Futures Cornwall: Cornwall opportunities, 2024
[73] The UK's digital skills gap: Navigating the challenges of digitalisation, 2023
[74] New Skills Programme: Cornwall Council, 2024
[75] Ibid
[76] Digital Futures Cornwall: Cornwall opportunities, 2024
[77] What is SPF digital futures Cornwall? Step into learning
[78] The anonymised information for this analysis has been provided by the Digital Futures Intelligence Team, within Truro Penwith College.
[79] Digital Futures: the team

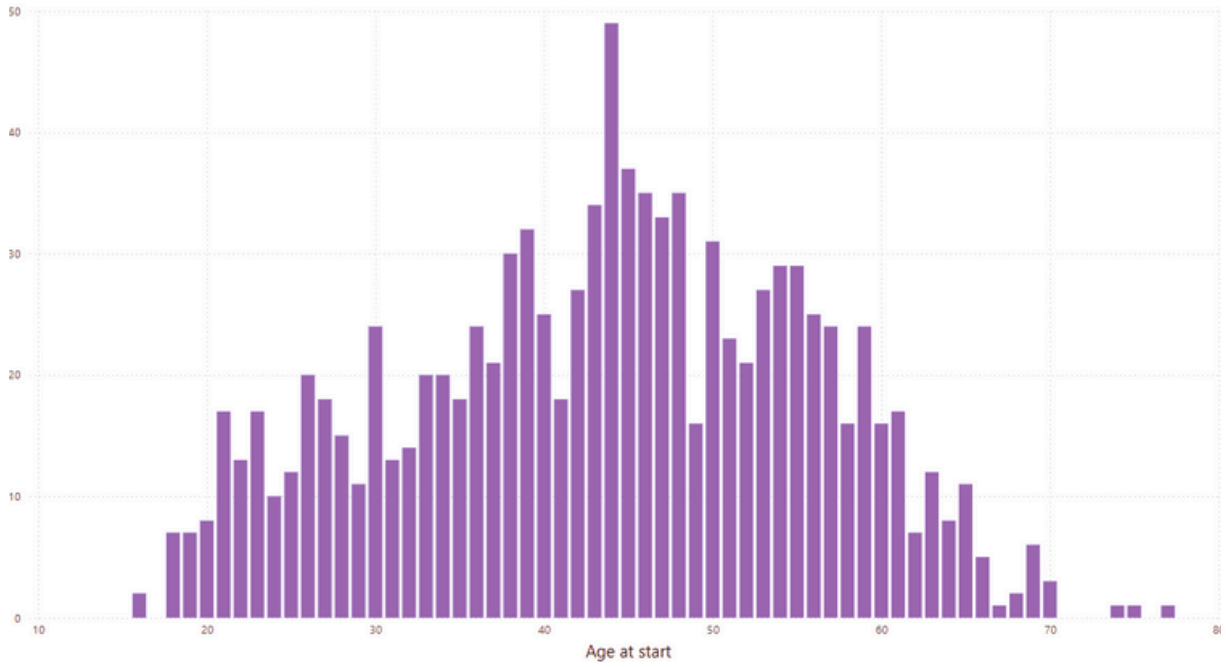
This data offers a valuable snapshot of collaborative progress and the evolving digital skills framework, though it does not encompass every digital training initiative funded by the SPF.

By the close of the 2024/2025 programme year, over 1,000 course attendances were recorded. The most popular courses included 'AI for Marketing' and 'Social Media Marketing', reflecting a strong appetite for advanced digital skills. While introductory courses such as Word, Google Analytics, and Project Management for Business saw lower uptake, high-skill offerings—like Fullstack Bootcamp, PowerBI, AI, and Coding Best Practices—were particularly well attended. Nonetheless, foundational courses such as Excel (Beginner) and Introduction to Coding also attracted significant interest, highlighting ongoing demand for entry-level learning alongside advanced training.

This participation pattern demonstrates a dual trend: a pronounced drive for high-level digital skills acquisition, coupled with sustained interest in essential beginner courses.

Examining the age profile of participants reveals broad engagement across all age groups, with a notable spike among those aged 30–60—the demographic most likely to be seeking reskilling opportunities. Interestingly, a number of residents over the age of 69 also took part in these courses, underscoring the inclusivity and reach of the programme.

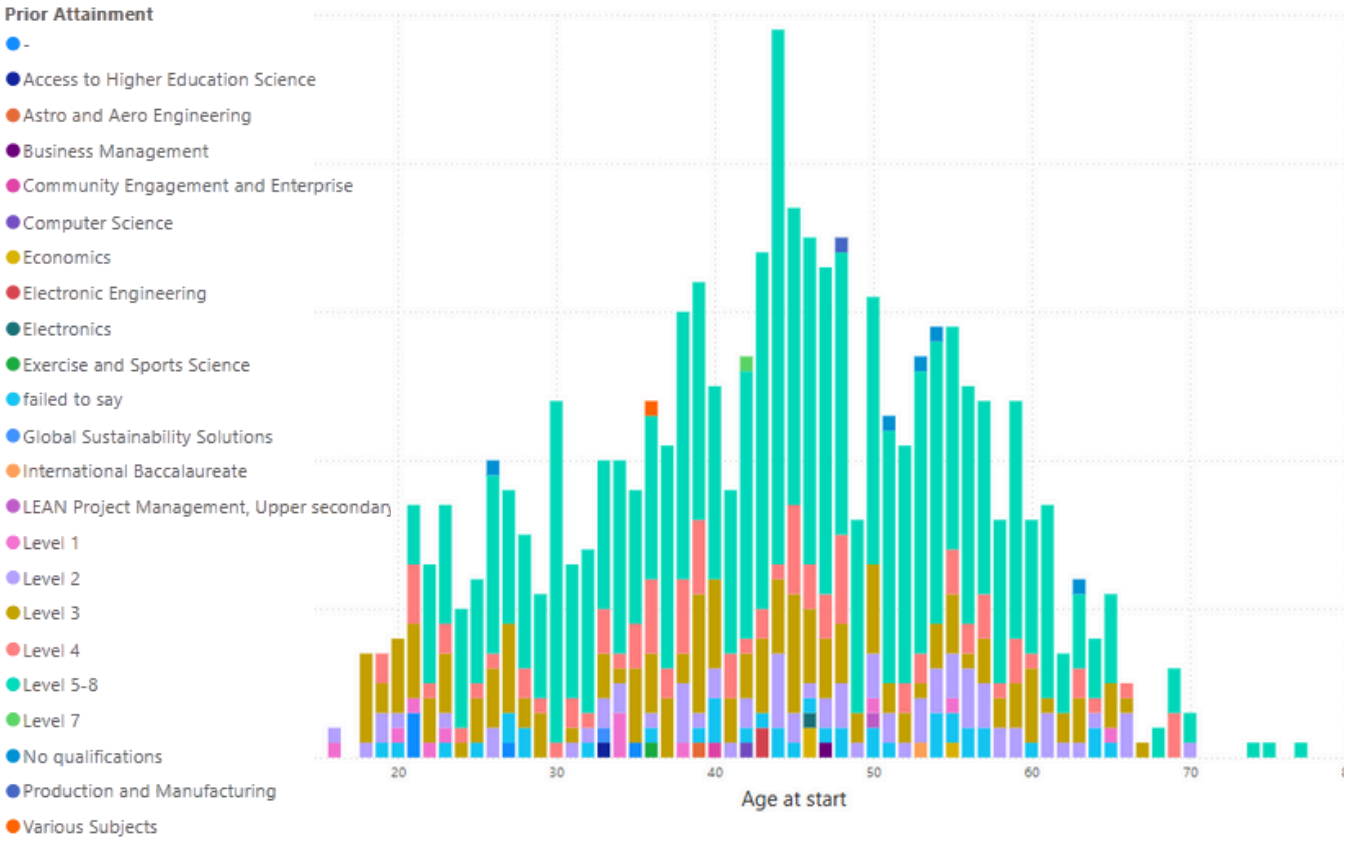
Age of participants at start of course; 2024-2025 [78/79]



[78] The anonymised information for this analysis has been provided by the Digital Futures Intelligence Team, within Truro Penwith College.
[79] Digital Futures: the team

Further analysis of prior attainment shows that most attendees already possessed at least a Level 1 qualification, with 88% holding Level 3 or above. Only 0.5% of participants had no previous qualifications, suggesting that the majority were already motivated learners, likely active in the workforce. Of the 987 respondents who disclosed their educational background, those without prior qualifications were spread across the full age range, from 16 to 80 years old.

Age of participants at start of course by prior academic achievements; 2024-2025 [78/79]



In sum, while national frameworks provide a foundation, Cornwall's experience underscores the need for hyperlocal adaptation. Cornwall's tech sector growth offers a compelling narrative of potential but realising this requires confronting entrenched educational deficits and infrastructural inequities. Without sustained investment in curriculum diversity, employer support, and data transparency, the region risks perpetuating a cycle where digital opportunity remains concentrated in urban centres, leaving rural communities—and their economies—behind.

[78] The anonymised information for this analysis has been provided by the Digital Futures Intelligence Team, within Truro Penwith College.
[79] Digital Futures: the team

SECTION 4:

ANSWERING THE KEY QUESTIONS

CONSEQUENCES OF NOT MEETING DEMAND

WHAT HAPPENS IF WE DON'T MEET THE SKILLS GROWTH DEMAND AGAINST INDUSTRY DEMAND

Failing to meet the digital skills growth demand in Cornwall will have significant negative consequences for both the local economy and the broader community. The assessment highlights several risks:

- **Economic Constraints:** Persistent digital skills deficits, especially at intermediate and advanced levels, will limit Cornwall's ability to leverage opportunities in emerging technology-driven industries. This can stifle economic growth and innovation, particularly in high-growth sectors like cybersecurity and IT, which are already experiencing skills shortages.

- **Labour Market Mismatch**: With approximately 76% of occupations in Cornwall requiring digital skills, a continued mismatch between available skills and job requirements will exacerbate unemployment and underemployment, especially given the region's aging population and higher economic inactivity rates.

- **Reduced Business Competitiveness:** 76% of businesses report that skills shortages harm profitability, and nearly half believe the education system does not adequately prepare young people for work. This means local businesses may struggle to grow, innovate, or even maintain operations, leading to lost revenue and competitiveness.

- **Digital Exclusion:** Without intervention, digital exclusion will persist, particularly affecting rural communities and those with lower digital literacy. This limits individual empowerment and access to opportunities, further entrenching social and economic inequalities.

- **Stunted Sectoral Growth:** High-growth sectors, especially those requiring advanced digital skills, will be constrained by labour shortages. This undermines the region's potential to become a digital leader within the South West and the UK.

WHAT IS THE COST OF NOT DOING ANYTHING?

The cost of inaction includes:

- Lost Economic Output: Skills shortages directly harm profitability for the majority of businesses, leading to reduced economic output and tax revenues.
- Widening Inequality: Digital exclusion will deepen, leaving significant portions of the population unable to participate fully in the digital economy or access essential services.
- Missed Investment: Without a skilled workforce, Cornwall risks missing out on inward investment and the expansion of high-value industries.
- Underutilised Talent: A mismatch between skills supply and demand results in underemployment, especially among self-employed individuals and those in rural areas.
- Long-term Decline: If the gap persists, Cornwall could fall further behind other regions, making it harder to catch up in the future and undermining the goals of the Good Growth Strategy.

WHAT ARE THE DIGITAL SKILLS NEEDED BY OUR EDUCATION PROVIDERS?

Education providers in Cornwall need to focus on both intermediate and advanced digital skills:

- Tier 2 (Intermediate Skills): These include working with computers and electronics, and using standard software packages like Microsoft Word and Excel. These skills are required in 52.5% of all occupations in Cornwall.
- Tier 3 (Specialist/Advanced Skills): These involve programming, engineering and technology, quality control analysis, and technology design. Such skills are linked to 23.6% of occupations and are critical for high-growth sectors.
- Soft Digital Skills: Increasing demand for competencies like cloud technology, digital problem-solving, and adaptability is noted, reflecting a shift from traditional technical skills to broader digital literacy and continuous learning.

WHAT IS THE GAP?

- There is a significant mismatch between the digital skills available in the workforce and those required by employers, especially at higher skill levels.
- Advanced coding and specialist digital skills are underrepresented, and existing training models do not adequately prepare individuals for these roles.
- Education systems are perceived as inadequately preparing young people for the digital workforce, with 48% of businesses expressing this concern.

WHAT IS THE DEMAND?

- Demand is high across both intermediate and advanced digital skills, with 76% of occupations in Cornwall requiring some level of digital competency.
- Growth sectors such as cybersecurity, IT, and technology-driven industries are particularly affected by shortages in advanced digital skills.
- There is also growing demand for digital skills in traditionally non-digital sectors, reflecting the horizontal integration of digital technology across the economy.

WHAT IS THE PICTURE?

- Cornwall's digital skills ecosystem is marked by persistent deficits, especially at intermediate and specialist levels.
- The region's labour market is more digitally driven than the South West average, but faces unique challenges due to its demographic profile, industry structure, and rural-urban divides.
- Despite a thriving tech sector, foundational barriers like digital exclusion, inadequate training investment, and limited support for small businesses remain major obstacles.
- National initiatives and data collection efforts are fragmented, making targeted intervention difficult without coordinated local action.

Aspect	Current state in Cornwall
Skills demand	76% of jobs require digital skills
Skills gap	Significant at intermediate and advanced levels
Education provider need	Focus on Tier 2 (intermediate) and Tier 3 (advanced) skills; improve soft digital skills training

Aspect	Current state in Cornwall
Cost of inaction	Lost economic output, widening inequality, missed investment, underutilised talent, long-term decline
Key Challenge	Data gaps, digital exclusion, inadequate training, sectoral mismatch

Cornwall must address these gaps through coordinated strategies involving education providers, businesses, and local authorities to ensure digital skills growth keeps pace with industry demand and unlocks the region's economic potential.

APPENDICES

Appendix 1: Cornwall Council - Good Growth projections table

Sector	Sector Category	Employment (2023)	% of employment	Lightcast Forecasts of employment change 2023-2033	Vacancies by sector 2024	% of total vacancies
Critical Minerals	Distinctive	900	0.4%	1.5%	76	0.2%
Marine	Distinctive	2,000	0.8%	-11.6%	131	0.3%
Renewable Energy	Distinctive	700	0.3%	12.4%	54	0.1%
Space & Digital	Distinctive	5,000	2.0%	10.5%	725	1.7%
Agri-Food	Core	23,000	9.2%	10.1%	875	2.1%
Creative & Cultural	Core	8,000	3.2%	15.0%	350	0.8%
Food & Drink Service	Core	24,000	9.6%	5.7%	2,026	4.9%
Visitor Economy	Core	58,000	23.2%	9.9%	5,215	12.5%
Accommodation	Foundational	13,000	5.2%	13.5%	1,268	3.0%
Administrative Services	Foundational	11,000	4.4%	1.9%	9,210	22.1%
Amusements	Foundational	1,250	0.5%	-1.2%	123	0.3%
Construction	Foundational	19,000	7.6%	7.0%	766	1.8%
Education	Foundational	17,000	6.8%	1.4%	1,457	3.5%
Health & Social Care	Foundational	36,000	14.4%	1.8%	6,728	16.1%
Manufacturing	Foundational	16,000	6.4%	10.6%	1,597	3.8%
Advanced Manufacturing	Foundational	6,000	2.4%	13.7%	264	0.6%
Other Services	Foundational	15,000	6.0%	14.0%	1,861	4.5%
Professional Business Services	Foundational	11,000	4.4%	5.8%	1,929	4.6%

Sector	Sector Category	Employment (2023)	% of employment	Lightcast Forecasts of employment change 2023-2033	Vacancies by sector 2024	% of total vacancies
Professional Business Services	Foundational	11,000	4.4%	5.8%	1,929	4.6%
Public Administration	Foundational	7,000	2.8%	1.2%	612	1.5%
Retail & Wholesale	Foundational	41,000	16.4%	-7.5%	3,270	7.8%
Transport & Logistics	Foundational	8,000	3.2%	4.2%	490	1.2%
Waste	Foundational	1,500	0.6%	20.5%	156	0.4%
Water	Foundational	900	0.4%	13.2%	108	0.3%

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CONTACT INFORMATION FOR FURTHER INQUIRIES

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