**Cheshire and Warrington
Local Enterprise Partnership**

Digital Skills in Cheshire and Warrington

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Brennan Wilson Ltd

Digital Skills in Cheshire and Warrington

This presentation:

National and international evidence

Employer demand
- Skills across the economy
- Digital occupations
- Digital industries

Skills Supply
- Young People – FE and apprenticeships
- Adults – FE and apprenticeships

Challenges and Opportunities

Digital Skills in Cheshire and Warrington

National and international evidence

National and international evidence

Demand for digital skills is accelerating

Covid-19 has accelerated the use of digital
- For the digital capability of individuals, over five years' worth of pre-pandemic progress was made in a single year during the pandemic
- For UK organisations, 87% of them reported accelerating their pace of digital adoption during the pandemic.

In the UK more than six million people are currently employed in occupations that are likely to change radically or disappear entirely by 2030.

Nine in ten businesses say that having a basic level of digital skills is important for employees at their organisation

Three in five employers expect their reliance on advanced digital skills to increase in the next five years.

One in four employers nationally saying that their current workforce lacks the basic digital skills that they need, rising to over one in three saying this for advanced digital skills.

National and international evidence

Digital inclusion remains a key issue

Access to the internet at home is linked to age, employment status and social class:
- 98% in social classes AB report as having access to the internet at home, compared to 82% in social classes DE.
- A third of unemployed people have Low or Very Low digital capability versus one in five who are in the workforce.
- 20% of households with a single pensioner have no connection to the internet.

Online learning is not an even playing field:
- There is overwhelming research evidence indicating a large disparity in the remote learning experiences of the most and least disadvantaged school students.
- Nationally, 14% of people with children aged 4-18 from social classes DE say that children in their household never have access at home to appropriate devices based on their schooling requirement - double the 7% from social classes AB responding in this way. This gives an estimate of c14,000 children in Cheshire and Warrington that never have access at home to appropriate devices for their schooling.

There are gender disparities
- Three in five young males are interested in a digital career, compared to just two in five young females
- Females account for 15% of A-level computing entries and 21% of Computing GCSE entries in England
- Nationally, 83% of people employed in digital occupations are male.

Digital Skills in Cheshire and Warrington

Employer demand:

- **Digital skills across the economy**

- **Digital occupations**

- **Digital industries**

Digital Skills in Cheshire and Warrington

Employer demand: digital skills across the economy

Demand for specific digital skills across the C&W labour market presents a mixed picture. Job postings data shows that between 1 in 6 (software and programming) and 1 in 50 (machining and manufacturing technology) employers are seeking such skills. Most specific digital skills carry a wage premium. Overall demand in the labour market has tended to increase or be stable (other than for data analysis skills and digital design) and, post- pandemic, employers a putting average or less effort into recruiting for these skills than for other types of skills.

Profile of demand for types of digital skill in Cheshire and Warrington					
Digital skills type	% of job postings seeking these skills	% of employers recruiting for these skills	Vacancies are easier to fill/average/ hard to fill	Demand has increased/ decreased/ stable	Pay is lower/ higher compared to the C&W average
Software and programming	6%	16%	Easier	Stable	Higher
Computing networking and support	3%	11%	Average	Increased	Higher
Data analysis	4%	13%	Average	Decreased	Higher
Digital design	4%	12%	Average	Decreased	Higher
CRM	3%	15%	Easier	Increased	Lower
Digital Marketing	2%	8%	Easier	Stable	Higher
Machining and manufacturing technology	2%	6%	Average	Increased	Higher
Source: Lightcast analyst job postings data					

Digital Skills in Cheshire and Warrington

Employer demand: digital occupations

There were 21,552 jobs in 2020 in digital occupations in C&W - 2% below what would be expected if C&W mirrored the national average. However, the numbers employed locally have recently grown faster than nationally (2.4% compared to 1% 2020-2022), with the fastest growth being in Warrington (5%). The highest level of average annual openings in digital occupations in Cheshire and Warrington is for Programmers and Software Development Professionals at just over 350 openings per annum.

Employment in 'Digital Occupations' in Cheshire and Warrington, by local authority and occupation, 2022			
Occupation	Cheshire West and Chester	Cheshire East	Warrington
Programmers and Software Development Professionals	1,225	2,221	1,357
IT Specialist Managers	882	1,290	1,088
Information Technology and Telecommunications Professionals n.e.c.	759	1,137	951
IT Operations Technicians	611	743	572
IT Business Analysts, Architects and Systems Designers	572	882	619
IT User Support Technicians	500	641	513
IT Project and Programme Managers	407	544	478
Information Technology and Telecommunications Directors	406	639	483
Web Design and Development Professionals	302	462	234
IT Engineers	270	228	246
Telecommunications Engineers	201	257	357
Total	6,135	9,044	6,899
Source: Lightcast Analyst			

| Change in employment in Digital Occupations in Cheshire and Warrington by occupation type and local authority, 2020-2022			
Occupation	Cheshire West and Chester	Cheshire East	Warrington
IT Engineers	3%	(2%)	(1%)
Web Design and Development Professionals	2%	4%	6%
IT Project and Programme Managers	2%	2%	5%
IT Operations Technicians	2%	3%	4%
Information Technology and Telecommunications Professionals n.e.c.	2%	2%	6%
Information Technology and Telecommunications Directors	1%	2%	5%
IT Business Analysts, Architects and Systems Designers	1%	2%	5%
IT User Support Technicians	0%	1%	3%
Programmers and Software Development Professionals	0%	2%	8%
IT Specialist Managers	0%	1%	4%
Telecommunications Engineers	0%	(5%)	(1%)
Total	1%	2%	5%
Source: Lightcast Analyst			

Every digital occupation has higher median wages than average. Half have an annual wage premium of more than £17k. Post-pandemic levels of demand have been broadly stable at 2-3k job postings per month. The highest demand has been for Programmers and Software Development Professionals; IT Business Analysts, Architects and Systems Designers; and IT User Support Technicians. The volume of vacancies for these three occupations is higher than would be expected from the number of digital jobs. This suggests that there may be higher levels of churn for these digital occupations than for others.

Median wages and educational level associated with Digital Occupations in Cheshire and Warrington, 2022		
Occupation	Education Level	Median Wages
Information Technology and Telecommunications Directors	Honours degree	£45,678
IT Specialist Managers	Honours degree	£43,063
IT Project and Programme Managers	Honours degree	£46,988
IT Business Analysts, Architects and Systems Designers	Honours degree	£44,513
Programmers and Software Development Professionals	Honours degree	£42,865
Web Design and Development Professionals	Honours degree	£34,254
Information Technology and Telecommunications Professionals n.e.c.	Honours degree	£33,349
IT Operations Technicians	Level 3	£29,426
IT User Support Technicians	Level 3	£27,032
Telecommunications Engineers	Level 3	£31,665
IT Engineers	Honours degree	£33,667
Source: Lightcast Analyst		

Digital occupations in Cheshire and Warrington: % of digital job postings vs % of digital jobs

■ % of Digital Occupations Jobs   ■ % of Digital Occupations postings
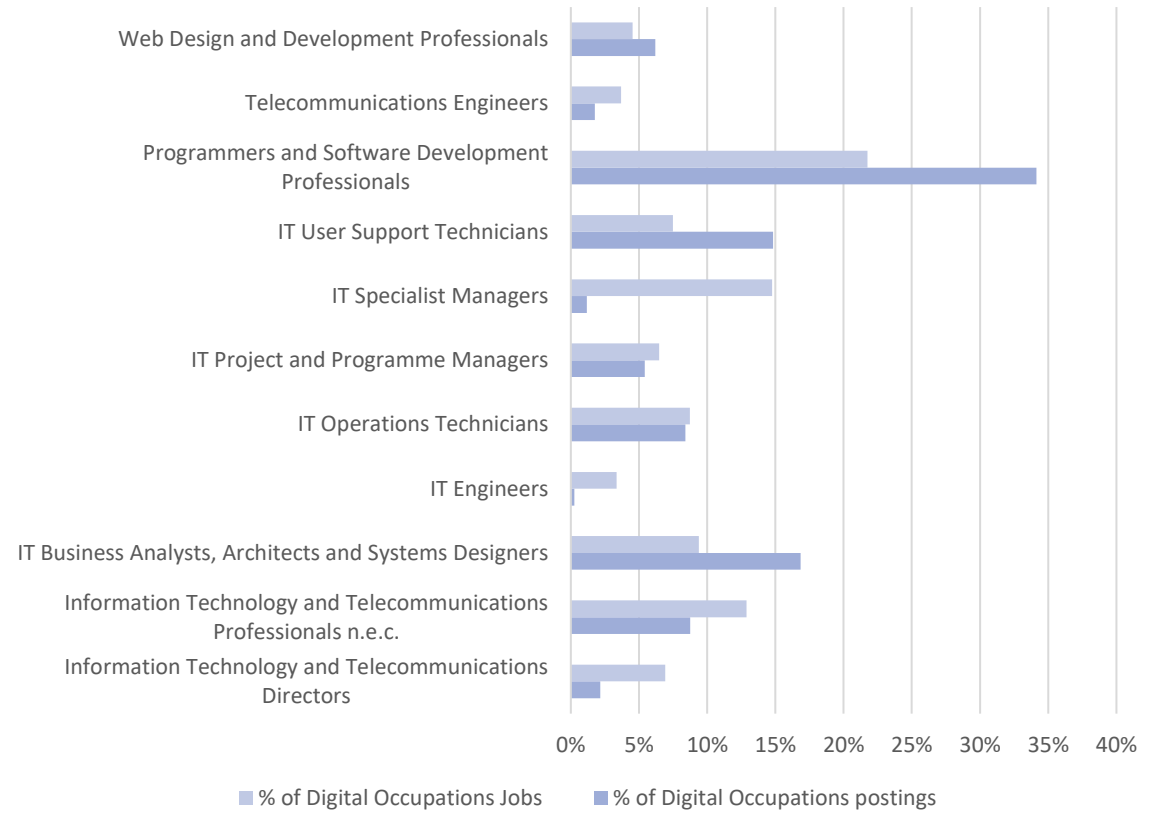
Digital Skills in Cheshire and Warrington

Employer demand: digital industries

In 2021, the Digital Sector (as defined by DCMS) employed 21,717 people in Cheshire and Warrington, which was 11% below the level of employment that might be expected from national employment levels for the sector. However, with an employment growth of 2.6% between 2020 and 2022, the sector grew more rapidly than was the case nationally where growth in this period was 1%. Employment is concentrated in a handful of locations. These locations include:

- Parts of Chester City Centre

- Chester Business Park

- Various business parks in Warrington adjacent to (south of) the M62 between junctions 8 and 11.

- Wilmslow

- Crewe Industrial Estate

Digital industries (DCMS definition) in Cheshire and Warrington by LSOA, 2020

Number of employees in digital industries
- 0 - 5
- 5 - 20
- 20 - 40
- 40 - 70
- 70 - 120
- 120 - 220
- 220 - 320
- 320 - 495
- 495 - 740
- 740 - 1090
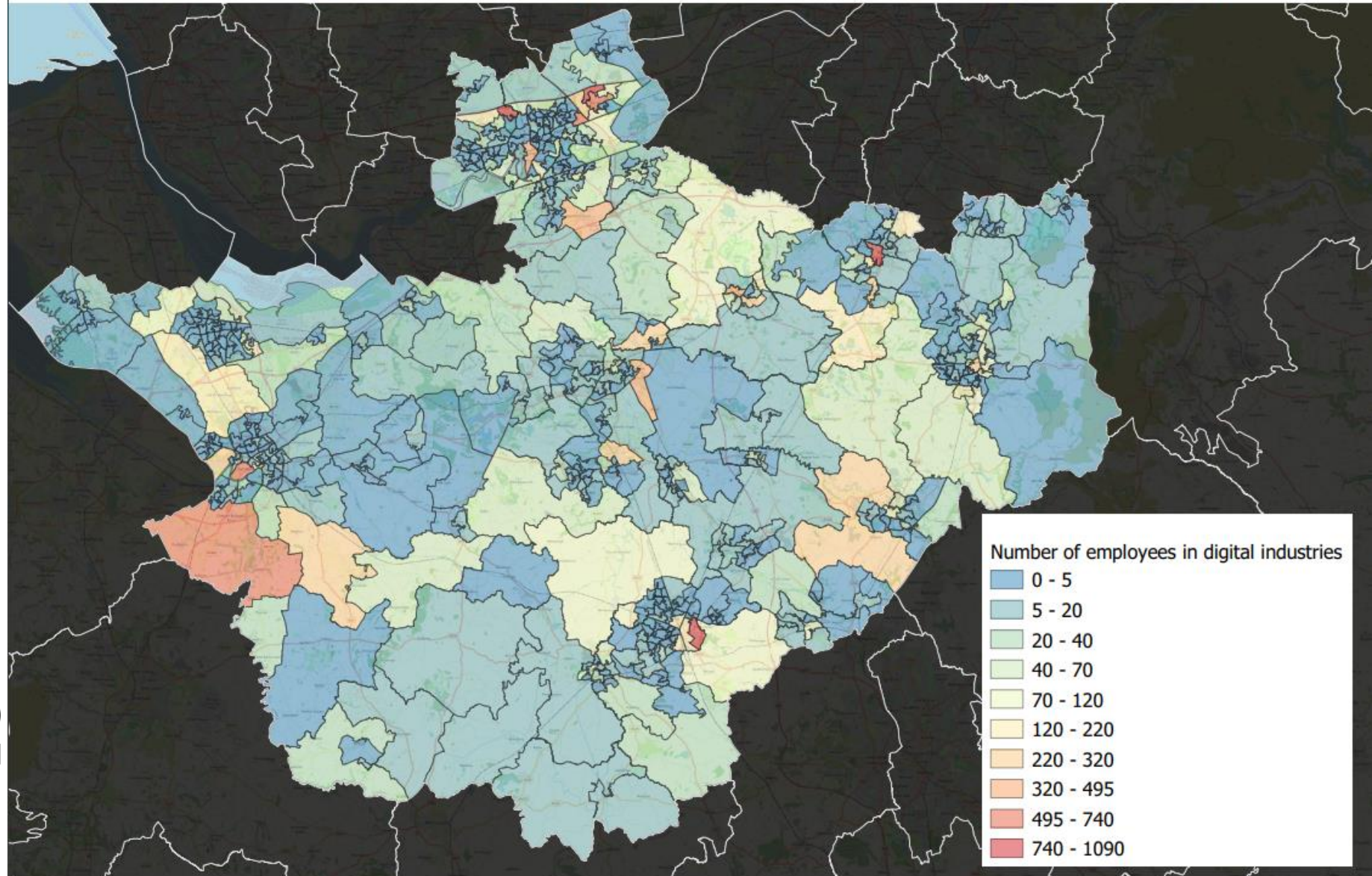
Map by Brennan Wilson Ltd in QGIS. Data from BRES, OS and OpenStreetmap

The number of employees in digital industries is about what would be expected from national employment shares in both Cheshire East (slightly below) and Warrington (slightly above). Employment volume in digital industries is only two thirds of what might be expected in Cheshire West and Chester. The Digital Sector in Cheshire and Warrington is dominated by companies with between 1 and 4 employees, accounting for 78% of all businesses in the sector. However, this size band constitutes 87% of the Digital Sector in England. This equates to a shortfall of c500 companies sized 1-4 in C&W.

LQ and employer volumes of the digital industries in Cheshire and Warrington by local authority 2022		
County/Unitary Authority Name	2022 Location Quotient	2021 Establishments
Cheshire East	0.95	1,526
Warrington	1.07	765
Cheshire West and Chester	0.67	997
Source: Lightcast Analyst		

Cheshire and Warrington Digital Sector Business Size
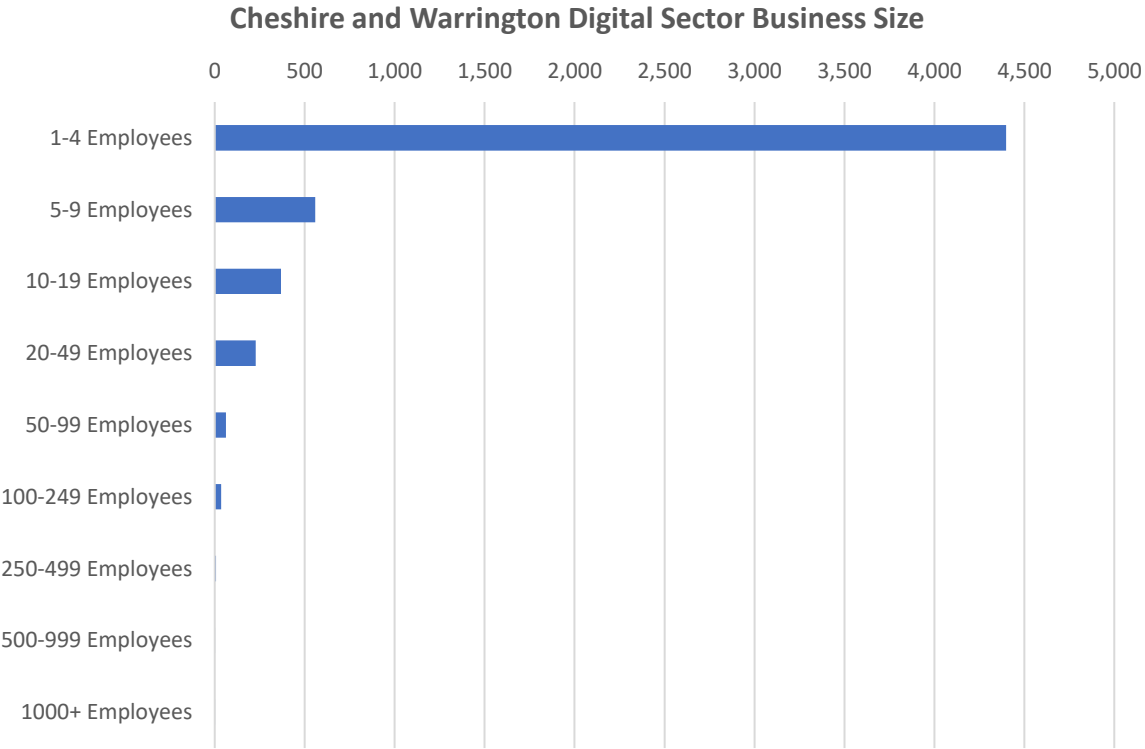
# Digital Skills in Cheshire and Warrington

Skills supply: young people

# Digital Skills in Cheshire and Warrington

Skills supply: young people in FE

Young people's digital skills learning at Level 2 saw a reduction of 22% in the number of enrolments 2018/19-2020/21. There was stark gender disparity in Level 2 enrolments, with 86% being by males. There was also a 7% decline in enrolments on young people's Level 3 digital learning aims in sharp contrast to a growth of 8% for all learning aim enrolments at Level 3. 28% of digital L3 enrolments were by females.

16-18 enrolments on Level 2 digital learning aims in C&W, 2018/19 - 2020/21
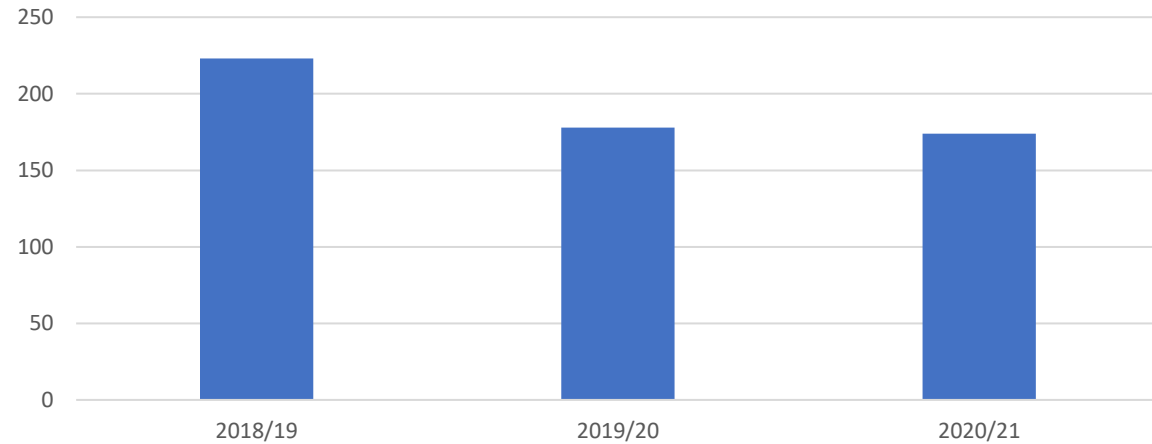
Level 3 16-18 enrolments on digital learning aims in C&W , 2018/19-2020/21
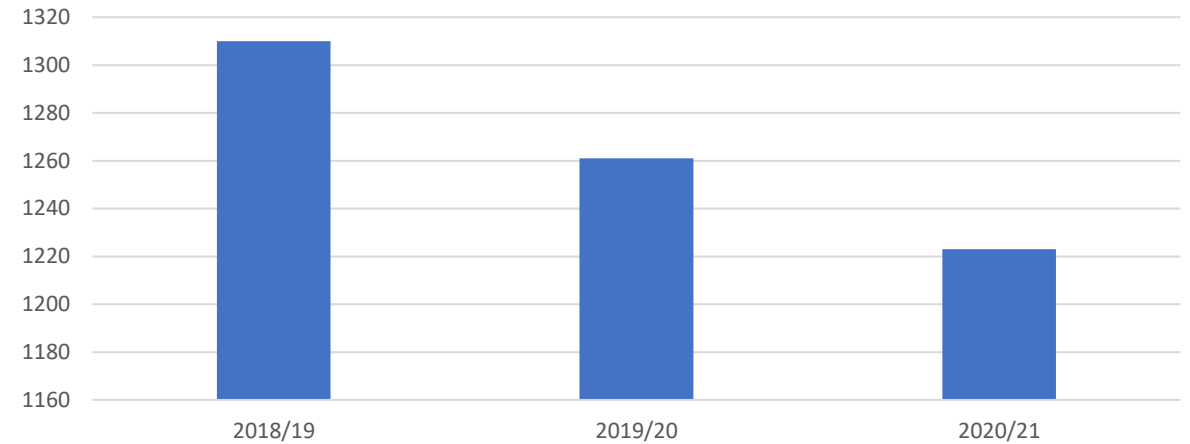
Level 2 16-18 enrolments on digital learning aims, by gender, 2018/19-2020/21				
	2018/19	2019/20	2020/21	Total
Female	31	22	26	79
Male	192	156	148	496
Total	223	178	174	575
Source: ESFA localities datacube (residency)				

| Level 3 16-18 enrolments on digital learning aims, by gender, 2018/19-2020/21				
	2018/19	2019/20	2020/21	Total
Female	355	348	367	1070
Male	955	913	856	2724
Total	1310	1261	1223	3794
Source: ESFA localities datacube (residency)				

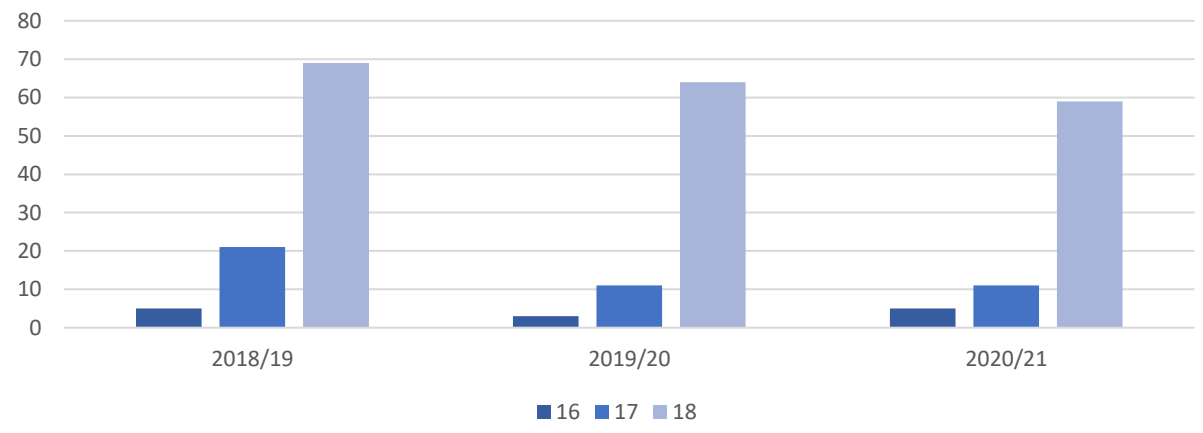# Digital Skills in Cheshire and Warrington

Skills supply: young people in apprenticeships

2018/19- 2020/21, the number of C&W young people starting on a digital apprenticeship dropped from 95 to 75, a decline of 21%. The number of employers starting 16-18 year olds declined from 64 to 45. Digital apprenticeships are not been an option for school leavers at 16 with only 5 young people aged 16 starting in 2020/21. There were 32 providers with digital apprenticeship starts by 16–18-year-olds resident in C&W in 2020/21. 87% of these starts were with providers located outside of C&W.
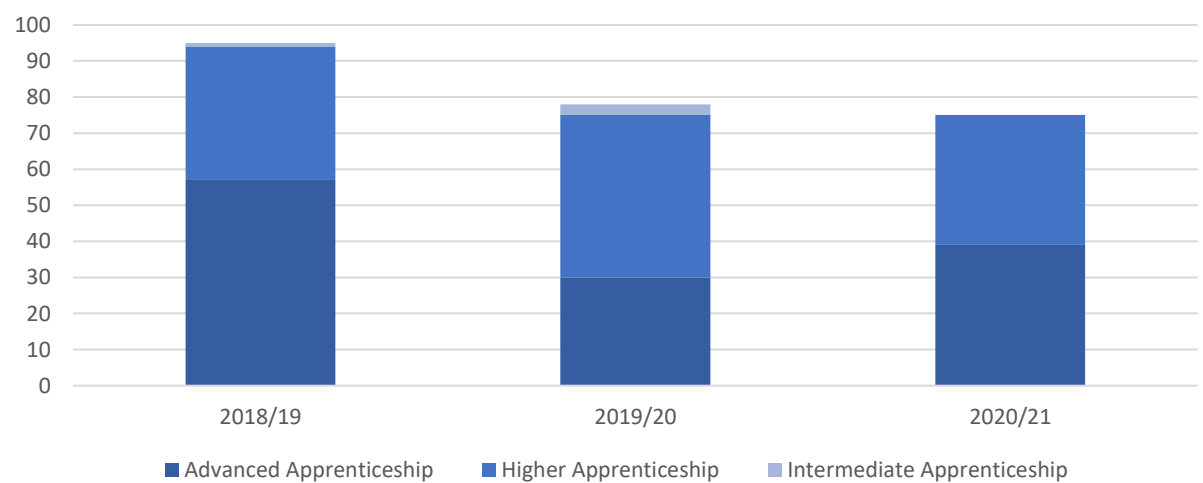

16-18 starts on digital apprenticeships by C&W residents , 2018/19-2020/21
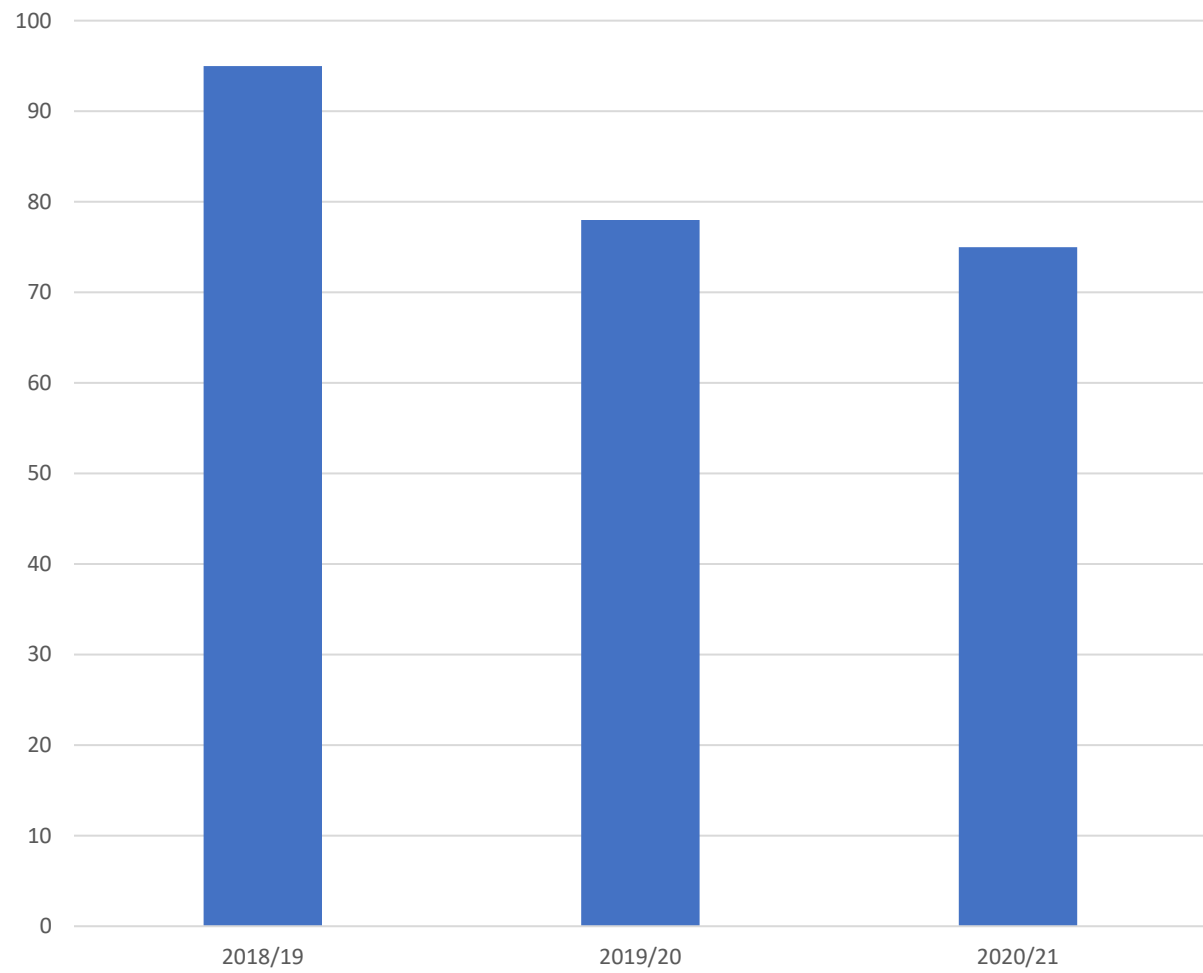
16-18 digital apprenticeship starts by C&W residents by age of learner, 2018/19-2020-21

■ 16 ■ 17 ■ 18

16-18 apprenticeship starts by C&W residents by level, 2018/19-2020/21

■ Advanced Apprenticeship ■ Higher Apprenticeship ■ Intermediate Apprenticeship

# Digital Skills in Cheshire and Warrington

Skills supply: adults

Digital Skills in Cheshire and Warrington

Skills supply: adults in FE

At Entry Level and Level 1 enrolments by adults halved between 2018/19 and 2020/21. The places with the highest levels of enrolment by adults on Entry and Level 1 digital learning aims were in parts of Warrington, parts of Ellesmere Port, parts of Macclesfield, Winsford, a couple of wards in Chester, a couple of wards in Crewe, and to the east of Congleton. 77% of adult learners on Entry and Level 1 digital learning aims were not in paid employment, were looking for work and were available to start work. Enrolments on digital Level 2 remained stable between 22018/19 and 2020/21. There were relatively low levels of enrolments at Level 2 in Colshaw Farm, the south of Macclesfield and much of Crewe, particularly east of the main rail line.

Enrolments on Entry and Level 1 digital learning aims by adults in C&W, 2018/19-2020/21

Enrolments on Entry and L1 aims, 2018-21
- 0 - 2
- 3 - 5
- 5 - 7
- 7 - 10
- 10 - 13
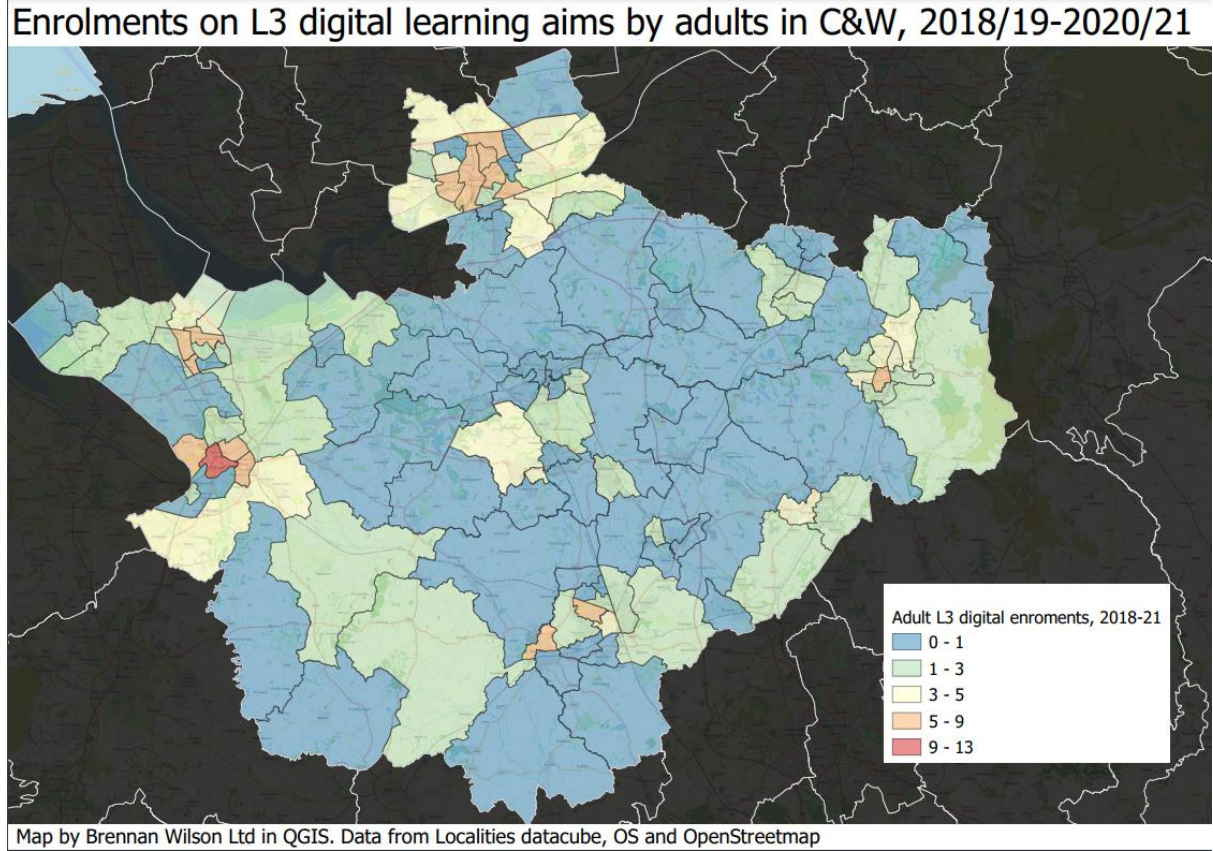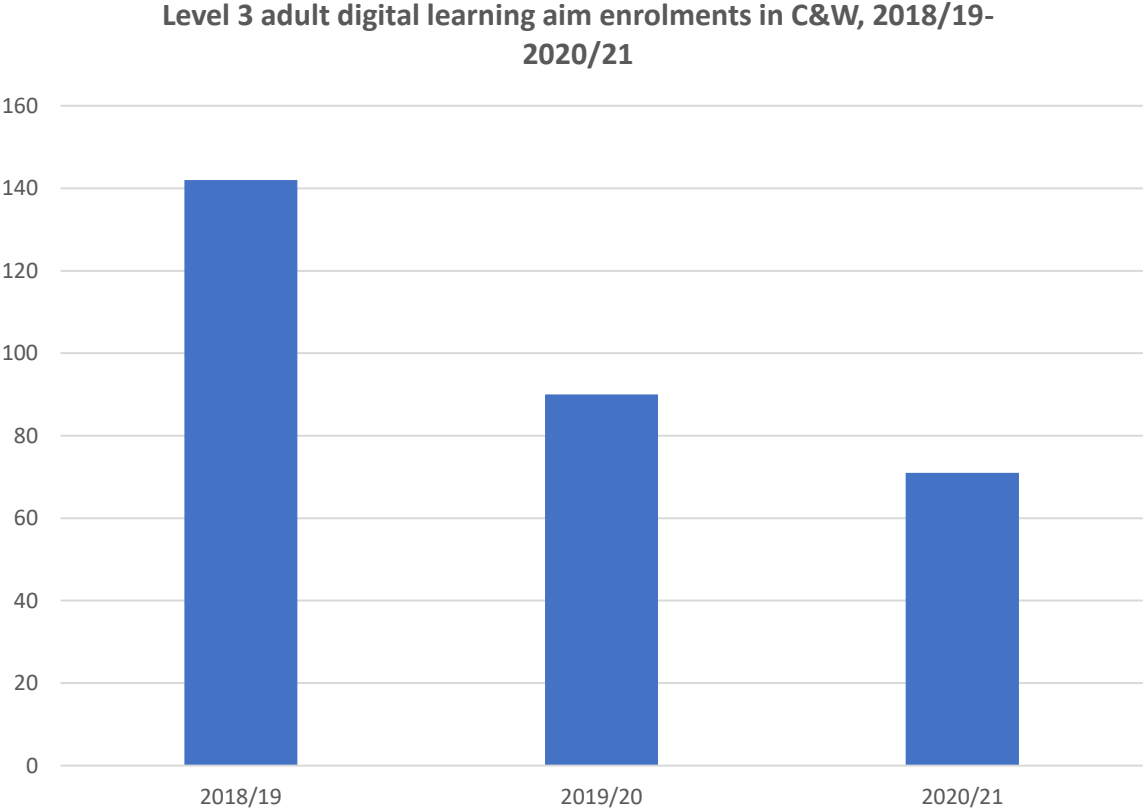- 13 - 16
- 17 - 23
- 23 - 30
- 31 - 37
- 38 - 87
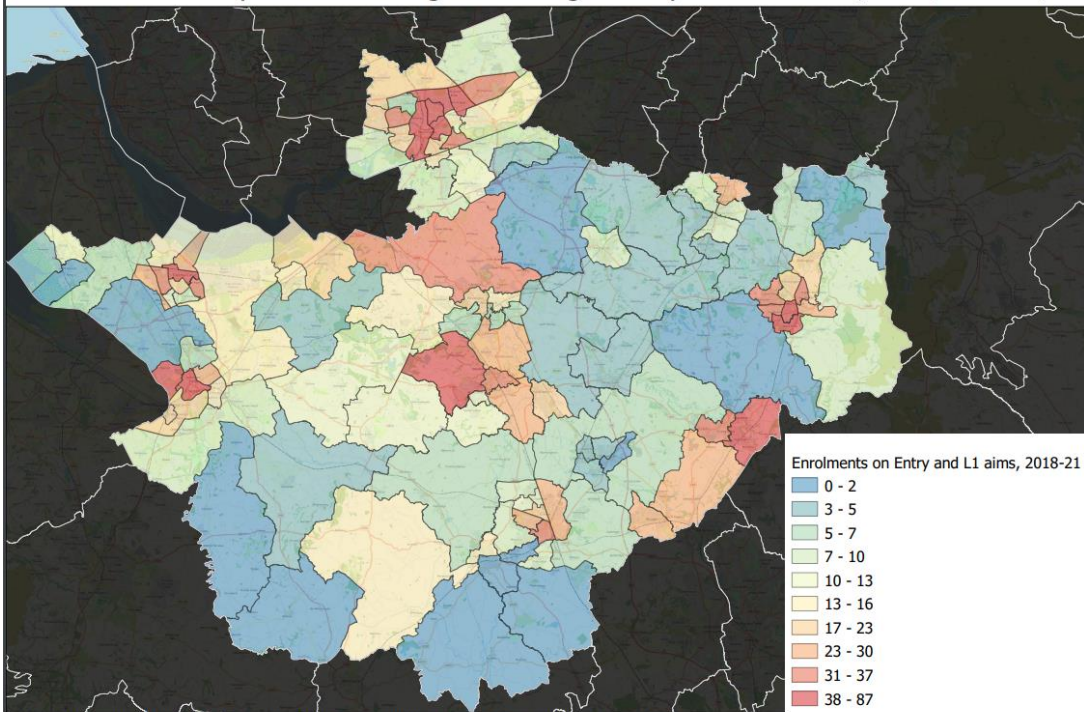
Map by Brennan Wilson Ltd in QGIS. Data from ESFA datacube, OS and OpenStreetMap

Enrolments on Level 2 digital learning aims by adults in C&W, 2018/19-2020/21

Enrolments on L2 digital aims
- 0 - 2
- 2 - 4
- 4 - 5
- 5 - 6
- 7 - 8
- 8 - 11
- 11 - 14
- 15 - 18
- 18 - 22
- 22 - 63
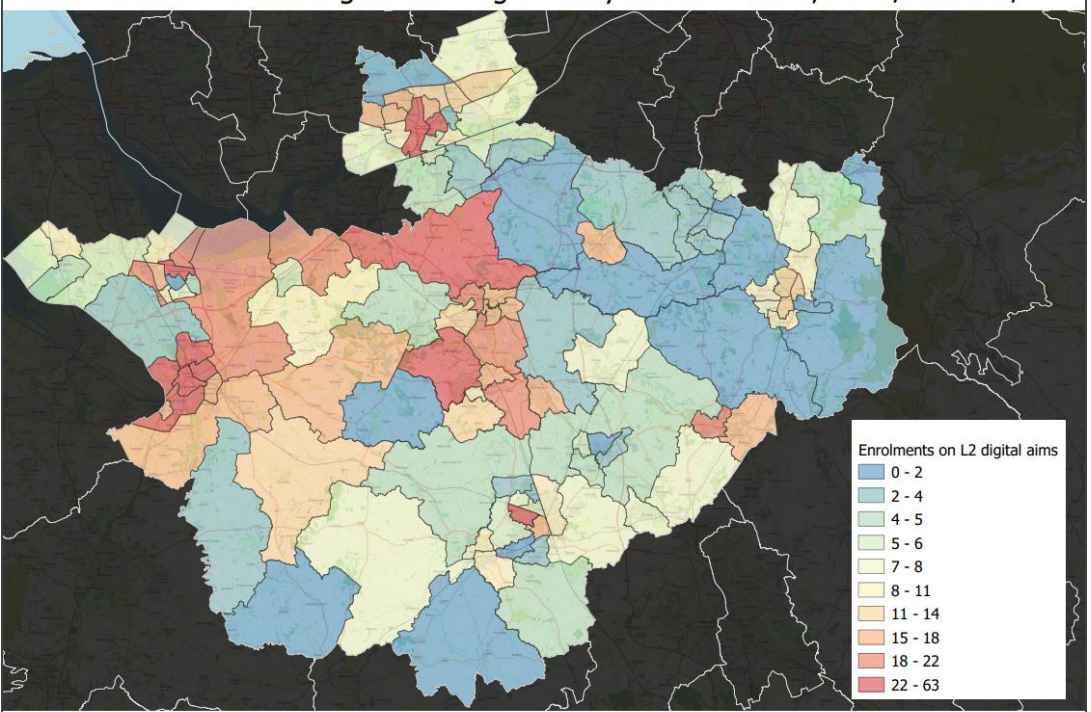
Map by Brennan Wilson Ltd in QGIS. Data from ESFA datacube, OS, OpenStreetMap

The volume of digital Level 3 learning aims enrolled on by adults in FE in Cheshire and Warrington is very low and getting lower. Between 2018/19 and 2020/21, digital level 3 enrolments by adults halved from an already very low 142 to 71. Females accounted for only a quarter of adult digital learning enrolments at Level 3. Spatial analysis reveals deserts of L3 digital provision for adults including places with relatively high concentrations of adults in low paid work like Crewe, east Congleton, Winsford, and Colshaw Farm.


Level 3 adult digital learning aim enrolments in C&W, 2018/19-2020/21

Enrolments on L3 digital learning aims by adults in C&W, 2018/19-2020/21

Adult L3 digital enroments, 2018-21
0 - 1
1 - 3
3 - 5
5 - 9
9 - 13

Map by Brennan Wilson Ltd in QGIS. Data from Localities datacube, OS and OpenStreetmap
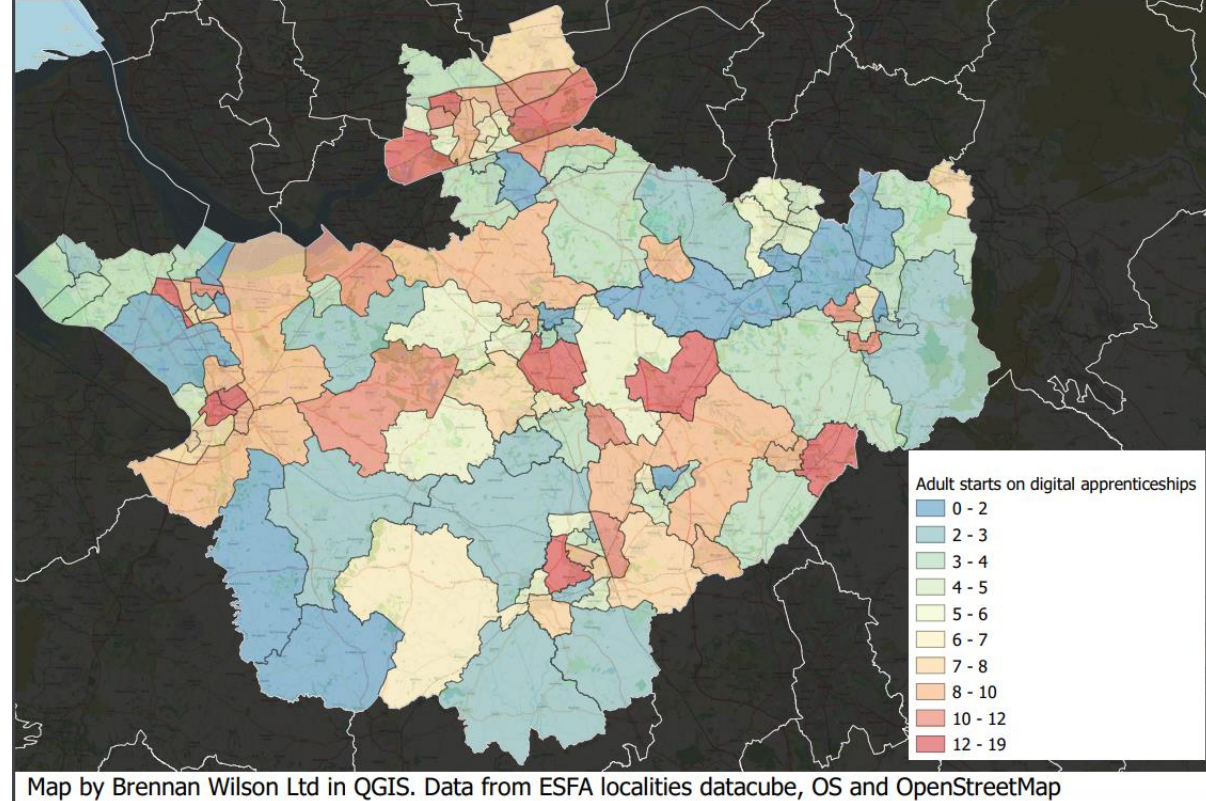
Digital Skills in Cheshire and Warrington

Skills supply: adults in apprenticeships

The number of starts by adults resident in C&W on digital apprenticeships saw a significant increase of 81% between 2018/19 and 2020/21, compared with a 9% decline for all apprenticeships. There was also a 60% growth in employers starting adult digital apprenticeships. Participation in digital adult apprenticeships covered a much wider geography than the areas where employment in digital industries is concentrated, or places where travel to work in digital industries is straight forward. Similar to the picture for young people, the large majority of starts on digital apprenticeships by adults resident in Cheshire and Warrington were with providers headquartered out of area

Adult starts on digital apprenticeships in C&W, 2018/19-2020/21
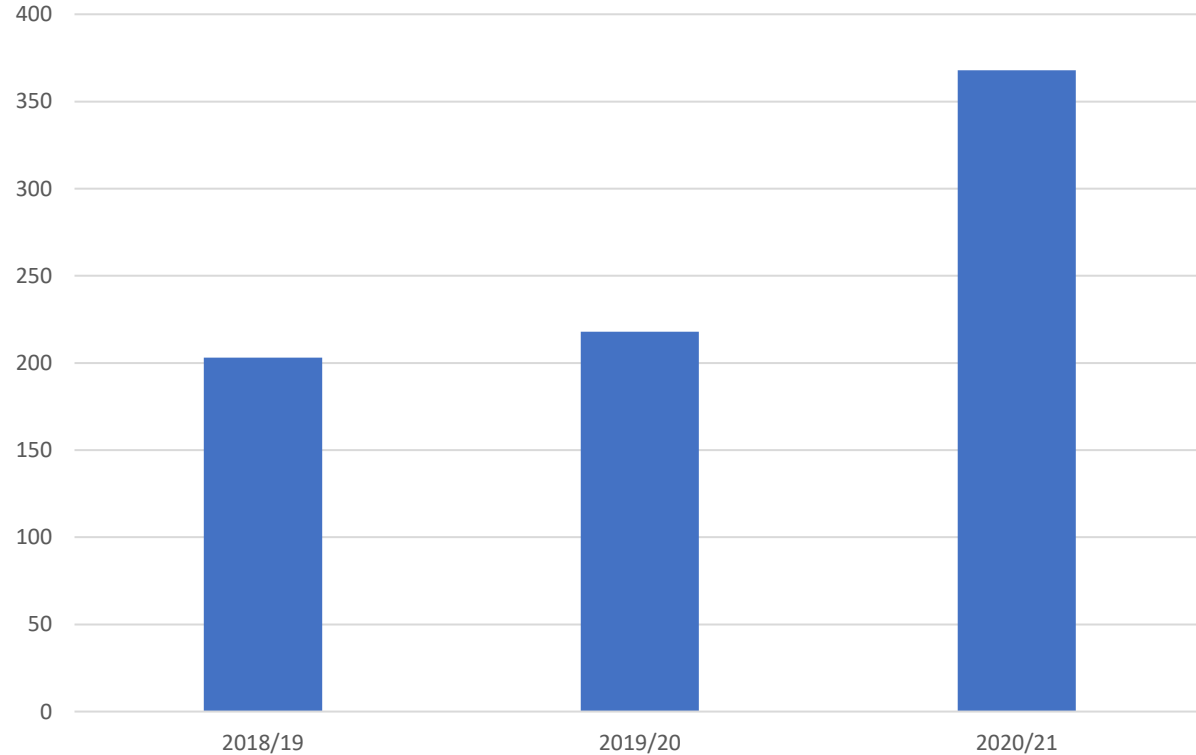
Residency of adult starters on digital apprenticeships in C&W, 2018/19 - 2020/21

Adult starts on digital apprenticeships
- 0 - 2
- 2 - 3
- 3 - 4
- 4 - 5
- 5 - 6
- 6 - 7
- 7 - 8
- 8 - 10
- 10 - 12
- 12 - 19

Map by Brennan Wilson Ltd in QGIS. Data from ESFA localities datacube, OS and OpenStreetMap

Digital Skills in Cheshire and Warrington

Challenges and opportunities

Challenges and opportunities

Challenges	Opportunities
There are fewer people employed in digital industries and digital occupations in C&W than there should be	There is an opportunity to support the creation of new small digital businesses, particularly in Cheshire West and Chester.
There is gender disparity in both employment, and learning on skills programmes in Cheshire and Warrington	Recent employment growth in digital industries and digital occupations has been faster in C&W than nationally
Digital exclusion is linked to age, class and employment status.	Employment requiring digital skills, in digital occupations and in digital industries offers a wage premium
There are an estimated 14k children in C&W that never have access to suitable technology to learn from home.	Demand for digital is increasing and will continue to do so
The volume of young people acquiring digital skills in FE and apprenticeships in C&W is declining and digital apprenticeships has not been an option for school leavers at 16.	Over three quarters of adults on Level 1 digital programmes are looking for work and available to start work
Apprenticeship delivery by C&W based providers is low	The introduction of discrete programmes for adults (boot camps, night school) can address the desserts of adult FE Level 3 provision that currently exist in C&W