

Cheshire and Warrington Labour Market - Digital Route

The Cheshire and Warrington Data and Labour Market Steering Group have commissioned this work which takes the qualification pathways that have been developed by the Institute for Apprenticeships and Technical Education, mapping different occupations against them and contextualising them for the Cheshire and Warrington economy.

Other Pathways include:

- Care Route
- Construction – Building Services Engineering Pathway
- Construction – Design, Surveying & Planning Pathway
- Construction – Onsite Construction Pathway
- Logistics Pathway
- Science Pathway
- Transport Pathway

The pathways will be updated as necessary and, by the end of October, all the draft pathways will be posted on the LEP website.

Cheshire and Warrington Briefing – Digital Occupations

Introduction

This briefing covers some key facts about Digital Occupations in Cheshire and Warrington:

- What sort of digital jobs are there?
- How many digital jobs are there and what do these jobs pay?
- Which employers are recruiting and where are jobs being advertised?
- What sort of skills are employers looking for?
- What sort of apprenticeships are available?
- What sort of courses can young people and adults do?

Digital Route Description

There are three types of jobs in Digital occupations. They are:

- Digital Business Services
- Digital Production, Design and Development
- Digital Support and Services

The types of Digital jobs are described in the table below

| Jobs in the Digital Route | | | |
|---|--|---|--|
| | Technical Occupations | Higher Technical Occupations | Professional Occupations |
| Digital Business Services | <ul style="list-style-type: none">• Data Analyst Technician• Digital Solutions Technician | <ul style="list-style-type: none">• Data Analyst Advanced Technician• Digital Solutions Advanced Technician | <ul style="list-style-type: none">• Business Information Professional• Digital Solutions Professional |
| Digital Production, Design and Development | <ul style="list-style-type: none">• Software Development Technician | <ul style="list-style-type: none">• Software Development Advanced Technician | <ul style="list-style-type: none">• Software Development Professional |
| Digital Support and Services | <ul style="list-style-type: none">• IT Support and Services Technician | <ul style="list-style-type: none">• Cyber Security Technician• Hardware, Networks, and Infrastructure Technician• IT Systems Technician | <ul style="list-style-type: none">• Professional Occupations Cyber Security |

A fuller description of the occupations in Digital Route¹ can be found at Annex 1

¹ This is the Digital Route as described in the Institute for Apprenticeships and Technical Education (IFATE) Occupational Maps <https://www.instituteforapprenticeships.org/occupational-maps/>



Digital jobs in Cheshire and Warrington²

- In 2021, there were over 20,000 Digital jobs in Cheshire and Warrington³.
- About 6,000 of these jobs were at Level 3, and about 15,000 required qualifications at Level 4+.
- Over the next ten years, about a third of these jobs will need to be filled by new entrants because of retirements and similar.
- All Digital jobs have a very low exposure to the risk of automation.
- There are about the same number of jobs like this in Cheshire and Warrington as would be expected from the national average.

Digital job wages in Cheshire and Warrington

The table below sets out details on job numbers and the median wages that different occupations that fall into the Digital route attract in Cheshire and Warrington.

| Job Numbers and median wages of Digital occupations in Cheshire and Warrington | | |
|--|-----------|--------------|
| | 2021 Jobs | Median Wages |
| IT Operations Technicians | 1,787 | £29,629.00 |
| IT User Support Technicians | 1,613 | £29,715.00 |
| Business and Related Associate Professionals n.e.c. | 2,867 | £27,497.00 |
| Information Technology and Telecommunications Directors | 1,449 | £70,018.89 |
| IT Specialist Managers | 3,092 | £47,978.00 |
| IT Project and Programme Managers | 1,304 | £42,714.37 |
| IT Business Analysts, Architects and Systems Designers | 1,918 | £42,628.00 |
| Web Design and Development Professionals | 870 | £32,737.68 |
| Information Technology and Telecommunications Professionals n.e.c. | 2,516 | £36,701.50 |
| Management Consultants and Business Analysts | 3,335 | £34,957.00 |
| Actuaries, Economists and Statisticians | 483 | £40,001.47 |
| <i>Source: EMSI Analyst</i> | | |

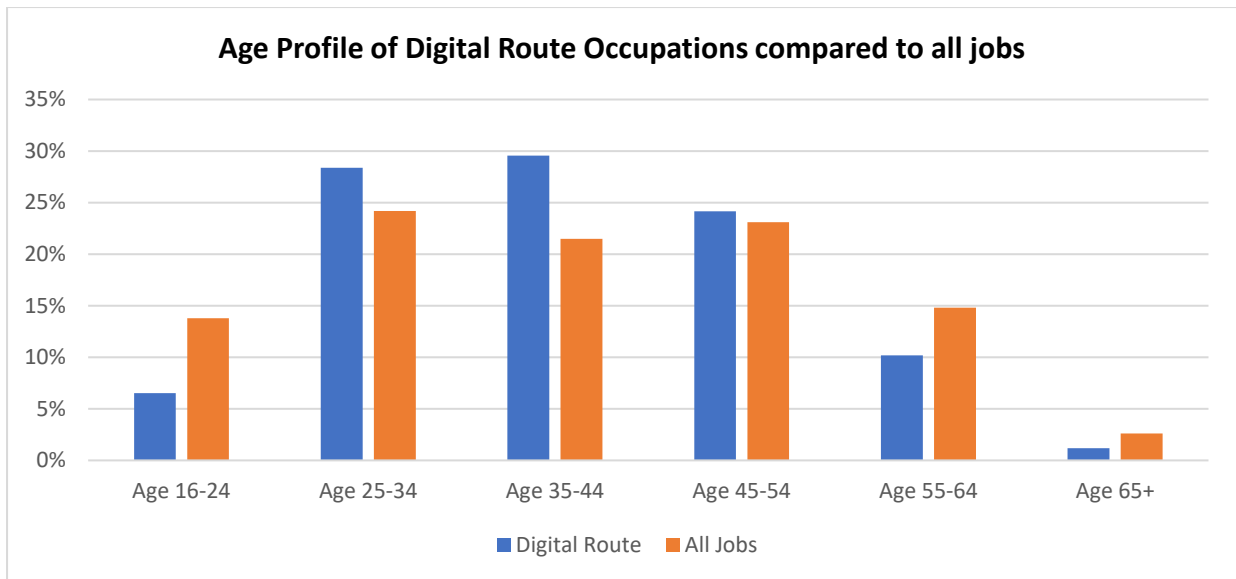
Age profile of Digital jobs

There are more people in their mid-20s, 30s and 40s employed in Digital occupations and fewer young people and aged 55+ than is the case for all jobs.

² For mapping of the Institute for Apprenticeships and Technical Education (IFATE) Digital route to 4-digit SOC codes see Annex 2.

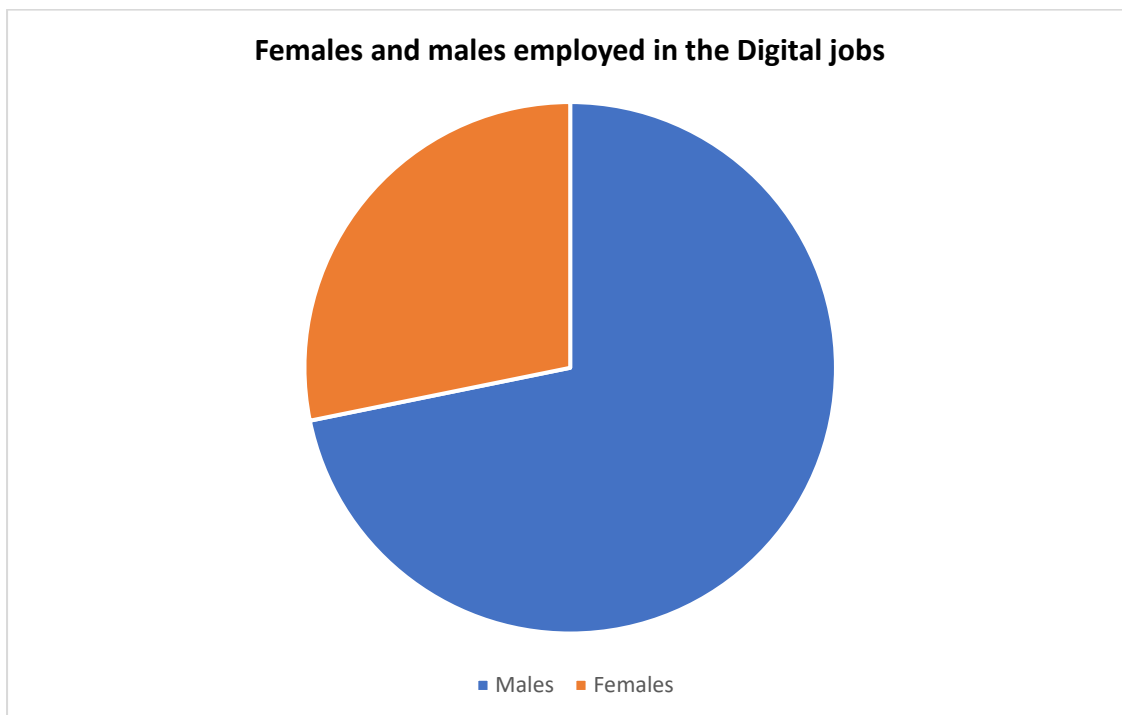
³ Data in this section from EMSI Analyst.





Source: EMSI Analyst

Gender Profile of Digital jobs



Source: EMSI Analyst

Job postings⁴

- In the last five years, there have been about 23.5k unique job postings for this type of role in C&W (excluding staffing companies) with about 8.5k in Cheshire West and Chester, 9k in Cheshire East, and 6k in Warrington.

⁴ All data in this section and the next is from EMSI Analyst.



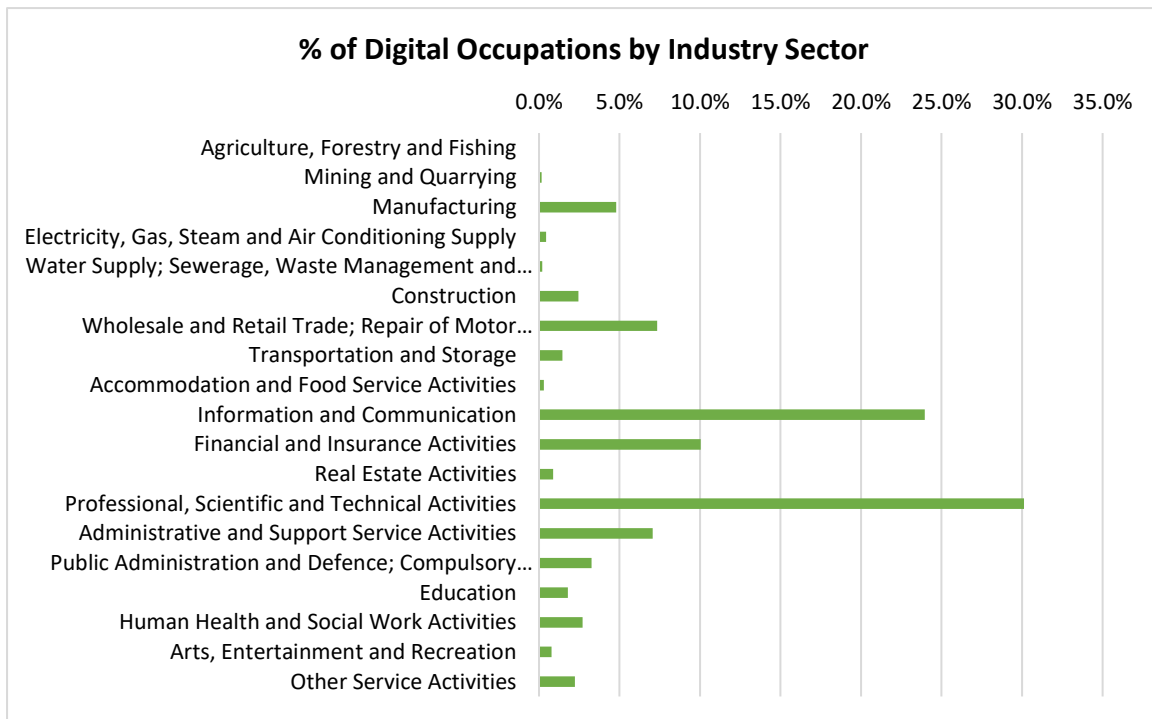
- These jobs were mainly advertised in Warrington (5,643); Chester (3,908); Macclesfield (1,956); Crewe (1,823); Northwich (2,059); Ellesmere Port (463); Knutsford (2,570); and Wilmslow (1,068).
- The average number of times a role like this gets advertised in Cheshire and Warrington has increased from 7 in 2016 to 8 in 2021. This may indicate that employers are finding these roles slightly harder to fill recently.
- Top recruiters in Cheshire and Warrington (excluding staffing agencies) include Barclays PLC, Adria Solutions Ltd, AstraZeneca, Bank of America Corporation, NHS, TEK Systems Ltd, and Applause IT Ltd.
- The most frequently advertised job titles in Cheshire and Warrington are for Web Developers, Business Analysts, IT Support technicians, Service Desk Analysts, Front End Developers, PHP Developers, Solutions Architects, Network Engineers, Project Managers, and Data Analysts.

Hard Skills sought by employers

| Hard skills sought by employers for Digital jobs in C&W | |
|---|-----------------------|
| Skill | Frequency in Postings |
| Agile Methodology | 11% |
| SQL (Programming Language) | 11% |
| JavaScript (Programming Language) | 9% |
| Cascading Style Sheets (CSS) | 8% |
| Information Technology Infrastructure Library | 7% |
| HyperText Markup Language (HTML) | 6% |
| Data Analysis | 6% |
| Business Requirements | 6% |
| Project Management | 6% |
| Automation | 6% |
| Stakeholder Management | 6% |
| C# (Programming Language) | 5% |
| Auditing | 5% |
| Information Technology Infrastructure Library | 5% |
| Business Process | 5% |
| Financial Services | 5% |
| .NET Framework | 4% |
| Key Performance Indicators (KPIs) | 4% |
| Software Development | 4% |
| Change Management | 4% |
| PHP (Scripting Language) | 4% |
| Source: EMSI Analyst | |



Which industry sectors in Cheshire and Warrington employ people in Digital Occupations?



Source: EMSI Analyst

Apprenticeships

In the past five years, there have been 687 apprenticeships advertised in occupations in Digital occupations in Cheshire and Warrington. Over this time, more than 50 have been advertised in each of Warrington, Macclesfield, Crewe, Chester, and Northwich.

In the academic year 2019/20, 315 residents of Cheshire and Warrington started an apprenticeship in a digital occupation. The most popular apprenticeships were in the following areas:

- Digital and Technology Solutions Professional
- Digital Marketer
- IT and Telecoms Professionals
- Infrastructure Technician
- Data Analyst



| Apprenticeships in Digital occupations started by people in Cheshire and Warrington 2019-2020 | | | | |
|--|---------|---------|----------|-------|
| Apprenticeships | Level 2 | Level 3 | Level 4+ | Total |
| Digital and Technology Solutions Professional (integrated degree) | | | 70 | 70 |
| Digital Marketer | | 58 | | 58 |
| IT and Telecoms Professionals | 40 | 3 | 2 | 45 |
| Infrastructure Technician | | 42 | | 42 |
| Data Analyst | | | 22 | 22 |
| Digital and Technology Solutions Specialist (integrated degree) | | | 13 | 13 |
| Cyber Security Technologist | | | 10 | 10 |
| IS Business Analyst | | | 10 | 10 |
| Software Development Technician | | 10 | | 10 |
| Network Engineer | | | 8 | 8 |
| Unified Communications Technician | | 8 | | 8 |
| Software Tester | | | 6 | 6 |
| Grand Total | 40 | 129 | 146 | 315 |
| <i>Source: ESFA Localities datacube 2019-2020</i> | | | | |

College Courses

The most popular courses with young people that feed into digital occupations were the Extended and Subsidiary Diplomas in IT and GCE A Level in Computer Science. The T-levels in Digital Business Services; Digital Production, Design and Development; and Digital Support Services are currently being rolled out. These are intended to replace Level 3 BTECs.

| Most popular substantial digital practitioner qualifications taken by 16-18 yr olds | | | | |
|--|---------|---------|----------|-------|
| Row Labels | Level 2 | Level 3 | Level 4+ | Total |
| Extended Diploma in IT (QCF) | | 146 | | 146 |
| Subsidiary Diploma in IT (QCF) | | 113 | | 113 |
| GCE A Level in Computer Science | | 91 | | 91 |
| GCE AS Level in Computer Science | | 39 | | 39 |
| BTEC First Extended Certificate in Information and Creative Technology | 36 | | | 36 |
| BTEC National Foundation Diploma in Information Technology | | 36 | | 36 |
| BTEC National Extended Certificate in Information Technology | | 31 | | 31 |
| <i>Source: ESFA localities datacube (residency) 2019-2020</i> | | | | |

The most popular courses taken by adults were the Extended Diploma in IT and the HNC in Computing.



Most popular substantial digital practitioner qualifications taken by adults

| | Below Level 2 | Level 2 | Level 3 | Level 4+ | Total |
|--|---------------|---------|---------|----------|-------|
| Extended Diploma in IT (QCF) | | | 15 | | 15 |
| BTEC Higher National Certificate in Computing | | | | 13 | 13 |
| Word Processing Software | 12 | | | | 12 |
| BTEC First Extended Certificate in Information and Creative Technology | | 10 | | | 10 |
| Certificate of Introduction to Digital Skills | 8 | | | | 8 |
| BTEC Higher National Diploma in Computing | | | | 7 | 7 |
| Diploma of Introduction to Digital Technologies | 6 | | | | 6 |
| Source: ESFA localities datacube (residency) 2019-2020 | | | | | |



Annex 1 - Digital Route Description

| Digital Business Services Pathway | | |
|---|---|---|
| Technical Occupations | Higher Technical Occupations | Professional Occupations |
| <p>Data Analyst Technician Source, format and present data securely in a relevant way for analysis using basic methods.</p> <p>Data Technician (L3)</p> | <p>Data Analyst Advanced Technician Collect, organise and analyse data to provide business insights using extensive knowledge of data solutions, database systems and analytical tools</p> <p>Data Analyst (L4) IS Business Analyst (L4)</p> | <p>Business Information Professional Provide and implement data technology enabled solutions to support internal and external customers.</p> <p>Data Scientist (degree) (L6)</p> |
| <p>Digital Solutions Technician Creating, editing, posting and updating content including e-commerce content, product information, and descriptions.</p> <p>Digital Content Administrator</p> | <p>Digital Solutions Advanced Technician Facilitate and instigate direct communication online between the end user or customer and the organisation, implementing communication strategies to support business objectives.</p> <p>Digital Community Manager (L4) Digital Content Manager</p> | <p>Digital Solutions Professional Provide and implement technology enabled solutions to internal and external customers</p> <p>Artificial Intelligence (AI) Data Specialist (L7) Digital & Technology Solution Specialist (L7)</p> <ul style="list-style-type: none"> • Cyber Security Technical Specialist • Data Analytics Specialist - Digital Business & Enterprise Systems • Architecture Specialist - IT / Digital Futures Management • Specialist • IT Business Analysis Specialist • IT Operations Management Specialist • IT Project Management Specialist • IT Strategy Specialist • Network Engineering Specialist • Software Engineering Specialist - System Test & Assurance Specialist |



| Digital Production, Design and Development Pathway | | |
|--|--|--|
| Technical Occupations | Higher Technical Occupations | Professional Occupations |
| <p>Software Development Technician</p> <p>Build simple software components (web, mobile, desktop applications) as a part of larger software development project. Interpret simple design requirements and testing to ensure components meet their intended functionality</p> <p>Digital Front End Developer</p> <p>Software Development Technician (L3)</p> | <p>Software Development Advanced Technician</p> <p>Build and test simple, high quality codes across various layers (front end, logic and database) and interpret design documents and specifications</p> <p>DevOps Engineer (L4)</p> <p>Digital Accessibility Specialist (L4)</p> <p>Digital User Experience Games Designer</p> <p>Gaming Audio Engineer</p> <p>IT Product Manager</p> <p>Software Developer (L4)</p> <p>Software Tester (L4)</p> <p>Video Games Quality Assurance Technician</p> | <p>Software Development Professional</p> <p>Software engineering covering modelling, simulation, human factors, systems engineering and in uences upon product architecture throughout the whole product lifecycle</p> <p>Computer Science/Software Engineer</p> <p>Creative Digital Design Professional (L6)</p> <p>Digital User Experience (UX) Professional (L6)</p> <p>Game Programmer (L7)</p> |



| Digital Support and Services Pathway | | |
|---|---|--|
| Technical Occupations | Higher Technical Occupations | Professional Occupations |
| <p>IT Support and Services Technician Help internal and external customers to install and use IT technology along with trouble - shooting their problems. Skills are developed across IT security and data management</p> <p>Cyber Security Technician (L3) Digital Device Repair Technician (L3) Digital Support Technician (L3)</p> <ul style="list-style-type: none"> Digital Applications Technician Digital Service Technician <p>Information Communication Technician (L3)</p> <ul style="list-style-type: none"> Digital Communications Technician Network Technician Support Technician <p>Infrastructure Technician (L3) IT Solutions Technician (L3)</p> <ul style="list-style-type: none"> Hardware Solutions Software Solutions <p>Network Cable Installer (L3) Radio Network Technician (L3) Unified Communications Technician (L3)</p> | <p>Cyber Security Technician Detect security breaches and respond using alerts from automated tools to determine breach status and resolution working with the incident response team. Extended skills allow hazards, risks and controls to be managed.</p> <p>Cyber Intrusion Analyst (L4) Cyber Security Technologist (L4)</p> <ul style="list-style-type: none"> Cyber Defend and Respond Cyber Risk Analyst Cyber Security Engineer | <p>Professional Occupations Cyber Security Provide and implement technology enabled solutions for internal and external customers</p> <p>Cyber Security Technical Professional (degree) (L6)</p> |
| | <p>Hardware, Networks and Infrastructure Technician Design, install, maintain and support communication networks. Knowledge extends to network configuration, cloud, network administration and monitoring tools. Provides advice and guidance to internal and external customers</p> <p>Network Engineer (L4) Unified Communications Trouble Shooter (L4)</p> | |



| | | |
|--|---|--|
| | <p>IT Systems Technician Co-ordinate systems development tasks including the design, integration and formal testing, oversees transition into production Applications Support Lead (L4) Computer Systems Analyst</p> | |
|--|---|--|



Annex 2 Mapping of SOC 2010 codes to the Digital Route

There is no simple mapping of the IFATE Occupational Maps to 4-digit SOC codes. The codes below will contain the occupations included in the Digital Route but may also include others.

| SOC Code | Occupation |
|----------|--|
| 1136 | Information technology and telecommunications directors |
| 2133 | IT specialist managers |
| 2134 | IT project and programme managers |
| 2135 | IT business analysts, architects and systems designers |
| 2137 | Web design and development professionals |
| 2139 | Information technology and telecommunications professionals n.e.c. |
| 2423 | Management consultants and business analysts |
| 2425 | Actuaries, economists and statisticians |
| 3131 | IT operations technicians |
| 3132 | IT user support technicians |
| 3539 | Business and related associate professionals n.e.c. |

