ABOUT COMPTIA

The Computing Technology Industry Association (CompTIA) is the world’s leading information technology (IT) certification and training body. CompTIA is a mission-driven organization committed to unlocking the potential of every student, career changer or professional seeking to begin or advance in a technology career. Each year CompTIA, directly and through its global network of partners, provides millions of learners the tools and confidence to succeed.

CompTIA’s base of certified information technology professionals spans 232 countries worldwide.

CompTIA sets the standard for preparing entry-level candidates through expert-level professionals to succeed at all stages of their career in technology. Through CompTIA’s philanthropic arm, CompTIA Spark develops innovative on-ramps and career pathways to expand opportunities to populations that traditionally have been under-represented in the information technology workforce.

- CompTIA Technology Career Pathway Roadmap
- CompTIA Certifications Job Match
- CompTIA Training and Learning
- CompTIA Tech Career Academy
- CompTIA IT Salary Calculator
- CompTIA Member Communities and Councils
- CompTIA Academy and Delivery Partner Program

ABOUT COMPTIA’S UK & IRELAND COMMUNITY

The CompTIA UK & Ireland Community brings together technology business professionals from across the UK and Ireland to discuss both regional opportunities and global trends. The community offers industry leaders the opportunity to gain valuable insight, share best practices, and collaborate to grow their businesses and showcase how technology and technology companies solve business challenges.

- CompTIA UK & Ireland Community

ABOUT THE STATE OF THE TECH WORKFORCE UK

CompTIA’s State of the Tech Workforce UK provides an in-depth look at employment, economic impact, technology trends, salaries, hiring activity, and more across the regions and metropolitan areas of the United Kingdom. The report draws upon many data sources, including EMSI Burning Glass, UK Office for National Statistics (ONS), Eurostat, OECD, CompTIA and more.

<table>
<thead>
<tr>
<th>National reporting</th>
<th>Metropolitan Area reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>Birmingham</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>Newcastle</td>
</tr>
<tr>
<td>Scotland</td>
<td>Bristol</td>
</tr>
<tr>
<td>Wales</td>
<td>Leeds</td>
</tr>
<tr>
<td></td>
<td>London</td>
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<td></td>
<td>Sheffield</td>
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<td></td>
<td>Manchester</td>
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<td></td>
<td>Glasgow</td>
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<td></td>
<td>Cardiff</td>
</tr>
<tr>
<td></td>
<td>Belfast</td>
</tr>
<tr>
<td></td>
<td>Edinburgh</td>
</tr>
</tbody>
</table>

As with any sector-level report, there are varying interpretations of what constitutes the tech sector and the tech workforce. Some of this variance may be attributed to the objectives of the author. Is the goal to depict the broadest possible representation of STEM and digital economy fields, or a more narrowly defined technology subset? Is the goal to capture all possible knowledge workers, or a more narrowly defined technology subset? CompTIA weighs a number of factors in making these decisions. See the methodology section for details of the specific NAICS codes and SOC codes CompTIA uses in its definitions.
DEFINING NET TECH EMPLOYMENT

The tech workforce consists of two primary components, represented as a single figure by the ‘net tech-employment’ designation. The foundation is the set of technology professionals working in technical positions, such as IT support, network engineering, software development, data science, and related roles. Many of these professionals work for technology companies (51%), but many others are employed by organisations across every industry sector in the U.K. economy (49%).

The second component consists of the business professionals employed by technology companies. These professionals – encompassing sales, marketing, finance, HR, operations and management, play an important role in supporting the development and delivery of the technology products and services used throughout the economy. Thirty-one percent of the net tech-employment total consists of tech-industry business professionals.

One final segment involves workers classified as self-employed. For the purposes of this report, only dedicated, full-time self-employed technology workers are counted towards net-tech employment. Workers that are characterised as “gig” workers, which may entail working on the side for supplementary income, are excluded from this analysis due to several uncertainties with the data and to minimize the possibility of double counting.

N = Technology professionals employed across the economy, including in the tech sector
(e.g. software developers, network architects, database admins, etc.)

N = Tech sector employment, less technology professionals
(e.g. sales, marketing, finance, HR, etc.)

2.0 million workers in total
2022 estimate

69%
% of NET tech employment is in technology occupations

Source: Lightcast | CompTIA
Some numeric changes affected by rounding
KEY FINDINGS

KEY POINTS

- Net tech employment in the United Kingdom – as described on the previous page, reached an estimated 2,043,622 workers in 2022, a 1% increase over the previous year. Net tech employment is projected to increase by almost 1% in 2023.

- Since 2017, net tech employment increased by an estimated 75,280 net-new jobs. Net tech employment saw a slight decline between 2019 and 2020 but has shown growth since then.

- Net tech employment accounted for approximately 6.3% of the overall U.K. workforce in 2022. Because of the blurring of lines across industries, there is likely a degree of undercounting in tech sector employment as a percentage of U.K. employment.

- Among the components of net tech employment, the tech sector side of the equation grew at 1.1% year over year, while the occupation side across all industry sectors experienced a gain of 1.0% year over year. Looking ahead, tech sector and tech occupation gains are projected to be 0.9% and 0.8% respectively.

- The software and custom development sector has seen continuous gains over the 5 year period 2017-2022. Largest tech industry contributor to job gains, 2017-2022:

  - Software and Custom Development: +39,355

- Largest tech occupation contributors to job gains, 2017-2022:

  - Programmers and Software Development: +15,444
  - IT Specialist Managers: +8,491
  - IT Operations Technicians: +5,526
  - IT Technology and Telecommunications Professionals: +4,588
  - IT Technology and Telecommunications Directors: +4,370

- On a percent change basis, the occupation category covering programmers and software development professionals grew by +5.3%, the largest increase among tech occupations during 2017-2022. IT Support or Operations Technicians increased by 4.1%, IT Project Managers increased by 3.4%, and IT Analysts and Cybersecurity and systems increased by 2.8%.

ECONOMIC IMPACT OF TECH INDUSTRY

5.5%

Estimated direct contribution of the UK tech industry to the UK economy: £82.6 billion

Source: Lightcast | UK ONS | CompTIA
Hiring activity to offset churn within tech workforce

Additional hires needed to offset retirements and workforce separations

By 2030, projections from EMSI Burning Glass put the base of tech occupation employment at approximately 1.41 million (note: this covers occupations only and represents a subset of the net tech employment figure presented previously).

Calculating future workforce needs over the next decade is a function of several variables. First, there is a growth component, which may entail organisations adding headcount due to expansion or possibly to support new emerging technologies.

Secondly, there is a retirement factor, with a portion of the workforce transitioning away from the workforce permanently. And lastly, there is a segment leaving the workforce for some other reason, also referred to as separations. These may stem from a career change, a return to school, family pursuits, or other. Changes to any of these variables can boost or shrink future workforce projections.

Job posting data provides another layer of insight into the tech job market outlook. Because government labour taxonomies – Standard Occupation Codes (SOCs), lag the speed with which the market changes, job posting data provides a more up-to-date look at the skills and experiences employers seek.

Overall quarterly tech job postings among U.K. employers dipped during 2020 due to the pandemic slowdown. Postings rebounded in Q1 2021. Job postings have seen a decline in the last two quarters of 2022. Note: job postings should not be interpreted as unfilled jobs and there is not a 1:1 relationship between postings and actual hires made.

Nationally, women represent approximately 49% of the U.K. workforce and 17% of tech occupations. This gap signals underrepresentation in the tech workforce. In the United States, women represent 26% of tech occupations.

Tech occupation employment outlook

Workforce need = annual replacement rate + growth rate

Aggregate quarterly job postings for tech occupations

Job postings by U.K. employers

Tech workforce characteristics

% and count of women working in tech occupations

% and count of women working in all occupations

Source: Lightcast | UK ONS | CompTIA
KEY FINDINGS

METRO AREA NET TECH EMPLOYMENT

The top four metropolitan areas employ a little more than 662,350 tech industry and tech occupation workers, or about 1 in 3 tech workers in the nation.

London is the largest metropolitan area in the country by a wide margin. It follows that it also has the largest base of tech employment.

The London and Birmingham areas saw the highest increases in net tech employment year over year.

METRO AREA EMPLOYMENT CONCENTRATION

Employment concentration provides a measure of tech employment relative to employment across all the other industry sectors in a local economy. Along with economic impact as a percentage of a local economy, these metrics help to put tech into context.

At more than 8%, London, Leeds, and Edinburgh have the highest concentration of net tech employment as a percentage of their overall employment bases.

Compared to the national tech employment concentration benchmark of 6.3%, seven metro areas had the same or higher rate, confirming the importance of technology to a far-reaching set of cities across the U.K.

METRO AREA TECH BUSINESS ESTABLISHMENTS

A large, dynamic base of business establishments, also referred to as company locations, is another measure of a healthy tech sector. Tech business establishments tend to be concentrated in population centers and in locations that are close to the customers they serve.

- London 44,883
- Manchester 6,391
- Bristol 3,860
- Birmingham 3,134

METRO AREA MEDIAN TECH INDUSTRY WAGES

Tech jobs continue to command a premium with a median wage 55% higher than the prevailing median wage across the UK labor market.

Not surprisingly median tech wages are highest in the London metropolitan area. Rank order of top five metro areas by median tech wage:

1. London
2. Edinburgh
3. Bristol
4. Glasgow
5. Leeds

Source: Lightcast | UK ONS | CompTIA
UNITED KINGDOM SNAPSHOT
United Kingdom

**STATE OF TECHNOLOGY SUMMARY**

- **2,043,622** Net Tech Employment\(^2\)
- **6.3%** Net Employment as a % of Overall Workforce
- **188,874** Tech Business Establishments (firms with payroll)
- **£82.6b** Economic Impact
- **1,342,707** Employer Job Postings (2022 total for tech occupations)
- **14%** Emerging Tech Job Postings as a % of Total

\(^1\)Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

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**NET TECH EMPLOYMENT**

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2,250,000</td>
</tr>
<tr>
<td>2018</td>
<td>2,200,000</td>
</tr>
<tr>
<td>2019</td>
<td>2,150,000</td>
</tr>
<tr>
<td>2020</td>
<td>2,100,000</td>
</tr>
<tr>
<td>2021</td>
<td>2,050,000</td>
</tr>
<tr>
<td>2022 est.</td>
<td>2,000,000</td>
</tr>
<tr>
<td>2023 proj.</td>
<td>+21,026 jobs</td>
</tr>
</tbody>
</table>

+1.0% Projected growth of +17,072 jobs and +0.8%

---

**LEADING TECH OCCUPATIONS**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2022 Employment</th>
<th>2023 % Change(^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development and Web Design</td>
<td>364,563</td>
<td>+0.9%</td>
</tr>
<tr>
<td>IT Analysts, Cybersecurity(^3) and Systems</td>
<td>309,140</td>
<td>+0.8%</td>
</tr>
<tr>
<td>IT Support and Operations Technicians</td>
<td>227,435</td>
<td>+0.7%</td>
</tr>
<tr>
<td>Network and Telecommunications Engineers</td>
<td>104,507</td>
<td>+0.7%</td>
</tr>
<tr>
<td>IT Project Managers</td>
<td>87,312</td>
<td>+0.7%</td>
</tr>
</tbody>
</table>

\(^3\)Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

**LEADING TECH INDUSTRY SECTORS** [by employment]

<table>
<thead>
<tr>
<th>Sector</th>
<th>2022 Employment</th>
<th>2023 % Change(^6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>570,563</td>
<td>+0.3%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>296,608</td>
<td>+1.4%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>244,342</td>
<td>+1.9%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>113,773</td>
<td>+1.0%</td>
</tr>
</tbody>
</table>

\(^6\)2023 projection | Wage data subject to revisions and may not be directly comparable to prior years

---

**TECH OCCUPATION WAGES** [by annual percentile]

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Wage (£K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td>£25K</td>
</tr>
<tr>
<td>25th</td>
<td>£50K</td>
</tr>
<tr>
<td>50th</td>
<td>£75K</td>
</tr>
<tr>
<td>75th</td>
<td>£100K</td>
</tr>
<tr>
<td>90th</td>
<td>£150K</td>
</tr>
</tbody>
</table>

Estimated median tech wage £42,201, 55% higher than median national wage\(^5\)

\(^5\)2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

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NATIONAL SNAPSHOT
**England**

### STATE OF TECHNOLOGY SUMMARY

1,810,010  NET TECH EMPLOYMENT

6.6%  NET EMPLOYMENT AS A % OF OVERALL WORKFORCE

173,643  TECH BUSINESS ESTABLISHMENTS [firms with payroll]

833,355  EMPLOYER JOB POSTINGS [2022 total for tech occupations]

114,819  EMERGING TECH JOB POSTINGS [job roles + skills]

14%  EMERGING TECH JOB POSTINGS AS A % OF TOTAL

---

1Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

---

**NET TECH EMPLOYMENT**

<table>
<thead>
<tr>
<th>Year</th>
<th>Est.</th>
<th>Proj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1,500,000</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>1,500,000</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>1,500,000</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>1,500,000 +18,429 jobs</td>
<td>+1.0%</td>
</tr>
<tr>
<td>2021</td>
<td>1,518,429</td>
<td></td>
</tr>
<tr>
<td>2022 est.</td>
<td>1,500,000</td>
<td>+0.8%</td>
</tr>
<tr>
<td>2023 proj.</td>
<td>1,518,429</td>
<td>+1.0%</td>
</tr>
</tbody>
</table>

--

**EMERGING TECH OCCUPATIONS**

- **Software Development and Web Design**: 323,094, +0.9%
- **IT Analysts, Cybersecurity and Systems**: 274,050, +0.8%
- **IT Support and Operations Technicians**: 196,849, +0.7%
- **Network and Telecommunications Engineers**: 91,818, +0.7%
- **IT Project Managers**: 76,772, +0.7%

---

**LEADING TECH INDUSTRY SECTORS**

<table>
<thead>
<tr>
<th>Sector</th>
<th>2022</th>
<th>2023 % Change(^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>519,426</td>
<td>+0.4%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>258,095</td>
<td>+1.4%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>220,916</td>
<td>+1.9%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>90,622</td>
<td>+0.8%</td>
</tr>
</tbody>
</table>

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**TECH OCCUPATION WAGES**

- Estimated median tech wage £42,758, 55% higher than median national wage\(^5\)

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\(^1\)Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

\(^2\)CompTIA analysis of Lightcast employer job posting data | core tech jobs

\(^3\)2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

\(^4\)Wage data subject to revisions and may not be directly comparable to prior years

\(^5\)2023 projection
Wales

STATE OF TECHNOLOGY SUMMARY

54,102 NET TECH EMPLOYMENT
4.0% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
3,993 TECH BUSINESS ESTABLISHMENTS (firms with payroll)
18,991 EMPLOYER JOB POSTINGS (2022 total for tech occupations)
2,551 EMERGING TECH JOB POSTINGS (job roles + skills)
13% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

1Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

NET TECH EMPLOYMENT

<table>
<thead>
<tr>
<th>Year</th>
<th>NET TECH EMPLOYMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>+310 jobs +0.6%</td>
</tr>
<tr>
<td>2022 est.</td>
<td></td>
</tr>
<tr>
<td>2022 proj.</td>
<td></td>
</tr>
</tbody>
</table>

Projected growth of +253 jobs and +0.5%

LEADING TECH OCCUPATIONS

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2022</th>
<th>2023 % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development and Web Design</td>
<td>9,165</td>
<td>+0.6%</td>
</tr>
<tr>
<td>IT Analysts, Cybersecurity and Systems</td>
<td>7,946</td>
<td>+0.3%</td>
</tr>
<tr>
<td>IT Support or Operations Technicians</td>
<td>6,993</td>
<td>+0.5%</td>
</tr>
<tr>
<td>Network or Telecommunications Engineers</td>
<td>3,133</td>
<td>-0.5%</td>
</tr>
<tr>
<td>IT Project Managers</td>
<td>2,328</td>
<td>+0.3%</td>
</tr>
</tbody>
</table>

1Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

LEADING TECH INDUSTRY SECTORS [by employment]

<table>
<thead>
<tr>
<th>Industry</th>
<th>2022</th>
<th>2023 % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>9,618</td>
<td>-3.8%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>8,978</td>
<td>+1.4%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>3,562</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>8,034</td>
<td>+2.3%</td>
</tr>
</tbody>
</table>

1CompTIA analysis of Lightcast employer job posting data | core tech jobs

LEADING TECH OCCUPATION WAGES [by annual percentile]

<table>
<thead>
<tr>
<th>Percentile</th>
<th>WAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td>£25K</td>
</tr>
<tr>
<td>25th</td>
<td>£25K</td>
</tr>
<tr>
<td>50th</td>
<td>£25K</td>
</tr>
<tr>
<td>75th</td>
<td>£35K</td>
</tr>
<tr>
<td>90th</td>
<td>£43K</td>
</tr>
</tbody>
</table>

Estimated median tech wage £35,244, 43% higher than median national wage

2023 projection | Wage data subject to revisions and may not be directly comparable to prior years

2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

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Scotland

STATE OF TECHNOLOGY SUMMARY

139,935   NET TECH EMPLOYMENT¹
5.4%   NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
9,131   TECH BUSINESS ESTABLISHMENTS (firms with payroll)
62,555   EMPLOYER JOB POSTINGS (2022 total for tech occupations)
6,825   EMERGING TECH JOB POSTINGS (job roles + skills)
11%   EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

NET TECH EMPLOYMENT

+1,388 jobs
+1.0%

Projected growth of +1,094 jobs and +0.8%

EMPLOYER HIRING ACTIVITY VIA JOB POSTINGS

LEADING TECH OCCUPATIONS

Software Development and Web Design
24,243   +0.9%

IT Analysts, Cybersecurity³ and Systems
21,450   +0.6%

IT Support and Operations Technicians
19,707   +0.5%

Network and Telecommunications Engineers
7,842   +0.7%

IT Project Managers
5,652   +0.5%

³Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

LEADING TECH INDUSTRY SECTORS  [by employment]

2022
2023 % Change⁴

IT Consultancy and Services
32,601   +0.2%

Telecom, Data Processing, Web Portals
24,648   +0.9%

Software and Custom Development
11,823   +2.7%

Tech Manufacturing
11,013   +0.6%

⁴2023 projection | ¹Wage data subject to revisions and may not be directly comparable to prior years

TECH OCCUPATION WAGES  [by annual percentile]

Estimated median tech wage £39,937, 49% higher than median national wage⁵

⁵2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication
# Northern Ireland

## State of Technology Summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Tech Employment</td>
<td>39,617</td>
<td>+901 jobs (+2.3%)</td>
</tr>
<tr>
<td>Net Employment as a % of Overall Workforce</td>
<td>4.0%</td>
<td></td>
</tr>
<tr>
<td>Tech Business Establishments (firms with payroll)</td>
<td>2,107</td>
<td></td>
</tr>
<tr>
<td>Employer Job Postings (2022 total for tech occupations)</td>
<td>19,552</td>
<td></td>
</tr>
<tr>
<td>Emerging Tech Job Postings (job roles + skills)</td>
<td>2,495</td>
<td></td>
</tr>
<tr>
<td>Emerging Tech Job Postings as a % of Total</td>
<td>13%</td>
<td></td>
</tr>
</tbody>
</table>

*Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

### Employment and Hiring Activity

**Net Tech Employment**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs</td>
<td>37,606</td>
<td>38,500</td>
<td>39,400</td>
<td>40,300</td>
<td>41,200</td>
<td>+901 jobs (+2.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projected growth of +733 jobs and +1.9%</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Leading Tech Occupations**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2022</th>
<th>2023 % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development and Web Design</td>
<td>8,062</td>
<td>+1.3%</td>
</tr>
<tr>
<td>IT Analysts, Cybersecurity and Systems</td>
<td>5,693</td>
<td>+1.5%</td>
</tr>
<tr>
<td>IT Support and Operations Technicians</td>
<td>3,886</td>
<td>+1.5%</td>
</tr>
<tr>
<td>IT Project Managers</td>
<td>2,561</td>
<td>+1.6%</td>
</tr>
<tr>
<td>Network and Telecommunications Engineers</td>
<td>1,713</td>
<td>+1.5%</td>
</tr>
</tbody>
</table>

**Leading Tech Industry Sectors**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Employers</th>
<th>2023 % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>8,918</td>
<td>+3.5%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>4,886</td>
<td>+2.5%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>8,041</td>
<td>+0.6%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>4,102</td>
<td>+2.9%</td>
</tr>
</tbody>
</table>

**Tech Occupation Wages**

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Wage (UK £)</th>
<th>2021-2022 Median Tech Wage £34,524, 46% higher than median national wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td>£75K</td>
<td></td>
</tr>
<tr>
<td>25th</td>
<td>£50K</td>
<td></td>
</tr>
<tr>
<td>50th</td>
<td>£25K</td>
<td></td>
</tr>
<tr>
<td>75th</td>
<td>£10K</td>
<td></td>
</tr>
<tr>
<td>90th</td>
<td>£5K</td>
<td></td>
</tr>
</tbody>
</table>

*2023 projection | 2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

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*Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

CompTIA analysis of Lightcast employer job posting data | Core tech jobs

Estimated median tech wage £34,524, 46% higher than median national wage
METRO AREA SNAPSHOTs
Belfast

STATE OF TECHNOLOGY SUMMARY

26,069 NET TECH EMPLOYMENT¹
6.2% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
1,305 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
17,619 EMPLOYER JOB POSTINGS [2022 total for tech occupations]
2,251 EMERGING TECH JOB POSTINGS [job roles + skills]
13% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data| Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

NET TECH EMPLOYMENT

Projected growth of +417 jobs and +1.6%

LEADING TECH OCCUPATIONS

Software Development and Web Design 5,714 +1.1%
IT Analysts, Cybersecurity³ and Systems 3,784 +1.4%
IT Support and Operations Technicians 2,345 +1.4%
IT Project Managers 1,770 +1.6%
Network and Telecommunications Engineers 983 +1.7%

LEADING TECH INDUSTRY SECTORS [by employment]

<table>
<thead>
<tr>
<th>Industry</th>
<th>2022</th>
<th>2023 % Change²</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>6,944</td>
<td>+3.7%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>3,253</td>
<td>+2.7%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>6,249</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>1,964</td>
<td>+1.3%</td>
</tr>
</tbody>
</table>

²CompTIA analysis of Lightcast employer job posting data | core tech jobs

Tech Occupation Wages [by annual percentile]

Estimated median tech wage £34,599, 41% higher than median national wage³

³Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

⁴CompTIA analysis of Lightcast employer job posting data | core tech jobs

⁵2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

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NET TECH EMPLOYMENT
+1,424 jobs
+3.2%

PROJECTIONS
Projected growth of +1,171 jobs and +2.5%

EMPLOYER HIRING ACTIVITY VIA JOB POSTINGS

LEADING TECH OCCUPATIONS (by employment)

2023 % Change

Software Development and Web Design 7,452 +1.9%
IT Analysts, Cybersecurity3 and Systems 6,957 +1.3%
IT Support and Operations Technicians 5,707 +1.9%
Network and Telecommunications Engineers 2,825 +2.3%
IT Project Managers 1,478 +1.4%

LEADING TECH OCCUPATION WAGES (by annual percentile)

Estimated median tech wage £37,273, 41% higher than median national wage5

1Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

22023 projection | 3Wage data subject to revisions and may not be directly comparable to prior years

3Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

4CompTIA analysis of Lightcast employer job posting data | core tech jobs

52021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication
**Bristol**

**STATE OF TECHNOLOGY SUMMARY**

- **42,241** NET TECH EMPLOYMENT
- **6.4%** NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- **3,860** TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- **41,514** EMPLOYER JOB POSTINGS [2022 total for tech occupations]
- **4,555** EMERGING TECH JOB POSTINGS [job roles + skills]
- **11%** EMERGING TECH JOB POSTINGS AS A % OF TOTAL

1Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

**NET TECH EMPLOYMENT**

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>39,000</td>
</tr>
<tr>
<td>2018</td>
<td>39,450</td>
</tr>
<tr>
<td>2019</td>
<td>39,900</td>
</tr>
<tr>
<td>2020</td>
<td>40,350</td>
</tr>
<tr>
<td>2021 est.</td>
<td>40,800</td>
</tr>
<tr>
<td>2022 proj.</td>
<td>41,250</td>
</tr>
</tbody>
</table>

Projected growth of +338 jobs and +0.8%

**LEADING TECH OCCUPATIONS**

- **Software Development and Web Design**
  - 2022: 8,273
  - 2023 % Change: +1.0%
- **IT Analysts, Cybersecurity** and Systems
  - 2022: 5,921
  - 2023 % Change: +0.9%
- **IT Support and Operations Technicians**
  - 2022: 4,764
  - 2023 % Change: +0.5%
- **Network and Telecommunications Engineers**
  - 2022: 2,665
  - 2023 % Change: +0.6%
- **IT Project Managers**
  - 2022: 1,864
  - 2023 % Change: +0.6%

3Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

- **LEADING TECH INDUSTRY SECTORS**
  - **IT Consultancy and Services**
    - 2022: 10,529
    - 2023 % Change: -0.1%
  - **Telecom, Data Processing, Web Portals**
    - 2022: 7,506
    - 2023 % Change: +2.0%
  - **Software and Custom Development**
    - 2022: 5,283
    - 2023 % Change: +1.5%
  - **Tech Manufacturing**
    - 2022: 1,778
    - 2023 % Change: +0.7%

- **TECH OCCUPATION WAGES**
  - Estimated median tech wage £39,864, 55% higher than median national wage

2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

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Cardiff

STATE OF TECHNOLOGY SUMMARY

- 23,020 NET TECH EMPLOYMENT\(^3\)
- 4.8% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 1,553 TECH BUSINESS ESTABLISHMENTS (firms with payroll)
- 12,141 EMPLOYER JOB POSTINGS (2022 total for tech occupations)
- 1,444 EMERGING TECH JOB POSTINGS (job roles + skills)
- 12% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

\(^3\)Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

NET TECH EMPLOYMENT

![Net tech employment chart]

- Projected growth of +247 jobs and +1.1%

LEADING TECH OCCUPATIONS

- Software Development and Web Design 3,988 +1.2%
- IT Analysts, Cybersecurity\(^3\) and Systems 3,417 +1.1%
- IT Support and Operations Technicians 2,970 +0.8%
- Network and Telecommunications Engineers 1,323 0.0%
- IT Project Managers 1,064 +1.1%

\(^3\)Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

LEADING TECH INDUSTRY SECTORS [by employment]

- IT Consultancy and Services 3,967 -2.8%
- Telecom, Data Processing, Web Portals 4,562 +3.0%
- Software and Custom Development 1,838 -1.2%
- Tech Manufacturing 2,969 +2.2%

\(^4\)2023 projection | \(^5\)Wage data subject to revisions and may not be directly comparable to prior years

TECH OCCUPATION WAGES [by annual percentile]

- Estimated median tech wage £35,116, 40% higher than median national wage\(^5\)

\(^5\)2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication
Edinburgh

STATE OF TECHNOLOGY SUMMARY

35,916 NET TECH EMPLOYMENT¹
8.2% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
2,407 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
22,618 EMPLOYER JOB POSTINGS [2022 total for tech occupations]
3,003 EMERGING TECH JOB POSTINGS [job roles + skills]
13% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data| Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

NET TECH EMPLOYMENT

+378 jobs
+1.1%
Projected growth of
+301 jobs
and +0.8%

EMPLOYER HIRING ACTIVITY VIA JOB POSTINGS

LEADING TECH OCCUPATIONS

2022 2023 % Change¹
Software Development and Web Design 7,677 +1.1%
IT Analysts, Cybersecurity³ and Systems 5,861 +0.6%
IT Support and Operations Technicians 5,005 +0.8%
IT Project Managers 1,733 +0.6%
Network and Telecommunications Engineers 1,303 +0.5%

³Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

LEADING TECH INDUSTRY SECTORS [by employment]

2022 2023 % Change¹
IT Consultancy and Services 10,960 +0.1%
Telecom, Data Processing, Web Portals 3,622 +0.0%
Software and Custom Development 5,379 +2.9%
Tech Manufacturing 3,238 +1.2%

¹2023 projection | Wage data subject to revisions and may not be directly comparable to prior years

TECH OCCUPATION WAGES [by annual percentile]

Estimated median tech wage £40,106, 49% higher than median national wage³

³2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication
Glasgow

STATE OF TECHNOLOGY SUMMARY

- 37,671 NET TECH EMPLOYMENT
- 6.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 2,151 TECH BUSINESS ESTABLISHMENTS (firms with payroll)
- 25,377 EMPLOYER JOB POSTINGS (2022 total for tech occupations)
- 2,263 EMERGING TECH JOB POSTINGS (job roles + skills)
- 9% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

NET TECH EMPLOYMENT

<table>
<thead>
<tr>
<th>Year</th>
<th>Tech Industry Jobs</th>
<th>Tech Occupation Jobs</th>
<th>+419 jobs</th>
<th>2023 est.</th>
<th>2023 proj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>2019</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2020</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2021</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Projected growth of +323 jobs and +0.9%

PROJECTED GROWTH

- IT Consultancy and Services +0.2%
- Telecom, Data Processing, Web Portals +1.2%
- Software and Custom Development +3.5%
- Tech Manufacturing -0.1%

LEADING TECH OCCUPATIONS

- Software Development and Web Design 6,684 1.3%
- IT Analysts, Cybersecurity3 and Systems 5,851 0.9%
- IT Support and Operations Technicians 5,539 0.4%
- Network and Telecommunications Engineers 2,070 0.1%
- IT Project Managers 1,392 1.0%

LEADING TECH INDUSTRY SECTORS [by employment]

<table>
<thead>
<tr>
<th>Sector</th>
<th>2022</th>
<th>2023 % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>10,659</td>
<td>+0.2%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>6,896</td>
<td>+1.2%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>2,800</td>
<td>+3.5%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>2,042</td>
<td>-0.1%</td>
</tr>
</tbody>
</table>

TECH OCCUPATION WAGES [by annual percentile]

<table>
<thead>
<tr>
<th>Percentile</th>
<th>£K</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td></td>
</tr>
<tr>
<td>25th</td>
<td></td>
</tr>
<tr>
<td>50th</td>
<td>£25K</td>
</tr>
<tr>
<td>75th</td>
<td>£50K</td>
</tr>
<tr>
<td>90th</td>
<td>£75K</td>
</tr>
</tbody>
</table>

Estimated median tech wage £39,650, 47% higher than median national wage5

1Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details
2Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.
3Wage data subject to revisions and may not be directly comparable to prior years
42021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication
52021 projection
Leeds

STATE OF TECHNOLOGY SUMMARY

41,023 NET TECH EMPLOYMENT
8.5% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
2,351 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
31,057 EMPLOYER JOB POSTINGS [2022 total for tech occupations]
2,443 EMERGING TECH JOB POSTINGS [job roles + skills]
8% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

NET TECH EMPLOYMENT

+784 jobs
+1.9%

Projected growth of +628 jobs and +1.5%

EMPLOYER HIRING ACTIVITY VIA JOB POSTINGS

LEADING TECH OCCUPATIONS

2022

2023 % Change

Software Development and Web Design
7,715
+1.2%

IT Analysts, Cybersecurity and Systems
6,602
+1.5%

IT Support and Operations Technicians
4,251
+1.1%

Network and Telecommunications Engineers
1,993
+0.9%

IT Project Managers
1,603
+1.4%

LEADING TECH INDUSTRY SECTORS [by employment]

2022

2023 % Change

IT Consultancy and Services
13,937
+2.5%

Telecom, Data Processing, Web Portals
6,921
+1.9%

Software and Custom Development
5,755
+2.8%

Tech Manufacturing
366
-2.7%

TECH OCCUPATION WAGES [by annual percentile]

Estimated median tech wage £39,365, 52% higher than median national wage

1/Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data| Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

2/CompTIA analysis of Lightcast employer job posting data | core tech jobs

3/Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

4/Wage data subject to revisions and may not be directly comparable to prior years

5/2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication
Liverpool

STATE OF TECHNOLOGY SUMMARY

19,528 NET TECH EMPLOYMENT
4.1% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
1,614 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
14,963 EMPLOYER JOB POSTINGS [2022 total for tech occupations]
1,351 EMERGING TECH JOB POSTINGS [job roles + skills]
9% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

NET TECH EMPLOYMENT

Project growth of +118 jobs and +0.6%

EMERGING TECH JOB POSTINGS

9%

NET TECH EMPLOYMENT AS A % OF OVERALL WORKFORCE

4.1%

LEADING TECH OCCUPATIONS

Software Development and Web Design 3,667 +1.0%
IT Analysts, Cybersecurity and Systems 2,915 +0.7%
IT Support and Operations Technicians 2,497 +0.8%
Network and Telecommunications Engineers 1,101 +0.6%
IT Project Managers 1,058 +1.9%

LEADING TECH INDUSTRY SECTORS [by employment]

IT Consultancy and Services 4,137 +1.2%
Telecom, Data Processing, Web Portals 3,258 -1.8%
Software and Custom Development 4,624 -0.1%
Tech Manufacturing 484 0.0%

TECH OCCUPATION WAGES [by annual percentile]

Estimated median tech wage £38,661, 54% higher than median national wage

1Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

2CompTIA analysis of Lightcast employer job posting data | core tech jobs

3Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

42023 projection | Wage data subject to revisions and may not be directly comparable to prior years

52021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication
London

**STATE OF TECHNOLOGY SUMMARY**

- **451,380** NET TECH EMPLOYMENT¹
- 9.0% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- **44,883** TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- **28,012** EMPLOYER JOB POSTINGS [2022 total for tech occupations]
- **3,145** EMERGING TECH JOB POSTINGS [job roles + skills]
- 11% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

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**NET TECH EMPLOYMENT**

- 451,380 NET TECH EMPLOYMENT
- +4,383 jobs
- +1.0%

**Projected growth of +3,580 jobs and +0.8%**

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**EMPLOYER HIRING ACTIVITY VIA JOB POSTINGS**

- Estimated median tech wage £49,684,
- 44% higher than median national wage

---

**LEADING TECH OCCUPATIONS**

- Software Development and Web Design 89,470 +0.9%
- IT Analysts, Cybersecurity³ and Systems 78,329 +0.8%
- IT Support and Operations Technicians 43,693 +0.9%
- IT Project Managers 21,641 +0.8%
- Network and Telecommunications Engineers 16,570 +0.8%

³Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

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**LEADING TECH INDUSTRY SECTORS** [by employment]

<table>
<thead>
<tr>
<th>Industry</th>
<th>2022</th>
<th>2023 % Change⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>136,173</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>67,802</td>
<td>+1.7%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>63,647</td>
<td>+1.6%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>3,986</td>
<td>+0.4%</td>
</tr>
</tbody>
</table>

⁴2023 projection | ⁵Wage data subject to revisions and may not be directly comparable to prior years | ⁶2021 data due to UK ONS reporting delays | ⁷2022 wage figures unavailable at time of publication

---

**TECH OCCUPATION WAGES** [by annual percentile]

- Estimated median tech wage £49,684,
- 44% higher than median national wage

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Newcastle

STATE OF TECHNOLOGY SUMMARY

30,678 NET TECH EMPLOYMENT¹
5.7% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
1,772 TECH BUSINESS ESTABLISHMENTS (firms with payroll)
11,821 EMPLOYER JOB POSTINGS (2022 total for tech occupations)
1,394 EMERGING TECH JOB POSTINGS (job roles + skills)
12% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

30,678 NET TECH EMPLOYMENT

49.1% intersection = 30,678 NET TECH EMPLOYMENT

NET TECH EMPLOYMENT

0 11,000 22,000 33,000

Projected growth of +251 jobs and +0.8%

EMPLOYER HIRING ACTIVITY VIA JOB POSTINGS

LEADING TECH OCCUPATIONS

Software Development and Web Design 5,091 +0.9%
IT Analysts, Cybersecurity³ and Systems 4,329 +1.3%
IT Support and Operations Technicians 4,212 +1.3%
Network and Telecommunications Engineers 1,304 +1.0%
IT Project Managers 1,179 +0.8%

³Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

LEADING TECH INDUSTRY SECTORS [by employment]

<table>
<thead>
<tr>
<th>Industry</th>
<th>2022</th>
<th>2023 % Change⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>9,313</td>
<td>+1.7%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>6,689</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>2,507</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>1,614</td>
<td>+2.2%</td>
</tr>
</tbody>
</table>

⁴2023 projection | Wage data subject to revisions and may not be directly comparable to prior years

TECH OCCUPATION WAGES [by annual percentile]

Estimated median tech wage £36,017, 51% higher than median national wage⁵

<table>
<thead>
<tr>
<th>Percentile</th>
<th>£K</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td></td>
</tr>
<tr>
<td>25th</td>
<td></td>
</tr>
<tr>
<td>50th</td>
<td></td>
</tr>
<tr>
<td>75th</td>
<td></td>
</tr>
<tr>
<td>90th</td>
<td></td>
</tr>
</tbody>
</table>

⁵2021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

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Manchester

STATE OF TECHNOLOGY SUMMARY

81,476 NET TECH EMPLOYMENT
5.7% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
6,391 TECH BUSINESS ESTABLISHMENTS (firms with payroll)
65,855 EMPLOYER JOB POSTINGS (2022 total for tech occupations)
6,891 EMERGING TECH JOB POSTINGS (job roles + skills)
10% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

NET TECH EMPLOYMENT

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55,068</td>
<td>51,097</td>
<td>48,3% intersection = 81,476 NET TECH EMPLOYMENT</td>
<td>18,000</td>
<td>16,000</td>
<td>14,000</td>
<td>12,000</td>
<td>10,000</td>
</tr>
</tbody>
</table>

PROJECTED GROWTH OF +671 JOBS AND +0.8%

LEADING TECH OCCUPATIONS

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2022</th>
<th>2023 % Change^4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development and Web Design</td>
<td>13,622</td>
<td>+1.0%</td>
</tr>
<tr>
<td>IT Analysts, Cybersecurity^3 and Systems</td>
<td>11,547</td>
<td>+0.9%</td>
</tr>
<tr>
<td>IT Support and Operations Technicians</td>
<td>9,371</td>
<td>+0.9%</td>
</tr>
<tr>
<td>Network and Telecommunications Engineers</td>
<td>4,695</td>
<td>+1.1%</td>
</tr>
<tr>
<td>IT Project Managers</td>
<td>3,481</td>
<td>+1.0%</td>
</tr>
</tbody>
</table>

^3Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

LEADING TECH INDUSTRY SECTORS [by employment]

<table>
<thead>
<tr>
<th>Industry</th>
<th>2022</th>
<th>2023 % Change^4</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>21,631</td>
<td>+1.5%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>14,154</td>
<td>+1.0%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>8,152</td>
<td>+1.6%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>4,135</td>
<td>-1.4%</td>
</tr>
</tbody>
</table>

^42023 projection | ^3Wage data subject to revisions and may not be directly comparable to prior years

TECH OCCUPATION WAGES [by annual percentile]

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Wage (£K)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td>£25K</td>
</tr>
<tr>
<td>25th</td>
<td>£50K</td>
</tr>
<tr>
<td>50th</td>
<td>£75K</td>
</tr>
<tr>
<td>75th</td>
<td>£100K</td>
</tr>
<tr>
<td>90th</td>
<td>£125K</td>
</tr>
</tbody>
</table>

Estimated median tech wage £38,684, 50% higher than median national wage^5

^52021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details
Nottingham

STATE OF TECHNOLOGY SUMMARY

33,143 NET TECH EMPLOYMENT¹
6.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
2,136 TECH BUSINESS ESTABLISHMENTS (firms with payroll)
16,143 EMPLOYER JOB POSTINGS (2022 total for tech occupations)
1,435 EMERGING TECH JOB POSTINGS (job roles + skills)
9% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

NET TECH EMPLOYMENT

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jobs</td>
<td>24,000</td>
<td>25,000</td>
<td>26,000</td>
<td>27,000</td>
<td>28,000</td>
<td>+625 jobs</td>
<td>+1.9%</td>
</tr>
</tbody>
</table>

Projected growth of +494 jobs and +1.5%

EMERGING TECH OCCUPATIONS

2023 projection

LEADING TECH OCCUPATIONS

<table>
<thead>
<tr>
<th>Occupation</th>
<th>2022</th>
<th>2023 % Change²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development and Web Design</td>
<td>5,332</td>
<td>+1.8%</td>
</tr>
<tr>
<td>IT Support and Operations Technicians</td>
<td>4,371</td>
<td>+0.9%</td>
</tr>
<tr>
<td>IT Analysts, Cybersecurity³ and Systems</td>
<td>4,175</td>
<td>+1.6%</td>
</tr>
<tr>
<td>Network and Telecommunications Engineers</td>
<td>1,895</td>
<td>+1.9%</td>
</tr>
<tr>
<td>IT Project Managers</td>
<td>1,548</td>
<td>+1.9%</td>
</tr>
</tbody>
</table>

³Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

LEADING TECH INDUSTRY SECTORS [by employment]

<table>
<thead>
<tr>
<th>Sector</th>
<th>2022</th>
<th>2023 % Change³</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>6,177</td>
<td>+0.1%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>8,987</td>
<td>+2.6%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>3,955</td>
<td>+2.9%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>759</td>
<td>+1.7%</td>
</tr>
</tbody>
</table>

³2023 projection | ²Wage data subject to revisions and may not be directly comparable to prior years

TECH OCCUPATION WAGES [by annual percentile]

<table>
<thead>
<tr>
<th>Percentile</th>
<th>10th</th>
<th>25th</th>
<th>50th</th>
<th>75th</th>
<th>90th</th>
</tr>
</thead>
<tbody>
<tr>
<td>£K</td>
<td>£75K</td>
<td>£50K</td>
<td>£25K</td>
<td>£25K</td>
<td>£25K</td>
</tr>
</tbody>
</table>

Estimated median tech wage £36,505, 45% higher than median national wage⁴

⁴2021 data due to UK ONS reporting delays | ²2022 wage figures unavailable at time of publication

CompTIA
Sheffield

STATE OF TECHNOLOGY SUMMARY

31,660 NET TECH EMPLOYMENT
5.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
1,960 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
17,416 EMPLOYER JOB POSTINGS [2022 total for tech occupations]
1,639 EMERGING TECH JOB POSTINGS [job roles + skills]
9% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

NET TECH EMPLOYMENT

<table>
<thead>
<tr>
<th>Year</th>
<th>Est.</th>
<th>Projected Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>30,000</td>
<td>+338 jobs</td>
</tr>
<tr>
<td>2018</td>
<td>31,338</td>
<td>+1.1%</td>
</tr>
<tr>
<td>2019</td>
<td>31,660</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>31,388</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>31,660</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>31,392</td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>31,730</td>
<td></td>
</tr>
</tbody>
</table>

Projected growth of +270 jobs and +0.9%

LEADING TECH OCCUPATIONS

| Occupation | 2022 | 2023 % Change
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Software Development and Web Design</td>
<td>5,290</td>
<td>+1.1%</td>
</tr>
<tr>
<td>IT Analysts, Cybersecurity3 and Systems</td>
<td>5,000</td>
<td>+0.9%</td>
</tr>
<tr>
<td>IT Support and Operations Technicians</td>
<td>3,977</td>
<td>+0.6%</td>
</tr>
<tr>
<td>Network and Telecommunications Engineers</td>
<td>1,799</td>
<td>+0.6%</td>
</tr>
<tr>
<td>IT Project Managers</td>
<td>1,148</td>
<td>+0.7%</td>
</tr>
</tbody>
</table>

3Cybersecurity job role does not yet have a dedicated ONS occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

LEADING TECH INDUSTRY SECTORS [by employment]

| Sector | 2022 | 2023 % Change
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Consultancy and Services</td>
<td>7,474</td>
<td>+1.5%</td>
</tr>
<tr>
<td>Telecom, Data Processing, Web Portals</td>
<td>6,305</td>
<td>+0.2%</td>
</tr>
<tr>
<td>Software and Custom Development</td>
<td>3,374</td>
<td>+3.3%</td>
</tr>
<tr>
<td>Tech Manufacturing</td>
<td>795</td>
<td>-2.0%</td>
</tr>
</tbody>
</table>

32023 projection | 3Wage data subject to revisions and may not be directly comparable to prior years

TECH OCCUPATION WAGES [by annual percentile]

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>10th</td>
<td>£25K</td>
</tr>
<tr>
<td>25th</td>
<td>£30K</td>
</tr>
<tr>
<td>50th</td>
<td>£35K</td>
</tr>
<tr>
<td>75th</td>
<td>£40K</td>
</tr>
<tr>
<td>90th</td>
<td>£45K</td>
</tr>
</tbody>
</table>

Estimated median tech wage £38,977, 53% higher than median national wage

32021 data due to UK ONS reporting delays | 2022 wage figures unavailable at time of publication

Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of Lightcast and UK Office for National Statistics data | Estimates cover 2021-2022 time period or most recently available | See report Methodology for details

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APPENDIX TABLES
## TECH OCCUPATION EMPLOYMENT DETAIL

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology and Telecommunications Directors</td>
<td>95,002</td>
<td>95,857</td>
<td>856</td>
<td>1%</td>
</tr>
<tr>
<td>IT Specialist Managers</td>
<td>221,062</td>
<td>222,685</td>
<td>1,624</td>
<td>1%</td>
</tr>
<tr>
<td>IT Project and Programme Managers</td>
<td>87,312</td>
<td>87,959</td>
<td>647</td>
<td>1%</td>
</tr>
<tr>
<td>IT Business Analysts, Architects and Systems Designers</td>
<td>124,915</td>
<td>125,839</td>
<td>925</td>
<td>1%</td>
</tr>
<tr>
<td>Programmers and Software Development Professionals</td>
<td>311,236</td>
<td>314,032</td>
<td>2,795</td>
<td>1%</td>
</tr>
<tr>
<td>Web Design and Development Professionals</td>
<td>53,327</td>
<td>53,872</td>
<td>545</td>
<td>1%</td>
</tr>
<tr>
<td>Information Technology and Telecommunications Professionals n.e.c.</td>
<td>184,225</td>
<td>185,625</td>
<td>1,400</td>
<td>1%</td>
</tr>
<tr>
<td>IT Operations Technicians</td>
<td>113,227</td>
<td>114,029</td>
<td>803</td>
<td>1%</td>
</tr>
<tr>
<td>IT User Support Technicians</td>
<td>114,208</td>
<td>115,006</td>
<td>798</td>
<td>1%</td>
</tr>
<tr>
<td>Telecommunications Engineers</td>
<td>56,311</td>
<td>56,753</td>
<td>442</td>
<td>1%</td>
</tr>
<tr>
<td>IT Engineers</td>
<td>48,196</td>
<td>48,507</td>
<td>311</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,409,020</strong></td>
<td><strong>1,420,165</strong></td>
<td><strong>11,145</strong></td>
<td><strong>1%</strong></td>
</tr>
</tbody>
</table>

Sources: EMSI, Burning Glass, CompTIA
METHODOLOGY

CLASSIFICATION SYSTEM
CompTIA’s State of the Tech Workforce UK utilises the UK Standard Industrial Classification System (SIC) to define the tech industry. The UK SIC is a five-digit classification assigned to most specific industries. Economic units with similar production processes are classified in the same industry. Because State of the Tech Workforce UK analyses the tech industry by using industry classifications, the report in general focuses on companies and sectors, not individual occupations.

For occupation analysis, CompTIA’s State of the Tech Workforce UK utilises Standard Occupational Classification (SOC) System, which is a standard used by government agencies to classify workers into occupational categories.

NET TECH EMPLOYMENT
The tech workforce consists of two primary components. The foundation is the set of technology occupation professionals working in technical positions, such as IT support, network engineering, software development and every related role. Many of these professionals work for technology companies (51%), but many others are employed by organisations across every industry sector in the UK economy (49%).

The second component of the discussion consists of the business professionals employed by technology companies. These professionals play an important role in supporting the development and delivery of the technology products and services used throughout the economy. 31.05% of the net tech employment total consists of tech industry business professionals.

See page 4 of this report for more details on the concept of Net Tech Employment.

TECH INDUSTRY DEFINITION
There are a number of considerations when developing a definition of the technology industry. In some cases, SIC codes do not perfectly reflect industry dynamics. This can be especially challenging in times of rapid innovation, when new tech sectors emerge in a short period of time. More recently, the degree to which technology has become core to so many industry sectors poses new questions. For example, a technology platform designed to facilitate the online sale of goods may have traditionally been viewed as a retailer, although given the intense use of technology, an argument could be made to classify it as a technology firm.

Conceptually, CompTIA’s State of the Tech Workforce UK focuses on the sectors involved in making, creating, enabling, integrating, or supporting technology, whether as a product or service. At this time, the report does not include industry sectors categorised primarily as users of technology.

CompTIA’s State of the Tech Workforce UK includes 25 SIC codes in its definition of the tech industry. Broadly these can be thought of in two broad categories: tech manufacturing and tech services. These industries sufficiently represent the technology industry within the framework provided under the UK Office for National Statistics industry taxonomies. For more specific details regarding the UK managed services sector, see CompTIA’s UK MSP sizing research brief.

TECH OCCUPATION DEFINITION
The occupations covered in this report are broadly categorised into core information technology (IT) positions and then engineering, repair, and technician positions. In total, 11 distinct SOCs are used to define the tech occupations found across every industry sector of the UK economy.

LOCATION CONSIDERATIONS
The UK Office for National Statistics uses several different location classifications, which may include a hierarchy of administrative geographies, electoral regions, census regions, Eurostat NUTS-3 and LAU-2 mapping, postal geographies and more. See UK ONS site for more details. The data sources used in this report may also have unique interpretations of locations to facilitate data aggregation or to allow for more consistency across regions or metro areas.