

CompTIA®

UK Tech Industry and Workforce Trends

Trends and Analysis of United Kingdom
Regions and Metro Areas



ABOUT

ABOUT COMPTIA

The Computing Technology Industry Association (CompTIA) is a leading voice and advocate for the \$5 trillion global information technology ecosystem; and the estimated 75 million industry and tech professionals who design, implement, manage, and safeguard the technology that powers the world's economy. Through education, training, certifications, advocacy, philanthropy, and market research, CompTIA is the hub for advancing the tech industry and its workforce.

CompTIA is the world's leading vendor-neutral IT-certifying body with more than 2.8 million certifications awarded based on the passage of rigorous, performance-based exams. 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 develops innovative on-ramps and career pathways to expand opportunities to populations that traditionally have been under-represented in the information technology workforce.

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ABOUT UK TECH INDUSTRY AND WORKFORCE TRENDS

CompTIA's UK Tech Industry and Workforce Trends 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 a number of data sources including EMSI, Burning Glass Technologies Labour Insights, UK Office for National Statistics (ONS), Eurostat, OECD, CompTIA and more.

NATIONAL COVERAGE

England
Northern Ireland
Scotland
Wales

METRO AREA COVERAGE

Birmingham
Bristol
Leeds
London
Manchester
Sheffield
Liverpool
Newcastle
Nottingham
Belfast
Edinburgh
Glasgow
Cardiff

Due to differences in location classifications, there may be some degree of variance in the data output for certain metro areas. In some cases, metros are narrowly defined city-type locations, while in others, a metro may have a much larger geographic footprint. CompTIA uses established guidelines from the data sources cited above in portraying the metro area data. See Methodology for more detail.



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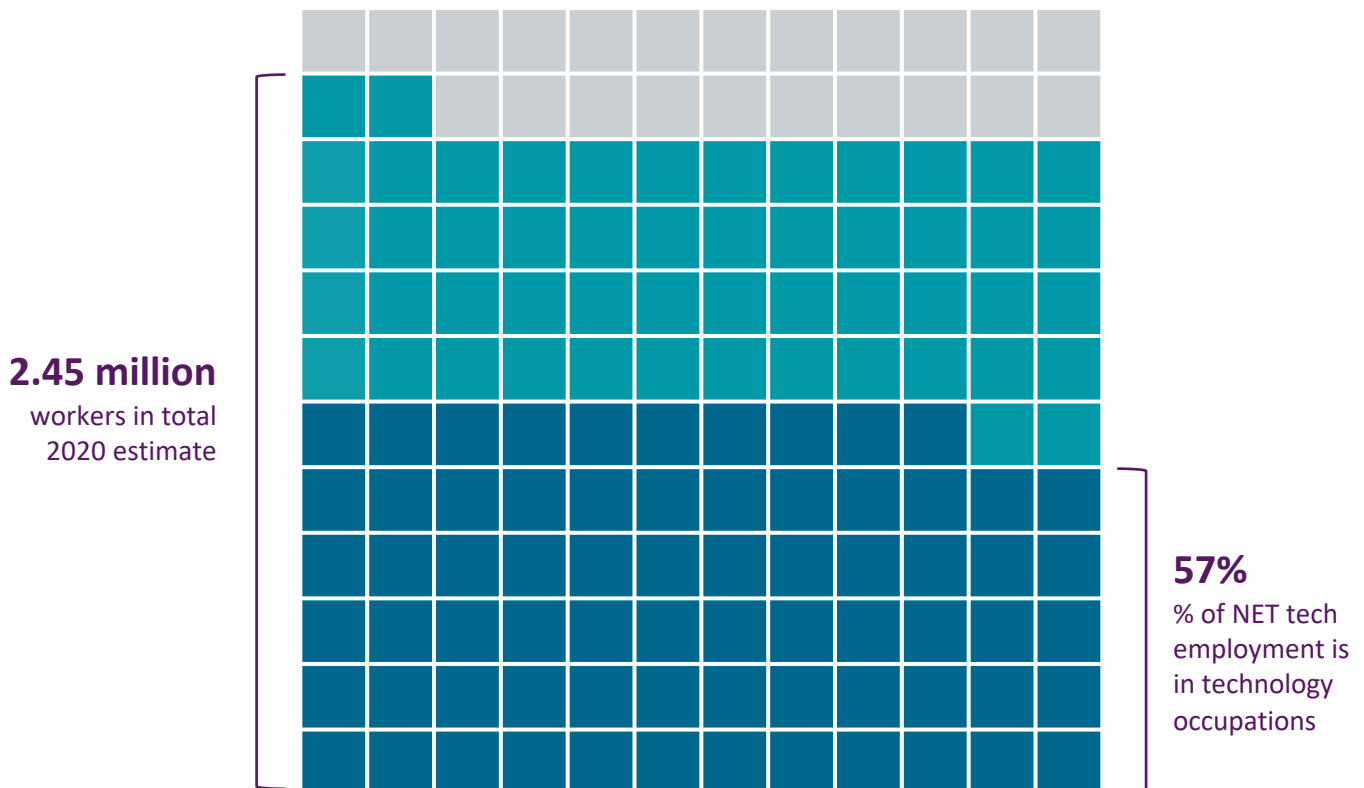
DEFINING NET TECH EMPLOYMENT


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 scientist, and related roles. Many of these professionals work for technology companies (39.8%), but many others are employed by organisations across every industry sector in the U.K. economy (60.2%).

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. Slightly more than 43% 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 characterized 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.)



 = 20,000 workers

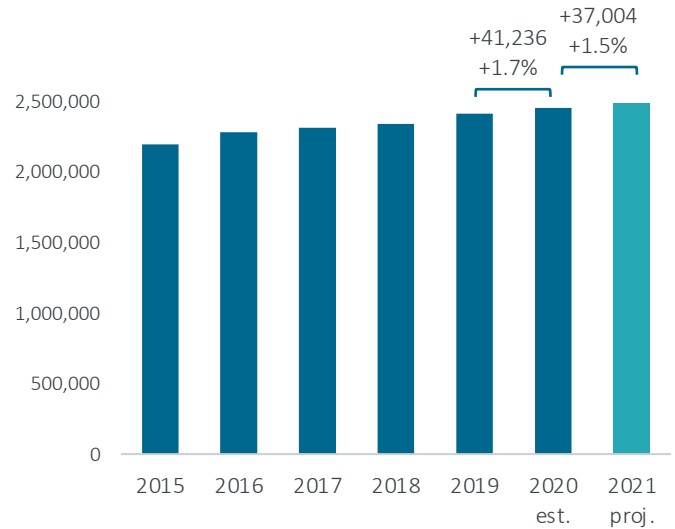
Source: EMSI | CompTIA
Some numeric changes affected by rounding

KEY FINDINGS

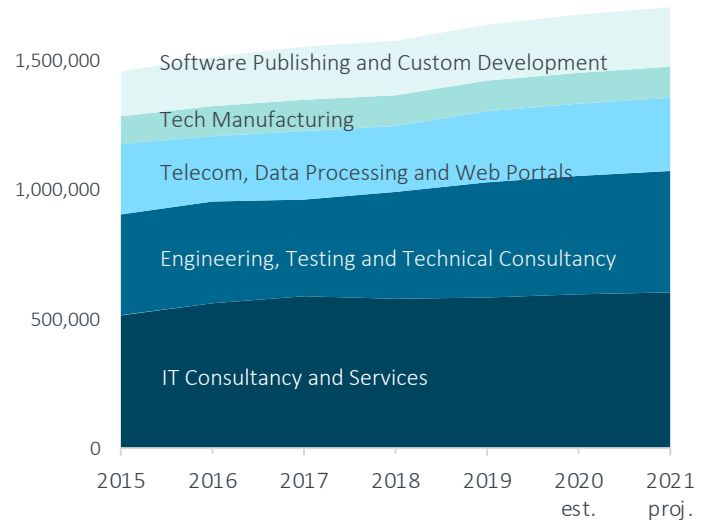
KEY POINTS

- Net tech employment in the United Kingdom – as described on the previous page, reached an estimated 2,451,246 workers in 2020, approximately a 2% increase over the previous year.
- Since 2015, net tech employment increased by an estimated 255,790 net new jobs. Net tech employment growth has been steady during this span, averaging approximately 51,158 new jobs per year.
- Net tech employment accounted for approximately 7.6% of the overall U.K. workforce in 2020. 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 experienced estimated growth of +2.2% year over year, while the occupation side across all industry sectors experienced a gain of 1.3% year over year. Looking ahead, tech sector and tech occupation gains are projected to be 1.7% and 1.3% respectively.
- All sectors of the tech industry have seen job gains over this five-year period. Largest tech industry contributors to job gains, 2015-2020:
 - IT Consultancy and Services: +80,687
 - Engineering, Testing and Technical Consultancy: +69,787
- Largest tech occupation contributors to job gains, 2015-2020:
 - Programmers and Software Development: +36,530
 - IT and Telecommunications Professionals: +20,878
 - IT Specialist Managers: +17,050
 - IT Business Analysts: +11,001
 - IT Technology and Telecommunications Directors: +9,419
- On a percent change basis, the occupation category covering programmers and software development professionals grew by +13.5%, the largest increase among tech occupations during 2015-2020. IT and telecommunications professionals increased by 12.8% and IT and telecommunications directors increased by 11.1 percent.

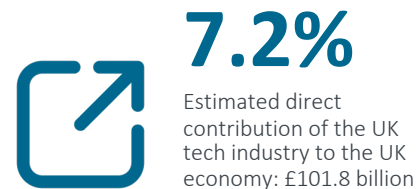
NET TECH EMPLOYMENT TRENDING



TECH INDUSTRY EMPLOYMENT TRENDING



ECONOMIC IMPACT OF TECH INDUSTRY



Source: EMSI | UK ONS | Burning Glass Labour Insights | CompTIA

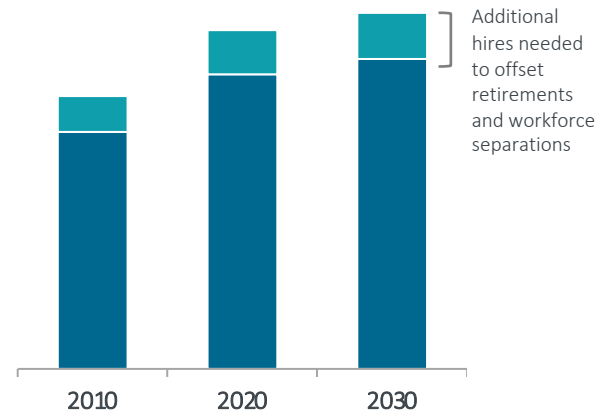
KEY FINDINGS

KEY POINTS

- By 2030, projections from EMSI put the base of tech occupation employment at approximately 1.47 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 with employers playing catch-up with pent-up demand. Note: job postings should not be interpreted as unfilled jobs and there is not a 1:1 relationship between postings and actual hires made.
- Employer demand for tech talent as measured by online job postings follows a similar pattern to tech employment. London had approximately 36,049 postings in 2020. In second place is Manchester with approximately 29,958 postings. Bristol and Birmingham are third and fourth respectively in terms of tech job postings.
- 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.

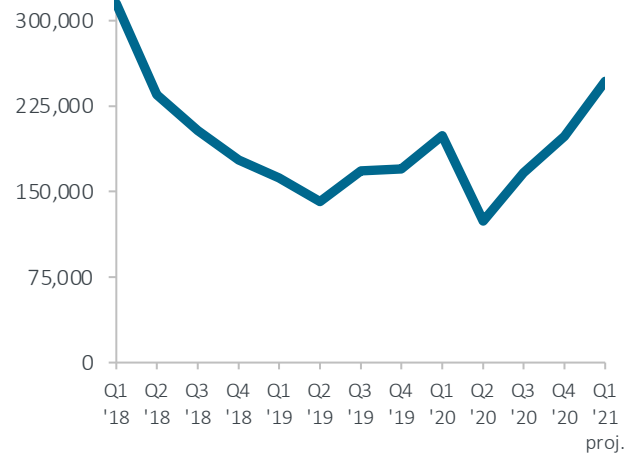
TECH OCCUPATION EMPLOYMENT OUTLOOK

Workforce need = annual replacement rate + growth rate

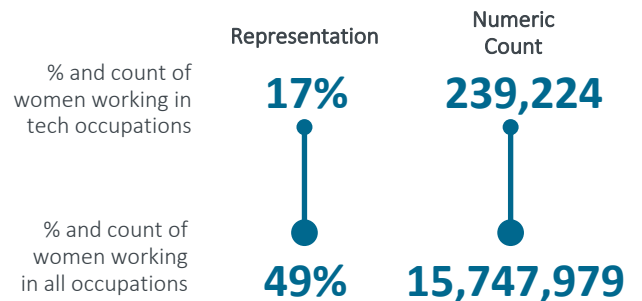


AGGREGATE QUARTERLY JOB POSTINGS FOR TECH OCCUPATIONS

Job postings by U.K. employers



TECH WORKFORCE CHARACTERISTICS



Source: EMSI | UK ONS | Burning Glass Labour Insights | CompTIA

KEY FINDINGS

METRO AREA NET TECH EMPLOYMENT

- The top four metropolitan areas employ a little more than 725,000 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 area also saw the highest increase 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 about 10%, London and Edinburgh have the highest concentration of net tech employment as a percentage of its overall employment base.
- Compared to the national tech employment concentration benchmark of 7.6%, 5 metro areas had a higher rate, confirming the importance of technology to a far-reaching set of cities across the country.

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 57,168
- Manchester 9,853
- Bristol 5,825
- Birmingham 4,411

METRO AREA MEDIAN TECH INDUSTRY WAGES

- On average, tech industry wages are highest in London, followed by Edinburgh, Glasgow, and Birmingham.
 - London £57,077
 - Edinburgh £45,454
 - Glasgow £44,764
 - Birmingham £44,026
 - Manchester £43,412
 - Liverpool £43,282
 - Bristol £43,179
 - Leeds £41,002
 - Sheffield £40,655
 - Newcastle £39,281

TOP METROS BY NET TECH EMPLOYMENT

1.	London	521,184
2.	Manchester	100,360
3.	Bristol	55,636
4.	Glasgow	48,626
5.	Birmingham	47,304
6.	Leeds	44,311
7.	Edinburgh	43,098
8.	Newcastle	40,729
9.	Sheffield	38,504
10.	Nottingham	37,885

TOP METROS BY NET TECH EMPLOYMENT JOB GAINS

1.	London	+20,023
2.	Manchester	+1,516
3.	Nottingham	+1,516
4.	Edinburgh	+1,268
5.	Glasgow	+1,160
6.	Birmingham	+1,001
7.	Leeds	+842
8.	Sheffield	+810
9.	Newcastle	+713
10.	Liverpool	+574

TOP METROS BY NET TECH EMPLOYMENT AS A PERCENT OF LOCAL EMPLOYMENT

1.	London	10.5%
2.	Edinburgh	10.3%
3.	Leeds	9.3%
4.	Bristol	8.8%
5.	Glasgow	8.3%
6.	Newcastle	7.6%
7.	Nottingham	7.3%
8.	Manchester	7.2%
9.	Birmingham	7.1%
10.	Belfast	6.9%

UNITED KINGDOM SNAPSHOT

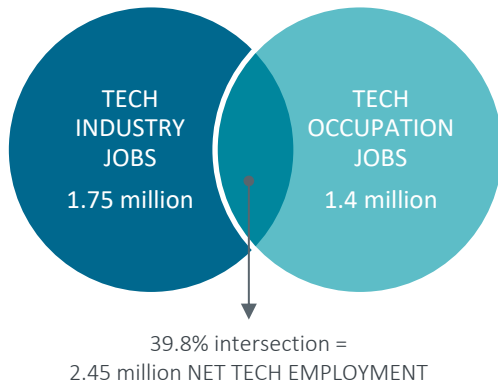
United Kingdom



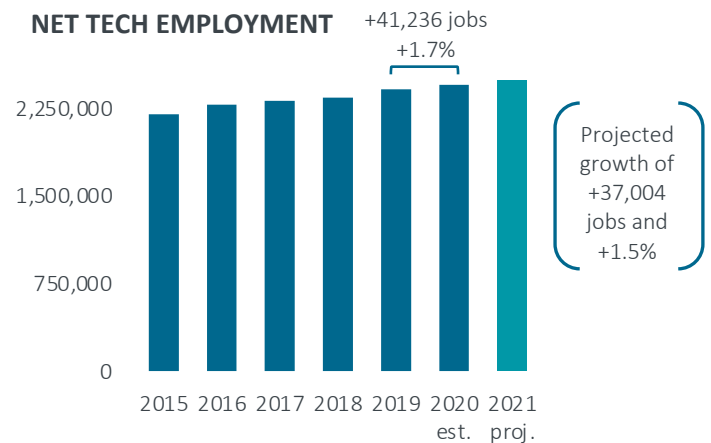
STATE OF TECHNOLOGY SUMMARY

- 2,451,246 NET TECH EMPLOYMENT¹
- 7.6% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 282,003 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 688,572 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 138,021 EMERGING TECH JOB POSTINGS [job roles + skills]
- 20.0% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



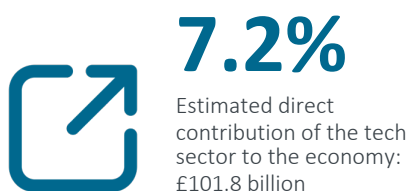
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	358,537	+1.6%
IT Analysts, Cybersecurity ² and Systems	308,040	+1.4%
IT Support or Operations Technicians	224,654	+1.0%
Network or Telecommunications Engineers	104,812	+1.1%
IT Project Managers	86,903	+1.3%

LEADING TECH INDUSTRY SECTORS [by employment]

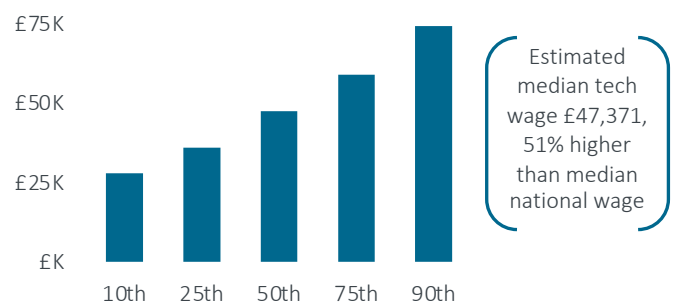
Sector	2020	YoY % Change
IT Consultancy and Services	595,371	+2.1%
Engineering, Testing and Technical Consultancy	458,716	+2.7%
Telecom, Data Processing and Web Portals	278,999	+1.9%
Software Publishing and Custom Development	225,030	+3.4%
Tech manufacturing	118,067	+0.2%

ECONOMIC IMPACT



²In this data set, cybersecurity does not yet have a dedicated occupation category, but rather spans several categories. For reporting purposes, it is grouped with IT and Systems Analysts.

TECH OCCUPATION WAGES [by percentile]



NATIONAL SNAPSHOTS

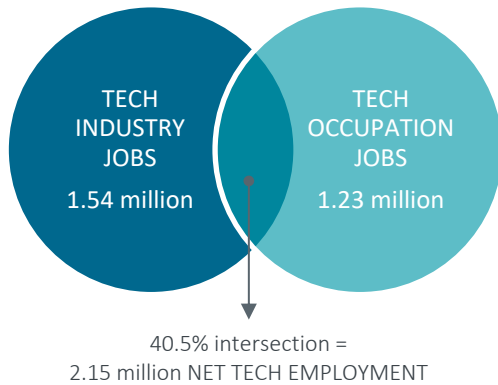
England



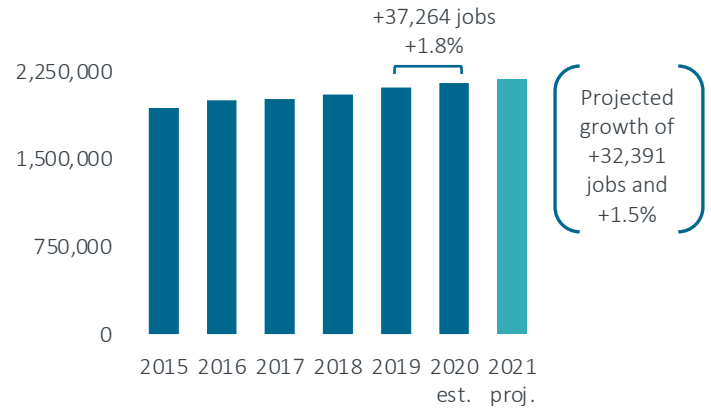
STATE OF TECHNOLOGY SUMMARY

- 2,150,328 NET TECH EMPLOYMENT¹
- 7.9% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 251,804 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 523,948 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 106,818 EMERGING TECH JOB POSTINGS [job roles + skills]
- 20% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	317,522	+1.6%
IT Analysts, Cybersecurity and Systems	272,905	+1.4%
IT Support or Operations Technicians	194,118	+1.0%
Network or Telecommunications Engineers	91,864	+1.1%
IT Project Managers	76,245	+1.4%

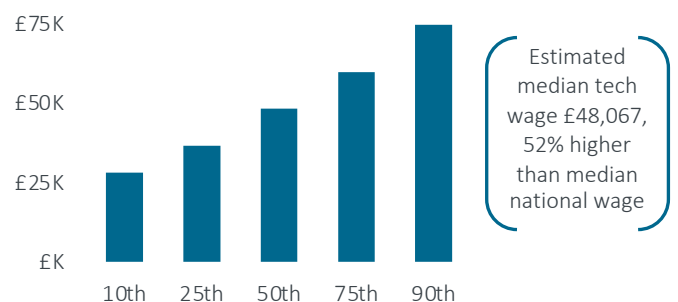
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
IT Consultancy and Services	541,335	+2.3%
Engineering, Testing and Technical Consultancy	389,085	+2.9%
Telecom, Data Processing and Web Portals	237,506	+1.7%
Software Publishing and Custom Development	202,110	+3.6%
Tech manufacturing	95,165	0.0%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



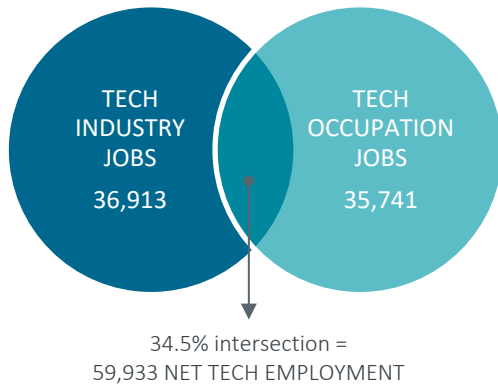
Wales



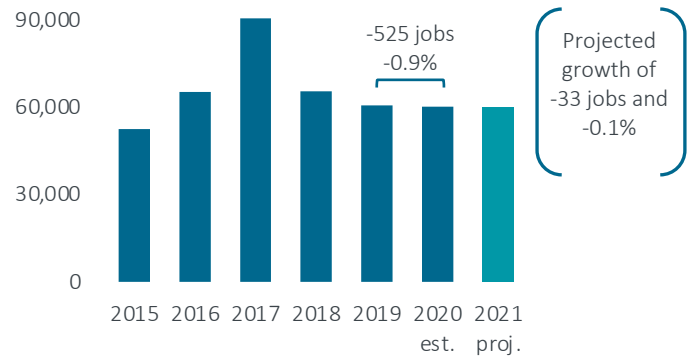
STATE OF TECHNOLOGY SUMMARY

- 59,933 NET TECH EMPLOYMENT¹
- 4.4% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 6,580 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 12,388 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 1,998 EMERGING TECH JOB POSTINGS [job roles + skills]
- 16% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	8,591	-0.6%
IT Analysts, Cybersecurity and Systems	7,709	-0.4%
IT Support or Operations Technicians	6,899	+0.5%
Network or Telecommunications Engineers	3,448	-0.7%
IT Project Managers	2,383	+0.4%

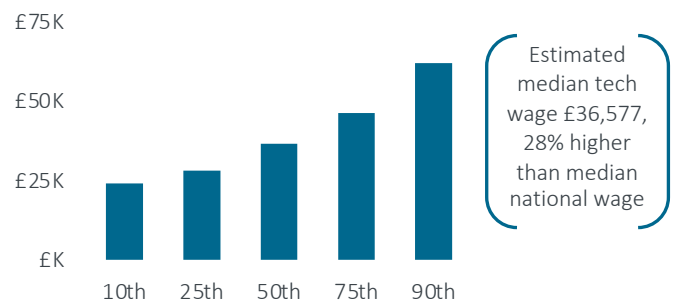
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
IT Consultancy and Services	9,199	-10.9%
Telecom, Data Processing and Web Portals	8,495	+1.7%
Engineering, Testing and Technical Consultancy	7,790	-2.2%
Tech manufacturing	7,136	+1.3%
Software Publishing and Custom Development	2,775	-13.1%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



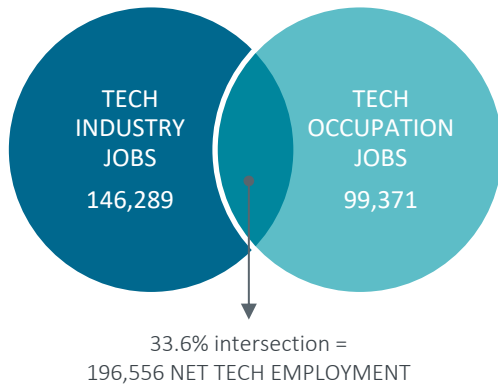
Scotland



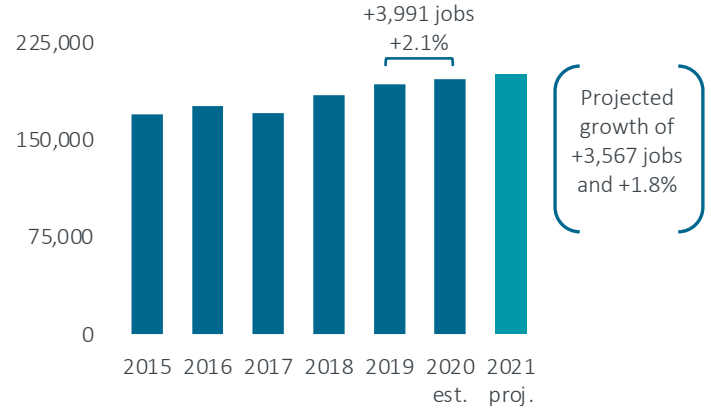
STATE OF TECHNOLOGY SUMMARY

- 196,556 NET TECH EMPLOYMENT¹
- 7.6% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 20,355 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 30,881 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 6,086 EMERGING TECH JOB POSTINGS [job roles + skills]
- 20% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	24,464	+2.1%
IT Analysts, Cybersecurity and Systems	21,944	+1.8%
IT Support or Operations Technicians	19,931	+1.2%
Network or Telecommunications Engineers	7,850	+1.1%
IT Project Managers	5,792	+1.3%

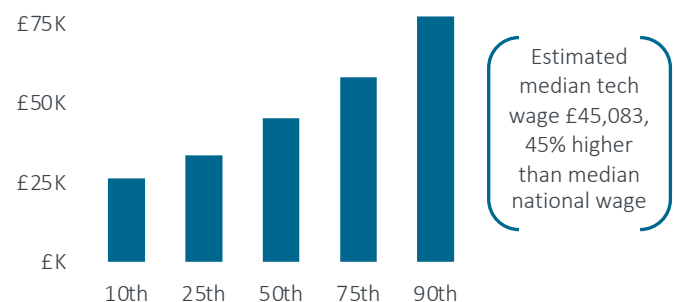
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Engineering, Testing and Technical Consultancy	56,008	+1.9%
IT Consultancy and Services	38,262	+3.9%
Telecom, Data Processing and Web Portals	26,791	+3.5%
Software Publishing and Custom Development	11,532	+5.4%
Tech manufacturing	11,320	+2.1%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



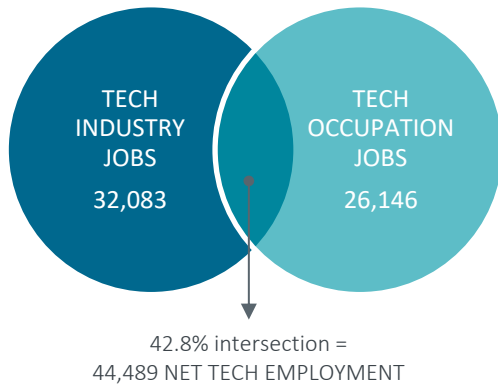
Northern Ireland



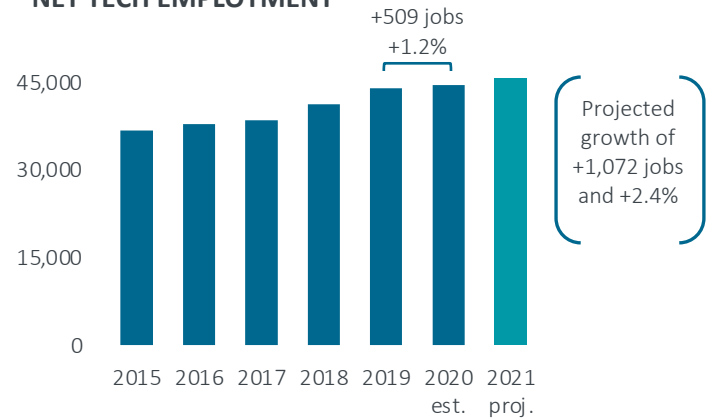
STATE OF TECHNOLOGY SUMMARY

- 44,489 NET TECH EMPLOYMENT¹
- 4.6% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 3,264 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 13,244 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 2,864 EMERGING TECH JOB POSTINGS [job roles + skills]
- 22% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



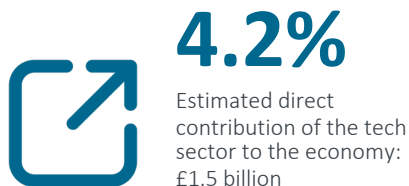
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	7,960	+1.2%
IT Analysts, Cybersecurity and Systems	5,482	+0.9%
IT Support or Operations Technicians	3,706	+0.9%
IT Project Managers	2,483	+1.5%
Network or Telecommunications Engineers	1,649	+1.0%

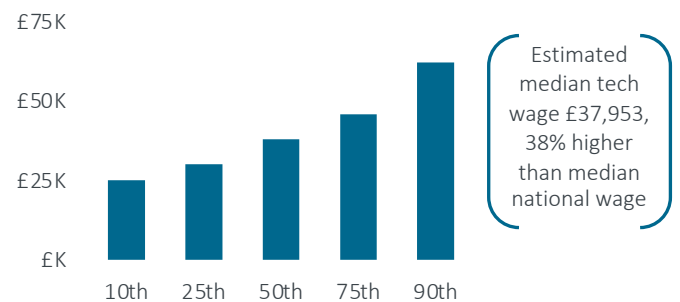
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Software Publishing and Custom Development	8,613	+0.7%
IT Consultancy and Services	6,576	+0.2%
Telecom, Data Processing and Web Portals	6,206	+3.2%
Engineering, Testing and Technical Consultancy	5,833	+2.2%
Tech manufacturing	4,280	-1.0%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



METRO AREA SNAPSHOTS

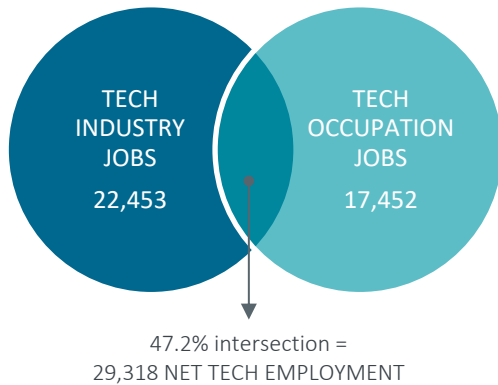
Belfast



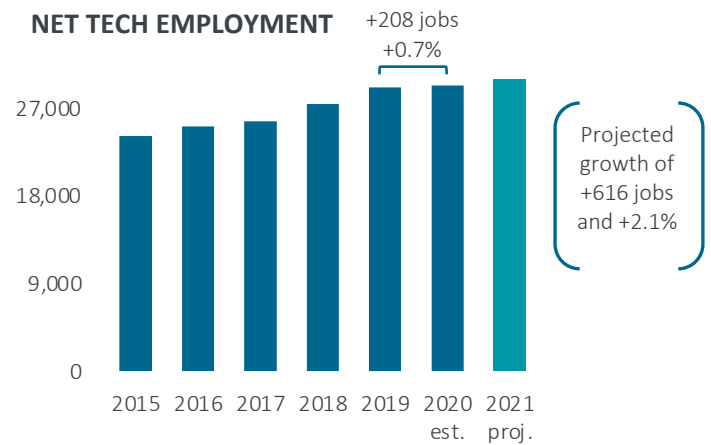
STATE OF TECHNOLOGY SUMMARY

- 29,318 NET TECH EMPLOYMENT¹
- 6.9% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 1,882 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 11,446 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 2,658 EMERGING TECH JOB POSTINGS [job roles + skills]
- 23% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



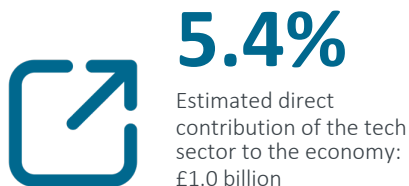
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	5,872	+1.3%
IT Analysts, Cybersecurity and Systems	3,597	+0.3%
IT Support or Operations Technicians	2,213	+0.3%
IT Project Managers	1,699	+1.2%
Network or Telecommunications Engineers	899	0.0%

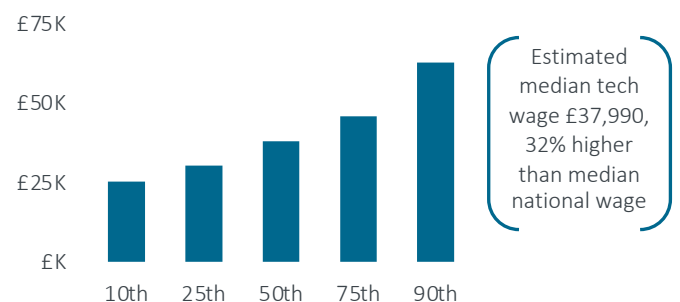
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Software Publishing and Custom Development	7,545	+1.6%
IT Consultancy and Services	4,792	-0.8%
Engineering, Testing and Technical Consultancy	3,734	+1.5%
Telecom, Data Processing and Web Portals	3,401	+1.1%
Tech manufacturing	2,615	-0.3%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



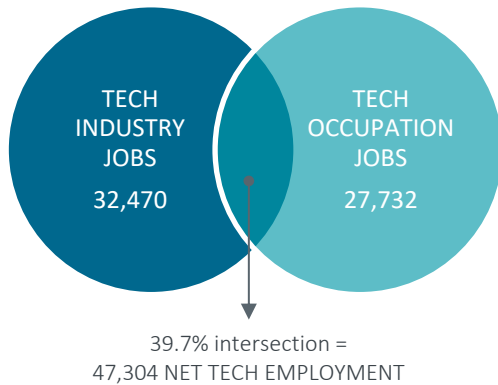
Birmingham



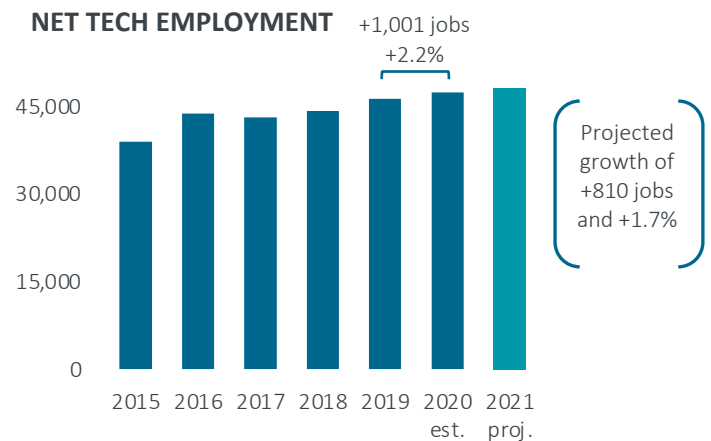
STATE OF TECHNOLOGY SUMMARY

- 47,304 NET TECH EMPLOYMENT¹
- 7.1% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 4,411 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 15,951 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 2,659 EMERGING TECH JOB POSTINGS [job roles + skills]
- 17% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



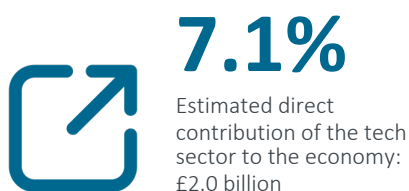
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	6,379	+1.6%
IT Analysts, Cybersecurity and Systems	6,350	+1.0%
IT Support or Operations Technicians	5,362	+2.2%
Network or Telecommunications Engineers	2,405	+2.7%
IT Project Managers	1,371	+1.6%

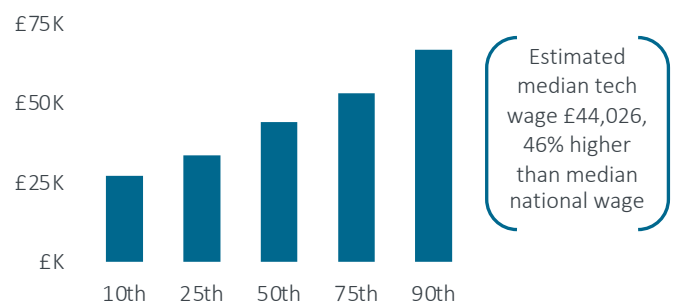
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Engineering, Testing and Technical Consultancy	11,407	+3.5%
IT Consultancy and Services	9,383	+1.8%
Software Publishing and Custom Development	4,476	+4.5%
Telecom, Data Processing and Web Portals	4,476	+4.9%
Tech manufacturing	390	-9.2%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



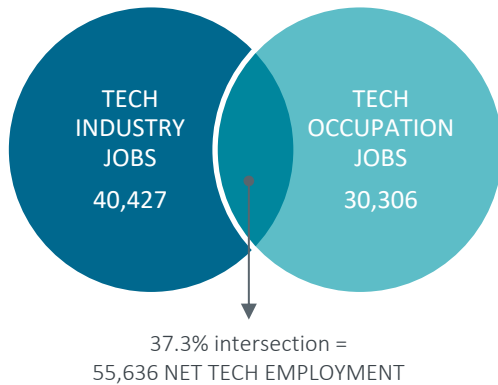
Bristol



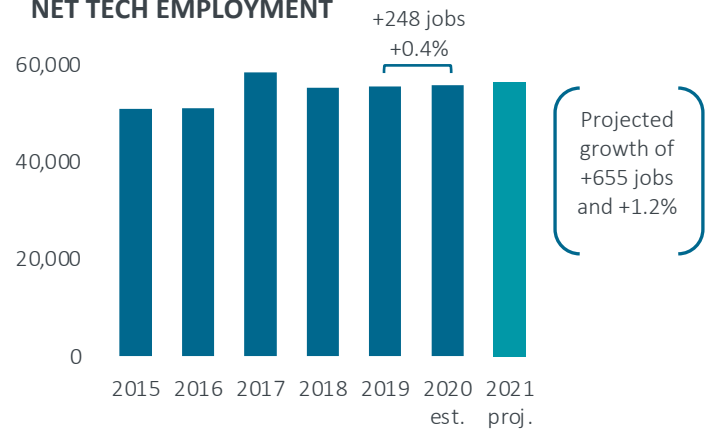
STATE OF TECHNOLOGY SUMMARY

- 55,636 NET TECH EMPLOYMENT¹
- 8.8% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 5,825 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 18,965 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 3,663 EMERGING TECH JOB POSTINGS [job roles + skills]
- 19% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	8,088	+1.2%
IT Analysts, Cybersecurity and Systems	5,889	+1.1%
IT Support or Operations Technicians	4,773	+0.5%
Network or Telecommunications Engineers	2,674	+0.7%
IT Project Managers	1,892	+0.8%

LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Engineering, Testing and Technical Consultancy	15,688	+1.3%
IT Consultancy and Services	11,687	-0.5%
Telecom, Data Processing and Web Portals	5,381	-3.4%
Software Publishing and Custom Development	5,014	+1.3%
Tech manufacturing	1,915	-0.2%

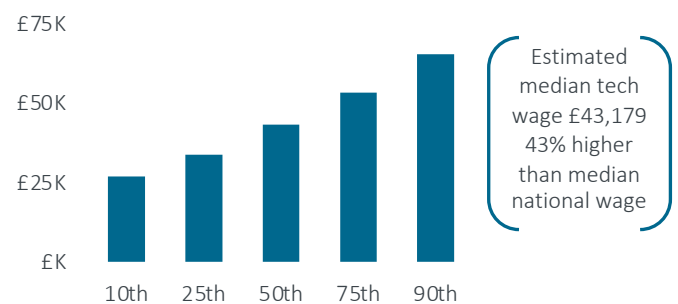
ECONOMIC IMPACT



6.9%

Estimated direct contribution of the tech sector to the economy: £1.8 billion

TECH OCCUPATION WAGES [by percentile]



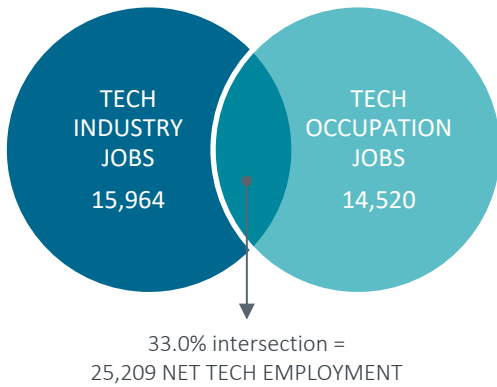
Cardiff



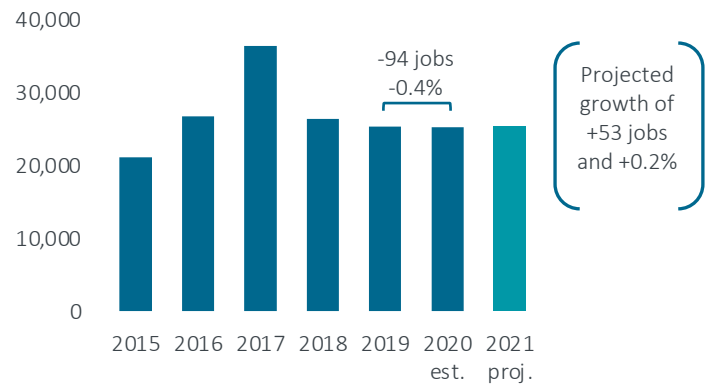
STATE OF TECHNOLOGY SUMMARY

- 25,209 NET TECH EMPLOYMENT¹
- 5.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 2,353 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 5,477 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 1,039 EMERGING TECH JOB POSTINGS [job roles + skills]
- 19% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	3,634	-0.3%
IT Analysts, Cybersecurity and Systems	3,112	-0.2%
IT Support or Operations Technicians	2,909	+0.8%
Network or Telecommunications Engineers	1,390	-1.1%
IT Project Managers	1,011	+0.2%

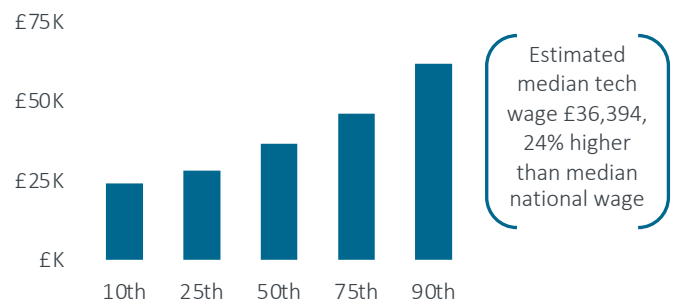
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Engineering, Testing and Technical Consultancy	3,908	+0.9%
IT Consultancy and Services	3,556	-10.6%
Telecom, Data Processing and Web Portals	3,439	+1.2%
Tech manufacturing	3,145	+2.6%
Software Publishing and Custom Development	1,328	-13.5%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



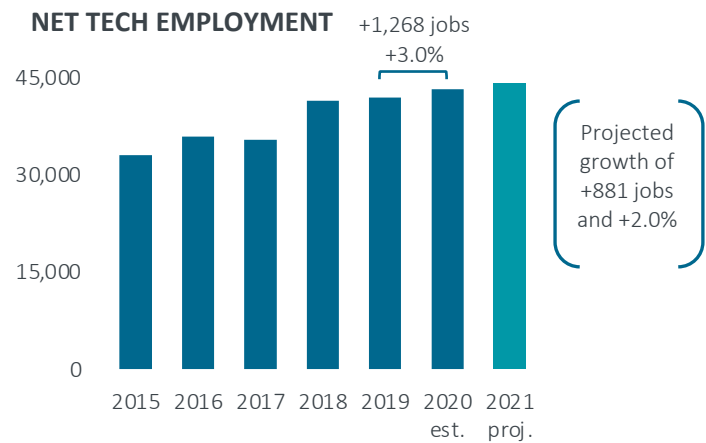
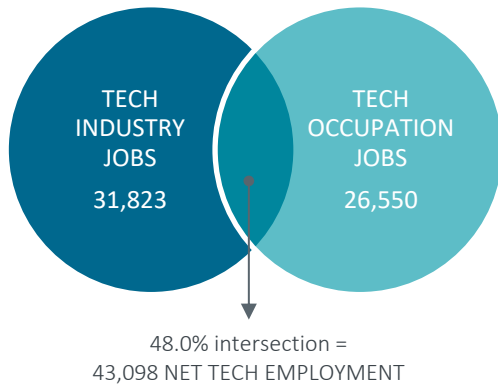
Edinburgh



STATE OF TECHNOLOGY SUMMARY

- 43,098 NET TECH EMPLOYMENT¹
- 10.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 3,697 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 12,335 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 2,932 EMERGING TECH JOB POSTINGS [job roles + skills]
- 24% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



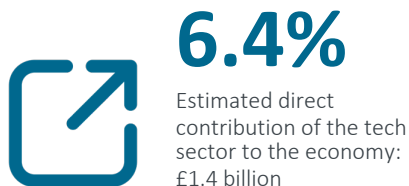
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	7,623	+2.8%
IT Analysts, Cybersecurity and Systems	6,135	+2.8%
IT Support or Operations Technicians	5,094	+2.5%
IT Project Managers	1,748	+2.0%
Network or Telecommunications Engineers	1,337	+1.7%

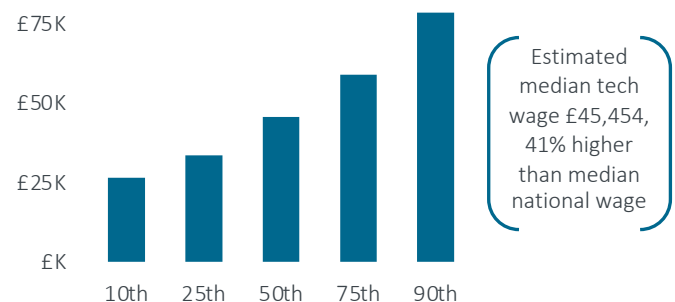
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
IT Consultancy and Services	12,697	+4.0%
Engineering, Testing and Technical Consultancy	6,172	+2.6%
Software Publishing and Custom Development	5,010	+5.7%
Telecom, Data Processing and Web Portals	4,626	+5.3%
Tech manufacturing	3,116	+2.7%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



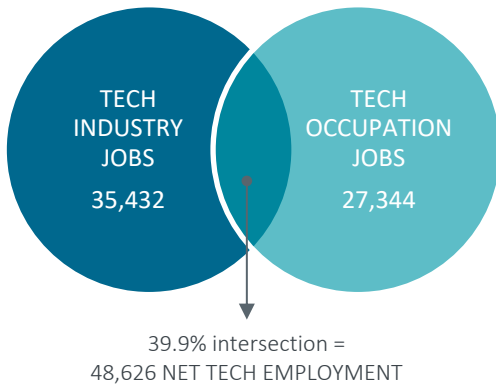
Glasgow



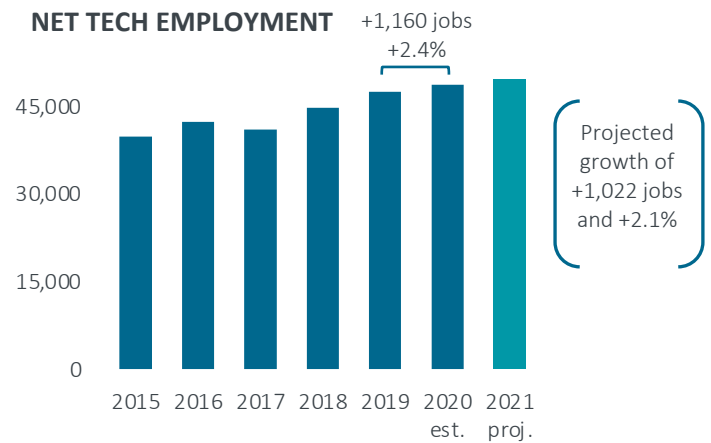
STATE OF TECHNOLOGY SUMMARY

- 48,626 NET TECH EMPLOYMENT¹
- 8.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 3,665 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 9,548 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 1,934 EMERGING TECH JOB POSTINGS [job roles + skills]
- 20% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	6,788	+2.8%
IT Analysts, Cybersecurity and Systems	6,011	+2.2%
IT Support or Operations Technicians	5,598	+0.7%
Network or Telecommunications Engineers	2,314	+2.1%
IT Project Managers	1,446	+2.1%

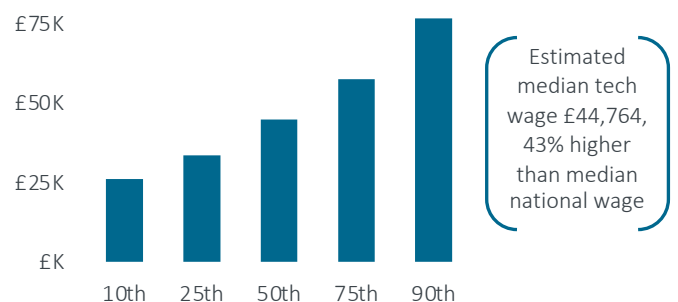
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
IT Consultancy and Services	12,875	+4.7%
Engineering, Testing and Technical Consultancy	9,899	+2.8%
Telecom, Data Processing and Web Portals	7,009	+2.4%
Software Publishing and Custom Development	2,691	+6.7%
Tech manufacturing	2,140	+1.8%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



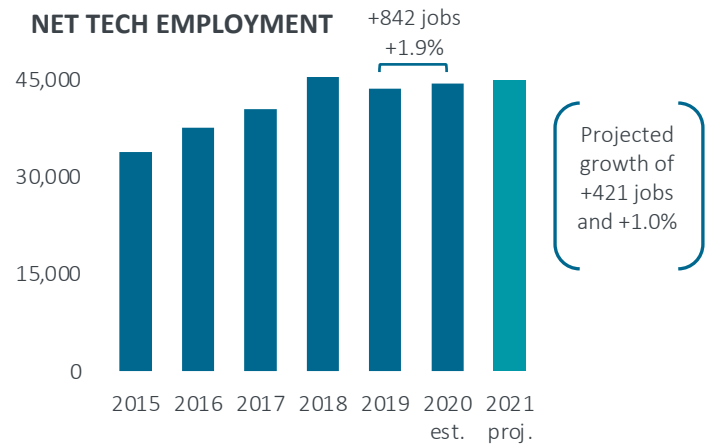
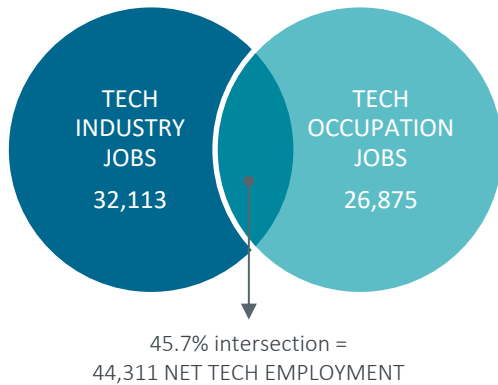
Leeds



STATE OF TECHNOLOGY SUMMARY

- 44,311 NET TECH EMPLOYMENT¹
- 9.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 3,269 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 12,254 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 2,249 EMERGING TECH JOB POSTINGS [job roles + skills]
- 18% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	7,604	+3.0%
IT Analysts, Cybersecurity and Systems	6,113	+2.1%
IT Support or Operations Technicians	4,026	+1.8%
Network or Telecommunications Engineers	1,866	+0.4%
IT Project Managers	1,486	+2.0%

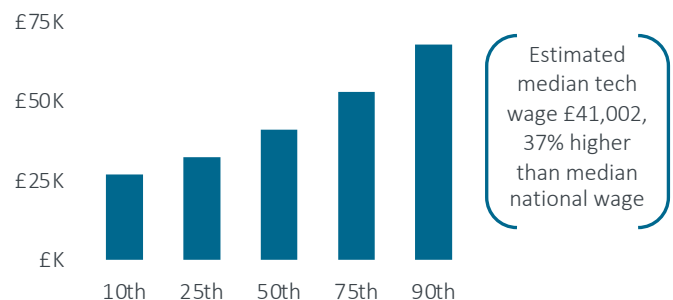
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
IT Consultancy and Services	11,442	+2.7%
Engineering, Testing and Technical Consultancy	8,173	+3.1%
Telecom, Data Processing and Web Portals	5,777	0.0%
Software Publishing and Custom Development	4,949	+4.4%
Tech manufacturing	574	-2.4%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



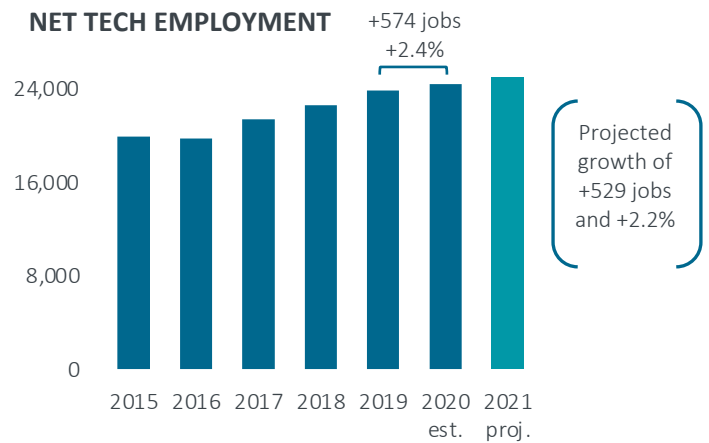
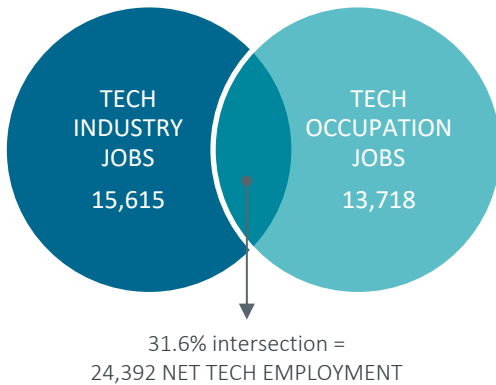
Liverpool



STATE OF TECHNOLOGY SUMMARY

- 24,392 NET TECH EMPLOYMENT¹
- 5.4% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 2,470 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 5,055 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 580 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 EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	3,448	+0.8%
IT Analysts, Cybersecurity and Systems	2,917	+1.6%
IT Support or Operations Technicians	2,388	+0.3%
Network or Telecommunications Engineers	1,091	+1.9%
IT Project Managers	888	+1.0%

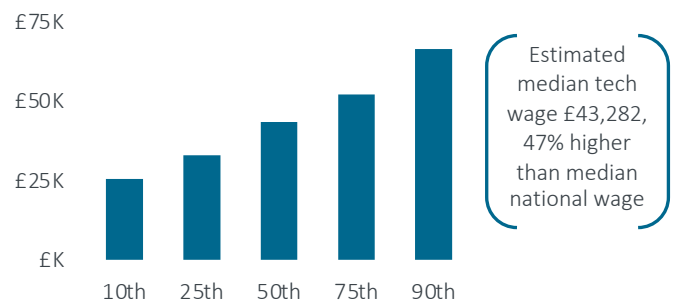
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Engineering, Testing and Technical Consultancy	4,918	+4.6%
Telecom, Data Processing and Web Portals	4,516	+5.3%
IT Consultancy and Services	3,821	+0.7%
Software Publishing and Custom Development	1,506	-1.0%
Tech manufacturing	640	+6.8%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



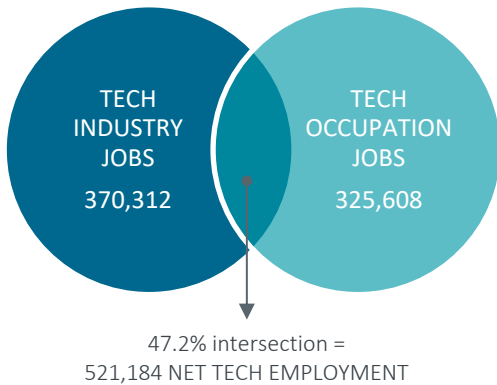
London



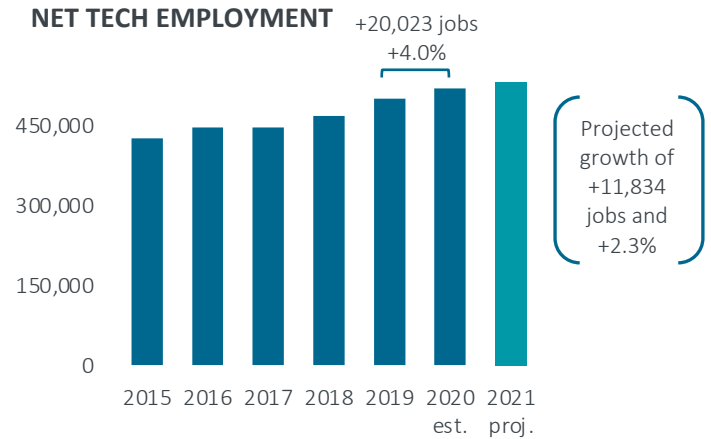
STATE OF TECHNOLOGY SUMMARY

- 521,184 NET TECH EMPLOYMENT¹
- 10.5% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 57,168 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 36,049 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 6,527 EMERGING TECH JOB POSTINGS [job roles + skills]
- 18% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



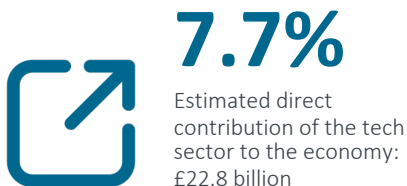
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	89,514	+3.2%
IT Analysts, Cybersecurity and Systems	79,287	+3.0%
IT Support or Operations Technicians	43,118	+2.5%
IT Project Managers	21,564	+2.5%
Network or Telecommunications Engineers	16,959	+3.2%

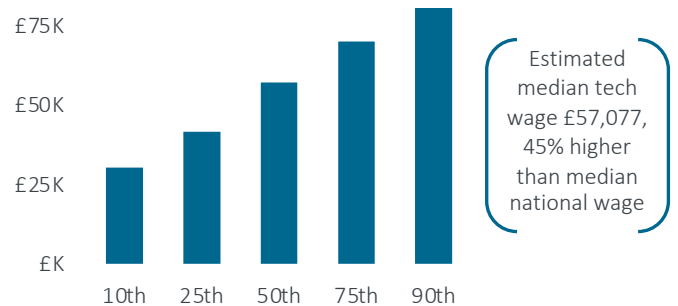
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
IT Consultancy and Services	168,204	+6.3%
Software Publishing and Custom Development	66,059	+7.8%
Engineering, Testing and Technical Consultancy	62,156	+3.8%
Telecom, Data Processing and Web Portals	61,252	+5.4%
Tech manufacturing	6,089	+4.1%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



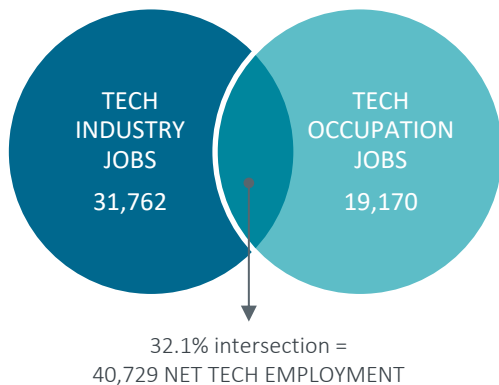
Newcastle



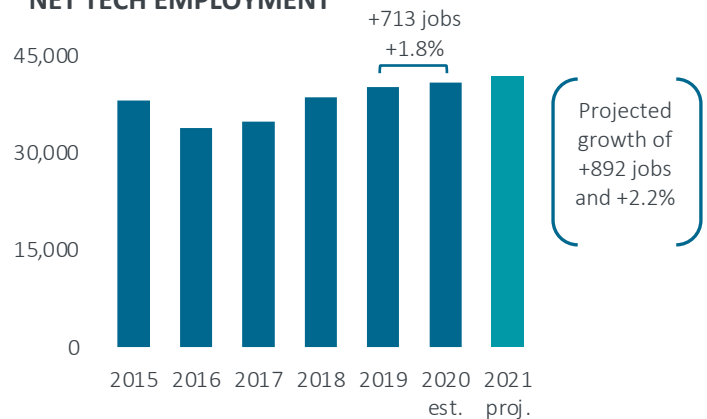
STATE OF TECHNOLOGY SUMMARY

- 40,729 NET TECH EMPLOYMENT¹
- 7.6% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 3,075 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 994 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 113 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 EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



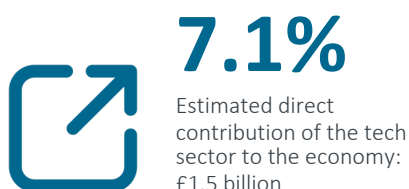
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	4,846	+0.3%
IT Analysts, Cybersecurity and Systems	3,974	+0.6%
IT Support or Operations Technicians	3,900	+0.7%
Network or Telecommunications Engineers	1,264	+0.8%
IT Project Managers	1,171	+0.9%

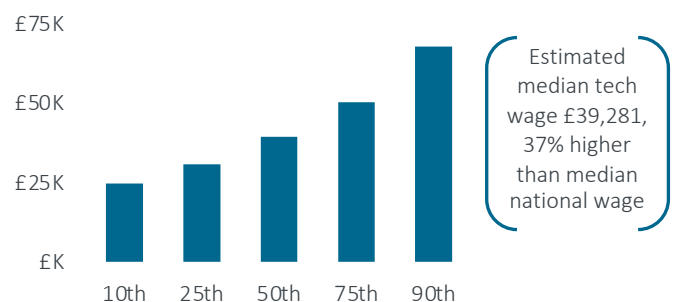
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Telecom, Data Processing and Web Portals	10,932	+3.1%
Engineering, Testing and Technical Consultancy	9,640	+6.0%
IT Consultancy and Services	7,358	-2.5%
Software Publishing and Custom Development	2,369	-4.7%
Tech manufacturing	1,240	-1.9%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



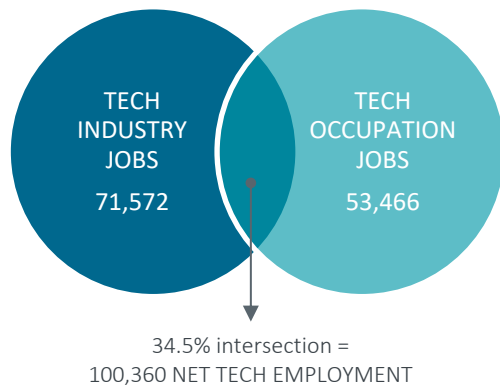
Manchester



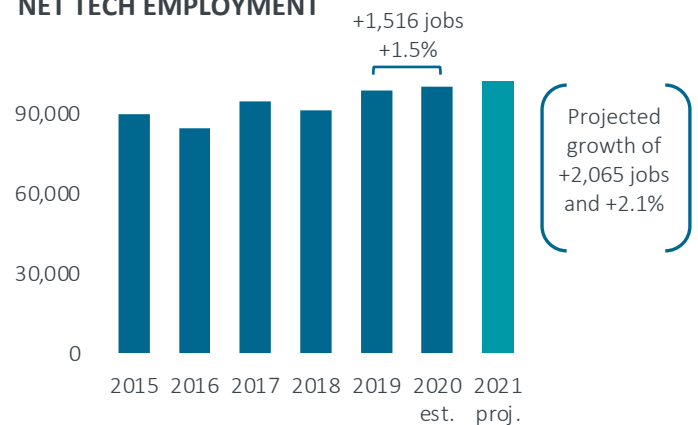
STATE OF TECHNOLOGY SUMMARY

- 100,360 NET TECH EMPLOYMENT¹
- 7.2% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 9,853 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 29,958 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 5,545 EMERGING TECH JOB POSTINGS [job roles + skills]
- 19% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



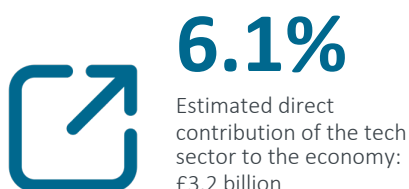
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	13,165	+1.0%
IT Analysts, Cybersecurity and Systems	11,285	+1.1%
IT Support or Operations Technicians	9,141	+0.9%
Network or Telecommunications Engineers	4,468	+1.5%
IT Project Managers	3,328	+0.9%

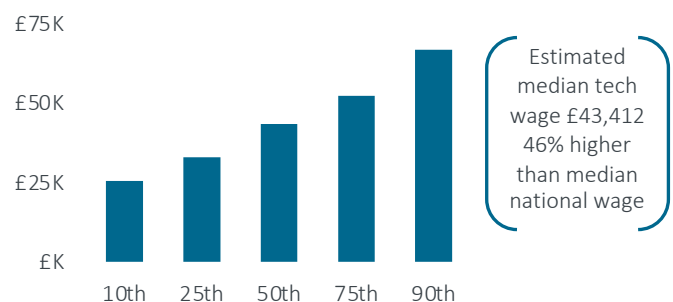
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Engineering, Testing and Technical Consultancy	21,739	+3.2%
IT Consultancy and Services	19,924	+1.5%
Telecom, Data Processing and Web Portals	13,764	+1.9%
Software Publishing and Custom Development	7,189	+0.8%
Tech manufacturing	5,002	+0.8%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



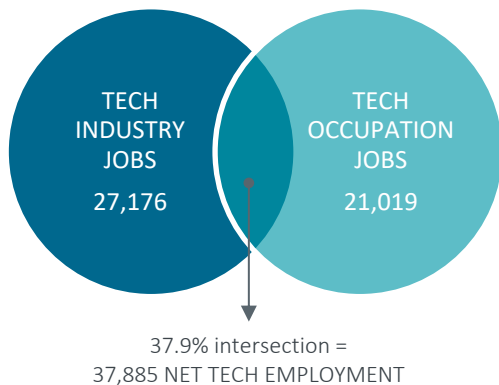
Nottingham



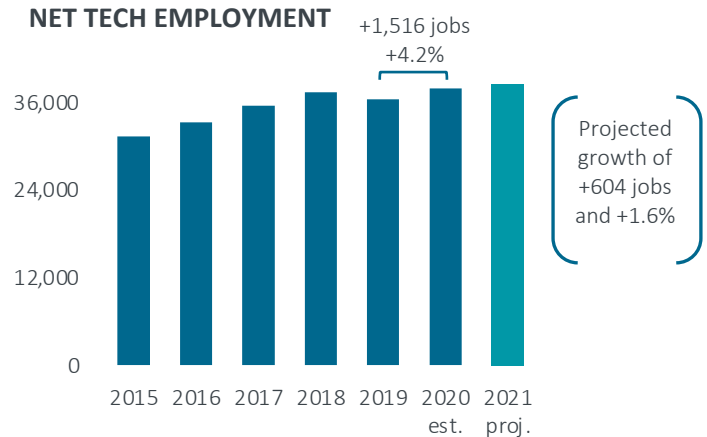
STATE OF TECHNOLOGY SUMMARY

- 37,885 NET TECH EMPLOYMENT¹
- 7.3% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 3,342 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 10,214 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 1,603 EMERGING TECH JOB POSTINGS [job roles + skills]
- 16% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



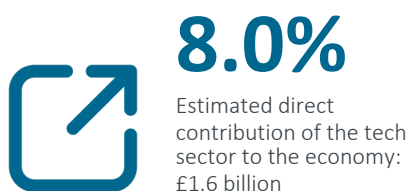
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	5,119	5.0%
IT Support or Operations Technicians	4,260	2.2%
IT Analysts, Cybersecurity and Systems	3,965	4.4%
Network or Telecommunications Engineers	1,697	3.0%
IT Project Managers	1,428	4.7%

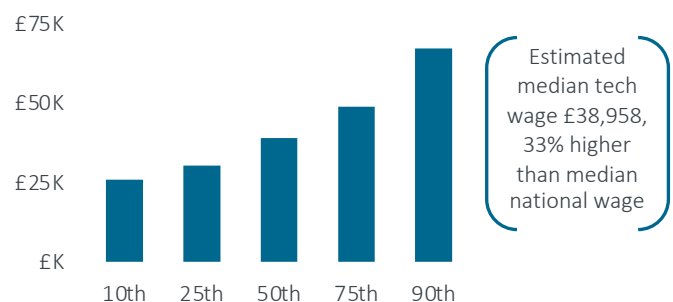
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Telecom, Data Processing and Web Portals	7,232	+7.7%
IT Consultancy and Services	6,839	+7.6%
Engineering, Testing and Technical Consultancy	6,814	+0.8%
Software Publishing and Custom Development	3,920	+13.2%
Tech manufacturing	894	+1.5%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



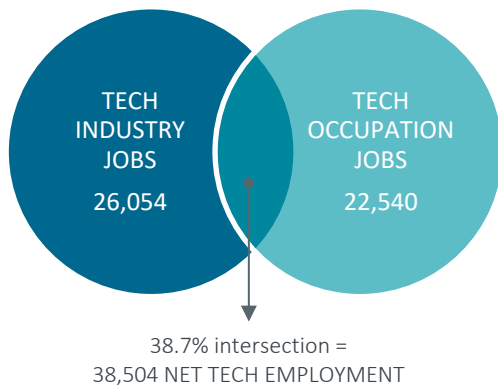
Sheffield



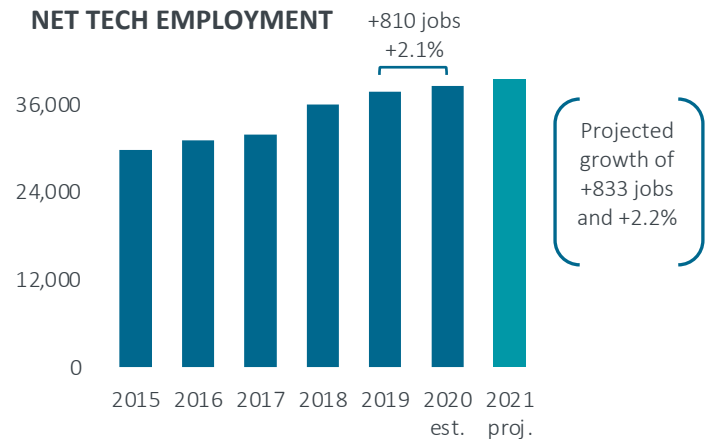
STATE OF TECHNOLOGY SUMMARY

- 38,504 NET TECH EMPLOYMENT¹
- 6.6% NET EMPLOYMENT AS A % OF OVERALL WORKFORCE
- 3,047 TECH BUSINESS ESTABLISHMENTS [firms with payroll]
- 6,271 EMPLOYER JOB POSTINGS [2020 total for tech occupations]
- 953 EMERGING TECH JOB POSTINGS [job roles + skills]
- 15% EMERGING TECH JOB POSTINGS AS A % OF TOTAL

¹Net of tech industry + tech occupation + self-employed | Sources: CompTIA analysis of EMSI, Burning Glass Technologies Labour Insights, UK Office of National Statistics and others | Data estimates cover 2020 time period, unless otherwise specified as pre or post | See report Methodology for details.



NET TECH EMPLOYMENT



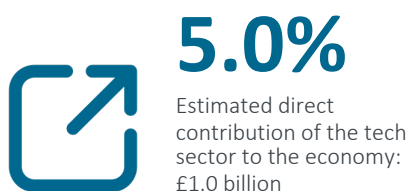
LEADING TECH OCCUPATION CATEGORIES

Category	2020	YoY % Change
Software Development and Web Design	5,150	+2.0%
IT Analysts, Cybersecurity and Systems	5,007	+2.4%
IT Support or Operations Technicians	3,886	+0.8%
Network or Telecommunications Engineers	1,836	+1.2%
IT Project Managers	1,196	+2.5%

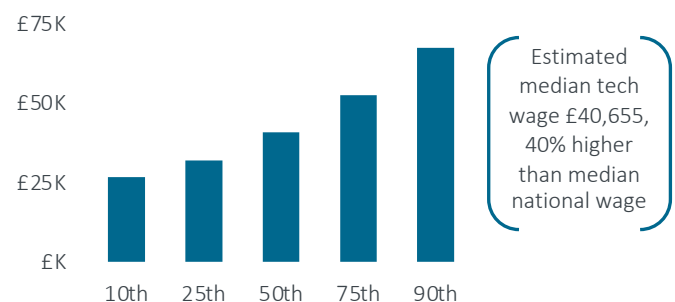
LEADING TECH INDUSTRY SECTORS [by employment]

Sector	2020	YoY % Change
Telecom, Data Processing and Web Portals	7,615	+3.6%
Engineering, Testing and Technical Consultancy	7,255	+2.8%
IT Consultancy and Services	6,859	+2.3%
Software Publishing and Custom Development	2,341	+2.2%
Tech manufacturing	1,189	+2.0%

ECONOMIC IMPACT



TECH OCCUPATION WAGES [by percentile]



APPENDIX TABLES

	<u>2020 Jobs</u>	<u>2021 Jobs Proj.</u>	<u>Numeric Change 2020-2021</u>	<u>% Change 2020-2021</u>
Information Technology and Telecommunications Directors	93,968	95,318	1,350	1%
IT Specialist Managers	218,527	220,957	2,430	1%
IT Project and Programme Managers	86,903	88,004	1,101	1%
IT Business Analysts, Architects and Systems Designers	123,956	125,490	1,534	1%
Programmers and Software Development Professionals	306,662	311,051	4,389	1%
Web Design and Development Professionals	51,875	52,567	691	1%
Information Technology and Telecommunications Professionals n.e.c.	184,084	186,632	2,548	1%
IT Operations Technicians	111,795	112,887	1,092	1%
IT User Support Technicians	112,859	113,985	1,127	1%
Telecommunications Engineers	56,387	57,215	828	1%
IT Engineers	48,425	48,970	545	1%
Total	1,395,440	1,413,076	17,636	1%

METHODOLOGY

CLASSIFICATION SYSTEM

CompTIA's UK Tech Industry and Workforce Trends 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 U.K. Tech Industry and Workforce Trends 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 UK Tech Industry and Workforce Trends 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 (39.8%), but many others are employed by organisations across every industry sector in the UK economy (60.2%).

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. 43% of the net tech employment total consists of tech industry business professionals.

See page 3 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 UK Tech Industry and Workforce Trends 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 categorized primarily as users of technology.

CompTIA's UK Tech Industry and Workforce Trends includes 26 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.



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