



Experis™
ManpowerGroup



Tech Cities Job Watch

Q4 2015



Cloud



Mobile



IT Security



Big Data



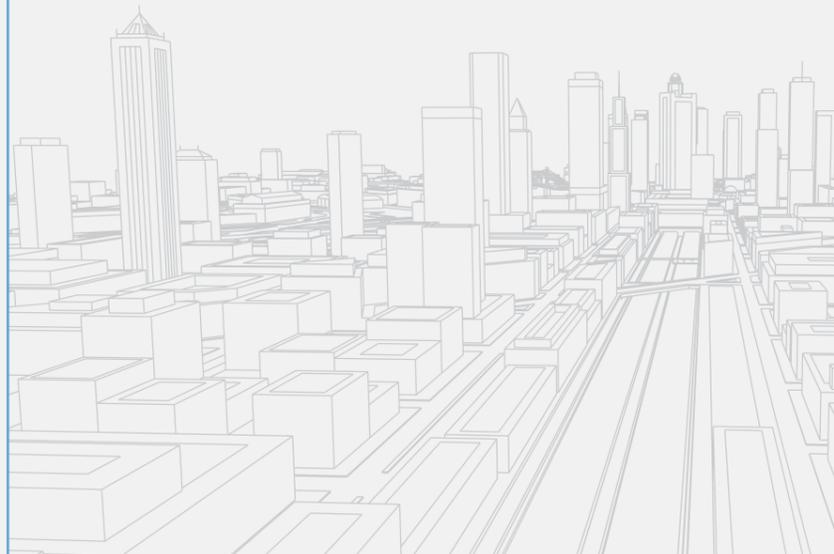
Web Development

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About Experis and Tech Cities Job Watch

As technology continues to significantly impact all aspects of business, companies in cities across the UK vie for top tech talent in order to build their ability to innovate and cater to demand.

The Experis Tech Cities Job Watch report sets out to provide employers with a barometer of these changing trends within the technology sector. By combining the latest market intelligence with Experis insights and expertise, this report indicates where exciting new job opportunities are across the UK.

A general shortage of skilled IT professionals across the country has resulted in sharp competition across five key technology disciplines in particular: IT Security, Cloud, Mobile, Big Data and Web Development.

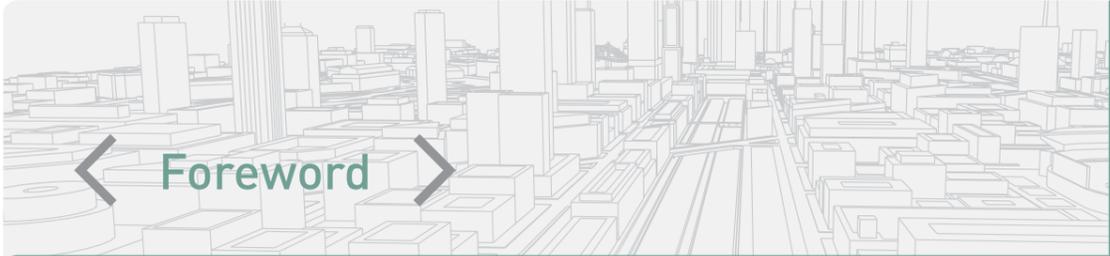
For this report, Experis selected 10 UK cities that are rapidly developing reputations as technology cluster hubs: London, Birmingham, Brighton, Bristol, Cambridge, Edinburgh, Glasgow, Manchester, Newcastle upon Tyne and Leeds.

Experis is the largest IT recruitment specialist in Europe and has been at the forefront of the search for the best in IT talent for over 25 years, placing tens of thousands of candidates.

Experis has the deep industry knowledge to understand the challenges organisations face and the access to highly skilled professionals to help companies seize opportunities.

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Foreword

Last month I stood, neck craned, crammed into my daily commuter train, reading an article in the Evening Standard about how ministers were being urged to ease visa rules for tech workers amid warnings that nine out of 10 of London's new digital businesses are being held back by skills shortages.

The article continued, 'ask a London technology entrepreneur what keeps them awake at night, and a shortage of available talent will often be the answer'.

There is undeniably a shortage of skills in Big Data, Mobile, Cloud, IT Security and Web Development [the five tech disciplines we survey in Tech Cities] and this is having an impact on salaries, with a year-on-year rise of 4.67%. If you need these skills, you'll need to pay the premium to attract and retain them.

Research from O2 suggests the UK will need to fill 766,000 new digital jobs by 2020 and train almost 2.3 million people to meet the demand for digital skills. And from what we're seeing, more of this demand will come from outside of London. Comparing the percentage split between tech London and the other nine tech cities we monitor, it's becoming clear there is a move to host more and more of these roles in tech hotspots such as Manchester, Leeds and Bristol.

As you might expect when the economy is growing and businesses feel optimistic, there is an investment in permanent hiring. We've seen a shift from employers hiring on a contract basis to hiring permanently - with 82% of roles being permanent in Q4 2014, increasing to 85% for the same period in 2015. Yet recent global research from Experis has shown over three quarters [76%] of UK businesses make extensive use of IT contract workers; much higher than some of the other most advanced markets, including the US [66%], Japan [65%], and Germany [40%].

2015 saw a number of high profile cyber security attacks, but the worrying news is that breaches are now almost inevitable. While a shortage of skilled cyber security professionals is likely to push up the costs of beefing up defences and dealing with attacks, companies can't afford not to make this investment.

This quarterly report is, by our own admission, a work in progress. I'd love to hear your thoughts on how we can more closely align it with your expectations. How could this be a more valuable tool for you and teams? Please do reach out to me or any of the Experis team - we'd be really interested in discussing your experiences and sharing more of our observations.

Here's to a successful 2016.



Geoff Smith
Managing Director, Experis Europe
www.experis.co.uk



Executive Summary

Tech cities outside of London increased their share of the advertised roles across the five disciplines by 3% when compared to the previous quarter, up 7% from Q4 2014. This highlights the significant investment into tech cities outside of the Capital with local businesses growing, London-based companies relocating, and all aiming to attract the best talent.

Overall, year-on-year salaries and day rates have increased by 4.67% and 3.32% respectively as attracting skilled IT workers becomes more competitive. This is notably higher than the 2% annual increase in weekly earnings seen in the recent ONS UK Labour Market report.

After a number of well publicised cyber security attacks in 2015, it comes as no surprise that IT Security roles showed the largest increase in day rates (10%) and perm salaries (3.55%) compared to the previous quarter. An estimated £246bn is lost by businesses across Europe each year due to network breaches, which is leading those companies aiming to reinforce their own security, to offer more attractive salaries to edge out rival employers.

Businesses are continuing the trend seen throughout the year looking to fill more perm roles (85%) over contract positions (15%), a 1% rise on last quarter in the share of perm roles and 3% rise on Q4 2014. This could be reflecting longer term and ongoing requirements to retain skilled workers in the five disciplines, as opposed to using them for short-term projects.

The seasonal dip in the run up to Christmas saw a 13.77% decrease in perm roles and 21.22% drop in contractor roles.

**The five technology disciplines chosen for this report are based upon those in highest demand according to Experis' industry experience*



Hiring Demand



Salary Watch



Employer Demands



Skills Crunch

This section summarises the key trends in hiring demand across the five key disciplines of technology: Big Data, Cloud, IT Security, Mobile and Web Development. The analysis covers the period of Q4 2015.

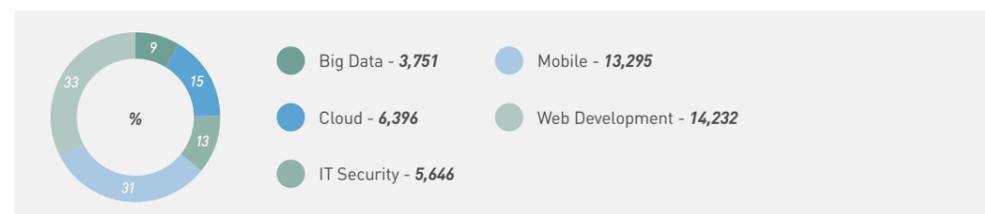
Tech City: Hiring Demand

The balance between opportunities in London and outside the Capital has seen a further shift towards our other nine cities, which now account for 35% of the featured roles - up from 28% in Q4 2014

Hiring demand was strong at the beginning of the quarter but steadily declined, with a couple of small intermittent rises, before an expected and steep drop off in late December. This was influenced by the winter holiday season, which contributed to a 17% decrease in roles advertised compared to last quarter.

The share of advertised roles between the disciplines has shifted towards IT Security by 2% with the other four out of the five disciplines experiencing a slight reduction. Meanwhile the balance between opportunities in London and outside the Capital has seen a further shift towards our other nine cities, which now account for 35% of the featured roles - up from 28% in Q4 2014.

Share of hiring demand and number of roles advertised across the five technology disciplines



Cloud

An increasing number of organisations are choosing to incorporate cloud computing in to their IT strategy for infrastructure and collaboration purposes.

However Cloud saw the largest percentage decrease compared to the previous quarter, dropping 24% in roles advertised. 6,396 Cloud roles were advertised last quarter, accounting for 14.8% of the hiring demand across the five disciplines. Outside of London, Manchester held the highest Cloud demand [343 roles] followed by Leeds [294 roles].

Big Data

Big Data saw a 17% decline in demand compared to Q3 2015, with 3,751 roles advertised. However, 2016 will likely see an increase in hiring demand within this sector as technology becomes more affordable and the market expands.

London led the tech cities within this discipline representing 3,070 of the advertised roles. The other 681 roles were spread relatively evenly across the other tech cities, however, Bristol and Leeds retained the most demand this quarter.



Hiring Demand



Salary Watch



Employer Demands



Skills Crunch

Tech City: Hiring Demand

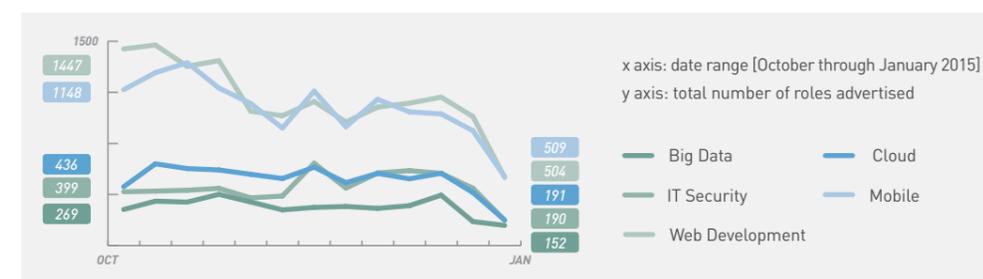
Mobile

With the take up of 4G mobile broadband steadily increasing, providing faster internet access, a third of the British population cite a mobile device as their primary means of accessing the internet. This growing shift in preference is causing a corresponding demand in Mobile tech experts.

Outside of the Capital, Leeds saw the highest demand for Mobile talent, with 881 roles advertised. In London, Mobile demand represented the largest percentage of demand share [32% and 8881 roles] within the five disciplines with over 1,000 more roles advertised than the next highest in demand [Web Development].

Source: Ofcom's 2015 Communications Market Report

Total number of roles advertised in Q4 2015



IT Security

Unsurprisingly, IT Security saw the lowest percentage decrease in roles advertised compared to the previous quarter, with just a 4% drop off in spite of the traditional seasonal decline. There were 5,646 roles advertised throughout the UK, likely due to the pressure involved during the holiday season in keeping e-commerce transactions secure.

Leeds had the highest demand outside of the Capital for IT Security talent with 383 roles advertised, closely followed by Manchester with 355 openings. London remained interested in IT Security professionals with 3,742 roles advertised.

IT Security saw the lowest percentage decrease in roles advertised... likely due to the pressure involved during the holiday season in keeping e-commerce transactions secure.



Hiring Demand



Salary Watch



Employer Demands



Skills Crunch



Hiring Demand



Salary Watch



Employer Demands



Skills Crunch

This section reveals where the 'Tech Cities' rank in terms of average salaries for the following five disciplines of technology: Big Data, Cloud, IT Security, Mobile and Web Development. The analysis covers the period of Q4 2015.

Tech City: Hiring Demand



Web Development

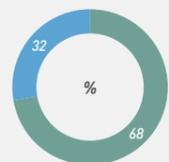
Continued investment in digital transformation projects and mounting web traffic on organisations' internet platforms are reflected in the demand for web developers across the country.

Outside of London, Web Development leads the five disciplines with 6,421 roles advertised; with a further 7,811 opportunities advertised within the Capital. The majority of Web Development roles advertised outside of the capital were concentrated in Manchester [1,430 roles], followed distantly by Leeds [942] and Bristol [744].



Summary

Share of London based roles and non-London based roles advertised across the five disciplines of technology in Q4 2015



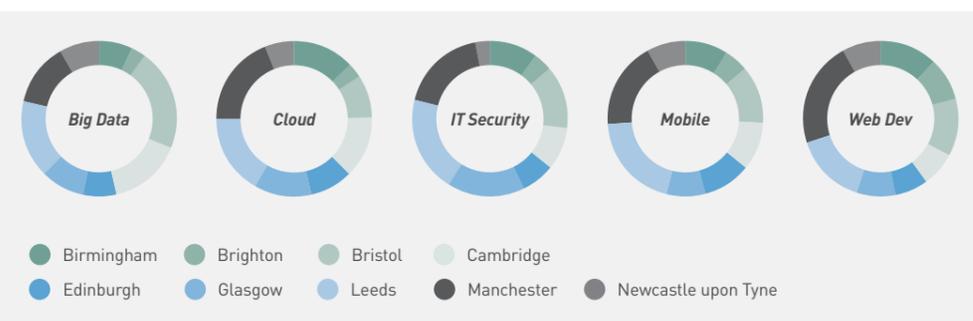
London based roles - 39,187
Non-London based roles - 14,946

Interestingly, tech cities outside of the capital increased their share of the five disciplines by 3% from last quarter and up 7% from Q4 2014. This may indicate a growing trend of tech talent diversification within the UK.

Hiring demand in this quarter fell by 10,813 roles overall, to 43,320 roles advertised - in line with the expected seasonal dip when companies slow down their recruitment over the festive period. Mobile and Web Development dominated the hiring demands this period, with 13,295 and 14,232 roles advertised respectively.

Interestingly, tech cities outside of the capital increased their share of the five disciplines by 3% from last quarter and up 7% from Q4 2014. This may indicate a growing trend of tech talent diversification within the UK. Overall, Manchester's hiring demand led the tech cities excluding London with 22% of the demand share, followed by Leeds [15%] and Bristol [12%].

Non-London based Tech City hiring demand showing the share of jobs for every discipline



Salary Watch

Average permanent salaries

City	Big Data	Cloud	IT Security	Mobile	Web Development	City Average
Birmingham	£59,643	£39,659	£46,766	£38,339	£31,560	£36,352
Brighton	£41,278	£48,450	£52,365	£36,500	£37,600	£38,868
Bristol	£43,190	£41,889	£43,996	£42,371	£37,674	£40,620
Cambridge	£44,156	£44,592	£52,439	£39,523	£38,534	£41,849
Edinburgh	£62,969	£47,154	£53,672	£42,080	£36,707	£42,625
Glasgow	£52,830	£47,042	£47,540	£40,077	£36,987	£40,965
Leeds	£49,313	£49,108	£43,721	£41,622	£35,699	£40,460
London	£68,120	£58,482	£58,545	£54,772	£44,992	£54,224
Manchester	£44,833	£47,801	£45,173	£39,955	£34,370	£38,168
Newcastle upon Tyne	£51,405	£52,569	£52,765	£38,698	£31,449	£37,585
Average	£64,641	£55,216	£54,963	£49,968	£40,306	£48,992

* Shading to indicate the top three cities, salary-wise for each discipline

Big Data professionals continued to earn the highest average salaries overall - a trend we have witnessed over the past three quarters.

As usual, London dominates the salary chart across all five disciplines with Big Data offering the highest permanent average salary both in London [£68,120] and across all the tech cities [£64,641]. Overall the city averages have slightly increased since Q3.

The highest average Big Data salaries advertised outside of London were £62,969 in Edinburgh and £59,643 in Birmingham. Edinburgh also represented the tech city outside of London with the highest average salary at £42,625.

Cloud roles have remained the second highest paying discipline, with the average salary advertised being £55,216.

Perm salaries have increased by 1.92% compared to the previous quarter, with IT Security roles showing the largest increase [3.55%] in salaries advertised. Over the last 12 months we have seen a 3.32% rise year on year in perm salaries. Big Data and Cloud have shown the biggest increases of 8.82% and 7.13% respectively when compared to our Q4 2014 report.



Hiring Demand



Salary Watch



Employer Demands



Skills Crunch



Hiring Demand



Salary Watch



Employer Demands



Skills Crunch

A national comparison of permanent versus contract roles for hiring demand across the five key disciplines of technology: Big Data, Cloud, IT Security, Mobile and Web Development. The analysis covers the period of Q4 2015, in the tech city hubs of London, Birmingham, Brighton, Bristol, Cambridge, Edinburgh, Glasgow, Leeds, Manchester and Newcastle upon Tyne.

Salary Watch

Average contractor day rates

City	Big Data	Cloud	IT Security	Mobile	Web Development	City Average
Birmingham	£371	£343	£437	£333	£276	£367
Brighton	^	^	£332	£301	£290	£289
Bristol	£335	£419		£385	£315	£363
Cambridge	£450	£455	£450	£368	£386	£415
Edinburgh	^	£340	£407	£366	£345	£362
Glasgow	^	£410	£173	£403	£301	£332
Leeds	£444	£480	£493	£342	£299	£395
London	£527	£472	£500	£407	£355	£438
Manchester	^	£378	£434	£371	£253	£357
Newcastle upon Tyne	^	^	^	£423	£181	£373
Average	£511	£463	£481	£396	£341	£423

* Shading to indicate the top three cities, salary-wise for each discipline ^ Data Not Available

Although London doesn't top the advertised day rates in every discipline, it offers the highest average day rate and has seen a 1% increase since Q3 2015. The average day rates advertised across all tech cities saw a 3% increase.

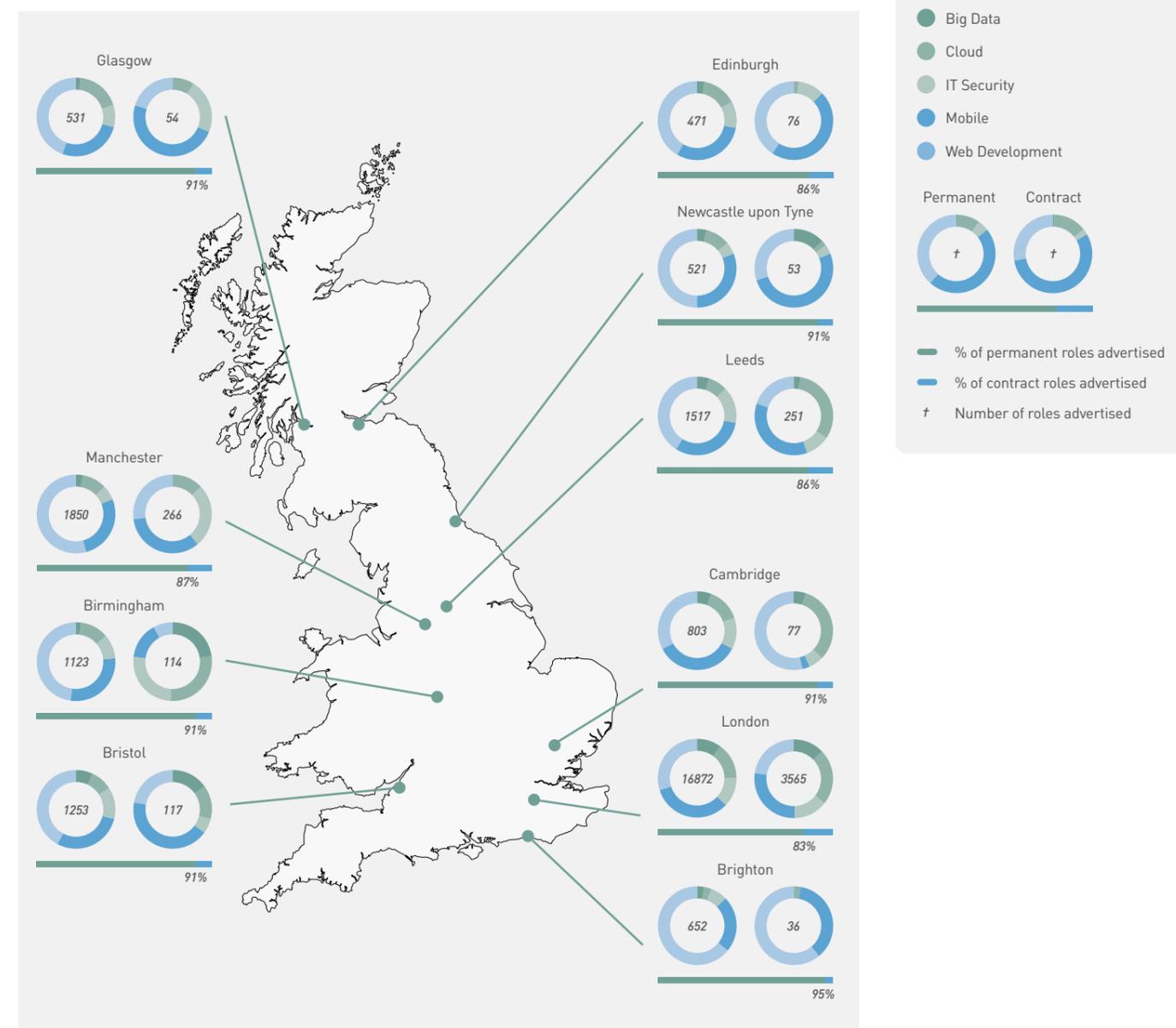
Outside of the Capital, the highest day rates were offered in Cambridge and Leeds. The average day rate in Cambridge is £415 with the highest rates being advertised for Cloud roles [£455]. The highest day rates for Leeds are offered for IT Security roles [£493] and the city average stands at £393.

We have seen advertised day rates rise every quarter since the launch of our Tech Cities Job Watch research. In Q4 2015 they grew 3.02%, with IT Security seeing the biggest increase of 10%. Year-on-year day rates have increased 4.67% from Q4 2014 to Q4 2015.

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Employer Demand Trends

Employer Demand - permanent vs contract roles advertised





Hiring Demand



Salary Watch



Employer Demands



Skills Crunch



Hiring Demand



Salary Watch



Employer Demands



Skills Crunch

This section summarises the top skills in demand for each discipline of technology for the period of this report.

Employer Demand Trends



Perm roles

2015 finished on a quiet note with fewer opportunities advertised in the final weeks of December. As a result of this seasonal decline, the number of permanent roles advertised across the tech cities has fallen 13.77% when compared to Q3 2015, to 25,593.

Within the Capital there were 16,872 roles advertised this quarter, a 16.32% drop on the previous quarter from 20,163.

The tech cities outside of London showing the strongest demand were Manchester [1,850 roles], Leeds [1,517 roles] and Bristol [1,235 roles]. Manchester saw the largest percentage decrease in advertised roles from the previous quarter [22.85%].

Three of the tech cities went against the norm and saw a rise in perm roles advertised against the previous quarter; Birmingham, Brighton and Cambridge had an average increase of 8.59% as businesses looked to fill positions in the five key disciplines.



Contract roles

Contract roles also fell during this period by 21.20% - from 5,849 in Q3 2015 to 4,609. An overall decrease based on the seasonal dip, along with the growing trend of businesses looking to fill permanent positions over contract roles.

The largest percentage decreases in roles advertised were in Edinburgh [55.29%] and Newcastle [54.70%], with Birmingham [1.79%] seeing the only increase compared to last quarter. London saw 3,565 contract roles advertised last quarter, a decrease of 18.81%.

Manchester [266], Leeds [251] and Bristol [117] saw the highest number of contract roles advertised outside London.

Three of the tech cities went against the norm and saw a rise in perm roles advertised against the previous quarter; Birmingham, Brighton and Cambridge had an average increase of 8.59% as businesses looked to fill positions in the five key disciplines.

Skills Crunch



Mobile

More and more purchases are made on mobile devices so organisations need to ensure their products and services are readily available on mobile platforms, with positive experiences for users.

Mobile payments continue to gather pace. Visa used their partnership with the US Super Bowl to push mobile payments at the event, with over 500 contactless payment terminals to enable spectators to use their mobile wallets. Mobile will also be used at events to eliminate fraud, reward the good behaviour and improve security for the attendees. Key programming languages such as **Objective-C, Java, C#/ C++** and **'Swift'** for **iOS** remain at the centre of the in demand Mobile skills.



Web Development

Online content and eCommerce continue to grow with organisations aiming for competitive advantage, increasing their market share and driving company performance. The UK Government's £11 billion initiative to furnish 26 million homes with smart meters by 2020 shows growing investment on development.

Core programming languages such as **Java, C#** and **.Net** remain the most in demand skills in back-end development; while **HTML5, CSS3, JavaScript, AngularJS** and **NodeJS** are still the most popular skills in front-end development.



IT Security

With cybercrime set to become the UK's most common offence, companies have shifted their focus to seek methods to respond to, and develop resilience against, hacks and breaches. IT Security continues to move towards a defence that is both preventative and responsive, which has resulted in a growth in the number of 'end users' building their own security operations teams to complement the services they have outsourced to managed services providers.

Skills in demand this quarter continue to include **SIEM** [security information and event management] **IDAM** [Identity Access Management], **biometrics** and **penetration testers**. Professionals holding the **CISSP** [Certified Information Systems Security Professional] qualification are also in demand.

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Hiring Demand



Salary Watch



Employer Demands



Skills Crunch



Hiring Demand



Salary Watch



Employer Demands



Skills Crunch

< Skills Crunch >

Big Data continues to accelerate to meet requirements for key areas including business development and research projects in science and engineering.

Big Data

Big Data continues to accelerate to meet requirements for key areas including business development and research projects in science and engineering. The use of large datasets provides invaluable insights in to customer behaviour, business environments and forecasting of market trends, resulting in a more objective decision-making process.

The rise in Big Data has been credited with the 25% growth in Government spending on Smart Cities and the projected 50 billion new connected devices in the Telecoms industry by 2020. The main technologies associated with Big Data include machine learning, algorithm development, virtualisation and cloud-based infrastructure. In demand skills include **Spark** [for data processing], **Apache Hadoop** and tools such as **Tableau**, **Splice Machine** and **SAP HANA** [Big Data analytics and business intelligence tools].

Cloud

64% of small and medium-sized businesses [SMBs] use cloud-based applications, with 78% of all businesses indicating that they are planning to buy new cloud-based solutions in the next few years.

These figures clearly elevate cloud computing from a nice-to-have feature to an essential part of an organisation's IT infrastructure, which will lead onto an expected increase in demand for qualified and certified Cloud IT professionals. There is still an on-going requirement for skills in **hybrid cloud platform technologies**, such as **Microsoft Azure** and **Amazon Web Services [AWS]**, and cloud software platforms such as **MS Office365**.

< Methodology >

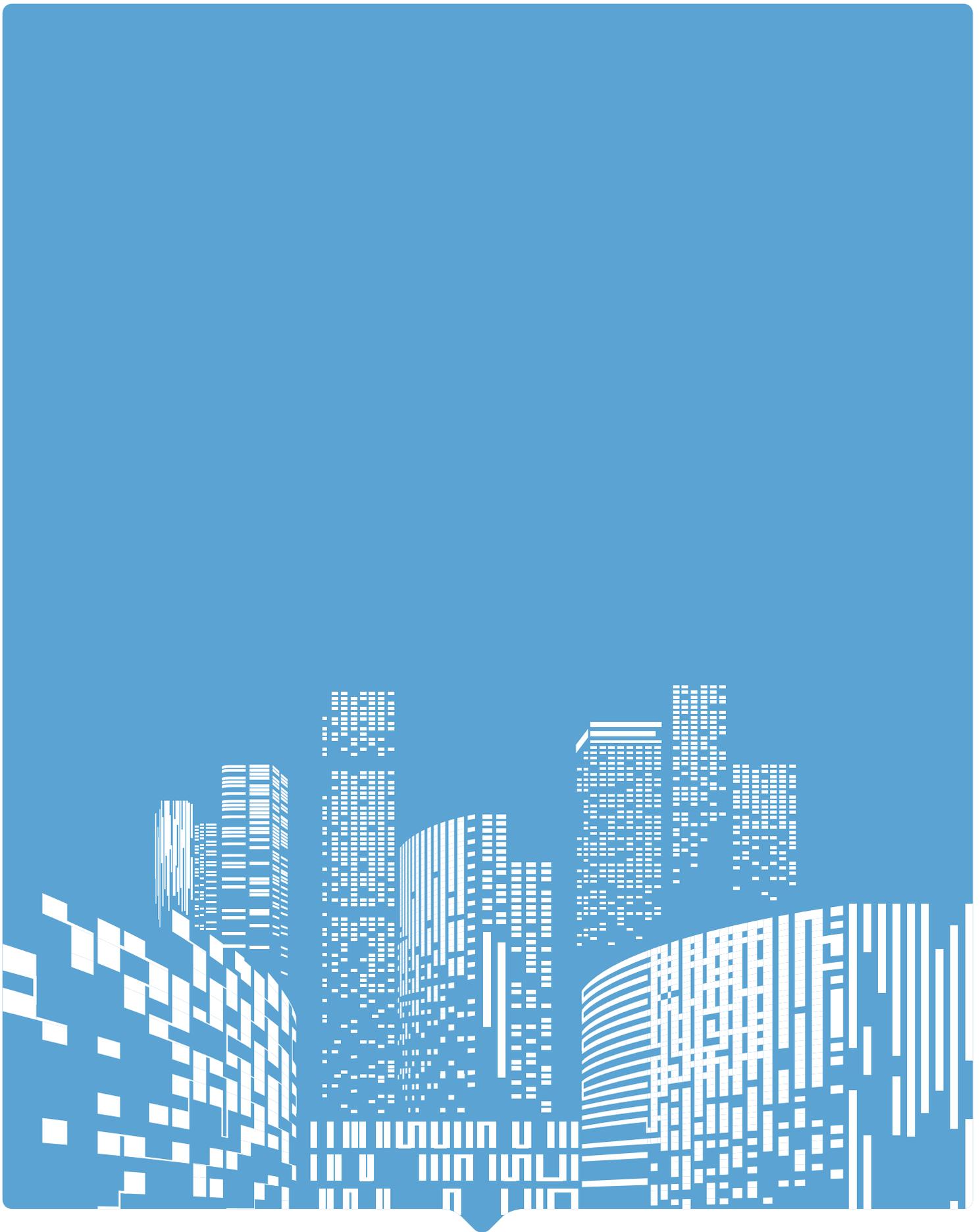
The statistics referenced in this report were obtained via an entity extractor provided by Innovantage, which scans and logs IT jobs postings across over 180 global job boards and in excess of half a million employer websites. This information was then put through a normalisation process, where the data was matched to defined regions and types. Where roles were unsortable due to vague or foreign language job titles, they have been omitted. This data was further sorted into disciplines, job types, sectors, and other categories to provide a detailed analysis of the current recruitment market. Instances where data was minimal or for regions where information was unavailable were not included. Experis drew upon its years of IT talent industry experience to compile the detailed analysis of the recruitment market found in this report.

Contact Information

-  Tel: +44 (0) 203 122 0200
-  info@experis.co.uk
-  www.experis.co.uk/techcities

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