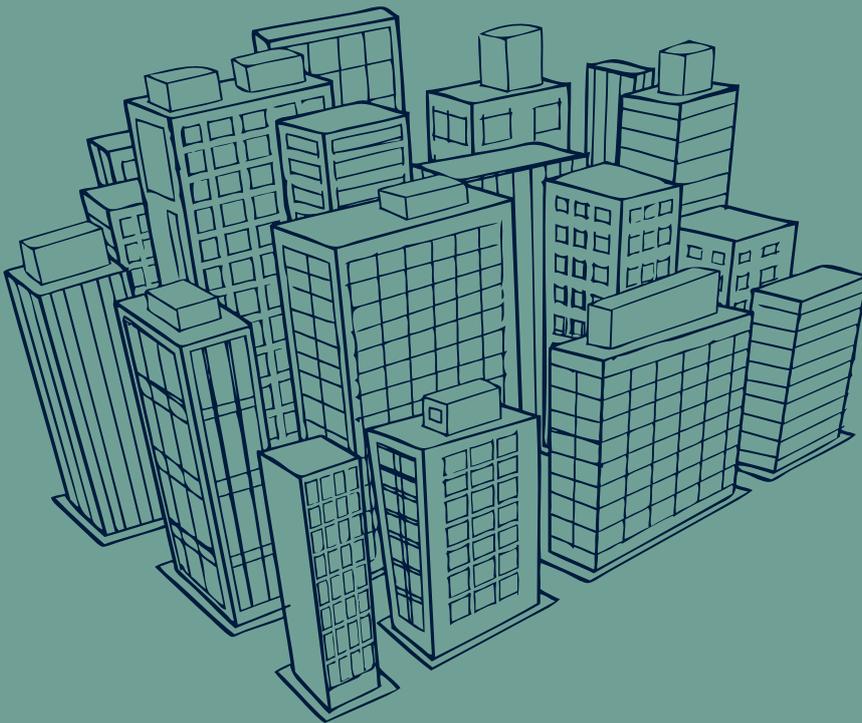


# Tech Cities Job Watch

## Q1 2018



**Big Data**

# 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, so they can build their ability to innovate and cater to demand.

Yet, as the technology sector has evolved, so have the skills, expectations, and demands of the talent that powers it. As a result, employers are finding it increasingly challenging to attract and secure the skilled individuals their business needs.

By combining the latest market intelligence with Experis insights and expertise, the Tech Cities Job Watch report provides employers with a barometer of the changing workforce dynamics within the technology sector. Five key disciplines are focused on in particular: Big Data, Cloud, IT Security, Mobile and Web Development.

It also puts a spotlight on the emerging opportunities and challenges businesses face in ten UK cities that are rapidly developing reputations as technology cluster hubs - London, Birmingham, Brighton, Bristol, Cambridge, Edinburgh, Glasgow, Leeds, Manchester and Newcastle.

Experis is the largest IT recruitment specialist in Europe. We have 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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Experis UK Brand Leader
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# Foreword



Knowledge is power. Those organisations that can predict future challenges and opportunities, rather than just reflect on what's happened in the past, are the ones that will truly thrive in the future of work. That's one of the reasons why so many organisations have invested in Big Data in recent years. In today's digital world, they recognise that their ability to better process, secure and manage data will set them apart from the competition.

This is important, of course, but it will not guarantee business success on its own. It's the insight that can be gleaned from datasets which makes Big Data so powerful. To achieve this, employers must engage with the right professionals – those who can turn raw data into business gold.

Against this backdrop, it's hardly surprising that Big Data professionals are highly sought after by employers. So much so, that the latest Tech Cities Job Watch findings reveal a 78% growth in demand over the last 12 months alone. This far exceeds the average growth in demand seen in the other disciplines tracked: Cloud, IT Security, Mobile and Web Development.

When demand for certain skillsets grows, most people would expect the wages to be pushed up, as a result of increased competition. However, this isn't the case where Big Data roles are concerned this quarter. While there is strong demand, remuneration for Big Data skills has stalled. Permanent salaries only increased by 0.1% over the last year, the smallest growth of any of the five technology disciplines tracked, while contractor day rates fell by 5%. There are a few potential reasons why this might be happening.

It may be that the General Data Protection Regulation (GDPR) is putting other Big Data projects on ice, limiting the number of higher value – and therefore higher paying – roles in the market. Alternatively, it could demonstrate that hype is crashing up against reality, where organisations are looking for people who can perform data miracles, but are reluctant to invest in what's required to make that happen. Or maybe it's a sign that the market is rebalancing. In years gone by, Big Data skills were scarcer and employers had to put their hand in their pocket to secure the best. Now, candidate supply more closely meets demand, which may explain pay stagnation.

Time will tell which of these theories is truly causing pay growth to stall in the Big Data world. In the meantime, Big Data skills remain in high demand and businesses must keep a close eye on the market – to ensure they stay one step ahead of the competition and continue to position themselves as an employer of choice.

Best wishes,

Dave Hannah  
Experis UK Brand Leader

# Insights

## Not so Big Data



### Introduction

In a data-driven world, those that can turn data into insight, better decisions and differentiated customer experiences are going to win. With the steady adoption of sensor technologies, including the Internet of Things (IoT), we can expect datasets to grow and similarly the demand for the alchemists who turn these into gold.

Our findings support this increase in demand for Big Data talent, with year-on-year growth of 78%. More specifically, contractor demand has grown by 128% and permanent roles by 68% over the same period. This increase outstrips demand across other important skills markets, including Mobile (26%) and Cloud (30%).

But there is a twist. Remuneration has stalled. Permanent salaries only increased by 0.1% in the past year, the lowest of any of the five technology areas tracked, whilst contractor day rates are down 5% over the same period. When demand increases, one would expect remuneration to rise too – but that's not the case. Let's delve deeper into what Big Data is from a skills perspective and explore why we are seeing this peculiar variance.



**Demand for Big Data talent saw a year-on-year increase of 78% since Q1 2017**



## But what is Big Data?

It might be said that Big Data is a term used by many, but understood by few. Having heard the term, senior executives often demand that their organisations embrace Big Data, or even buy it as if it were an 'off the shelf' product. No doubt, some CEOs are not just demanding Big Data, but insisting that their organisation should have the biggest data!

Is this simply a term to highlight that the volume of data captured today is a lot larger than say a decade ago? Is it a reference to the increasing significance of data that doesn't naturally sit in a traditional database, such as images and video? Or perhaps it is a reference to the sheer velocity of data pouring into the organisation. After all, volume, variety and velocity are often quoted in respect of Big Data.

Big Data embraces a broad range of activities. Artificial intelligence (AI), and machine learning in particular, also has a role to play in respect of data processing. It should be clear that Big Data is not a product, but an initiative that is unique to every organisation that chooses to maximise the return on their data.

Big Data will yield the best value where it can pick up on weak signals in large, dynamic datasets. The ability to detect the outbreak of a virulent type of flu before it becomes a pandemic based on the search engine habits of many millions of users (simply by monitoring the use of keywords related to flu products and flu symptoms) is an example of where real value emerges from Big Data.



**Big Data embraces a broad range of activities. Artificial intelligence (AI), and machine learning in particular, also has a role to play in respect of data processing.**

There are many elements to turning raw data into business gold. These include:

- Data visualisation
- Data processing
- Data retrieval and extraction
- Data storage
- Data source management, such as sensors



## Role and skills clarification

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Naturally, data scientists are very much associated with Big Data. They are considered the new rock stars of the tech sector. Their prominence is in part associated with the success of data-driven companies such as Facebook, Google, Amazon and Netflix. Data scientists are the alchemists, but they are also involved in the more mundane aspects of Big Data, such as data extraction and cleansing.

Beyond 'data scientist', other skills associated with Big Data, include:

- R
- Matlab
- SAS
- Hadoop
- MongoDB
- AI / Machine Learning
- Tableau
- General programming languages such as C, C++, Python and Java.

Let's not forget that there are also many general administrative skills needed to support the infrastructure on which these tools run and the data resides. From a trends perspective, it is difficult to isolate the demand for Big Data because, again, some skills are used beyond Big Data projects in areas such as enterprise applications and general database management.



**Data Scientists are very much associated with Big Data. They are considered the new rock stars of the digital age.**



## Will data scientists save us?

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To some extent, we may be hitting 'peak' data scientist; a point beyond which there is a degree of disillusionment. Their skills do not work where organisations have poor data or poor data consolidation processes. Thus, before senior executives can marvel over 3D holographic data visualisations, there is a lot of data grunt work to be done.

This includes:

- Identifying data silos
- Cleaning and integrating disparate data sources
- Developing a technology strategy that reinforces rather than thwarts the goal of generating value from data

As a result, while most people still focus on the importance of data scientists, the volume of 'under the bonnet' work means we are more likely to see growth in demand for data architects or data engineers.



## Why the variance?

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As previously highlighted, our latest findings reveal that demand for Big Data skills have significantly increased, while remuneration has stalled. It may well be that this variance results from hype crashing up against reality. Hiring a data scientist doesn't turn your industrial era factory into the Facebook of your sector. The vagueness of the 'data scientist' role definition might well be a contributory factor, leading some to believe that they can perform data miracles.

It could signify that there is a pressure bubble in the talent supply chain. Demand is clearly there, but the supply lacks the confidence or is unaware that they could command a greater return. Having said that, this is less likely to be the case in the UK, where the talent market is very fluid and transparent.

More plausibly, in the run up to the GDPR launch, it's likely that Big Data projects have been put on ice and those with data skills have been reassigned to ensuring that changes are successful. Thus those capable of working on higher value and thus higher remuneration Big Data projects are making do with GDPR gigs. Though one would have expected the demand to have peaked some time prior to the GDPR launch. Nonetheless, organisations cannot risk being understaffed should their GDPR implementation not perform as intended.



## Conclusion

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We cannot ignore the market trends, but we also cannot ignore real data. Without a doubt, in a data-driven world, Big Data skills will continue to be very much in demand. However, it would appear that there are no gilded career paths in the world of information technology. These unusual supply-demand variances may represent a great opportunity for those talent acquirers who themselves have got their Big Data act together to acquire great people at below the market pricing. Or it may be that we are about to enter the 'trough of disillusionment' in respect of Big Data's potential.

Once we have weathered this, we will then likely see a more realistic growth trend with better correlated remuneration. Smart organisations will play a long game in respect of Big Data, because in the digital age, data is the new oil.



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# Salary Watch

## Permanent salaries

For this quarter, average permanent salaries across all ten Tech Cities and five disciplines stood at £55,535. Each discipline has seen a year-on-year growth since Q1 2017, apart from Big Data, which experienced no change.

### Average permanent salaries for the key five disciplines across the ten Tech Cities

City	Big Data	Cloud	IT Security	Mobile	Web Dev	City average
Birmingham	£50,677	£52,926	£52,676	£41,079	£33,817	£43,780
Brighton	^	£51,109	£46,508	£49,825	£38,466	£43,499
Bristol	£56,124	£50,177	£49,693	£45,268	£39,692	£46,473
Cambridge	£52,885	£52,095	£47,506	£46,677	£37,250	£47,006
Edinburgh	£44,984	£50,117	£53,856	£40,448	£35,082	£44,031
Glasgow	£54,250	£47,931	£48,111	£42,056	£35,886	£43,408
Leeds	£53,331	£46,967	£50,066	£41,273	£36,866	£43,316
London	£73,026	£65,330	£63,020	£59,707	£50,648	£62,219
Manchester	£49,107	£53,955	£53,473	£40,932	£38,190	£43,979
Newcastle upon Tyne	£56,425	£45,419	£53,132	£43,816	£33,958	£42,610
Total	£67,464	£60,494	£59,342	£53,552	£43,198	£55,535

\* Shading to indicate the top three cities, salary-wise for each discipline ^ indicates no data available

### Big Data

Permanent salaries for Big Data remained static compared to the same period last year, with the average salary standing at £67,464.

With a year-on-year growth of 3%, London yet again remains the highest paying city for Big Data professionals, with an average permanent salary of £73,026. This is 8.24% higher than the average salary.

Outside of the Capital, Newcastle and Bristol offered the highest salaries of £56,425 and £56,124 respectively. Bristol also experienced the highest year-on-year growth (17%) out of all ten Tech Cities.



## Contract rates

Unlike the permanent salaries, day rates for each discipline across the ten Tech Cities saw a year-on-year decline, offering an average of £432 this quarter. Cloud experienced the highest decrease of 9%, whilst Mobile only decreased by 1%.

### Average contractor day rates

City	Big Data	Cloud	IT Security	Mobile	Web Dev	City average
Birmingham	^	£381	£294	£230	£282	£330
Brighton	^	£379	£395	£278	£230	£297
Bristol	£428	£412	£409	£302	£306	£358
Cambridge	^	£378	^	£348	^	£327
Edinburgh	£397	£405	£399	^	£308	£363
Glasgow	£408	£376	£412	£339	£271	£347
Leeds	£446	£373	£359	£344	£338	£390
London	£516	£466	£457	£419	£340	£451
Manchester	£518	£455	£446	£324	£276	£412
Newcastle upon Tyne	£578	£407	£240	£290	£205	£383
Total	£504	£451	£440	£398	£319	£432

\* Shading to indicate the top three cities, salary-wise for each discipline ^ indicates no data available

### Big Data

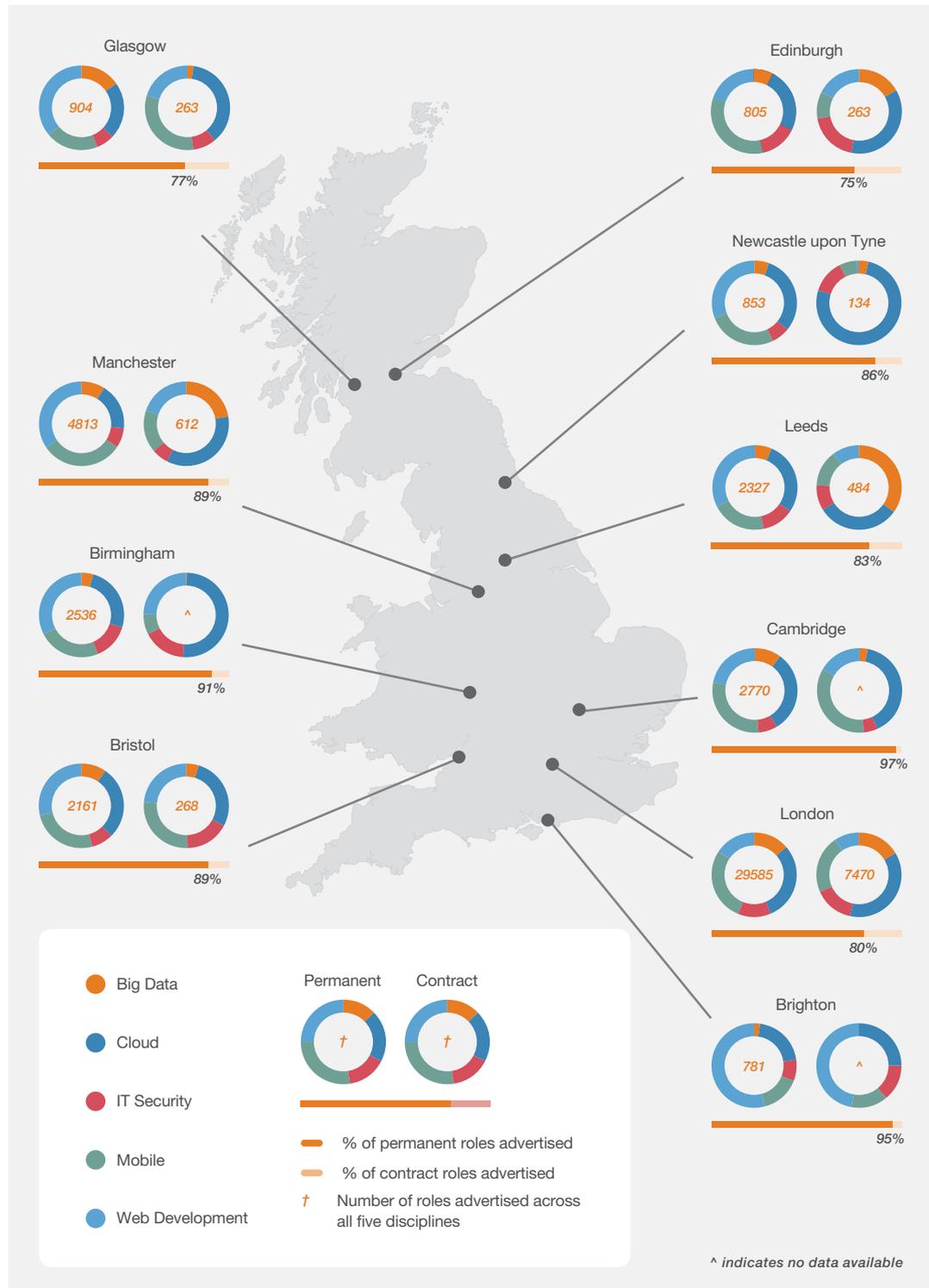
The average day rate offered to Big Data professionals this quarter was £504. Despite a 5% decrease year-on-year, this discipline remains the highest paying discipline, ranking higher than Cloud, IT Security, Mobile and Web Development. It also pays 16.67% more than the average salary across the ten Tech Cities and five disciplines combined.

When reviewing all cities, Newcastle offered the highest day rate of £578 – 16.68% higher than the national average day rate for Big Data professionals. Manchester and London were the second and third highest-paying cities, with average day rates of £518 and £516 respectively.



# Employer Demand

A national comparison of permanent versus contract roles for employer demand (for the five key technology disciplines, across the UK's ten Tech City hubs).





## Permanent

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This quarter, 47,535 permanent roles were advertised across the five disciplines and ten Tech Cities. This demonstrates a year-on-year growth of 44% (since Q4 2017).

### Big Data

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Demand for Big Data professionals also saw a significant increase of 68%, resulting in a total of 5,524 roles advertised this quarter.

London alone advertised 4,070 Big Data roles this quarter. This represents more than two-thirds of all roles advertised, whilst the remaining 1,232 roles were advertised across the other cities.

Outside the Capital, Manchester, Cambridge and Leeds saw the highest demand for Big Data professionals respectively.



Demand for Big Data professionals also saw a significant increase of 68%, **resulting in a total of 5,524 roles advertised this quarter.**



## Contract

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Whilst day rates across the five disciplines and ten Tech Cities declined year-on-year, there was 77% increase in demand for IT contractors over the same period, with a total of 9,892 roles advertised.

### Big Data

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Mirroring this trend, demand for Big Data professionals increased by a staggering 128%, resulting in 1,610 roles advertised this quarter.

Despite London remaining the vital hub for technology jobs of all disciplines, we're seeing a gradual devolution of Big Data roles to the wider UK. As a result, London's share of the country's Big Data market has fallen from 85% in Q1 2017 to 74% in Q1 2018.

**“A couple of years ago there was a talent shortage, with very few professionals specialising in Big Data roles. Particularly over the past 12 months however, supply has been increasingly meeting demand, with candidates upskilling themselves with the relevant qualifications they need to secure those lucrative roles.**

**Having said that, with the pace of technology advancing, some of the specialist requirements have been reduced. Nevertheless, demand for Big Data professionals will always be there but businesses will have to ensure that they continue to hire the same quality of candidates ”**

*James Cook, Consultant, Experis UK & Ireland*



## Methodology

The statistics referenced in this report were obtained via an entity extractor provided by Innovantage, which scans and logs IT job 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.

**Special thanks to Ade McCormack, for his contribution to the 'Insights' section of this report.**

Ade McCormack is a digital strategist and near futurist. He is a former technologist, FT opinion columnist, and CIO 100 judge, and has lectured at MIT Sloan on digital leadership. More of his strategic insights can be found via his blogs at [www.ademccormack.com](http://www.ademccormack.com).



## Get in touch

We hope you find this report to be a useful tool. As always, we would really value your perspective on our insights. Please do reach out to us if you'd like to discuss your own experiences in sourcing talent across the UK's Tech Cities.



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