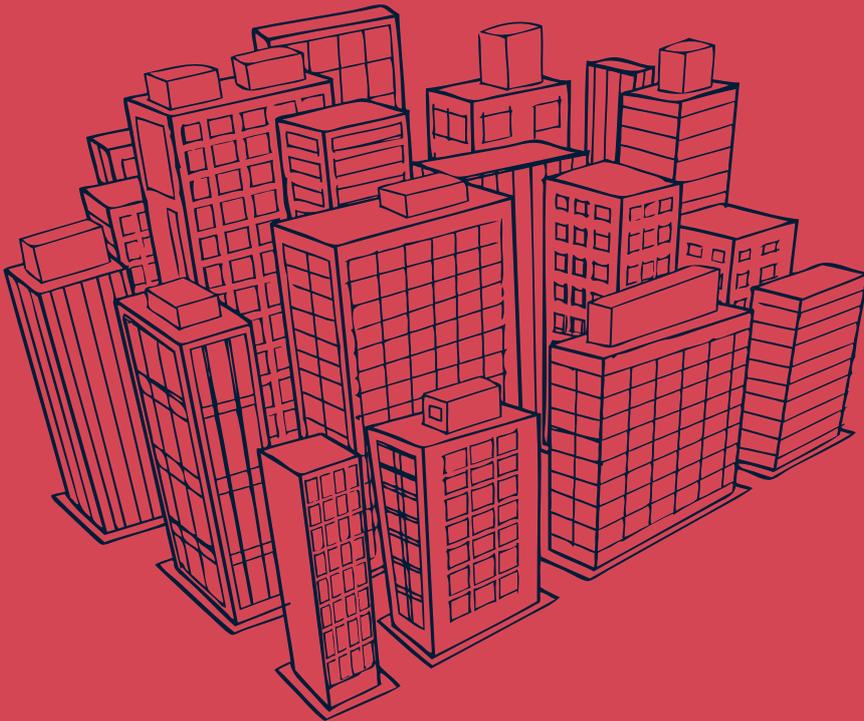




Experis™
ManpowerGroup

Tech Cities Job Watch

Q2 2017



Cloud

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.

Contents

- 1 Foreword:** Geoff Smith
Managing Director, Experis Europe
- 2 Executive Summary**
- 3 Salary Watch**
- 5 Employer Demand**
- 8 Insights**
- 12 Conclusion**
- 13 Methodology**

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Foreword



The growth of the Internet of Things, Big Data and machine learning has led many organisations to invest in their Cloud infrastructure. Not only does this allow them to better harness new technological developments, but in many cases it provides greater operational efficiency, direct cost savings, and improved security too.

With these benefits in mind, it comes as little surprise that there was a surge in Cloud adoption when it became commonplace five to ten years ago. Many new businesses have opted for Cloud-first operations right from day one; while a large number of more established businesses moved their platforms to the Cloud during this first wave of migration, in the hope of benefiting from the many efficiencies it can provide. This created strong demand for Cloud specialists who could design and build the required platforms. Consequently, a premium was placed on these skills - encouraging many IT professionals to capitalise on this hot trend.

However, demand for Cloud skills has shifted once again. While Cloud Architects and other specialist roles remain in demand, fewer organisations today are looking to recruit experts to design and build new Cloud platforms. After all, many organisations have already made the move. And those that have not are often hindered by the cost and complexity of such a project; barriers which may take years to overcome.

Instead, demand for Cloud skills is increasingly being driven by organisations looking for more IT professionals to maintain, optimise and enhance their existing Cloud platforms. As these skills are often less specialist, businesses appear to be finding it comparatively easier to fill vacant Cloud positions – causing pay growth in this discipline to slow.

This is reflected in our latest Tech Cities Job Watch report. Our analysis has shown that the number of Cloud-based roles almost doubled in the past year; with Cloud-based contractor roles now representing almost a third of all short-term positions advertised across the five core tech disciplines. However, salaries and contractor day rates for these skills have levelled off. This demonstrates that the expertise businesses are seeking are not as specialist, and therefore command less of a premium.

Time will tell as to whether this disconnect between pay and demand will continue. However, for the time being, it's clear that Cloud skills are now an integral part of day-to-day IT operations across the board, and strong employer demand is likely to continue in the years ahead.

I hope you find this report to be a useful tool and, as always, I would really value your perspective on our insights. Do reach out to either myself or one of our team if you'd like to discuss your own experiences in sourcing talent across the UK's Tech Cities.

Best wishes,

Geoff Smith
Managing Director, Experis Europe



Executive Summary

In Q2 2017, 11,917 Cloud roles were advertised on either a contract or permanent basis, almost doubling the demand seen in Q2 2016. While a high proportion of these opportunities are available in London, steady demand is also coming out of Manchester, Bristol and Leeds.

Permanent Cloud opportunities outnumber contract opportunities at a ratio of almost 4:1, with 9,783 opportunities offered on a permanent basis, compared to 2,134 on a contract basis. Across the five tech disciplines, Cloud now accounts for a quarter of all permanent roles advertised, a significant gain on the 14.32% share in Q2 2016. On the contract side, almost one third of the roles advertised across the five tech disciplines in Q2 2017 were within Cloud - up from 26.71% during the same period of last year.

While we have seen modest pay growth of 2.71% in Cloud permanent salaries, average day rates have remained unchanged at £481 year-on-year. There have been sharp declines in both the annual wages and day rates offered to Cloud professionals in Newcastle, which previously advertised higher salaries for the Cloud discipline.

Key Takeaways



Cloud now accounts for a **quarter of all permanent roles advertised**



Demand for **Cloud professionals and skills is up by 97.7%**

When we look at the broader picture across all five tech disciplines and ten Tech Cities, pay growth is altogether more robust. Permanent salaries have grown 4.2% year-on-year, reaching an average of £53,113 in Q2 2017, while day rates are up 6.26% to £458.

There were 40,044 permanent opportunities advertised across the five tech disciplines and ten Tech Cities in Q2 2017, an uplift of 26.81% on Q2 2016. Similar growth has been seen for contract opportunities too, which grew by 23.33% year-on-year to 6,942 roles.

These results indicate that the demand for Cloud professionals and skills is up, but restricted pay growth signals a much more complex market than we have seen previously. This is to be expected to a certain extent as the market matures and organisations present more diverse Cloud requirements. Cloud has transitioned from being one of the hottest tech trends to being an integral part of the day-to-day operations for IT departments across the board, and this is influencing both the demand and remuneration for Cloud skills.

Salary Watch



Permanent salaries

Average permanent salaries across the ten Tech Cities and five disciplines have grown by 4.2% compared to Q2 2016, reaching £53,113. All disciplines experienced year-on-year pay growth, except for Mobile, which declined by 4.27%.

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

City	Big Data	Cloud	IT Security	Mobile	Web Dev	Average (City)
Birmingham	£53,897	£47,076	£58,296	£36,458	£33,529	£41,249
Brighton	£57,808	£43,854	£60,086	£41,849	£40,134	£42,976
Bristol	£52,029	£47,467	£44,773	£40,111	£36,239	£41,823
Cambridge	£49,860	£46,114	£44,390	£44,339	£45,995	£45,668
Edinburgh	£46,382	£48,962	£66,128	£41,536	£35,193	£42,833
Glasgow	£51,214	£45,256	£45,285	£37,436	£34,043	£38,994
Leeds	£54,401	£50,077	£43,897	£39,053	£34,745	£41,493
London	£72,780	£63,599	£61,926	£57,738	£47,726	£59,549
Manchester	£45,442	£49,382	£51,282	£37,359	£35,795	£41,140
Newcastle upon Tyne	£44,492	£43,044	£55,354	£33,243	£29,093	£36,321
Average (Skill)	£67,155	£58,885	£58,514	£50,772	£42,073	£53,113

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

Cloud

Average salaries for permanent Cloud professionals have gone up by just 2.71% year-on-year, from £57,331 to £58,885. This is higher than the 2% annual UK wage growth recorded for the March-May 2017 period, but broadly in line with the rate of inflation for June of 2.6%. Despite the small year-on-year increase, Cloud offered the second highest average salary out of the five disciplines this quarter (after Big Data), overtaking IT Security.

The three cities that offered the highest permanent salaries to Cloud professionals were London, Leeds and Manchester. Out of these three cities, Manchester saw the largest quarter-on-quarter increase of 9.14%, whereas London experienced the highest year-on-year growth of 6.18%.



Contract rates

Average day rates for all five disciplines, across the ten Tech Cities saw growth of 6.26%, since Q2 2016. All disciplines experienced year-on-year increases, except Big Data (-0.75%) and Cloud (0%).

Average contractor day rates

City	Big Data	Cloud	IT Security	Mobile	Web Dev	City Average
Birmingham	^	£386	£505	£377	£370	£390
Brighton	£475	£360	^	£412	£309	£350
Bristol	^	£381	£440	£384	£262	£352
Cambridge	^	£338	^	£373	£379	£363
Edinburgh	£446	£428	^	£351	£346	£375
Glasgow	^	£456	£423	£354	£357	£377
Leeds	£472	£469	£400	£382	£316	£422
London	£542	£504	£500	£447	£405	£486
Manchester	^	£454	£346	£342	£313	£377
Newcastle upon Tyne	£593	£347	£435	£346	£365	£372
Average	£532	£481	£487	£422	£369	£458

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

Cloud

Unlike the year-on-year growth seen in permanent salaries for Cloud professionals, average Cloud day rates have stagnated and remained at £481. They have also fallen by 2.43% against the previous quarter, from £493.

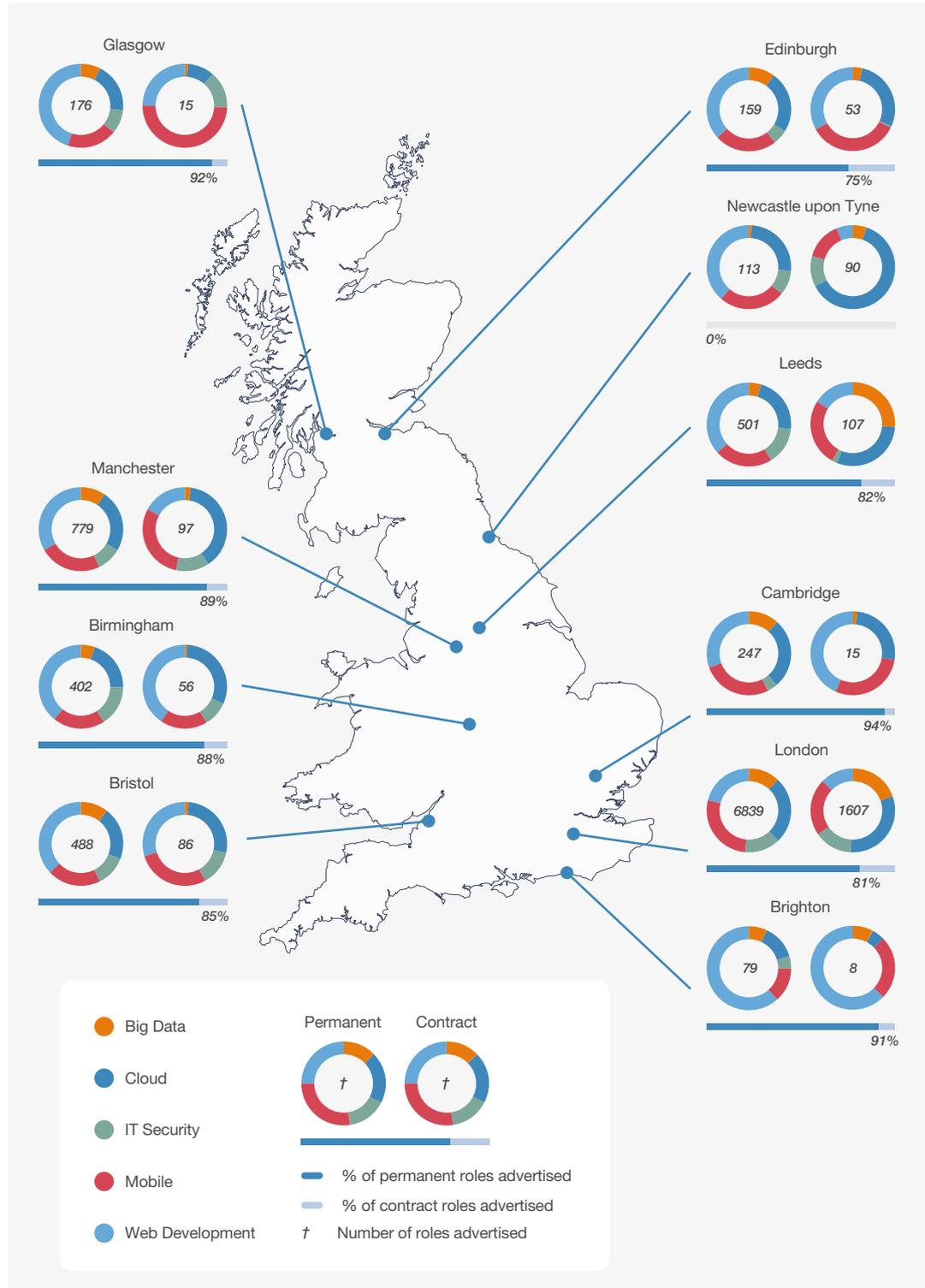
London, Leeds and Glasgow were the three cities offering the highest day rates. Out of these three cities, Glasgow saw the biggest increase - both since the previous quarter (22.91% from £371), and from Q2 2016 (18.44% from £385).

Looking across all ten cities, Manchester saw the highest year-on-year growth of 19.47% (from £380).



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

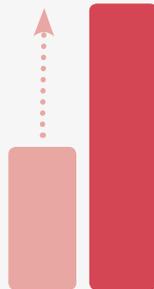
The total number of permanent roles advertised across all ten Tech Cities and five disciplines in this quarter was 40,044 – an increase of 21.05% since Q1 2017 and 26.81% compared to Q2 2016.

Cloud

There were a total of 9,783 permanent Cloud-based roles advertised in Q2 2017, representing one in four (24.4%) technology jobs advertised across the five core disciplines, an increase in share from 14.32% for the same period of last year.

Just over two-thirds of permanent Cloud roles advertised were based in London (6,839), with the remaining 2,944 positions spread across the other Tech Cities.

Outside the Capital, Manchester, Leeds and Bristol saw the highest demand for Cloud professionals this quarter.



The combined number of permanent and contractor Cloud roles for IT professionals has almost doubled in the past year, with a 97.73% increase between Q2 2016 and Q2 2017. However, permanent salaries and contractor day rates have not reflected this increase in demand.



Contract

Similar to the permanent roles, the total number of contract roles advertised across all ten cities and five disciplines increased both quarter-on-quarter and year-on-year, by 24.21% and 23.33% respectively. 6,942 contract roles were advertised in Q2 2017.

Cloud

Cloud-based contractor roles now represent almost a third (30.74%) of all short-term positions advertised across the five core tech disciplines in Q2 2017 (2,134), compared to 26.71% at the same time last year (1,504).

Mirroring the permanent market, 75% of the 2,134 contractor roles advertised were for positions based in the Capital (1,607) this quarter.

Similar to the permanent market, outside of London, Leeds, Manchester and Bristol had the highest number of Cloud contract roles advertised.



Cloud skills in demand for this quarter are **OpenStack** and **Rackspace**; **SaaS** (Software as a Service), for solutions such as **Salesforce.com** and **Insightly**; and **IaaS** (Infrastructure as a Service) for technologies including **Microsoft Azure** and **Amazon Web Services (AWS)**.

Insights

A Clouded future?



Introduction

The Cloud is not a new phenomenon. In essence, it is a reference to services delivered via the web – and so it is as old as the web. And if one broadens the definition to information services delivered electronically, the concept goes back to the sixties when we had data bureaux providing services such as payroll processing.

Nonetheless, the Cloud has now woven its way into the core of business. Many business models are reliant on the Cloud to function, so it's no surprise to see that demand for these skills continues to soar, as this quarter's Tech Cities data reveals. But the fact that this coincides with stagnating salaries suggests that there are other factors impacting IT spend, in respect of Cloud computing and the particular skills and roles that are in demand.



Many business models are reliant on the Cloud to function, so it's no surprise to see **that demand for these skills continues to soar.**



A brief history of the Cloud

In order to identify macro patterns or trends affecting Cloud, it is useful to first look at a brief history of IT architectures. The first wave of computing was highly centralised. This era was characterised by mainframes and minicomputers. The arrival of the PC and peer-to-peer networking saw a move to a more distributed approach to computing.

The architectural concept of client server saw a further push into the decentralised model, at least initially. This so called 'fat client' model resulted in increasingly high specification PCs. This was great news for both the vendors and the users, who enjoyed the autonomy of having their own 'baby mainframe' on their desk.

However, the IT function did not like this degree of user control. So the era of 'thin client' computing emerged, which was effectively a return to the centralised model. The Cloud model grew in popularity, continuing the centralised architecture theme. But because Cloud services can be purchased as products in their own right, the users no longer needed a dedicated IT function. Thus the users have taken back control of their IT needs.

From a skills perspective, this cyclic trend has a bearing both on the role of the technical architect, and where the skills are required. The growing popularity of the Cloud is increasing the demand for technologists amongst Cloud service providers. The shift to the use of Cloud services will in turn lead to a decrease in the need for technologists in the IT function.

But in recent years we have seen the emergence of the Internet of Things (IoT). Otherwise dumb devices, such as toothbrushes and TVs, are increasingly becoming smart through the addition of processing power and even storage capacity. The emerging term in respect of this model is 'edge computing'.

By virtue of these smart devices around the home, office and factory having their own computing capacity, we would appear to be re-entering the decentralised phase of the architectural cycle. Edge computing will fuel a demand in embedded technology skills. The demand will be fuelled by, for example, the increasing need for IT skills by white box goods companies, as their products become more reliant on new technology. Strategically it may trigger organisations to deemphasise their Cloud migration activities and focus on edge-related opportunities. However it is not a binary choice. The edge may well boost Cloud skills demand, as the need to manage the associated data is likely to drive growth in Cloud-based data management.

Whilst it is early days, it can be assumed that the IoT is more than just a passing fad. As a result, organisations that do not build their IT architectures with the IoT in mind are in danger of painting themselves into an expensive corner.



The growing popularity of the Cloud is increasing the demand for technologists amongst Cloud service providers. **The shift to the use of Cloud services will in turn lead to a decrease in the need for technologists in the IT function.**



The Cloud is **good**

It is important to recognise that the Cloud approach is typically associated with a 'pay as you go' financial model. This means IT can be consumed as a service, rather than purchased as an expensive and fast-depreciating asset. From a financial perspective, it is a logical choice.

Unless your organisation's value proposition comes from a unique software or hardware feature you have developed, you are best advised to acquire your IT services from a third-party provider, for whom such provision is their core business. Despite prognostications that all companies in the digital age are IT / software companies, smart organisations push as much of their IT out of the door as possible. After all, it means they can get on with the increasingly valuable activity of turning data into differentiated customer services. The Cloud makes this straightforward.



Despite prognostications that all companies in the digital age are IT / software companies, **smart organisations push as much of their IT out of the door as possible.**



What are **Cloud skills**?

Returning to skills, there is some confusion over what it means to have Cloud capability. There are many technologists whose role involves the Cloud. However, in many respects, they use the Cloud rather than build it – therefore they do not need to have specialist Cloud knowledge. Below are the activities that do require specialist Cloud knowledge:

- 1. Application development** – The Cloud lends itself as a medium for enterprise applications. It is supportive of a DevOps collaborative approach. Harnessing the functionality available in the various Cloud stack frameworks available is an important element of Cloud-based application development.
- 2. Application deployment** – Cloud-based servers can be configured in different ways to optimise their usage. Skills associated with virtual machines and more recently containers are in demand.
- 3. Application security** – Using publicly available Cloud-based applications is a risky business. As is developing applications for delivery via the Cloud. Hackers are getting smarter and the Cloud presents a potential weakness in an organisation's defences. People are needed who understand the issues along with how to resolve them.
- 4. Database specialists** – Database specialists who are focused on Big Data will increasingly use the Cloud as a repository for the growing pools of data emanating from a variety of sources. Again, these specialists need to understand how to harness the functionality associated with the Cloud provider's platform.
- 5. Migration specialists** – Moving some or all of the organisation's IT systems into the Cloud requires expertise to ensure that the migration runs smoothly with little or no disruption to business. Similarly integrating Cloud and non-Cloud applications to ensure interoperability and a consistency in respect to security, responsiveness, IT governance and data integrity is key to the quality of the business model.



Many technologists use the Cloud rather than build it – **therefore they do not need to have specialist Cloud knowledge.**



Stagnation

The stagnation in salaries suggests that there may well be a surplus of Cloud literate professionals, even against the backdrop of growing demand.

We have mentioned the emergence of edge computing as something that might stymie the Cloud's uptake. However, at this stage, edge computing is more conceptual than actual. Its uptake has yet to start in earnest across the market.

Other factors could include the pressures of the impending General Data Protection (GDPR) deadline that are perhaps stalling Cloud migration programmes, as organisations focus on compliance. Similarly, concerns about cyber security and cyber terrorism are perhaps making organisations drag their heels in respect of migrating to the Cloud as well.

Furthermore, organisations may be thinking of focusing their attention on digital transformation or embracing the emerging benefits of cognitive computing. However, in reality, the leadership team is most likely to deal with urgent issues (GDPR) and brand damaging matters (cyber security) as a priority.

Conclusion



Unlike the IT Security market, it would appear that we are unlikely to be facing a skills shortfall in respect of the Cloud in the foreseeable future. However, talent with niche Cloud skills will continue to attract higher rates.

Recent research from the Cloud Industry Forum puts UK Cloud adoption at 88%. Yet this does not suggest that there is only 12% of the market left. Just because an organisation has embraced the Cloud in some capacity, does not mean that it has ported its full IT estate into the Cloud, as we explored earlier.

Nonetheless, flattening salaries would seem to be a sign of Cloud adoption reaching maturity. Other factors, as mentioned before, are deemphasising the strategic importance of Cloud adoption, and therefore reducing the fight for the best Cloud-skilled talent.



Just because an organisation has embraced the Cloud in some capacity, does not mean that **it has ported its full IT estate into the Cloud**

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.

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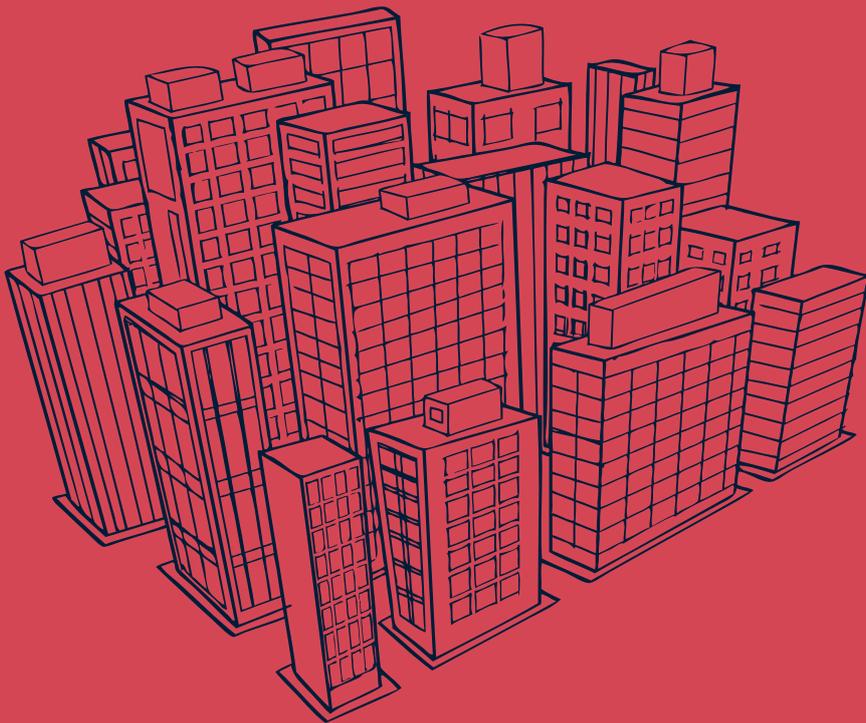
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