



BEYOND THE CLOUD

UK TECHNOLOGY RESEARCH 2018

SUMMARY REPORT

INTRODUCTION

UK businesses in all industries are facing a challenging future. With the GDPR (General Data Protection Regulation) in force since 25th May 2018 and increasing confusion surrounding Brexit, it can be hard to plan any aspect of the future, let alone the technological challenges of UK business. In addition, reports of escalation in cyber-security incidents and a prevalent skills shortage creates additional complications for UK organisations.

A key question is whether the UK will be able to keep up with the global technological race.

The focus of the research is to understand the current technology environment of UK businesses and whether companies are utilising innovative technology to mitigate future challenges facing the UK. The purpose of the research was to understand how emerging technologies are deployed or whether there is a market to implement them in the future. This was with the hope to find UK organisations understanding the benefits of harbouring technology in business.

Serviceteam IT, in partnership with Doogheno, conducted this research to provide an insight into the UK's technology adoption at a time of change. The aim was to continue the 2017 research on the most significant challenges facing UK businesses and the trends in the use of the cloud in the UK; yet, include a focus on the competitive advantage from emerging technologies.

After extensive research Serviceteam IT are unaware of any report that addresses the challenges facing UK businesses and how emerging technologies can support UK business. Given the increasing seriousness and urgency of Brexit to the UK, we believe this research provides an important insight into the challenges facing UK businesses specifically.

Emerging technologies will be key, and not just for the corporate giants. 38% of our respondents are actively using or due to implement emerging technologies including Artificial Intelligence (AI), Blockchain, Edge, Internet of Things (IoT) and Robotic Process Automation (RPA) kickstarting the new digital revolution.

METHODOLOGY

To obtain data for this research, a combination of in-depth interviews and a questionnaire was used to provide a quantitative and qualitative scope to the analysis. Like last year, respondents to the survey were located across the UK, making this the second nationwide survey of UK businesses that Serviceteam IT have completed.

The questionnaire, entitled 'Beyond the Cloud: UK Technology Research 2018', was formed through an online survey. This was completed over a five-week period between the 5th June and the 9th July 2018.

The sampled population of over 14,000 included individuals from a multitude of sectors including Government, Construction, Technology, Insurance and Finance. The various sectors allowed comparisons to be drawn between different areas of the economy.

KEY FINDINGS

- IoT is the currently the most used emerging technology with 19.7% of respondents actively using it.
- The main reasons for adopting emerging technologies is reduced cost and expansion.
- 50% of respondents reported an increase in cyber-security incidents.
- 80% of companies have not developed a contingency plan which covers the various outcomes of Brexit negotiations.

20% of businesses predict that they will have to report more breaches to the ICO as a result of GDPR, although only 10% of businesses have had to report data breaches to the ICO in the last 12 months

CHARITY

In 2016 the estimated income of the UK voluntary sector was £73.1 billion, according to the Charity Commission. The survey aimed to determine what the current technology environment within this industry is and how individuals see technology adoption in the future.

One of the key findings is that 75% of respondents feel skill shortages will have the greatest impact on their organisation in the next 36 months. In addition, 75% of respondents had concerns about their organisation's GDPR compliance. This is a huge proportion of respondents from this sector; however, uncertainty is to be expected considering the regulation only came into force on 25th May 2018. Unlike the general trend of the data, 50% of respondents had to report a data breach to the ICO in the last 12 months; however, only 25% of respondents believe they will have to report more data breaches because of GDPR.

Furthermore, 75% of respondents were unsure whether their organisation had developed a contingency plan preparing the outcome for various Brexit negotiations and 25% responded that there was no contingency plan within their company. Although no respondents saw Brexit as the most significant challenge to their business in the next 36 months, having a contingency plan will certainly help the uncertain process. Is this because it is a more highly regulated sector?

In terms of emerging technologies reduced cost, expansion and user experience were cited for the reasons for deployment. However, 75% of respondents do not think that their organisation will have the skill set to deal with these technologies and 25% of respondents were unsure.

In this sector it appears that although the adoption of emerging technologies is something which the sector wants to think about, there is confusion surrounding current regulations and Brexit concerns and it is unclear whether they will have the skill set to implement these technologies effectively.

CONSTRUCTION

Approximately 2.96 million people in the UK are employed by the construction industry. As a huge employer and contributor to the economy and infrastructure, we felt it was important to include this industry. This is especially given the uncertain future of the UK.

Although cyber-security had the greatest external impact on 48.2% of respondents in 2017 – the most popular response – Brexit and skills shortages were cited by 28.5% of respondents respectively as being the most significant problem facing their company in the next 36 months. This is interesting as 86% of respondents in this sector experienced an increase in cyber-security incidents in the last 12 months. However, although Brexit was joint as the most popular answer, only 16.6% of respondents have a contingency plan encompassing the various outcomes of Brexit. Considering this is one of the greatest impacts, it is interesting that 50% of respondents have not compiled a list of outcomes and solutions. Furthermore, 100% of respondents hosted their Cloud services in the UK, although North America, Ireland and Europe were also cited as data locations.

40% of respondents in this sector were actively using AI, and 20% of respondents are actively using Edge and IoT respectively. However, no respondents were actively using Blockchain or RPA. Yet, as 50% of respondents believe that they will have the skill set to deploy these emerging technologies, this number is expected to rise. For example, 60% of respondents commented that they have a longer-term interest in Blockchain and 20% of respondents were planning to deploy RPA within the next 12 months.

Overall, it appears this sector is seriously looking into emerging technologies and will have the resources to effect deployment. However, there is more trouble concerning business planning, although it is a reason for using these technologies.

EDUCATION

In 2016–17, there were 2.32 million students studying at UK higher education institutions. The number of pupils attending England's secondary schools is also set to rise by 20% over the course of the next decade. Therefore, a flexible and tech-based education sector is vital to help student's progression. This is especially with larger class sizes and an increasingly tech-dependent society.

One of the key findings to come from this sector is that 30% of respondents feel that Brexit is the biggest challenge to their business plans in the next 36 months. Brexit is certainly going to affect UK businesses, so this concern is anticipated. It is likely that changes to education, such as Erasmus schemes, will significantly change the way these organisations operate. However, no respondents said that their organisation had a contingency plan. 57.1% had no contingency plan and 42.8% of respondents were unsure.

As Brexit was clearly the most popular response, the proportion of respondents who were unsure or have not planned for Brexit does not reflect well on the government body advising the organisations.

Interestingly, 42.8% of respondents named legislation including GDPR as the greatest impact to their business since 2017, whereas 14.2% of respondents feel legislation including GDPR will have the greatest impact on their business in the next 36 months.

In this sector emerging technologies were most prominently placed in the longer-term interest or no interest categories. In turn, the highest proportion of respondent answers were that 42.8% had longer-term interest in AI; 71.1% had no interest in Blockchain; 42.8% had longer-term interest in Edge; 42.8% had longer-term interest in IoT and 57.1% had no interest in RPA. However, AI, Edge, IoT and RPA were actively used by 14.2% of respondents respectively. Therefore, there is interest in emerging technologies in this industry. This could be due to 57.1% of respondents being unsure whether they can enhance the skills needed for these emerging technologies. In addition, 28.2% responded that they did not have these skills as a department. However, one respondent commented that there was also a declining of real funding in the education sector; there may be no money to invest in these technologies in comparison to private companies.

FINANCE

UK-based financial and related professional services employ 7.3% of the UK's working population, over 2.2 million people, two thirds of whom are outside London. This is a huge contributor to the British economy and therefore, we felt it was necessary to understand their technology opinion. Brexit was listed as the biggest problem by 50% of respondents, yet 50% also have contingency plan. Although the Brexit outcome is ambiguous, having a contingency plan will certainly help the process.

The most notable finding in this sector is that although 100% of respondents commented that they saw no change regarding data breaches in the last 12 months, 33% predict that they will have to report more data breaches to the ICO because of GDPR.

In addition, 66% of respondents in the industry are either actively using or due to implement emerging technologies, the most popular being AI. Most surprisingly, 66% of respondents had no interest in Blockchain. External research presents that the finance and insurance sectors have a great interest in Blockchain. However, this does not correlate with our data. This has led us to wonder whether interest in Blockchain is purely for public relations purposes as no respondent was actively using or due to implement Blockchain. It appears that the finance sector is uninterested in emerging technologies but are ahead of the game in terms of compliance related and business planning challenges.

GOVERNMENT AND DEFENCE

There were 5.36 million people employed in the public sector for March 2018. Although government and defence is a large employer, 40% of respondents named a skills shortage as the biggest challenge to their organisation in the next 36 months. Interestingly, 100% of respondents were also unsure whether their organisation had developed a contingency plan outlining the various outcomes of Brexit; however, no respondents listed Brexit as the greatest challenge to their organisation in the next 36 months.

60% of respondents indicated that they had not experienced an increase in cyber-security incidents in the past 12 months whereas the other 40% had experienced an increase. When asked where these attacks were coming from, answers focused on the external aspect of the hacks or replied that they did not know the source or type of attack. This may have a relationship to 75% of respondents storing cloud services in their own data-centres. Other cloud services included Azure, Google Cloud and Hybrid Cloud.

Again, AI was the most popular form of emerging technology. 50% of respondents were planning on deploying AI in the next 12 months. Additionally, 75% of respondents expressed longer-term interest in IoT, making this the second most popular emerging technology. 50% of respondents also showed a longer-term interest in RPA. Conversely, 75% of respondents showed no interest in Blockchain or Edge respectively. Although the use of these technologies is for expansion, reduced cost and efficiency, again there is a problem with a skill shortage. 75% of respondents mentioned that they would not have the skills to deal with these emerging technologies.

HEALTHCARE AND PHARMACEUTICALS

With the UK celebrating the NHS' 70th birthday this July, it was important to get data from the healthcare and pharmaceutical industry. Legislation, including GDPR seems to hold the greatest challenge in the industry for the next 36 months, according to 66.6% of respondents.

100% of respondents held their Cloud services in the UK and 33% held additional services in Europe. In addition, 100% of respondents were very satisfied with their use of the Cloud. However, 66% of respondents were unsure whether their organisation has developed a contingency plan covering the various outcomes of Brexit.

Furthermore, respondents commented that the IT department identified the requirement of emerging technologies and the main reasons for deployment were compliance and reduced cost. All respondents said that they would have the skills to deal with these emerging technologies which reflects the recent media surrounding AI helping to identify illnesses and reduce patient waiting time.

INSURANCE

According to HM Treasury, the UK is one of the most competitive places in the world to undertake insurance and the Government is committed to do what it can to sustain and sharpen the UK's competitive edge and make the UK the world's leading centre for insurance. This was one of the main reasons this sector was, again, included in the research. Serviceteam IT thought it was difficult to see how this goal could be achieved without the extensive use of IT.

80% of respondents cloud services are in the UK. Unlike other sectors, 60% of respondents indicated their cloud services were also located in North America. Yet, 60% of respondents commented that they had not experienced a cyber-security incident in the last 12 months. This may be the reason why all respondents were either very satisfied or satisfied with the Cloud.

Interestingly, although only 25% of respondents had to report a data breach to the ICO in the last 12 months, 75% of respondents think that they will have to report more data breaches to the ICO because of GDPR. In addition, only 20% of respondents listed that they had a contingency plan for Brexit negotiations and 60% of respondents were unsure which seems unusually high for this sort of sector.

In this sector AI, IoT and RPA are being actively used. However, there is no longer-term interest in Edge and interestingly, only 50% of respondents have a longer-term interest in Blockchain.

MARKETING

The creative industries are a £92 billion UK sector and is growing at twice the rate of the economy. This is one of the UK's fastest growing industries and its outperformance of the wider UK economy meant that it was included in the research.

37.5% of respondents listed Brexit as the greatest challenge to their business in the next 36 months, making this the most popular answer. The second most popular was legislation, including GDPR which 25% of respondents listed as the greatest challenge to their business. Although Brexit is a concern, 50% of respondents indicated that their organisation had a contingency plan covering the various outcomes of Brexit negotiations. This is a lot higher than the overall percentage of respondents at 20.48%.

In this sector, only 33% of respondents have actively deployed AI. In addition, no other emerging technology was actively deployed, according to respondents. Yet, 66% of respondents felt they had the skills needed to deploy these technologies.

It appears the marketing sector understand compliance and will be able to address long term challenges to the business. However, more research needs to be done in terms of emerging technologies to heighten compliance, lower cost and have better customer satisfaction. This is a necessary step to effectively address compliance.

PROFESSIONAL SERVICES

Professional services are critical to the success of the UK economy, representing 15% of UK GDP, 14% of employment and 14% of exports. For example, the UK accounts for around 10% of the global market for legal services, second only to the US.

The key findings from this sector was that 86% of respondents experienced an increase in cyber-security incidents in the last 12 months. Most of these attacks were from phishing emails and one respondent mentioned that generally, these attacks were from South Africa. Additionally, 14.2% of respondents have developed a contingency plan for Brexit. Interestingly, 83.3% of respondents also had applications that they could not move to the Cloud which 40% of respondents commented was due to security reasons.

In addition, most professional services respondents were not using emerging technologies. The only actively used technologies were IoT and RPA with 16.6% of respondents using them respectively. No respondents were using Edge. 16.6% of respondents were planning to use Blockchain in the next 12 months and 50% of respondents had a longer-term interest in AI.

SCIENTIFIC RESEARCH

The UK boasts the most productive research base in Europe. But to stay ahead in the global science and innovation race, there needs to be investment in technology.

All respondents had data centres in Europe and 50% of the respondents also had data centres in North America. Although having a skills shortage higher on the agenda than Brexit concerns, 50% of respondents had a contingency plan outlining the various outcomes of Brexit negotiations. This, similar to marketing, was a lot greater than the overall percentage of respondents.

While AI, Blockchain and Edge had longer-term interest, IoT and RPA are planning to be deployed in 12 months in the respondent's companies. The survey suggests that it was the manufacturing department which led the respondent's businesses to deploy these emerging technologies; however, all respondents indicated that they were unsure whether they had the skill set to deal with these emerging technologies.

TECHNOLOGY

During 2016 there was £6.8 billion venture capital and private equity investment in UK tech. This, along with last year's survey statistics was a primary reason why the technology sector was included in the sample population for the questionnaire. This sector also holds most of the respondents.

38.8% of respondents mentioned Brexit and skills shortages respectively being the greatest problem on their future business plans. However, only 26.6% of respondents' companies have developed a contingency plan which outlines the various outcomes of Brexit negotiations. Additionally, 58% of respondents experienced a cyber-security incident in the last 12 months which could explain why most of the respondent's data centres are in Europe. 67% of respondents hold Cloud services in the UK. However, tech respondents also hosted their cloud services in North America, Asia, UAE and Australia.

It is no surprise that in the tech industry, emerging technologies are more widely used. 15.3% of respondents are actively using AI; 15.3% are using Edge; 38.4% are actively using IoT; and 7.6% are using RPA. The proportion of respondents with technology deployment in 12 months and longer-term interest is also higher. For example, 38.4% of respondents have longer-term interest in Blockchain. In addition, 46.1% of respondents commented the use of emerging technologies was for expansion, making it the most popular justification. According to the respondents, the departments who identified the requirement to implement these technologies includes; R&D, Engineering, Operations, Sales and the Tech department.

Overall, it appears the tech industry's biggest problems are Brexit and a skill shortage for emerging technologies.

TRAVEL AND TRANSPORT

There were over 8.3 billion passenger journeys in 2016. Brexit is the largest problem facing the travel and tourism sector with 50% of respondents listing it as having the greatest impact over the next 36 months. 33% of respondents have a contingency plan for Brexit; however, 33% did not and 33% were unsure. Therefore, it appears that more research needs to be completed regarding the depth of Brexit.

The most significant finding is that 83% of respondents had not experienced a cyber-security incident in 12 months. This could be due to all their cloud services being located within Europe. Although 75% of respondents were unsure whether their department would have the skills to deal with the emerging technologies, only 16.6% of respondents were actively using an emerging technology: this was IoT.

UTILITIES

The utilities sector spans from electric to gas, water and integrated providers. Cyber-security and legislation including GDPR are the greatest external challenges in the next 36 months according to 40% of respondents respectively. Interestingly, cyber-security and legislation including GDPR were also the greatest external challenges since 2017, according to the same percentage of respondents. One respondent however commented that the biggest problem will be a lack of appetite to invest in high tech software companies.

AWS and Azure were the most popular cloud environments and most of their cloud services were in Europe. Only 20% of respondents held cloud services outside of Europe and these were all in North America.

Blockchain again was the least popular emerging technology with 60% of respondents having no interest in deployment. Edge was more popular within this sector with 40% of respondents actively using the technology and 20% planning deployment in the next 12 months. IoT was also a popular emerging technology with 40% of respondents also actively using the technology. AI again was popular with 60% of respondents either actively using the technology or planning its deployment in the next 12 months.


CONCLUSION

Our findings reveal that although the Cloud is still a central component of UK businesses, the concerns from last year's research still prevail. Most notably, in the next 36 months challenges surrounding Brexit are now more prevalent than GDPR concerns. This seems reasonable considering the outcome of Brexit increasingly unclear and there is heavy media coverage on the issue. Yet, only 20.48% of respondents have developed a contingency plan outlining the various outcomes of Brexit for their business. However, there is an increase in respondents moving cloud services in the UK, which could be a reaction to Brexit and GDPR concern.

Another key finding is that although a few respondents have had to report a data breach to the ICO in the past 12 months, a greater number of respondents believe that they will have to report more data breaches to the ICO because of GDPR.

Additionally, 38% of respondents are actively using emerging technologies or planning to deploy them in 12 months which may be used to help UK business adapt and survive. What is likely in the next few years is that longer-term interest will develop to increased adoption of these emerging technologies. With the uncertainty surrounding Brexit, being a global technology leader can only be beneficial for the UK economy.

Overall the results of the research show that although cloud adoption is still high, emerging technologies and a digital revolution may be a more effective way of dealing with major business concerns such as Brexit, GDPR and cyber-security. However, there needs to be more training and analysis, especially as each sector highlighted a problem with skills shortages.



IT can be complex. It's an ever changing world, with new technologies, new regulations and new threats. At **Serviceteam IT**, we love it. (This can make us a little boring at parties).

Ask us about the latest cyber-security trends, the challenges of data sovereignty or low latency connectivity, and we'll put the kettle on and open the biscuits.

Every company promises great service, few consistently achieve it.

At Serviceteam IT we strive always to be honest, transparent and personable at a price which is fair. Our professional team will work hard to bring you the benefit of their knowledge and experience, and our flexible, can-do approach means nothing is impossible if your pockets are deep enough. We're not the biggest, but our clients trust us, and believe we are one of the good ones.

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