



Making IT  
good for society

# Digital Brexit

Planning for a successful digital  
future outside of the EU

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## Executive summary

Since the June 2016 Referendum result in favour of leaving the European Union, BCS members have been in dialogue about the issues and opportunities that arise from the change in relationship between the UK and Europe. Much uncertainty remains, but there are a number of clear objectives for UK government, business, the IT profession and wider society to aim for. Most of the issues are not new, but are heightened, more urgent or modified as a result of this decision.

BCS believe the UK now has a choice; it could do what's necessary to maintain the existing status quo or it could seize this as an opportunity to make the much needed changes in the IT sector that would truly lead to the UK positioning itself as a digital world leader. This report outlines those opportunities available to the UK in this new Brexit context, underpinned by what should happen regardless within the IT sector that will ensure IT is good For society.

**Our primary conclusion is that the UK's future success outside the EU will be underpinned by our choices on major digital issues.**

The UK needs to make the right choices for a future that is:

- **Data-driven:** we want to see the UK as an exemplar and innovator in a data age, with data protection equivalence with EU regulations as a minimum goal.
- **Digitally-capable:** we want to see investment in our current and future workforce along with academia and research to match our ambitions. We also want to create a welcoming environment for the top global talent in our sector.
- **Secure:** we want to see cross-border cooperation on cyber security, together with a boost in UK participation in international standards development to ensure maximised UK capabilities and an integrated security strategy.
- **Connected:** we want to see a world-leading digital infrastructure that matches our ambitions in every sector through strategic cooperation on communications, regulation and pricing beyond Brexit.

## Introduction

BCS is a charity and professional membership organisation incorporated by Royal Charter, here to **Make IT Good for Society**. BCS is politically-neutral and home to members with diverse views and affiliations. The EU Referendum result has set a new course for the UK. BCS is therefore eager to ensure that the right steps are taken to guarantee that digital issues arising from exiting the EU are understood.

BCS has engaged in dialogue with its membership, consulted with stakeholders and revisited policy issues to capture the most important areas and develop a strategy after the Brexit vote. The majority of significant policy issues for the UK's exit are still the subject of debate and speculation, so there is a great deal of uncertainty and positions are likely to evolve over the coming months and years. It is the aim of this report to give a snapshot of the situation and rather than simply react to events, to develop a picture of the choices the UK needs to make to meet its own aspirations in the digital arena.

## A data-driven future

It is essential for the UK that data relationships between people, corporations and governments work for the common good. Data relationships underpin and increasingly define our citizenship as well as commerce and personal life. This is a global issue and one where the UK has an incredible opportunity to lead change, drive growth and support a fair society.

### BCS wants to see:

- The UK becoming a leader and innovator in data protection. This sets data protection equivalence with EU regulations for the UK to be a minimum goal and high priority in Brexit negotiations.
- The UK and our members moving beyond a data protection compliance mindset to seeing personal data relationships as a strategic opportunity.
- The UK investing in data frameworks that align social and commercial goals in order to become that innovator in data protection. A Royal Commission on personal data ecosystems, how organisations, governments and individuals interact, would signal a major improvement in the UK's ambition as a leader in global data protection and exploitation.

## The evidence

The evidence of the importance of data to the UK is succinctly summed up by the House of Commons Science and Technology Select Committee's report into big data:

***"We are living in the data age"***<sup>1</sup>

A number of emerging technologies such as the 'Internet of Things' (the proposed development of the internet where everyday objects have network connectivity) are set to expand the availability and richness of data well beyond the vast amounts we have today. Data science and cognitive computing will change what it is possible to detect, discover and infer from that data. The result is that the transformational ability of data is set to continue and expand with a fundamental impact on society.

The personal data ecosystem is not building trust and value as it could. Trust in data usage is a much-debated issue and current evidence supports a very troubling hypothesis, that people are not sure of how and why their data is being used. This is well expressed by research from the University of Pennsylvania:

***"A majority are resigned to giving up their data—and that is why many appear to be engaging in tradeoffs. Rather than feeling able to make choices, Americans believe it is futile to manage what companies can learn about them. Our study reveals that more than half do not want to lose control over their information but also believe this loss of control has already happened. By misrepresenting the American people and championing the tradeoff argument, marketers give policymakers false justifications for allowing the collection and use of all kinds of consumer data often in ways that the public find objectionable. Moreover, the futility we found, combined with a broad public fear about what companies can do with the data."***<sup>2</sup>

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<sup>1</sup> S&T Select Cttee (Commons) (Feb 2016) 4th Report, *The big data dilemma*.  
[http://www.publications.parliament.uk/pa/cm201516/cmselect/cmsstech/468/46803.htm#\\_idTextAnchor008](http://www.publications.parliament.uk/pa/cm201516/cmselect/cmsstech/468/46803.htm#_idTextAnchor008)

<sup>2</sup> Turov, J., Hennessy, M. and Draper, N. (June 2015) *The Trade-off Fallacy*. University of Pennsylvania. [https://www.asc.upenn.edu/sites/default/files/TradeoffFallacy\\_1.pdf](https://www.asc.upenn.edu/sites/default/files/TradeoffFallacy_1.pdf)

While focused on the US, this hypothesis is consistent with findings of a BCS-commissioned YouGov poll.<sup>3</sup> In addition, it supports findings from Wellcome, an independent health research foundation, that people were largely unaware of how their data is being used and confusion about what personal data is and what it could achieve.<sup>4</sup> Across every sector there is growing pressure on trust and data use. Research from Citizens Advice highlighted that UK consumers want:

- A fairer and more balanced data environment, with more visibility and openness about data flows as a whole and in particular with what information is collected about themselves.
- A more responsive system that enables easy ways to make decisions on how their information is used and to change their minds if their preferences change.
- To feel safe and confident online: this is not just about data being secure from malicious attack, but having confidence that any companies who overstep the mark will be held to account.<sup>5</sup>

The UK's data laws are currently based on a European Data Directive, which will be replaced in 2018 by the General Data Protection Regulations (GDPR). Irrespective of EU membership, any organisation that holds data on European citizens will need to comply with the GDPR. In order to maintain and grow a data industry and support all businesses that interact with consumers, it is essential that UK law is officially recognised as compatible or equivalent to European protections.

Myriad government reports and legislative attempts, including the recently passed Digital Economy Bill (DEB) and the recent report from the Office of the National Data Guardian,<sup>6</sup> acknowledge the scope and impact of trust issues between the public and users of their data. Despite good intentions, most potential solutions have failed to reach firm conclusions with wide agreement. For example, the conclusion of the long-running consultation for the DEB stated:

***“The sensitivities around the issue of data sharing require a sensible dialogue. The opportunities to transform public services afforded by technology and more effective use of the data already held by public bodies are great. Understanding privacy concerns and factoring them earlier into the policy development process may help realise some of those opportunities. However, wider consultation is required so that the views of more people and organisations can be heard to ensure proposals strike the right balance between preserving the privacy of citizens’ data and enabling public sector cross referencing of information before proposals are implemented.”***<sup>7</sup>

The conclusion is that no blueprint or roadmap presently exists that will lead to a data-driven future that is good for the public. The government needs to be brave and support the development of such a blueprint away from the pressures of short term political or operational considerations. This will require a mechanism such as a Royal Commission to elevate the discussion and reach some socially-acceptable and innovative frameworks that can be implemented by UK businesses, charities, and public services.

## A digitally-capable future

From digital literacy to the most valuable digital talent, the UK's growth and innovation is underpinned by the digital capability of its resident population. Every sector depends on it and from transportation, finance, retail, health to public services, future developments assume access to talent. Professionals in areas such as information security, data analytics, business analysis and architecture, software engineering and digital leadership are ubiquitously required.

<sup>3</sup> BCS <http://www.bcs.org/upload/pdf/personal-data-infographic.pdf>

<sup>4</sup> The Wellcome Trust. *Public attitudes to commercial access to health data* (March 2016) <https://wellcome.ac.uk/sites/default/files/public-attitudes-to-commercial-access-to-health-data-summary-wellcome-mar16.pdf>

<sup>5</sup> Citizens Advice (July 2016) *Fairness and flexibility* <https://blogs.citizensadvice.org.uk/wp-content/uploads/2016/07/Fairness-and-flexibility-data-expectations-final-report.pdf>

<sup>6</sup> National Data Guardian (July 2016) <https://www.gov.uk/government/news/new-safeguards-and-public-conversation-about-health-and-care-data-proposed>

<sup>7</sup> *Conclusions of civil society and public sector policy discussions on data use in government* (March 2015) [http://datasharing.org.uk/wp-content/uploads/sites/2/2015/03/20150327\\_Conclusions\\_OPM\\_paper\\_Data\\_final.pdf](http://datasharing.org.uk/wp-content/uploads/sites/2/2015/03/20150327_Conclusions_OPM_paper_Data_final.pdf)

It is estimated that there are 600,000 tech vacancies in the UK and this figure is predicted to jump to 1 million by 2020<sup>8</sup>. Ultimately, the key impact of Brexit for the IT industry will be related to the UK's ability to bring the appropriate amount and quality of talent into organisations.<sup>9</sup>

Appropriate access to digital talent drives many business decisions on where to base operations. A post-EU UK will see a change in the competitive environment for talent and will be in need of a range of capabilities to enact changes as the UK leaves the EU, as well as to support future growth and ambitions. Access to non-UK talent is essential as part of a solution that also majors in investment in education and training to bolster the UK workforce.

The UK's world-class academic computing community is, through research, teaching and community involvement, one of the pillars of our economy and society. Academic research and innovation goes hand in hand with talent and capability. That community is under immediate threat because of the prospect of a changing environment outside the EU and must be protected. As one of the 35 professional engineering institutions that comprise the *Engineering the Future* alliance, together with the Royal Academy of Engineers and EngineeringUK, BCS supports the Alliance's positions on a post-EU academic community in their *'Engineering a Future Outside the EU'*<sup>10</sup> 2016 report which urges government to seize the opportunity to solve the UK's fundamental lack of engineering skills.

### BCS wants to see:

- The lowest possible barriers to working in the UK for practitioners and academics who meet appropriate professional standards in our sector, together with continued funding of research which will ultimately shape our future society.
- Our members and the wider IT sector continuing to promote personal and team development in organisations. Every individual must take responsibility for building and maintaining a welcoming, diverse and fair workplace.
- The UK needs to significantly increase public and private investment in educating the UK workforce in digital capability. We need a specific focus on information security, software development and data innovation. This will include supporting capabilities like the expansion of honours degree apprenticeships targeted at the existing workforce as well as new entrants.

### The evidence

The House of Commons Science and Technology Select Committee succinctly describes the UK's problem with digital talent as follows:

***"The evidence is clear that the UK faces a digital skills crisis"***<sup>11</sup>

From basic IT literacy through to the 93% of technology companies reporting that skills gaps affect them commercially, a huge gulf exists between supply and demand of digital talent.<sup>12</sup>

The remarkable achievements of the *BCS Computing at School* community, the *Shadbolt Review*, and the very welcome investment in apprenticeships all support a more capable future for the UK. However, it is not clear that those already in work are sufficiently supported by their employers in terms of digital training. If the UK is to meet its own needs then the existing workforce must be a larger part of the solution.

Exiting the EU will affect the UK's ability to make use of global talent and the impact is likely to be either neutral or negative without other measures. Our dialogues with BCS members suggest that simply implementing regulatory changes from an EU exit could absorb a substantial portion of the talent currently available to the UK.

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<sup>8</sup> Tech London Advocates (2016) *Diversity in tech*.

[http://www.techlondonadvocates.org.uk/wp-content/uploads/2016/10/TLA-Diversity-in-Tech-Manifesto\\_2016.pdf](http://www.techlondonadvocates.org.uk/wp-content/uploads/2016/10/TLA-Diversity-in-Tech-Manifesto_2016.pdf)

<sup>9</sup> White, R. (2016) *Evidence from the Tech City on the impact of Brexit*.

<http://page-executive.passle.net/post/102divc/evidence-from-tech-city-on-the-impact-of-brexite>

<sup>10</sup> Royal Academy of Engineering (Oct 2016) *Engineering a future outside the EU – Securing the best outcome for the UK*.

<http://www.raeng.org.uk/publications/reports/engineering-a-future-outside-the-eu>

<sup>11</sup> S&T Select Ctte (Commons) (Jun 2016) 2nd Report, *Digital skills crisis*.

[http://www.publications.parliament.uk/pa/cm201617/cmselect/cmsctech/270/27003.htm#\\_idTextAnchor004](http://www.publications.parliament.uk/pa/cm201617/cmselect/cmsctech/270/27003.htm#_idTextAnchor004)

<sup>12</sup> <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/science-and-technology-committee/digital-skills/written/26497.pdf>

For example, in the IT security industry the UK does not have enough home-grown talent to drive growth in this sector. Recent survey figures from Intel Security and the Centre for Strategic and International Studies reveal that 82% of respondents (globally including the UK) believe there is a cyber security talent shortage.<sup>13</sup> Free movement of EU professionals has been a major factor in addressing this shortage and if after Brexit British migration controls are equivalent to other world economies, growth could stagnate. Currently, sponsored information security professionals are covered under the Tier 2 visa system and Brexit could result in a decrease in volumes of people allowed visa under this scheme.

If the UK is to have any ambition to be a leading and safe digital nation, the government and industry's response needs to be commensurate with both that ambition and with the challenges of an EU exit.

## A secure digital future

Personal, corporate and national online criminal activity continues to grow as a threat. To secure a fair society, protect our critical infrastructure and ensure the UK is an attractive place to do business, we need to maximise UK information security capability. Exiting the EU will change international relationships and consequently alter priorities around information security. The UK would benefit from an integrated strategy to create a vibrant information security industry both for internal need and as an exported service. Part of how to achieve this is building talent amongst the existing workforce as well as new entrants. However, this will also require investment in research, business, government capability and continued international cooperation.

It is encouraging that the Government's *National Cyber Security Strategy 2016-2021* says that we aim to reach our digital objectives with the continued cooperation with the EU, particularly in relation to cyber security and intelligence in addition to incentivising the expansion of the UK's cyber security sector.<sup>14</sup> It is of critical importance to UK security that these intentions are acted upon, or the UK otherwise risks becoming increasingly vulnerable to online criminal activity at a time when incidents are increasing in frequency.

### BCS wants to see:

- The protection and encouragement of cross-border working on cyber security together with a boost in UK participation in international standards development.
- Members and organisations connecting information security strategy with talent planning. Information security must be a focus for development.
- The implementation of a UK strategy to build a vibrant information security sector along the lines suggested in the *National Cyber Security Strategy 2016-2021*.

### The evidence

According to the Department for Culture, Media and Sport Sector Economic Estimates 2016, UK digital exports are worth over £30bn a year, 14.5% of all UK service exports and there is a need to ensure we continue to be a safe place to do business.<sup>15</sup> In contrast to this, the cyber threat to our digital industry remains very real, with 65% of large firms detecting a cyber security breach in the last year with the average cost of a breach estimated at £2,620 across all businesses.<sup>16</sup>

The immediate effects of Brexit on cyber security appear to be relatively limited. According to SAS Business Analytics, actual attacks in the wake of the vote have remained around average levels with a slight increase in 'hacktivist' style attacks, as opposed to more dangerous security breaches.<sup>17</sup>

However, experts in the field of cyber security have speculated that any uncertainty surrounding changes

<sup>13</sup> Intel Security (2016) *Hacking the skills shortage*. <http://www.mcafee.com/us/resources/reports/rp-hacking-skills-shortage.pdf>

<sup>14</sup> HM Government (2016) *National Cyber Security Strategy 2016-2021*.

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/567242/national\\_cyber\\_security\\_strategy\\_2016.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/567242/national_cyber_security_strategy_2016.pdf)

<sup>15</sup> Department for Culture, Media and Sport (Aug 2016) *DCMS Sectors Economic Estimates*.

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/544103/DCMS\\_Sectors\\_Economic\\_Estimates\\_-\\_August\\_2016.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544103/DCMS_Sectors_Economic_Estimates_-_August_2016.pdf)

<sup>16</sup> HM Government, Ipsos MORI, University of Portsmouth (2016) *Cyber security breaches survey 2016*.

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/521465/Cyber\\_Security\\_Breaches\\_Survey\\_2016\\_main\\_report\\_FINAL.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/521465/Cyber_Security_Breaches_Survey_2016_main_report_FINAL.pdf)

<sup>17</sup> Kiertzner, H. (Oct 2016) *Post-Brexit cyber security*. *SC Magazine*. <http://www.scmagazineuk.com/post-brexit-cyber-security/article/544394/>

in laws in this area have a “better than 50/50” chance of causing an increase in cybercrime.<sup>18</sup> A recent poll revealed that more than a third of information security professionals fear that leaving the EU would make the UK more vulnerable to cyber-attacks and there are concerns about no longer benefitting from intelligence sharing with EU member states.<sup>19</sup>

Continued involvement with European law enforcement agencies will therefore be particularly important for the UK relationship with Europol and the European Cybercrime Centre. Europol’s mandate is to support Law Enforcement Authorities throughout the EU under its obligations via the Data Protection Directive and other EU Regulations and might have to implement different mechanisms to share certain data with the UK outside the EU and vice versa.

Although we should also be looking at bilateral intelligence and activity agreements with individual European partners, the priority should be on forging new arrangements with the two agencies above. Additionally, economic effects could lead to loss of investment in UK capabilities thus making the UK a preferred target and jurisdictional issues caused by Brexit could increase complications.

The Network and Information Security (NIS) Directive (2016/1148/EU) covers arrangements for dealing with network and information security and the precautions taken by critical national infrastructures against disruption. It also deals with resilience requirements on three classes of digital service with social and economic significance in search engines, cloud computing services and online marketplaces.

The requirements on EU Member States, for example to have a national strategy and a network of Computer Security Incident Response Teams (CSIRTs),<sup>20</sup> are similar to provisions set out in the UK’s existing Cyber-Security Strategy . The biggest concern is that, on leaving the EU, the UK might lose access to the strategic cooperation group and the CSIRT network that the Directive creates. Since most NIS issues and incidents are international in scope, any reduction in information sharing would harm our ability to protect the UK’s citizens and services. Following Brexit, the UK would also cease to be a full member of Europol and would need to agree associate membership status. This status is unlikely to allow the UK direct access to Europol investigative databases, to lead investigative teams or to participate in the management of Europol.

The Directive’s requirements on critical infrastructures are also likely to fit well with the existing work of the UK’s Centre for the Protection of National Infrastructure (CPNI) and the National Cyber-Security Centre (NCSC). The main change here appears to be the addition of DNS services (including top-level domain registries) and Internet Exchange Points to the traditional list of critical infrastructures. The Directive considers that most critical infrastructures will be provided within individual countries, so requires governments to determine which providers in each sector need to be within scope. The UK is likely to use its own risk assessment in making this decision, informed by the impact thresholds to be developed by the cooperation group.

However, the Directive takes the view that digital service providers are likely to be international, so the definition of these organisations and the requirements placed upon them need to be consistent across Europe. It is not clear what their impact on UK-based service providers might be. Providing resilient services should be in the interests of both the users and businesses that depend on these platforms and providers.

While the UK remains in the EU, we should endeavour to ensure that the Commission’s lower-level guidance does not make unreasonable demands of either of these groups. As the outcome of these discussions becomes clearer, the UK may consider whether it wishes to impose the requirements on digital service providers in the UK. Since the guidance is likely to set the expectations of service users across the EU, a choice not to adopt it could damage confidence in UK-based services.

## A connected future

The ambitions of every sector of our society depends on a level of future connectivity that we are not currently planning to deliver. Outside of the EU the UK’s infrastructure will be benchmarked against international competition. At present, it does not benchmark well. The rationale and positive economic

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<sup>18</sup> Ashok, I. (July 2016) IBTimes. <http://www.ibtimes.co.uk/brexit-cybersecurity-experts-predict-rise-cybercrime-after-changes-security-law-1568732>

<sup>19</sup> Asford, W. (June 2016) Computer Weekly. <http://www.computerweekly.com/news/450298692/Brexit-will-make-UK-more-vulnerable-to-cyber-attack-say-security-pros>

<sup>20</sup> ENISA (Aug 2016) *Strategies for incident and cyber crisis cooperation*. <https://www.enisa.europa.eu/publications/strategies-for-incident-response-and-cyber-crisis-cooperation>

case for connectivity is unavoidable and clear. Yet despite this clarity, investment has been calibrated to the interests of the telecommunications sector, not the wider economy and public need and this must change.

### BCS wants to see:

- Strategic cooperation on communications regulation and pricing that continues beyond the UK's exit from the EU.
- A refreshed infrastructure strategy that includes clear government commitment to a significant change in the scale of investment and the pace of roll-out of a mixture of fixed and mobile infrastructure (Fibre to the Premise, 4G) and investment in future connectivity (e.g. 5G).

### The evidence

The House of Commons Culture, Media and Sport Committee report '*Establishing World Class Connectivity Throughout the UK 2016*' finds that:

***"...while the Government's broadband programme, Broadband Delivery UK (BDUK), is on track to deliver access to 95% of premises with superfast services by the end of 2017, there is a serious public concern that the UK is not adequately investing in critical telecoms infrastructure. The UK is a laggard by international standards in providing fibre connectivity. This could result in a widening, not a narrowing, of the digital divide; especially as demand for faster services escalates after 2020"***<sup>21</sup>

There have been numerous reports in recent years that demonstrate the return on infrastructure investment and its value to the UK economy. These only serve to heighten the importance of the UK's connectivity in a post Brexit world.

The *UK Broadband Impact Study* impact report, commissioned by the Department for Culture, Media and Sport (2013) estimated that the availability and take-up of faster broadband speeds will add about £17 billion to the UK's annual Gross Value Added (GVA) by 2024.<sup>22</sup> These interventions are projected to return roughly £20 in net economic impact for every £1 of public investment.

More recently we have seen the economic success resulting from improved broadband connection demonstrated by London's Small, Medium Sized Enterprises (SMEs) following the take up of the Government's Broadband Connection Voucher Scheme. A recent report by Adroit Economics, commissioned by the Greater London Assembly, concluded that the scheme will enable London's SMEs to generate £2 billion of additional sales within the first two years, 32,000 new jobs and achieve just under £1 billion in cost savings.<sup>23</sup> The report estimates that the economic return on investment of public funds into the scheme is an additional £23.67 of Gross Value Added for every £1 invested in the scheme.

The European Commission's Digital Economy and Society Index ranks the UK 6th in the European Union behind Denmark, the Netherlands, Sweden, Finland and Belgium.<sup>24</sup> The UK is rated as part of a group of countries that are 'lagging ahead', scoring above the EU average but whose development is now very slow, and as such is lagging in comparison to the progress of the EU as a whole.

Ofcom's *International Communications Market Report 2015* finds that just 28% of UK mobile connections are 4G, compared with 45% in the US and 63% in South Korea.<sup>25</sup> Additionally, 84% of the UK population have 4G mobile network availability from at least one provider, versus 98% in the US, 99% in Japan and 100% in South Korea.

Consequently, without a continued push on investment as happened at the origins of the BDUK programme, we could easily see many more EU nations bypass the UK in terms of connectivity, creating an inability to compete on a global scale. This could potentially be disastrous to attracting business to our shores.

<sup>21</sup> House of Commons Culture, Media and Sport Committee (July 2016) *Establishing world-class connectivity throughout the UK*. <http://www.publications.parliament.uk/pa/cm201617/cmselect/cmcmds/147/147.pdf>

<sup>22</sup> SQW Group (Nov 2013) *UK Broadband Impact Study*. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/257006/UK\\_Broadband\\_Impact\\_Study\\_-\\_Impact\\_Report\\_-\\_Nov\\_2013\\_-\\_Final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/257006/UK_Broadband_Impact_Study_-_Impact_Report_-_Nov_2013_-_Final.pdf)

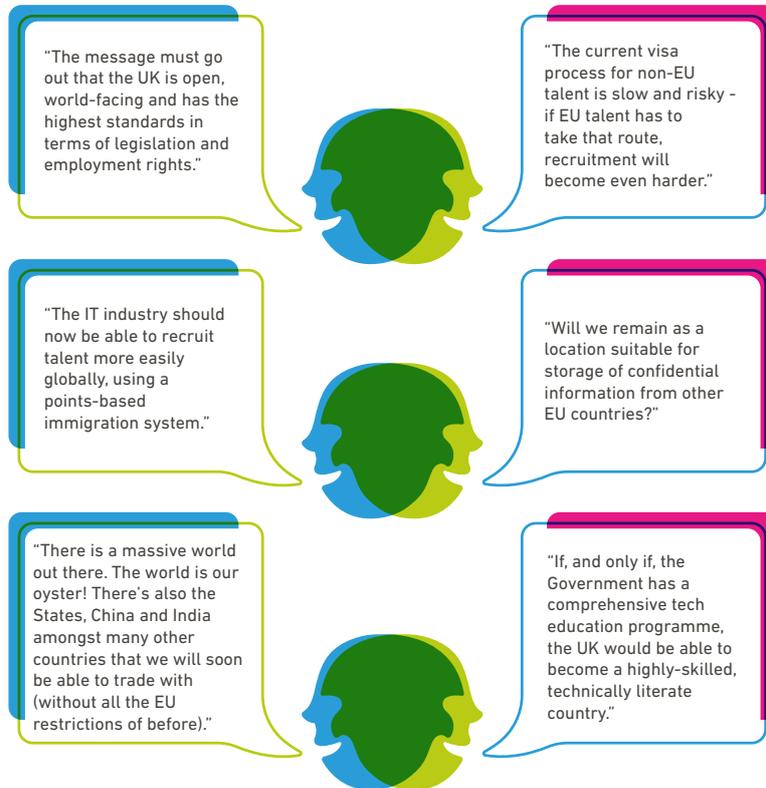
<sup>23</sup> Point Topic (Aug 2016) *Faster broadband brings £3 million boost to London SMEs*. <http://point-topic.com/faster-broadband-brings-3-billion-boost-london-smes/>

<sup>24</sup> European Commission (June 2016) *The Digital Economy & Society Index*. <https://ec.europa.eu/digital-single-market/en/desi>

<sup>25</sup> Ofcom (Dec 2015) *International Communications Market Report 2015*. [https://www.ofcom.org.uk/data/assets/pdf\\_file/0020/31268/icmr\\_2015.pdfPages15and206](https://www.ofcom.org.uk/data/assets/pdf_file/0020/31268/icmr_2015.pdfPages15and206).

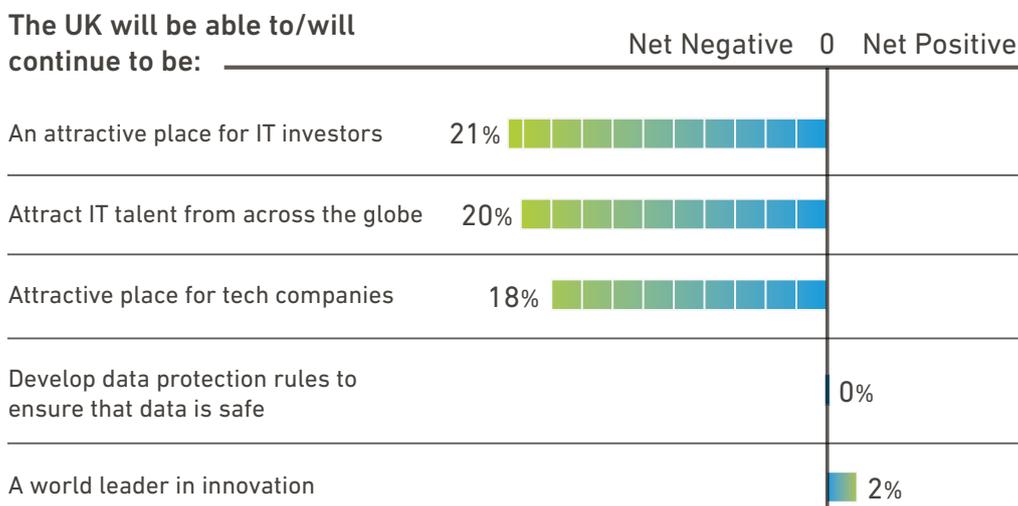
## Member Viewpoints

BCS is committed to being a welcome home to everyone who shares the organisation’s values and is prepared to submit to the code of conduct. Despite having a broad range of views, BCS members are demographically more likely to be ‘Remainers’ than the general population, and are by their membership declaring a level of social responsibility and accountability. Members come from all quarters of the IT, computing and digital communities.



## Confidence and emigration

Our ‘post-Brexit’ survey showed that our members’ confidence in the UK’s digital future had suffered because of the Referendum, and the word ‘emigrate’ featured heavily in comments. While this is likely to be an emotional reaction to the result among ‘Remainers’, and we do not expect this will be the sole factor in individuals choosing to leave the UK, it may affect the results. We also have anecdotal reports that this is seen as an opportunity to entice UK talent abroad, which is more likely to lead to increases in a ‘brain drain’.



## Exit-related change programmes

The precise arrangements for leaving the EU will remain unknown for some time, but most scenarios will mean some level of change of operating environment for public services and commercial organisations. In regulated industries such as financial services, small changes in the operating environment can result in vast technical alterations to achieve compliance. Simple tweaks in tax, employment law, financial regulations, etc., can spawn vast change programmes. In dialogue among members, many have expressed a great deal of alarm at what the summation of these programmes may look like. The level of multisector change combined with the level of digital integration could put us into unknown territory.

In a short-term and narrowly-defined way this could be good for the IT profession in terms of ensuring more than a decade of incredible demand for their services. However, this is not in the UK's long-term interests or that of the profession, and few BCS members are genuinely optimistic about this. The comparison is with the 'Y2K' bug, where a vast amount of investment in technical work led to the avoidance of an issue rather than adding value. This is called 'technical debt'. Clearly it is better for the UK if the profession pursues changes that move businesses and public services forward and support exports.

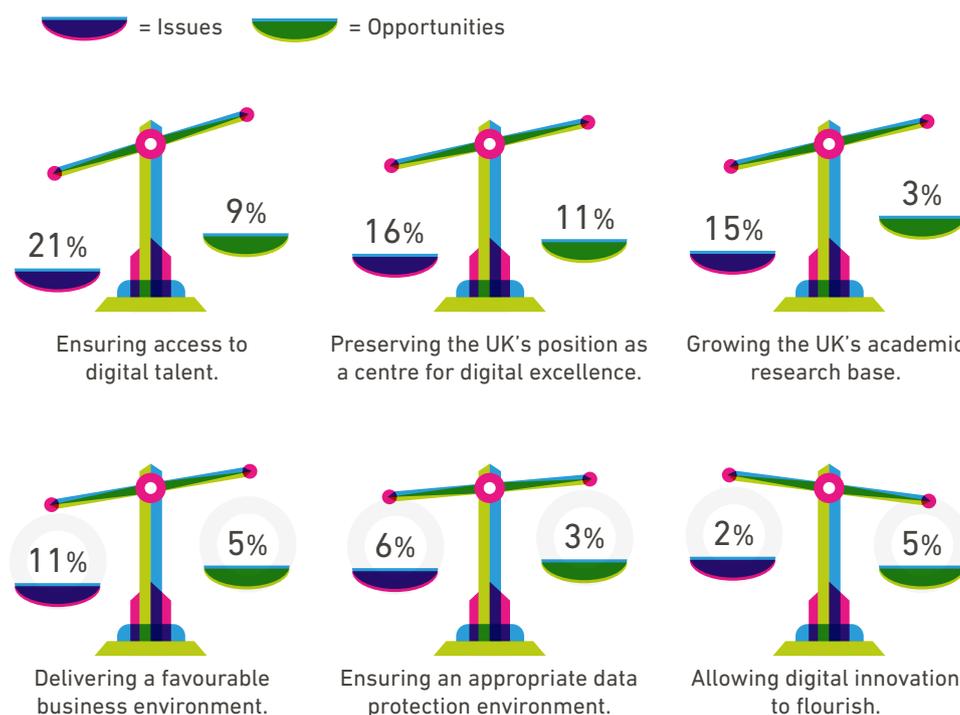
This will be incredibly difficult to predict or influence, but an eye needs to be kept on the exit-related technical debt that is created for every organisation public and private. The main mitigations will be through a rapid step-change in talent planning and investment in people. Investments in infrastructure will also help offset this 'exit-debt' and potentially support more effective and efficient delivery and international collaboration.

## Digital opportunities

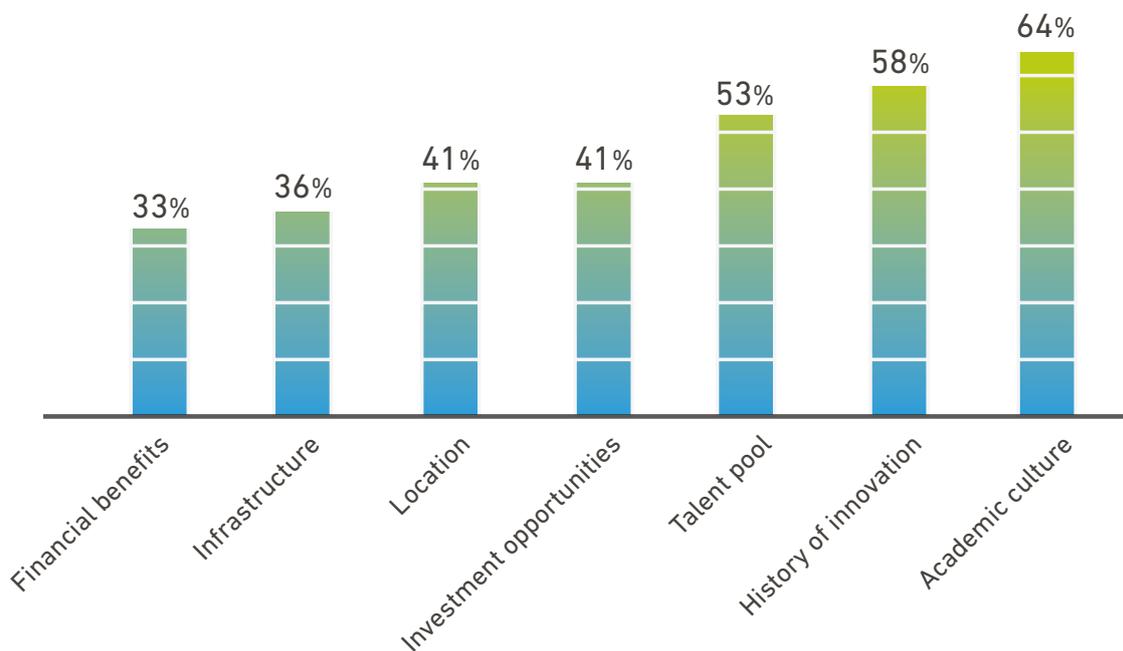
Many member comments have shown that some see little upside in the exit from the EU. However, others support the view that there are clear opportunities for economic and social progress, for example on personal data, in a more independent legal and regulatory environment. This is set against the substantial power of the EU to regulate global digital business.

In a post-EU UK, there will undoubtedly be positive opportunities. Despite some negativity, it is clear that there is a feeling of duty among BCS members to work towards a positive future for the UK between risk mitigation and making the most of new opportunities that arise.

Areas in which members identified issues and opportunities for the IT profession are shown here.



## Attractive for tech



Although there is undoubtedly uncertainty among BCS members as to what Brexit will mean to the tech sector, as a nation we have advantages that we hope will continue to allow the UK to be a digital leader. BCS members believe that that our academic culture and history of innovation are integral to our continuing success in this area.

Ethics and social good underpin any profession, so BCS is by its Constitution committed to diversity and inclusion. The digital economy is highly international in its outlook and constituent parts. BCS members have a duty to support welcoming and inclusive environments. The IT profession can and should act as ambassadors for an open and inclusive UK that welcomes positive relationships with non-UK citizens and a diverse UK society.



**BCS is here to Make IT Good for Society.**

We promote wider social and economic progress through the advancement of information technology science and practice. We bring together industry, academics, practitioners and government to share knowledge, promote new thinking, inform the design of new curricula, shape public policy and inform the public.

Our 75,000 strong membership includes practitioners, businesses, academics and students in the UK and internationally. We deliver a range of professional development tools for practitioners and employees. As a leading IT qualification body, we offer a range of widely recognised qualifications.