

**Responsible use of data : fourth report of session 2014-15 : report,  
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House of Commons  
Science and Technology  
Committee

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# Responsible Use of Data

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Fourth Report of Session 2014–15



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House of Commons  
Science and Technology  
Committee

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# Responsible Use of Data

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**Fourth Report of Session 2014–15**

*Report, together with formal minutes relating  
to the report*

*Ordered by the House of Commons  
to be printed 19 November 2014*

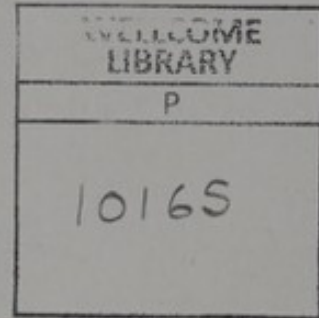


## Science and Technology

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Government Office for Science and associated public bodies.

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### Publications

The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the Internet at <http://www.parliament.uk/science>. A list of reports from the Committee in this Parliament is included at the back of this volume.

The Reports of the Committee, the formal minutes relating to that report, oral evidence taken and some or all written evidence are available in printed volume(s). Additional written evidence may be published on the internet only.

### Committee staff

The current staff of the Committee are: Dr Stephen McGinness (Clerk); Giles Deacon (Second Clerk); Victoria Charlton (Committee Specialist); Dr Elizabeth Rough (Committee Specialist); Darren Hackett (Senior Committee Assistant); Julie Storey (Committee Assistant); and Nick Davies (Media Officer).

### Contacts

All correspondence should be addressed to the Clerk of the Science and Technology Committee, Committee Office, 14 Tothill Street, London SW1H 9NB. The telephone number for general inquiries is: 020 7219 2793; the Committee's e-mail address is: [scitechcom@parliament.uk](mailto:scitechcom@parliament.uk).

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## Summary

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Big Data has the potential to transform the ways that analysts understand the world in which we live. Social media data, a subset of big data, could provide a new method of examining society that was hitherto available through snapshot methods such as census data or surveys.

One of the defining features of modern society is the move to mass uptake of social media, the creation, sharing and exchange of information, ideas and pictures within virtual communities and networks. Millions of individuals from across the globe have signed up to social media platforms, such as Facebook, Twitter and LinkedIn, and this phenomena has led to vast collections of personal data. As the tools to analyse and organise vast quantities of digital data have been developed, both commercial and governmental organisations have considered how that social media data might be put to use.

We have found the UK well-placed to take advantage of social media data, and its analysis, for the benefits of better governance and commercial opportunities. There are, however, persistent problems in ensuring that the education system is generating people with the right skill sets to feed this growing industry and that government organisations have the necessary insights to ensure it is used to its fullest extent for the benefit of UK citizens.

One key aspect of the use of social media data is the tension that exists between the generation of data by individuals and the use of that data by organisations. We have not been convinced that the users of social media platforms are fully aware of how their data might be used and what redress they may, or may not have if they disagree with how an organisation exploits that data. This is exacerbated by our finding that terms and conditions contracts are simply too long and complex for any reasonable person to make any real sense of. Reading such documents has been likened to engaging with "Shakespeare". Drafted by lawyers, to be used in American court rooms, the contents of terms and conditions have been designed to protect organisations in the event of legal action. As a mechanism for showing that users have provided informed consent, so that organisations can process incredibly persona data, terms and conditions contracts are simply not fit for purpose.

We were pleased to find a willingness among those in the industry to develop good practice and to seek ways in which the users of services might better understand how their data may be used, how to actively protect their privacy and how to judge the ethical standards of service providers. We are keen to see the Government become more actively involved in developing global standards and possibly kitemark that would mark out service providers that meet those global standards in the care and handling of personal data.

We are worried that current legislation is no longer sufficient now that data moves more easily across digital platforms and that technologies can be used to analyse multiple sets of such data in real time. Whilst legislators have reflected on how regulation should be updated, governing bodies are floundering when it comes to the details of legislation. The

draft EU General Data Protection Regulation (2012) has attracted criticism from industry, and progress on agreeing a final commitment has not been forthcoming. Furthermore, national governments can find it difficult to regulate industries who provide services that can be delivered from anywhere in the world.

Personal data should not be undervalued and the Government has a clear responsibility to explain to the public how personal data is being used to make improvements to products and facilities. The Government needs to lead the conversation around security of personal data, so that in future years, members of the public can engage with online services with the confidence that their personal data is secure.



# 1 Introduction

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## *Social media data*

1. Modern society is generating an “ever-increasing” volume of data and there is a lot of speculation on how the data generated by social media platforms might be utilised by both private and public organisations.<sup>1</sup> techUK<sup>2</sup> defined social media data as “information relating to user-generated content on the internet”<sup>3</sup> and, as it produces data sets too large for traditional data processing, belongs to what is generally categorised as big data.<sup>4</sup>

2. The Government outlined some statistics drawn from Digital Insights about public engagement with social media platforms in 2013: every day 400 million tweets are posted to Twitter, 350 million photos are added to Facebook and over a billion videos are viewed on YouTube.<sup>5</sup> The Internet Association wrote that “analysis of large datasets can lead to the discovery of new opportunities, unanticipated insights, and unexpected services that bring value to society, businesses, and governments”<sup>6</sup> and the Government considered that social media data may have the “potential to transform public and private sector organisations” whilst driving “research and development”.<sup>7</sup>

3. The Information Commissioner’s Office’s (ICO) report, *Big Data and Data Protection*, published in July 2014, described big data as an area that was “fast-evolving”.<sup>8</sup> The infrastructure required to support this growing field is clearly an important aspect for future Government activity and one that the Government is addressing through partnership with the Economic and Social Research Council (ESRC) Administrative Data Research Network<sup>9</sup> and investments in a number of projects including:

- i) “£42 million announced this year to establish the ‘Alan Turing Institute for Data Science’ which will research new ways of collecting, storing and analysing huge data sets.

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<sup>1</sup> SMD 002 [Paras 7-8].

<sup>2</sup> techUK is a trade organisation representing companies from the information technology, telecommunications and electronics sectors.

<sup>3</sup> SMD 023 [Paras 1.3 & 1.6].

<sup>4</sup> The Gartner IT Glossary describes big data as “high-volume, high-velocity and high-variety information assets that demand cost-effective, innovative forms of information processing for enhanced insight and decision making”. Gartner IT glossary, *Big data*, [gartner.com/ITglossary](http://gartner.com/ITglossary). Accessed 24 October 2014.

<sup>5</sup> SMD 020 [para 3]; see also: Social Media Today, ‘*Social Media in 2013: By the Numbers*’, [socialmediatoday.com](http://socialmediatoday.com) and Digital Insights, ‘*Social Media facts, figures and statistics 2013*’, [blog.digitalinsights.in](http://blog.digitalinsights.in). Both accessed 24 October 2014.

<sup>6</sup> The Internet Association, Request for Comments Concerning Big Data and the Consumer Privacy Bill of Rights (Docket No. 140514424-4424-01), published 5 August 2014, page 11.

<sup>7</sup> SMD 020 [para 2].

<sup>8</sup> Information Commissioner’s Office, *Big data and data protection*, July 2014, paragraph 4, page 2. Available at [ico.org.uk](http://ico.org.uk). Accessed 24 October 2014.

<sup>9</sup> The stated core aim of the ADRN is to “facilitate access to and linkage of de-identified administrative data routinely collected by government departments and other public sector organisations”. See Economic and Social Research Council, ‘ESRC Big Data Network - Phase 1’, [esrc.ac.uk](http://esrc.ac.uk). Accessed 24 October 2014.



- ii) £189 million announced in the 2012 Autumn Statement to support big data and energy-efficient computing projects such as the National Biomedical Informatics Institute and a UK network of Administrative Data Research Centres.
- iii) Setting up the Connected Digital Economy Catapult (CDEC), which will receive over £50 million investment from the Technology Strategy Board. CDEC will play a leading role in developing new tools, platforms and assets to enable innovative UK companies to take advantage of the commercial opportunities provided by the growth in data.”<sup>10</sup>

4. As the information delivered through social media platforms develops rapidly in terms of the volume of data and number of users, there is a tension between obtaining data for commercial/administrative use and the ethical dimensions of using social media data that resonates, as Professor Liesbet van Zoonen, Principle Investigator of the IMPRINTS project<sup>11</sup>, pointed out, with the disturbing themes raised in the novel *Nineteen Eighty Four* by George Orwell.<sup>12</sup> Orwell painted a world in which the privacy of individuals had been severely eroded and where personal information was used by the state to control citizens. Whilst the concerns raised in this inquiry did not reach the same epic proportions, there were serious misgivings raised in relation to obtaining informed consent for the use of citizens’ data.

### *Data protection legislation*

5. The law concerning the rights of individuals in relation to their data was outlined in the EU Data Protection Directive (95/46/EC) and transposed into UK law through the Data Protection Act 1998.<sup>13</sup> The growth of the use of big data, and services such as social media platforms, has coincided with the original EU legislation being revisited. The EU Commission published a draft *General Data Protection Regulation*, in January 2012, to update data protection legislation.<sup>14</sup> The Regulation would, as drafted, expand on the rules governing consent and privacy issues such as the ‘right to be forgotten’ and mandating the collection of explicit consent for data usage. For example, the conditions for consent outlined in Article 7 are drafted as follows:

1. The controller shall bear the burden of proof for the data subject’s consent to the processing of their personal data for specified purposes.

<sup>10</sup> SMD 020 [para 15]

<sup>11</sup> IMPRINTS (Identity Management – Public Responses to Identity Technologies and Services) was a “was a comparative and multidisciplinary research project, asking about the influences on UK and US publics to engage and/or disengage with identity management practices, services and technologies of the future”. Its final project report was published in September 2014. See [imprintsfutures.org](http://imprintsfutures.org). Accessed 24 October 2014.

<sup>12</sup> SMD 003 [para 3.2.2]; George Orwell, *Nineteen Eighty Four*, Published July 1950, Signet Classics

<sup>13</sup> Directive 95/46/EC, *On the protection of individuals with regard to the processing of personal data and on the free movement of such data*, 24 October 1995; Data Protection Act, 1998.

<sup>14</sup> European Commission, *Proposal for a regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation)*, 25 January 2012

2. If the data subject's consent is to be given in the context of a written declaration which also concerns another matter, the requirement to give consent must be presented distinguishable in its appearance from this other matter.

3. The data subject shall have the right to withdraw his or her consent at any time. The withdrawal of consent shall not affect the lawfulness of processing based on consent before its withdrawal.

4. Consent shall not provide a legal basis for the processing, where there is a significant imbalance between the position of the data subject and the controller.<sup>15</sup>

### *Our inquiry*

6. Although social media data is a potentially valuable source of information for both economic and governance purposes, the opportunities that exist are accompanied by a series of ethical challenges surrounding the issues of privacy and informed consent. These ethical challenges are international in nature. We wanted to ensure that the UK Government was considering how social media data could be used both effectively and responsibly and sought written evidence on the following terms of reference

- i) How can real-time analysis of social media data benefit the UK? What should the Government be doing to maximise these benefits?
- ii) How does the UK compare to other EU countries in funding for real-time big data research?
- iii) What are the barriers to implementing real time data analysis? Is the new Government data-capability strategy sufficient to overcome these barriers?
- iv) What are the ethical concerns of using personal data and how is this data anonymised for research?
- v) What impact is the upcoming EU Data Protection Legislation likely to have on access to social media data for research?
- vi) Is UK legislation surrounding the collection and use of data fit for purpose?

7. We received 32 written submissions and held three evidence sessions, focusing on the benefits of social media data, the barriers to effective use of social media, questions surrounding informed consent and privacy, culminating in a final evidence session with Ed Vaizey MP, Parliamentary Under Secretary of State for Culture, Communications and

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<sup>15</sup> European Commission, *Proposal for a regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation)*, Article 7, 25 January 2012



Creative Industries, Department for Culture, Media and Sport. We would like to thank all contributors for their involvement in this inquiry.

## 2 The potential benefits of social media data

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8. Our first consideration was to establish if social media data had the potential to provide benefits for the UK in terms of both economic growth and more effective governance.

### *Economic benefits*

9. Sir Nigel Shadbolt, Professor of Artificial Intelligence at the Web Science Trust, told us that the data science sector was “set to grow, by some accounts, by around 100% in three to four years’ time”.<sup>16</sup> His view of data, in an article he had written for *The Times*, as “the new raw material of the 21<sup>st</sup> century” was echoed by the Minister, who noted that big data was being called the “oil of the 21<sup>st</sup> Century”.<sup>17</sup>

10. techUK identified social media data, as a particular subset of big data, as a huge area of growth with studies indicating “that, with over 1.5 billion social media users and 80% of online users interacting with social media regularly, there is a \$1.3 trillion global opportunity to be unlocked through the social media revolution”.<sup>18</sup> The Minister told us that the Government viewed social media data as an important part of big data as an overall resource.<sup>19</sup>

11. Carl Miller, of the think tank Demos, noted that, currently, “a few fields are completely redrawing their business models” on the basis of social media data becoming available for use and we heard examples of ways in which UK businesses could benefit from social media data.<sup>20</sup> The UK was already taking a “leading” role in “scientific information and research evaluation”, an established sector that Timo Hannay, Digital Science, thought would be “revolutionised” by the use of “online data”, including (but not limited to) social media data.<sup>21</sup> techUK told us that improvements could be made to products in light of knowledge about consumers gained from social media data:

[social media analysis] provides businesses with the ability to undertake well-targeted branding and marketing campaigns, carry out brand logo monitoring, better understand public sentiment and intent, strengthen their customer engagement and enrich their existing Customer Relationship Management provisions.<sup>22</sup>

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<sup>16</sup> Q85 [Sir Nigel Shadbolt]

<sup>17</sup> Tim Berners-Lee and Nigel Shadbolt, ‘There’s gold to be mined from all our data’, *The Times*, 31 December 2011; Q199 [Ed Vaizey MP]. See also SMD 015 [para 2]

<sup>18</sup> SMD 023 [para 1.8]

<sup>19</sup> Q198 [Ed Vaizey MP]

<sup>20</sup> Q7 [Carl Miller]

<sup>21</sup> Q7 [Timo Hannay]

<sup>22</sup> SMD 023 [para 1.9]

The Government remarked that data could “enable market-changing products and services”.<sup>23</sup> There may also be benefits for consumers themselves. The Consumer Data Research Centre at the University of Leeds noted that “better and more effective consumer outcomes could be obtained by optimising consumer choices in light of individual lifestyles”.<sup>24</sup> It went on to add that “opinions—positive and negative—of [customer] experiences can guide service providers and contribute to UK brand positioning internationally”.<sup>25</sup>

12. Witnesses were optimistic about the ability of the UK, to a greater extent than many other countries, to develop social media data into an economically important resource. Mr Miller said that the UK was considered a “leader” in Europe due to a “strong higher education sector and lively tech innovation hubs”.<sup>26</sup> His thoughts were supported by the Minister, who stated that the UK stood in “good comparison with other European countries” while recognising that other countries such as the US, Japan and India held strengths.<sup>27</sup> Research Councils UK was also of the opinion that the UK was in “a position to become a world-leader in this area”, although it added that current training and capacity building provisions were “insufficient to meet the growing demand”.<sup>28</sup>

#### *Administrative benefits*

13. According to Mr Miller, social media data, when placed in the hands of civil servants, has the potential to provide a contribution to “evidence based policy making”.<sup>29</sup> Other witnesses highlighted its ability to supplement information gathered about the UK population from other means, such as the census or surveys; Emma Carr, Big Brother Watch, told us that the Office for National Statistics was “looking at Twitter to see what it can ascertain from that that it could not necessarily ascertain from the census”.<sup>30</sup> In other countries, social media has been able to provide key information that would be useful for governance purposes: for example, according to one witness, in Australia, Twitter users began to use the hashtag #mythbusters to identify whether flooding incidents were true or not.<sup>31</sup>

14. However, Dr Ella McPherson, University of Cambridge, was clear that social media could probably only ever be used in “addition to, not as a replacement for, other methods of inquiry”.<sup>32</sup> Dr Mathieu d’Aquin, Open University, gave us an example of how Twitter

<sup>23</sup> SMD 020 [para 2]

<sup>24</sup> SMD 004 [para 2]

<sup>25</sup> SMD 004 [para 9]

<sup>26</sup> Q9 [Carl Miller]

<sup>27</sup> Q200 [Ed Vaizey MP]

<sup>28</sup> SMD 022 [para 2]

<sup>29</sup> Q10 [Carl Miller]

<sup>30</sup> Q51 [Professor Yates]; Q33 [Dr McPherson]; Q152 [Emma Carr]

<sup>31</sup> Q39 [Professor Preston] According to Professor Preston, “Mythbusters’ is a television programme about busting myths, conspiracies and so on, and people were using the hashtag to say what was real and what was not. That became a trending hashtag, with people using it to ask whether the flood was really happening in an area.”

<sup>32</sup> Q33 [Dr McPherson]



could be used to establish that events were taking place, which could be validated by CCTV footage.<sup>33</sup> Professor Mick Yates, Consumer Data Research Centre, University of Leeds, explained that the data collected by the census provided “a broad look at everything, in a structured and detailed way” and could not be replaced by social media data as, unlike the census, people on social media platforms choose what to share, if they participate at all.<sup>34</sup> As we concluded about administrative data in an earlier report, *The Census and Social Science*, social media data could only serve a supporting role for more traditional data types rather than being the sole source of social information.<sup>35</sup>

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<sup>33</sup> Q152 [Dr d’Aquin]

<sup>34</sup> Qq51;36 [Professor Yates]

<sup>35</sup> Science and Technology Committee, Third Report of Session 2012-13, *The Census and Social Science*, HC 322, para 59



### 3 Barriers to using social media data effectively

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#### Data science skills in the UK

15. The benefits of using social media data will require the correct infrastructure to be in place, including the necessary hardware, good software and the right people. This section focuses on the availability of the necessary skills rather than the development of the hardware and software infrastructure, as evidence to the inquiry on infrastructure was generally positive and Government initiatives surrounding big data were described as good. There are, however, issues regarding the use of social media data in improving governance than for seeking economic benefits.

#### *Data Science use in governance*

16. We have received evidence that government organisations' use of social media data was inconsistent across the UK. With regard to their ability to utilise social media data during emergency events, Professor John Preston, University of East London, contrasted the differences between the local governments for London, Birmingham and Carlisle:

each had different strategies in their use and interpretation of social media. Birmingham was very much ahead of the curve in using Twitter, Facebook and YouTube; London, being the seat of Government, was quite top-down; and Carlisle said that they did not want to use social media that much—it was very much face-to-face contact and radio communications that they wanted to use.<sup>36</sup>

He reflected that the success in using social media within Government organisations ultimately depended upon the interest levels of officials.<sup>37</sup>

17. Sir Nigel Shadbolt, Web Science Trust, considered that, if social media data was to be used effectively within government, at both local and national levels, there was a need to investigate whether civil servants had the right “mix of skills”.<sup>38</sup> We were told that there was a general shortage of people in the UK with the right mix of data science skills and techUK reported a risk that this shortage may be felt more acutely by public sector organisations, as “those with the required skills prefer to take roles within start-ups rather than in government or established business where skills are currently needed”.<sup>39</sup> techUK

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<sup>36</sup> Q37 [Professor Preston]

<sup>37</sup> Q37 [Professor Preston]

<sup>38</sup> Q116 [Sir Nigel Shadbolt]

<sup>39</sup> SMD 023 [para 3.3]

thought that the “Government should have a programme of re-skilling to optimise opportunities”.<sup>40</sup>

### *Data science skills outside Government*

18. Sir Nigel informed us that there were many job opportunities for data scientists in the UK, “there was a survey just this year by Eurojobs.com that looked at the 6,000-odd jobs that mentioned the words “data” or “data science” in their title. Half of those—over 50%—came from Britain”. He said that the “nearest EU competitor was Germany”, which only hosted a 9% proportion of advertised jobs.<sup>41</sup>

19. Despite the abundant employment opportunities, there appears to be a distinct shortage of people with the right combination of skills to fill the job vacancies in data science in the UK. techUK considered there to be “a skills and educational gap which is creating [a] lack of data specialists in the UK” while Digital Science pinpointed “the most pressing deficit” to be “insight combined with technical talent”.<sup>42</sup> Sureyya Cansoy, techUK, told us that e-skills UK, the sector skills council for information technology,<sup>43</sup> “expect big data job vacancies to grow by 23% annually by 2017” and that “techUK and e-skills predict that we will need another half a million [people skilled in data science] by 2020”.<sup>44</sup> She also told us that currently “57% of recruiters dealing with big data vacancies say that it is difficult to find people for the jobs they are looking to hire for”.<sup>45</sup> Timo Hannay, Digital Science, picked out a company, Altmetric, as an example which “currently has eleven staff but seven vacancies, of which five are technical—essentially developer and data analytics type roles”.<sup>46</sup> He stated that the numbers give “some indication of the difficulty” that UK companies are having in getting the “high calibre of person” needed to fill such vacancies.<sup>47</sup>

20. Witnesses recognised that the Government had begun to take action on skills shortages in data science, producing *Seizing the data opportunity: A strategy for UK data capability*, a joint venture between the Government, the Information Economy Council, industry and academic institutions.<sup>48</sup> The Strategy identifies what proficiencies are needed by industry,

<sup>40</sup> SMD 023 [para 3.3]

<sup>41</sup> Q85 [Sir Nigel Shadbolt]

<sup>42</sup> SMD 023 [para 3.3]; SMD 010 [para 13]

<sup>43</sup> e-skills UK works “on behalf of employers to develop the software, internet, computer gaming, IT services and business change expertise necessary to thrive in today’s global digital economy”. See ‘About e-skills UK’, e-skills.com. Accessed 24 October 2014.

<sup>44</sup> Qq28-29 [Sureyya Cansoy]

<sup>45</sup> Q29 [Sureyya Cansoy]

<sup>46</sup> Q30 [Timo Hannay]. Altmetric is a London-based start-up company which aims to “track and analyse the online activity around scholarly literature”. See ‘About us’, altmetric.com. Accessed 24 October 2014.

<sup>47</sup> Q30 [Timo Hannay]

<sup>48</sup> Department for Business, Innovation and Skills, *Seizing the Data Opportunity: A Strategy for UK Data Capability*, BIS/13/1250, October 2013. Note: the Information Economy Council is a body intended to “provide a vehicle for government and industry to work in partnership to develop and deliver a long-term strategy to support the growth of the Information Economy in the UK”. It consists of representatives from government, business and academia and is co-chaired by the Minister for Culture and Digital Industries, Ed Vaizey MP, and Victor Chavez, President of techUK. See techUK, ‘Leadership for information economy council’, techuk.org. Accessed 24 October 2014. See also Q29 [Sureyya Cansoy].



where the gaps are, where action is needed and what needs to happen in schools, higher education and apprenticeships in terms of promoting the reputation of the industry.<sup>49</sup> The ESRC considered the Strategy an excellent starting point, but that strong leadership would be required to overcome barriers such as the development of data science expertise, pointing out that the rate at which the demand was growing “is not matched by increased investment in more comprehensive training and skills programmes”.<sup>50</sup> We have noted that the Government is pursuing a number of plans to promote data science skills within the curriculum, including projects carried out in conjunction with e-skills. We are aware of projects such as the e-skills’ BigAmbition website, aimed at 14-19 year olds,<sup>51</sup> or the CC4G (Computer Clubs for Girls) project,<sup>52</sup> both of which are set to have a positive impact on the future UK workforce. This Committee, in its report *Educating tomorrow’s engineers*<sup>53</sup>, has raised concerns about the Government’s approach to developing engineering skills and to encouraging more students to embark on a technical career. The initiatives mentioned above demonstrate the type of input that can, and should, be encouraged.

21. We have seen repeatedly that the UK is not producing the technically proficient people required to support modern businesses. In our report, *Educating Tomorrow’s Engineers*, we concluded that, despite the Government’s recognition of the importance of engineering skills, there is a persistent gap in the numbers of engineers required to achieve economic growth. Data science is yet another skills area that urgently needs to be addressed if the UK is to be able to build an economy that can compete on the global stage. It is essential that the Government ensures that data science skills are promoted in educational institutions and within organisations that are able to provide data skills development.

22. *We repeat our recommendation, from our report, Educating Tomorrow’s Engineers, that learned societies, professional institutions and trade bodies put an obligation on their members to systematically engage in promoting data science skills through a structured programme of educational engagement. We request that the Government detail to us, in its response to this report, how it intends to ensure that organisations take part in a national effort to promote data science skills within the current and future UK workforce.*

## Framing the debate

23. Professor Liesbet van Zoonen, Loughborough University, told us that there was a disparity in how UK and continental European countries discussed issues related to data

<sup>49</sup> Department for Business, Innovation and Skills, *Seizing the Data Opportunity: A Strategy for UK Data Capability*, Executive Summary, BIS/13/1250, October 2013

<sup>50</sup> SMD 022 [para 9-10]

<sup>51</sup> BigAmbition, [bigambition.co.uk](http://bigambition.co.uk)

<sup>52</sup> Computer Club for Girls, [e-skills.com/education/e-skills-for-schools/online-e-skills.com/education/e-skills-for-schools/online-club-cc4g-cc4g/](http://e-skills.com/education/e-skills-for-schools/online-e-skills.com/education/e-skills-for-schools/online-club-cc4g-cc4g/)

<sup>53</sup> Science and Technology Committee, *Educating tomorrow’s engineers*, HC 665, 2012-13



collection.<sup>54</sup> She said that in the UK, debate around collecting data from citizens was often defined in terms of a security framework (i.e. counter-terrorism or crime reduction) rather than improvements to Government services for the benefit of citizens. In contrast, the debate in Europe leans towards the improvement of services that can be derived from data.<sup>55</sup> According to Professor van Zoonen, this meant that the link between data sharing and better services was less apparent to UK citizens, who may also become less supportive of security-led data requirements once the initial security concern has abated.<sup>56</sup>

24. In the UK this attitude is demonstrated by the way in which the powers taken by the Government to address the threats of terrorism have subsequently been characterised as government snooping and breaching the privacy of citizens. In summer 2014, a number of national newspapers criticised GCHQ's access to social media data. The *Mail Online* reported that "GCHQ 'can spy on Facebook and YouTube users and has ability to manipulate online polls', latest Snowden leaks claim", whilst the BBC reported that GCHQ were able to "legally snoop" on users of social media and email systems.<sup>57</sup> Commentators compared the activities of GCHQ to those of a "surveillance state", resulting in GCHQ being named the biggest "internet villain" by the Internet Service Providers' Association.<sup>58</sup>

### *Public trust*

25. We explored the perception that the Government is not trusted to use the personal data of citizens responsibly. Dr Mathieu d'Aquin, Open University, told us that the key question held by a number of individuals is "What are they going to do with [my data], and how can I understand what is going to be done with it in such a way that I can be reassured that the interpretation, understanding and use of the data will not go against my interest?"<sup>59</sup> The University of Manchester told us that "experimental research in relation to confidentiality statements" has shown that the public supports secondary data use "when they are aware of the purpose of it", but EMC, an IT company, told us there was a failure in communicating the benefits of big data analysis to the general public.<sup>60</sup> techUK speculated that the Government may be hesitant in talking about data use due to a "fear of media and public opinion following several high profile cases of lost data, security breaches and general 'mistrust' of how government uses this type of information".<sup>61</sup>

26. Emma Carr, Big Brother Watch, highlighted that "generally, people hold the Government to a much higher standard when it comes to data protection" than they do

<sup>54</sup> Q128 [Professor van Zoonen]

<sup>55</sup> Q128 [Professor van Zoonen]

<sup>56</sup> Qq128-129 [Professor van Zoonen]

<sup>57</sup> Lucy Crossley, 'GCHQ "can spy on Facebook and YouTube users and has ability to manipulate online polls", latest Snowden leaks claim', *Mail Online*, [dailymail.co.uk](http://dailymail.co.uk), 15 July 2014; BBC, "'Google and Facebook can be legally intercepted", says UK spy boss', *BBC Online News*, [bbc.co.co](http://bbc.co.co), 17 June 2014. Both accessed 24 October 2014.

<sup>58</sup> Matthew Sparkes, 'GCHQ named "internet villain" at award ceremony', *The Telegraph*, [telegraph.co.uk](http://telegraph.co.uk), 10 July 2014. Accessed 24 October 2014.

<sup>59</sup> Q141 [Dr d'Aquin]

<sup>60</sup> SMD 015 [para 24]; SMD 002 [para 29]

<sup>61</sup> SMD 023 [para 3.5]

private companies.<sup>62</sup> She explained that “people know that private companies are usually using their data to make money” but that “people seem to get extremely upset about data being used within the public sector” or if they “see any indication that the Government are making money” from personal information.<sup>63</sup>

27. A recent example of the Government’s poor communication of data use to the public was in relation to care.data.<sup>64</sup> Professor van Zoonen speculated that care.data had been framed as helping the NHS as an institution rather than helping individual patients.<sup>65</sup> This may have led to confusion amongst participants about the personal benefits that they would experience by taking part. There may also have been inadequate communication of the rights of individual patients. Ms Carr told us that Big Brother Watch had carried out some polls and found that a large percentage (69%) of people felt that they “had not been informed of the right to opt out of care.data”.<sup>66</sup> The Web Science Trust pointed out that the:

furore surrounding care.data indicates that data subjects are no longer content to accept assurances of the benefits of data analysis and sharing in the absence of a robust and trusted ethical framework. Whether this is because they consider the costs may be potentially too high, or the benefits potentially too low, or whether they wish to press the “pause button” while the implications of Edward Snowden’s revelations are digested is not clear.<sup>67</sup>

The Horizon Digital Economy Research Institute suggested that the Government should ensure that research involving personal data is overseen by “ethics review panels that operate under published guidelines”, as happens in the academic field.<sup>68</sup>

28. **Real buy-in from members of the public for the use of their data is most likely to be achieved by delivering well-run services, which meet the expectations of customers. There are some excellent examples of administrative services that already exist in the UK, which demonstrate exactly what the UK should be aiming for: one shining example is paying your road fund license on the DVLA website, an easy-to-use and efficient service.<sup>69</sup> Services such as these provide benefits to both the service provider and customer, providing a trusted platform for the exchange of data and service. care.data is a clear example where this trusted relationship failed to develop.**

29. *Members of the public do not appear to be wholly against the idea of their data being used by Government institutions, but support for data usage is highly dependent upon the*

<sup>62</sup> Q123 [Emma Carr]

<sup>63</sup> Q123 [Emma Carr]

<sup>64</sup> Care.data was the government plan to permit access to medical records by researchers. The plan was suspended due to a large public outcry at the potential for the data being misused.

<sup>65</sup> Q130 [Professor van Zoonen]

<sup>66</sup> Q127 [Emma Carr]

<sup>67</sup> SMD 009 [para 17]

<sup>68</sup> SMD 012 [para 8]

<sup>69</sup> DVLA, ‘Renew vehicle tax (tax disc)’, [gov.uk/tax-disc](http://gov.uk/tax-disc)



*context within which the data is collected. The Government should have learned from the experience with care.data and we recommend that the Government develop a privacy impact assessment that should be applied to all policies that collect, retain or process personal data.*

## Regulation of the industry

30. Professor Liesbet van Zoonen, Loughborough University, told us that one reason for the lack of trust among the public was the “fear” that the citizen “will lose out to big business interests”.<sup>70</sup> Big Brother Watch, referencing a 2013 poll it had commissioned, pointed out that “41% of consumers felt that they were being harmed by companies gathering their personal data” and the Information Commissioner’s Office’s (ICO) report, *Big Data and Data Protection*, indicated that “big data is sometimes characterised as a power relationship that favours corporations and governments”.<sup>71</sup> The report recognised the EU Commission’s draft *General Data Protection Regulation* (GDPR)<sup>72</sup> as an attempt to “shift the balance of power in favour of the individual by giving them more explicit rights over the processing of their personal data”, a view supported by the Horizon Digital Economy Research Institute, which considered the GDPR would tighten “the legal language mandating consent” and establish “a stronger bias against the potential harm of profiling than previous data protection policy”.<sup>73</sup>

31. techUK did not see the GDPR as an unmitigated good, citing a 2013 Deloitte report, *Economic Impact Assessment of the proposed European General Data Protection Regulation*, that warned that the proposed Regulation could “reduce GDP by €173 billion [...] leading to a loss of 2.8 million jobs” across the EU.<sup>74</sup> This was because they considered the legislation would restrict the “ability of businesses to use direct marketing” and by restricting organisations’ ability to effectively assess credit risk, “consumer credit could fall by as much as 19%”. The Deloitte report considered that the European Commission impact assessment on the proposed Regulation was “limited in its scope” and did not “adequately consider the economic impacts of the Proposed Regulation as currently proposed”.<sup>75</sup>

32. In addition to legal obligations, the ICO has explained its views on how organisations should work with personal data. Its report on *Big Data and Data Protection* has been

<sup>70</sup> Q153 [Professor van Zoonen]

<sup>71</sup> SMD 021 [para 11]; Information Commissioner’s Office, *Big data and data protection*, July 2014, paragraph 122, page 39. Available at [ico.org.uk](http://ico.org.uk). Accessed 24 October 2014.

<sup>72</sup> European Commission, *Proposal for a regulation of the European Parliament and of the Council on the protection of individuals with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation)*, 25 January 2012..

<sup>73</sup> Information Commissioner’s Office, *Big data and data protection*, July 2014, paragraph 122, page 39. Available at [ico.org.uk](http://ico.org.uk). Accessed 24 October 2014; SMD 012 [paras 9 & 12]

<sup>74</sup> Deloitte, *Economic Impact Assessment of the Proposed European General Data Protection Regulation*, Final Report, December 2013, page 3.

<sup>75</sup> Deloitte, *Economic Impact Assessment of the Proposed European General Data Protection Regulation*, Final Report, December 2013, page 32.



described as outlining the ways in which the ICO “expects big data organisations to behave”.<sup>76</sup> On launching the report, Steve Wood, ICO’s Head of Policy Delivery, said that “the basic data protection principles already established in UK and EU law are flexible enough to cover big data” and indicated that new legislation would not be necessary.<sup>77</sup>

33. The UK Computing Research Committee (UKCRC) wrote that consideration of data protection legislation “must look carefully at the practical needs of data intensive research” whilst attempting to “strike a balance between legitimate regulation” and providing the academic research community with the “means of conducting empirical experiments on realistic data”.<sup>78</sup> Professor McAuley, Horizon Digital Economy Research Institute, pointed out that some small businesses were concerned about how to work with the “ethical” issues surrounding social media data, whilst still using the data to inform their business needs.<sup>79</sup> He said this was leading to “tension between innovation and regulation”.<sup>80</sup> The Internet Association wrote that it endorses a conversation shift towards a “responsible use framework” for data.<sup>81</sup>

34. The Government considered it “essential” to provide for “strong data subject rights to protect against abuse of personal data” but emphasised the need to “strike a balance”, recognising that a number of data controllers “have a legitimate interest to process data”.<sup>82</sup> The Government’s UK Data Capability Strategy, *Seizing the data opportunity*, stated that “working with the Information Economy Council, the government will look at options to promote guidance and advice on the rights and responsibilities of data users”.<sup>83</sup>

35. We note that a primary concern of the general public is that it is unable to limit the misuse of personal data by large organisations, but we recognise the work of the ICO in addressing some of these issues. We are attracted to the position of the ICO that big data should play by the same rules as every other form of data processing. It is essential that organisations operate in a transparent manner, allowing public confidence to flourish in light of knowledge about the way that their data is used.<sup>84</sup> The UK is already a leading player on the global stage in using social media data and we are keen for this status to be maintained, but only if that can be achieved while ensuring the personal privacy of UK citizens.

<sup>76</sup> Jamie Hinks, ‘ICO slaps UK big data firms with fresh data protection guidelines’, IProPortal.com. See also Information Commissioner’s Office, *Big data and data protection*, July 2014, paragraph 122, page 39. Available at ico.org.uk. Both accessed 24 October 2014.

<sup>77</sup> Information Commissioner’s Office, ‘Big data “not a game played by different rules”, says regulator’, News Release, ico.org.uk, 28 July 2014. Accessed 24 October 2014.

<sup>78</sup> SMD 007 [para 10]

<sup>79</sup> Q98 [Professor McAuley]

<sup>80</sup> Q98 [Professor McAuley]

<sup>81</sup> The Internet Association, *Request for Comments Concerning Big Data and the Consumer Privacy Bill of Rights* (Docket No. 140514424-4424-01), published 5 August 2014.

<sup>82</sup> Letter from the Ministry of Justice to Andrew Miller MP

<sup>83</sup> Department for Business, Innovation and Skills, *Seizing the Data Opportunity: A Strategy for UK Data Capability*, BIS/13/1250, October 2013, page 45.

<sup>84</sup> Transparency is discussed further in the sub-chapter, ‘Communicating the intentions for data use’

## 4 Informed consent and 'terms and conditions'

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36. The issue of how informed consent was obtained from users, for the rights to process their personal data, was raised early in the inquiry and was a central issue throughout.<sup>85</sup> Informed consent to participate in research is defined by the Council for International Organizations of Medical Sciences, as that given:

by a competent individual who has received the necessary information; who has adequately understood the information; and who, after considering the information, has arrived at a decision without having been subjected to coercion, undue influence or inducement, or intimidation.<sup>86</sup>

37. As the use of social media data and its financial value continues to grow, it is clear that social media platforms potentially have a very important asset at their disposal, but the ability of organisations and researchers to use that data is limited by law. In the UK, this law is the Data Protection Act 1998, which maintains that consent must be obtained from individuals before their data can be used for research purposes.<sup>87</sup>

38. The University of Cambridge told us that

Signing social media platforms' terms and conditions does not necessarily correlate to informed consent, as research has shown that users sign these complicated documents without reading them in order to open their accounts.<sup>88</sup>

The University of Manchester described the example of an individual using the social media platform, Twitter, where "there is a process of consent as part of creating a Twitter account" but even then, "it may not be entirely clear to the account holder how their Tweets might be used for secondary purposes, including research".<sup>89</sup>

39. The call for ethical behaviour was not limited to the users of services. Sureyya Cansoy, techUK, reported that an "increasing number of companies" were "concerned about ethics questions" and Professor McAuley, Horizon Digital Economy Research Institute, said that "many small companies, even large ones, want to be seen to be behaving ethically and are getting somewhat annoyed at some of the unethical behaviours of others".<sup>90</sup> Timo Hannay,

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<sup>85</sup> See, for example, Q18 [Carl Miller].

<sup>86</sup> Council for International Organizations of Medical Sciences, 'International Ethical Guidelines for Biomedical Research Involving Human Subjects', 2002. Available at [chioms.ch](http://chioms.ch). Accessed 24 October 2014.

<sup>87</sup> Data Protection Act, 1998.

<sup>88</sup> SMD 013 [para 13]. Note, this witness cites the research of Beninger et al, 'Research using Social Media: Users' Views', NatCen Social Research, February 2014. Available at [natcen.ac.uk](http://natcen.ac.uk). Accessed 24 October 2014.

<sup>89</sup> SMD 015 [para 17]

<sup>90</sup> Q16 [Sureyya Cansoy]; Q89 [Professor McAuley]



Digital Science, told us that “we want to be able to abide by any reasonable requests that users may make to remove things”.<sup>91</sup>

40. The primary method for obtaining consent on social media platforms and their equivalents is by asking users to agree to terms and conditions when they register to use the service. Terms and conditions can be defined as “special and general arrangement[s], rule[s], requirements, standards etc. forming integral parts of a contract or agreement”.<sup>92</sup> Dr Kevin Macnish, University of Leeds, commented on the problems in using this process.

It is widely known that these forms are rarely read in detail or understood. The print is small and the eventual use often obscure. Even if signing the form could be considered an act of consent, it is often not an act of informed consent. *Caveat emptor* is an unfair response if a large number are signing up for the service on a (widely recognized) limited understanding of the future use of the information they will provide.<sup>93</sup>

41. Professor John Preston, University of East London, told us that “people treat social media a bit like they treat the pub”.<sup>94</sup> He continued:

They feel that if they go into a pub and have a private conversation, it does not belong to the pub; it is their conversation. They interpret Twitter or Facebook in the same way—as a place to have a conversation.<sup>95</sup>

He thought that “people need to know what they are signing up to”.<sup>96</sup>

42. It could be argued that users are compelled to either accept terms and conditions (which they might disagree with) or relinquish access to services like social media platforms. While the Internet Association maintains that “companies compete on privacy and understand that there are few barriers to switching among providers should consumers lose confidence in an online platform or service”; if a Tesco customer wants to collect points using the Tesco club card, they have to sign up to Tesco’s terms and conditions.<sup>97</sup> Similarly, if a person wants to connect with their friends on Facebook, it is necessary to use the Facebook service and sign up to their data use policy.<sup>98</sup>

43. During this inquiry we sought to understand the issues surrounding informed consent, its importance in ensuring users understood what they were agreeing to, the manner in

<sup>91</sup> Q15 [Timo Hannay]

<sup>92</sup> The Law Dictionary, ‘Terms and conditions’, thelawdictionary.org. Accessed 24 October 2014.

<sup>93</sup> SMD 001 [para 7]

<sup>94</sup> Q67 [Professor Preston]

<sup>95</sup> Q67 [Professor Preston]

<sup>96</sup> Q67 [Professor Preston]

<sup>97</sup> The Internet Association, *Request for Comments Concerning Big Data and the Consumer Privacy Bill of Rights* (Docket No. 140514424-4424-01), published 5 August 2014, page 3. See also Tesco Clubcard, ‘Terms and conditions’, tesco.com. Accessed 24 October 2014.

<sup>98</sup> Facebook, ‘Data use policy’, en-gb.facebook.com. Accessed 24 October 2014.

which companies communicated that to users, the difficulties in services that are often sourced outwith jurisdictional boundaries and how these issue might be addressed.

### Length and complexity

44. Professor David De Roure, Economic and Social Research Council, highlighted that a primary problem with terms and conditions is that “few people read [what] they are signing up to”.<sup>99</sup> Dr Mark Elliot, University of Manchester, speculated that users just want to “get to the good stuff”, and Carl Miller, Demos, told us that there was “a wonderful statistic that if you read all the terms and conditions on the internet you would spend a month every year on it”.<sup>100</sup> Mr Miller concluded that “there has been little incentive for many platform providers to do anything other than issue 100-page documents, because everyone clicks ‘Yes’”, and, to change the status quo, “pressure” would have to be applied from “outside the company”.<sup>101</sup> The lack of attention people pay to the terms and conditions was emphasised when, in 2010, GameStation temporarily added a clause to its terms and conditions that stated the company now owned the user’s “immortal soul”.<sup>102</sup> Given the widespread acceptance of the clause, GameStation concluded that 88% of signatories did not fully read the terms and conditions documents.<sup>103</sup>

45. To compound the problem of length, terms and conditions contracts have been found to employ unnecessarily complex language. Dr Elliot identified the complex language used in terms and conditions as a barrier to reading them, “even if you made your terms and conditions only 500 words, I still do not think people are going to read them, partly because of the language they are written in”.<sup>104</sup> Sir Nigel Shadbolt, Web Science Trust, labelled the contracts “totally impenetrable” and “more complex than Shakespeare”, necessitating a reading age of “19.2 years to get through”.<sup>105</sup> Dr Kevin Macnish, University of Leeds, commented on the fact that these terms and conditions were often accepted by children and thus “if we are going to make the terms and conditions understandable to schoolchildren, that gives us a level of English and understanding that I think is sensible to be aiming at”.<sup>106</sup>

46. We wrote to a number of social media platforms (or their parent companies) to ask questions about their commitment to informed consent and their use of terms and conditions. YAHOO! wrote that it provided information to users via dedicated privacy webpages;<sup>107</sup> LinkedIn aimed to “provide clarity” to members about how the company used

<sup>99</sup> Q91 [Professor De Roure]

<sup>100</sup> Q180 [Dr Elliot]; Q18 [Carl Miller]

<sup>101</sup> Q27 [Carl Miller]

<sup>102</sup> Joe Martin, ‘GameStation: “We own your soul”’, *bitgamer*, 15 April 2010, bit-tech.net. Accessed 24 October 2014.

<sup>103</sup> Joe Martin, ‘GameStation: “We own your soul”’, *bitgamer*, 15 April 2010, bit-tech.net. Accessed 24 October 2014.

<sup>104</sup> Q180 [Dr Elliot]

<sup>105</sup> Q91 [Sir Nigel Shadbolt]

<sup>106</sup> Q176 [Dr Kevin Macnish]

<sup>107</sup> SMD 028. See also Yahoo, ‘Yahoo privacy centre’, yahoo.com. Accessed 24 October 2014.



their information in a similar manner,<sup>108</sup> claiming it had earned the trust of users by respecting members' "privacy and properly protecting their personal information".<sup>109</sup> Facebook explained that it had "introduced a simplified Data Use Policy," which offered "a slimmed-down, jargon-free guide to the way that Facebook manages data"<sup>110</sup> (see image below).<sup>111</sup>

**Data Use Policy**

Information we receive and how it is used  
Learn about the types of information we receive, and how that information is used.

Sharing and hiding you on Facebook  
Get to know the privacy settings that help you control your information on Facebook.com.

Other websites and applications  
Learn about things like social plugins and how information is shared with the games, applications and websites you and your friends use off Facebook.

Advertising and Facebook notices  
See how ads are served without sharing your information with advertisers, and understand how we pair ads with social content.

Cookies, pixels and other similar technologies  
Find out how cookies, pixels and tags (like local storage) are used to provide you with services, features and relevant ads and content.

Some other things you need to know  
Learn how we make changes to this policy and more.

**More resources**

- Interactive Tools
- Minors and Safety
- Facebook Privacy Page
- Facebook Safety Page
- Facebook Site Governance Page
- Facebook Ad Controls
- View the complete Data Use Policy

However, with the exception of a comment by Twitter, stating that "during the registration process users must give their consent to our Terms of Service, Privacy Policy and Cookie Use"<sup>112</sup> and a brief Facebook reference to Terms,<sup>113</sup> there was little comment on how the terms and conditions documents (and their use to indicate consent for data use) were utilised by those organisations.

47. Steve Wood, Information Commissioner's Office, told us that often terms and conditions documents "will come from a culture within an organisation where lawyers are heavily involved. [...] It comes from the point of view that you need to cover

<sup>108</sup> SMD 027

<sup>109</sup> SMD 027

<sup>110</sup> SMD 026

<sup>111</sup> [www.facebook.com/about/privacy](http://www.facebook.com/about/privacy) accessed 9 September 2014

<sup>112</sup> SMD 029

<sup>113</sup> SMD 026

everything".<sup>114</sup> He speculated that "there may be some organisations that sometimes are able to exploit the opacity of the notice".<sup>115</sup>

48. The Minister agreed that terms and conditions were too complex, saying that

the idea that people read 150 pages of terms and conditions is simply laughable; it is a complete nonsense. We all know what lawyers are like—every t is crossed and every i is dotted. But the consumer needs something that is easy to understand and straightforward.<sup>116</sup>

He reported that "the Information Commissioner's Office is going to be the conduit for this kind of work, with the industry coming forward with proposals to simplify terms and conditions online".<sup>117</sup>

49. We are not convinced that users of online services (such as social media platforms) are able to provide informed consent based simply on the provision of terms and conditions documents. We doubt that most people who agree to terms and conditions understand the access rights of third parties to their personal data. The terms and conditions currently favoured by many organisations are lengthy and filled with jargon. The opaque, literary style of such contracts renders them unsuitable for conveying an organisation's intent for processing personal data to users. These documents are drafted for use in American court rooms, and no reasonable person can be expected to understand a document designed for such a niche use. *We commend the Information Commissioner's Office for investigating ways to simplify the contents of terms and conditions contracts and ask the Government, in its response to this report, to detail how the public at large will be involved in arriving at more robust mechanisms for achieving truly informed consent from users of online services. Clear communication with the public has been achieved in the past, for example in the use of graphic health warnings on cigarette packets. Effective communication with the public can be achieved again.*

### Communicating the intentions for data use

50. When questioned about user expectations on the use of their data by social media platforms, witnesses did not believe that terms and conditions documents allowed for informed consent to be provided for the use of that data.<sup>118</sup> Carl Miller, Demos, held up Twitter as an example of better practice in this regard; he told us that Twitter was "unapologetically open" and the "clear statements" it used early on in the application

<sup>114</sup> Q172 [Steve Wood]

<sup>115</sup> Q172 [Steve Wood]

<sup>116</sup> Q209 [Ed Vaizey MP]

<sup>117</sup> Q209 [Ed Vaizey MP]

<sup>118</sup> Q67 [Professor Yates]



process were “helpful in informing people’s reasonable expectation about what can happen and what is possible with their [data]”.<sup>119</sup>

51. The Information Commissioner’s Office’s report, *Big Data and Data Protection*, pointed out that the Data Protection Act 1998 requires an organisation to tell people:

what it is going to do with their data when it collects it. It should state the identity of the organisation collecting the data, the purposes for which they intend to process it and any other information that needs to be given to enable the processing to be fair.<sup>120</sup>

Despite this, witnesses to this inquiry considered that the communication of how collected data may be used was rarely clear and helpful: the University of Leeds even suggested that the Government should consider “introducing legislation which requires social media platforms to provide clearer information about what happens to users’ data than currently exists”.<sup>121</sup>

52. Social media platforms outlined their policies about transparency. For example, LinkedIn told us that its transparency reports were intended:

to provide [their] members and the general public with information about the numbers and types of requests for member data that [LinkedIn] receive from governments around the world, as well as the number of [its] responses.<sup>122</sup>

Similarly, Twitter told us that it “publishes a bi-annual Transparency Report to inform our users about key elements of disclosures”.<sup>123</sup> Facebook said that it had taken “extensive steps” to put “transparency and usability at the heart of our work on privacy, data use and consent” and outlined a number of methods it used to promote transparency including “Ad Preferences”, a feature that is currently available to users in the US, which is “a way for people to learn why they are seeing a particular ad, and control how we use information about them, both on and off Facebook, to decide which ads to show them”.<sup>124</sup>

53. The Government was supportive of efforts to improve the transparency of data use, stating that it “expects businesses to be transparent and open about their use of consumer data. This transparency is essential if consumers are to feel safe and empowered in an increasingly digital marketplace”.<sup>125</sup>

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<sup>119</sup> Q19 [Carl Miller]

<sup>120</sup> Information Commissioner’s Office, *Big data and data protection*, July 2014, paragraph 106, page 33. Available at [ico.org.uk](http://ico.org.uk). Accessed 24 October 2014.

<sup>121</sup> SMD 011 [para 20]

<sup>122</sup> SMD 027. See LinkedIn, ‘[Our transparency report](#)’, [linkedin.com](http://linkedin.com). Accessed 24 October 2014.

<sup>123</sup> SMD 029

<sup>124</sup> SMD 026 [para 5]

<sup>125</sup> SMD 020 [para 11]

54. We consider it vital that companies effectively communicate how they intend to use the data of individuals and that if terms and conditions themselves cannot be made easier to understand, then the destination of data should be explained separately. We recommend that the Government drives the development of a set of information standards that companies can sign up to, committing themselves to explain to customers their plans to use personal data, in clear, concise and simple terms. In its response, the Government should outline who will be responsible for this policy and how it plans to assess the clarity with which companies communicate to customers. Whilst we support the Government in encouraging others to meet high standards, we expect it to lead by example. The Government cannot expect to dictate to others, when its own services, like care.data, have been found to be less than adequate. We request that the Government outline how it plans to audit its own services and what actions it plans to take on services that do not meet a satisfactory level of communication with users about the use of their personal data.

### Requiring versus requesting information

55. When users sign up to access services, organisations often require that users provide personal information, usually without any accompanying explanation to justify such requirements. One Committee member observed that a flashlight (torch on mobile phone) application required him to allow the application to access his location before being able to download the flashlight service.<sup>126</sup> Professor Derek McAuley, Horizon Digital Economy Research Institute, agreed that this was an example of an unjustified request and suspected that the information was not needed for the application to do its job but the company was “obviously after it for some other reason”.<sup>127</sup> He indicated that companies were being “duplicitous in their behaviour” as they were “presenting one experience, yet asking for a lot more information”.<sup>128</sup> In an article published by the Huffington Post entitled ‘The Insidiousness of Facebook Messenger’s Mobile App Terms of Service’, marketing expert Sam Fiorella wrote:

Facebook’s Messenger App, which boasts more than 200,000 million monthly users, requires you to allow access to an alarming amount of personal data and, even more startling, direct control over your mobile device. I’m willing to bet that few, if any, of those using Messenger on Android devices, for example, fully considered the permissions they were accepting when using the app.<sup>129</sup>

Some of the clauses in the contract highlighted in his article allow the app to:

<sup>126</sup> Q89 [Jim Dowd MP]

<sup>127</sup> Q89 [Professor McAuley]

<sup>128</sup> Q89 [Professor McAuley]

<sup>129</sup> Sam Fiorella, ‘The Insidiousness of Facebook Messenger’s Mobile App Terms of Service’, *The Huffington Post*, [huffingtonpost.com](http://huffingtonpost.com). Accessed 24 October 2014.



- Record audio with microphone. This permission allows the app to record audio at any time without your confirmation.
- Read personal profile information stored on your device, such as your name and contact information. This means the app can identify you and may send your profile information to others.
- Take pictures and videos with the camera. This permission allows the app to use the camera at any time without your confirmation.<sup>130</sup>

To clarify why this array of permission requests were made by the Facebook Messenger application, Facebook published an explanation page on its website, stating that:

Almost all apps need certain permissions to run on Android, and we use these permissions to help enable features in the app and create a better experience for you. Keep in mind that Android controls the way the permissions are named, and the way they're named doesn't necessarily reflect how the Messenger app and other apps use them.<sup>131</sup>

It listed a number of examples for permissions justifications, which included:

**Take pictures and videos:** This permission allows you to take photos and videos within the Messenger app to easily send to your friends and other contacts.<sup>132</sup>

56. We were informed that the Information Economy Council, a body co-chaired by the Government and the techUK president that “brings together Government, industry and academia to drive the information economy in the UK”, was “creating a set of data principles to address how we can reassure consumers in this new digital age without losing the opportunity to get the most out of technological innovations”.<sup>133</sup> One working group, led by Professor McAuley, was working on how companies process personal information something, he indicated, that “industries are crying out for”.<sup>134</sup>

57. There is a qualitative difference between requesting personal information when registering for a service and requiring that same information. Companies should have a greater responsibility to explain their need to require (and retain) personal information than when they simply request it. *We welcome the work of the Information Economy Council and recommend that the Government use that work to provide companies with guidelines to aid organisations in deciding what information they should require and*

<sup>130</sup> Sam Fiorella, 'The Insidiousness of Facebook Messenger's Mobile App Terms of Service', *The Huffington Post*, huffingtonpost.com. Accessed 24 October 2014.

<sup>131</sup> Facebook, 'Why is the Messenger app requesting permission to access features on my Android phone or tablet?', en-gb.facebook.com. Accessed 24 October 2014.

<sup>132</sup> Facebook, 'Why is the Messenger app requesting permission to access features on my Android phone or tablet?', en-gb.facebook.com. Accessed 24 October 2014.

<sup>133</sup> Q5 [Sureyya Cansoy]

<sup>134</sup> Q89 [Professor McAuley]

*how that, and the subsequent use of the data, might be managed responsibly. We expect the Government, in its response to this inquiry, to outline a draft timetable for when businesses might expect to receive Government endorsed guidelines in this area.*

## Companies based in foreign jurisdictions

58. Several of the larger social media platforms, like Facebook and LinkedIn, are headquartered in the USA, outside of the jurisdiction of UK and the EU and thus subject to different pressures when producing terms and conditions.<sup>135</sup>

59. Steve Wood, Information Commissioner's Office, noted that data protection issues possess a "global dimension".<sup>136</sup> The global nature of the internet can blur the traditional physical boundaries between legal jurisdictions and cause confusion when considering regulation. Carl Miller, Demos, stated that "legal jurisdiction" was coming up against "rapid technological change and globalised information architectures".<sup>137</sup> This issue was aptly demonstrated by a recent dispute between Microsoft and the US courts. The US Magistrate Judge James Francis in New York said "internet service providers such as Microsoft Corp or Google Inc. cannot refuse to turn over customer information and emails stored in other countries when issued a valid search warrant from U.S. law enforcement agencies".<sup>138</sup> The judge ordered Microsoft to hand over the contents of email stored on a server in Ireland, despite Microsoft having previously reassured global customers that their "data should not be searchable by U.S. authorities and said it would fight such requests".<sup>139</sup>

60. Dr Mathieu d'Aquin told us that "the organisations that will have the best ability to misuse personal data are certainly private companies, especially large-scale private companies not located in the UK".<sup>140</sup> It has been revealed, for example, that Facebook had been manipulating the information presented to users in an experiment to assess user's emotional reactions to being presented with posts containing positive or negative sentiments.<sup>141</sup> This experiment attracted controversy as it was not clear that Facebook's users had consented to take part in an experiment which "manipulated" people's thoughts and emotions.<sup>142</sup> Dr Mark Elliot, University of Manchester, said that Facebook's experiment was a "clear example of misuse" of data and that a "boundary [had been]

<sup>135</sup> See Q67 [Professor Preston].

<sup>136</sup> Q180 [Steve Wood]

<sup>137</sup> Q19 [Carl Miller]

<sup>138</sup> Joseph Ax, 'U.S. judge rules search warrants extend to overseas email accounts', *reuters.com*, 25 April 2014. Accessed 24 October 2014.

<sup>139</sup> Joseph Ax, 'U.S. judge rules search warrants extend to overseas email accounts', *reuters.com*, 25 April 2014. Accessed 24 October 2014.

<sup>140</sup> Q123 [Dr d'Aquin]

<sup>141</sup> BBC, 'Facebook emotion experiment sparks criticism', *BBC News Online*, 30 June 2014, *bbc.co.uk*. Accessed 24 October 2014.

<sup>142</sup> <http://www.bbc.co.uk/news/technology-28051930> accessed 5 September 2014



crossed” by Facebook.<sup>143</sup> However, Facebook’s Data Use Policy indicates that users’ data may be shared if Facebook has:

- received your permission;
- given you notice, such as by telling you about it in this policy; or
- removed your name and any other personally identifying information from it.<sup>144</sup>

61. According to the Information Commissioner’s Office, the proposal for the EU *General Data Protection Regulation* (GDPR) would “extend the scope of data protection to apply to data controllers outside the EU that are processing the personal data of people in the EU, if the processing relates to offering them goods or services or monitoring their behaviour (article 3)”.<sup>145</sup> We understand that negotiations about the contents of the GDPR are ongoing and that, in June 2014, the Council agreed a partial, general approach on limited elements of the proposal, including territorial scope and Article 3.

62. The United States has also been wrestling with where the balance should lie in facilitating new data based business and protecting privacy. In response to a request for comment concerning big data and the Consumer Privacy Bill of Rights, the Internet Association, a trade association representing internet companies such as Yahoo!, wrote:

We are concerned that any legislative proposal to address “big data” may create a “precautionary principle problem” that hinders the advancement of technologies and innovative services before they even develop.<sup>146</sup>

The Internet Association considered that internet service users “trust” member companies (of the Internet Association) to “use their data responsibly” and that it should be sufficient for member companies to “voluntarily abide by self-regulatory codes such as the Interactive Advertising Bureau (IAB)’s Self-Regulatory Principles, Digital Advertising Alliance’s (DAA) Self-Regulatory Program, and the Network Advertising Initiative (NAI) Code of Conduct, which are subject to enforcement by the FTC [Federal Trade Commission]”.<sup>147</sup>

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<sup>143</sup> Q159 [Dr Elliot]

<sup>144</sup> <https://www.facebook.com/about/privacy/your-info>

<sup>145</sup> Information Commissioner’s Office, *Big data and data protection*, July 2014, paragraph 124, page 39. Available at [ico.org.uk](http://ico.org.uk). Accessed 24 October 2014.

<sup>146</sup> The Internet Association, *Request for Comments Concerning Big Data and the Consumer Privacy Bill of Rights* (Docket No. 140514424-4424-01), published 5 August 2014, page 2. See also National Telecommunications and Information Administration, ‘NTIA Seeks Comment on Big Data and the Consumer Privacy Bill of Rights’, [ntia.doc.gov](http://ntia.doc.gov). Accessed 24 October 2014.

<sup>147</sup> The Internet Association, *Request for Comments Concerning Big Data and the Consumer Privacy Bill of Rights* (Docket No. 140514424-4424-01), published 5 August 2014, pages 3 and 4.

63. We are also aware of the “US-EU safe harbour” [sic] agreement, which operates as an “interoperability mechanism”, outlining “internationally accepted data protection principles”.<sup>148</sup> The website for the agreement says that:

The European Commission’s Directive on Data Protection went into effect in October of 1998, and would prohibit the transfer of personal data to non-European Union countries that do not meet the European Union (EU) “adequacy” standard for privacy protection. While the United States and the EU share the goal of enhancing privacy protection for their citizens, the United States takes a different approach to privacy from that taken by the EU. In order to bridge these differences in approach and provide a streamlined means for U.S. organizations to comply with the Directive, the U.S. Department of Commerce in consultation with the European Commission developed a “safe harbor” framework and this website to provide the information an organization would need to evaluate—and then join—the U.S.-EU Safe Harbor program.<sup>149</sup>

The Internet Association thought that the US-EU Safe Harbour agreement must “remain strong for Internet businesses”.<sup>150</sup>

64. In our report *Malware and cybercrime* we noted that the UK Government has a responsibility to protect UK citizens online, in an extension of the protections that are conferred on citizens in the offline world: a responsibility the Government accepted in its written evidence to this inquiry. *As the majority of popular social media platforms are head-quartered in the US, we find it essential that the Government revisit all international agreements, including the US-EU safe harbour, to ensure that they protect UK citizens. We ask that, in its response to us, the Government outlines the international agreements that currently exist where it has ensured that the data of UK citizens will be guarded as well as if it were within UK legal jurisdictions.*

## A Kitemark

65. One solution to the lack of international governmental agreements on data protection, discussed during our inquiry, was the use of a ‘kitemark’ on the contents of terms and conditions documents.<sup>151</sup> Professor Derek McAuley, Horizon Digital Economy Research Institute, stated that this would provide users with confidence that any particular set of

<sup>148</sup> The Internet Association, *Request for Comments Concerning Big Data and the Consumer Privacy Bill of Rights* (Docket No. 140514424-4424-01), published 5 August 2014, page 15.

<sup>149</sup> Export.gov, ‘Welcome to the U.S.-EU Safe Harbor’, export.gov. Accessed 24 October 2014.

<sup>150</sup> The Internet Association, *Request for Comments Concerning Big Data and the Consumer Privacy Bill of Rights* (Docket No. 140514424-4424-01), published 5 August 2014, page 15.

<sup>151</sup> The Kitemark is a registered certification mark owned and used by the British Standards Institute. References in this report are to an analogous mark.



terms and conditions met a “higher standard”.<sup>152</sup> He thought that as a result, people might be able to “reflect on what they do and do not use”.<sup>153</sup>

66. According to Carl Miller, Demos, the potential benefits of a kitemark system may include incentivising companies “to put in plain English in a few pages what the implications of people putting their data on those platforms really is” and an independent and authoritative authentication of “whether or not the terms and conditions were clear”.<sup>154</sup>

67. One initiative that already exists to look specifically at the clarity of text on the internet is the Plain English Campaign, a citizen-led campaign launched in 1990. The organisation awards the “crystal mark”, which is a “seal of approval for the clarity of a document” and currently used internationally, applying to 21,000 documents in the UK, USA, Australia, Denmark, New Zealand and South Africa.<sup>155</sup> The Campaign states that it is “the only internationally-recognised mark of its kind”.<sup>156</sup>

68. The Minister was attracted to the introduction of a kitemark. He told us that the Information Economy Council during its work on terms and conditions would be engaging industry to come up with proposals for a kitemark, something he considered would be welcomed by industry.<sup>157</sup>

69. **We consider an internationally recognised kitemark to be the first step in ensuring the responsible use of the data of UK citizens by both social media platforms and other organisations. We are pleased that the Government seems to be working toward this end and recommend that, in its response to this report, it provides a draft timetable for when proposals for a kitemark can be expected.**

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<sup>152</sup> Q91 [Professor McAuley]

<sup>153</sup> Q91 [Professor McAuley]

<sup>154</sup> Qq27;18 [Carl Miller]

<sup>155</sup> Plain English Campaign, ‘Crystal Mark’, plainenglish.co.uk. Accessed 24 October 2014.

<sup>156</sup> Plain English Campaign, ‘Crystal Mark’, plainenglish.co.uk. Accessed 24 October 2014.

<sup>157</sup> Q210 [Ed Vaizey]

## 5 The online citizen

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70. We have become increasingly concerned that the benefits of data sharing that might be achieved, in both governance and economic growth, are at risk because the public distrusts the technology and some organisations that provide online services. The Government has been working to provide an identity assurance scheme that would give those in receipt of Government benefits an online presence so that individual citizens can manage their personal details in their transactions with the State. This scheme could be the basis for all UK citizens to have a protected, online identity that could be used, if the Government was willing, for both governance and online commercial activities.

71. We have also seen that the Government's approach to online safety has been piecemeal and conducted tactically to meet immediate needs with little evidence of any horizon scanning. The Government should be considering now how it wants UK citizens to engage with both governmental and commercial online services. It should be seeking to provide a platform for UK citizens to engage those services without unnecessarily risking their personal data and enabling its citizens to make informed choices about what data to share, with whom and for what purpose. Future prosperity will be impacted by how well information flows between government, citizens and business. The Government needs to begin work so that all of its citizens have firm and secure foundations from which to build their online functionality.



## Conclusions and recommendations

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### Skills and infrastructure

1. We have seen repeatedly that the UK is not producing the technically proficient people required to support modern businesses. In our report, *Educating Tomorrow's Engineers*, we concluded that, despite the Government's recognition of the importance of engineering skills, there is a persistent gap in the numbers of engineers required to achieve economic growth. Data science is yet another skills area that urgently needs to be addressed if the UK is to be able to build an economy that can compete on the global stage. It is essential that the Government ensures that data science skills are promoted in educational institutions and within organisations that are able to provide data skills development. (Paragraph 21)
2. We repeat our recommendation, from our report, *Educating Tomorrow's Engineers*, that learned societies, professional institutions and trade bodies put an obligation on their members to systematically engage in promoting data science skills through a structured programme of educational engagement. We request that the Government detail to us, in its response to this report, how it intends to ensure that organisations take part in a national effort to promote data science skills within the current and future UK workforce. (Paragraph 22)

### Government use of data

3. Real buy-in from members of the public for the use of their data is most likely to be achieved by delivering well-run services, which meet the expectations of customers. There are some excellent examples of administrative services that already exist in the UK, which demonstrate exactly what the UK should be aiming for: one shining example is paying your road fund license on the DVLA website, an easy-to-use and efficient service. Services such as these provide benefits to both the service provider and customer, providing a trusted platform for the exchange of data and service. *care.data* is a clear example where this trusted relationship failed to develop. (Paragraph 28)
4. Members of the public do not appear to be wholly against the idea of their data being used by Government institutions, but support for data usage is highly dependent upon the context within which the data is collected. The Government should have learned from the experience with *care.data* and we recommend that the Government develop a privacy impact assessment that should be applied to all policies that collect, retain or process personal data. (Paragraph 29)

### Better information for users of online services

5. We note that a primary concern of the general public is that it is unable to limit the misuse of personal data by large organisations, but we recognise the work of the ICO in addressing some of these issues. We are attracted to the position of the ICO that big data should play by the same rules as every other form of data processing. It is

essential that organisations operate in a transparent manner, allowing public confidence to flourish in light of knowledge about the way that their data is used. The UK is already a leading player on the global stage in using social media data and we are keen for this status to be maintained, but only if that can be achieved while ensuring the personal privacy of UK citizens. (Paragraph 35)

6. We are not convinced that users of online services (such as social media platforms) are able to provide informed consent based simply on the provision of terms and conditions documents. We doubt that most people who agree to terms and conditions understand the access rights of third parties to their personal data. The terms and conditions currently favoured by many organisations are lengthy and filled with jargon. The opaque, literary style of such contracts renders them unsuitable for conveying an organisation's intent for processing personal data to users. These documents are drafted for use in American court rooms, and no reasonable person can be expected to understand a document designed for such a niche use. We commend the Information Commissioner's Office for investigating ways to simplify the contents of terms and conditions contracts and ask the Government, in its response to this report, to detail how the public at large will be involved in arriving at more robust mechanisms for achieving truly informed consent from users of online services. Clear communication with the public has been achieved in the past, for example in the use of graphic health warnings on cigarette packets. Effective communication with the public can be achieved again. (Paragraph 49)
7. We consider it vital that companies effectively communicate how they intend to use the data of individuals and that if terms and conditions themselves cannot be made easier to understand, then the destination of data should be explained separately. We recommend that the Government drives the development of a set of information standards that companies can sign up to, committing themselves to explain to customers their plans to use personal data, in clear, concise and simple terms. In its response, the Government should outline who will be responsible for this policy and how it plans to assess the clarity with which companies communicate to customers. Whilst we support the Government in encouraging others to meet high standards, we expect it to lead by example. The Government cannot expect to dictate to others, when its own services, like care.data, have been found to be less than adequate. We request that the Government outline how it plans to audit its own services and what actions it plans to take on services that do not meet a satisfactory level of communication with users about the use of their personal data. (Paragraph 54)

#### Regulating the use of personal data

8. There is a qualitative difference between requesting personal information when registering for a service and requiring that same information. Companies should have a greater responsibility to explain their need to require (and retain) personal information than when they simply request it. We welcome the work of the Information Economy Council and recommend that the Government use that work



to provide companies with guidelines to aid organisations in deciding what information they should require and how that, and the subsequent use of the data, might be managed responsibly. We expect the Government, in its response to this inquiry, to outline a draft timetable for when businesses might expect to receive Government endorsed guidelines in this area. (Paragraph 57)

9. In our report *Malware and cybercrime* we noted that the UK Government has a responsibility to protect UK citizens online, in an extension of the protections that are conferred on citizens in the offline world: a responsibility the Government accepted in its written evidence to this inquiry. As the majority of popular social media platforms are head-quartered in the US, we find it essential that the Government revisit all international agreements, including the US-EU safe harbour, to ensure that they protect UK citizens. We ask that, in its response to us, the Government outlines the international agreements that currently exist where it has ensured that the data of UK citizens will be guarded as well as if it were within UK legal jurisdictions. (Paragraph 64)
10. We consider an internationally recognised kitemark to be the first step in ensuring the responsible use of the data of UK citizens by both social media platforms and other organisations. We are pleased that the Government seems to be working toward this end and recommend that, in its response to this report, it provides a draft timetable for when proposals for a kitemark can be expected. (Paragraph 69)
11. We have become increasingly concerned that the benefits of data sharing that might be achieved, in both governance and economic growth, are at risk because the public distrusts the technology and some organisations that provide online services. The Government has been working to provide an identity assurance scheme that would give those in receipt of Government benefits an online presence so that individual citizens can manage their personal details in their transactions with the State. This scheme could be the basis for all UK citizens to have a protected, online identity that could be used, if the Government was willing, for both governance and online commercial activities. (Paragraph 70)

#### Protecting the interests UK citizens online

12. We have also seen that the Government's approach to online safety has been piecemeal and conducted tactically to meet immediate needs with little evidence of any horizon scanning. The Government should be considering now how it wants UK citizens to engage with both governmental and commercial online services. It should be seeking to provide a platform for UK citizens to engage those services without unnecessarily risking their personal data and enabling its citizens to make informed choices about what data to share, with whom and for what purpose. Future prosperity will be impacted by how well information flows between government, citizens and business. The Government needs to begin work so that all of its citizens have firm and secure foundations from which to build their online functionality. (Paragraph 71)

# Formal Minutes

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Wednesday 19 November 2014

Members present:

Andrew Miller, in the Chair

Stephen Metcalfe  
Graham Stringer

Pamela Nash

Draft Report (*Responsible Use of Data*), proposed by the Chair, brought up and read.

*Ordered*, That the draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 71 read and agreed to.

Appendix and Summary agreed to.

*Resolved*, That the Report be the First Report of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

*Ordered*, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

[Adjourned till Wednesday 26 November at 9.00 am



## Witnesses

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The following witnesses gave evidence. Transcripts can be viewed on the Committee's inquiry page at [www.parliament.uk/science](http://www.parliament.uk/science).

### Wednesday 18 June 2014

*Question number*

**Timo Hannay**, Managing Director, Digital Science, **Carl Miller**, Research Director, Centre for the Analysis of Social Media, Demos, and **Sureyya Cansoy**, Director, Tech for Business and Consumer Programmes, techUK

Q1-31

**Professor John Preston**, Professor of Education, University of East London, **Professor Mick Yates**, Visiting Professor, Consumer Data Research Centre, University of Leeds, and **Dr Ella McPherson**, Research Fellow, University of Cambridge

Q32-79

### Monday 23 June 2014

**Professor Derek McAuley**, Professor of Digital Economy in the School of Computer Science and Director of Horizon, Horizon Digital Economy Research Institute, **Professor David De Roure**, Director, Oxford e-Research Institute and ESRC Strategic Adviser for Data Resources, Economic and Social Research Council, and **Sir Nigel Shadbolt**, Professor of Artificial Intelligence, Web Science Trust

Q80-119

**Professor Liesbet van Zoonen**, Professor of Communication and Media Studies, Loughborough University, **Professor David Robertson**, Head of School of Informatics, University of Edinburgh, representing the UK Computing Research Committee, **Dr Mathieu d'Aquin**, Research Fellow, The Open University, and **Emma Carr**, Acting Director, Big Brother Watch

Q120-155

### Wednesday 2 July 2014

**Steve Wood**, Head of Policy Delivery, Information Commissioner's Office, **Dr Mark Elliot**, Senior Lecturer, Confidentiality and Privacy Research Issues group, University of Manchester, and **Dr Kevin Macnish**, Teaching Fellow and Consultant, Inter-Disciplinary Applied Ethics Centre, University of Leeds

Q156-195

**Ed Vaizey MP**, Parliamentary Under-Secretary of State for Culture, Communications and Creative Industries, Department for Culture, Media and Sport

Q196-227

## Published written evidence

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The following written evidence was received and can be viewed on the Committee's inquiry web page at [www.parliament.uk/science](http://www.parliament.uk/science). SMD numbers are generated by the evidence processing system and so may not be complete.

|    |  |         |
|----|--|---------|
| 1  | Dr Kevin Macnish   | SMD0001 |
| 2  | EMC  | SMD0002 |
| 3  | Professor Liesbet van Zoonen, Loughborough University  | SMD0003 |
| 4  | Professor Mark Birkin, Dr Kevin Macnish, Professor Matthew Robson, and Professor Mick Yates, University of Leeds         | SMD0004 |
| 5  | Professor John Preston, University of East London, Dr Layla Branicki and Professor Jane Binner, University of Birmingham | SMD0005 |
| 6  | Aidan McCormack  | SMD0006 |
| 7  | UK Computing Research Committee  | SMD0007 |
| 8  | Demos, the Alliance for Useful Evidence and Sir David Omand  | SMD0008 |
| 9  | Web Science Trust and the EPSRC project SOCIAM   | SMD0009 |
| 10 | Digital Science (a company in the Macmillan group)   | SMD0010 |
| 11 | Dr Helen Kennedy and Dr Giles Moss, Institute of Communications Studies, University of Leeds                             | SMD0011 |
| 12 | Horizon Digital Economy Research Institute, University of Nottingham   | SMD0012 |
| 13 | Dr Ella McPherson and Dr Anne Alexander, University of Cambridge   | SMD0013 |
| 14 | The Open University  | SMD0014 |
| 15 | Dr K Purdam, Dr M Elliot and Dr E Mackey, University of Manchester   | SMD0015 |
| 16 | Information Commissioner's Office  | SMD0018 |
| 17 | Dr Wendy Moncur  | SMD0019 |
| 18 | Department for Business, Innovation and Skills,<br>Department for Culture, Media and Sport, and the Ministry of Justice  | SMD0020 |
| 19 | Big Brother Watch  | SMD0021 |
| 20 | Research Councils UK<br>(led by the Economic and Social Research Council (ESRC))   | SMD0022 |
| 21 | techUK   | SMD0023 |
| 22 | Daniel Trottier  | SMD0024 |
| 23 | Office for National Statistics   | SMD0025 |
| 24 | Facebook   | SMD0026 |
| 25 | LinkedIn   | SMD0027 |
| 26 | Yahoo  | SMD0028 |
| 27 | Twitter  | SMD0029 |
| 28 | techUK (supplementary to SMD0023)  | SMD0030 |
| 29 | Google   | SMD0031 |



## List of Reports from the Committee during the current Parliament

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All publications from the Committee are available on the Committee's website at [www.parliament.uk/science](http://www.parliament.uk/science).

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

### Session 2014–15

|                       |   |                  |
|-----------------------|---|------------------|
| First Special Report  | Communicating climate science: Government Response to the Committee's Eighth Report of Session 2013–14                      | HC 376           |
| First Report          | Ensuring access to working antimicrobials   | HC 509 (Cm 8919) |
| Second Special Report | Government horizon scanning: Government Response to the Committee's Ninth Report of Session 2013–14                         | HC 592           |
| Second Report         | After the storm? UK blood safety and the risk of variant Creutzfeldt-Jakob Disease  | HC 327 (Cm 8940) |
| Third Special Report  | Ensuring access to working antimicrobials: Research Councils UK Response to the Committee's First Report of Session 2014–15 | HC 643           |
| Third Report          | National Health Screening   | HC 244           |

### Session 2013–14

|                       |   |                   |
|-----------------------|---|-------------------|
| First Special Report  | Educating tomorrow's engineers: the impact of Government reforms on 14–19 education: Government Response to the Committee's Seventh Report of Session 2012–13 | HC 102            |
| First Report          | Water quality: priority substances  | HC 272–I (HC 648) |
| Second Special Report | Marine science: Government Response to the Committee's Ninth Report of Session 2012–13  | HC 443            |
| Third Special Report  | Bridging the valley of death: improving the commercialisation of research: Government response to the Committee's Eighth Report of Session 2012–13            | HC 559            |
| Second Report         | Forensic science  | HC 610 (Cm 8750)  |
| Fourth Special Report | Water quality: priority substances: Government response to the Committee's First Report of Session 2013–14  | HC 648            |
| Third Report          | Clinical trials   | HC 104 (Cm 8743)  |
| Fifth Special Report  | Clinical trials: Health Research Authority Response to the Committee's Third Report of Session 2013–14  | HC 753            |
| Fourth Report         | Work of the European and UK Space Agencies  | HC 253 (HC 1112)  |
| Fifth Report          | Pre-appointment hearing with the Government's preferred candidate for Chair of the Natural Environment Research Council (NERC)                                | HC 702            |
| Sixth Special Report  | Forensic science: Research Councils UK Response to the Committee's Second Report of Session 2013–14   | HC 843            |

|                        |  |                                  |
|------------------------|--|----------------------------------|
| Seventh Special Report | Clinical trials: Medical Research Council Response to the Committee's Third Report of Session 2013–14  | HC 874                           |
| Sixth Report           | Women in scientific careers  | HC 701 (HC 1268)                 |
| Seventh Report         | Pre-appointment hearing with the Government's preferred candidate for Chair of the Arts and Humanities Research Council (AHRC)   | HC 989                           |
| Eighth Special Report  | Work of the European and UK Space Agencies: Government Response to the Committee's Fourth Report of Session 2013–14  | HC 1112                          |
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