



House of Commons  
Public Administration Select  
Committee

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**Government and IT —  
“a recipe for rip-offs”:  
time for a new  
approach**

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**Twelfth Report of Session 2010–12**

***Volume I***

*Volume I: Report, together with formal minutes*

*Volume II: Oral and written evidence*

*Additional written evidence is available in Volume III, on [www.parliament.uk/pasc](http://www.parliament.uk/pasc)*

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## Summary

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Information Technology (IT) plays a fundamental role in the provision of public services. However, despite a number of successful initiatives, government’s overall record in developing and implementing new IT systems is appalling. The lack of IT skills in government and over-reliance on contracting out is a fundamental problem which has been described as a “*recipe for rip-offs*”.

IT procurement has too often resulted in late, over budget IT systems that are not fit for purpose. Given the cuts that they are having to make in response to the fiscal deficit it is ridiculous that some departments spend an average of £3,500 on a desktop PC. This Government, like many before it, has an ambitious programme aimed at reforming how it uses IT. This Report sets out what the Government must address if these reforms are to succeed where previous attempts have failed.

We found that government is currently over-reliant on a small “oligopoly” of large suppliers, which some witnesses referred to as a “cartel”. Whether or not this constitutes a cartel in legal terms, current arrangements have led to a perverse situation in which governments have wasted an obscene amount of public money. Benchmarking studies have demonstrated that government pays substantially more for IT when compared to commercial rates. The Government needs to break out of this relationship. It should do this by:

- i. Improving its own information. The Government’s own information about its IT is woefully inadequate. This lack of data means that governments have failed to benchmark the price it pays for IT goods and services; this data must be collected centrally to allow the Government to obtain the best possible price from the market.
- ii. Publishing more information. The Government has already started publishing large amounts of information about its expenditure as part of its transparency agenda. The Government should go further and make public not just information about how much its IT costs, but also about how its systems run. All IT procurement contracts should be published in full to ensure transparency and restore trust. This would allow external experts to challenge current practices and identify ways services could be delivered differently as well as more economically.
- iii. Widening the supplier base. The Government must expand its supplier base by promoting fair and open competition and engaging with innovative SMEs. To widen the supplier base the Government needs to reduce the size of its contracts and greatly simplify the procurement process. It must also adopt common standards and ensure that systems interoperate to eliminate over-reliance on a small group of suppliers, and commoditise where possible. Most importantly, departments need the capacity to deal directly with a wider range of suppliers, especially SMEs.
- iv. Working in an “agile” manner. The challenges that government seeks to address are constantly changing. Often the IT systems that government develops are

already out of date before they have been implemented. The Government needs to move towards the use of agile and iterative development methods which enable IT programmes to adapt to changes.

Above all, to address these challenges successfully, the Government needs to possess the necessary skills and knowledge in-house, to manage suppliers and understand the potential IT has to transform the services it delivers. Currently the outsourcing of the government's IT service means that many civil service staff, along with their knowledge, skills, networks and infrastructure has been transferred to suppliers. The Government needs to rebuild this capacity urgently.

Finally, we outline our own vision for how the delivery of public services online could be reformed through a combination of data release, giving individuals control of their own personal records, engaging users in the design and continuous improvement of services and opening up the delivery of online services to a greater range of organisations.

The Government has set out its own milestones for success in its ICT Strategy. We shall be returning to this topic to monitor the Government's progress against these targets, and the recommendations set out in this Report.

# 1 Introduction

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1. Information Technology (IT)<sup>1</sup> now impacts on almost every part of society. Government spent an estimated £16 billion on IT in 2009.<sup>2</sup> IT is the means by which the government interacts with citizens; the majority of its services are processed using IT enabled business systems; departments and public bodies rely on electronic systems to manage corporate functions; and many public sector workers use IT infrastructure in the course of their working day. Yet despite the breadth and depth of IT’s use in government, the public sector seems to make less effective use of IT than the private sector.

2. The Government is aware of these perceived failings. It has already conducted a series of contract renegotiations with its largest IT suppliers and the Cabinet Office’s first business plan contained five high level actions that mentioned IT.<sup>3</sup> More recently, its ICT Strategy set out its aim to use IT to deliver better public services while reducing costs.<sup>4</sup> The Government is not alone in taking a renewed interest in IT. The NAO published its landscape review of Government ICT in February,<sup>5</sup> swiftly followed by the Institute for Government’s Report “*System Error*”.<sup>6</sup>

## Our inquiry

3. This inquiry examined how government uses IT and what the barriers are to further improvement. Over the course of this inquiry we received 69 written submissions from a range of organisations and individuals. We held five evidence sessions with academics, small and medium sized enterprises (SMEs), trade bodies, systems integrators (SIs), representatives of local government, officials from the Department of Work and Pensions, Her Majesty’s Revenue and Customs (HMRC) and the Cabinet Office and the Rt Hon Francis Maude MP, Minister for the Cabinet Office (the Minister). We also visited Facebook and Vocalink.<sup>7</sup> Finally, we held a private meeting with SMEs, hosted by the Institute for Government, in order for us to hear from SMEs who were concerned that being publicly critical could lead to them losing business.<sup>8</sup> We would like to thank all those who contributed to our inquiry; especially Jerry Fishenden, an IT consultant and researcher who acted as our specialist adviser, whose support over the course of this inquiry has been invaluable.<sup>9</sup>

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1 Over the course of this inquiry the terms IT (Information Technology) and ICT (Information and Communication Technology) have been used inter-changeably. We have treated both words the same way in this Report and will use the term IT except in cases where witnesses or documents refer specifically to ICT.

2 HMT, *Operational Efficiency Programme: back office operations and IT*, May 2009.

3 Cabinet Office, *Business Plan 2011-2015*, Actions 1.8 – 1.12

4 Cabinet Office, *Government ICT Strategy*, March 2011, para 7

5 National Audit Office, *Information and Communication Technology in Government: Landscape review*, HC 757, 17 February 2011

6 Institute for Government, *System Error: Fixing the Flaws in Government IT*, March 2011

7 The company whose IT systems run payment transfers for the financial sector

8 A closed, Chatham House rule session with SMEs was held during May 2011, hosted by the Institute for Government, in order for us to hear evidence that SMEs felt unable to reveal on the public record.

9 Jerry Fishenden was appointed as a Specialist Adviser to the Committee for this inquiry on 23 November 2010.

## 2 The public sector’s record

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4. The UK has been described as “a world leader in ineffective IT schemes for government”.<sup>10</sup> There have been a number of high cost IT initiatives which have run late, under-performed or failed over the last 20 years including: the Child Support Agency’s IT system,<sup>11</sup> the IT system that would have underpinned the National ID Card scheme,<sup>12</sup> the Defence Information Infrastructure Programme,<sup>13</sup> the implementation of the Single Payments Scheme by the Rural Payments Agency,<sup>14</sup> and the National Offender Management System (C-Nomis).<sup>15</sup>

5. During the course of our inquiry there was evidence of continuing IT mismanagement: the Department of Work and Pensions (DWP) chose to cancel a contract with Fujitsu for desktop computers;<sup>16</sup> one of the NHS partners involved in the electronic patient record system pulled out after the suppliers failed to meet a deadline;<sup>17</sup> and the flagship Universal Credit programme was reported to be behind schedule due to problems meeting the deadline for building the new IT system.<sup>18</sup> The Government’s own ICT strategy acknowledges that it is not seen as having a good record in delivering IT projects.<sup>19</sup> There have been a number of successful government IT projects, some of which were identified in the NAO Report “*Delivering Successful IT-enabled business change*.”<sup>20</sup>

6. The Government is not alone in facing problems in its use of IT, as it argued in its ICT Strategy:

All big organisations – whether in the public or private sector – have examples of failure in delivering big ICT projects and programmes. In the public sector, the failures tend to be very public, while in the private sector, it is easier to keep them in decent obscurity. It is not obvious that the record of government is significantly worse than that of other big organisations.<sup>21</sup>

7. Arguably the government’s IT needs are more complex than those of other organisations. Ian Watmore, Chief Operating Officer and head of the Efficiency and Reform Group in the Cabinet Office has been quoted as saying that “*IT in government is as*

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10 Dunleavy, P. Margetts, H., Bastow, S., and Tinkler, J., *Digital Era Governance*, Oxford University Press, 2008, p 70

11 Public Accounts Committee, Thirty-Seventh Report of the Session 2006-07, *Child Support Agency: Implementation of the Child Support Reforms*, HC 812

12 Ev 124

13 National Audit Office, *Ministry of Defence: The Defence Information Infrastructure Programme*, July 2008, HC 788

14 National Audit Office, *Department for Environment Food and Rural Affairs: The Delays in Administering the 2005 Single Payment Scheme in England*, October 2006, HC 1631

15 National Audit Office, *National Offender Management System*, March 2009, HC 292

16 “DWP ends Fujitsu thin-client contract”, *silicon.com*, 15 March 2011

17 “Health IT hit by fresh crisis”, *Financial Times*, 19 April 2011

18 “IT for Universal Credit may miss deadline”, *Guardian Professional*, Monday 20 June 2011

19 Cabinet Office, *Government ICT Strategy*, para 1

20 National Audit Office, *Delivering Successful IT-enabled business change*, November 2006, HC 33-I

21 Cabinet Office, *Government ICT Strategy*

*difficult as it gets.*<sup>22</sup> Jonathan Murray, a partner in an IT firm Innovia Ventures, highlighted the different challenges faced by the public sector:

It is recognized that public and private sector organizations serve different needs and are driven by different objectives. The majority of private sector organizations are motivated by a common set of financial performance objectives. Governance structures and business models can remain stable in private sector organizations for decades. These factors greatly simplify the process of identifying and implementing common best practice.

Public sector organizations operate in a reality that challenges many attempts to identify and transfer best practice. There is no homogeneity of objectives across government departments. The nature of the election cycle places severe constraints on the time window available for governance reform and acts to reinforce institutional resistance to change. The traditional – and understandable - constraints and conservatism of public procurement regulations and processes are antithetical to the speed with which organizations must adopt technology to support rapid change. Finally the political process has traditionally reinforced a stovepipe approach to governance where Ministers and senior civil servants are given autonomy and full authority over their departments to the detriment of more distributed and integrated approaches.<sup>23</sup>

## Previous attempts at reform

8. The Government is determined to reform the use of IT to deliver better services and reduce costs. It is not the first to have such ambitions. The NAO’s landscape review identified 30 “*major cross-government policies, reviews and strategies for ICT*” from 2000 to 2010.<sup>24</sup> Many of these initiatives covered the same topic outlining similar aspirations and recommendations for change, which emphasises the difficulty of achieving meaningful reform in this area.<sup>25</sup>

9. We asked the Government why previous attempts to reform IT had been unsuccessful. In the Government’s view the reasons were that:

- projects tended to be too big, leading to greater risk, complexity and limiting the range of suppliers who could compete;
- departments, agencies and public bodies too rarely reused and adapted systems available off the shelf or that had already been commissioned by another part of government, leading to wasteful duplication;
- systems were too rarely interoperable;

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22 Quoted in Mark Say, ‘The Information Man’, *Government Computing*, 19:2, 2005, p. 16

23 Ev w29

24 *Delivering Successful IT-enabled business change*, Appendix 1

25 *Ibid*

- the infrastructure was insufficiently integrated, leading to inefficiency and separation;
- there was serious over-capacity, especially in data centres;
- procurement timescales were far too long and costly, squeezing out all but the biggest suppliers; and
- there had been too little attention given at senior levels to the implementation of big ICT projects and programmes, either by senior officials or by ministers. Similarly, Senior Responsible Owners (SROs)<sup>26</sup> often move on due to change in roles.<sup>27</sup>

10. When asked why these latest reforms would prove more successful than those of previous administrations, the Cabinet Office responded that they would address these underlying barriers to change by:

- introducing new central controls to ensure greater consistency and integration;
- taking powers to remove excess capacity;
- creating a level playing field for open source software;
- streamlining procurement and specify by outcomes rather than inputs;
- creating a presumption against projects having a lifetime value of more than £100million;
- imposing compulsory open standards, starting with interoperability and security;
- creating a comprehensive asset register;
- creating a cross-public sector Applications Store;
- requiring SROs (Senior Responsible Owners) to stay in post until an appropriate break point in project/programme life; and
- encouraging boards to hold ministers and senior officials to account on a regular basis for the progress of projects and programmes with substantial ICT elements.<sup>28</sup>

11. We welcome the Government’s attempt to analyse current deficiencies, but it is not clear whether they have identified the fundamental causes of failure or simply listed its symptoms. For example, the failure to re-use and adapt existing systems, the overcapacity in data centres and a lack of interoperability appear symptomatic of more fundamental problems; a lack of effective cross-departmental working and IT governance across Whitehall.

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26 The senior official who has overall responsibility for a project or programme

27 Ev 118

28 Ev 119

## Underlying causes of failure

12. It is these underlying causes of failure which we sought to assess in our inquiry. There was a recurring theme in our evidence: that the failure of “IT projects” was rarely due to the technology itself. Failure occurred because of flaws in the underlying policy, or its implementation. Ian Watmore went further saying that he contested “*the concept of an IT project*”.<sup>29</sup>

I do not know what that means. There are only projects that you introduce in Government to introduce policy that Ministers have decreed or to improve the operation of the system of Government. Technology happens to be an enabler for that. [...] When we have the so-called IT project disasters, nearly always they translate back [...] to one of [...] three things: policy problems, business change problems or big-bang implementation.<sup>30</sup>

Similarly Socitm<sup>31</sup> argued that it was not the “pure” IT project, such as system upgrades, that tended to fail but those that were “*focused on implementing a particular policy initiative or reforming the way a specific part of the public service works.*”<sup>32</sup>

13. On the basis of the evidence received during our inquiry, we concluded that there are six underlying causes of failure in government IT:

- Inadequate information, resulting in the Government being unable to manage its IT needs successfully (Chapter 3);
- An over-reliance on a small number of large suppliers and the virtual exclusion of small and medium sized (SME) IT contractors, which tend to be less risk adverse and more innovative (Chapter 4);
- A failure to integrate IT into the wider policy and business change programmes (Chapter 5);
- A tendency to commission large, complex projects which struggle to adapt to changing circumstances (Chapter 6);
- Over-specifying security requirements (Chapter 7), and
- The lack of sufficient leadership and skills to manage IT within the Civil Service, and in particular the absence of an “intelligent customer” function in Departments (Chapter 8).

After suggesting solutions to these problems, we go on to outline our own ideas about how IT could be used to transform the way that government delivers its services (Chapter 9).

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29 Q 491

30 Q 491

31 An association for Information and Communications Technology (ICT) and related professionals in the United Kingdom public and third sectors, and suppliers to these sectors.

32 Ev 138

## 3 Lack of Information

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14. The data we needed to assess the current state of government IT proved hard to come by. To overcome this lack of information we sent a questionnaire to a number of Government Departments to secure more detail about their IT operations. The quality of the responses was variable.<sup>33</sup> This was not because Departments were unwilling to release this information, but because the data we requested did not exist. The Minister was open with us about the lack of information on this issue:

the quality of our central data is very poor. When we were renegotiating contracts last summer with the biggest suppliers, the central data was woefully inadequate, and we only got the data in the first instance by asking the suppliers themselves.<sup>34</sup>

The Government has already committed to improve the quality of the data held centrally.<sup>35</sup>

**15. Having access to up-to-date and accurate information about government IT is essential if the Government is to reform its IT successfully. Without it the Cabinet Office will be unable to monitor and enforce its programme of reforms. We were particularly shocked to learn that, on coming to office, the Minister had to ask the IT suppliers for information about the value of their contracts. We welcome the Government's commitment to rectifying this situation. We recommend that the Government work with the NAO to identify which data it needs to gather to monitor the progress of its reforms and outline in its response to this Report what information will be collected by departments and how frequently this data will be gathered.**

### Benchmarking

16. Our evidence shows that central government IT expenditure is less cost-effective than either the private sector or local government. Socitm's annual IT Trends survey indicates that local government secures better value for money than central government:

It is widely accepted that 3% is a benchmark of good practice in the private sector service industries for ICT spend as a percentage of total revenue expenditure. Socitm benchmarking in recent years has demonstrated that local government organisations spend consistently less than 3% [on ICT...] the average for the percentage of total revenue expenditure spent on ICT in central government departments is at least 5%.<sup>36</sup>

Other figures confirmed this. According to the UK Central Government IT Benchmarking Study conducted by Gartner<sup>37</sup> in 2005 median total cost of ownership per Government

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33 Available on-line at <http://www.parliament.uk/business/committees/committees-a-z/commons-select/public-administration-select-committee/>

34 Q 497 [Mr Maude]

35 Q 522

36 Ev 136

37 A leading information technology research and advisory company.

desktop was running at £2,300, when best practice was around £1,800 a year<sup>38</sup> The Network for the Post-Bureaucratic Age found that Departments were paying between £800 and £1,600 per annum for each computer. Other figures have shown that the Cabinet Office spent an average of £3,664 per desktop computer for each full-time employee.<sup>39</sup> At a time when the annual deficit is necessitating large reductions in public spending, such waste is unacceptable.

17. In addition to paying higher than average prices for some goods, Sir Phillip Green’s efficiency review of government spending also identified a high degree of price variation for the same item across different Departments.<sup>40</sup> The review identified the “*very poor*” quality of data as one of the reasons for the Government’s failure to achieve better value for money. Similarly Socitm pointed out that:

Benchmarking is an essential first step to service improvement. [...]The very fact that it is so difficult to obtain comparative data about ICT costs and performance for central government speaks volumes.<sup>41</sup>

18. When we raised these issues with Ian Watmore he agreed that the Government should do more to assess and compare its expenditure and performance, saying it was “*a really fertile area to explore*”.<sup>42</sup> However, he cautioned that there could be difficulties in attempting to secure benchmarking data for more complex projects, such as those that dealt with retirement pensions.<sup>43</sup>

19. The SMEs that contributed to our private seminar were unimpressed by this response, saying that benchmarking was routinely conducted amongst their private sector clients, even for complex bespoke projects. They did not agree that the nature of government presented any special challenges. They also alleged that a lack of benchmarking data enabled large systems integrators (SIs) to charge between 7 to 10 times more than their standard commercial costs.

**20. The poor benchmarking of central government’s IT expenditure is unacceptable. Without this information it will not be possible for the Government to advance effectively its cost reduction agenda. We recommend that the Government should investigate the claims of overcharging put to us and seek to identify reliable and comparable cost benchmarks, and collect accurate information from departments in order to compare with those benchmarks. Where possible bespoke projects should also be benchmarked, and the Government should trial ways of conducting benchmarking exercises for its more complex projects. The Government should use independent and specialist advisers and the NAO to assist with identifying objective benchmarking measurements.**

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38 Quoted in “G-Cloud will save £1.2 billion says John Suffolk, government CIO”, CIO, 19<sup>th</sup> October 2010. See <http://www.cio.co.uk/news/3244802/g-cloud-will-save-12-billion-says-john-suffolk-government-cio/>

39 “Cabinet Office paying £3,664 per desktop computer”, PC Pro 13 May 2011 <http://www.pcpro.co.uk/news/367354/cabinet-office-paying-3-664-per-desktop-computer>

40 <http://download.cabinetoffice.gov.uk/efficiency/sirphilipgreenreview.pdf>

41 Ev 137

42 Q 503

43 Q 531

## Transparency

21. Making detailed information on IT expenditure publicly available for scrutiny would enhance the Government's ability to generate savings, by allowing external challenge of its spending decisions. The Government has already taken steps to provide more information about IT projects and expenditure in general, especially through the work of the Transparency Board and its publication of contracts on Contract Finder.<sup>44</sup>

22. To realise the full benefits of transparency, this is not sufficient. More information should be made public by default. If the Government want external experts to suggest ways of how it can reduce expenditure, publication of the raw spend on IT reveals little. Wherever possible the Government should provide information about system architecture and design, about the hardware and software it uses, and the rate paid for commodities and services. This would enable external commentators and the incumbents' competitors to be in a better position to suggest ways in which existing systems and services could be delivered differently, as well as at a lower cost. In the longer term it would enable potential alternative suppliers to compete more effectively for blocks of work.

23. We recognise that there will be resistance to this approach. Governments have traditionally limited their ability to publish this information by signing commercial confidentiality agreements with companies. In future such agreements must be severely restricted to enable the Government to publish detailed contractual information about how much they are paying for different services and products within a contract. This should disadvantage nobody if all suppliers are treated the same. Our predecessor Committee examined the issue of commercial confidentiality in government contracts in 1998. It concluded that those bidding for government contracts should regard the need to be open about what they were providing to government as "*part of the cost of doing business with the public sector*" arguing that "*publishing details of successful tenders may encourage new suppliers to come forward with more competitive bids when contracts are renewed.*"<sup>45</sup>

24. More challenging will be the obstacles to using this information to achieve a better deal once a contract has been signed. The Government cannot easily cancel an existing contract if it subsequently receives ideas for a better or more cost effective approach. In some cases it will be necessary to wait until a contract comes up for renewal to realise these savings. Therefore the Government should seek to disaggregate its large contracts to reduce both their scope and length. The Government should also consider, as an interim measure, renegotiating terms with the incumbent, encouraging the company to reduce cost where other groups have provided evidence that it is possible to deliver outcomes in a more effective manner. It could also encourage the incumbent supplier to sub-contract the work to another company better able to reduce costs.

**25. Making data about expenditure available is not only a good discipline for departments; it also allows the Government to harness independent views on how to deliver services more cost effectively. The Government should publish in full all contracts. It should publish as much information as possible about how it runs its IT to**

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44 <http://www.contractsfinder.businesslink.gov.uk/>

45 Public Administration Select Committee, Third Report of the Session 1997-98, *Your Right to Know: The Government's Proposals for a Freedom of Information Act*, HC 398

**enable effective benchmarking and to allow external experts to suggest different and more economical and effective ways of running its systems. Feedback it receives based on this information should be used to challenge and hold to account current providers, and to renegotiate, disaggregate and re-compete existing contracts where it becomes clear that more cost effective delivery mechanisms are available.**

## 4 Suppliers

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### Large Systems Integrators

26. A recurring theme throughout our inquiry was the dominance of Government IT by a small number of large systems integrators (SIs).<sup>46</sup> Professor Margetts, Oxford Internet Institute, said that “*the concentration of the market in the UK [...] with a small number of suppliers getting the bulk of the contracts,*” was one of the features that contributed to successive governments’ poor performance in IT.<sup>47</sup> The NAO’s landscape review stated that “*at present 80% of central government IT work is undertaken by 18 suppliers*” and that this contrasted with 2004 when just 11 companies had undertaken 80% of this work.<sup>48</sup> Some of these contracts are extremely large and extend over a long period of time; the Aspire contract between HMRC and Capgemini covers a 13 year period and was originally valued at £2.8 billion.<sup>49</sup> This contract is a case study of what is wrong with the present procurement culture. Such a large contract is too complex to manage. The assessment of costs and benefits is opaque and it commits too much power and money to a single supplier.

27. There was widespread agreement among commentators, academics, the Government and the NAO that too much business went to too few companies, although we could not find a figure on which all groups would agree.<sup>50</sup> The Government ICT strategy described the current situation as an “*oligopoly*”,<sup>51</sup> a sentiment echoed by the Public Accounts Committee.<sup>52</sup>

28. Some SMEs that contributed to our inquiry went further. Martin Rice, CEO of Erudine, an IT SME, described the situation as a “*cartel*”.<sup>53</sup> Many of the SMEs who participated in our private seminar echoed this view, although they were unwilling to put these concerns on the record for fear of losing business. Some alleged that large suppliers intentionally vary the effort they put into their bids for government contracts based on whether they or their competitors have been successful in previous competitions. This suggestion was also made during public evidence sessions:

**Chair:** And does that mean they actually decide, “You go for that contract and we’ll go for this one”?

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46 A systems integrator is a person or company that specialises in bringing together component subsystems into a whole and ensuring that those subsystems function together.

47 Q 5

48 National Audit Office, *Information and Communications Technology in government: Landscape review*, para 2.8.

49 Computer Weekly, *HMRC revises Aspire contract with Capgemini*, 29 October 2009

50 See National Audit Office, *Information and Communications Technology in government: Landscape review*, HC 757, 14 February 2011, Q 392, and Q497 [Mr Watmore]

51 Cabinet Office, *Government ICT Strategy*, para 14

52 Public Accounts Committee, Fortieth Report of Session 2010-12, *Information and Communication Technology in Government*, HC 1050, para 10

53 Q 149

**Martin Rice:** I don't know if it is as much as that but I know that if they win one, they will bid for other ones knowing that they will lose some and they will not put as much effort into the bid.<sup>54</sup>

29. These accusations were strongly contested by representatives of large IT companies. Craig Wilson, Hewlett Packard, argued that:

Last year [...] there were over 700 contract award notices through public procurement in the UK. This is public procurement for these kinds of projects. Those awards were made to some 460 different companies, so that does not sound to me like a cartel.<sup>55</sup>

Intellect, the IT industry trade body, issued a similarly robust response saying that:

We were very concerned about the suggestion that the technology industry may operate a cartel with no supporting evidence or information being offered to the committee. Such a suggestion is not only inaccurate and misleading, but also potentially damaging to an industry that is a vital part of the UK economy.<sup>56</sup>

Nevertheless the same memorandum went on to say that the:

government's current go-to-market approach presents significant barriers to new entrants to the market, especially in terms of the change-averse culture in government and the preference given to suppliers with UK government experience.<sup>57</sup>

**30. Extremely serious allegations have been made about the behaviour of some large suppliers. There are clearly very strong feelings on both sides of this debate. We are not in a position to come to a firm verdict on this matter. Having described the situation as an “oligopoly” it is clear the Government is not happy with the current arrangements. Whether or not this constitutes a cartel in legal terms, it has led to the perverse situation in which the governments have wasted an obscene amount of public money. The Government should urgently commission an independent, external investigation to determine whether there is substance to these serious allegations of anti-competitive behaviour and collusion. The Government should also provide a trusted and independent escalation route to enable SMEs confidentially to raise allegations of malpractice.**

### **Supplier Lock-In: Legacy Systems and Intellectual Property Rights**

31. Government has a large number of older, legacy IT systems. The IfG Report noted that a large proportion of IT expenditure was devoted to maintaining and updating legacy systems and that *“developing interoperability between legacy systems and new services and applications is a complex and costly undertaking.”*<sup>58</sup> This reliance on legacy systems

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54 Q 152.

55 Q 397

56 Ev 134

57 Ev 135

58 Institute for Government, *System Error: Fixing the Flaws in Government IT*, March 2011, p22

represents a serious risk to government and can act as a barrier to expanding its supplier base. Only a limited number of companies have the expertise and the intellectual property rights to operate these systems so the government is locked in to dealing with this small group of companies.

32. We received suggestions from some SMEs that the major SIs used legacy systems as leverage to maintain their dominance. Some SMEs reported that there were solutions that could easily transfer data from old platforms, but that a combination of risk aversion and vested interests prevented these solutions being adopted.

33. Another area of lock-in to the current large suppliers arises as a consequence of SIs taking ownership of the intellectual property (IP) of the information systems they supply. As a result the government may not have rights over systems it has paid for. This can make it costly for government to migrate to newer and more cost-effective systems or suppliers.

**34. We recommend that the Government develop a strategy to either replace legacy systems with newer, less costly systems, or open up the intellectual property rights to competitors. Alternative means of dealing with legacy systems should be explored with the widest possible range of suppliers, including SMEs.**

### Widening the supplier base and the role of SMEs

35. The Government's analysis has shown that its large IT contractors are not performing well. A Cabinet Office review in September 2010 of the performance of the 14 largest IT suppliers found that none of them were performing to a "good" or "excellent" level, with average performance being a middling "satisfactory with some strengths". Some were performing significantly worse.<sup>59</sup>

36. At the Conservative Spring Conference in March 2011 the Prime Minister said that he wanted to "throw open the bidding process to every single business in our country" to provide "a massive boost for our small businesses".<sup>60</sup> The Government has announced a number of initiatives aimed at increasing the number of IT SMEs that undertake government work: including increasing the use of SMEs as subcontractors, increasing the number of SMEs that contract directly with government; reducing the size of contracts; and simplifying the procurement process.

37. However, despite these intentions, we received numerous reports from SMEs about poor treatment by both Government departments and large companies who sub-contract government work to SMEs. There is a strong suspicion that the Government will be diverted from its stated policy and that its objective will not be achieved.

### SMEs as subcontractors

38. The NAO considered the issue of SMEs being involved in the delivery of Government IT by subcontracting with large SIs and concluded that "it remain[ed] to be seen whether

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<sup>59</sup> Cabinet Office, *Common Assessment Framework CAF 9*, September 2010, version 1.4

<sup>60</sup> [http://www.conservatives.com/News/Speeches/2011/03/David\\_Cameron\\_Building\\_a\\_better\\_future.aspx](http://www.conservatives.com/News/Speeches/2011/03/David_Cameron_Building_a_better_future.aspx), 6 March 2011

*this approach will deliver the expected benefits of reduced costs and greater diversity and innovation in the supply chain.*<sup>61</sup> An article in Computer Weekly has criticised the use of subcontracting to improve SME involvement, arguing that when large companies were “given the power to hire and fire SMEs vying for government business or to cut everyone else out and do the work themselves” they inevitably chose the latter.<sup>62</sup> The Minister also pointed out that subcontracting could lead to the Government paying a high price as it had to cover the margin of both the sub and prime contractor.<sup>63</sup>

39. SMEs approached us informally to express concerns based on their own experiences of subcontracting. We heard of cases where SIs had involved SMEs in the bidding process so they could demonstrate innovation, only for the SME to be dropped after award of contract. In some of these cases SMEs felt that they have provided innovative ideas which had then been exploited by the larger SIs. We were also told by SMEs that by subcontracting with an SI they were barred from approaching government directly with ideas that might allow it to radically transform its services and reduce costs. This was because SIs did not want the Government to be provided with ideas that could result in them losing business, or having to reduce costs.

40. When we put these concerns to the Government we were told that their contracting arrangements did not stop subcontractors speaking directly to Departments.

Commercially, when we say “go through” it does not mean there is a wall between us and them [...] there are many suppliers who have innovations and ideas they want to share with us, and they can directly do that to us.<sup>64</sup>

However, during our private seminar with SMEs, we were told that this did not reflect their experiences. SMEs reported that they were instructed to approach the SI first in order to obtain permission to talk to a Department and that some Departments refused to deal with them directly.

41. The Government has established the Innovation Launch Pad programme which is intended to address this concern. This scheme should enable SMEs to pitch their business proposals for products and services they can provide to drive better value for money.<sup>65</sup> We welcome the scheme, but as a one-off exercise it does not address the fundamental concern that SMEs have no permanent route which enables them to bring innovative ideas directly to Government.

**42. We take seriously the concerns expressed by many SMEs that by speaking openly to the Government about innovative ideas they risk losing future business particularly if they are already in a sub-contracting relationship with an SI. The Government should reiterate its willingness to speak to SMEs directly, and commit to meeting SMEs in private where this is requested. We recommend that the Government establish a permanent mechanism that enables SMEs to bring innovative ideas directly to**

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61 National Audit Office, *Information and Communications Technology in government: Landscape review*, para 3.19

62 “End IT dinosaurs’ reign of terror, MPs told”, *Computer Weekly*, 23 February 2010

63 Q 497 [Mr Maude]

64 Q 324

65 <https://www.innovationlaunchpad.cabinetoffice.gov.uk/Page/Home>

**government in confidence, thereby minimising the risk of losing business with prime contractors.**

43. When SMEs subcontract with a large SI they do not always enjoy the same payment terms that the SI has secured with the Government. Craig Wilson, Hewlett Packard, explained that the reason for this was that "*the procurement process is decoupled from the contract piece.*"<sup>66</sup> He noted that the Government had been very active in pressing companies to pass on favourable payment terms to SMEs and remarked that large companies "*should not be taking advantage of the leadership*" which the Government was showing in this area.<sup>67</sup> Mr Wilson committed to taking up this issue and seeing if improvements could be made.<sup>68</sup>

**44. Where SMEs do subcontract with a large SI, the SI should ensure that it pays the SMEs on the same terms on which the Government pays the large SI. We welcome the Government's own efforts to improve the speed with which it pays its contractors, and we encourage it to ensure its prime contractors pass these benefits on to SMEs.**

### **Reducing contract size**

45. To increase the number of SMEs who secure business, the Government is reducing the size of its contracts. The intention is to create more opportunities of an appropriate size for SMEs to bid for. The Minister told us there was a presumption that no projects should have a lifetime value of more than £100 million,<sup>69</sup> although this is still large by international standards.<sup>70</sup> Reducing contract size has other positive benefits for the Government such as reducing procurement timescales, as contracts of a lower value are subject to simpler procurement procedures. It could simplify the process of benchmarking the quality, performance and pricing of existing contracts, by breaking information down into smaller units that are easier to analyse.

**46. We welcome plans for IT contracts to be broken up to allow for more effective competition and to increase opportunities for SMEs to win Government work. We urge the Government to create more contracting opportunities worth much less than £100 million.**

### **Aggregated Demand versus Aggregated Supply**

47. Following the Green Review the Government has been moving to act as a single buyer to obtain economies of scale. Using its collective purchasing power has considerable merit for government when purchasing commodity products or services (such as desktop computers). Doing this will also support efforts to commoditise government IT procurement, which was a central recommendation of the IfG's IT Report.<sup>71</sup>

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66 Q 424

67 Q 424

68 Q 425

69 Q 479

70 Q 190 [Mr Rice]

71 IfG, *System Error*, p 11

48. This approach can be counter-productive. The effect of demand aggregation can be to aggregate supply, further concentrating contracts in the hands of a few large SIs. Departments are following instructions from the Cabinet Office Efficiency and Reform Group (ERG) to switch away from their existing direct SME contracting arrangements in favour of centralised procurement models. This would mean that SMEs would become tier 2 suppliers behind selected large suppliers, preventing SMEs from contracting directly with departments. The Cabinet Office has confirmed that:

Spend is being channelled into three current channels: a) existing framework contracts where spot buying is undertaken centrally (this is known as Home Office Cix), b) department-specific arrangements based on their unique needs (such as FCO’s arrangements with Hays) and c) an existing contract with Capita, owned and managed by DWP and available to all government departments.<sup>72</sup>

49. It is unclear to us how narrowing the supply channels will create a more open and competitive market. The nature of this supply-side aggregation of SMEs under large contracts appears to be in direct contradiction of the policy articulated by the Minister when he indicated his desire to encourage Departments to secure more direct contracting with SMEs.<sup>73</sup>

**50. We welcome the efforts the Government is making to reduce the cost it pays for IT. However the Government’s plan to act as a single buyer appears to be leading to a consolidation towards a few large suppliers. This could act against its intention to reduce the size of contracts and increase the number of SMEs that it contracts with directly. We are particularly concerned with plans to move SME suppliers to an “arm’s length” relationship with Government. The Government needs to explain how it will reconcile its intentions to act as a single buyer, secure value for money and reduce contract size to create more opportunities for SMEs.**

### **Procurement**

51. SMEs also suffer as a result of the complexity and cost imposed by the public procurement regime. Janet Grossman, Chair of Intellect Public Sector Council described the challenges the system poses, especially for smaller companies:

as a small and medium player with innovation, the cost of entering a procurement cycle can be life threatening [...] if you are a small innovator and you want to do something radical or even a bit different, it can be very hard for you.<sup>74</sup>

David Clarke, Chair of BCS,<sup>75</sup> described the procurement process as the “*root cause*” of many of the problems facing Government IT, arguing that if this issue was not resolved “*nothing else will be fixed*”.<sup>76</sup>

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72 Ev 154

73 Q 520

74 Q 146 [Ms Grossman]

75 Formerly the British Computer Society

76 Q 146 [Mr Clarke]

52. Government procurement for public works, goods and services is subject to EU regulation to enable the operation of a single market. The procurement procedure used varies depending on the value of the contract; the higher the value of the contract the more rigorous the process which must be observed.<sup>77</sup> There are a number of different procurement procedures which the contracting authority can use (open, restricted, competitive dialogue and negotiated). The choice of procedure determines both the number of stages the process will involve as well as the minimum length of those stages.

53. Procurements that go through the most rigorous process take an average of 77 weeks to complete in the UK. This length means that many small businesses cannot commit staff to work on a bid for the duration of the procurement process. The length of the process also makes it difficult for Government information systems to keep up-to-date; as by the time a procurement cycle has finished both the policy and available technology may have changed. Janet Grossman argued that the cost and effort involved in running a procurement process encouraged departments to tender for large contracts to decrease the frequency with which they have to bear these costs.<sup>78</sup>

54. While EU procurement law was often seen as a barrier to effective procurement the IfG’s System Error report noted that the timescales imposed by the EU Directives account for less than 10% of the average 77 week procurement period.<sup>79</sup> Similarly, Olswang LLP, a firm specialising in business law, argued that:

the regulatory regime is not as inflexible from a commercial perspective as is commonly made out by the press and others. More often than not, restrictions arise because those who interpret the rules in central government either adopt an overly restrictive approach – for fear of European Commission infringement proceedings against the UK – or simply do not provide guidance on an issue and thus leave small, less expert, individual public authorities to find their own way through the Regulations.<sup>80</sup>

55. However there is always a risk of infraction proceedings if any potential contractor can prove that it has been materially disadvantaged by having been treated differently from the winner. This makes it difficult for the Government to have too many bidders. We also heard evidence to suggest that the current procurement regime mitigates against “agile development.”<sup>81</sup>

56. The Minister provided us with a similar analysis, arguing that the problem was not caused by the way the EU directives have been implemented, saying that he was “*reasonably confident [...] that we have not gold-plated the European Directives in our own law.*”<sup>82</sup> Instead he believed the problem lay with the amount of guidance issued:

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77 [http://www.ogc.gov.uk/procurement\\_policy\\_and\\_application\\_of\\_eu\\_rules\\_eu\\_procurement\\_thresholds\\_.asp](http://www.ogc.gov.uk/procurement_policy_and_application_of_eu_rules_eu_procurement_thresholds_.asp)

78 Q 166 [Mr Grossman]

79 IfG, *System Error*, p 68

80 Ev w128

81 See Chapter 6.

82 Q 540

What we have done in terms of the guidance that goes out is massively embellished this. There are 6,000 pages of guidance that went out from the Office of Government Commerce on big IT procurements.<sup>83</sup>

He also stated that he was pressing for deregulation of the contracting process and a change to the European Directive.<sup>84</sup> The Government has already taken steps to simplify procurement and has issued two procurement notes which have implemented some reforms.<sup>85</sup>

**57. The way procurement currently operates favours large companies that can afford to commit the staff and resources to navigate the convoluted processes. It also encourages the Government to confine discussions to as few potential contractors as possible. If the Government is serious about increasing the amount of work it awards to SMEs it must simplify the existing processes. We welcome the Minister’s assurance that the Government is simultaneously seeking to change the current European Directive regarding procurement and taking steps to simplify official guidance that surrounds the procurement process. We ask the Government to update us on the progress it is making on both initiatives in its response to this Report.**

### ***Other SME unfriendly practices***

58. We also heard that the Government’s standard contracts discriminate against SMEs, since they include complex obligations regarding unlimited liability, limiting the percentage of business that a government contract would represent in terms of annual turnover, and length of trading history. It was suggested that standard government contracts should be designed for SMEs by default, with SIs left to negotiate exceptional arrangements for more complex work.<sup>86</sup>

59. Another bureaucratic burden is that similar questions are often asked during the pre-qualification stage of procurement exercises: requiring companies to provide three years’ worth of accounts, and detail how much of a company’s business the contract would represent. Whilst the intention is to prove a company is financially viable and to ensure that the company is not overly dependent on any other single contract, it can also have the effect of eliminating SMEs from a competition. The Government has already committed to removing pre-qualifying questionnaires from the majority of its tenders.<sup>87</sup>

**60. We recommend that the Government investigate the practices which seem unintentionally to disadvantage SMEs. When contracts and pre-qualifying questions are drawn up thought must be given to what impact they could have on the eligibility and ability of SMEs to apply for work, and whether separate provision should be made for SMEs. We believe it would be preferable if the default procurement and contractual**

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83 Q 540

84 Q 540

85 Ev 120

86 SME seminar

87 Ev 122

approach were designed for SMEs, with more detailed and bespoke negotiation being required only for more complex and large scale procurements.

### *Consequence of greater use of SMEs*

61. Increasing the use of SMEs will place extra pressure on departments. The management of smaller organisations is currently outsourced to the large SIs. For example the Aspire framework provides HMRC with access to over 200 IT suppliers.<sup>88</sup> Mr Pavitt, HMRC, Chief Information Officer (CIO) said that "*managing those individually would be quite a heavy bandwidth for a Government department*".<sup>89</sup>

62. It is not clear that Departments are willing to take on the additional work that contracting directly with SMEs implies even where this could yield significant savings. Erudine, an IT SME, told us that its mechanism for migrating a legacy system onto a more modern, cheaper platform, which could generate potential savings of around £4m a year was rejected by a senior DWP IT official who gave the following explanation:

we have as you know an 'interest' in having SMEs present and working in the department for good political reasons. So you have other value to us [... is] purely political. You guys need to be realistic. I will be very candid with you [...] it is a huge amount of bother to deal with smaller organisations. Huge. And we wouldn't necessarily do that because it doesn't make our lives simpler.<sup>90</sup>

63. The DWP said that it did not comment on anonymous and unattributable comments but that the views expressed did not represent those of the Department and that the Department supported the use of SMEs in the delivery of its IT. It reported that in 2009/10 SMEs made up 29.3% of their supplier base, either as a prime contractor or a subcontractor to another supplier. We welcome this assurance from the Department but this account does suggest that attitudes at official level risk undermining ministers' ambitions to increase the number of SMEs Government contracts with directly.

**64. The Government presumption in favour of smaller, disaggregated contracts should lead to more direct contracting with SMEs. This will require Departments to invest more effort in managing relationships directly with SMEs meaning that more systems integration work is performed in-house, but this will yield longer term benefits through increased innovation and lower costs. Ministers need to ensure their officials have the skills, capacity and above all the willingness to deliver on ministerial commitments to SMEs.**

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88 Q 323

89 Ibid

90 Extract from an e-mail that Erudine provided in a private note to our inquiry.

## 5 Integrating IT

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65. A common theme emerging from our evidence is that IT must be integrated into the development of all new policy and initiatives. It was suggested previous IT failures had been caused by a lack of linkage with the business of government. As the Open Rights Group put it:

You don't want a policy on shovels when your actual problem is gardening - you need a policy on gardening. Therefore, the question isn't how to use IT the question is "How do we manage this problem, and does IT fit into this case".<sup>91</sup>

66. A number of witnesses argued that it was wrong to think of large projects which involved IT as “IT projects” but that they should instead be regarded as “IT-enabled business change programmes”. Glyn Evans, Vice President of Soctim argued that:

It sometimes seems that every other year we have some inquiry into why IT projects fail, whereas perhaps a more meaningful question is why do we try and run business change projects as if they were IT projects [...] The danger of focusing, in effect, on the IT bit of change is that you don't do well any of the other elements. In such circumstances it's amazing that any IT projects actually succeed.<sup>92</sup>

ThinkGov, an IT consultancy, echoed this sentiment, “*there are very few Information Technology failures, but plenty of examples where a public sector business change project using IT has been mismanaged.*”<sup>93</sup> Intellect commented that the Government should focus on establishing departments’ business needs first and then deciding what technology to use<sup>94</sup> and that currently “*technology tends to be considered separately from business change.*”<sup>95</sup> Westminster Council reinforced this point, arguing that “*too often IT is viewed as a dark art or worse still something that will just deliver without needing to engage with the deliverers.*”<sup>96</sup>

67. Sirius argued that IT is too often an “*afterthought*” with policy development and legislation both being conducted in “*isolation to the technical environment or technological implications.*”<sup>97</sup> One company, commenting on IT management in HMRC, said that “*the IT part of HMRC effectively dictates HMRC strategy because IT seems to sit at the heart of everything. The IT tail wags the business dog.*”<sup>98</sup>

68. Hewlett Packard highlighted the importance of integrating IT at the start of policy development.

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91 Ev 130

92 Ev 139

93 Ev w34

94 Ev 113

95 Ev 114

96 Ev 89

97 Ev w45

98 Note submitted in confidence to the Committee.

IT is now on the critical path of almost any significant policy initiative. It is not sensible for policy to be developed without considering the way in which IT might support its delivery [...] In particular, it is important that IT is not treated as an afterthought which comes at the end of the policy development process.<sup>99</sup>

We suggested to the Government that the technology that would deliver any new policy should be considered early on in the policy development process and given the same importance attributed to the legal or financial implications of a policy. Ian Watmore was very receptive to this idea saying that:

I absolutely think that delivery of the policy, in all its guises, should be thought about right at the beginning when you are making policy, and delivery includes technology, organisational change, people and the other things as well. I absolutely agree.<sup>100</sup>

**69. Government should ensure that the IT implications of new initiatives are properly considered near the start of the policy process on a par with the legal and financial considerations. This should simply be an extension of thinking about how the policy will be implemented in practice. We recommend that analysis of these issues be included in all policy submissions to Ministers.**

## Over-specifying

70. Another flaw that seems to haunt government's approach to IT is over-specifying technical solutions to problems. Microsoft argued that there was a tendency towards:

Long, detailed and very prescriptive definitions of every aspect of the system to be delivered. This is not limited to the functions that the system must deliver, but also specifies many aspects of how the system must do it, often down to the specific technology. Not only does this make the bidding process more complex and expensive, but also eliminates any opportunity for innovative solutions.<sup>101</sup>

71. Similarly a number of SMEs believed that there was a mindset of getting things done rather than getting things right: "*Big problems require big solutions*" was how one SME described Whitehall's attitude. Little consideration was given to how public services could be better designed and delivered, and the role of modern information systems in helping to make that happen. Procurement appears aimed solely at dictating solutions, "*we know what the solution is, come and deliver it*", rather than setting out desired outcomes and then letting an open market provide potential solutions.<sup>102</sup>

72. A number of useful suggestions were made as to how combat government's tendency to over-specify. One of these was that the Government should spend much more time thinking about what it wants to achieve before starting the formal procurement process itself. Sureyya Cansoy, Intellect's director of public services, argued:

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99 Ev 105

100 Q 557

101 Ev w145

102 SME Seminar

there is not enough preparation on procurement before a Government department or agency goes out to procure and publishes its contract notice. They don't spend enough time understanding the art of the possible, they don't spend enough time thinking about the business outcomes that the project or programme is trying to achieve<sup>103</sup>

Once the formal procurement process has begun government is, understandably, unwilling to talk to individual companies for fear of having the eventual contracting decision challenged.

73. One mechanism government uses to talk to the IT industry at an early stage in a systems development is Intellect's "Concept Viability" scheme which provides suppliers with the opportunity to give government departments honest feedback on whether the project or programme is designed well, whether it would work, whether the commercial arrangements are the most appropriate ones, and whether their budgets are realistic before a contract notice is issued.<sup>104</sup> This scheme has received positive reviews from the National Audit Office (NAO)<sup>105</sup> although some SMEs were less positive arguing that they struggled to get access to the scheme.<sup>106</sup>

74. An alternative model, used by the oil and gas industries for providing a conduit between technology innovators and industry, was recommended to us. The Industry Technology Facilitator (ITF)<sup>107</sup> enables the oil and gas industries to tap into supplier-side innovation and deployment. It runs as an independent organisation outside of the normal commercial and supply chain interests and enables an informed dialogue to take place, something that appears to be lacking in government's current approach to IT.<sup>108</sup>

**75. We agree with our witnesses who argued that there was no such thing as an IT project – only policy initiatives and business programmes that use technology in their delivery. One of the primary reasons for these project failures is a lack of focus on the outcome and how the IT project fits into the wider benefits the Government wants to achieve. The Government must stop departments specifying IT solutions and ensure they specify what outcomes they wish to achieve, within the broad technical parameters to ensure interoperability. The market should then be able to provide a range of possible IT solutions.**

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103 Q 190 [Ms Cansoy]

104 Q 174 [Ms Cansoy]

105 National Audit Office, *Delivering Successful IT-enabled business change*, para 3.24

106 SME seminar.

107 See <http://www.oil-itf.com/index>

108 Ev w147-148

## 6 Agile Development

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76. Another problem with government IT identified during our inquiry lies in the way in which it develops new systems. The Institute for Government (IfG) report *System Error* discussed this issue at length, contrasting how the Government had traditionally run projects using “waterfall development”- with their preferred approach “agile development”.

### Waterfall versus Agile Development

77. In the waterfall model the design goes through a series of sequential phases with each phase being completed before moving onto the next. The main argument advanced in favour of this model is that time spent up front making sure requirements and design are correct saves time and effort later. Therefore each phase should be completed before proceeding to the next phase.

78. The IfG argues that this model would be successful “*as long as the plan will not need to change mid-way through*”.<sup>109</sup> However, in the vast majority of cases, the complex nature of the problems that Government is faced with means that this criterion is rarely met. New priorities, policies and initiatives, as well as new technological options, often lead to changes being required both during development and after implementation.

79. The waterfall approach encourages users to try and define all their requirements in as much detail as possible during the initial specification stage, due to the high costs of making changes at later stages in the process. This can therefore result in unnecessary ‘gold-plating’ of requirements as the initial specifications are seen as the only opportunity to request functionality.

80. In contrast agile development is based on an iterative and incremental process, where requirements and solutions continuously evolve, this is the way many businesses acquire IT. Rather than specifying rigid system requirements and then attempting to design the whole programme at once, the design team will produce a partially complete design which goes through a number of iterations. The design is also broken up into a number of parts (modules) which can be worked on and changed independently. The design, often in the form of a working although incomplete prototype, is shown to the customer at the end of each iteration allowing them to experience, comment and feedback on the product; thereby ensuring much greater integration of the business into the design of the systems.

81. The figure below, from the IfG Report, summarises the main difference between the two approaches:

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109 IfG, *System Error*,p28

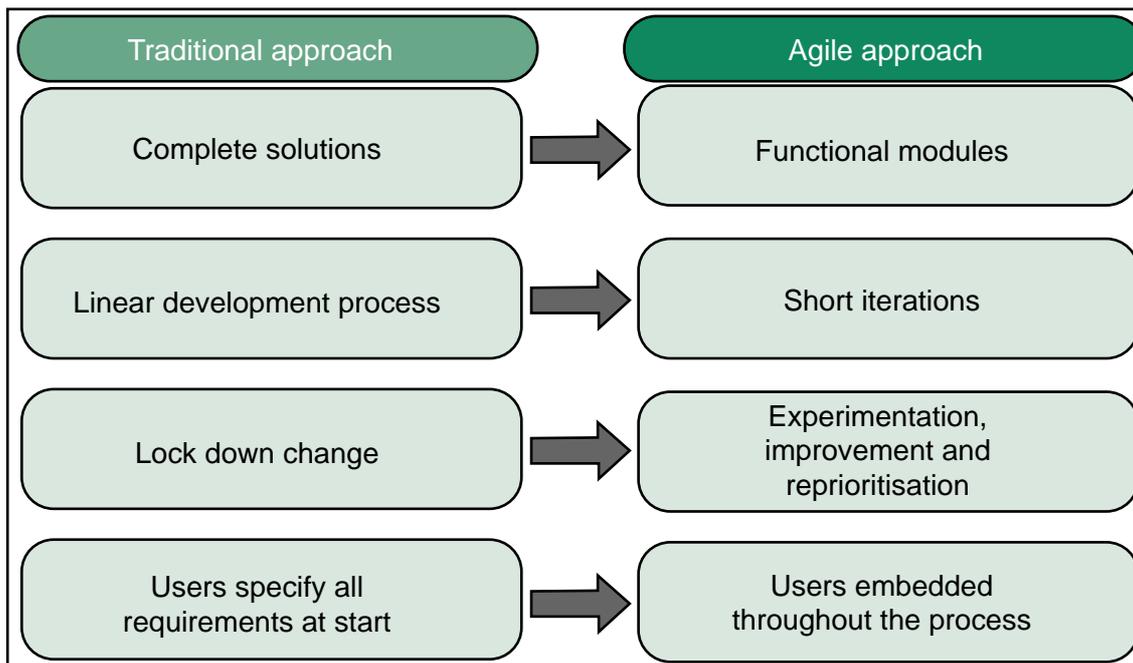


Figure 1: Waterfall v. Agile development approach. Source: IfG: System Error, p32

82. The IfG recently facilitated a project using agile development techniques that developed software to help the DWP and the Metropolitan Police Service share data on suspected fraudsters. Their report identifies the following benefits:

- Reducing time-consuming decision-making processes;
- Implementing those parts of the system that are ready, without having to wait for the complete system to be finished;
- Encouraging SME involvement, by breaking programmes up into smaller modules; and
- Greater flexibility by being better able to deal with changes in system requirements.<sup>110</sup>

## Challenges to using Agile

83. The Government has responded positively to the IfG Report, and its ICT Strategy contains a commitment to apply agile methods to ICT procurement and delivery.<sup>111</sup> Mark Holden, HMRC, told us that there was not much in the way of barriers to the greater use of agile development. However, he did say that some types of projects – particularly those which aimed to develop or enhance legacy systems – might not be suitable environments

110 IfG, *System Error*, p 47

111 Cabinet Office, Government ICT Strategy, para 27

for using this methodology.<sup>112</sup> Sir Ian Magee, IfG, made a similar point saying that the Institute's report was not claiming that Agile would be suitable for every project.<sup>113</sup>

84. The IfG identified three main barriers to using agile working methods in Government:

- Governance issues. The current approval process looks for a detailed specification as a sign that a project has been properly thought out, but such specifications are not normally produced for Agile development as the specification is expected to change as the project develops;
- Commercial processes. A preference for fixed price contracts to deliver a particular solution reinforces the tendency for both sides to demand a high level of detail up-front;
- Cultural issues. A reluctance to delegate and assign high levels of responsibility at lower levels of the organisation, in addition to a more general wariness of change from inside Government.<sup>114</sup>

In addition, greater use of agile development is likely to necessitate behaviour changes within Government. As agile methodology requires increased participation from the business to provide feedback on different iterations of the solution, departments will need to release their staff, particularly senior staff with overall responsibility of the project, to allow them to participate in these exercises.

85. Alistair Maughan, partner and head of Technology Transactions at an international law firm, has argued that the fact that agile projects do not have a fixed cost at the outset combined with the hierarchical nature of civil service management structures meant that it would not be able to be successfully used in government.<sup>115</sup>

86. We do not think that any of these challenges are insurmountable. For example the theoretical ability to acquire a "fixed price" under the current model has not prevented projects being delivered late or additional costs being incurred. However, it is clear that moving towards a greater use of agile development will require changes in the way government commissions and manages projects. For example, the "*System Error*" report identified the need to develop different governance and oversight mechanisms for agile projects; arguing that the current Gateway Reviews are unsuitable both due to the length of the review process and the fact that agile projects lack obvious Gateway points at which to conduct these reviews.<sup>116</sup>

**87. Agile development is a powerful tool to enhance the effectiveness and improve the outcomes of Government change programmes. We welcome the Government's enthusiasm and willingness to experiment with this method. The Government should be careful not to dismiss the very real barriers in the existing system that could prevent**

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112 Q 334

113 Q 97

114 IfG, *System Error*, p 53-54

115 "Agile will fail Gov IT, says corporate lawyer", *Computer Weekly*, April 26 2011

116 IfG, *System Error*, p 72

**the wider use of agile development. We therefore invite the Government to outline in its response how it will adapt its existing programme model to enable agile development to work as envisaged and how new flagship programmes will utilise improved approaches to help ensure their successful delivery.**

### **Agile and procurement**

88. We also heard specific concerns about the compatibility of agile development with current procurement guidelines. Alistair Maughan argued that under EU procurement law the Government is required to compare bidders “*on a like-for-like basis, and deciding on best value for money*” but that “*Agile can't give you a clear specification of outputs up-front. Nor can it give a definitive up-front price*” that is required to make Government to make a like-for like comparison.<sup>117</sup> Similarly the IfG noted that:

The procurement process can undermine agile projects in two ways. First, when detailed specifications are used it can restrict the freedom to innovate. Second, the long timelines associated with the procurement process can restrict the ability to deliver production ready solutions rapidly.<sup>118</sup>

89. Kelvin Prescott, Newbury Management Consultants and Susan Atkinson, Legal Director, Gallenalliance Solicitors suggested a number of changes which they believed would help overcome these problems including:

- A different contract structure which breaks projects down in several phases, with parties only committed initially to the first stages. This would allow the customer to adapt the process as development continues.
- The creation of an agile procurement strategy based on a “*fail early, fail fast*” principle that provides the ability to terminate a project when failure looks likely and that provides access to a number of suppliers than can be rapidly appointed to projects, or parts of project.
- A number of specific changes to the current Procurement Contract Regulations.<sup>119</sup>

**90. The Government should examine how it can remove barriers to agile development as an integrated part of its wider efforts to reform the procurement process and increase the role of SMEs. The Government will have to bear in mind the need to facilitate agile development as it renegotiates the EU procurement directive and revises the associated guidance.**

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117 “Agile will fail GovIT, says corporate lawyer”, *Computer Weekly*, April 26 2011

118 IfG, *System Error: Fixing the Flaws in Government IT*, March 2011 p 68

119 Ev w46-154

## 7 Security and privacy

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91. We heard during our inquiry that government's special security requirements increase commercial and technical complexity, thereby increasing cost and reducing competition. The Government argued that its status meant that it was more likely to be the subject of hostile attack than private sector organisations.<sup>120</sup>

92. IBM highlighted security as one area where "gold-plating" of specifications often takes place:

The security arena is often an area where excessive constraints may distance the programme from the original operational need.<sup>121</sup>

93. Similarly one SME argued that government needs to be more realistic about its security needs and "*not ask for American Defence Department standards for systems that no one is going to want to hack.*"<sup>122</sup> Another described it as being equivalent to using "*a sledgehammer to crack a nut.*"<sup>123</sup> Bracknell Forest Council said that the current arrangements were "*too draconian and seen as a hindrance by most outside of the security industry.*"<sup>124</sup> We were also told that "*overly prescriptive security conditions limit adoption of newer technologies and limit data exchange.*"<sup>125</sup> Soctim concurred with this view.<sup>126</sup>

94. Logica argued that:

Security issues also pose a challenge to the co-ordination of technology policy. Different government departments can interpret security policies in a way that can mean that solutions agreed by one department are not accepted by another.<sup>127</sup>

95. However, we also heard some encouraging evidence from SMEs who had spoken with CESG<sup>128</sup> and believed they were in the process of adopting a more pragmatic approach. The BCS were also less critical of the current arrangements saying that the "*Government's approach to information security and information assurance has improved significantly over the last decade and policy is more pragmatic and generally understood by users*". However, they also raised concerns about the lack of a holistic approach to data security.<sup>129</sup>

96. A number of organisations expressed concerns about the Government's record in guarding the personal information it holds, with particular reference to incidents where

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120 Q 516

121 Ev w131

122 Ev w3

123 Ev w4

124 Ev w13

125 Ev 91

126 Ev 102

127 Ev w50

128 CESG is the Information Assurance (IA) arm of GCHQ. It is the UK Government's National Technical Authority for IA, responsible for "enabling secure and trusted knowledge sharing"

129 Ev 96

disks or laptops had been lost.<sup>130</sup> The Information Commissioner emphasised the importance of Privacy Impact Assessments (PIAs), which assess the data protection implications of new projects, stating that these needed to be “*more than mere paper exercises.*”<sup>131</sup> The BCS recommended that Government should have “*...broader and deeper adoption of the ‘Privacy by Design’ principles espoused by the Information Commissioner’s Office*”.<sup>132</sup>

97. The over-classification of data was another problem highlighted. Protectively marking information when not required has enormous cost implications and prevents Government taking advantage of commodity products and services, including the adoption of commercial cloud services.

98. Following a number of high profile data losses by departments a number of reviews were undertaken examining and strengthening in the Government’s information assurance capability.<sup>133</sup> In its guidance the Government recognises that over classifying data has negative consequences:

Applying too high a protective marking can inhibit access, lead to unnecessary and expensive protective controls, and impair the efficiency of an organisation’s business.<sup>134</sup>

**99. Governments have learnt that they must secure both personal data and data relating to national security, whilst also guarding against gold-plating its security requirements – which can greatly inflate costs without delivering any tangible benefits. Over-classifying routine administrative and operational information causes unnecessary technology and operational costs, and prevents the public sector taking advantage of the economies and efficiencies of commodity software and new opportunities. It also acts as a further barrier to more effective use of SMEs in the supply of IT goods and services. Government must do more to demonstrate how a risk-based approach is helping achieve a better balance in information assurance.**

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130 Ev w43, Ev 98

131 Ev w43

132 Ev 98

133 See for example Cabinet Office, *Data Handling Procedures in Government: Final Report*, June 2008

134 [http://www.cabinetoffice.gov.uk/sites/default/files/resources/hmq-security-policy\\_0\\_0.pdf](http://www.cabinetoffice.gov.uk/sites/default/files/resources/hmq-security-policy_0_0.pdf) para 19

## 8 Skills and leadership

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100. Many of the complaints we heard about Government IT can be traced back to a lack of skills in Government; whether these are the skills needed to manage procurement, understand new opportunities and innovative approaches or to integrate IT into the policymaking process. All our other recommendations will be futile unless the Government addresses the lack of skills and leadership from senior management necessary for the effective procurement and use of IT.

### An intelligent customer?

101. Discussions about procurement often focus on the lack of an "intelligent customer" function within Government to enable it to engage effectively with external suppliers and stakeholders. The Government's inability to act as an intelligent customer seems to be a consequence of its decision to outsource a large amount of its IT operations to the private sector. The NAO noted that many IT contracts:

are for a government body's whole ICT service, meaning that civil service staff, knowledge, skills, networks and infrastructure have been transferred to a supplier. This has effectively locked government into specific contracts for the long-term.<sup>135</sup>

102. Computer Weekly argued that this has created a situation where "*government give contractors the job of telling it what it needs to buy from them.*"<sup>136</sup> Mark Thompson of Judge Business School, University of Cambridge argued that "*there is usually really lousy management of the contract once it is in place,*"<sup>137</sup> while Professor Willcocks, LSE, has argued that the challenges facing the NHS IT programmes have been in part caused by a lack of internal capability to manage large contracts.<sup>138</sup> One witness, Dr Leonard Anderson of Logicterm Limited, believed that departments must have the necessary skills or employ an independent programme management consultant to ensure that the client and suppliers can work properly in partnership. He concluded that "*complete outsourcing is a recipe for rip-offs*".<sup>139</sup>

103. Professor Margetts, Oxford Internet Institute, provided another example from HMRC:

HMRC took a decision a long time ago, in the early 1990s, to outsource everything—and I mean everything. All the expertise went over to the supplier, and a tiny proportion was spent on managing the contract compared with what the private sector would have done. We are seeing the consequences of that now.<sup>140</sup>

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135 National Audit Office, Information and Communications Technology in government, p 17

136 End IT dinosaurs' reign of terror, MPs told, *Computer Weekly*, 23 February 2010

137 Ev w142

138 Ibid

139 Ev w40

140 Q 31 [Professor Margetts]

104. Similarly, the BCS stated that “*departments generally do not have the overall IT skills capability or capacity to meet their sometimes ambitious portfolios of change, and have often become over-dependent on the external marketplace.*” It argued that this situation has been exacerbated by “*the high degree of outsourcing of IT services, which makes it more difficult to develop and maintain the required level of client-side IT skills*”.<sup>141</sup> David Wilde, the CIO of Westminster Council identified one of the key challenges government faced was striking a balance between which functions to outsource while still retaining the skills necessary to manage those services effectively.<sup>142</sup>

105. In their evidence Hewlett Packard identified several key functions which they believe needed to be retained in-house. They were:

- Chief Information Officer;
- Development of Information Systems (IS) and IT Strategy and Architecture;
- Security and Information Assurance Policy;
- Business Analysis and Business Relationship Management;
- Procurement and Contract Management, and
- Business Change and Programme Management.

According to Hewlett Packard the development of IS and IT Strategy and Architecture, and Contract and Procurement Management roles were often filled by staff on fixed-term contracts or external advisers. They described this as “*less than ideal*” as it prevented the development of a professional cadre of staff with these skills and undermined long-term accountability for the delivery of these functions.”<sup>143</sup>

106. The Minister agreed that government had traditionally struggled to outsource IT functions successfully:

I have a sense that, when you outsource IT in the quite comprehensive way that some big bits of Government have, what tends to happen is either an assumption that we have outsourced, so that is fine, complete and we do not need to worry about it, or we retain a massive amount of in-house capability to monitor and man-mark what is being done by the outsourced provider.

One provider told us that they had 2,500 people working on the outsourced provision but there were 4,000 people in-house monitoring them, which is insane. What you need is to have a small but very capable in-house CIO-type capability, which can scan the market and see what is available.<sup>144</sup>

107. Ian Watmore agreed with this analysis arguing that when outsourcing governments had “*either abdicated, giving it all away, or we have retained an army, which has just added*

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141 Ev 97

142 Q 295

143 Ev 106-107

144 Q 541

to cost and bureaucracy on both sides.” Instead he argued that the government needed a “smaller intelligent group that can procure and manage a contract in partnership, and hold them to account when they need to, but help them fix things when they need to as well.” He said that this was a difficult skill set to find but that the current Government was “buying it in”.<sup>145</sup>

**108. Managing suppliers is as important as deciding who to contract with in the first place. To be able to perform both of these functions government needs the capacity to act as an intelligent customer. This involves having a small group within government with the skills to both procure and manage a contract in partnership with its suppliers. Currently the Government seems unable to strike the right balance between allowing contractors enough freedom to operate and ensuring there are appropriate controls and monitoring in-house. The Government needs to develop the skills necessary to fill this gap. This should involve recruiting more IT professionals with experience of the SME sector to help deliver the objective of greater SME involvement.**

### **IT Profession in Government**

109. David Clarke, BCS, expressed concern that the tendency to outsource government IT functions was undermining the IT profession within Government.

One of the things that worry me a lot is the lack of career paths now in this profession in Government. So much is outsourced; that work used to be the career paths of people coming up to become those excellent, knowledgeable people at the top of the tree. By outsourcing a lot of the stuff that you do, you don't have that career path within Government.<sup>146</sup>

110. The Government Chief Information Officer is responsible for the IT profession within government. The first strategy for developing IT skills was out in 2005<sup>147</sup> and focused on the *Skills Framework for the Information Age* which was developed with the IT industry. The NAO found that there had been “no clear mandate to implement” this strategy.<sup>148</sup>

111. The Government is also developing its own IT talent through the Technology in Business Stream of the Civil Service Fast Stream Programme. Established in 2007-08, this programme is designed to develop high calibre government IT employees. It has placed 47 staff in 10 departments. The Technology in Business Fast Stream has been the most successful of all the Civil Service Programmes, with more applications per place, the highest growth in the number of applications.<sup>149</sup> The BCS commented positively on this scheme, but said that it was producing “nowhere near enough” people and could benefit from expansion.<sup>150</sup>

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145 Q 542

146 Q 193 [Mr Clarke]

147 Cabinet Office, *Transformational Government – enabled by technology*, Cm6683, November 2005.

148 National Audit Office, *Information and Communications Technology in government*, p18

149 Ibid

150 Qq 196-199

112. **The strategic importance of Government developing and maintaining an intelligent customer function has been repeatedly highlighted throughout our inquiry. We are very supportive of the Government’s efforts to develop its own talent in-house through the Technology in Business Fast Stream. The Government should use this scheme as a basis for a strengthened IT Profession within Government. It must ensure that it aligns the training curriculum with its ICT Strategy and wider developments in the world of technology outside of Government.**

## Spread of skills

113. Mr Clarke, BCS, emphasised that the skills required by Government included the ability to manage business change programmes and understand the role IT plays in those programmes. These are not technical skills, but competencies that all senior officials including those on Departmental boards should possess; having an understanding of technology policy will enable better integration of technology into policy making and the operation of public services. This will be increasingly important as the Government seeks to deliver more services on a “*digital by default*” basis.

114. When we put concerns regarding the quality of existing skills to the Government the response we received was mixed. At official level the prevailing view was that the Government had the skills it needed. Phil Pavitt, CIO HMRC, told us that the description of the Government as lacking in skills was not one he recognised.<sup>151</sup> This view was echoed by Craig Wilson, Hewlett Packard, who told us the “*Government has some excellent skills in terms of procurement and leadership now [...]*”.<sup>152</sup> However, the Minister was more sceptical commenting that the Government was “*not nearly as good as [it] should be.*”<sup>153</sup>

115. **Knowledge about how modern information systems and technology can be used to improve public services should not be restricted to the IT profession – this knowledge is essential to the work of all senior civil servants responsible for designing and delivering policy. The Government should explore how departmental boards and senior officials can best benefit from professional training and support in technology policy. A systematic programme to improve these skills across the senior civil service would also help support the Government’s aim of ensuring public services become “digital by default” by improving the integration of technology and policy throughout the policy-making process.**

## Leadership

### Role of SROs

116. Senior Responsible Owners (SROs) are the senior officials responsible for ensuring that a programme meets its objectives and delivers the projected benefits.<sup>154</sup> They are the owner of the overall business change, provide senior leadership for the programme and

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151 Note of informal evidence session.

152 Q 430

153 Q 541

154 [http://www.ogc.gov.uk/User\\_roles\\_in\\_the\\_toolkit\\_senior\\_responsible\\_owner.asp](http://www.ogc.gov.uk/User_roles_in_the_toolkit_senior_responsible_owner.asp)

take personal responsibility for the successful delivery of outcomes. A number of organisations highlighted the importance of SROs. Intellect, the IT industry trade association argued that:

Senior Responsible Owners (SROs) of appropriate seniority and experience should lead programmes of all sizes from conception through procurement and delivery.<sup>155</sup>

However, as the Government acknowledges, this has not always happened, with SROs often changing several times during the course of a project. The Institution of Engineering and Technology and the Royal Academy of Engineering noted that these changes mean any significant project overruns or failures can be blamed on previous SROs who have since left the project.<sup>156</sup> To rectify this situation the Government has announced that it will require SROs to stay in post until an appropriate break point in the project.<sup>157</sup>

**117. We welcome the Government's intention to strengthen the role of Senior Responsible Owner (SRO) by ensuring that they stay in post until an appropriate break point in the project. Wherever possible SROs should stay in post to oversee the delivery of the benefits for which they are accountable and which the project was intended to deliver. It should be in Ministers' interests to ensure that this happens, and Ministers should take a personal interest in the leadership of politically sensitive programmes.**

**118. We are concerned that despite the catalogue of costly project failures rarely does anyone – suppliers, officials or ministers – seem to be held to account. It is therefore important that, when SROs do move on they should remain accountable for those decisions taken on their watch, and that Ministers should be held accountable when this does not happen.**

### **Role of Chief Information Officers**

119. Chief Information Officers (CIOs) are a department's most senior official directly responsible for information management and the related technical systems. They play an increasingly important and demanding role ensuring that organisations are well placed to manage the information required to deliver their objectives. Ian Watmore praised the quality of the current CIOs working in Government describing them as "*some of the very best people from the private sector. About half the CIOs from the last three or four years came directly from the private sector and were really top players.*"<sup>158</sup>

120. However, some witnesses expressed concerns about the CIO Council<sup>159</sup> and the lack of impact the Council's work has had.<sup>160</sup> A number of witnesses argued that CIOs should have a higher profile within departments and advocated that they should serve on departmental boards. Roger Marshal, former Chair of EURIM said that:

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155 Ev 113

156 Ev w121

157 Ev 119

158 Q 542

159 A group of all departmental CIOs

160 Ev w56

It cannot be emphasised too strongly that CIOs or their equivalent must be given the resources and authority within public sector organisations in order to impose good practice and eliminate poor practice. In comparable private sector organisations [...] there will invariably be a main board director who both understands and can represent the interests of IT professionalism. This should be the case in the public sector too.<sup>161</sup>

Hewlett Packard made similar points, arguing that while the importance of the departmental CIO was increasingly recognised, *“the function remains inconsistently adopted – some are members of their department’s board and accountable to the Permanent Secretary, others less senior. More could be done to strengthen the role of the departmental CIO in policy development.”*<sup>162</sup>

121. Of the 14 departments we surveyed as part of our research into Government IT only three (DWP, HMRC and Office of National Statistics) reported that their CIO sat on the departmental board. This is presumably due to the large amount of information processed by these departments.

122. When we put these concerns to Ian Watmore he acknowledged that the level of CIO appointments *“has been the source of some controversy over many years.”* However he argued that every function *“whether it is IT, finance, HR [...] wants to have their person on the board, and the view of departmental leads was that the boards would become overly big and complex.”*<sup>163</sup>

123. The Minister also argued that one of the risks of having CIOs on departmental boards was that it led to IT being compartmentalised with the rest of the board not taking an interest in large IT-driven programmes. He said that there was a danger that people would say:

*“He or she is doing the technology. None of us needs to worry about the IT projects.”* Actually Ministers need to be taking an interest in big projects generally, including IT projects, and so do permanent secretaries. I do not think they have in the past to nearly a great enough extent, so someone down there in the bowels of the organisation will deal with it.<sup>164</sup>

**124. Ministers should reconsider the governance arrangements for their departments’ information systems and associated IT. Whilst it may not always be appropriate for the CIO to be a board level appointment, we think that more department boards should include CIOs given the essential role that information and technology play in delivering Departments’ services. Where CIOs are not on a departmental board, another member of their Board should have proven expertise in, and act as a champion for, information and technology issues.**

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161 Ev w56

162 Ev 107

163 Q 560

164 Q 561 [Francis Maude]

## 9 Transforming public services

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125. Successive governments have made clear their ambition to use IT to transform and improve public services. Technology has the potential to radically redesign how services are delivered. Microsoft argued that:

Whilst value can be generated by using IT to do the same things more efficiently, much greater value is generated by using IT to do things in a totally new way, transforming service delivery, engaging more directly with citizens and dramatically reducing costs.<sup>165</sup>

126. However, many of the organisations and individuals who contributed to our inquiry were sceptical about Government's ability to deliver transformational change of this magnitude:

Government thinking about IT appears to lack a channel for formally evaluating "radical possibilities". [...] It is very hard to find any forum in which Central Government will consider them. There appears to be an underlying assumption in IT policy that existing processes must be made more efficient using IT, rather than looking for completely new ways of doing things that are only now viable.<sup>166</sup>

The Institution of Engineering and Technology and the Royal College of Engineering made a similar point, arguing that successful transformation will require the "*development of strategic objectives and system architectures that transcend Departmental boundaries and budgets.*"<sup>167</sup>

127. The Institute of Creative Technologies advocated that the Government should:

move beyond the 'transformational government' programme, which aimed to impose command and control through large centralised databases, towards principles of transparency, openness, and co-operation in which the individual citizen has far more engagement with and control over data and personal information.<sup>168</sup>

This point was further reinforced by Sirius, an IT company which specialises in Open Source, who commented that

Open technologies empower individuals and shift power away from the centre. Open technologies build social cohesion and are socially transformative. Government should be as technologically smart as possible, in the service of productive efficiency and participatory democracy."<sup>169</sup>

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165 Ev w139

166 Ev w1

167 Ev w121

168 Ev w22

169 Ev w46

Recent initiatives such as the Skunkworks team, dotgovlabs, data.gov.uk, and the Alphagov project suggest that the Government is moving in this direction.

128. We have decided to highlight four ways in which we think the Government could use technology to enable a transformation in the way it delivers services. These are the release of public data; shifting ownership of personal data towards the individual; engaging users in service design; and opening up on-line channels for service delivery by third parties.

## Public data release

129. Opening up access to government data would allow people to extract what they want from the information rather than having to use and access it in a way prescribed by the data's owner. The Government has placed a strong emphasis on its open data strategy, and in particular the data.gov.uk website where collections of public data are being published. The Government is also currently creating a Public Data Corporation, which aims to bring public data together in one place.<sup>170</sup>

130. Alongside Government-initiated uses of public data, such as the recently released crime statistics website,<sup>171</sup> “ground-up” initiatives have become increasingly important. One example is the use of “hack days”.<sup>172</sup> These events enable a group of developers to work on a particular problem, based on specific data, to develop a number of potential solutions. These rapid prototypes are intended to address a specific problem from the perspective of the user; producing a product based on what the service user would find useful rather than what “Government wants, or what Government thinks it needs”.<sup>173</sup> We heard that some government departments are increasingly willing to support these initiatives, asking developers “What can you do with our data? We do not have any ideas, we have this wealth of data, build us something, show us something fun, something that ordinary citizens can actually make sense of. Show us what we can do.”<sup>174</sup>

131. Enabling this kind of rapid and effective innovation relies on the routine release and general availability of up-to-date data. We heard that some difficult challenges remain, including information being locked inside content management systems, making it difficult to extract in a useful form.<sup>175</sup> As a result the government often has to pay the company who designed the system a second time to retrieve the information. To tackle this, Professor Shadbolt, a member of the Government’s Transparency Board, recommended that government should state explicitly in contracts that system data should be owned by the government, rather than the companies that design or run the system:

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170 “Public Data Corporation to free up public data and drive innovation”, Cabinet Office, see <http://www.cabinetoffice.gov.uk/news/public-data-corporation-free-public-data-and-drive-innovation>

171 See <http://www.police.uk/>

172 Q 245 [Mr McGreggor]

173 Ibid

174 Ibid

175 Q117

we also need to change procurement so that when we procure we do not forget to say, "And the data in the system will be just available".<sup>176</sup>

132. The ability to re-use data in new and innovative ways can help to improve how public services operate. We are therefore encouraged by recent developments, such as the LinkedGov initiative<sup>177</sup>, which aims to "*make Government data usable*" and to "*create as complete as possible a body of public data that is accessible, discoverable, human-readable, machine readable, comparable and internally linked*". We welcome the Government's acknowledgement of this approach on its data.gov.uk site.<sup>178</sup>

133. We heard concerns that current licensing arrangements pose a barrier to the access of public data. Jim Killock, Open Rights Group, drew our attention to key pieces of data, such as maps and postcodes, for which developers are charged for access. He argued that this information represented "*really critical infrastructure*" and that charges for this core data caused "*either social or economic barriers to people really using data properly*".<sup>179</sup> He believed that licensing this data acted against the interests of the department or organisation that owned this data. He gave the example of designing a programme to provide consumers with information about bus and train times:

The core business of train and bus companies is to get people on trains and buses, but it is nevertheless quite difficult to get the data off them to advertise their services. So in a way, they are trying to charge or licence the data of their train and bus services, and that attempts to charge for the data and provide a revenue stream actually competes against their core business of getting people on transport.<sup>180</sup>

134. There have already been some welcome developments in this area. The Ordnance Survey has released a number of its data sets free of charge through its OpenData and OpenSpace products.<sup>181</sup> The Government is already promoting the re-use of public sector information.<sup>182</sup> It has also recently redesigned the licensing framework and developed a new "Open Government" Licence which aims to ensure interoperability, avoid the need for re-users to apply for licence and cover a wider range of rights.<sup>183</sup>

**135. Publicly releasing data has the potential to transform public services radically by allowing individuals to use data in ways most useful to them, rather than having to use and access the data in a way prescribed by the provider. We welcome the Government's commitment routinely to release public data. We recommend that the Government**

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176 Q 118

177 <http://linkedgov.org/>

178 <http://data.gov.uk/linked-data>

179 Q 245 [Mr Killock]

180 Ibid]

181 <http://www.ordnancesurvey.co.uk/oswebsite/business/licences/using-and-creating-data-with-os-products/index.html>  
They also have other products for which they charge.

182 National Archives, *The United Kingdom Report on the Re-use of Public Sector Information*, 2010. PSI encompasses a wide range of information, including national and local legislation, statistics, local planning, transport, education, local services and tourist information.

183 Ibid, p 6-7

should release live, as well as historic, data sets where this is possible and that in future its information systems are designed to do so by default.

136. **Bringing in outside developers to demonstrate to departments the potential of the information they already hold is an exciting way to innovate and provide new tools and services for the Government. We applaud the departments that have already been involved in “hack days” and recommend that all departments work in a similar way.**

137. **Government must continue to address the issue of public data access by removing licences from its own data and by encouraging publicly funded organisations to do the same. Placing this information into the public domain for free is in the long-term interest of data owners, users and the wider economy.**

### **Open standards**

138. Open Standards refers to the format in which data is published and how it is made available. Historically, many systems used proprietary formats and interfaces. Information could not be easily recognised by, or exchanged between, different systems. This made it costly and time consuming to access important information drawn from across systems, or to switch to other suppliers. The use of open standards has a number of advantages: it makes it simpler to access data; it implies interoperability; it allows future access to data and documents in information systems; and developers do not require access to proprietary software to make use of the data.<sup>184</sup>

139. The Government appears keen to tackle this issue. In January 2011, the Cabinet Office issued a Procurement Policy Note on the *Use of Open Standards* when specifying ICT requirements,<sup>185</sup> and also launched a survey to help decide which standards should be used to organise government data and systems.<sup>186</sup> The Open Source Consortium has however expressed some concerns about this survey, its inclusion of various proprietary formats and confusion in other areas.<sup>187</sup>

140. Despite the Government’s restatement of an open standards policy, it does not appear to be observed during procurement. A preliminary analysis of Official Journal of the European Community contracts carried out for us by Helen Margetts and Scott Hale, Oxford Internet Institute has shown that rather than specifying requirements and standards, such as “*word processing software compatible with the open document format*”, procurement notices continue to specify proprietary products and formats. This suggests another misalignment between Government policy and its execution in Whitehall, which may in part explain the small scale adoption of open standards in the public sector.<sup>188</sup>

141. **Adherence to open standards is important if the Government is to make data more readily accessible. It will also help the Government avoid lock-in to any one provider. We welcome attempts to identify the open standards to be used across departments.**

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184 POST Note, *Open Source Software*, June 2005, Number 242

185 Ev 121

186 <http://www.cabinetoffice.gov.uk/content/uk-government-open-standards-survey>

187 Ev w136-137

188 Analysis carried out for PASC by Helen Margetts and Scott Hale, Oxford Internet Institute

However, we are concerned that the recent Government survey indicates that the current understanding of open standards is incomplete. The Government should prioritise the adoption of a set of core open standards which focus on interoperability between systems, making data available through open interfaces and formats that allow meaningful public access.

142. Government should omit references to proprietary products and formats in procurement notices, stipulating business requirements based on open standards. The Government should also ensure that new projects, programmes and contracts, and where possible existing projects and contracts, mandate open public data and open interfaces to access such data by default.

### Personal data ownership

143. A large amount of data held by Government is personal information about individuals who use its services. Currently multiple departments and service providers acquire similar personal information from citizens and store it on separate systems. This makes it difficult to ensure that all these records are correct, as each one has to be updated separately.

144. Martin Ferguson, Head of Policy at Socitm, provided a personal example where to record a change in his daughter's circumstances, he had had to deal with *"10 different public-service and third-sector organisations, all independently, all separately. All had a separate record of my daughter."*<sup>189</sup> He argued that this situation should be changed so that each organisation's records *"would be capable of being joined in such a way that the different service providers were aware of what others were doing."*<sup>190</sup>

145. Inaccuracies and poor user experience caused by the existence of numerous independent records are not the only problems caused by current arrangements. The Information Commissioner argued that the volume of data that the Government stores increases the chance of personal data being lost or unlawfully placed in the public domain.

High profile security breaches have shown how vulnerable our personal details can be and information systems need to be designed to minimise information risk not solely by including better security safeguards but by adopting privacy friendly data minimisation approaches and ensuring the culture of an organisation drives the protection of personal information.<sup>191</sup>

A recent report by the Ombudsman into the case of a woman who had her personal information changed without her knowledge by a government agency highlights the problems that can be caused by poor information management. In this case, the changes led to her child support entitlement being reduced without her knowledge and her personal information being released to her former partner.<sup>192</sup>

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189 Q 278

190 Q 279

191 Ev w 42

192 Parliamentary and Health Service Ombudsman, Fourth Report of the Parliamentary Commissioner for Administration, Session 2010-11, *A Breach of Confidence*, HC 709

146. The current approach is also expensive to run. It is estimated that 10% of staff and 15% of the revenue budget of one unitary authority is spent on collecting, processing and maintaining personal data.<sup>193</sup>

147. The Government has already trialled methods intended to address some of these problems. The DWP’s “Tell Us Once” scheme allows people to inform one government agency about a birth or death and for this information to be passed on their behalf to other relevant agencies.<sup>194</sup>

148. We also heard of a more radical and transformative approach being piloted by the London Borough of Brent. This system provides individuals with a secure, online personal data service run by an independent community interest company which enables the individual to enter and maintain their own personal data in one place. When they want to interact with an online council service, they can authorise the release of relevant personal information from their personal data store.

149. This approach enables citizens to maintain their personal information in one trusted place with every organisation they engage with online. The Council also benefits from knowing that it is dealing with up-to-date information. If the current pilot proves successful, the Council hopes that it will be able to remove many of its duplicated data systems, thereby reducing cost and risk whilst also delivering a better quality service.

150. Letting the individual maintain their own personal data can help ensure cleaner and more reliable records and reduce duplication. It also puts individuals in control, allowing them to authorise the appropriate flow of personal information to and between relevant organisations. For example, an individual could obtain online proof from the DVLA regarding their ownership of a vehicle and then use that proof to confirm to a local authority their eligibility for a resident’s parking permit. Even this process could be largely hidden from the user, with automated verification and checking completed electronically whilst they are online, making the whole process potentially as simple as pressing a few on-screen buttons to authorise the data exchange.

151. There are a number of challenges to adopting such an approach. It would require a major change of approach shifting the focus of service design away from public authorities and towards the citizen. Departments and other organisations would also need to assess the technical changes necessary to integrate input from individuals into existing services. The Government would also need to examine the costs of such a change carefully and consider how it would be implemented in practice.

152. This must be balanced against current legal obligations. The Data Protection Act 1998 governs how the personal data of identifiable living people are processed and stored. It places a number of constraints on how long data can be stored for, what data can be used for, how information can be shared between different organisations, and how data are kept secure.<sup>195</sup> If individuals were placed in charge of their own personal data, public authorities

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193 Data supplied by Mydex/London Borough of Brent

194 Local Government Delivery Council, *Case Study: Tell Use Once*,

195 *Data Protection Principles*, Standard Note SN/HA5820, House of Commons Library, 6 January 2011

might be relieved of most of the legal and administrative burden of keeping information secure and up to date.

153. Not all citizens are comfortable with or able to use online services. Government will have to consider how to engage with this group and make alternative offline access to information available. This is a problem affecting any attempt to migrate provision to an online environment and is work the Government will need to embark on anyway if it intends to realise its vision of having all public services become "digital by default".

154. The Government is already developing an updated model of identity assurance - how users verify who they are - to streamline the way in which citizens can log into online Government services.<sup>196</sup> This system is being developed in partnership with the same company that has been involved in the Brent Council project.<sup>197</sup> Ian Watmore, Efficiency and Reform Group, explained that the Government's approach was to re-use ways of checking people's identity that already existed:

What we are trying to do there is to reuse what the marketplace is already doing. Rather than build a Government version of that, if the banks already have a good reusable ID assurance platform, why would we not use that to be the trusted access to our world?<sup>198</sup>

155. The Minister emphasised that by doing this the Government would not be creating "*a kind of national database*",<sup>199</sup> instead it was investigating how it could use information that people had already provided about themselves to verify their identity when they accessed Government services. This new approach to identity could form a complementary part of the new model of personal data ownership.

**156. Giving control of personal data to the individual has the potential to improve data quality while reducing both costs and risks. Individuals are used to controlling their own data with private sector companies, such as Amazon and with utility companies. Moving to a model where the citizen maintains their own personal data with an independent, trusted provider and then can choose whether to authorise the sharing of that information with other organisations is an ambitious vision that will need to be trialled extensively. We also recognise that there may be legal constraints and concerns about privacy which could act as a barrier to implementing such a radical reform. We therefore recommend that the Government, working with the Information Commissioner, review potential barriers to the personal data model and explore the ways in which this model could best be developed.**

**157. We welcome the work being done to create an integrated identity assurance trust model for simplifying access to Government services. We suggest that Government consider integrating this work with the personal data model. This could represent an important step, placing responsibility and control of personal data with citizens in their interactions with public and other online services.**

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196 "Cabinet Office outlines Gov-portal 'ID assurance' plans" *The Register*, 19 May 2011.

197 "DWP prepared alternative to ID Cards for Universal Credit" *Computer Weekly*, 27 May 2011.

198 Q 564 [Mr Watmore]

199 Q 564 [Mr Maude]

## User engagement in service design

158. Another way we believe that Government could transform the way it delivers public services is by using technology to involve users in the design and continuous improvement of its services. The IfG’s *System Error* Report advocated the continual involvement of users during the design of a new system.<sup>200</sup> Such feedback need not be limited to the initial design process alone: technology offers Government the opportunity to refine and improve the design of its services based on the real time flow of citizen feedback.

159. Our witnesses did not believe that the Government was currently doing enough to engage users when designing services, and that too frequently the needs or convenience of central Departments were placed above those of citizens. Dextrous Web, an IT SME, argued that this “*failure to base solutions on real user need [...] and to engage those who will actually use a solution*”<sup>201</sup> was one of the reasons for the continuing failure of IT to deliver better public services. Similarly Professor Margetts told us that Departments

are not focused enough on what citizens and consumers are actually doing. That is the one thing that the internet has done: it has allowed companies to know, to understand their customers and be able to treat them accordingly.<sup>202</sup>

160. Mydex, an IT community interest company, argued that a number of IT systems appeared to have been designed with no understanding of how they would be used by citizens. “*They were never rooted in an understanding of the individual’s journey through life episodes and their interactions with public services*”.<sup>203</sup>

161. Our survey of government departments, asked how extensively users were involved in the design of their services. The responses varied greatly, with some stating that they had adopted “*user centric*” design principles and engaged users in order to gather their opinions, others stating that they used periodic surveys, and others that they regarded the idea as “*not applicable*”.<sup>204</sup>

**162. It is self-evident that the people using systems, be they frontline officials or members of the public are best placed to provide suggestions on how to improve them. User feedback should be directly integrated into the design of new systems and the development of existing systems and processes to ensure continuous improvement. We recommend that Departments exploit the internet and other channels to enable users to provide direct online feedback both in the design of services and in their ongoing operation and improvement.**

## Open delivery of online Government services

163. IT-enabled service delivery is predicated on the Government specifying its requirements and then procuring and operating solutions. An alternative model would

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200 IfG, *System Error: Fixing the Flaws in Government IT*, March 2011, p31

201 Ev w98

202 Q 38

203 Ev w82

204 Responses from departments to PASC written questions during the inquiry.

enable individuals and external organisations to host and design systems that linked into online public services. Tim O'Reilly, a technology publisher, has noted that "... *the secret to the success of bellwethers like Google, Amazon, eBay, Craigslist, Wikipedia, Facebook and Twitter is that each of these sites, in its own way, has learned to harness the power of its users to add value to [... and] to co-create its offerings.*"<sup>205</sup> This open model has proved highly successful for companies such as Facebook, which also allows a range of third-party developers to innovate around its open platform. The majority of applications on Facebook are not designed by its employees but by independent developers whose applications integrate with Facebook's core services. This open platform model provides an interesting insight into how future Government services might operate better: enabling Government information and services to be provided to citizens where and when they need them. "*In this model, Government is a convener and an enabler rather than the first mover of civic action.*"<sup>206</sup>

164. Mr Hughes, Vice-President of Hewlett Packard Enterprise Services, argued that the Government should follow this approach and "*allow people [...] outside of the Government cloud to write applications to integrate into back office Government systems.*"<sup>207</sup> He went on to say that it would "*be a great way to drive up adoption of Universal Credit by having applets that the Post Office, Tesco, Sainsbury's and Waitrose could utilise on their own website.*"<sup>208</sup> Craig Wilson, Hewlett Packard's Managing Director, expanded on this line of thought and argued that the Government should consider allowing others to host Government's online services and that this would be preferable to having all services hosted at a single Government website:

The idea that these communities are going to be drawn to a Directgov website for all this kind of interaction is quite an old fashioned idea.<sup>209</sup>

While this might appear like a radical suggestion, it is effectively the online equivalent of locating post offices inside other shops, such as supermarkets, to increase their accessibility and custom.

165. Facebook emphasised "*the value of creating a web environment that is structured by building specialized applications on an open platform*".<sup>210</sup> One of the major advantages of an open platform model is the entrepreneurship and flexibility it fosters. As the basic structure of the website is open for development, companies and public agencies can call on a wide variety of web expertise to create the more specialised applications, features, or tools required to suit specific needs. This also fuels flexibility of development: if one application built on an open platform no longer adds value or needs to be replaced, another can be created without requiring that the underlying system be rebuilt.

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205 "Government as a Platform, Tim O'Reilly. In "Open Government. Collaboration, Transparency and Participation in Practice." O'Reilly Media, 2010, p11.

206 Ibid, p13.

207 Q445 [Mr Hughes]

208 Q445 [Mr Hughes]

209 Q445 [Mr Wilson]

210 Note to the Committee from Facebook following a site visit.

166. We see a clear opportunity for Government to adopt this model. IT enabled public services should be provided on an open platform with open interfaces. Government should provide the necessary open infrastructure that empowers people inside and outside of Government to innovate. Making this happen will be part of the transition we have mentioned above from an organisation-centric view of public services to one based on the needs of the citizen. There are obvious parallels between this approach and the Government desire to open up the delivery of public services to non-state actors as part of its Big Society agenda.

**167. Government should open up online service delivery to non-public sector organisations and explore ways in which public services can be offered through other websites, applications, devices and providers. This should be developed by providing an open Government platform around which others can innovate and improve, built on the principles of open data, open standards and open source.**

**168. In doing so Government will need to address issues of liability for the external delivery of Government services. Moving to a model where third parties provide online Government services will require clarity about where citizens should turn for help when they encounter difficulties, as well as clarifying who is accountable for service delivery.**

## Conclusion

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169. Government IT does not have a happy history. The last 10 years have seen several failed attempts at reform. The current Government seems determined to succeed where others have failed and we are greatly encouraged by its progress to date.

170. Numerous challenges remain and fundamentally transforming how Government uses IT will require departments to engage more directly with innovative firms, to integrate technology into policy-making and reform how they develop their systems. The fundamental requirement is that Government needs the right skills, knowledge and capacity in-house to deliver these changes. Without the ability to engage with IT suppliers as an intelligent customer – able to secure the most efficient deal and benchmark its costs – and to understand the role technology can play in the delivery of public services, Government is doomed to repeat the mistakes of the past.

# Conclusions and recommendations

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## Lack of information

1. Having access to up-to-date and accurate information about government IT is essential if the Government is to reform its IT successfully. Without it the Cabinet Office will be unable to monitor and enforce its programme of reforms. We were particularly shocked to learn that, on coming to office, the Minister had to ask the IT suppliers for information about the value of their contracts. We welcome the Government’s commitment to rectifying this situation. We recommend that the Government work with the NAO to identify which data it needs to gather to monitor the progress of its reforms and outline in its response to this Report what information will be collected by departments and how frequently this data will be gathered. (Paragraph 15)

## Benchmarking

2. The poor benchmarking of central government’s IT expenditure is unacceptable. Without this information it will not be possible for the Government to advance effectively its cost reduction agenda. We recommend that the Government should investigate the claims of overcharging put to us and seek to identify reliable and comparable cost benchmarks, and collect accurate information from departments in order to compare with those benchmarks. Where possible bespoke projects should also be benchmarked, and the Government should trial ways of conducting benchmarking exercises for its more complex projects. The Government should use independent and specialist advisers and the NAO to assist with identifying objective benchmarking measurements. (Paragraph 20)
3. Making data about expenditure available is not only a good discipline for departments; it also allows the Government to harness independent views on how to deliver services more cost effectively. The Government should publish in full all contracts. It should publish as much information as possible about how it runs its IT to enable effective benchmarking and to allow external experts to suggest different and more economical and effective ways of running its systems. Feedback it receives based on this information should be used to challenge and hold to account current providers, and to renegotiate, disaggregate and re-compete existing contracts where it becomes clear that more cost effective delivery mechanisms are available. (Paragraph 25)

## Large Systems Integrators

4. Extremely serious allegations have been made about the behaviour of some large suppliers. There are clearly very strong feelings on both sides of this debate. We are not in a position to come to a firm verdict on this matter. Having described the situation as an “oligopoly” it is clear the Government is not happy with the current arrangements. Whether or not this constitutes a cartel in legal terms, it has led to the perverse situation in which the governments have wasted an obscene amount of

public money. The Government should urgently commission an independent, external investigation to determine whether there is substance to these serious allegations of anti-competitive behaviour and collusion. The Government should also provide a trusted and independent escalation route to enable SMEs confidentially to raise allegations of malpractice. (Paragraph 30)

5. We recommend that the Government develop a strategy to either replace legacy systems with newer, less costly systems, or open up the intellectual property rights to competitors. Alternative means of dealing with legacy systems should be explored with the widest possible range of suppliers, including SMEs. (Paragraph 34)
6. We take seriously the concerns expressed by many SMEs that by speaking openly to the Government about innovative ideas they risk losing future business particularly if they are already in a sub-contracting relationship with an SI. The Government should reiterate its willingness to speak to SMEs directly, and commit to meeting SMEs in private where this is requested. We recommend that the Government establish a permanent mechanism that enables SMEs to bring innovative ideas directly to government in confidence, thereby minimising the risk of losing business with prime contractors. (Paragraph 42)
7. Where SMEs do subcontract with a large SI, the SI should ensure that it pays the SMEs on the same terms on which the Government pays the large SI. We welcome the Government's own efforts to improve the speed with which it pays its contractors, and we encourage it to ensure its prime contractors pass these benefits on to SMEs. (Paragraph 44)
8. We welcome plans for IT contracts to be broken up to allow for more effective competition and to increase opportunities for SMEs to win Government work. We urge the Government to create more contracting opportunities worth much less than £100 million. (Paragraph 46)
9. We welcome the efforts the Government is making to reduce the cost it pays for IT. However the Government's plan to act as a single buyer appears to be leading to a consolidation towards a few large suppliers. This could act against its intention to reduce the size of contracts and increase the number of SMEs that it contracts with directly. We are particularly concerned with plans to move SME suppliers to an "arm's length" relationship with Government. The Government needs to explain how it will reconcile its intentions to act as a single buyer, secure value for money and reduce contract size to create more opportunities for SMEs. (Paragraph 50)
10. The way procurement currently operates favours large companies that can afford to commit the staff and resources to navigate the convoluted processes. It also encourages the Government to confine discussions to as few potential contractors as possible. If the Government is serious about increasing the amount of work it awards to SMEs it must simplify the existing processes. We welcome the Minister's assurance that the Government is simultaneously seeking to change the current European Directive regarding procurement and taking steps to simplify official guidance that surrounds the procurement process. We ask the Government to

update us on the progress it is making on both initiatives in its response to this Report. (Paragraph 57)

11. We recommend that the Government investigate the practices which seem unintentionally to disadvantage SMEs. When contracts and pre-qualifying questions are drawn up thought must be given to what impact they could have on the eligibility and ability of SMEs to apply for work, and whether separate provision should be made for SMEs. We believe it would be preferable if the default procurement and contractual approach were designed for SMEs, with more detailed and bespoke negotiation being required only for more complex and large scale procurements. (Paragraph 60)
12. The Government presumption in favour of smaller, disaggregated contracts should lead to more direct contracting with SMEs. This will require Departments to invest more effort in managing relationships directly with SMEs meaning that more systems integration work is performed in-house, but this will yield longer term benefits through increased innovation and lower costs. Ministers need to ensure their officials have the skills, capacity and above all the willingness to deliver on ministerial commitments to SMEs. (Paragraph 64)

### Integrating IT

13. Government should ensure that the IT implications of new initiatives are properly considered near the start of the policy process on a par with the legal and financial considerations. This should simply be an extension of thinking about how the policy will be implemented in practice. We recommend that analysis of these issues be included in all policy submissions to Ministers. (Paragraph 69)

### Over-specifying

14. We agree with our witnesses who argued that there was no such thing as an IT project – only policy initiatives and business programmes that use technology in their delivery. One of the primary reasons for these project failures is a lack of focus on the outcome and how the IT project fits into the wider benefits the Government wants to achieve. The Government must stop departments specifying IT solutions and ensure they specify what outcomes they wish to achieve, within the broad technical parameters to ensure interoperability. The market should then be able to provide a range of possible IT solutions. (Paragraph 75)

### Challenges to using Agile

15. Agile development is a powerful tool to enhance the effectiveness and improve the outcomes of Government change programmes. We welcome the Government’s enthusiasm and willingness to experiment with this method. The Government should be careful not to dismiss the very real barriers in the existing system that could prevent the wider use of agile development. We therefore invite the Government to outline in its response how it will adapt its existing programme model to enable agile development to work as envisaged and how new flagship

programmes will utilise improved approaches to help ensure their successful delivery. (Paragraph 87)

16. The Government should examine how it can remove barriers to agile development as an integrated part of its wider efforts to reform the procurement process and increase the role of SMEs. The Government will have to bear in mind the need to facilitate agile development as it renegotiates the EU procurement directive and revises the associated guidance. (Paragraph 90)

### Security and Privacy

17. Governments have learnt that they must secure both personal data and data relating to national security, whilst also guarding against gold-plating its security requirements – which can greatly inflate costs without delivering any tangible benefits. Over-classifying routine administrative and operational information causes unnecessary technology and operational costs, and prevents the public sector taking advantage of the economies and efficiencies of commodity software and new opportunities. It also acts as a further barrier to more effective use of SMEs in the supply of IT goods and services. Government must do more to demonstrate how a risk-based approach is helping achieve a better balance in information assurance. (Paragraph 99)

### An intelligent customer?

18. Managing suppliers is as important as deciding who to contract with in the first place. To be able to perform both of these functions government needs the capacity to act as an intelligent customer. This involves having a small group within government with the skills to both procure and manage a contract in partnership with its suppliers. Currently the Government seems unable to strike the right balance between allowing contractors enough freedom to operate and ensuring there are appropriate controls and monitoring in-house. The Government needs to develop the skills necessary to fill this gap. This should involve recruiting more IT professionals with experience of the SME sector to help deliver the objective of greater SME involvement. (Paragraph 108)
19. The strategic importance of Government developing and maintaining an intelligent customer function has been repeatedly highlighted throughout our inquiry. We are very supportive of the Government's efforts to develop its own talent in-house through the Technology in Business Fast Stream. The Government should use this scheme as a basis for a strengthened IT Profession within Government. It must ensure that it aligns the training curriculum with its ICT Strategy and wider developments in the world of technology outside of Government. (Paragraph 112)

### Spread of skills

20. Knowledge about how modern information systems and technology can be used to improve public services should not be restricted to the IT profession – this knowledge is essential to the work of all senior civil servants responsible for designing and delivering policy. The Government should explore how departmental

boards and senior officials can best benefit from professional training and support in technology policy. A systematic programme to improve these skills across the senior civil service would also help support the Government’s aim of ensuring public services become “digital by default” by improving the integration of technology and policy throughout the policy-making process. (Paragraph 115)

## Leadership

21. We welcome the Government’s intention to strengthen the role of Senior Responsible Owner (SRO) by ensuring that they stay in post until an appropriate break point in the project. Wherever possible SROs should stay in post to oversee the delivery of the benefits for which they are accountable and which the project was intended to deliver. It should be in Ministers’ interests to ensure that this happens, and Ministers should take a personal interest in the leadership of politically sensitive programmes. (Paragraph 117)
22. We are concerned that despite the catalogue of costly project failures rarely does anyone – suppliers, officials or ministers – seem to be held to account. It is therefore important that, when SROs do move on they should remain accountable for those decisions taken on their watch, and that Ministers should be held accountable when this does not happen. (Paragraph 118)
23. Ministers should reconsider the governance arrangements for their departments’ information systems and associated IT. Whilst it may not always be appropriate for the CIO to be a board level appointment, we think that more department boards should include CIOs given the essential role that information and technology play in delivering Departments’ services. Where CIOs are not on a departmental board, another member of their Board should have proven expertise in, and act as a champion for, information and technology issues. (Paragraph 124)

## Public data release

24. Publicly releasing data has the potential to transform public services radically by allowing individuals to use data in ways most useful to them, rather than having to use and access the data in a way prescribed by the provider. We welcome the Government’s commitment routinely to release public data. We recommend that the Government should release live, as well as historic, data sets where this is possible and that in future its information systems are designed to do so by default. (Paragraph 135)
25. Bringing in outside developers to demonstrate to departments the potential of the information they already hold is an exciting way to innovate and provide new tools and services for the Government. We applaud the departments that have already been involved in “hack days” and recommend that all departments work in a similar way. (Paragraph 136)
26. Government must continue to address the issue of public data access by removing licences from its own data and by encouraging publicly funded organisations to do

the same. Placing this information into the public domain for free is in the long-term interest of data owners, users and the wider economy. (Paragraph 137)

### Open standards

27. Adherence to open standards is important if the Government is to make data more readily accessible. It will also help the Government avoid lock-in to any one provider. We welcome attempts to identify the open standards to be used across departments. However, we are concerned that the recent Government survey indicates that the current understanding of open standards is incomplete. The Government should prioritise the adoption of a set of core open standards which focus on interoperability between systems, making data available through open interfaces and formats that allow meaningful public access. (Paragraph 141)
28. Government should omit references to proprietary products and formats in procurement notices, stipulating business requirements based on open standards. The Government should also ensure that new projects, programmes and contracts, and where possible existing projects and contracts, mandate open public data and open interfaces to access such data by default. (Paragraph 142)

### Personal data ownership

29. Giving control of personal data to the individual has the potential to improve data quality while reducing both costs and risks. Individuals are used to controlling their own data with private sector companies, such as Amazon and with utility companies. Moving to a model where the citizen maintains their own personal data with an independent, trusted provider and then can choose whether to authorise the sharing of that information with other organisations is an ambitious vision that will need to be trialled extensively. We also recognise that there may be legal constraints and concerns about privacy which could act as a barrier to implementing such a radical reform. We therefore recommend that the Government, working with the Information Commissioner, review potential barriers to the personal data model and explore the ways in which this model could best be developed. (Paragraph 156)
30. We welcome the work being done to create an integrated identity assurance trust model for simplifying access to Government services. We suggest that Government consider integrating this work with the personal data model. This could represent an important step, placing responsibility and control of personal data with citizens in their interactions with public and other online services. (Paragraph 157)

### User engagement in service design

31. It is self-evident that the people using systems, be they frontline officials or members of the public are best placed to provide suggestions on how to improve them. User feedback should be directly integrated into the design of new systems and the development of existing systems and processes to ensure continuous improvement. We recommend that Departments exploit the internet and other channels to enable users to provide direct online feedback both in the design of services and in their ongoing operation and improvement. (Paragraph 162)

### **Open delivery of online Government services**

32. Government should open up online service delivery to non-public sector organisations and explore ways in which public services can be offered through other websites, applications, devices and providers. This should be developed by providing an open Government platform around which others can innovate and improve, built on the principles of open data, open standards and open source. (Paragraph 167)
  
33. In doing so Government will need to address issues of liability for the external delivery of Government services. Moving to a model where third parties provide online Government services will require clarity about where citizens should turn for help when they encounter difficulties, as well as clarifying who is accountable for service delivery. (Paragraph 168)

# Formal Minutes

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**Monday 18 July 2011**

Members present:

Mr Bernard Jenkin, in the Chair

Nick de Bois  
Charlie Elphicke  
Robert Halfon

Kelvin Hopkins  
Lindsay Roy

Draft Report (*Government and IT— "a recipe for rip-offs": time for a new approach*), proposed by the Chair, brought up and read.

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

Paragraphs 1 to 170 read and agreed to.

Summary agreed to.

*Resolved*, That the Report be the Twelfth 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.

Written evidence was ordered to be reported to the House for printing with the Report on 1 and 8 February, 15 and 23 March, 5 April, and 10 May 2011.

[Adjourned till Tuesday 6 September at 10.00 am

## Witnesses

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### Tuesday 8 March 2011

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**Dr Edgar Whitley**, London School of Economics, **Professor Helen Margetts** and **Dr Ian Brown**, Oxford Internet Institute Ev 1

**Professor Nigel Shadbolt**, University of Southampton, and **Sir Ian Magee**, Institute of Government Ev 12

### Tuesday 15 March 2011

**Martin Rice**, CEO, Erudine, **David Clarke MBE**, CEO, British Computer Society, **Janet Grossman**, Chair, Intellect Public Sector Council, and **Sureyya Cansoy**, Director of Public Sector, Intellect Ev 21

**Adam McGreggor**, Rewired State, **Andy Burton**, Chair, Cloud Industry Forum, and **Jim Killock**, Open Rights Group Ev 33

### Tuesday 22 March 2011

**Mark Adams-Wright**, Chief Information Officer, Suffolk County Council, **David Wilde**, Chief Information Officer, Westminster City Council, and **Martin Ferguson**, Head of Policy, SOCITM Ev 41

**Joe Harley**, Director General and Chief Information Officer, DWP, **Malcolm Whitehouse**, Group Applications Director, DWP, **Phil Pavitt**, Director General and Chief Information Officer, HMRC, and **Mark Holden**, Director Projects and Programmes, HMRC Ev 50

### Wednesday 23 March 2011

**Craig Wilson**, Managing Director, UK and Ireland, HP Enterprise Services, and **Howard Hughes**, Vice-President and General Manager for DWP, HP Enterprise Services Ev 57

### Wednesday 30 March 2011

**Rt Hon Francis Maude**, Minister for the Cabinet Office, and **Ian Watmore**, Chief Operating Officer, Efficiency and Reform Group, Cabinet Office Ev 74

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3	British Computer Society (BCS)	Ev 95
4	Socitm	Ev 99
5	Hewlett Packard (HP)	Ev 103
6	Erudine	Ev 110

7	Intellect	Ev 113
8	Rt Hon Francis Maude MP, Minister for the Cabinet Office	Ev 117
9	London School of Economics and Political Science identity Project	Ev 124
10	Open Rights Group	Ev 130
11	Supplementary evidence from Intellect	Ev 134
12	Supplementary evidence from Socitm	Ev 136
13	DWP	Ev 140
14	HMRC	Ev 141
15	Supplementary evidence from Hewlett Packard (HP)	Ev 141
16	Supplementary evidence from Cabinet Office	Ev 149

## List of additional written evidence

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Published in Volume III on the Committee's website [www.parliament.uk/pasc](http://www.parliament.uk/pasc))

1	Wingham Rowan	Ev w1
2	Anonymous	Ev w1
3	Martin Caxton	Ev w2
4	Mario Devargas	Ev w3
5	Common Software Measurement International Consortium (COSMIC)	Ev w4
6	David Moss	Ev w7
7	Pat Keane, Bracknell Forest Borough Council	Ev w12
8	David Chassels	Ev w13
9	Centre for Effective Dispute Resolution (CEDR)	Ev w17
10	Michael Phythian	Ev w18
11	Alex Stobart, Enterprising Scotland Limited	Ev w19
12	Institute of Creative Technologies, De Montfort University, Leicester	Ev w22
13	Jonathan Murray	Ev w25
14	Andrew Hardie	Ev w30
15	Peter Buchanan, think gov	Ev w34
16	Dr Leonard Anderson	Ev w38
17	The Information Commissioner	Ev w42
18	Tony Collins	Ev w44
19	Sirius	Ev w45
20	Ministry of Defence	Ev w47
21	Logica	Ev w50
22	BSA	Ev w52
23	Roger Marshall	Ev w56
24	OpenForum Europe	Ev w58
25	Rupert Collins-White	Ev w63
26	IT Profession Delivery Management Competency Group	Ev w66
27	Philip Virgo	Ev w68
28	Software Industry Research Board	Ev w71
29	Royal Borough of Windsor and Maidenhead	Ev w76

30	EURIM (The Information Society Alliance)	Ev w78
31	William Heath	Ev w82
32	Open Source Consortium	Ev w84
33	Gartner	Ev w87
34	Public and Commercial Services Union	Ev w95
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41	CISCO	Ev w116
42	Canon UK Ltd	Ev w119
43	The Institute of Engineering and Technology/Royal Academy of Engineering	Ev w120
44	NLAWARP	Ev w124
45	Additional evidence from David Chassels	Ev w126
46	Additional evidence from Open Source Consortium	Ev w126
47	Olswang LLP	Ev w128
48	IBM	Ev w130
49	Additional evidence from Open Source Consortium	Ev w136
50	Microsoft	Ev w137
51	Alpine Resourcing	Ev w145
52	Industry Technology Facilitator	Ev w147
53	Kelvin Prescott and Susan Atkinson	Ev w148

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

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

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First Report	Who does UK National Strategy?	HC 435
Second Report	Government Responses to the Committee's Eighth and Ninth reports of Session 2009-10	HC 150
Third Report	Equitable Life	HC 485 ( <i>Cm 7960</i> )
Fourth Report	Pre-appointment hearing for the dual post of First Civil Service Commissioner and Commissioner for Public Appointments	HC 601
Fifth Report	Smaller Government: Shrinking the Quango State	HC 537 ( <i>Cm 8044</i> )
Sixth Report	Who Does UK National Strategy? Further Report with the Government Response to the Committee's First Report of Session 2010-11	HC 713
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Ninth Report	Pre-appointment hearing for the post of Parliamentary and Health Service Ombudsman	HC 1220-I
Tenth Report	Remuneration of the Parliamentary and Health Service Ombudsman	HC 1350
Eleventh Report	Good Governance and Civil Service Reform: 'End of Term' report on Whitehall plans for structural reform	HC 901