



House of Commons
Public Administration Select
Committee

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

Twelfth Report of Session 2010–12

Volume III

Additional written evidence

*Ordered by The House of Commons
to be published 1 and 8 February, 15 and 22 March, 5 April, 10,
17 and 23 May and 9 June 2011*

The Committee Name

The Public Administration Select Committee is appointed by the House of Commons to examine the reports of the Parliamentary Commissioner for Administration and the Health Service Commissioner for England, which are laid before this House, and matters in connection therewith, and to consider matters relating to the quality and standards of administration provided by civil service departments, and other matters relating to the civil service.

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List of additional written evidence

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	The 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
35	Dextrous Web	Ev w97
36	McAfee	Ev w100
37	Conservative Technology Forum	Ev w104
38	Communications Management Association	Ev w108
39	Citrix	Ev w110
40	Commercial Litigation Association (CLAN)	Ev w113

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

Written evidence

Written evidence submitted by Wingham Rowan

Response to Q9: *How should IT policy adapt to the Age of Austerity?*

Key points:

- Government thinking about IT appears to lack a channel for formally evaluating “radical possibilities”. That means departmental boundaries and existing assumptions shape IT policy rather than the full potential of IT in the 21st Century shaping IT policy.
- 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.
- Government seems to see its primary role as funding IT systems. It should be looking instead at how it can pull the levers it controls to incentivise the private sector to build technologies that can deliver broad outcomes.
- The search for new IT policy could focus on wide goals such as “economic opportunity for citizens”. These goals contain sub-targets such as “a simpler welfare state”. But the latter should be considered as a part of the former rather than a silo of thinking.
- Government already has a model for a highly successful, cost free, technology implementation that has reached 80% of the UK population. It is the National Lottery. The technology is complex, secure and costly. It cost the taxpayer nothing because government intelligently pulled the levers that shaped an opportunity the private sector would fund.
- There are radical, out of the box, possibilities in IT that would cost the taxpayer nothing. But they sit above departmental boundaries. It is very hard to find any forum in which Central Government will consider them. See www.NationalMarkets.com
- I would be happy to explain my experience of dealing with central government on this concept over the years.

January 2011

Written evidence submitted by Anonymous

1. Outline of problems

- Lack of IT understanding at Manager level.
- Excessive reliance on large external software houses.
- Culture of Big Bang instead of Incremental Development.

2. I have 40 years experience in IT, including 25 years as a freelance consultant. I have worked on:

- Development of large Tandem based systems for Banking Systems.
- Testing of Health Systems.

As much of this work is subject to confidentiality restrictions, names of organisations are not given in this submission, however all examples given are from my own experience. For this reason please do not publish my name in connection with any of the examples listed below.

3. Working on various large IT systems, mainly Tandem Guardian based, I have observed significantly worse performance by both public bodies and large commercial organisations when developing IT systems. My experience is that a distinct pattern is present in failing systems.

4. Management of the Public bodies is at all levels recruited mostly from non-IT backgrounds. Typically the managers possess long experience of the needs of the Organisation, but not of the issues raised by the development of an IT system. This leads them to make errors of judgement on IT policy.

Example: a policy decision was made that users should be given whatever they asked for and implementation and performance issues were to be ignored. The result was serious implementation delays and when the project finally went live, users experienced response times of up to 15 minutes on some online queries.

5. Not having understanding of IT issues, Management tend to look to outside solutions:

- Structured Methodologies.
- Software Houses.

Both of these have a place, but both require understanding of IT within management. They are worthwhile but they are not the answer to the maiden’s prayer.

6. Structured Methodologies can contribute significantly to the quality and timescale of a project. They are not, however, a replacement for experienced and competent staff, and they do not guarantee a quality product,

especially when used without understanding. Used without proper understanding of their purpose they can become a source of unnecessary delays and a barrier to progress.

Example: Issuing a “specification” consisting of an inch thick folder of highly stylised information flow diagrams to a set of busy managers, who had no IT orientation, and asking them for comments within a few days. The specification was signed off by people who did not understand the implications of the system they were agreeing to.

Example: A project to handle new accounts required six months to specify and at least another 6 to implement. The delays became serious enough that one weekend a manager wrote his own system on his home computer, which ended up as the interim system. (I examined the program. It had many drawbacks, but two critical advantages, it was available when it was required and it worked.)

7. Software Houses can provide valuable external staff to cover peaks in workload. They can also bring in experience lacking in the internal management. They are however commercial organisations, providing staff at a substantial mark-up and not immune to unethical behaviour.

Example: Selling a system to a client on the basis of the Software House’s experience on similar systems. I was responsible for system design, and I was a newcomer with no experience of their software. The “experienced” programmers who worked the system were new employees who first had to learn the programming language involved. No-one on the project had the experience claimed by the Software House. None of this was revealed to the client.

8. Freelance consultants, such as myself, are less costly, and do not produce the same risk of being tied-in to one supplier. Consultants are not however a substitute for competent internal management. They should rather be viewed as a valuable resource requiring strong and knowledgeable management for effective use. They should never be viewed as taking away the need to build up a strong body of in-house experience. Example: I have known cases of costly external contractors being on the same job, on the same project for years at considerably more cost than an employee.

9. There is an understandable and reasonable desire by the internal management to tie outside suppliers down to a rigid formal specification, so that the product delivered may be assessed for quality. IT projects are however notorious for project creep, sometimes by genuine changes in user requirements, sometimes by technical issues which come to light during development. These contribute to increased costs, and provide an opportunity for the software house to exploit the client, who is now tied into them and has no bargaining power.

10. The above problems are exacerbated by a common belief that a Big Bang is the best way to develop a system. All IT systems, once gone live, are found to require unanticipated changes. The larger any phase of development is, the greater the risk of large and critical changes being required urgently once the system goes live. This produces more project creep, with additional costs and delays. Successful systems are always, in my experience, associated with an incremental approach, whereby each step is small enough that in the worst case it can fail, without causing significant problems, and in the best case a working system forms the basis for the next phase of development.

11. Strict standards are essential for good IT design. However standards must be relevant and fit for purpose. There is a tendency, in response to a genuine concern about slipshod and substandard work, to produce massively detailed standards, which either impede progress, or alternatively become ignored by tacit agreement.

Example: A Quality Protocol for paperwork which resulted in a delay of five days in releasing details of a program fix which had frozen payment to several thousands of recipients. The reasons for rejection included the font size of the date in the document footer. (In fact delays were avoided by giving the client the information verbally and off the record.)

January 2011

Written evidence submitted by Martin Caxton

I am the managing director of a small software house that sells software to local authorities. I make the following comments to your questions. Answers are in the same order as your questions.

1. Technology policy is poorly co-ordinated and appears to overlook significant factors when trying to integrate systems into an overall process. Student Loan collection system as a prime example. This has resulted in large numbers of incorrect payments and the inability to perform even the most basic of tasks to specify how much an individual owes at a given time.
2. From point 1 I suspect not very effective.
3. I cannot comment on this question.
4. IT use in design, delivery and improvement is patchy.
5. We aren’t in a post bureaucratic age so this question has no relevance.
6. Government has significant analytical skills but needs to focus on what is important and if it can afford to undertake the development.

7. Current practices work poorly and are over-complex.
8. Most have control over storage of data and network infrastructure. Must be realistic about security and not ask for American Defence Department standards for systems that no one is going to want to hack!
9. It will adapt poorly because it is still trying to start projects that although have benefits we currently can live without.
10. Government should not try to embrace new technologies and techniques without serious consideration. On the whole it should be very cautious. The current movement to Internet based technologies is negligent as the technologies are not robust and there are significant security implications. Obvious costs are being ignored to support incorrect conclusions.
11. Current approach to security etc is laughable and inconsistent. Realities need to be accepted.
12. Overall about the same as other countries.

January 2011

Written evidence submitted by Mario Devargas

1. *How well is technology policy co-ordinated across Government?*

Answer

My perception is that this is (has been) rather unstructured and assumes a certain level of personal links/involvement in the process, ie, if you are in the know you get the information—otherwise you normally do not get any information. In addition, coordination on this subject is normally delivered via “central government agencies/quangoes” etc. which is not always appropriate. Local Government is seen as second-class.

2. *How effective are its governance arrangements?*

Answer

My perception—very limited.

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

Answer

Absolutely NOT.

4. *How well is IT used in the design, delivery and improvement of public services?*

Answer

Sporadically—dependent on a number of factors—eg, CEO support (if there is any); Funding; IT Director’s vision—if he/she has any!; Business “hunger” to change—not as simple as it sounds; etc etc.

5. *What role should IT play in a “post-bureaucratic age”?*

Answer

Fundamental—without it, it will not deliver expected efficiencies, etc.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

Answer

The same old adage—we all need to be more “entrepreneurial”.

7. *How well do current procurement policies and practices work?*

Answer

Depends how they are used/abused? It can work—but the “interference” that Central Government projects on this area provide can misalign delivery—for example, if the best process is to follow OJEU—why confuse the issue with Catalyst-type framework when generally these DO NOT delivery the best price.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

Answer

None.

9. *How will public sector IT adapt to the new “age of austerity”?*

Answer

Who knows—with great difficulty I expect.

10. *How well does Government take advantage of new technological developments and external expertise?*

Answer

It does NOT.

11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

Answer

It is NOT—a sledge-hammer to crack a nut comes to mind.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

Answer

From my personal experience and perception—it depends who you compare with—for example, Germany, Nordic Countries, France, Spain, Italy—very badly; however, my perception in terms of Portugal, Greece, etc is good.

January 2011

Written evidence submitted by Common Software Measurement International Consortium (COSMIC)

SUMMARY

- This submission addresses a critical aspect of Q7 of the PASC inquiry on how well do current IT procurement practices work. As noted by the PASC, “central government is notorious for large IT projects running over time, over budget and ultimately failing”. One should add to this list that few parts of the public sector know how to control value for money on projects that are delivered.
- IT projects fail mostly because of the failure to manage the procurement of software. Repeated enquiries have recommended actions that, whilst all important, are insufficient to solve the problems.
- This submission recommends a set of practices to rectify the weaknesses, namely (a) adopting ways of measuring unit costs and hence value for money of supplied software, (b) sharing performance data across departments to establish norms for value for money and (c) adopting best practice at using these data to control value for money and delivery of new projects to time and budget. At present some parts of the UK public sector use practice (a); that is simply not enough.
- It is noted that software suppliers all measure their own performance (as recommended here) and make healthy profits whilst the taxpayer suffers all the cost overruns and delays. But it is not in the suppliers’ interests to educate their customers on how to manage them properly. Customers must learn how to be in charge.
- The methods recommended here have been pioneered partly in Australian government and partly by the COSMIC organization which has prepared this submission. Whilst the methods are not yet widely used by software customers, their take-up is increasing, with many reports from public and private sector organizations of excellent returns on investment. Some examples are given in this submission.

THE SCOPE OF THIS SUBMISSION

1. This submission concerns a very specific but critical aspect of Q7 posed by the PASC, namely: “How well do current procurement policies and practices work?”

2. The “specific aspect” is that procurement practices in much of the public sector do not give any reliable indication of the value for money it obtains from software-intensive IT systems and generally result in poor control of the procurement of systems to time and budget.

3. This submission is also relevant to Q6 and Q8 on the skills and assets the Government needs to own, and to Q9 on adapting to the “age of austerity”. We also address Q12 on how the UK compares to other countries with regard to government procurement of IT systems.

THE CURRENT SITUATION

4. Procuring IT systems means buying hardware and software, telecommunications services and sometimes new physical premises. But the usual cause of IT projects failing or being delivered late and over budget is difficulties with procuring the software.

5. Few parts of the UK public sector keep track of the unit costs of bought-in software and are able to judge value for money. As far as we are aware, no part of the UK public sector uses best practice to control delivery of software to time and budget.

6. Overcoming the problems of projects failing or being delivered late requires many well-known actions including good project management, clear and stable lines of accountability, clear specification of requirements, etc. These have been repeatedly recommended over the years and they remain vital. The missing ingredients—measuring value for money and using the resulting data to control the delivery of new software—will not alone solve the problems. But without these ingredients, the problems will continue.

7. Just four years ago, it was reported ^[1] that “approximately 30% of government IT projects are delivered to time and budget”. At that time, the CIO of the Department of Work and Pensions negotiated a pledge from 12 of the largest IT system suppliers that this figure would be raised to “over 90% within three to four years”. We suspect this initiative has got nowhere (the PASC should ask for a progress report). A 2007 study ^[2] of 105 outsourced UK public sector IT projects costing £29.5 billion showed that 30% were terminated prematurely and that the cost of overruns for projects that ran to completion was £9.0 billion (30.5%).

THE MISSING INGREDIENTS

8. Public sector customers for IT systems need to acquire three assets and the associated skills to exploit them.

- (a) Measurements of the amount of software required and delivered so that unit costs can be measured.
- (b) A common repository of unit costs and other performance data from all public sector software-intensive IT projects which can be used to share experience and to support contract negotiations with IT suppliers.
- (c) Processes by which customers can exploit the data to control and improve value for money and the delivery of new systems to time and budget.

9. It is important to note that the principal IT suppliers all have their own repositories of performance measurements for all their projects. However, it is not in their commercial interests either to share their data with customers or to propose any processes by which their customers could properly control their services. Lacking these data and processes, customers pay high unit prices and suffer the extra costs of overruns, whilst the suppliers continue to make healthy profits. There is without question a causal link between the inability of customers to measure and control their software suppliers’ performance and the poor service that customers receive.^[3]

A LITTLE HISTORY

10. In 1990, the Central Computer and Telecommunications Agency (CCTA) recommended that central government departments adopt a method of measuring software and using the measurements to determine value for money and for estimating future projects.^[4] Several departments responded, notably the Inland Revenue which has used the method successfully to help control value for money since its systems were outsourced in the early 1990s. A few other departments continue to use the method.

11. Unfortunately, there is no pooling of performance data across departments and there are no standard processes to exploit the data to control new projects. Attempts by departments to compare their price/performance against external benchmark data have been largely a waste of money.

12. About 10 years ago the Government of the State of Victoria, Australia, developed the “Southern Scope” process^[5] to help control the scope, value for money and delivery to time and budget of software projects. In 2005 they published results showing that by using this process they had reduced the unit cost of externally-supplied software by a factor of three and that the average cost overrun had been reduced from 84% to less than 10%. This method was presented by representatives of the Government of Victoria to the UK Office of Government Commerce, but no action was taken.

13. Although the emphasis of the PASC inquiry is clearly on the procurement of administrative systems, the methods recommended here are equally applicable to the procurement of real-time and embedded software. This is highly relevant to systems procured by the MoD and by some other departments. A pilot study, paid for by the MoD Procurement Agency, was successfully completed in 2002 of using the measurement methods on the Eurofighter software. No further action was taken.

THE EXPERIENCE IN OTHER COUNTRIES

14. The following are countries that we know have adopted some or all of the three ingredients (measurements, pooling of price/performance data, and a process based on Southern Scope).

15. *Australia*. The approach of the Government of the State of Victoria has now been adopted by the Commonwealth Government in Canberra.

16. *Italy*. Several years ago, the Italian equivalent of the OGC (“DigitPA”) published very comprehensive guidelines for the procurement of software covering all three ingredients. DigitPA maintains a central repository of price/performance data. There are anecdotal reports that they, too, have reduced the unit cost of software by a factor of three.

17. *Finland*. The Ministry of Justice has successfully piloted all three ingredients resulting in achieving a unit cost of software of €300, down from a range of €500 to €1,000.

18. The EC Directorate of Taxation and Customs Union (TAXUD) has been using all three ingredients for some years. Since 2006, TAXUD has required that each software supplier “shall justify the effort he/she quotes in his/her proposals/offers for software development, maintenance, testing and related documentation....” (by using methods recommended in this submission).^[6]

19. The Chinese, Japanese and South Koreans have established repositories of software project performance data, managed by national research institutes, to which public sector bodies contribute data.

20. Countries that in recent years have published studies by government auditors lamenting the problems of procuring software include Canada and the Netherlands.

21. There is no doubt that the public sector in most countries does not have proper controls on software procurement. The situation is not much better in the private sector, though these methods are being increasingly used, with some reports of an excellent ROI.

RECOMMENDATIONS

22. The UK Public Sector should:

- (a) adopt the internationally-standardised COSMIC software sizing method,^[7] a more advanced and general method than that recommended by the CCTA;
- (b) establish a repository of public sector software project performance data and use it to monitor and improve value for money in software procurement; and
- (c) adopt the “Southern Scope” process for software procurement and require software suppliers to follow it to ensure delivery to time and budget.

23. This work needs a small investment and will require a long-term commitment. Given the size of the prize, doing nothing is not an option, especially in this “age of austerity”.

(COSMIC is a voluntary, not-for-profit organisation of software metrics experts from the Americas, Asia/Pacific and Europe, founded in London in 1998. It is dedicated to improving practices in software measurement and project estimating. For more see www.cosmicon.com.)

REFERENCES

[1] “Suppliers agree to cut IT costs for Whitehall”, the Financial Times, 1 December 2006.

[2] “Cost overruns, delays and terminations: 105 outsourced public sector ICT projects”, Dexter Whitfield, European Services Strategy Unit, Research Report No. 3, December 2007.

[3] “Software industry performance—what you measure is what you get”, C R Symons, IEEE Software, Nov/Dec 2010.

[4] “Estimating with MkII Function Point Analysis”, CCTA, 1991.

[5] “Southern SCOPE: avoiding software budget blowouts”, the Government of the State of Victoria, e-Government Resource Centre, www.egov.vic.gov.au.

[6] Invitation to Tender documents issued by the EC Directorate of Taxation and Customs Union, 2006 through 2010.

[7] “Software Engineering—COSMIC-FFP—a functional size measurement method”, ISO/IEC 19761:2003.

Written evidence submitted by David Moss

WHITEHALL, RED LIGHT DISTRICT

1. INTRODUCTION

1.1 This evidence is submitted in response to the request issued by the Public Administration Select Committee (PASC) in their paper, *Good governance—the effective use of IT*.¹

2. CREDENTIALS

2.1 David Moss of Business Consultancy Services Ltd (BCSL) has 33 years experience in IT and has spent eight of them campaigning against the Home Office plan to introduce government ID cards into the UK.² Those eight years gave him some exposure to the ways politicians, Whitehall, trade associations, salesmen, in-house and external consultants and government contractors devise policy and implement it.

3. BACKGROUND

3.1 In the BBC TV series *Ian Hislop's Age of the Do-Gooders*,³ the editor of *Private Eye* examined the Victorian civil service. Senior appointments were given to the scions of the aristocracy, he said, who were necessarily incompetent, he implied, and it was only when Sir Charles Trevelyan introduced a meritocratic system of appointments by examination that the civil service and thus our public administration became efficient. Cut to an interview with Sir Gus O'Donnell, head of the home civil service, looking meritocratic.

3.2 We bathe warmly in this myth, but in reality the Victorians ran an empire with just a few thousand staff in Whitehall, whereas we now have millions of civil servants and we can barely run the UK. Look at Defence,⁴ Education,⁵ Health,⁶ and the economy.⁷

3.3 Sir Gus is the man who put together the coalition government,⁸ like an *éminence grise* of old. It seems like *lèse majesté* to say it but the facts can't be disguised, our meritocratic civil service is no good. Whitehall's performance is a disgrace. Its failures are documented in the media—nowhere more diligently, oddly enough, than in *Private Eye*⁹—and nary a viscount in sight. We want, need, deserve and pay for better government than this.

4 Transformational Government

4.1 The failure of Whitehall is acknowledged by Ian Watmore's paper *Transformational Government Enabled by Technology*¹⁰ produced for the Cabinet Office in November 2005—if government was working, it wouldn't need transforming.

4.2 The problem, according to Mr Watmore and his fellow CIOs (Chief Information Officers), is that frontline public servants don't know what they're doing and the solution, he says, is to replace them with computers, give everyone in the UK an electronic identity (eID) and let the computers allocate public services to the eIDs, using data shared between all government departments.¹¹

4.3 One question that exercises PASC, where does policy originate?

4.4 Mr Watmore's strategy is consistent with the European Commission's five-year plan, i2010.¹²

4.5 i2010 says that all EU states should move to electronic government,¹³ based on:

- OSCIE¹⁴—the open smart card infrastructure for Europe (= ID cards);
- and on Project STORK:¹⁵ “the ultimate goal of the STORK project is to implement an EU-wide interoperable system for the recognition and authentication of eIDs”.

¹ <http://www.parliament.uk/documents/commons-committees/public-administration/IQ%20final%20version1.pdf>

² <http://dematerialisedid.com/BCSL/Campaign.html>

³ http://www.bbc.co.uk/iplayer/episode/b00wh73v/Ian_Hislops_Age_of_the_DoGooders_Britains_Moral_Makeover/

⁴ <http://www.thetimes.co.uk/tto/news/uk/defence/article2843346.ece>

⁵ <http://www.thetimes.co.uk/tto/education/article2843683.ece>

⁶ <http://blogs.computerworlduk.com/the-tony-collins-blog/2010/12/more-npfit-craziness/index.htm>

⁷ <http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/5424014/Lords-say-tripartite-system-of-financial-regulation-is-a-failure.html>

⁸ <http://dematerialisedid.com/BCSL/AMT5.html>

⁹ Please see for example *System Failure—a Private Eye special report* by Richard Brookes on ‘How this government is blowing £12.4 billion on useless IT for the NHS’, 2 March–15 March 2007, issue no 1179.

¹⁰ <http://dematerialisedid.com/pdfs/transgov-strategy.pdf>

¹¹ <http://dematerialisedid.com/BCSL/Share.html>

¹² <http://dematerialisedid.com/BCSL/Festival.html>

¹³ So did the previous five-year plan, eEurope, ie *electronic* Europe.

¹⁴ <http://dematerialisedid.com/PDFs/OSCIE/documents.htm>, please see particularly

<http://dematerialisedid.com/PDFs/OSCIE/Download/04-1.PDF>

¹⁵ <http://www.epractice.eu/en/news/284632>

4.6 Did the Watmore-style notion of transformational government emanate from the unelected and unaccountable European Commission? Or was it the spontaneous idea of the meritocratic UK civil service? We members of the public don't know. Perhaps PASC could find out.

4.7 In the five years after the Cabinet Office paper:

- the UK was first an active participant¹⁶ in Project STORK pilot schemes and then lost all involvement;¹⁷
- the Identity Cards Act¹⁸ was first passed and then repealed;¹⁹
- after a not very successful time there Mr Watmore left the civil service to become Chief Executive of the Football Association; and²⁰
- despite our meritocratic civil service, there is absolutely nothing to show for transformational government in the UK.

4.8 You would think that the lessons had been learned:

- The Watmore plan is no way to deliver the “understanding of people” that PASC refer to in their paper—if you're going to offer public services, there is no substitute for the professional judgement and mature experience of frontline public servants. Certainly, computers are no substitute. Whitehall are going to have to stop despising the frontline.
- Governing people is difficult, but that difficulty can't be avoided. It certainly can't be avoided by pretending that government is no more than an extended case of stock control and that the civil service's job is to govern eIDs instead of people.²¹ Another PASC concern, the Watmore plan isn't post-bureaucratic, it's *purely* bureaucratic, people are cancelled out of the equation, if anything it's *post-human*.

4.9 But no. The lessons haven't been learned. So much for good governance.

4.10 Whitehall continues to try to implement what looks like i2010:

- after a not very successful time at the FA Mr Watmore is back in the Cabinet Office as Chief Operating Officer of the Efficiency and Reform Group;²²
- transformational government has been resurrected in the Cabinet Office, this time as—bit of a mouthful this one—the G-Digital Programme including the Digital Delivery Identity Assurance Project; and²³
- although the Home Office's ID cards scheme failed comprehensively, its ghost lingers expensively on.

5. THE G-DIGITAL PROGRAMME

5.1 It is devoutly to be wished that the G-Digital Programme should go the same way as transformational government—nowhere. The best we can hope for is to waste as little money as possible before failure is acknowledged.

5.2 The Cabinet Office claim that by putting all public services in a so-called “G-Cloud” on the web, and by consolidating and centralising and standardising, a new world²⁴ can be created in which public services are trusted, high quality, efficient and green.

5.3 This is the very opposite of the government's express desire for localism. The civil service cannot claim with a straight face to be planning to implement government policy—the government wants localism, Whitehall offers centralisation. Far from dutiful public administration, the G-Digital Programme looks more like contumely²⁵ or contemptuous provocation.

5.4 Mr Watmore strikes again? The G-Digital Programme is an acknowledgement that our meritocratic civil service has produced distrusted, low quality, inefficient and polluted public services.

5.5 How did we get into this mess? Why should we believe that the same people, given lots more of our money, can be magically perfected and do better? No reason.

¹⁶ <http://dematerialisedid.com/BCSL/Hall.html>

¹⁷ We are involved in none of the six current pilot schemes, please see <http://www.epractice.eu/en/news/357137>

¹⁸ <http://www.legislation.gov.uk/ukpga/2006/15/contents/enacted>

¹⁹ <http://www.legislation.gov.uk/ukpga/2010/40/contents/enacted>

²⁰ <http://www.guardian.co.uk/football/2010/mar/22/ian-watmore-football-association-resignation>

²¹ <http://dematerialisedid.com/BCSL/Frankensteen.html>

²² <http://network.civilservicelive.com/pg/pages/view/360546/>

²³ <http://gdigital.direct.gov.uk/>

²⁴ <http://gdigital.direct.gov.uk/gdigital/files/2010/10/101004-G-Cloud-Programme-Overview-V1.pdf>, please see slide 6 for the new world. Please see also <http://dematerialisedid.com/BCSL/New.html>

²⁵ <http://dematerialisedid.com/PressRelease24.html>

5.6 If obtaining public services requires access to the web, what happens to all the people in the UK who don't have access to the web? 9.2 million of them according to Martha Lane Fox.²⁶ How can the Cabinet Office avoid the charge that these people will be excluded by the G-Digital Programme? They can't.

5.7 Transformational government made no progress partly because the big departments of state refused to share their resources,²⁷ particularly the databases they maintain, full of personal information about all of us citizens. Why would they now change and agree to share? No reason.

5.8 There is some safety in keeping our personal information compartmentalised and considerable danger in consolidating it all into one big attractive honeypot. Do we want the departments of state to share? Are we mad?

5.9 How do you deliver public services securely over the web? It's difficult.²⁸ And the UK government has never demonstrated that it knows how to do it.

5.10 The G-Digital Programme holds out the messianic hope of a new world while ignoring the practical questions above. It is actually a very traditional and unimaginative sales pitch and we know, not least from reading *Private Eye*, that all the cost savings promised and all the service improvements promised are traditionally lost in the gulf between theory and practice, between dreams and reality.

5.11 No experienced stockbroker would have his or her name associated with this false prospectus and no reputable stock exchange would list the company.

6. THE DIGITAL DELIVERY IDENTITY ASSURANCE PROJECT

6.1 As far as is generally known to the public, the Digital Delivery Identity Assurance Project consists of one document and nothing more, a *Prior Information Notice*,²⁹ telling prospective suppliers of identity assurance services that the government could be interested in using them but there is no commitment to do so and no budget.

6.2 No need to stay in the dark, though—BCSL attended a meeting for prospective suppliers³⁰ and can shed a little more light on the project.

6.3 The point was made by the assembled suppliers spontaneously, repeatedly and emphatically that they could not be seen to be involved in the Digital Delivery Identity Assurance Project if there was *any* connection made between it and the Home Office's failed ID cards scheme. The same point was made by a representative of DWP, the Home Office's own peers.

6.4 It was the responsibility of the Identity & Passport Service (IPS) to deliver the ID cards scheme. IPS is an executive agency of the Home Office and had responsibility for ePassports, ID cards, biometric visas and the National Identity Register. They were assisted by the Home Office Scientific Development Branch (HOSDB)³¹ and by external consultants, most notably PA Consulting.³² And James Hall, their sometime Chief Executive, held the title Director General of Identity Services.

6.5 This is the organisation that could write in its framework agreement³³ that "in delivering its mission of "Safeguarding identity" IPS aims to be the trusted and preferred provider of identity services". (Failed.)

6.6 The Safeguarding Identity Strategy Group³⁴ was chaired by the Permanent Secretary at the Home Office himself, Sir David Normington. (Retired.)³⁵

6.7 And here we were at a meeting to discuss identity assurance. Was there anyone there from the experts, IPS? No. HOSDB? No. The Home Office? No. Was there any reference to the ID cards scheme or to the Home Office in the "high-level background information document" mentioned in the *Prior Information Notice*? No. The ID cards scheme is now unmentionable and IPS has become a negative brand.

6.8 Did the non-executives do their job over the years, or did they and Sir David just sit there and watch IPS implode? We don't know. What we do know is that five members of the Board of IPS have left since the election in May 2010.³⁶ And that IPS's remaining staff have pulled out of Globe House and retreated to the mother ship in Marsham St.

²⁶ <http://raceonline2012.org/manifesto/1>

NB this figure, 9.2 million, keeps changing and was 10 million not so long ago.

²⁷ Please see http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/31_07_07_fo4_idict.pdf, particularly the comments on "silo government".

²⁸ <http://dematerialisedid.com/BCSL/Clouds.html>

²⁹ <http://gdigital.direct.gov.uk/gdigital/files/2010/11/100924-Identity-Assurance-PIN-V1.pdf>

³⁰ <http://forum.no2id.net/viewtopic.php?f=2&t=33354&p=120504#p120504>

³¹ <http://dematerialisedid.com/BCSL/HOSDB.html>

³² <http://dematerialisedid.com/PressRelease25.html> and <http://dematerialisedid.com/PressRelease23.html>

³³ <http://www.parliament.uk/deposits/depositedpapers/2009/DEP2009-2942.pdf>, please see paragraph 2.2

³⁴ http://dematerialisedid.com/PDFs/13439_Safeguarding_Identity_w_opt.pdf, please see p.25

³⁵ <http://www.homeoffice.gov.uk/media-centre/press-releases/new-perm-sec>

³⁶ James Hall (Chief Executive Officer), Isabel Hunt (Executive Director, Communications and Marketing), Bill Crothers (Executive Director, Chief Information Officer and Commercial), Katie Davis (Executive Director, Strategy) and Vince Gaskell (Executive Director, New Service Implementation).

6.9 With no government money on the table, and no government commitment, prospective suppliers to the Digital Delivery Identity Assurance Project should clearly beware.³⁷

6.10 Under their current governance, so should most civil servants—they risk becoming unpeople like IPS.

7. THE IDENTITY DOCUMENTS ACT

7.1 IPS were meant to create a National Identity Register (NIR). Following enrolment on the NIR, every UK citizen over the age of 16 would be issued with an ID card. And, from 2012, we were all going to have our fingerprints recorded in our ePassports. The process was to be driven by passport applications—people would be registered when they applied for a first-time passport or for a renewal.

7.2 Announced in the same April 2009 press release,³⁸ CSC were awarded a £385 million contract to create the new passport application system that would be required and IBM were awarded a £265 million contract to create the NIR system.

7.3 With the passing of the Identity Documents Act, neither of these new computer systems is needed. So the CSC and IBM contracts have been terminated. Yes?

7.4 No.

7.5 These contracts continue to run and, thanks to the new *Opening up government* website,³⁹ we know that in the 6½ months between the election and the end of November 2010, IPS paid:

- £36,450,308.92 to CSC Computer Sciences Ltd; and
- £29,049,970.35 to IBM United Kingdom Ltd.

7.6 It appears that:

- the Identity Documents Act does not do what most people think it does,⁴⁰ ie kill the old ID cards scheme for good;
- Whitehall are not doing what most people think the coalition government want; and
- a lot of money is going into keeping alive Whitehall's dreams of a national identity register and a nation of eIDs.

8. THE HOME OFFICE'S ID CARDS SCHEME

8.1 In July 2002, the then Home Secretary, Rt Hon David Blunkett MP, issued his consultation document on *Entitlement Cards and Identity Fraud*.⁴¹ The pedestrian give-everyone-a-card-and-keep-a-list scheme proposed there was designed for the Home Office by Intellect,⁴² the UK trade association of IT suppliers, and would have been immediately recognised by Sir Charles Trevelyan and all other Victorians, including the Russian Tsars who introduced the *propiska*⁴³ system.

8.2 Did the Whitehall meritocrats notice the advent in the intervening 150 years of the mobile phone?⁴⁴ Or of digital certificates?⁴⁵ Probably. But they and PA Consulting⁴⁶ nevertheless let the scheme steam on for eight years before it finally hit the buffers.

8.3 There are management standards for government technology projects, most notably the gateway reviews⁴⁷ conducted by the Office of Government Commerce (OGC). A green light from OGC means the project can proceed, a red light means it must stop. The results of OGC's review of the ID cards scheme are well-known:⁴⁸ "This has all the inauspicious signs of a project continuing to be driven by an arbitrary end date rather than reality ... I conclude that we are setting ourselves up to fail". The project continued regardless.

8.4 There's not much point having project management standards if they're not followed.⁴⁹

8.5 OGC used to be part of HM Treasury. It has migrated now to the Efficiency and Reform Group in the Cabinet Office. In future, it is suggested, in its new home, OGC should be allowed to do its job, particularly strangling misbegotten government projects at birth.

³⁷ <http://dematerialisedid.com/BCSL/Risk.html>

³⁸ <http://www.whitehallpages.net/news/archive/185894>

³⁹ <http://data.gov.uk/dataset/financial-transactions-data-ho>

⁴⁰ <http://www.publications.parliament.uk/pa/cm201011/cmpublic/identity/memo/mid08.htm>

⁴¹ http://dematerialisedid.com/PDFs/complete_hi_r.pdf

⁴² <http://dematerialisedid.com/Capture.html#intellect>

⁴³ <http://dematerialisedid.com/Propiska.html>

⁴⁴ <http://dematerialisedid.com/Mobiles.html>

⁴⁵ <http://dematerialisedid.com/Dematerialisation.html>

⁴⁶ <http://dematerialisedid.com/Capture.html#pa>

⁴⁷ http://www.ogc.gov.uk/what_is_ogc_gateway_review.asp

⁴⁸ <http://www.timesonline.co.uk/tol/news/uk/article684968.ece>

⁴⁹ It's not just IPS. The Department of Health don't pay much attention to OGC either, please see <http://blogs.computerworlduk.com/the-tony-collins-blog/2011/01/the-dh-documents-that-mock-coalition-policy-on-openness/index.htm>

8.6 The House of Commons Science and Technology Committee conducted a thorough review and reported⁵⁰ that they were “concerned”, “surprised”, “regretful” and “sceptical” at the “confusion”, “inconsistency” and “lack of clarity” in IPS’s plans for ID cards.

8.7 To no avail.⁵¹ IPS simply carried on with their plans, ignoring the recommendations made. PASC will not want to feel that it is wasting its time like the House of Commons Science and Technology Committee. In future, it is suggested, no government project should be able to treat a select committee so disrespectfully—committee recommendations should be incorporated into gateway reviews.

8.8 The ID cards scheme depended crucially on reliable mass consumer biometrics.⁵² IPS’s predecessor, the UK Passport Service, tested the biometrics proposed for the ID cards scheme in a large-scale field trial⁵³ and they failed. IPS ignored the evidence and carried on. They would fail GCSE Science.^{54, 55}

8.9 This matter was brought to the attention of Sir Michael Scholar, Chair of the UK Statistics Authority. He was unable to intervene—he can only act in the case of official statistics, and IPS was operating without any official statistics on biometrics.

8.10 Sir Michael says that⁵⁶ “one of the reasons I took this job is that having good statistics is like having clean water and clean air. It’s the fundamental material that we depend on for an honest political debate”.

8.11 In future, it is suggested, any government project that depends on a particular technology being reliable should require official figures, checked by the Office for National Statistics,⁵⁷ proving that the technology is reliable before the project can proceed. Without that, there is no honest debate.

8.12 And there wasn’t. For example, on 29 January 2009 the Home Office issued a press release, *Benefits of ID cards for Manchester*, containing at least 10 misleading assertions,⁵⁸ How can that happen?

8.13 The misleading assertions continue. For example, the UK Border Agency continues to spend money on so-called “smart gates” at 10 UK airports. Smart gates depend on face recognition, the most spectacularly unreliable biometric of all. There is no support for the claim that smart gates enhance national security.⁵⁹ And yet the money continues to pour out. How can that happen?

8.14 By the time the ID cards scheme was cancelled, there was nothing to show for it.⁶⁰ IPS hadn’t even worked out how to use ID cards to verify people’s identity.⁶¹ They didn’t even have an agreement with other government departments to use the scheme.⁶²

8.15 What were IPS and its predecessors and all their consultants doing all day, every day, for eight years?

8.16 And what naïve presumption led them to believe, until Sir James Crosby corrected them,⁶³ that they were competent to insert their scheme into the nation’s payment systems?

9. CONCLUSION

9.1 As PASC note, “central government is notorious for large IT projects running over time, over budget and ultimately failing”. The remedy reached for in the past was to introduce private sector staff and skills. Whitehall is now knee-deep⁶⁴ in private sector consultants and contractors and has been for decades and it hasn’t helped—that wasn’t the solution.

⁵⁰ <http://dematerialisedid.com/PDFs/1032.pdf>

⁵¹ For related correspondence with the Home Office, please see <http://dematerialisedid.com/Open2.html> and <http://dematerialisedid.com/Open.html>

⁵² <http://dematerialisedid.com/Register/regBiometrics.pdf>

⁵³ <http://dematerialisedid.com/Evidence/Biometrics.html#trialresults>

⁵⁴ <http://dematerialisedid.com/BCSL/Garlic.html>

⁵⁵ <http://dematerialisedid.com/BCSL/Tsunami.html>

⁵⁶ http://www.publicservice.co.uk/feature_story.asp?id=11442

⁵⁷ For related correspondence with the UK Statistics Authority and the Identity & Passport Service, please see <http://dematerialisedid.com/BCSL/UKSA.html> and *Fantasy and the Home Office* at <http://dematerialisedid.com/BCSL/Tulipmania.html>

⁵⁸ For related correspondence with the Home Office, please see *Confusion and the Home Office* at <http://dematerialisedid.com/BCSL/Tulipmania.html> and particularly the 4 February 2009 letter to Sir David Normington.

⁵⁹ For related correspondence, please see *Danger and the Home Office* at <http://dematerialisedid.com/BCSL/Tulipmania.html>

It should be clear from the correspondence that Lin Homer and Brodie Clark of UKBA were considerably more helpful than anyone else BCSL dealt with in Whitehall.

⁶⁰ <http://dematerialisedid.com/CiF/Review.html>

⁶¹ http://ips.gov.uk/cps/rde/xchg/ips_live/hs.xsl/1977.htm
Please see paragraphs 1.3, 2.6, 3.13–14.

⁶² *ibid*, paragraph 3.8

⁶³ <http://www.dematerialisedid.com/BCSL/Crosby.html>

⁶⁴ For example, Michael O’Higgins, Chairman of the Audit Commission, is a former managing partner of PA Consulting. For example, James Hall, retired chief executive of IPS, is a former managing partner of Accenture UK. For example, in July 2005, it was revealed that “at least 62 consultants are working alongside 43 civil servants and one secondee” on the ID cards scheme, please see

<http://www.managementconsultancy.co.uk/management-consultancy/news/2139556/pa-consulting-paid-12m-id-cards> and <http://www.accountancyage.com/accountancyage/news/2139802/pa-consulting-bill-id-cards>

9.2 Whitehall and its consultants ignore scientific evidence, they ignore select committees and they drive straight through OGC's red lights.

9.3 The "effective use of IT" that PASC seeks cannot be delivered by Whitehall as currently constituted. Their performance proves that beyond doubt and there is no point debating the matter further. They couldn't deliver transformational government and ID cards. They can't deliver the G-Digital Programme and the Identity Assurance Project.

9.4 It looks as though every other form of governance has been tried and failed. BCSL suggests therefore that the appointment of senior Whitehall officials should be subject to a vote and that it should be possible to vote them out of office. BCSL is a Whitehall outsider.

9.5 John Suffolk, the outgoing government CIO, suggests that the top 200 posts in Whitehall should be put out to open competition.⁶⁵ Mr Suffolk is an insider.

9.6 He is also an advocate of the G-Digital Programme. Whether an outsider or an insider, whether a supporter of G-Digital or not, a number of concerned people seem to be coming to the same conclusion—some major reform of Whitehall is needed before the long-suffering taxpayer⁶⁶ will see IT used effectively by government.

January 2011

Written evidence submitted by Pat Keane, Bracknell Forest Borough Council

1. *How well is technology policy co-ordinated across Government?*

The perception for this local authority, or more correctly this CIO, is that it could be a lot better. Examples are the fact that we were one of the lead authorities in adopting the use of our GCX connection as our N3 connection. That's gone well but we have two different forms of dual authentication to now manage, smartcards for N3 and tokens for the EAS for Benefits.

2. *How effective are its governance arrangements?*

Appears to be disjointed and inconsistent and not really aware that it's happening at anything but the department level.

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

Not sure they have or at least it's not clear to me. In fairness this may be because I've not dug deeply enough to find the outcome of any post implementation reviews that have been undertaken, but maybe these need to be more clearly signposted in this age of Transparency. I'd include local government in that. Maybe we should post our PIRs on our sites. Might help reduce some FoI requests.

4. *How well is IT used in the design, delivery and improvement of public services?*

This comment goes for all level of government, local and central. As with all things some are better than others but in general the perception is that the service is designed and possibly even implemented and then technology is laid on top rather than being intrinsic in the service design.

5. *What role should IT play in a "post-bureaucratic age"?*

Following on from the previous question it should be actively involved in service design/redesign or the implementation of new services. Maybe the first thing that should be thought about is the iPhone, iPad or Google app rather than the large back-office/engine room approach of the past. IT needs to be there at the table right from the start.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

Government has a captive audience which includes almost every member of society in some shape or form. This needs to be exploited to a much greater extent to engage with as many as possible. Not sure we currently have the skills, although we attempt to be customer focussed and have greatly improved these skills in the recent past. We do understand bureaucracy, as we invent most of it so we must be able to use our skills to reduce it.

⁶⁵ <http://blogs.computerworlduk.com/the-tony-collins-blog/2011/01/outgoing-government-cio-says-re-compete-top-200-jobs/index.htm>

⁶⁶ <http://dematerialisedid.com/BCSL/VFM.html>

7. *How well do current procurement policies and practices work?*

I'm afraid they don't. The EU procurement regulations and even OGC frameworks do not allow for rapid purchasing/deployment and while government at all levels appear to be quite good at purchasing or putting contracts in place it's not so good at ongoing supplier/contract management. OGC and other simply help you buy!

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

PSN is a good start in my opinion, owning the network is important and making it easy for all to use would be great. EAS is also a good start but needs to be a single solution across all government.

9. *How will public sector IT adapt to the new "age of austerity"?*

Again I think this will vary from those organisations that sees it as an enabler that may need investment to those that just see it as a cost centre that needs to take its fair share, or more, of the cuts.

10. *How well does Government take advantage of new technological developments and external expertise?*

Not well. Seems to find a solution and then look for a problem. In my opinion this was exemplified by first implementation/iteration of Government Connect. It was only when the burning platform of Benefits was introduced that things really began to move.

11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

Too draconian and seen as a hindrance by most outside of the security industry. Initiatives like Mydex need to be watched carefully as they turn the paradigm on its head making the individual responsible for their own data and its security. It will be very interesting to see how this develops.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

Not sure I can comment really, although I should be able to!!

January 2011

Written evidence submitted by David S Chassels

Author: David S Chassels CA. Current CEO of software technology company Procession plc, former partner BDO and executive with ICFC/3i.

The emphasis in this submission is on the supply of software applications with specific questions being addressed namely:

Number 6 "*What skills does the government have and what are those that it must develop in order to acquire IT Capability?*" and

Number 10 "*How well does Government take advantage of new technology developments and external expertise?*"

SUMMARY

The past

- Since closure of OGC Research unit in 2002 the UK Government has been the uninformed buyer.
- The official policy has been that the prime contractors are expected to do the best for taxpayers.
- None of the prime contractors have in place a review process to look for customer cost saving technologies.
- The reality is that industry analysts are conflicted in being reliant on vendor revenue.

The future

- It is vital Government understand what they are buying and they (not the prime contractors) chose outcomes that platforms technologies support best value and future proof investment by asking the right questions of the technology vendors (see Appendix B).
- Government as the largest buyer of IT need to be in control by being aware of innovative technologies that set new standards that others must reach if they wish to supply government solutions.

- There needs to be transparency in all relationships involving vendors the prime contractors and use of SME subcontractors, the latter should be governed by a code of conduct.
- External advice can be valuable but needs to be impartial and free of vendor influence.

CURRENT POSITION

There is undoubtedly a new attitude of support for innovation in IT coming from the now empowered Cabinet Office with some practical initiatives coming from the UK CIO office such as the “skunk works” and “hack days”. However there are powerful forces to maintain status quo but to tackle the historical IT “mess” (see industry comments in Appendix A) will be a longer exercise that requires firm resolve.

1. *Background*

This submission is presenting evidence from the “journey” by Procession as it tried to attract attention of government with its innovative technology for use in IT contracts. However this is typical of the experiences of many UK based innovative technologies and will give an insight into both the government issues and the nature of the way the supply industry works very often counter to the interests of the taxpayer.

2. *Structure of the supply industry*

Whilst the product set is “immature” the supply industry has all the characteristics of a mature industry where much consolidation has taken place over the past decade. We are now left with only four global suppliers of the core enabling technologies; three global giants IBM, Oracle, Microsoft and one niche player Progress. From such core technologies solutions are built either a custom coded solution or a “product” that addresses a typical business problem where the business moulds its activity to suit such solutions (It is called Custom Off The Shelf—“COTS”). In more recent years new “tools” have been built that address the building of specific business requirements but they remain part of quite a complex stack of technologies. Most are US backed and the best are acquired by the large vendors as they reach a sufficient sales traction to make an acceptable acquisition to the financial markets. Unfortunately this results in such “old” technologies being sold on to end users.

3. *Innovation a vendor perspective*

We now have a clear global domination by a few major US based players. They maintain such a position by building strong ecosystems of end user suppliers many of whom are UK Government suppliers. The investment by both groups is considerable and as such militates against step change innovation. This is a well known issue known as the “innovators dilemma”. *“If they adopt or make new products that are simple to implement and easy to use, they will lose their massive streams of services revenue. Their sales models are based on selling big deals. A switch to simplicity will crater their businesses”*. There are therefore significant vested interests that could be adversely disadvantaged with step change or what is termed “disruptive” innovation which rarely if ever comes from dominant suppliers.

4. *UK Government on Innovation*

In 2002 OGC shut down a research unit which was recognised as a resource that allowed a review on new technologies and methodologies. By chance Procession visited OGC in Norwich as the unit was closing. There was genuine interest but subsequently it became clear that any procurement of solutions and services was based upon relying on competitive tendering using technologies that prime contractors deemed suitable—an obvious conflict for such as IBM supplying both technology and services direct. Over the years whilst many departments sympathised and recognised the lack of support for innovation no one took responsibility. This came to a head in 2008 following a clear message from the then newly set up Treasury Efficiency Unit that anything in “IT” was responsibility of UK CIO office. An exchange and subsequent meeting made it clear that there was no mechanism in place to encourage innovation and that they relied on the prime contractors to do the best for taxpayers. The recent moves to bring all IT under responsibility of the Cabinet Office will remove such “misunderstandings”.

5. *UK Government contractors attitude on “innovation”*

Over the eight years it was suggested on several occasions by OGC executives that an approach to their “Catalist” suppliers should be made. Without exception such approaches just were not taken seriously. One made the point it was up to the customer ie the government to make such choices. There was one notable introduction following a meeting with OGC chief executive Peter Gershon and his deputy Bob Asserati who acknowledged they were not equipped to express a view and made an introduction to Capita. Despite diligent follow up Capita rejected out of hand with no meeting or even a discussion. (Just to put into perspective Procession technology is regarded by many as “state of the art” indeed such capability is regarded as the future of software by no less than Bill Gates). This just sums up the arrogance of the supply industry who exploited ruthlessly a customer who had no idea what they are really buying into.

6. *So who does advise buyers on procurement of "IT"?*

Truly independent advice is very hard to come by and from experience comes from individuals who have practical experience and understanding of the issues. The world's recognised leading analyst is US based Gartner. However they rely on 25% of their revenue coming from vendors. Their research into new innovative technologies is woefully short of their claims and consists of a 40 minute telephone briefing of which half is selling their services. Their headline claim "*LOOKING FOR ANSWERS? World-class technology research to meet your needs*" is quite sales driven and lacks substance. This is based upon a number of attempts to get them inside and also the experience of many others.

7. *How do Government department specify requirements?*

In 2009 we had an insight into the procurement of a new system at DWP for the Child Maintenance and Enforcement Commission (CMEC). This was a contract placed with TCS to be built in India at a cost of £50 million with two years to build. This basically is a system to assist mainly mothers requiring help to look after their children where the fathers have failed to support. By good chance we had an insight into the specification after it had been awarded. In summary we were quite shocked this should have cost no more than £5 million. The attached is a final letter in Appendix A sent to the then DWP Permanent Secretary. I concluded (after consulting informed parties) that specifying requirement from a systems perspective was at the core of the problem where requiring to using "old" components just ensures a complex and lucrative build for suppliers. Disturbingly no one has investigated our claims of the savings. Again this is evidence that no one was taking responsibility and highlights the importance of Government understanding just what they are buying into when they require new capability in applications.

8. *How does Government take control for effective IT?*

The following suggestions are based upon eight years of persistence and discussions with many who have had the same concerns:

- Become the informed buyer by understanding what is available. This requires asking the right questions see appendix B. These need to be directed to the suppliers of the core enabling tools namely IBM, Oracle and Microsoft. There is nothing to stop government specifying in their contracts outcomes required on the technologies to be used.
- Such an exercise should be on going to encourage innovation that is relevant to Government contract requirements. Mechanisms can be put in place such as the proposed Government "skunk works" to both assess and communicate expected outcomes to the procurement units.
- Specifications should be driven by the people user (internal and external) requirements not driven by legacy components which may or may not have a role to play in the new end to end application.
- Transparency in all relationships is a must just as is being adopted by this Coalition government in other activities. This would include banning use of analysts who are paid by vendors and a code of conduct for prime contractors in dealings with sub contractors.

APPENDIX A

TEXT OF LETTER FROM DAVID CHASSELS TO DWP

17 September 2010

Sir Leigh Lewis
Permanent Secretary
Department of Work and Pensions
4th Floor
Caxton House
6-12 Tothill Street
London SW1H 9DA

Dear Sir Leigh

Government IT procurement and CMEC

I refer to our exchange of letters earlier this year. I have now a better understanding of the real problem which has resulted in the Department in particular and Government in general buying complex outdated thus expensive IT. Early this month an article appeared in ZDNet about the state of "IT". The title summed it up "IT today: Unsustainable, unhealthy and just plain screwed". It takes for granted the government is in a mess and basically supports my views that the large vendors have little interest in innovation. It concludes "Add it up and IT is a mess. And chances are your IT organization is a disaster too. The big questions: What are you going to do about it? Where do we even start?"

My experiences and investigations will, I hope, help DWP address these serious issues. I concluded quite quickly there is someone or group in DWP IT that are the real problem. It is not with Duncan Mcgugan who I meet up in Warrington. He may not have grasped the total capabilities thus implications of our technology

(which even Bill Gates sees as the future) but he has a very sound understanding of the people and process approach.

In discussions with well informed people I conclude that your “systems/enterprise architects” are the problem. They dictate from a technical aspect of the existing system and not from a business perspective. I assume you investigated what happened to my original contact with DWP about a new approach and I can only assume this group dismissed it out of hand. I know from others who have in the past tried to suggest different thinking they are ignored with, as one person put it, a degree of arrogance only matched by ignorance of how business really works.

As for suppliers I have no doubt that they have been negligent in failing to “do the best for taxpayers”, a flawed policy by the last government. However the feedback I have had is summed up by a comment I received from a supplier. “If the Dept has set out a procurement that asks for details of our apples and oranges we are going to score no marks for telling them that they are asking the wrong questions.....” So they go for the £50 million on offer, the fact it could be £5 million is bad business for them.

As for procurement it is just a process where they work to set guidelines and instructions from the systems architects. I am sure the process was correctly followed and all boxes ticked but the whole process was flawed from the very start. As a result the DWP in one contract will have wasted in excess of £45 million with more inefficiencies and costs to come under the consequentially flawed framework agreements involving seven large companies. I have to remind myself this is a system to help families where there is an errant parent. I suggested it should be no more than £5 million but in reality could be half that.

I and many others believe you have a seriously flawed approach to “IT”. Of course you need systems people that understand the current complexity but to build new capability should be about your people working in their daily jobs to achieve outputs that deliver a good service to the public. It is a dynamic environment where there will be constant change whether through new policies or just looking to work in more efficient ways.

I believe you should have business analysts skill set in house who understand how people work and the information that is needed and from this new systems can be rapidly built. It is a bottom up approach. My recent papers sent to your office explain just how it can work.

Finally you may find of interest some research. Apparently it is recognised the quality of Government IT systems in the leading economies with the inverse link between that and the dominance of large ICT companies in that country. Unsurprisingly, but depressingly, the UK is singled out as the worst of the developed countries, with Holland ranked as the best. You just have to look at the two structures. The Dutch focus on “expertise” and have a link to their scientific council and there are initiatives that encourage bottom up activity. In contrast the UK emphasis is on the policy and procurement process, no mention of “expertise” or research and a resultant top down command and control approach.

We as a country do not have time to pull our punches as we are in crisis and IT has certainly contributed but likewise adopting innovation can help fix. I write this with the best of intentions to contribute to trying to fix our country for future generations. I am pleased that the current government have such relevant changes on their agenda.

APPENDIX B

QUESTIONS TO VENDORS ON THEIR TECHNOLOGY

1. Agility in software to support change—this must surely be a priority?
2. Ability to produce quickly prototypes reflecting the end user/business need to engage early feed back,
3. Ability to connect to legacy systems.
4. Use of open source.
5. How much custom coding is required to build custom solutions and is it accessible.
6. Does any model capability reflect what is actually deployed.
7. Reusable features to speed up future development.
8. Flexibility in build of working user forms and ease of change.
9. Ease of delivering as a service or from cloud (thin client?).
10. Scalability.
11. Shared service capability.
12. How many proprietary tools are required to address the following and if branded under one toolset detail of when acquired or built, state of integration as one and lines of code or file size.
 - BPM focus on people and their processes.
 - Process engine to ensure all works to plan.

- Rules engine reflecting real world of compliance.
- Calculation engine automating system work.
- State/ instance engine *Real time feed back*.
- Workflow *everything connected in right order*.
- Audit trail, events, escalations = *supporting control = empowerment*.
- Time recording supports activity based costing.
- Real time reporting become predictive.
- Build mash ups one screen multiple data sources.
- Linked Ajax Grids faster access to related data.
- Roles and performers people and machines.
- Management hierarchy *who sees what*.
- E-mail and correspondence control *tracking external communications*.
- Collaboration by accessing remotely required files = *efficiency in storage*.
- Data storage *link between front office and back office*.

January 2011

Written evidence submitted by the Centre for Effective Dispute Resolution (CEDR)

CEDR is an independent, non-profit organisation with a mission to cut the cost of conflict and create choice and capability in dispute prevention and resolution. It is the largest independent alternative dispute resolution body in Europe and offers leading expertise in consultancy, training, and coaching to enhance skills and capability in negotiation and conflict management.

Working in the UK and internationally CEDR works across the public and private sectors and has provided training and guidance for a number of Government bodies in the UK and other jurisdictions. (See <http://www.cedr.com>)

KEY POINTS

- The key points in this short response summarise the guidance note on Alternative Dispute Resolution (ADR) and conflict management produced by CEDR for EURIM. The guidance note forms supplementary material and can be accessed at: http://www.eurim.org.uk/activities/psd/ADR_expanded.pdf
- CEDR's response refers to one issue in particular identified by PASC in its issues and questions paper:

Question 6: *What skills does Government have and what are those it must develop in order to acquire capability?*

- EURIM identifies that one skill gap is the awareness and use of ADR.
- The supplementary material refers to two aspects of the ADR and conflict management skill gap. The first is a more detailed understanding of available dispute prevention mechanisms. The second, and most often neglected, is awareness of aspects of effective communication and negotiation which form the core of those mechanisms.
- Maintaining good working relationships for better project delivery is no revelation but it has been submerged under concepts of partnering and alliancing which focus more on the joint intentions of the parties regarding the project than they do on the skills they need to work collaboratively to achieve those intentions.
- Project participants need to be “conflict literate” and understand that project failures are more likely to occur in an atmosphere of blame avoidance. This is associated with another point EURIM makes in its response, that key messages from unsuccessful IT programmes have not been learned. That, perhaps, is not surprising when the culture of blame is allowed to permeate a project and more so when a project is abandoned.

January 2011

Written evidence submitted by Michael Phythian

1. *How well is technology policy co-ordinated across Government?*

Historically, technology policy has been poorly coordinated across central government, with minimal consultation or involvement with local government. This had started to change over recent years with the Cabinet Office CIO successfully establishing communication between central and local government and a number of partners. The traditionally limited number of private sector partners involved had constrained government to expensive solutions that had limited ability to adapt in a quickly changing world, unlike the variety of options available to local government—that was until the recent tendency for suppliers to start monopolising in that market, too. The relatively quick work in considering the Public Sector Network from a joint local-central view is an excellent example of what can be achieved, and the absence of a number of departments from these discussions should be highlighted and brought under some central control.

2. *How effective are its governance arrangements?*

Are there any governance arrangements? Each government department appears to do its own thing, which causes further confusion when these multiple approaches have to interface with local government—which traditionally has the majority of regular contacts with the majority of citizens. Any governance arrangements need to be considered from the view of the citizen and worked backwards, before being considered back-to-front.

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

It would appear not—are post implementation reviews ever carried out?

4. *How well is IT used in the design, delivery and improvement of public services?*

Public services should be designed and improved in cooperation with the users (citizens). Only then should ICT be considered as a method of delivery.

5. *What role should IT play in a “post-bureaucratic age”?*

PBA is political dogma. If this means returning to the likes of New Public Management and similar failed three-letter-acronyms, it should be kept well away from technology policy!

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

Government has all the necessary intelligence. It needs to assist those with potential, to rise above the bureaucracy and develop and apply the necessary skills.

7. *How well do current procurement policies and practices work?*

In a complex manner, permitting largely only those major organizations with adequate resources to take part.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

One Public Sector Network (PSN) of networks with access to a sufficient choice of data storage and provision to reduce costs and duplication for the whole of the public sector but assuring savings for all those partaking.

9. *How will public sector IT adapt to the new “age of austerity”?*

As it has done before. By being fed on by the private sector vultures already circling above. It will then have to be rebuilt again in a period when austerity is accepted as just a time of “lean thinking”. Perhaps we should examine the learning from Canada following their “age of austerity” a few years ago?

10. *How well does Government take advantage of new technological developments and external expertise?*

Learning should be done by considering the model of “new conditionality” proposed by , where increasing policy system complexity is developed because it is technically possible, rather than due to the necessity of process. Simpler processes would allow understanding by citizens and policymakers whilst costing less to implement technically. Unless it can facilitate or reduce the costs of the services, or alternatively improve the democratic process, it is not the position of government to take advantage of new technological developments. As to external expertise, consultancy of any sort comes with a cost, which should be evaluated against any potential benefit before committing to it. If it’s just an opinion being sought, this should be achieved on a pro-bono basis where additional assistance may be forthcoming, dependent upon the quality of the initial expertise.

11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

It needs to balance the civil and the military without letting one control the other as it appears to do now under CESG's control.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

I'm not aware that any country, other than the likes of Singapore, has managed this well—on that model some central control of the implementation might be an idea?

January 2011

Written evidence submitted by Alex Stobart, Enterprising Scotland Limited

- There is no effective IT policy or governance across Government. Whitehall departments fight for their independence at all times, and Cabinet Office is too weak to stop this.
- EU procurement law encourages antagonism, confrontation and contributes to poor outcomes. IT service design should be a collaborative, iterative process, not a red v. blue corner fight.
- There is conflict between the existing government public service providers, IT companies, innovators and the public. Citizens play next to no role in IT service design, so it is no surprise that what is constructed is rarely fit for purpose.
- Existing Government IT procurement only involves government civil servants and suppliers. It neglects, even excludes citizens, SMEs and innovators.
- Government will salami slice IT spend in this “age of austerity”, when what it should do is totally re-assess its procedures and roles & responsibilities with a systems thinking review that includes innovators and citizens.
- The UK Government is “institutionally incapable” of effective procurement and application of IT systems. 30 years of hurt requires radical re-appraisal.

Q1

1. There is no apparent IT policy across Government. Nor is there much co-ordinated policy of any description across Government. Government appears to be a collection of Whitehall departments; IT purchasing is one more way of protecting themselves by designing complexity, and building deeper and deeper, and more and more intractable systems eg NHS for IT. Large firms and consultancies only add to this accretion of inept service offerings.

Q2

2. Again, it appears that IT governance across Whitehall is seemingly non-existent. The Cabinet Office has not delivered effective IT design and standards, and the OGC is incompetent in respect of IT procurement. Departments and third party vendors are well able to exploit civil servants' vanity, Ministers' ambition or find other means to purchase whatever they want.

Q3

3. No, because they have no teeth. Where there are jobs for life, no sanctions for failure and no regard to cost or value, as has apparently been the case for the last 30 years, it is not surprising we are where we are. No civil servant has ever been held accountable, let alone sacked for wasting something like £ 16,000,000,000 on NHS for IT. If this one carries no sanctions, what will? The public are left bemused.

Q4

4. IT is generally used extremely poorly, with some exceptions. Government is wasteful and still bingeing on the 1997–2009 spending boom. It is unable to think or act like the people it is supposed to serve. Public servants are easily entranced by the Big 4, or management consultants. SMEs and sole traders are not heard.

5. Trade bodies like Intellect further cement the cosy relationships, much like the MOD and Defence contractors. Value for money, and fit for purpose come second to oligopoly behaviour. “No civil servant is sacked for buying IBM”. “No citizen receives value for money from Government ICT spend”.

Q5

6. A post-bureaucratic age is:

“... about showing an understanding of people, in how we make policy and design government and public services..”

7. <http://www.demsoc.org/blog/> quotes amongst others the CX of Brighton Council:

“There is a three-way divide between existing public service providers, who understand the context and constraints on change, the public themselves, who give legitimacy and are best able to articulate their needs and aspirations, and innovators both inside and outside traditional public service organisations.”

Government (central or local) IT public service providers traditionally show very little regard for people and the public; they are not consulted in service design, so the solutions we receive are very poor. There has been a paper on post-bureaucratic IT **The report—“Better for Less: How to make Government IT deliver savings” (iBook here)—investigates the quagmire of government IT.**

8. The British government currently spends somewhere between £16 billion and £23 billion on IT every year. The astonishing lack of clarity over expenditure is symptomatic of appalling failures in IT strategy, procurement, and process. This cannot be allowed to continue, especially during a time of spending cuts in frontline services. The annual cost dwarfs some government departments. It is three times the amount we spend on the army, more than the Department for Transport. Worse, it has been designed badly and, unfortunately this time, the process has been built to last. The problems come from ineffective procurement—much of which is waste.

9. Prof. Stephen Coleman in his paper “The Network-Empowered Citizen” describes why we need to take these new digital movements seriously and find some way to connect them to our decision-making processes:

***Governments must learn to engage constructively with online civic networks.** Engaging with entails more than nodding recognition and occasional funding. Rather than inviting citizens to visit badly-designed government web sites to find civic information or interact with elected representatives, politicians and officials should be going to the civic networks in which people articulate and represent their own interests and values—and they should be pointing other citizens in the same direction. Just as in the past politicians spent many evenings in drafty civic halls or behind tables in public libraries, they should now be seeking out and entering into dialogue with the online networks that represent the new loci of active citizenship.* (Coleman, Networked Citizen)

10. I would contend for example, that NetMums and other informed citizen’s groups and social enterprises/ third sector players plus a local authority and an innovative service design company could potentially procure a more effective IT system for “children 0 to 18” and their life experiences, than 8 Whitehall departments and 400 English councils. The UK government is centralising and vertical; it prefers to deal with lobby groups and big suppliers, not citizens and representatives’ groups.

11. Our lives as people growing up are **not** lived following the EU procurement law rules, and UK civil service specifications of IT systems. That’s why the outcomes of the latter do not ever do what we would want. We therefore all waste billions of hours and pounds living with the consequences. Have you ever tried to get HMRC to answer the phone? Since the Aspire contract, wait times have doubled and service standards fallen by 50% again. If people, businesses and charities organised the tax system, re-designed it and built it, we could not do any worse.

Q6

12. Some might argue Government needs very few IT skills other than the ability to commission. All other activities can be out-sourced. Suffolk Council have decided this is the route for everything they do.

Q7

13. UK government procurement is inherently flawed and fails us over and over again, because EU law encourages antagonistic, confrontational and competitive behaviour between Government and supplier. As configured in the UK, it is presently a Prisoner’s Dilemma with no way out. Iteration, dialogue, collaboration, step by step co-production, joint research and development do not happen.

14. Glaxo would not develop a drug by specifying a “set of deliverables” tender document, then walking away and waiting for bids. Why does Government expect to develop IT that is fit for purpose through slavishly following EU procurement? The UK government must follow agile procurement methods, work with SMEs and service design companies, and talk with users, to re-design IT.

Q8

15. Infrastructure could all be owned by third parties. Private data must be owned by the individual. At present, UK government probably has 350 views of me and my data. None of them will be completely correct. Life would be so much easier if I maintained my private data, and told government of changes, or when I wanted my data used. There is a proto-type by Mydex of personal data stores which is encouraging <http://mydex.org/prototype/>

Q9

16. Government will adapt to “the new age of austerity” by salami cuts. This is sub-optimal. What it should do is take the opportunity to look at Singapore, or Estonia and re-configure along systems thinking lines. What do people want from government; how would innovators design and deliver it; and how does IT support it?

17. What is the role of government, and why? As a single parent, I would not enjoy having to deal with 50 agencies to help look after my child. Why is the citizen never consulted in the system design? Because they are not, we have a hotch-potch of garbage IT systems, and bolt-ons, with thousands of humans chasing their tails to try and correct it.

Q10

18. Government cannot take account of most new technological developments at the right time, because EU law means they are at least two to three years behind the curve. This is the time it takes to think about it, write the procurement, go through the tenders, make a decision and then purchase and deploy.

19. External expertise—on the whole the voices that are listened to by UK government would be larger companies and industry lobbyists. Innovators, SMEs, citizens, user groups and other smaller players would not be considered by the Executive in my experience.

Q11

20. This area of IT is possibly the one most influenced by political views, and the views of MI5 and other State services. However, it is heartening that ID Cards appear to be going.

Private companies are as dangerous as the State here. Apple is keen to know all about you as this Traitorware blog describes:

<https://www.eff.org/deeplinks/2010/12/what-traitorware>

Q12

21. The UK is very poor in relation to other countries. For example, in Denmark there has been a collaborative procurement company 55; 45% shareholdings between central and local government.

<http://www.ski.dk/om/sider/english.aspx>

22. People have been saying to UK government “Go and have a look elsewhere” for 20 years. But the public sector do not want to know. It might dilute their power, mean they lost their job or even have to do things differently. These are not outcomes that government servants necessarily wish to look at.

23. UK suppliers making and selling services to Singapore, Finland, US and elsewhere should be allowed to show why, and present to UK Ministers and people. If it works abroad, why not here?

The economist Dambisa Moyo said recently about aid to Africa:

*“Many of them just asked for advice because they genuinely want to see a turnaround. I think there’s no doubt in anybody’s mind, whether you love or hate aid, that there’s clearly something wrong. **There’s clearly a problem with a system that has not delivered economic growth and reduced poverty for 50 years.** Nobody can tell me that things are working swimmingly in Africa. they ain’t.”*

24. IT suppliers to the UK government run the same risks. There’s clearly a problem with an IT infrastructure, culture and operations that have not really worked well for the last 30 years, and the system needs radical change. Otherwise in 2050 we will see the same questions from your Committee.

25. The PASC IT inquiry seems to want to enable the British people and SMEs change the “business of government”. SMEs, citizens and users certainly want to help. UK Government IT is a joke compared to the best of the private sector. Yes, elements may be more complicated, but the system is broken.

January 2011

**Written evidence submitted by The Institute of Creative Technologies,
De Montfort University, Leicester**

Authors: Dave Everitt, Andrew Hugill, Sue Thomas

SUMMARY

This paper addresses most of the questions in the PDF document “Good Governance: the effective use of IT: Issues and Questions Paper”, and can be summarised as follows:

1. Commit to Open Government
2. Connect elements of strategic thinking

3. Build trust
4. Combat ignorance
5. Design better
6. Centralise the “what” but not the “how”
7. Combine open source with commercial solutions
8. Save time and money through co-operation
9. Learn from the enthusiastic and the agile
10. Amplify the individual

1. COMMIT TO OPEN GOVERNMENT

1.1 *Comment*

Open Government provides a far more cost-effective model for the governance and effective use of IT. By drawing on the “wisdom of crowds” and engaging both ordinary citizens and commercial interests in an inclusive way, government can gain much from external sources.

1.2 *Evidence*

The principles of Open Government and its effect on technology are set out in the paper published in May 2010 by the Centre for Technology Policy Research (CTPR), with which the Institute Of Creative Technologies (IOCT) at De Montfort University has an affiliation. This envisages a move beyond the “transformational government” programme, which aimed to impose command and control through large centralised databases, towards principles of transparency, openness, and cooperation in which the individual citizen has far more engagement with and control over data and personal information.

1.3 *Recommendation*

Open up access to social media and networking tools for civil servants and empower them to engage effectively with citizens through these media.

2. CONNECT ELEMENTS OF STRATEGIC THINKING

2.1 *Comment*

The lack of a complete strategic vision for the creative industries is hampering the UK’s international competitiveness. Their contribution to UK plc is imperfectly understood and not fully recognised. Any vision needs to be completely connected with other strategic elements, and not piecemeal as is often currently the case.

2.2 *Evidence*

There are many examples. The video games industry, for instance, has recently experienced an intermittent and inconclusive debate about tax breaks. The music industry continues to struggle with difficult questions about piracy. The host of SMEs and micros across the nation involved in creative work lack the collective “punch” to rise above cottage-industry levels, and often fall below tax thresholds.

2.3 *Recommendation*

Develop a holistic strategy for digital creative industries in the UK.

3. Build Trust

3.1 *Comment*

Resolving security and trust issues are crucial if government is to engage effectively.

3.2 *Evidence*

A litany of problems and scandals have been generated by the present practice of storing personal information on centralised databases. Another model exists, whereby the citizen owns all their personal information and chooses to whom to make it available and to what extent. Apart from empowering the individual, this would also have the advantage that it would be kept up to date. Certain aspects of disclosure would of course be compulsory by law where required. However, there would also be a substantial commercial opportunity and, crucially, a new sense of trust between government and citizen.

Meanwhile, security mistakes are all too easy to make. One example, from this very exercise: the PDF “Good Governance: the effective use of IT Issues and Questions Paper”, when opened in a text editor, reveals both the author’s name and creation software data. In this case it is not a security threat, but plain Word

documents (and PDFs generated by Word) can contain extra information authors and their employers might not want to disclose—an issue that has made news in the past.

3.3 *Recommendation*

Give people ownership and direct control of their own personal data and identity.

4. COMBAT IGNORANCE

4.1 *Comment*

Internal ignorance of technologies is a vulnerability which government simply cannot afford.

4.2 *Evidence*

The reason why “central government is notorious for large IT projects running over time, over budget and ultimately failing” is often that those who make the final decisions may know too little about the technologies they’re charged with choosing. This is not necessarily always their fault, as there could be simpler guides to what is available and better training for civil servants. But the consequence is that, unaware of the full map of the territory, decision-makers can be persuaded by commercial pitches or popular “locked-in” choices instead of exploiting (and possibly adapting and contributing to) the range of open source solutions that run many thousands of large-scale projects and high-volume web services.

4.3 *Recommendation*

Implement a compulsory training programme for all in government and civil service in current technologies, including open source technologies.

5. DESIGN BETTER

5.1 *Comment*

Public sector websites are, all too often, a model of poor design.

5.2 *Evidence*

The online tax form has a poor user interface (errors only presented on completion of the page, “save” button required but not prompted before proceeding to next stage and thus raising a server error, etc). The initial version even failed in some browsers and platforms. Why did no-one foresee these problems? What user testing was carried out? If decision-makers lacked the necessary knowledge, and contractors promoted their own solution over more standards-compliant cross-platform approaches, bad practice would have slipped through unnoticed.

5.3 *Recommendation*

As part of training programme in Recommendation 2.3, include information design training.

6. CENTRALISE THE “WHAT” BUT NOT THE “HOW”

6.1 *Comment*

Both centralisation and decentralisation have roles to play.

6.2 *Evidence*

There are two apparently contrasting initiatives: to “centralise IT procurement”, and the “decentralisation of public service provision”. However, these can support each other. For instance, local IT providers can offer competitive rates and knowledgeable localised support that has an advantage over larger, centrally-chosen providers. Centralisation works best to *disseminate strategic aims*, but can become ineffective at a local level—in other words, the best policy might be to centralise the “what” (overall aims and overarching strategy) but not the “how” (method of delivery and choice of tools/solutions). Further, good practice (say a local government successfully gathering community feedback using inexpensive or free social software and/or open source technologies) could be promoted and distributed by a centralised strategic body as formal policy guidance.

6.3 Recommendation

Centralise strategy and policy, but decentralise methods of implementation.

7. COMBINE OPEN SOURCE WITH COMMERCIAL SOLUTIONS

7.1 Comment

In 2009 both UK and US governments declared an intent to look into open source solutions:

<http://news.bbc.co.uk/1/hi/technology/7910110.stm>

<http://news.bbc.co.uk/1/hi/7841486.stm>

7.2 Evidence

There has already been a lack of implementation of these policies. Should the good work of Tim Berners-Lee and Nigel Shadbolt in this area be taken up, it will be important to monitor how commercial interests respond to this move, considering the—potentially unquestioning—trust governments have for large enterprises that mirror their own internal structures. The optimal solution would reflect the typical professional IT practitioners' scenario ie open source initiatives working with sympathetic commercial interests to their mutual benefit, rather than in opposition—O'Reilly is the exemplar here. Although not always necessarily free, the cost benefits of open source do not need to be explained. Neither is there concern for security or stability, as large organisations already utilise the powerful solutions provided by the open source community (eg Co-op/Smile online banking utilises Java and Apache Struts running with IBM's Websphere).

<http://csis.org/publication/government-open-source-policies>

<http://opensource.com/government>

http://httpd.apache.org/docs/trunk/misc/security_tips.html

7.3 Recommendation

Build on the work undertaken by Berners-Lee and others to ensure that open source solutions are properly explored alongside commercial versions.

8. SAVE TIME AND MONEY THROUGH COOPERATION

8.1 Comment

Require co-operation between IT and infrastructure providers.

8.2 Evidence

Government needs to *enforce* co-operation rather than reinforce competition between (eg) cable and broadband providers, and even legislate for it. Again, a coherent overview could weld the varying providers into a consortium operating under a single remit. Such issues are a good case for policy centralisation. The successful European initiative for a universal phone charger is a pioneering example.

http://news.bbc.co.uk/newsbeat/hi/technology/newsid_8124000/8124293.stm

8.3 Recommendation

Require current and future providers to exchange strategy and plans, and to communicate.

9. LEARN FROM THE ENTHUSIASTIC AND THE AGILE

9.1 Comment

Learn from the “agile” methods of the newer IT companies and initiatives.

9.2 Evidence

Government bodies would also be well-advised to examine the “lightweight” but effective and highly portable practices of the newer web companies such as 37 Signals, O'Reilly, the Agile Software movement etc, which have all been instrumental in driving the recent social software web revolution; similar alliances are likely to drive the implementation of the rapidly-developing semantic web initiatives, together with major input from academic research institutes. However, experience gained while advising Arts Council England on web and IT strategy demonstrates that, although mindsets can be changed, it takes enthusiastic insiders to make changes stick. A highly productive and rewarding approach is to assemble and work with an advisory body of knowledgeable individuals, especially those who have emerged as exemplars from their own good practice—NOT (say) through cherry-picking expensive consultants from large companies.

9.3 Recommendation

Examine modern thinking on agile software development, and consider how it may be applied.

10. DEVELOP “AMPLIFIED” INDIVIDUALS AND COMMUNITIES

10.1 Comment

Encourage and involve people in developing vision and the skills to realise vision.

10.2 Evidence

This is a reference to a recently completed NESTA-funded project run by the IOCT in Leicester. See <http://amplifiedcity.typepad.com/leicester/> and the NESTA report *Amplified Leicester: Impact on Social Capital and Cohesion* <http://bit.ly/fsjxpg> Amplified Leicester was a city-wide experiment designed to grow the innovation capacity of Leicester by networking key connectors across the city’s disparate and diverse communities in an incentivised participatory project enabled by social media. The resulting two-stage model recommended first a “cocoon” where individual skills are developed, followed by “emergence” involving dissemination and broader collaboration. The emergence phase has so far generated a “Vision2020” conference inviting citizens to imagine the city ten years hence, a series of public talks, and most recently the Joseph Rowntree funded Amplified Resilient Community, connecting two very different areas of Leicester in an amplified collaboration. If this model could be applied at the governmental and national level, then genuinely open government could become a reality.

Further, government might consider becoming more “transliterate” by developing and promoting broader skills that move beyond print to encompass the many literacies of new media communications. Ofcom would be the obvious conduit for this.

See <http://www.transliteracy.com>

10.3 Recommendation

Examine the initiatives instigated at Amplified Leicester and the Vision2020 conference with a view to rolling this out nationally.

January 2011

Written evidence submitted by Jonathan Murray

SUMMARY

1. UK public sector IT faces significant challenges in responding to three competing realities: The emergence of a *post-bureaucratic age*, the move towards *decentralization of government* and the fiscal constraints created by an *age of austerity*.

2. Resolving these tensions will be impossible without the implementation of integrated IT governance processes which drive radical reductions in complexity, link the center with the periphery, gain control over costs and increase delivery speed and flexibility.

3. Leading private sector companies have already faced these challenges and have successfully transformed and improved their management of IT over the last decade.

4. An integrated set of Governance, Architecture and Procurement (GAP) principles can be synthesized from these private sector best practices.

5. These principles—if uniformly applied across the UK public sector—would have profoundly positive impacts on IT service delivery and would help resolve the tension between competing demands.

6. Holistic application of these principles would carry additional downstream benefits for the development of the UK IT service sector.

INTRODUCTION AND CONTEXT

1. The inquiry asks in Q5: *What role should IT play in a “post-bureaucratic age”?* and in Q9: *How will public sector IT adapt to the new “age of austerity”?* The answer to these questions illuminates a critical and some might say irresolvable tension for UK public sector IT.

2. Q5 implies an emerging age of decentralization where decision-making is dispersed to the periphery and where old hierarchical organizational models are transformed into new distributed, decision-making networks.

3. The successful implementation of such a transformation depends critically on the following:

- (a) That the information on which decision-making is based be available at any time and in any place within the network.

- (b) That central changes in policy and the learning from front-line operational experience can be encoded within rules-based systems and made available in real-time to all who need it.
- (c) That the system boundaries between government—as the producer of policy—and citizens and private sector businesses—as the consumers of government services and providers of information—be removed to allow for the implementation of deep models of public/private integration.

4. The implications from 2.a, b and c for UK public sector IT service delivery are profound. They imply a complete inversion of historic practice, moving from traditional closed, stovepipe and domain centered approaches of system design and implementation towards an open, distributed, rules and information based network model.

5. In the author's opinion, UK public sector IT is not ready to meet the demands implied by Q5.

6. Q9 implies that there will be less investment available for IT in the years ahead. UK public sector IT will be expected to *do more with less*—an apparent contradiction—and particularly so when the demands implied by Q5 are taken into account.

7. The author believes that the central issue facing UK public sector IT today is how to resolve this contradiction?

8. The greatest barrier to progress is complexity. The complexity generated by historic—and current—approaches to IT infrastructure increases systems integration costs, reduces flexibility and slows down or prevents the implementation of new distributed network based models of information and business process management.

9. The first priority of UK public sector IT should be the implementation of novel approaches to governance, architecture and procurement that focus on massive simplification of IT infrastructure. Only if this is done will UK public sector IT be in a position to deliver the modern, flexible infrastructure required to meet the needs of a *post-bureaucratic world* while doing so at lower cost to the UK taxpayer over time.

THE FRAMEWORK OF A SOLUTION

1. The challenges facing UK public sector IT are not unique and nor are the organizational demands. Large global private sector companies have been on the path to decentralized decision making since the mid-1980s. The competitive pressures of today's global market place do not allow for slow decision making.

2. Highly autonomous distributed decision-making models based on defined policy encoded in business rules systems have already replaced previous hierarchical approaches in most organizations of this class. The days when local management teams would request guidance from corporate headquarters before making local decisions are long gone.

3. Decision-making has been pushed to the very periphery of these best-in-class organizations. In a very real sense they are living in the *post-bureaucratic world* today.

4. The author believes that the remedies for the strategic and performance issues facing UK public sector IT can be identified by examining the pathways to excellence forged by these private sector organizations as they overcame similar strategic challenges.

THE GAP PRINCIPLES

1. In response to advisory engagements at the World Bank and United Nations between 2003 and 2007—looking at the underperformance of public sector IT—the author's research identified a number of critical private sector best practices that might be effectively implemented in public sector settings.

2. This research was further developed in collaboration with Charles Chang—at that time with Oaksmill Consulting—and published as a white paper entitled “The GAP Principles: Supporting IT Projects and e-Government through Improved Governance, Architecture and Procurement”⁶⁷ in 2006.

3. The author proposes that the principles outlined remain as valid and applicable to the challenges facing UK public sector IT today as they did back in 2006.

4. An updated version of the *GAP Principles* can be summarized as follows:

- (a) The establishment of a cross-government Chief Information Officer position with the authority to enforce a single set of operational and architectural standards across government.
- (b) Creation of a “left-to-right” IT investment strategy and budgetary governance “Star Chamber”—lead jointly by the Government CIO, a Cabinet member and a senior civil servant—with the authority to review and control the IT spending of individual departments.
- (c) The creation of a unified—government wide—Enterprise Architecture Framework that establishes technical standards to be followed by all departments while encouraging fast, flexible, distributed applications development.

⁶⁷ The GAP Principles: Supporting IT Projects and e-Government through Improved Governance, Architecture and Procurement, <http://unpan1.un.org/intradoc/groups/public/documents/unpan/unpan025936.pdf>

- (d) Adoption of “Abstracted” architecture models and “Service Oriented” design principles which allow for clear separation between the physical, operating system, middleware and application layers of the architecture and enable the decomposition of large complex system developments into smaller, lower risk components.
- (e) Flexible procurement models that recognize the difference between long-term strategic infrastructure investment and the short-term, flexible approaches needed for rapid application development and delivery. These models should support and encourage the awarding of contracts to smaller—local—service providers as a spur to the development of the UK’s indigenous IT services sector.

THE ROLE OF THE ENTERPRISE CIO

1. The author is unaware of a best-in-class private sector organization today which does not have a corporate CIO vested with the authority outlined above. In many cases the corporate CIO is a board level position with equal weight and influence to senior members of the executive team.

2. Progressive CEOs recognize the deep strategic importance of IT delivery to the commercial success of their company and require a close working relationship with the corporate CIO. This creates significant challenges in hiring individuals with the correct mix of skills for the role. A successful corporate CIO must combine a keen strategic understanding of the organization’s objectives while also possessing the skills required to address the complex technical issues at play.

IT GOVERNANCE PROCESSES

1. Leading companies have established very sophisticated IT governance processes which aim to align IT investment with the strategic direction and growth drivers of the business, promote decentralized decision-making and keep operational complexity and costs under control.

2. The *GAP Principles* research identified two critical governance processes.

- (a) The *Architecture and Standards* process creates a common technical blueprint for operational systems and IT processes across the enterprise. The corporate CIO has ultimate authority for the development and enforcement of this blueprint but must balance the benefits of centralized cost control with the need for operational flexibility and responsiveness at the departmental level. This is almost universally implemented as a “Federated” governance model where collaborative decision-making is shared between the corporate and departmental CIOs. However, despite the joint decision making model, ultimate authority for the definition of standards rests with the corporate CIO.
- (b) The *Strategic Investment* process creates alignment between business strategy and the IT systems investment needed to implement that strategy. This governance process is lead by a senior business leader jointly with the corporate CIO and includes senior business leaders from key divisions. Most offices of the corporate CIO employ departmental or divisional *Relationship* managers whose are responsible for maintaining the day-to-day link between corporate IT organization and divisional business leadership. This role feeds departmental demands and requirements into the *Strategic Investment* process where competing demands are resolved and aligned to the prevailing investment budget.

ENTERPRISE ARCHITECTURE PLANNING PROCESSES

1. A critical tool of the corporate CIO is the Enterprise Architecture Framework (EAF) that establishes key technical and operational standards to be enforced across the organization.

2. When done well an EAF accomplishes several goals. It prevents the unnecessary proliferation of multiple, redundant technologies that do drive up complexity and costs. It establishes a framework for operational excellence that ensures the adoption of common measures and service levels across the business and it enables a flexible, cost controlled IT infrastructure that can rapidly respond to the changing needs of the business.

3. As with each of these governance processes it is critical to find the balance between central control over costs and performance and departmental needs for operational flexibility. When used in combination, the *Strategic Investment* process and the EAF drive dramatic improvements in delivery service levels and cost control in many complex private sector organizations.

ENTERPRISE ARCHITECTURE MODELS

1. The *GAP Principles* identified a number of progressive approaches to enterprise architecture five years ago that have accelerated and become mainstream in the period since.

2. All large complex companies are rapidly moving to highly *abstracted* or *virtualized* IT architectures. This approach decouples key layers of the architecture reducing intra-system dependencies that historically drove the complexity and fragility of IT environments. Decoupling delivers multiple benefits; increased flexibility and responsiveness, improved cost control and improved service quality.

3. *Virtualizing* the link between software and the hardware on which it runs enables significant levels of server consolidation. Where ten business applications previously each needed their own individual server, these can now be run as *virtualized* workloads on a single—admittedly larger capacity—server. This approach to consolidation benefits from requiring little or no adaptation to existing applications.

4. The move to *abstracted* architecture continues apace with the introduction of new models of *Cloud Computing*. With this new approach IT infrastructure and application services are procured and delivered as a service to the consuming organization. In a very real sense a company's entire IT environment becomes *virtualized* and is delivered back by the *Cloud* service provider as a pay-as-you-go, consumption based, utility service. The consuming organization benefits from no longer having to manage a complex, costly and fragile physical IT infrastructure while gaining the benefit of access to an essentially unlimited amount of computational resource as needed. The potential benefits to organizations with peak driven workloads—HMRC as an example—are significant because the organization is no-longer required to sustain the infrastructure investment required to support extreme peak loads which only occurs at certain times. Additionally this approach enables a single cloud infrastructure to service the needs to multiple diverse consuming organizations driving further levels of infrastructure consolidation.

RAPID VALUE DELIVERY THROUGH SERVICE ORIENTATION

1. The term *Service Orientated Architecture* (SOA) has lost much of its luster over the last 20 to 24 months as technology vendors and professional service firm marketing has pivoted towards the new market opportunities of *virtualization* and *Cloud Computing*.

2. Despite this change in marketing emphasis the design principles embedded within SOA remain critically important to unlocking bottlenecks in enterprise application development. SOA implies an approach to system design focused on delivering smaller and more focused *service components* that can then be combined to form more complex and complete systems.

3. Best-in-class companies apply SOA design principles that break complex application systems development down into smaller *service components*. This approach allows for rapid prototyping and iterative development methodologies that ensure faster alignment with business needs and faster delivery of value than was possible with monolithically integrated approaches.

4. Successful implementation of SOA design principles has a high and critical dependency on the *architecture and standards* process outlined above. A well-defined Enterprise Architecture Framework and strict adherence to defined development standards are critical to ensure that individually developed *service components* can be combined to deliver the end-to-end functionality of the complete system. Implementing SOA approaches without these governance frameworks in place will add—not reduce—complexity and cost.

THE PROBLEM WITH PROCUREMENT

1. The inflexibility of many complex IT infrastructures is largely driven by the historic practice of procuring monolithically integrated systems. This approach—which combine hardware, operating system and application software and often services in one tightly coupled package—makes it easier for vendors to tender for but significantly increases future systems integration costs and can create severe barriers when horizontal business integration becomes a strategic imperative.

2. This approach also acts to drive diversification and complexity within the IT environment as each new system adds its own mix of system software and hardware to an already complex IT environment.

3. This vertically integrated approach has long ago been abandoned by best-in-class private sector companies and yet remains the dominant procurement model within the public sector.

4. Large monolithically integrated application projects carry a huge win-or-lose risk profile. Very few vendor companies can afford to take on the risk associated with this type of project. It is not surprising that the monolithic approach is welcomed and promoted by most global systems integration and technology companies. This approach severely limits the pool of vendors who are qualified to tender for public sector projects and that reduces competition for services and ultimately raises costs to the public sector.

STRATEGIC APPROACHES TO IT PROCUREMENT

1. Application of the *GAP Principles* moves the balance of power in procurement relationships back towards the purchaser. However, there is remains a tension which must be resolved.

2. At one end of the procurement spectrum, effective governance processes and enterprise architecture blueprints are used to gain control over complexity and cost by limiting the set of technologies used within an organization. This is entirely appropriate and moves select vendors from a transactional relationship—based on quarterly unit sales—towards a strategic partnership model where value is measured in lifetime share of the customer's total spend.

3. At the other end of the spectrum *service oriented* decomposition of application development acts to increase competitive bidding for *service component* development work by expanding the pool of vendors who can afford to tender for projects with a much smaller risk profile.

4. Best-in-class companies manage this tension by creating distinct procurement processes for *Infrastructure* and *Application development*.

5. Infrastructure procurement focuses on an ever-narrower set of very strategic vendor relationships that deliver the standardized infrastructure architecture upon which applications are built. Infrastructure has a much longer lifecycle that is reflected in longer-term strategic contract awards.

6. Application development procurement focuses on shorter term more dynamic procurement models that meet these flexibility requirements of a dynamic and rapidly changing business.

STRATEGIC PROCUREMENT IMPACT ON SECTORIAL DEVELOPMENT

17. Government spending practices have profound impacts on the development and trajectory of the UK's indigenous IT service sector. A move towards the strategic procurement and architecture practices outlined in the *GAP Principles* would have a profound economic effect by stimulating the the development of an entirely new generation of small scale, agile and innovative UK based application development companies.

CONCLUSIONS

1. The *GAP Principles* represent a synthesis of best practice identified from within a group of large, complex global companies who have already addressed the strategic challenges similar to those facing the UK public sector today.

2. It is recognized that public and private sector organization 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.

3. 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 detriments of more distributed and integrated approaches.

4. Despite these daunting challenges the author is convinced that a consistent and conscientious implementation of the *GAP Principles*—with support from the highest levels of government—and tailored to the unique objectives and motivations of the UK public sector—would have a deeply transformative impact on the quality of IT service delivery; leading to significantly improved outcomes for both UK citizens and government.

January 2011

Written evidence submitted by Andrew Hardie

SUMMARY

The financial crisis and resulting budget cuts provide the strongest driver and best opportunity yet to shake up UK Public Sector ICT systems procurement, project management and operation.

Key topics and themes include:

- Decoupling of commodity infrastructure supply from the applications that run on them.
- Recognition that:
 - ICT procurement is very different from construction or commodities.
 - Public Sector ICT procurement is different from corporate.
 - Every ICT procurement is different.
- Contract frameworks must accept that change happens and support the agility to react.
- Smaller projects must be encouraged—fear of aggregation accusations must be removed.
- Obstacles to direct SME supply to Government must be reduced; the sub-contractor route is unsatisfactory, benefiting neither Government nor the SMEs.
- Focus must be shifted from compliance to capability and competence.
- Front-line users must be involved throughout the procurement and development process.

- Early and repeated testing of applications during development, not just for final acceptance.
- Integration is a two-edged sword—tightly coupled systems magnify and propagate faults.
- Equating connectivity and integration with inter-operability is a big mistake.
- The perspective on risk needs to be re-aligned; if suppliers can't "price it in" or perceive it as too onerous they will walk away.
- Obsession with "process" must be replaced by leadership and innovation, in depth—ritualising procedures abolishes initiative and creativity.
- Similarly, excessive use of analytical "methodologies" to create abstractions far removed from reality abolishes judgement and understanding.
- Realising that in most information systems the only really important factors are the users and the information they interact with via the applications; the rest is infrastructure.
- Project management must be more flexible, recognise human factors more and not just accept change but prepare for and enable it.
- There must be recognition that:
 - The more human-created software ICT systems incorporate, the less deterministic and more unpredictable they become.
 - The more systems depend on human-mediated content, the more sensitive they are to human behaviour—adding a sociological/ethnographic dimension.
 - ICT systems are installed in a context of vested interests, prejudice and fear.
- The most important document in a project is the one that describes the problem or requirement—preparing it requires experience and understanding. Fact gathering is not (indeed, almost never) enough. Requirements capture is a seriously undervalued skill.
- Competence development in procurement is essential, both for customers and vendors.
- Open Source Software is now "best of breed" in many areas and its use should be positively encouraged.

QUESTIONS AND ISSUES

How well is technology policy co-ordinated across Government?

(No comment).

How effective are its governance arrangements?

(No comment).

Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?

In addition to the NAO and OGC reports on ICT failures mentioned in the Issues and Questions paper, there have been many others examining large ICT projects in both public and private sectors. Perhaps, the best was the MPA (Major Projects Association) report from 2003, identifying the people issues that are at the heart of the problem, such as insufficient project agility, political pressures, insufficient team training and not listening to the people on the front line.

Yet, despite all these reports, failures continue. The question of why has become known as Cobb's Paradox: "We know why projects fail, we know how to prevent their failure—so why do they still fail?" The answers are less about technology and far more to do with the people involved, on all sides. Organisational learning in Government seems to remain a serious problem.

At the Project Management level, failures are often attributed to insufficiently rigorous enforcement of "the plan" when, in fact, the problem was that the plan was too rigid and became overtaken by events. Project management must be more flexible, recognise human factors more and not just accept change but prepare for and enable it.

More widely, "management by maxim", based on myths of linear reasoning and control, is another bad habit that needs changing. ICT systems development turns out to be more like gardening—it has to be nurtured and cultivated in a conducive environment; shouting at the plants achieves nothing.

The ritualisation of risk is yet another problem. Risk assessment, instead of involving in-depth thinking about systems during specification, development and in use, is frequently reduced to another box-ticking compliance exercise. Tabulating and claiming to have "mitigated" a list of risks both ignores the risks that were not identified and, worse, fails to consider the second-order risks that arise from the attempts to manage the identified risks. The identified risks are then devalued by highly subjective estimates of probability and impact.

Furthermore, the simplistic model of "risk exposure = potential loss x probability of loss" is largely inappropriate for complex ICT systems because they have both deterministic computers and unpredictable

human elements—analysts, programmers, integrators and users—and rely on human generated and mediated information.

How well is IT used in the design, delivery and improvement of public services?

The focus seems to be on cost-reduction by making business and citizens submit statutory information online instead of on paper. This may be laudable but it is not exactly Business Process Re-engineering. Efficiency and economy do not necessarily equate to better services.

It must also be accepted that public sector projects are not the same as corporate ones and that corporate techniques and solutions do not always translate to the public sector. In particular, the context of public sector projects is often very different, with high visibility, political issues, etc.

What role should IT play in a “post-bureaucratic age”?

In a word: *enabling*.

The truth is we are far from a post-bureaucratic age. Most Government online services are simply automated versions of existing processes—filling out forms online just relocates the typing. True, such processes can produce faster and more convenient results for citizens but truly innovative projects remain rare.

What skills does Government have and what are those it must develop in order to acquire IT capability?

Since demise in the 1980s of the CCTA and its valuable advice to government, we have seen well-meaning initiatives such as smart procurement and intelligent customer come and go. The truth is that the big suppliers now have the upper hand in almost all areas.

In the past 20 years, the old civil service attitude of “on tap but never on top” towards technical staff has been replaced by chronic undervaluing of their importance, steadfast refusal to pay market rate salaries for skills and, assisted by outsourcing and civil service fragmentation into agencies, ICT staff have relentlessly migrated to the private sector.

Rebuilding civil service technical, project management and procurement competence must be given the highest priority or it will be impossible to change the current situation, the big suppliers will continue to dominate and the failures will continue to happen.

How well do current procurement policies and practices work?

There have been some notable successes but the numerous high profile project and information governance failures have shaped the current climate.

There needs to be a recognition that the current procurement practices are unsatisfactory, especially for software-dominated projects. The way in which non-commodity software applications are specified and procured needs to change. The real users, not their management, must be involved from an early stage. The old-fashioned and widely discredited “waterfall” development model must be replaced by an iterative model, with early and repeated testing of the applications during development, not just acceptance tests at the end of the procurement. This approach is widely and successfully used in the games software industry and often includes the “10% milestone”, where an early version of the game is tested and, if the publisher doesn’t like it, the rest of the project is cancelled. Incorporating that in Government procurement would be a major culture shock but it’s better to lose 10% than 100% of contract value.

What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?

Government should own its own data and never have to pay to get back information created at public expense.

Government should also own those special-purpose applications developed at public expense and promote their reuse elsewhere in Government wherever possible. The trend towards commodity “cloud” computing (sometimes referred to Software as a Service) facilitates this.

Almost all general ICT projects can now operate entirely on commodity equipment. Outsourcing of communications infrastructure is not only appropriate but to be encouraged, especially where competition for bandwidth and quality of service can be embedded. Workstations and departmental networks are now “commodity” products that should be regarded more like furniture and electricity. The trend to virtualisation and “cloud” has shown that back-end server systems can be commodities as well although issues of information management—in the widest sense—in the cloud context are far from being resolved. Virtual network routers are an exciting new development, further assisting “on demand” resource provision.

This separation between commodity infrastructure and the applications should extend to the procurements, with contracts for infrastructure and applications handled separately. The focus must be on the applications to run on the out-sourced, commodity back-end systems, networks and workstations. There is no reason why

these applications cannot be a mix of government-developed and owned, rented (in the sense of pay-per-use or pay-per-user) and free (Open Source) software.

How will public sector IT adapt to the new “age of austerity”?

Hopefully by, at last, being forced to “think small”. It is 10 years since the OECD called for “dolphins not whales” in a plea for smaller projects when they warned of the “hidden danger to e-Government” caused by over-large ICT projects (Ref 1), cautioning that they “should be avoided wherever possible”. Yet, it seems that the lessons have still not been learnt. The “goldfish memory” of public sector ICT procurement persists along with the high-profile disasters.

Perhaps, the greatest fallacy in both government and private sector ICT systems implementation is that greater systems integration is the answer. It isn't. The more tightly you couple ICT (or, indeed, any) systems together, the greater the speed, range and impact of problems and side-effects become and the harder it is to change the resulting monolithic systems, precisely at the time when ever greater agility is needed. Look what havoc tightly-coupled financial systems wrought on the global economy—a “Black Swan”, low probability, high impact event that cannot be extrapolated from past experience, no matter how elaborate or rigorous your project governance. Increasing integration also brings risks of supplier lockin.

It is the author's assertion that “the answer to many stovepipes is not one new stovepipe”. The touchstone for any contemplated ICT system must be “would it scale to the Internet?” The Internet does not depend on commonality or tight integration. Instead it is a loosely-coupled network of compatible (not common) devices and systems of widely varying ages and capabilities, yet it works and works well. Over-specifying and trying to over-standardise are common mistakes.

The Internet, or more specifically Web, model of distributed, non-cooperating applications also points the way out of the stovepipe trap. High street retailers solved the problem of uneconomic, over-sized department stores by adopting the “shop within in a shop” concept allowing flexible response to changing market conditions. The Web, in a way, does the same by decoupling big infrastructure (Internet and the Web) from service delivery (Web applications) which can be developed, deployed and updated rapidly. “App-stores” are just the latest manifestation of this trend. The more new Government applications are specified and developed as entirely Web-based, the better.

Another popular fallacy is the “strategic alignment” of ICT systems development with the organisation's strategy goals. This notion, long promoted in the fashionable management press, is in practice unachievable and attempting to follow it is counter-productive. What is needed instead is a framework that provides flexible resources that can adapt quickly to changes in the organisation and outside. Virtualised and commodity systems are ideally suited to these needs—it's just the management perspective that remains to be changed. Simply using virtualised systems to replace physical systems is wasting their real advantage—agility.

How well does Government take advantage of new technological developments and external expertise?

It seems that Government mostly does not, except where it suits the large suppliers to offer it. But, this cannot be considered surprising in a procurement climate that discriminates so heavily against the traditionally innovative SME sector. The complaints from the SME sector about the obstacles to winning public sector business must be listened to and acted upon.

Through bitter experience as a director of an SME in the 1980s, the author can confirm that partnering with or sub-contracting to large corporations is not always the best way to gain a foothold in Government markets. This was the era of routine late payment by large suppliers to their sub-contractors and the prompt payment by Government to those SMEs who did manage to secure direct business kept many of them alive during the various financial crises of the 1980s.

Large corporations often try to conceal the SME's contribution, especially if it is innovative, so as to prevent the SME building a reputation for that might one day undermine the large corporation's own market. If the SME is cost-effective, then the large supplier can simply pad their margin to avoid embarrassing comparisons with their own pricing structure.

In the current financial crisis, the large ICT corporations may have even less incentive to partner with SMEs, as they try to maximise retained revenue in an effort to prevent further downsizing. It is also questionable if placing large contracts with large multinational corporations is the best way of tackling the UK's economic crisis, as the multinationals may simply repatriate the profits to suit their global debt picture or to profit from currency movements.

What is needed is a simple, cost-free way of SMEs presenting their products, services and capabilities to the whole of government and an easy way for orders to be placed. The suffocating bureaucracy, obsessed with compliance not capability or competence has to be swept aside.

Furthermore, “blue-sky” research and experimental ICT systems projects must be encouraged and the results publicised. Much innovation arises from creative people just “playing about”. ICT departments in Government should be allowed and encouraged to “play” with ideas and new developments in the context of their organisation's needs, which they will understand better than any supplier.

Similarly, pilot projects must be treated for what they really are, an experiment. Growing pilot projects on into full-scale deployments is wrong, as is trying to conceal the results of pilot projects perceived as having “negative results”. Those are not failures but successful demonstrations that something doesn’t work or is inappropriate and should be welcomed and learned from.

Lastly, the contribution that Open Source Software (OSS) can make to Government ICT projects must be promoted. Many OSS packages are now the “best of breed” available and run large parts of the Internet and corporate systems. Everyone using email, the Web or a mobile phone is, unwittingly, using numerous OSS applications every day.

How appropriate is the Government’s existing approach to information security, information assurance and privacy?

The HMRC disk loss was a defining moment—an “event horizon”—in UK government ICT. Senior civil servants, always cautious about the career risk of being involved with or responsible for major ICT projects, now not only don’t want to take ownership the problems, they don’t want to own the solutions either in case they backfire. It has skewed the whole perspective on information assurance and risk.

The truth is that all public sector project risk ultimately reverts to the Government—this, along with universal service obligations, are the two biggest differences between public and private sector ICT projects. Yet, the passion for trying to outsource risk persists along with the almost pathetic obsession with having a single, incontrovertible contractual point of blame. The result, unsurprisingly, is a distorted market in which only the largest suppliers can operate and thus do so largely according to their own wishes, including ignoring or withdrawing from projects they don’t like and taking on projects that initially are unprofitable, in the expectation that downstream changes will bring the profits. The parallel with major corporate or sovereign debt, where the debtor effectively controls the lender, is depressingly striking.

At the information management policy level, the work EURIM is doing in this area is particularly valuable and I commend it to the Committee.

How well does the UK compare to other countries with regard to government procurement and application of IT systems?

Research conducted by Dunleavy et al into public sector ICT procurement (Ref 2) in the major economies found that the country doing this best was Holland, where they are not afraid to break large projects down into smaller parts, despite the possible accusations of aggregation the UK seems paranoid about. Better guidance and a more pragmatic interpretation of the spirit of the procurement rules is sorely needed—the “gold-plating” of the letter of the rules we have now simply disadvantages the UK.

But, there’s a snag: splitting big projects into smaller ones and managing their implementation and interoperation requires government to be an intelligent customer—you can’t just hand off the whole problem to a supplier.

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AUTHOR BACKGROUND

Further information about the author and papers relating to the topics discussed here can be found at:

<http://ashardie.com>

January 2011

Written evidence submitted by Peter Buchanan, think gov

The consultation paper asks for answers to 12 questions, but as they are focussed on Information Technology (IT) rather the reasons why the Government is not making effective use of IT I have included preliminary sections explaining:

- Why business must come first.
- How that can be achieved.

In section three I have put answers to all 12 questions and concluded with a short summary.

1. WHY BUSINESS MUST COME FIRST

(a) There are very few Information Technology (IT) failures, but plenty of examples where a public sector business change project using IT has been mismanaged.

(b) Without Information Technology the vast majority of public and private sector organisations would either do less or employ many more staff. A useful analogy is going without trucks and using horse drawn carriages, and does anyone think that is realistic today?

(c) We are now in an age where most organisations are unable to operate if their Information Technology is not working. Information Technology is a ubiquitous tool, and it is hard to imagine a business change that does not involve changes to the Information Technology that supports it.

(d) Typically two thirds of the cost of what are described as IT projects will be for non IT expenditure. Even a simple web site needs staff trained to maintain it and publicity for users to find it.

(e) Talking about Information Technology (IT) projects is to fundamentally misunderstand the nature of using IT. Worse than that it has the effect of corrupting what should be a business change by starting it from an IT perspective. For example, taking something as simple as a web site there is the world of difference in what will happen when:

- A business decides to have a web site and ask business users to provide content, or
- Business users decide to communicate and collaborate with Internet users

In both cases a web site will be developed, but the second one is likely to be much more valuable. In reality most of the web sites you regularly use will be in the second category.

(f) To hammer the point home, another analogy. In a room at home you need a new cabinet, would you ask a carpenter to build something? Or would you decide what you want and take a few sketches to a carpenter? In the same way as you would lead at home the business must lead at work, so don't leave important projects to the carpenters (or IT specialists).

(g) The next paragraph looks at the key steps that need to be taken to put the business first and ensure that Information Technology is used to best advantage.

2. HOW TO PUT BUSINESS FIRST

Before attempting to answer the questions I have listed the sequence of steps in a business change that I believe are necessary for the public sector to put the achievement of business outcomes first. This provides a logical basis for my answers to the twelve questions posed by the PASC.

1. *Put a business leader in charge*

The business will only come first if there is a business leader in charge, and their future career success is linked to achieving business outcomes. Project managers can provide support, but the "buck" must stop with the business leader.

The leader needs to have time to focus from the outset up to the completion of the business change. Rotating staff can work, but only if it is planned in advance with a reasonable overlap.

The leader needs to be responsible for the full business change, separating out the one third that is the Information Technology component and managing it separately makes no sense at all.

2. *Understand what creates business value*

It seems obvious that something should only be changed to achieve something, and that business value is the only sensible measure. Even a minister who "wants" something should be asked why? (or more precisely what value will it create?).

Value needs to be quantified in pound terms, otherwise how can the cost be seen to be value for money. Most importantly itemise the value of the outcome created by each separate change, and for each change assess the cost of achieving it.

3. *Have measures of the business value created by each change*

A good test of one's understanding of the value created by a change is being able to define a clear method for measuring its achievement. If something can't be measured how can it be important, and how will anyone know it has been achieved?

Having robust measures of outcomes in place makes it more likely that predicted benefits are realised. Measures also enable post implementation reviews to assess what outcomes have actually been achieved.

4. *Explore possibilities*

Use workshops to bring customers, front line staff, managers and business leaders together. To stimulate thinking bring in specialists to talk about what is possible. Using tools outside the attendees shared experience (often new IT opportunities). Focus discussions on identifying changes that achieve measurable business value.

During each workshop there will be questions, don't let attendees guess but capture them and get answers ready for the next workshop. Even with the right people present there will be processes that are not clear and a lack of clarity on the costs of doing things.

5. *Decide what to do*

When the workshops have generated a list of potential changes with a statement of what value they will achieve and how it can be measured it is time to decide what to do.

Change creates risk, so plan a roadmap of changes to keep the risk manageable. The roadmap should clearly show the outcomes from each change and build towards a vision of a future state. This roadmap is the key to managing the changes successfully.

6. *Manage to achieve outcomes*

Business change programmes will inevitably alter as they move towards implementation. When this happens it is essential that the impact on outcomes is understood. Without a management focus on business outcomes minor alterations may dramatically reduce the value that should have been delivered.

It is also important that those managing understand what is likely to alter business value, for example, if this isn't delivered we won't be able to reduce staffing. This emphasises the need for a business leader to be in charge, there is nothing special about an IT project, whilst subject matter experts (carpenters or IT) are important they shouldn't be doing the driving.

7. *Sell to staff and customers*

Whenever an organisation changes how it does business it needs to bring its staff and customers along with it. People don't like change, but when there is a clear benefit for them individually they can accept large changes quickly. Mobile phones and text messaging are good examples of large changes in how people communicate that became ubiquitous quickly. But as with mobile phones the benefits need to be sold, even with a monopoly public sector organisation. It is more than selling, staff need to be trained and organisational structures may need altering. But having a focus on selling emphasises the need to persuade rather than tell.

8. *Use a qualified team*

Business change is nothing new and understanding the right skills and the team structure to achieve a particular change is relatively easy to establish. Where possible use people who have the skills and experience to do their jobs, where members of the team have weaknesses support them with consultants.

Don't confuse consultants with contractors acting as staff replacements. Consultants are there to advise not do, and are an effective way to grow permanent staff without taking undue risks. Contractors are also useful, particularly when skills are needed for a short duration when it makes no sense to train people.

9. *Outsource?*

The more like a commodity a component is the more one should expect to outsource it, for example, it is hard to think of a reason for doing one's own web hosting. The general test is if you can't do something better and cheaper than the market it should be outsourced.

The skill with outsourcing is to be clear about what you want and how you will measure whether you are getting it. There needs to be a clear Service Level Agreement (SLA), and if you don't have the experience to set one up call in a consultant. The SLA needs to focus on what is important to you rather than what can be measured, and beware setting targets that create behaviours one doesn't want (eg a focus on call waiting times can reduce the quality of call handling).

3. QUESTIONS

1. *How well is technology policy co-ordinated across Government?*

Not particularly well, in most commercial organisations the procurement and deployment of Information Technology is heavily standardised which generally isn't the case in the public sector. For example in most large commercial organisations the personal computer and the business management tools one uses are common in all divisions, even internationally. This makes it easy to work together and reduces costs.

There are exceptions, usually in large Departments that have outsourced the IT service provision, but standardisation should be far more common. This problem is particularly obvious when public sector workers

are moved from one Department to another following a reorganisation and they need new IT kit and retraining to do essentially the same job.

There is no good reason for different public sector bodies to procure different IT solutions rather than standard commodity solutions, but they continue to do so.

2. How effective are its governance arrangements?

As explained earlier there are few IT projects, merely business changes that rely on IT. Governance arrangements should therefore cover all the steps outlined in Section 2 “How to put business first” above. Whilst the Office of Government Commerce continues to argue that business issues must lead there is limited evidence that it does.

Intellect and the Office of Government Commerce have developed models that promote good governance when IT is procured, which includes having a Senior Responsible Officer. Their work emphasises the importance of having a business leader to take responsibility and this approach could usefully be followed for all business change projects.

3. Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?

The reviews broadly concur with the high level points made earlier, ie that success is dependant on putting business first, ie:

- the level of engagement by senior decision makers of the organisations concerned; and
- their understanding of the importance of determining at the outset what benefits they were aiming to achieve and, importantly, how programmes and projects could be actively managed to ensure these benefits were optimised.

As this consultation is talking about IT rather than business change it suggests that the lessons haven't been learnt.

4. How well is IT used in the design, delivery and improvement of public services?

Not as well as it could be, largely because the early phases described in Section 2 “How to put business first” are generally not followed. There is far too much enthusiasm for IT projects rather than business change projects, resulting in a failure to fully explore how business value can be maximised.

For example, the Identity Card project was viewed as an IT project, with the majority of public sector thinking on how it could be justified. What should have happened is that the potential for improving identity management for public sector staff and citizens should have been examined to assess what changes would improve outcomes. As managing identity is a significant proportion of what the public sector does, and it is heavily duplicated it, seems likely that cost could be significantly reduced and confidence in identity improved.

5. What role should IT play in a “post-bureaucratic age”?

An interesting question, assuming that post-bureaucratic means an age where “decisions are based on dialogue and consensus rather than authority and command”. IT is clearly a fundamental enabler as dialogue and discussion will otherwise be limited to those that can physically meet together.

The follow on question is “how can IT be exploited so as to pull citizens into dialogue and discussion”? Experience so far with open consultations has not been spectacularly successful, but there are successful models, usually where there is a clear benefit to helpful contributors.

6. What skills does Government have and what are those it must develop in order to acquire IT capability?

As explained in my comment on outsourcing “if you can't do something better and cheaper than the market it should be outsourced”. If the skills are not present in a particular public sector organisation it is a waste of public money to develop them. The key skills needed by Government are in deciding what to do and how to manage it ie to be clear about what they want, how they will measure whether they are getting it and measuring and evaluating it.

The Government needs are for business and project management skills, it can contract for IT specialists. Although if there is a long term need for IT specialists then it may be cost effective to train in-house staff.

7. How well do current procurement policies and practices work?

Badly, there are too many separate procurement exercises for what is essentially the same commodity. This wastes public money in two ways, the cost of each procurement exercise, and the higher prices paid through losing scale economies. Also many of the staff running procurements do not have the experience and confidence to operate the processes efficiently resulting in the waste of public money.

The large number of catalogues for the supply of IT services across the public sector illustrates an unnecessary desire to be different. And the public sector pays heavily for the different catalogues, both in the cost of setting them up and higher charges to recoup supplier's costs. It would be possible to only permit a public sector organisation to procure something when they can convince a national review organisation that they need to and there isn't a suitable procurement mechanism in place. Where a new procurement is necessary they should also make sure the contract is usable by other public sector organisations.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

Control is the key; ownership is irrelevant as long as Government can trust the owners. All personal data and access to it needs to be controlled. There is also a good case for one Government organisation to control assets which are shared by a number of public sector bodies.

9. *How will public sector IT adapt to the new "age of austerity"?*

An interesting question and one that suggests IT is still seen in isolation, which will cause public sector performance to decline in comparison with the private sector. As argued earlier IT is a tool, and is also a small proportion of Government's administrative expenditure. If the public sector truly wishes to save money it will spend more on business change projects that use IT. The austerity should affect total administrative and programme spending not solely IT expenditure.

10. *How well does Government take advantage of new technological developments and external expertise?*

Variably, but overall Government is much worse than large scale commercial organisations. One reason for this is that the public sector behaves like a lot of small, rather amateur, independent organisations. Localisation is fine, for example Tesco does it really well, but they have all their common services managed nationally. Can you imagine every store procuring their point of sale equipment separately?

Public sector organisations with inevitably restricted numbers of experienced staff are never going to be able to keep up to date and maintain relationships with the key people in the IT industry. The more the provision IT is managed locally the worse the situation will get.

11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

It is not well defined and inconsistent, and there is a clear need for there to be a right of privacy. For example, it can be argued that many of the well publicised failures resulted from a lack of care for the rights of citizens to have their information protected.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

Procurements typically take more time in the UK. There is a tendency to go a long way beyond the intent and letter of the law, often because of inexperience due to the fragmentation of public sector procurement.

The application of IT systems would be massively improved if senior public servants were routinely expected to understand what IT could contribute. IT shouldn't be a bottom up push from IT specialists but a business pull from knowledgeable and confident business leaders. Failure to exploit a ubiquitous tool, which is what IT has become, should be a signal that a business leader needs to be retrained or re-deployed.

4. IN CONCLUSION

Having answered the 12 questions a few themes are apparent:

- We should be talking about business change enabled by IT, with measurable business value the focus. This means having a business leader in control, leaving specialists (like IT) in support.
- Information Technology that is essentially a commodity should be centrally procured and managed. Not necessarily for the whole public sector but certainly for some eg all police forces. Act local but manage nationally, as illustrated by Tesco.
- There needs to be simple all pervasive policies on security and privacy that apply evenly and transparently across the public sector.

The public sector is capable of making massive efficiencies, but by exploiting IT and changing the way it does business and not by attempting to merely spend less on IT.

Written evidence submitted by Dr Leonard Anderson

SUMMARY

1. The reasons for the inquiry are clear. A problem with the questions is the concentration on Technology at the expense of Information. A policy for Information Governance is a primary need, which would naturally include the Technology aspects. This means identifying target outcomes as the first step, building governance processes and finally specifying the technology. Technology policy is a tertiary requirement.

2. Technology has the capability to improve security, effectiveness and efficiency of all public sector services. It could provide faster transactions for citizens, departmental information sharing and better planning information. This cannot happen because Government ignores international interoperability standards (eg ISO 18876), a “not invented here” culture in technologists and avoiding structured control of programmes. There is no cross government architectural guidance, strategy or standards body. Avoidance of standards misses many opportunities for efficiency savings and improving the value of information.

3. Government leadership of technology related programmes is ineffective. No career structure is evident. Departments, Agencies and Local Government have no common frameworks or Information Governance policies. Information is not managed as a public asset—it is more the management of data silos to be obscured from others.

1. *How well is technology policy co-ordinated across Government?*

4. It is not obvious that technology policy is coordinated. For example much work done by various CIO and CTO Council working parties has neither been completed nor published. The “Enterprise Architecture for UK Government” <http://bit.ly/i9PxeH>, started in 2006. It was an attempt to develop an Enterprise Architecture reference model, which should have helped to:

- Move to a shared services approach.
- Promote the development of common infrastructure.
- Improve management of risk.
- Identify and aggregate demand to promote efficient use of resources.
- Agree shared standards to promote better inter-working between agencies.
- Increase competition in the supply of IT services and products.
- Improve business agility and a reduce total cost of ownership.

5. The achievement in terms of deliverable products was virtually zero. There was lots of good will from both local and central government ICT managers, but no programme leadership. It was not a failure of policy; it was a failure of governance.

2. *How effective are its governance arrangements?*

6. There do not appear to be any broadly agreed governance arrangements. Information governance is complex—just look at the complexity of the definitions <http://wp.me/p14MGf-dD>. Each department, government agency and local authority has its own opinion on what it is and how to implement it. There’s no obligation to follow internal processes, let alone any Cabinet Office pronouncement.

7. There are areas of good security and privacy governance. The codes of connection between networks is one good example—although perhaps too excessive for some local government applications. Most organisations do not have an information asset register. People cannot govern what they don’t know exists nor where it is located.

8. Briefly, there is a need for cross government standards. The E-Government Interoperability Framework (E-GIF) was mandated, but there isn’t any development or auditing of its use. The work done on a Framework for Multi-Agency Environments (<http://www.fame-uk.org/>) has not gained any traction—it identifies risk factors and prevents costly failures. The Government culture is to ignore standards

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

9. Too many past and present failures demonstrate that People have not learnt how to manage complex programmes consistently. Internal programme management skills have not been developed sufficiently. Contracting out so much of the work is evidence of a lack of internal skills and abrogating much of the responsibility the big suppliers, who are not averse to earning extra income.

10. Managing Successful Programmes (MSP) and Prince2 were developed with public sector programmes and projects in mind. They are excellent processes, when well executed. People and suppliers find reasons for not using them.

11. Other disappointing examples are in the Prime Minister’s Structural Reform Plans (SRPs) <http://wp.me/p14MGf-am>. There’s no apparent MSP regime. It looks like an unco-ordinated set of To Do lists; no evidence

of a risk register or linkage of the IT aspects in each department. The avoidance of standards is endemic. In the private sector it could be a career limiting offence. <http://wp.me/p14MGf-bO>.

12. Quality assurance and risk assessment must be performed by independent bodies, not the prime contractor. Even internal staff cannot be relied upon to expose failures of people who may be planning their career path—but collecting evidence will be hard.

4. *How well is IT used in the design, delivery and improvement of public services?*

13. IT has added value in many public services. “How well?” implies some form of performance measurement from a baseline. Most KPIs are just benchmarks against similar types of local government organisation eg SOCITM <http://bit.ly/h99EUs>. These are useful figures, but do not show a comparison with other parts of the public sector or the private sector.

14. The ability to compare with universal best practice depends on a level of maturity that is not present in the public sector. See “Valuing Information as an Asset” <http://lenand.files.wordpress.com/2011/01/infoasasset.pdf> as an introduction to what can be achieved. There are some good public sector examples—but adoption of the techniques is not widespread.

15. Evidence of quality across the UK public sector is mixed. There are good and bad examples in every organisation. Post implementation reviews, one year after implementation, would be the best source of evidence—but almost as rare as hen’s teeth.

5. *What role should IT play in a “post-bureaucratic age”?*

16. Unfortunately, IT is correctly associated with bureaucracy by front-line staff. Computerised forms, often laboriously filled in from paper copies, are seen as the problem, not the solution. IT should have a tertiary role after designing a process and governance mechanism.

17. Data should be captured automatically in the usual line of business. For example, social workers should not be required to file so many written reports. Voice recording should be sufficient. Automatic transcription should be routinely performed. Handwriting recognition with smart pens can collect forms data. IT should not add to the workload, it should reduce it. More use should be made of electronic credentials and personal data stores.

18. There is a huge bureaucratic structure to support data collection in schools and colleges. £billions administrator effort is spent collecting data for records and statistics, diverted from the education budget. Some supplier research on the cost of administration in the education sector are as follows:

	<i>Administration</i>	<i>Teaching</i>
Expenditure (£k)	1,352,942	4,666,744
No of colleges	345	
Max %Admin	61%	
Min %Admin	10%	
Average %Admin	29%	
Median %Admin	29%	
No >40%	49	
No <20%	42	

19. With six times difference between the lowest and highest, there must be room for efficiency gains by effective use of IT. Eliminating duplicate entry and automating links between incompatible systems should be a high priority for the nation.

20. An even larger set of administration exists in the school sector, for example the recording of children’s attendance at school. There is a huge bureaucratic structure to support it. Schools expend huge amounts of teacher and administrator effort collecting data for statisticians—not just teaching. Schools in the UK process the information about 9 million children on a daily basis. The total volume is hardly noticed as it is performed in about 27,000 independent, self-contained locations. This is not just by the 400,000 teachers, but also by up to 90,000 administration staff and assistants. A school is typically involved in the operation of 10 different systems with records of attendance, achievements, school meals, libraries, parental addresses etc. Grossing up, there are about operational 250,000 systems. Much of the data is shared, within a school, across schools, up to local authorities and to the Department for Education (DfE). They share childrens’ names, addresses, dates of birth, nationality, parents’ names, qualifications etc.

21. And yet, although this cries out for standards, the DfE does not support <http://wp.me/p14MGf-6h> the only practical way forward provided by the SIF Association <http://bit.ly/cmUx8K>. This is a collaboration between educationalists and all the main suppliers of school administration systems. SIF is designed to provide complete interoperability between disparate systems. It is an open standard supported by certified commercial software.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

22. Government does not have a clue what IT skills are available from staff in central or local government. There is no coordinated Government asset register for people or information assets. There is no interoperability between human resource systems to enable an easy audit of skills. Secondly, there is no obligation to use standard definition of skills and career paths.

23. What it must NOT do is try and establish a new bureaucratic skills register. It will fail. It must establish a standard of common information required from every public sector organisation. This will take time. Such a project was attempted in a large multi-national company, eight years after the project started. The original concept failed. After a post mortem, the replacement project succeeded.

24. You can't control a skills development process until you set a baseline and define the outcomes needed. Government is fragmented into thousands of independent units. Very few are capable of providing a total service with the latest technology—neither should it. There is a case for a flexible, mobile IT workforce for developing modern systems.

25. Multi-national private sector organisations develop staff in a matrix organisation where development staff have a functional career path, but are assigned to operating units for projects, pay and rations. Promotion and skill development is a joint responsibility between the IT Function and the operating company. Replace the "IT Function" with a Government CIO role and "operating company" with department, agency and local authority. A policy that only considers the careers of a few "fast track" is not fit for purpose given the dependence of Government on so many IT staff. Working as an understudy, or a bag carrier, to expensive external consultants does not give the level of responsibility needed.

26. People are our greatest asset, and public sector IT has completely lost its way. Serendipity, longevity and risk aversion are the hallmarks of many careers. This should be changed to public sector career planning, flexibility and leadership.

7. *How well do current procurement policies and practices work?*

27. The evidence is mixed. Sometimes they do. Sometimes they don't. Most local authority projects work to budget and many are delivered on time. The headline problem is the failure of big projects. There's an adequate OGC Gateway process. It just isn't followed, or improperly understood. If private sector projects are aware of a great risk of failure, they will often cancel projects on behalf of the shareholders.

28. Good programme management, and all that it entails, is the missing ingredient. The best programmes integrate the work of clients and suppliers in a working partnership. They have common goals and clear leadership. There is clarity of governance and accountability. Complete outsourcing is a recipe for rip-offs. The client must have matching skills or employ an independent programme management consultant.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

29. Ownership of processors, data stores and communication networks is not a major issue. They are commodity products and most are not core government assets. They should be procured and operated at the lowest cost to the public purse. If a Government Cloud is trusted, secure and economical, then it should be used.

30. Control of data is a core custodial function and must not be relinquished. Data is best regarded as a triumvirate of Operational, Reference and Derived data. Public services may use any or all of these.

31. **Operational data** is front-line, perhaps with high transaction volumes, eg school attendance or DVLA registration. Nobody would contemplate providing this type of service without IT.

32. **Reference data**, commonly shared between many systems, is of variable quality, such as addresses. The reason is often that different operational systems have different versions and incompatible formats. Interoperability between systems is impossible without adoption of data standards. The public sector, as a whole, does not have a functioning standards body, or the power to enforce them.

33. **Derived data** is combined or abstracted from several sources. It is the basis of planning and performance measurement systems. It may reside in data warehouses or complex spreadsheets. Systems may collect data from operational, reference or other derived data sets. What makes it more complex is that the quality not only depends on knowledge of **standards**, but also the context and timeliness of the source data.

34. Interoperability Standards have been ignored. Presentations about ISO 18876 were made as early as 2003 by Dr L Anderson and Prof Matthew West to the extant e-standards body. Further presentations were made to DWP on 11 May 2007 and the "**Public Sector Information Domain**" group in the Cabinet Office on 27 November 2008. No action resulted. DfE avoiding the SIF standards was also referenced in paragraph 21. Martha Lane Fox seems to understand the need for standards. <http://wp.me/p14MGf-aC>. That's what Government leadership should control.

9. *How will public sector IT adapt to the new “age of austerity”?*

35. People will leave public sector employment. Innovation and development will diminish. Training will be embargoed. Morale will flag. Productivity may reduce. There may be more flexibility in central government, but local government IT runs the risk of failure of some services.

36. Austerity has already had an impact on professional development and knowledge sharing events. Some local authorities have been told to stop all external meetings. In central government, some visits to Brussels have been banned, missing opportunities to influence vital EU legislation. Austerity causes people to economise and only look inwards for solutions—when better ideas may exist outside.

37. “How should it adapt?” would be a better question. It should not be a headless chicken reaction, people should look at the principles of Information Governance <http://wp.me/p14MGf-dD> and portfolio analysis. The least important IT services could be ceased or support stopped.

38. Innovation and training should be protected <http://wp.me/p14MGf-57>. Internal administrative systems should be culled or drastically reduced.

10. *How well does Government take advantage of new technological developments and external expertise?*

39. Local government does not have much capacity for developments or purchasing external expertise. People identify opportunities where services might be improved by the use of technology. Very rarely does technology inspire the development of new or improved services.

40. Most technology experts respond to the commands of service and business managers. They often do not have the big picture that takes in all the process and governance constraints. Many are attracted to the technology itself, not the underlying objectives or desired outcomes.

41. Government should look at principles first. Adopting principles could become policy. Unless there is a policy to ring-fence innovation, standards development and skunk works, then it is difficult to analyse the potential value of new technology. It may be fundable in central government, but virtually impossible in local government.

11. *How appropriate is the Government’s existing approach to information security, information assurance and privacy?*

42. The question is limited to a small part of the much more comprehensive field of Information Governance. Eurim’s Information Governance group looked at Basic Principles (See <http://bit.ly/gJXLIA>), leading to a one sentence summary: “*Information Governance is the setting of objectives to achieve measurable outcomes by people using information assets in a life cycle process that considers both risk and time constraints.*”

43. Information Governance standards could be, and should be, developed by the Government CIO. Then there will be a baseline for quality assurance at all operational levels of public service. A framework and roadmap for developing partnerships is now essential—and the Government developed one for £6 million, see <http://bit.ly/brSoO3>. Why are they not mandated?

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

44. Is the relative performance of government procurement closely linked to Transparency International’s corruption league table. <http://bit.ly/eIcEJI>? In 2010 the UK was in 20th position. How does the UK compare in procurement performance with competitor countries that rank higher, such as Japan, Germany, Scandinavia? The USA is ranked 22nd.

45. Countries lower down the corruption table frequently have a cosy relationship between suppliers and politicians. Selection procedures favour the big suppliers, who have to increase costs to pay for lavish levels of hospitality and inflated “consideration” payments. There’s a message about avoiding such behaviour in the UK. It may mean employing people with the appropriate skills directly and not relying entirely on external consultants. Whilst working abroad, I heard a supplier say that he proposed an expensive database management system above a free one “because they can’t mark up free software”. There is more benefit to public “servants” if contract costs are higher.

46. Corruption lies in the cultural sub-dimension of “People” in the Quarkside seven dimension information governance model (7DIG). <http://bit.ly/hBGVJi>. The acceptance of favours is only part of the problem; it is also the treatment of those who object to potentially corrupt behaviour. Whistleblowers invariably lose out from any attempt to expose questionable practice. Too many civil servants finish up with large income from suppliers after they leave government service.

47. Application of IT systems is the third thing to consider, AFTER confirming the service requirements and establishing the governance. Initial adoption of packages based on other countries systems, laws and culture is doomed to repeat the mistakes of recent procurements.

January 2011

Written evidence submitted by The Information Commissioner

INTRODUCTION

1. The Information Commissioner has responsibility in the UK for promoting and enforcing the Data Protection Act 1998 (DPA) and the Freedom of Information Act 2000. The Information Commissioner's Office (ICO) is the UK's independent authority set up to uphold information rights in the public interest, promoting openness by public bodies and data privacy for individuals. The Commissioner does this by providing guidance to individuals and organisations, solving problems where he can, and taking appropriate action where the law is broken. The Commissioner's response to this consultation is based on the practical experience he has gained in regulating compliance with the DPA and FOI.

2. The Information Commissioner's submission to this inquiry will not seek to answer all of the questions asked in the Committee's paper, but will focus on those issues most relevant to his role as information rights regulator.

3. It is worth remarking at the outset that the Commissioner supports the assertion that good governance is essential to the effective use of IT. This is true from the perspective of ensuring compliance with information rights legislation and for inspiring trust and confidence in those whom the citizen has little choice but to entrust their personal information. 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. Good governance and its influence on the effective use of IT can also help ensure that that fears that we may end living in a database state with unwarranted intrusion into the lives of individuals are not realised in practice.

4. The Information Commissioner is responsible for regulating information rights legislation. His experience of promoting and enforcing this legislation over many years is that a number of information systems procured by Government have fallen short of compliance with these legal requirements. On too many occasions, it appears that the procurement of systems has occurred before privacy and transparency issues have been fully identified and addressed, leading to non-compliant systems being procured. In certain instances this has led to the Commissioner having to take action to ensure that systems are adjusted to make them compliant—sometimes at undue expense to the Department concerned, as information rights compliance measures were not sufficiently considered in the tendering process and thus did not form part of the contract.

5. In addition to the cases where lack of effective security safeguards is evident, the Commissioner has seen instances where new government information systems have been implemented in ways that cause data protection problems. This can range from not having the functionality to support individuals gaining access to their data, inability to delete records when no longer needed and holding excessive and irrelevant information.

6. The Information Commissioner and his predecessors have been very vocal in trying to get Government and other organisations to consider information rights issues as part of the design and procurement of systems for many years. In 2008, the Information Commissioner's Office commissioned a report from the Enterprise Privacy Group entitled "Privacy By Design".⁶⁸ This report sought to encourage organisations to design privacy and data protection compliance into new systems, rather than bolting it on as an expensive or ill-conceived afterthought. The then Information Commissioner wrote in the foreword to the report that "Although we have seen a dramatic change in the capability of organisations to exploit modern technology that uses our information to deliver services, this has not been accompanied by a similar drive to develop new effective technical and procedural privacy safeguards".

7. The Information Commissioner's "privacy by design work" has been focussed on providing practical tools to help ensure that privacy safeguards are addressed from first principles of policy development and system design. This includes publishing a privacy impact assessment handbook and codes of practice. In March 2010, the current Commissioner took this work further forward, publishing "The Privacy Dividend: the business case for developing proactive privacy protection".⁶⁹ This report aimed to help organisations understand the rationale for, and benefits to be gained from, building in better privacy protection. Its key conclusions were:

- personal information has a value and protecting it makes good business sense;
- such protection brings real and significant benefits that far outweigh the effort privacy protection requires; and
- ignoring privacy and not protecting personal information has significant downsides.

⁶⁸ Available at: http://www.ico.gov.uk/upload/documents/pdb_report_html/privacy_by_design_report_v2.pdf

⁶⁹ Available at: http://www.ico.gov.uk/-/media/documents/library/Data_Protection/Detailed_specialist_guides/PRIVACY_DIVIDEND.ashx

Recognition of these conclusions has assumed an even greater significance as difficult decisions on the allocation of resources have to be made as funding is reduced. This is brought into sharper focus by the European Commission considering making privacy by design an obligation for data controllers under a new data protection regulatory framework.

8. Information rights law in the United Kingdom is not new. The first Data Protection Act was passed in 1984. Over a quarter of a century later, it is a source of continuing frustration that Government procurement processes still produce systems that are not fit for the purpose of helping Government comply with basic information rights provisions. This should not be the case.

9. The Commissioner's experience is that there are some pockets of excellent practice in developing IT policy, but many initiatives related to IT are not joined up and fail to take account of one another, often sending out mixed messages. However, we are also getting feedback from information governance professionals within Government that in the drive to push all Government information onto the G-Cloud, legitimate concerns about compliance with information rights legislation and statutory codes of practice are being characterised as "old thinking". Such *ad hominem* arguments are winning out in certain sections of Government, potentially reducing the availability of information at the same time as Government seeks to make such information more accessible.

10. Several years ago, after the data loss by HMRC, the Central Sponsor for Information Assurance (CSIA) took a leading role in establishing core mandatory measures for protecting personal data across Government. At the same time, there was a lot of discussion about where responsibility lay within Government for coordinating technology policy when it came to privacy, data protection and information assurance. While the core mandatory measures to protect personal data included provision of privacy impact assessment as part of the Gateway Review process, there has never been any review as to how this works in practice, who has oversight of this process and if there is any quality assurance mechanism for ensuring that such assessments are more than mere paper compliance.

11. The Commissioner sees a lack of coordination in Government approach to identity technology policy, with a number of Departments developing identity management and assurance systems independently of one another, and an apparent lack of will to discuss how to make these systems interoperable. While it is obvious that better, more effective use of information technology could herald a "post bureaucratic" age, it is also true that a failure to coordinate policy effectively can create more bureaucracy, serve single Departments rather than the citizen and lead to a failure of Government to deliver services effectively. Anecdotally, one of the reasons the Commissioner is regularly given by Departments who wish to exploit private sector data is the expense, technical difficulties and "not invented here culture" that makes exploiting other Government data sets more difficult. This is not a totally bleak picture and there are some encouraging signs that new approaches to identity assurance are being considered within Government and some with privacy friendly features which give individuals more control over their own information.

12. The Commissioner is of the view that much more can be done to ensure that Government IT is harnessed for the benefit of the citizen and Government. The Commissioner is on record in saying that information rights law should be no barrier to proportionate, reasonable and appropriate information sharing or other uses of personal information.

13. However, it is worth repeating the point that all too often information rights concerns are not considered until it is too late to meaningfully influence the design, procurement or implementation of IT systems. Some significant problems stem from the legislation that information systems are designed to support, which leaves little room for more proportionate and privacy friendly ways of looking after personal information. A now defunct example is the Identity Cards Act which required the provision of far more information about a citizen than was necessary to verify identity then administer the ID cards system. Parliamentarians have an essential role to play in ensuring legislation does not drive the collection and unwarranted exploitation of personal information or put such information at greater risk. Where legislation is enacted that results in greater amounts of personal information being collected, often for what are seen at the time as pressing public policy reason such as security, post legislative scrutiny of the value of this in practice and the safeguards in place is an important, but often lacking, check mechanism.

14. The Commissioner would also like to highlight the possibility to improve the transparency of IT procurement by further publication of gateway reviews. The Commissioner and the Information Tribunal have ordered disclosure, on public interest grounds, of gateway reviews for several important IT projects.⁷⁰ He believes that government departments could publish further detailed information about gateway reviews on a more regular basis. The vehicle for doing this could be via a publication scheme, which all public bodies are required to maintain under section 19 of the Freedom of Information Act. The Commissioner does accept that timing of disclosure is important to allow some safe space for deliberation and also commercial sensitivity may be a factor that may sometimes weigh in favour of non disclosure. Arguments about the chilling effects of disclosure have been raised as very broad factors and in reality these chilling effects have not been demonstrated.⁷¹ Greater transparency will drive better public understanding of large IT projects and more debate about risks (such as privacy) and value for money.

⁷⁰ ICO decision notices FS50083104—ID cards, FS50075956—Department of Health E-Recruitment project and Information Tribunal decision EA/2006/68 & 80

⁷¹ See the UCL report Robert Hazell, Ben Worthy and Mark Glover, *The Impact of the Freedom of Information Act on Central Government in the UK: Does FOI Work?* Palgrave Macmillian, London, 2010

15. As well as Privacy Impact Assessments the Commissioner also believes that Access Impact Assessments⁷² should also be considered for large IT projects, these assessments would consider what information the public might request from the IT systems under the Freedom of Information Act and what information e.g. reports, raw data derived from the system could regularly be extracted and published in a publication scheme. These considerations could then be fed into the system design and specification at an early stage, alongside privacy impact assessments. This is particularly relevant given the current government proposals for a “right to data”, that will enhance FOI rights of access to cover data formats and re-use.

CONCLUSION

16. The Information Commissioner is not convinced that the current arrangements for coordinating technology policy and for the procurement of IT systems are adequate for producing systems that allow them to meet their information rights obligations efficiently or effectively. Nor do all these systems serve the individual by allowing them to effectively assert their information rights. Any failure to ensure the effective governance and development of information systems puts not just information rights compliance at risk but could further undermine the public’s trust and confidence in the government’s use of information.

January 2011

Written evidence submitted by Tony Collins

I have written on the failures of public and private sector IT projects for more than 20 years. I co-authored a book “Crash” on the lessons learnt from the world’s largest IT failures. Since it was published in 2000 little has changed.

A few points:

1. The media is often blamed for the perception that central government is poor at managing large IT-related projects, and that successes go unpublicised. From the £17 billion or so spent each year on government IT one would expect many successes without any necessity to report on them in the media. You would not expect journalists to stand on the observation deck at Heathrow and report on planes that land safely. That said, there are lessons to be learnt from IT successes, but Whitehall does not have a culture of reporting on what it has done well or badly. When for example I asked HMRC for its reports on lessons learned from its projects, it told me it does not publish them, nor would it at my request.
2. Flying is such a safe way to travel in part because of the diligent reporting of failures and the lessons learned from fatal crashes. Government IT failures tend not to harm people, although there are arguments in the safety-critical community about how they can, in failed deployments within the NHS and MoD. The perceived absence of harm to people means there is no imperative to learn lessons, and no structure for doing so. The NAO has published eight common causes of IT failure and departments are expected to confirm that their projects take these into account, but it’s not unknown for officials to sign off without complying. This underlines the point that Downing Street, the Cabinet Office and the NAO can ask, but not compel, departments. Gateway reviews are supposed to be mandatory but departments sometimes avoid them; and they are supposed to publish Gateway reports by the end of December 2010, under Cabinet Office plans. Most have not.
3. Civil servants sometimes end up in the companies their departments have awarded contracts to. Cynics refer to this as the deferred pension plan. The implication is that civil servants can be tough on suppliers, but not too tough.
4. Truth is hard to get at after a large project has run into serious difficulties. This is also a problem in the private sector. A 10-year legal dispute between HP and BSKyB did not reach any agreed conclusion on the cause or causes of an IT project failure. There was even a dispute over whether the project was a failure. It was a similar story in a dispute between British Gas and Accenture. Long and separate official inquiries into the loss of the Challenger Space Shuttle did not reach agreement on the underlying causes. There is an argument today on whether the NHS IT scheme, the NPfIT, has been a success or a disaster. Departments—and suppliers—sometimes portray disasters as an invention of the media. If there isn’t an official acceptance a project has failed it’s unlikely any lessons will be learned from it. Facts are sometimes hidden even from the NAO.
5. Projects are sometimes started on the basis of a culturally-accepted deception. It was known within the Department of Health that the National Programme for IT in the NHS would cost £5 billion and take three years. It was announced as a £2.3 billion programme, then a £6.2 billion programme which would be completed in 10 years. It later became a £12.7 billion programme which had no end date. The Department of Health has always argued that the programme is within budget. The Defence Information Infrastructure project was announced to Parliament as a £2.3 billion project when it was

⁷² See the 2008 report published by the Canadian Information Commissioner: The Access To Information Act 25 Years Later: Toward a new generation Of Access Rights in Canada. Access Impact Assessments page 14. <http://www.infocom.gc.ca/eng/DownloadHandler.aspx?pg=19eb9df7-a0b9-49f9-8a99-a75300faa31f§ion=af7ad5ce-4e53-4095-8f88-38fc2721c914&file=ATIA25y.pdf>

estimated internally to cost, potentially, £7 billion. A civil servant told me that project costs have to be underestimated to obtain Treasury approval.

6. Departments are sometimes locked in unnecessarily to large suppliers and accept “service credits” as compensation for poor service and project delivery. The departments want successful projects and good service rather than compensation. I hope that Coalition plans here will make a difference.
7. Government does not sue its largest IT suppliers, perhaps because it considers it unfair to put civil servants in the witness box, especially if they have moved jobs. This unwillingness to sue makes the relationship unequal almost from the start. It is one reason government may be congenitally ill-suited to managing large IT projects and programmes.

I hope that these points cover most of the questions the committee has asked. I am not qualified or able to write on the strength or otherwise of the government’s IT security arrangements.

January 2011

Written evidence submitted by Sirius

SHORT SUMMARY:

- Government IT costs too much.
- Government IT procurement costs too much.
- IT is the enabler of the “Post-Bureaucratic Age”.
- Government must become smarter in IT usage, and do “better for less”.
- Government IT policy must be “Triple-Open”—Open Data, Open Standards, Open Source.
- Incumbent supplier oligopoly is fighting move from “closed, proprietary and expensive” to Triple-Open.
- Innovative SMEs drive Triple-Open and cut costs.
- Procurement reform is the key and trigger.

1. *How well is technology policy co-ordinated across Government?*

Poorly. Government technology usage costs too much, constantly reinvents the wheel, frequently fails and is based on an outdated paradigm.

Technology policy, which needs coordination to achieve best results, is a clear victim of the Haldane Report. The gap between Government practice and best industry practice is wider than ever, and the trend towards Open Data, Open Standards and Open Source is still in its infancy.

2. *How effective are its governance arrangements*

Clearly ineffective.

As well as being too expensive, only 30% of projects work, 30% of contracts are terminated and 57% of projects experience cost overruns. Government productivity has declined since IT was introduced.

Lack of expertise is evident in all project stages, from procurement to post-implementation dispute resolution.

Governance is only as strong as the expertise and objectivity of the governors. Objective and expert oversight is missing.

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

Based on the constant repetition of the same mistakes the answer has to be no. Based on the repeated application of the same technologies and technology paradigm the answer has to be no. The way IT is done has undergone a fundamental change in the last decade, from closed and proprietary to open and open source. The very fact that contracts continue to be handed to the “usual suspects” and continue to fail in the same old ways suggest that the lessons have not come home yet.

4. *How well is IT used in the design, delivery and improvement of public services?*

It is an afterthought—it comes after developing policy and legislating, both of which are done in isolation to the technical environment or technological implications.

Effective use of IT is the very essence of the world of online services, indeed one could say that innovative, useful and wildly popular and successful online services grow out of understanding the potential of the new way of doing IT—Open Data, Open Standards and Open Source.

5. *What role should IT play in a “post-bureaucratic age”?*

Since its election in May last year, the coalition government has championed the idea of a post bureaucratic age centring on the principle of popular empowerment through technological advancement. We are, in David Cameron’s words “living in an age where technology can put information that was previously held by a few into the hands of almost everyone.” We believe this powerful principle of empowerment is the central pillar of what is meant by the post bureaucratic age. The triumvirate of data, information and communication are the means by which post bureaucratic governance is driven but at its heart is the shift from a government monopoly of information and power to a more networked and engaged model for government.

IT should be central to this Post-Bureaucratic Age.

Every day technology gives us better tools for people to interact easily with each other and with organisations. 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.

IT can deliver “better for less”.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

Unfortunately, after many years of outsourcing, the existing skills are few.

The skills that must be developed are primarily those around an understanding of the way IT has changed and the way the most successful service delivery systems are done now. Government systems pre-date the online age and are almost entirely closed and proprietary. The skills needed for successful service delivery in the connected age are open and non-proprietary. In this sense the existing lack of skills is in fact a good thing, as the skills Government have lost relate to an age coming to a close.

7. *How well do current procurement policies and practices work?*

Extremely poorly.

It costs too much. Best estimates place the figure around £21 billion annually.

Procurement costs too much, second only to the cost of Defence procurement, about the same amount of money is spent on the procurement process as is used to run the Foreign Office.

It favours the same set of enormous suppliers, almost all Government contracts go to the same 11 suppliers.

It excludes Open Source.

It excludes innovative SMEs.

My own company is a British SME with an international reputation, and is the champion for Open Source in the UK. All our work in the public sector has to be done through incumbent SIs who neither understand Open Source, not wish to see it succeed as it ultimately disrupts their own business model with its oligopolistic profits. Public Sector organisations pay a premium to a provider that does its best to dissuade them from using Open Source whilst grudgingly placing the work it cannot kill off through us.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

The essential asset is understanding, and being able to take a strategic view.

The fundamental shift to Open Data, Open Standards and Open Source means that physical infrastructure is becoming less important, and should be seen as an opportunity to reclaim control of systems. Government should ensure the data held within systems is not in proprietary formats and can be extracted without huge costs or risk.

Government needs to own and protect the domain expertise of systems and staff. Without this knowledge, the maintenance and modernisation of systems is dependent on suppliers, and will always come with a hefty pricetag.

9. *How will public sector IT adapt to the new “age of austerity”?*

This remains to be seen. How it *should* adapt is simple:

Adopt a “triple-open” strategy—Open Data, Open Standards, Open Source.

Break up the existing Oligopoly supplier cartel and open up procurement to the innovative SMEs who understand and have adapted to the triple-open model.

Let the market do the rest.

The result will be rapid innovation and flexibility in service provision, massive cost reduction, and a move of public sector IT systems to the new paradigm over time, ie “better for less”.

10. *How well does Government take advantage of new technological developments and external expertise?*

Historically very poorly. One hopes this will now change.

New technological developments have changed the way IT is done. It’s all about Open Data, Open Standards and Open Source.

11. *How appropriate is the Government’s existing approach to information security, information assurance and privacy?*

The previous Government wanted, through IT, to find out “a deep truth about the citizen based on their behaviour, experience, beliefs, needs or desires”. Fortunately, this folly has been abandoned by the new Government, although a positive strategy is yet to appear. Policy needs to be based on individuals owning their own identities and personal data individuals need to decide who they trust and who they share it with.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

The concentration of Government IT procurement in the hands of a small number of suppliers is a particular problem in the UK, as is the high cost of the procurement process. It is likely these two facts are related.

In terms of Open Data, Open Standards and Open Source, the UK is late to the party. There are signs, however, that this is changing, and one hopes this PASC enquiry will continue this trend.

January 2011

Written evidence submitted by Ministry of Defence

1. *How well is technology policy co-ordinated across Government?*

1. There is always a tension between the potential benefits of innovation and exploitation of leading edge technology, and the ability of a large Government department to maintain economies of scale in procurement and interoperability between OGDs and the Department itself.

2. Work has been undertaken by both the cross-Government CIO Council and CTO Council to identify best of class process, practice, and solutions as exemplars to be adopted by HMG. Progress has been made in this area, and MOD continues to participate proactively in the development of cross-Government policies and the implementation of initiatives.

2. *How effective are its governance arrangements?*

3. MOD has a comprehensive governance process, enabling Defence to achieve value for money from its ICT acquisition.

4. In 2010, MOD CIO conducted a review of ICT projects in support of the Cabinet Office/HM Treasury initiative to identify if ICT projects:

- (a) were key to delivering required Defence outputs and were consistent with Government priorities;
- (b) were able to deliver the agreed requirement on time and within budget; and
- (c) could be delivered in a different or more cost effective way by merging with other projects or by significantly reducing the scope/complexity of the requirement.

5. Of 33 projects reviewed, only one was ceased (this is currently under appeal).

6. The Department’s ICT spend also demonstrates effective governance. It compares favourably to the overall UK Public Sector average and Gartner’s Peer Group comparator for Defence.

7. However, MOD recognises the need to improve and to continue to drive through efficiencies. The publication of the Defence ICT Strategy (well received by the Government’s CIO Council), along with the formation of Network Authorities, will further ensure that future MOD ICT investment decisions are coherent, offer value for money, and meet business and operational requirements.

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

8. Lessons are identified following OGC Gateway reviews and the publication of NAO reports. Within MOD, the relevant policy branches are briefed and guidance/policy is amended as required. The issues identified are also shared with MOD scrutineers and are integrated into the acquisition cycle.

4. *How well is IT used in the design, delivery and improvement of public services?*

9. The Defence Information Infrastructure (DII) programme is a pan-Defence programme that provides a high-availability information infrastructure to support activities at strategic and tactical layers globally. It is currently enabling the retirement of a host of ageing and diverse legacy IT systems across Defence, delivering greatly enhanced capability at better value for money. The capability is allowing, for the first time, all Departmental personnel to readily access and share the information they need in order to do their job efficiently and effectively.

10. DII is already freeing up Departmental money for use in other areas; DII is currently on track to deliver direct financial benefits in excess of £1,600 Million by 2015. A specific programme of work named DII Optimisation is underway to ensure that the DII programme continues to achieve its objectives at best value for money to the taxpayer. In the near future, DII will begin hosting Microsoft Office SharePoint Server (MOSS), a vital new capability that will allow a “ways of working revolution” across Defence by introducing, across the estate, new core collaborative tools. These tools will enable better ways of working and promote further efficiencies across business Processes into the future.

5. *What role should IT play in a “post-bureaucratic age”?*

11. Defence is less directly focused than other Government Departments on the delivery of services to the UK citizen, but nonetheless seeks to exploit IT by empowering its staff (and members of the wider Defence community) through automation of previously bureaucratic processes and increased access to corporate data. New media and techniques will allow individuals and communities to engage more directly and effectively with the information they need to perform their function. The automated flow of assured information to relevant stakeholders from “factory to foxhole” will increase data quality, speed decision making, drive out inefficiencies and reduce unnecessary bureaucracy.

12. Defence has invested significantly in DII and now seeks to drive operational effectiveness and efficiency in its agile investment in applications; applications that must support unpredictable operational demands and increased levels of mobile and remote working. The exposure of data, held at appropriate levels of quality and assuredness, at the point of need, will allow users to manipulate it directly, with less dependence on third party processing. A typical investment of circa 4% in ICT will be leveraged to drive greater efficiencies and to enhance effectiveness in the remaining 96% of Defence investments.

13. MOD is fully engaged with the cross-Government initiatives, including the Efficiency and Reform Group’s (ERG’s) G cloud initiative to map the future provision of services.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

14. There are over 8,000 IT staff in MOD who are managed as distinct groups as members of the three Armed Services and MOD Civil Service. The skill sets captured for civilians are: Information Technology; Information Assurance; and Enterprise Architecture. Each of the three Armed Services defines its IT functions slightly differently, tailored to their specific operational environments (Maritime, Land and Air). The MOD has an Information Skills Champion who promotes Information Skills across Defence.

15. Across Defence, IT skills/roles are increasingly required in the following areas:

- (a) Architects: to enable an Enterprise Architecture approach to create federated systems, ITIL/Service Management and a move towards more shared corporate services.
- (b) Analysis and design, including rapid design and development to align applications, databases and services, testing and technical trials environments and expertise.
- (c) Information assurance expertise, particularly in the field of denial-of-service attacks and Cyber.
- (d) Information exploitation of latest Defence Information technologies.
- (e) Intelligent customer management.
- (f) Project & Portfolio Management including Through Life Capability Management.
- (g) INET application skills for deployment into theatre.
- (h) Skills for developing improved situational awareness tools, geospatial technology, matched with the ability to deal with increasingly large data transfer, for example imagery.
- (i) Comprehensive and realistic training environments (pre-deployment) which are key to the efficient exploitation of operational IS.

7. *How well do current procurement policies and practices work?*

16. MOD Procurement Policy is directed by the Director General Defence Commercial (DGDC) and is generated from legislation including EU directives, audit and lessons learnt. This policy information is cascaded down by Senior Commercial Officers at their Team briefs for implementation and is available on the Defence Acquisition Operating Framework (AOF) and the Commercial Toolkit on the MOD Intranet.

17. The MOD Procurement policy and practices cover all elements of the procurement lifecycle (Concept, Assessment, Demonstration, Manufacture, In-Service and Disposal/Termination). The in-service element covers aspects such as contract management and performance management using measurement tools such as Key Performance Indicators (KPIs) and Benchmarking.

18. All MOD ICT Contracts have been aligned to adhere to ERG Standard Terms and Conditions and amended where required to meet the specialist requirements of our customers. The MOD Procurement Policies and Practices are effective due to strong Commercial Governance and Assurance roles which provide advice, support, guidance, review and audit to all MOD Commercial HQ and Delivery Teams. MOD has clear and defined roles and responsibilities, principles and practices that are well established and adhered to by all staff, with the appropriate training courses to up-skill newcomers to the function.

8. *What infrastructure, data or other assets does Government need to own, or to control directly, in order to make effective use of IT?*

19. In principle, we should look to outsource IT infrastructure unless there are security or operational reasons which would dictate otherwise. Over 60% of Defence's IT infrastructure is already out-sourced; however, MOD will need to retain ownership of deployable infrastructure, which is primarily associated with military operations and ensure that it can support this infrastructure in areas which would be unsuitable for employing contractors (for example patrol bases in Afghanistan). There may also be a need to retain IT infrastructure because of security concerns, existing commercial arrangements or because the total cost of ownership associated with out-sourcing would be considerably more expensive than retaining ownership.

9. *How will public sector IT adapt to the new "age of austerity"?*

20. MOD has always sought value for money but the current challenging fiscal climate makes efficiency a key requirement. MOD will deliver this by:

- (a) **Commonality and economies of scale.** Defence will work more closely with wider-Government and ICT suppliers to drive down costs through economy of scale; removing unnecessary overlaps between business areas and Departments; and avoiding costly duplication of capability. In future years, Defence will increasingly use common ICT purchased from Government or Defence catalogues (and possibly supplied to OGDs by Defence). Only where there are unique Defence requirements (such as in relation to operational, security or intelligence issues) will dedicated (or differentiated) ICT be authorised. In addition, Defence will also seek to share technological innovations with and from other countries, for example the G Cloud.
- (b) **Enterprise approach to asset management.** This approach requires that all ICT investments adhere to a common set of Guiding Principles to enable better use of existing ICT Services.
- (c) **Better resource management.** To ensure optimal benefit from ICT investment, Defence CIO plans to: better measure Defence ICT spend; establish a reliable process for measuring VfM/return for ICT investment; and set targets for reducing year-on-year ICT run and maintain costs.
- (d) **Efficiency through effective ICT:** ICT is a key enabler of Departmental outputs, with current spend accounting for about 4% of the Department's operating costs (which total ~£37 billion). By leveraging more effective ICT services this 4% can support business areas to become more efficient, driving down the remaining 96% of operating costs.

10. *How well does Government take advantage of new technological developments and external expertise?*

21. MOD has a mature and well funded research programme and innovation strategy which aims to provide leading edge military equipment to deployed operational environments. MOD is also developing innovation processes to drive the re-use of existing IT to optimise MOD support and back office functions.

22. MOD has good links with key providers such as Cisco, IBM, Microsoft and Oracle to understand how changes can benefit MOD and to help influence their product roadmap. MOD is increasingly attempting to incentivise suppliers to exploit the benefits of new IT developments by inserting new technology into their systems in a timely manner, noting the challenges, however, created by system complexity and application inter-dependencies. Security considerations, specifically certification, must also be considered, and MOD must strike the right balance between the benefits of the introduction of new technology and ensuring the maintenance of security.

11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

23. MOD has a mature risk management culture, policy and set of assurance activities with respect to ICT products and services. MOD has implemented a comprehensive Information Assurance Programme in response to both the Government's Data Handling Review and Sir Edmund Burton's review into information security which also addressed the requirements placed upon the Department by the Information Commissioner's Office under his enforcement notice. MOD monitors and measures its information assurance maturity through the Government's Information Assurance Maturity Model. MOD has shown considerable improvement in its IA

maturity following the IA programme, and is undertaking a cultural change programme to strive for continued improvement.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

24. To date, MOD has not formally reviewed the ICT procurement processes of other countries' Governments. However, some comparisons have been made in relation to specific capabilities and/or programmes for example with the New Zealand and US policies and processes. In addition, MOD is currently engaged in an ERG project along with Department for Work and Pensions (DWP) to reduce the average timeline for restricted procedure ICT procurement to be placed and to bring the UK Government in line with the timelines of other Governments across the EU.

January 2011

Written evidence submitted by Logica

SUMMARY

- This response is submitted by Logica, one of the UK's leading IT, business and service technology companies. Logica employs over 39,000 people worldwide including over 5,000 people in the UK. It provides business consulting, systems integration and outsourcing to clients around the world, including many of Europe's largest businesses.
- Logica is one of the UK Government's main IT suppliers and is involved in delivering key services and projects for the Government including extremely sensitive and crucial security and defence work. Alongside other suppliers, Logica has worked closely with the new government to help determine the contribution it can make to reducing costs in its public sector activities.
- Public sector IT is responding effectively to the "more for less" agenda and can be part of the solution for government in its attempt to drive down costs and improve efficiencies overall. Breaking programmes down into smaller IT projects rather than single large scale programmes is one way of doing this.
- How procurement operates also will need to be addressed though. Competitive Dialogue has become increasingly used across the public sector. However, it can take too long, is complicated, stifles innovation, it struggles with accommodating changing specifications and the costs involved can also seem excessive.
- Logica welcomes the role of the Crown Commercial Representative as part of the governance arrangements in the procurement process. It would like to see better programme management in government (the skills for which can often be found on the supplier side), greater consistency when it comes to the government's approach to information security, information assurance and privacy and more effective co-ordination from the centre when it comes to technology policy overall.
- We would be happy to appear before the Committee as part of its inquiry to answer any further questions.

Q1. *How well is technology policy co-ordinated across Government?*

1. Technology policy is co-ordinated with mixed success across government. In terms of the strategic level—which encompasses how Government deals with data centres, desktop, networks and open source technology—the co-ordination of policy is improving. The previous Government had an IT policy based around cloud computing and the consolidation of data centres, which the new government appears to be reinforcing although it is too soon to tell the full impact of this.

2. It is important to remember that the co-ordination of technology policy is difficult. The reality is that an IT investment case may well have a 5+ year time span which is beyond the usual political cycle, and given that IT technology can change very quickly it is difficult for the Government to co-ordinate policy for the long term.

3. Individual departments are responsible for the investment decisions they make and so it seems difficult to build a homogenous, unified policy across Government when there is no cross government body to implement and enforce it.

4. 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.

Q2. *How effective are its governance arrangements?*

5. Governance arrangements are currently in a process of transition—Logica welcomes the role of the Crown Commercial Representative within the governance process.

Q3. Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learned and applied?

6. In general yes, however there is always going to be the fundamental issue of “scope creep” to address. Reducing “scope creep” increases the chances of a successful IT delivery but in reality, business requirements can change as a project progresses and so create the demand for change to the solution which can jeopardise the delivery timescale and cost.

7. Breaking IT programmes down to smaller modules is good practice but it needs to be recognised that the overall programmes still exist and they still have to be managed as such.

Q4. How well is IT used in the design, delivery and improvement of public services?

8. IT is used in the design, delivery and improvement of public services with mixed success. The real problem occurs when the business imperative or the objective changes halfway through an IT project which leads to the project being scrapped or changed, sometimes with significant financial loss.

9. All IT projects work better when the process or the objective has been firmly established and proven correct. It is good practice, once contracts are awarded, for further details of the IT programme to then be elaborated, so it gives suppliers the opportunity to contribute to the design of a project from an early stage. This is particularly helpful and avoids the type of “scope-creep” already mentioned and often leads to more successful programmes.

10. The procurement process also has its problems where it takes too long and the costs are excessive, so by the time the process has been completed the appropriate technology and the original requirement may have changed.

Q5. What role should IT play in a “post-bureaucratic” age?

11. The same role it plays in the commercial world—by making government more efficient and more effective. IT can also empower individuals be they citizens or public sector officials.

Q6. What skills does Government have and what are those it must develop in order to acquire IT capability?

12. The government does not necessarily need better IT people but it does need better programme management. The skills to manage large scale programmes—which can be provided by the supplier/contractor community—are in short supply.

13. The Government could use the skills found within supply side or contractor teams to provide the large scale programme management that is required within government. If so these teams should then be rewarded upon the success of a programme rather than the duration of their assignment.

Q7. How do current procurement policies and practices work?

14. Not well. Whilst the principle of the competitive dialogue process (ie both parties try to ensure they have understood the requirement and the solution) is sound, it takes too long.

15. Personnel changes on the buyer side at the point a contract is eventually awarded can mean that views on the requirement can change and lead to the scope creep mentioned earlier.

Q8. What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?

16. In theory none at all. However, the government may wish to own its IT infrastructure, data or other assets if they relate to security matters.

Q9. How will public sector IT adapt to the new “age of austerity”?

17. Public sector IT has adapted and is adapting to the new “age of austerity”. In October 2010 Logica signed a Memorandum of Understanding with the UK Government following the process initiated by the Minister for the Cabinet Office, Francis Maude, in July. Logica will continue to deliver all of its existing contracts, having agreed a number of efficiency savings with government.

18. In general, public sector IT will have to recognise that it has to do less and in a more economical way. Undoubtedly, IT will still be part of the solution and as such can help government improve its processes which in the long term will save the government money.

19. Smaller IT programmes remain an option as well. However, smaller IT programmes will only succeed if the public sector requirement is smaller and clearly defined.

Q10. *How well does Government take advantage of new technological developments and external expertise?*

20. In general, given its special requirements around security, the Government can struggle to change its policies to allow the latest technological development to be used.

Q11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

21. It is not the Government's existing approach to information security, information assurance and privacy per se but rather the consistency of accreditors in interpreting the rules and assessing the risks that can be challenging.

Q12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

22. Many other governments are facing similar constraints on spending to the UK. The UK Government is, compared to some countries, ahead in matters such as outsourcing.

23. European countries also abide by the principle of competitive dialogue but the UK seems to be a bigger adopter of this principle than other countries. Of 8098 current "computer and related services" notices across Europe, 93 are using Competitive Dialogue (c1%) but of the 465 UK subset, 31 are using Competitive Dialogue (c7%) so we appear to be much higher users of this process.

January 2011

Written evidence submitted by BSA

INTRODUCTION

1. The BSA—Business Services Association—is the trade body that represents companies, and their advisors, delivering outsourced and business services across the private and public sectors. A full list of members is provided as an annexe.

2. BSA members are involved across the full range of public service provision—including health, education, defence, environmental, waste management, housing and other local services, IT and digital services, security and transport.

3. Full members have a combined worldwide turnover of c.£80 billion and employ around two million people. In the UK the combined turnover is c.£30 billion and around half a million people are employed across the country.

4. The BSA has recently established an IT & Digital Services Committee to bring industry members together and help the government achieve its goals of streamlining public sector IT and creating better value for money. We believe that the government's IT policies have historically been too disjointed.

5. We welcome any efforts to reform IT service procurement and contract scope. We are particularly encouraged by statements from the Cabinet Office indicating a greater level of central coordination and oversight of the IT programmes of Whitehall departments and their agencies. There needs to be a greater recognition that the lowest cost often does not represent the best value, and departments could save more money in the long term by understanding the benefits of broad, encompassing contracts which contain through-life support.

6. We wish to make the following key points:

- (a) IT procurement should be as centralised as possible, preferably overseen by the Cabinet Office.
- (b) Contracts should be as wide as possible to ensure the best value for money. This means incorporating the principle of whole-life service contracts so that IT support is constant and costed in.
- (c) Government should take steps to facilitate a forum for public sector IT providers to cooperate and coordinate system compatibility.
- (d) The clarity of procurement frameworks are favoured over the dangers of an unregulated market.
- (e) Greater public scrutiny of IT contracts over £1 million will encourage decision-makers to opt for smaller contracts of a lower value.
- (f) IT services should be more widely used in government interaction with citizens.
- (g) The government should recognise the value of outsourcing IT services effectively. The government does not have an adequate skills base in its workforce to run day-to-day IT operations, nor should it attempt to develop one, because to do so the cost would be untenably high and provide a much poorer quality of outcome than outsourcing to private sector specialists.

Question 1: *How well is technology policy coordinated across government?*

7. Government has been slow to recognise the benefits of central coordination of technology policy and IT contracts. We feel the quality of public services, as well as the fiscal conditions which underpin them, have been unnecessarily diminished by the disjointed structure of government procurement and the tendency of Whitehall to maintain and defend fiefdoms.

8. Centrally determined, well-constructed service contracts can be flexible enough to provide the level of bespoke support required for departments and agencies. The cost savings to the government could be vast, and should be encouraged at a time when the government is attempting to cut public spending but maintain quality public services.

9. We are pleased to note the government's intention, stated in various departments' structural reform plans, for the Cabinet Office and HM Treasury to work together on devising a new procurement process for ICT. We urge that this is as centrally coordinated as possible. We also note that the government's self-imposed deadline for this is March this year, and we look forward to an elaboration on the direction of travel then.

Question 2: *How effective are its governance arrangements?*

10. IT contracts are valuable and can cost a lot of money. While we are encouraged about the government's stated intention to bring a greater degree of continuity and consistency to IT procurement, through a process of greater centralisation, we are very concerned that initiatives to open up the bidding process to public scrutiny will harm value for money and serve to put a premium on small, limited contracts.

11. The government has announced its desire to publish performance details on all new contracts in excess of £1 million. While admirable in its aims, this initiative could have the effect of discouraging ministers and officials from pursuing contracts costing more than £1 million, harming the likelihood of a successful outcome.

12. This also endangers the principle of corporate confidentiality. Relationships with IT service providers could be harmed, and government expenditure on such services could rise as providers either fail to bid or price such developments into their contracts.

Question 4: *How well is IT used in the design, delivery and improvement of public services?*

13. The transformative potential of IT is not well exploited in the design, delivery or improvement of public services. At their best, IT programmes can free public services of bureaucratic waste, aid staff in delivery and enhance the experience of users. At their worst, they can exacerbate the waste of resources, hinder staff and complicate the experiences of those people for which such public services exist.

14. For example, there remains too much of a tendency for online interaction with government, such as applying for benefits or a passport, to be a "back-up" option for use by technologically savvy citizens only. Paper-based forms should be phased out to a point where they are only necessary for those who are unable to use computers.

15. Rival and incompatible IT systems, which can severely hinder data compatibility between Whitehall departments and their agencies, are a block to joined-up government. It may seem reasonable for public service delivery to be divided up across governmental administrative structures, but for service users it can be difficult to understand why they need to provide the same information several times to different agencies. The previous government's "Tell Us Once" initiative was a step in the right direction.

Question 5: *What role should IT play in a "post-bureaucratic age"?*

16. Government has an important opportunity to use its new focus on a "post-bureaucratic age" to enhance the status of IT in its operations, whether those are back-office or front-line. The effective use of IT has an enormous potential to reduce paperwork, enhance operational efficiency dramatically, and vastly improve the user experience of the public who use government services.

17. The government should prioritise efforts to shift the bulk of its interactions with the public to online mechanisms. While it will be important to provide a range of ways to communicate with governmental agencies, including by continuing to accept paper forms from those who may not be able to use online services for whatever reason, the emphasis should now be on internet-based services.

18. We are pleased that the Department for Work and Pensions, for example, will be moving Jobseekers Allowance and state pension applications online. This will almost certainly cut administrative costs.

Question 6: *What skills does government have and what are those it must develop in order to acquire IT capability?*

19. The BSA encourages the government to acquire further skills in IT only where those skills can be directed towards the informed commissioning of external providers. The training of IT staff to perform day-to-day operations is extremely costly and does not provide the best service possible.

20. We firmly believe in the value of broad, encompassing contracts. It is not enough for public sector organisations to purchase IT systems—they need holistic service contracts with scope for support, repairs and replacement to be cost neutral. IT support staff need to know and understand the systems completely, so it is important that they are drawn from the same organisation providing the hardware and software. These outsourced support staff should be based in situ in order to provide the fastest possible service.

Question 7: How well do current procurement policies and practices work?

21. Although there are successful IT contracts in the public sector, BSA members have to work within procurement architecture which they would neither design nor endorse. The problem is twofold: contracts are too limited by size and too limited by scope.

22. The success of Whitehall IT contracts is hampered by departmental silos. The structure of government is such that almost all procurement is presently done on a departmental basis, including IT, limiting the size of contracts meaning that scale economies cannot be exploited and the best value for money cannot be achieved. IT procurement needs to be more than centrally coordinated; it needs to be centrally conducted, with departmental specificities acknowledged and catered for.

23. This will enable greater cross-system compatibility, which will have positive policy outcomes. The difficulties encountered by the Child Support Agency as it was absorbed by the Child Maintenance and Enforcement Commission, for example, would have been avoided had IT systems been compatible. This should not, however, be interpreted as a call for a single IT service provider for the whole of government. The Cabinet Office should facilitate a forum whereby providers can coordinate their systems.

24. The scope of IT contracts at present needs a fundamental evaluation. Government requires far more than hardware and software to achieve its IT goals. Round-the-clock support provided by specialists, maintenance and upgrade services, and reliable, integrated communications solutions are required by government. It is imperative that the government recognises that costs can be far lower if IT contracts are signed with a whole-life intention.

Question 8: What infrastructure, data or other assets does government need to own, or to control directly, in order to make use of IT?

25. The BSA strongly believes that government should not undertake any activity which is not a core function of the state unless the government can provide that activity to highest quality. While policymaking and regulation are important functions which can and should only be undertaken by the state, the provision of IT services and support is often best undertaken by the private sector.

26. Our answer to this is simple: the government should not own or control directly any type of infrastructure in order to make better use of IT. Companies in the outsourced IT and support services sector have a history of success with private as well as public sector clients, and can help government achieve solutions for a lower cost and to a better quality.

Question 9: How will public sector IT adapt to the new “age of austerity”?

27. The public sector should put value, rather than cost, at the forefront of its considerations when procuring IT services. Fiscal pressures will mean an inclination for procurement officials to be tempted by the contract with the lowest up-front cost, but it is vital that wider cost considerations are made.

28. Our position should not be mistaken for one which is necessarily advocating ever more expensive contracts. Sometimes the best value contracts can come at the lowest price. But the principle of value is one which takes both costs and outcomes into consideration. Better outcomes can reduce costs in the long-run, and it is imperative that IT contracts do not become hamstrung by annualised budgets which encourage a focus on short-term expenditure.

29. The government has previously implied that, despite its efforts to reduce expenditure fast, it can be brought round to the idea of spending more money up front to save a greater amount in the longer term. This is exemplified by HM Treasury’s attitude to welfare reform plans. We urge that this principle be applied to IT contracts.

Question 10: How well does government take advantage of new technological developments and external expertise?

30. Private providers of IT and digital services have a vast array of expertise which is not fully exploited by the public sector. For the reasons stated already, procurement officials should gear the tendering process towards opting for the best value contracts, which may not necessarily be the lowest cost contract. A greater amount of capital will be saved in the long run as government is better able to make use of external expertise and support.

31. Whole-life contracts, which extend to support, maintenance and upgrades, can mean that the public sector can take advantage of technological developments as they happen and on a cost-neutral basis.

BSA MEMBERS

FULL MEMBERS

Amey	www.amey.co.uk
ARAMARK	www.aramark.co.uk
Babcock Infrastructure Services	www.babcock.co.uk
Balfour Beatty Workplace	www.bbworkplace.com
Berendsen plc	www.berendsen.com
Capita	www.capita.co.uk
Carillion plc	www.carillionplc.com
ClearSprings	www.clearsprings.co.uk
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Interserve	www.interserve.com
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John Laing	www.laing.com
Kier	www.kier.co.uk
MITIE Group	www.mitie.co.uk
Morrison Facilities Services Ltd	www.morrisonplc.com
OCS Group	www.ocs.co.uk
Pinnacle	www.pinnacle-psg.com
Rentokil Initial	www.rentokil-initial.com
Serco Group	www.serco.com
Sodexo	www.sodexo.com

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Metzger	www.metzger.co.uk
Navigant Consulting	www.navigantconsulting.com
Pinsent Masons	www.pinsentmasons.com
PricewaterhouseCoopers UK	www.pwc.co.uk
Reynolds Porter Chamberlain LLP	www.rpc.co.uk
Serco Institute	www.serco.com/institute
SJ Berwin LLP	www.sjberwin.com
Trowers & Hamblins	www.trowers.com

Written evidence submitted by Roger Marshall

1. I have spent my whole professional career in local government ICT and was Information Systems Director for the City of London Corporation until retiring in April 2010. Since 2009 I have chaired a group within EURIM (The Information Society Alliance—see <http://www.eurim.org.uk>) which has been examining the subject of IT procurement in government and I am currently the industry chair of Eurim's Public Service Delivery group.

SUMMARY OF MAIN POINTS

2. The main points in my response are:

- Central government and its major agencies have a poor track record in: (a), obtaining good value when purchasing IT services and (b), successfully implementing new IT-based systems. There is, however, much good practice in other parts of the public sector from which central government can learn.
- There should be a strengthening of the professional status of IT within government. This means that senior civil servants and ministers should ensure that independent advice is available, listened to and acted upon.
- Senior Responsible Owners have a key role and once appointed should stay with projects and programmes until they are completed.

- Where Ministers wish to go against the advice given, their decision should be in the public domain in the interests of transparency.
- Greater use should be made of off-the-shelf packages and “good enough” rather than fully-tailored solutions, re-designing business processes to exploit their potential for cost reduction and service improvement.
- More investment should be made in the development and promotion of small scale front line support applications and customer self-service systems.

How well is technology policy co-ordinated across Government?

3. The formation of the CIO Council and appointment of a Government CIO have been steps in the right direction. However, the results so far have been disappointing. The CIO Council and Government CIO have had little impact on IT practitioners in the public sector and insufficient effort has been put into promulgation of their work.

4. Technology policy should be centred on standards (in particular procedural and data interchange standards) not on products and services. It is ironic that the UK government has been instrumental in developing or nurturing world-renowned IT management techniques such as Prince2, MSP (Managing Successful Programmes) and ITIL (IT Infrastructure Library) yet appears unable to apply them as successfully as other organisations (including other parts of the UK public sector).

How effective are its governance arrangements?

5. This has traditionally been a weakness in large central government departments and agencies. 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 (ie those whose main business is the processing of information) 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.

6. Major projects and programmes have a Senior Responsible Owner (SRO) appointed. It is essential that SROs stay with projects from start to finish so that each programme has a clearly identified advocate and leader. With this responsibility should come the power to call a halt or fundamentally change the objectives if the risk of failure becomes too high. SROs should have the power to freeze the specifications for new systems where this is needed to meet the programme’s objectives. Where a minister wishes to override such advice their decision, and the reasons for it, should be clearly stated and in the public domain.

Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?

7. Clearly not, as both project and operational failures costing billions of pounds are still being reported. I have recently chaired a Eurim group which summarised the procurement advice available from the NAO, Audit Commission and others (see <http://www.eurim.org.uk/activities/pubproc/0909ProcurementSummary.pdf>). As was the case back in 1994, when I chaired a similar special interest group for the Institute for Data Processing Management, which was set up following a damning report from the Public Accounts Committee at that time, there is no shortage of advice (such as that given in the above paragraphs). If the advice, then or now, had been followed there would have been few total project failures and much greater realisation of the potential benefits from government IT programmes.

8. Looking ahead, there have been recent announcements concerning implementation of the government’s Universal Credits policy, including the IT arrangements. Although the details of these arrangements have yet to be published, there are already serious causes for concern as this programme displays some of the characteristics of previous IT disasters.

How well is IT used in the design, delivery and improvement of public services?

9. Too often computer systems are designed and built from scratch to meet a highly complex set of requirements driven by policy development. Much more should be done to improve business processes in government with a view to making the best use of available IT systems. The adoption of off-the-shelf packages can often provide a perfectly adequate 80:20 solution (80% of the benefits for 20% of the cost of a fully-tailored system). The 100% solution will often fail because (a), it was too ambitious and inadequately planned, costed or executed, and (b), by the time it was deliverable government policy had changed.

What role should IT play in a “post-bureaucratic age”?

10. Low cost, small scale IT solutions which provide real benefits for front line staff should be encouraged and adequately funded, accepting that many such developments will fail to live up to expectations. The lessons learned should lead to a rapid improvement and wider roll-out and processes should be set up to ensure that this happens. In other words, start small and scale fast. A similar approach should be taken to systems enabling citizen self-service—there are already many good examples but they need to be more widely available and heavily promoted.

What skills does Government have and what are those it must develop in order to acquire IT capability?

11. Government does not need to be an IT application developer nor does it need to run data centres, however it should stimulate and regulate the market for these services. What it does need are the skills of an intelligent purchaser. It also needs programme management skills. These do not need to be “in house” as they can be bought in; what is essential is that the programme manager is independent of the suppliers and is incentivised to obtain the best outcomes for the customer. Above all, the advice of programme managers must be listened to and acted upon by SROs, chief executives, top civil servants and ministers.

How well do current procurement policies and practices work?

12. Performance varies across the public sector, but there are good examples of highly cost-effective procurement practices, for example the best outsourcing arrangements in local government and co-operative joint purchasing of telecom services and of PCs through reverse auctions. Generally speaking the UK public sector does not get good value for money when purchasing IT services and we should put more effort into determining the reasons (for example, structure of the market, legal constraints, use of proprietary products) and putting them right.

What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?

13. Most of the infrastructure does not need to be owned, but government should take measures to ensure that infrastructure suppliers do not profit unreasonably from their government business. Clearly, also, it should ensure that security and resilience of the infrastructure are properly addressed and audited. Data is different—personal data collected or held by government should be considered to be owned by the data subject and treated accordingly. Other data may be “free” or controlled by government for a variety of reasons (for example, intellectual property value, security, commercial value) and ownership/control needs to be determined on a case by case basis. Such considerations are unlikely to adversely impact the effective use of IT in most cases.

How will public sector IT adapt to the new “age of austerity”?

14. There are savings to be made within existing IT budgets, as historically the government has not been an effective purchaser of these services. Rationalisation of infrastructure into large shared-service data centres and networks can also provide savings. The biggest opportunity, however, lies in application rationalisation and the ruthless adoption of common systems across government. This should be led from the top of the civil service and by ministers—applying the 80:20 rule as described above and banning the silo mentality.

How well does Government take advantage of new technological developments and external expertise?

15. Adoption of new technology should be promoted through multiple small scale pilots and rapid scaling of the successful ones—this should be a well-financed and highly-publicised programme. External expertise is no substitute for good management—managers should know why they are buying in expertise and buy it intelligently, stopping when it is no longer needed.

How appropriate is the Government’s existing approach to information security, information assurance and privacy?

16. There is a high level of expertise in government but its application is patchy. There is a need for a more joined-up approach across government on subjects such as identity management and also a need for better staff training.

How well does the UK compare to other countries with regard to government procurement and application of IT systems?

17. The UK has a poor track record by any standards. Much of this can be blamed on a predilection for big-bang solutions driven by ministerial hubris. Big developments are intrinsically far more risky than smaller scale ones which can then be rolled out and gradually improved in an incremental fashion. Where scale is smaller, managerial responsibility consistent and lines of control shorter, such as in UK local government, IT failure is relatively rare. Eurim believes that evidence from other countries supports this view.

Written evidence submitted by OpenForum Europe

SUMMARY

A lack of adequate IT knowledge and experience in the business of government means that it cannot:

- Create and police a coherent IT strategy.
- Successfully manage IT projects.

The top 12 suppliers share around 60% of the annual government IT spend of £21 billion resulting in:

- potentially more expensive and traditional technology solutions being implemented; and
- little or no innovation

The failure to recognize the need to own the intellectual property contained in government IT systems results in an inability to re-use that intellectual property on a cost effective basis.

Adoption of Open Data Format standards and Open Source licensing models would significantly reduce costs as:

- Software could be re-used at minimal extra cost:
 - Proprietary “lock in” would be avoided.
 - The barriers to entry for new suppliers would be reduced.

1. *How well is technology policy coordinated across Government?*

As we are limited to 3,000 words we have limited our comments to our main themes.

2. *How effective are its governance arrangements?*

Given the scale of the cost overruns in the Independent article referenced in the briefing note for this submission the answer has to be that the governance arrangements are ineffective. This is despite the many reviews and audits that have been performed over the years (see next point). The underlying reasons for this include:

- Lack of the appropriate IT skills in government (most of these appear to have been outsourced) to understand and ensure the importance of conforming to industry standard governance of IT projects.
- The disconnect between policy design and implementation and the complexity this too often introduces into the delivery of the supporting technology.
- The inherently short term view that politics will always force upon large scale IT projects which inevitably take some time to journey from concept to operation and force potentially fruitful projects to be cut because results are not judged on Total Cost of Ownership (TCO).

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

Past NAO and OGC reviews of troubled projects have repeatedly cited common failings. From these reports, and through the application of common sense, it would seem obvious that for IT projects to be successful they need:

- To have a defined scope and specific objectives.
- To be owned by the organisation which will be using them with clear sponsorship.
- To be of a scale and complexity that is within the grasp of the owning organisation to deliver.
- Constant management and review.

However, judging from recent publicity, where there has been a distinct lack of these factors, it seems safe to form a view that the past lessons from NAO and OGC reviews have not yet been learnt and applied.

4. *How well is IT used in the design, delivery and improvement of public services?*

There is no doubt that over recent years a number of central and local government services have been made more accessible to the individual citizen through the use of IT.

However, there is also a catalogue of high profile failures which have limited the extent to which IT has been able to improve public services. New ways, with greater innovation not more cash, must be sought to deliver the efficiencies promised by IT and to release the vast untapped resource of public data.

The bundling together of “build and run” into single large, multi-year contracts also suppresses competition and hence innovation. Closed procurement processes have prevented SME organisations from offering simple, light weight, modern solutions and have favoured established suppliers with expensive, and often legacy, solutions. “Build and run” style contracts also leave the customer at the mercy of the supplier when it comes to the cost of variations to the contract. The lack of competition and innovation combined with the high cost

of many long term contracts have undoubtedly limited the extent to which IT has been able to improve public services.

5. What role should IT play in a “post-bureaucratic age”?

Government is not good at running projects so should release the entrepreneurial spirit of the SMEs by giving them access to government data (via open Application Program Interfaces (APIs) conforming to open standards) so that they can develop the applications the citizen wants. The key role for IT in a “post bureaucratic age” should therefore be to facilitate this process so that citizens can become intelligent consumers of government data and hence engage with “big government” as outlined by David Cameron in his speech of 22 February 2010. This will allow people to use the information ...

“as they wish, to make government more accountable, to make sure we spend money more efficiently and to drive up the quality and responsiveness of public services like schools, the NHS and the police.”

The amount of information that the Government has available for publication clearly makes the achievement of this a significant challenge, particularly in the way the information is presented. Whilst there are no technical issues to storing and retrieving the amount of data being contemplated, there will be significant work required to ensure that it can be retrieved in an intuitive (ie easy to find) manner. It is the development of the Information Systems or software required to achieve this which will be the most significant role that IT will play.

6. What skills does Government have and what are those it must develop in order to acquire IT capability?

The life-cycle of any IT system is:

- Definition of the business need.
- Design of the appropriate system.
- Build of the system.
- Implementation.
- Ongoing operation and maintenance.

The skills needed tend to be different for each stage although there is also an underlying set of skills needed by the project owner (ie the government) throughout:

- An ability to engage with, and understand, the policy being implemented and where necessary to champion policy change to simplify implementation.
- Strategic understanding of technology available to solve the business problem and a view on how it can best be utilised.
- Sufficient understanding of the technology specific to the system being implemented to be able to challenge whichever supplier (internal or external) has development responsibility.
- Budget management.
- Change management.
- Stakeholder management.
- Supplier management.

All of these skills are critical and where the project owner (the government in this situation) does not possess these skills then projects will fail. Unfortunately the level of failure in government IT projects would indicate that government does not have a sufficient level of these skills.

However, these skills only help maximise the chances of success of the delivery of a single project. To really make a step change in the value that IT can deliver projects need to build upon each other and to become more than the sum of their parts. These skills needed to achieve this are distinct from project delivery skills and include:

- An ability to comprehend the enterprise architecture of government data and how data flows are required to interface internally and externally.
- An understanding of the relevant Open Standards that should be met by the system being delivered so as to increase interoperability and to ease the consumption of the system outputs by citizens.
- An ability to componentise solutions so that the commercial restrictions on reuse are limited to the components that were pre-existing vendor IP and all components developed for government, at governments expense, can be licensed under an Open Source model.

There is little evidence that these capabilities currently exist in government and little evidence that there is a desire to develop them. Yet without these skills the true promise of IT cannot be realised.

7. How well do current procurement policies and practices work?

Estimates published in September 2010 by “the network for the post bureaucratic age” (pba) in their report “Better for Less” show current government spending on IT is circa £21 billion p.a. including £2 billion p.a. on

new procurements. The report also identifies nine suppliers who are the major suppliers of IT solutions to the government.

Procurement policy and practice should ensure:

- Accountable and transparent use of public funds.
- Maximum competition.
- Encouragement of innovation.
- Best value for money.
- Minimisation of regulatory compliance liabilities.
- Avoidance of discriminatory terms and conditions.
- No barrier to entry for SMEs.

For a variety of reasons we are a long way from achieving these objectives in the UK:

Culture—each Government Department works independently, believing their requirements are unique, looking for bespoke services and failing to achieve economies of scale by sharing development costs between departments.

Legacy contracts—framework agreements make status quo the easy option.

Commercial Confidentiality—acceptance of this by the government reduces competition as the current size of the single tenders effectively prevents any competitive analysis being performed.

Financial targets—existing suppliers will make cuts and meet spending review target but will reduce their financial exposure by resisting the changes needed to deliver transformation of public services.

Perceived risks and myths—the significant financial benefits of adopting an Open Source approach are not understood.

Inertia—preparation of a single tender as opposed to a number of smaller interoperable projects with the same overall functionality is the easy option for an existing supplier, this discourages the creation of consortia including innovatory smaller suppliers.

Audit—Internal/Government audits challenge costs but seem ill equipped to challenge compliance with open policies or judge the potential of over-specification.

Current procurement policies encourage the creation of a small pool of large suppliers through the use of a highly expensive tendering process. It is not uncommon for suppliers to incur costs running into millions of pounds during a tendering process. Inevitably at least one supplier will lose that bid and will have to swallow the aborted cost of the exercise. Not only does this situation prevent new, smaller (and potentially more innovative) suppliers from entering the competitive process but there are two other very significant impacts:

- The government (and, therefore, the taxpayer) will eventually pay for the abortive tender costs through higher prices on contracts that are won.
- It is in the suppliers' interests to build proprietary solutions so that no other supplier can easily replace them from a contract that has been won. This approach creates long term costs for the government.

There are simple solutions:

- Insisting on “open source” licenses for software being developed for government to encourage reuse.
- Insisting that all new IT systems (be they bespoke or a vendor package) used across government adhere to “open standards”.
- Disaggregating large, monolithic procurements to encourage competition or where this is not possible requiring that all bids are made by a consortium where each member of the consortium demonstrates best value for a particular aspect of the requirement (consideration will need to be given for who carries the integration risk).
- Only agreeing contracts by project phase, not only will this open up competition, hence driving down costs, but it will also allow better project management and control reducing the risk of costly overspends.
- Refusing commercial confidentiality and enforcing publication of all tenders received.
- Requiring, by law, that the preparation costs of any one tender cannot exceed a certain amount.

A (not exhaustive) summary of the benefits that would be achieved:

- A wider range of suppliers will compete for tenders, increasing competition (and benefiting SMEs), this, in turn, will drive down costs achieving more innovation at a lower cost.
- Project success will be less dependent on a single supplier.
- The increased granularity (clearer breakpoints in projects/contracts) and the use of open standards will increase flexibility during both the implementation and operational phases of the project.

- The wide spread use of Open Standards will dramatically increase interoperability and along side an increase in the use of Open Source will drive a step change in reuse.
- Lower barriers to exit and early termination of under performing projects.
- Enhanced capability to scale up successful projects.

These will achieve more project success at lower cost.

8. What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?

IT is a shorthand mnemonic which needs to be unbundled in order to answer this question. With a few exceptions, notably Software as a Service which is discussed separately, IT can be split into three independent components:

- The Information Systems (IS) (software) that process the relevant data in order to provide the required services.
- The Information and Communications Technology (ICT) (hardware and telecommunications equipment) that is required for the operation of the Information Systems.
- The data which relates to the service being provided.

The ICT component of the IT system does NOT need to be owned by the government, in fact, the pace of technology change in this area means that the optimum model would be to lease the hardware and telecommunication links on mutually agreeable terms from reputable suppliers. The move towards Cloud computing (specifically Infrastructure as a Service and Platform as a Service) presents both an opportunity (in terms of cost reduction) and a threat (in terms of lock-in to a single supplier) in the area of IT. To address the threat government should insist on Open Standards (for example the use of Open APIs to provision and control virtual machines in a suppliers cloud) across all Cloud platforms procured as this will encourage competition and prevent lock-in to a single supplier.

Currently tenders will often bundle the ICT and IS components together in an attempt to find a single supply source. This is not essential, in fact it is often counter-productive as ICT suppliers are not necessarily experienced and competent IS suppliers, and vice-versa. This approach compounds the non competitiveness of the current situation. Clearly separating these two components in tenders would re-introduce some basic competitiveness and encourage fresh thinking and innovation.

While the data being processed by the IT system will be owned by the government consideration also needs to be given for who “owns” the format. Data should be held, or at the very least be extractable, in a Open Standard / format. If this is the case then lock-in (through the data format) to a single suppliers IT system is avoided. Preventing lock-in ensures that incumbent suppliers can be challenged as that new and better systems can replace legacy systems without having to undergo an expensive and potentially complex data conversion process.

In most (if not all) IT systems it is the IS component, or software, which (over the whole life of the IT system) is the most expensive. While it has long been recognised that if development is funded by taxpayers’ money then the intellectual property created should ideally be owned by the crown (as specified in the majority of the Buying Solutions, and previously OGC, framework contracts) the reality is that this has not been widely enforced and even where the IP has vested with government, reuse has been minimal.

Therefore looking forward wherever possible, and certainly whenever bespoke development is carried out, the ownership of the Intellectual Property should vest with the crown and the software should be licensed under an appropriate Open Source licence. This will encourage the low cost re-use of a taxpayer funded asset for the benefit of all taxpayers. This approach would also prevent any single supplier creating a non competitive proprietary lock in. The current example of Moodle in the education sector is a classic case study of the success of this approach.

9. How will public sector IT adapt to the new “age of austerity”?

There are positive signs within local government with Councils now looking at sharing resource IT included and sharing development. This will be made easier and ultimately more successful if the councils develop Open Source solutions (they will be able to share and jointly develop them) that conform to Open Standards (the systems will be interoperable).

In contrast, central government has shown limited signs of changing that established way of working. Here there is a poor track record with the root cause being the way the government tenders for monolithic solutions which attracts only the big players. A move to better architected solutions utilising open standards and modularised design would enable more companies to respond to tenders.

10. How well does Government take advantage of new technological developments and external expertise?

The risk averse nature of the vast majority of government IT procurements does not encourage innovation. This means that government does not generally fare well in taking advantage of new technological

developments unless a supplier is willing to market the development and to take the risk on the first implementations.

11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

As we are limited to 3,000 words we have limited our comments to our main themes.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

The pba report mentioned previously makes an interesting observation:

“This reliance on a handful of suppliers is peculiar to the UK. One study (See P Dunleavy and H Magretts, Government IT Performance and the Power of the IT Industry: A Cross-National Analysis, American Political Science Association, 2004.) found that in the Netherlands, the top five IT suppliers have **20%** of the government market. In the US this figure is **48%**. In the UK it is **80%**.”

This lack of competition in the UK government market forces one to conclude that the UK does not compare favourably to other countries.

Several, if not most European governments have had trouble streamlining both their IT costs and their software requirements. It is very often the case that national IT systems are in fact completely split between several layers matching political and administrative entities (such as with federal states and decentralized administrations) while being poorly interconnected. At the level of IT procurement there tends to be a more observable variety in the quality of the requirements stated by the government agencies, although tenders sometimes fall in the perverse trap of systematically choosing the cheapest solutions without considering the hidden costs induced by the miscalculation of deployment fees, exit costs and maintenance burdens.

Free and Open Source Software as well as Open Standards have become the centre of the attention of the IT branch of many countries in Europe and abroad. Yet the way this has translated both in public procurement and the application of IT systems has so far resulted in very different outcomes. There seems to be three different trends when it comes to IT public procurement. The first one, which is often seen in the northern part of Europe, tends to mandate the use of Free and Open Source Software and executes that strategy in a rational way; the span of this strategy may vary, with countries such as Norway embarking into an in-depth reform of their IT systems while Finland seems to have a more limited span, although the execution itself reaches the most local branches of several ministry acting together. The second level is one in which the government mandates Free and Open Source Software on a political level although the actual execution of this requirement is either non-existent or lags behind a series of practical and management issues. The third trend, observed at the level of the central government (the reality being quite different and quite diverse at the regional level) is one where the mandate for Free and Open Source Software tends to be discrete or hesitant, usually as the result of lobbying actions on governments, but where the reality on the field is one where Free & Open Source Software is often massively deployed. This contrasted state of things unfortunately reinforces the poor coordination of the governmental IT systems.

January 2011

Written evidence submitted by Rupert Collins-White

SUMMARY

- The courts service in England and Wales is currently ill-served by the IT procurement behaviour of the MoJ and HMCS, because both the department and its agency fail to effectively deliver, or seemingly even consider important, value for money, project accountability, procurement transparency or effective oversight beyond the level of individual projects.
- Contracts and contractual arrangements with the ministry's primary supplier are such that it pays the supplier (currently Logica):
 - to carry on maintaining legacy IT systems rather than replacing them; and
 - to expend more money rather than less—more expensive systems pay the primary IT supplier more in commission than cheaper systems.
- The only way “past” the “lock in” created by this contractual situation is for HMCS or other areas of MoJ to attempt to procure or develop systems below a low initial threshold of spend. However, what this encourages is a lack of transparency, an absence of transparency in spend, minimal oversight, and usually an end cost that exceeds a spend amount that would have forced the project into the responsibility of the IT supplier in the first place—in other words a situation no more accountable or conscious of value for money than its alternative.

1. *E-Working—electronic filing and document management for the commercial courts*

An integrated case management system has been used in the Commercial Court since 2005 where it has, it seems, been reliable and popular with courts staff. It is a solution called InterCOMM by a UK business called Visionhall.

However, this project was dropped as a system for electronic filing, document management and listing (despite an internal assessment approving it as viable) in favour of a more expensive system developed internally by HMCS (and contractor staff)—eWorking.

E-Working is significantly over-budget, is more than a year overdue, is unpopular to the extent of being almost unused by the commercial law firms it must garner as users, and will offer less functionality to the users than alternative systems that could have been considered and, worse, were already “in play”.

Though eWorking is a system ostensibly developed “in-house”, HMCS relies on an arrangement for court forms creation and systems infrastructure with a major corporate entity (Adobe), but has refused in every arena to outline how much public money may need to be spent going forward with Adobe, exactly how much has already been spent, what commercial contractual relationship has been made and, if the project were to rolled out on a national scale (something HMCS previously would not comment on either way and now has said, through a representative, will not occur) what amount HMCS would be required to pay to Adobe.

What this means: HMCS/MoJ have, in eWorking, once more “reinvented the wheel” by creating a functionally identical system to Visionhall’s “in play” system, and to the system “in play” at the Supreme Court—and not functionally dissimilar to a slew of case management systems also “in play” within the justice system. This has cost roughly £6–10 million depending on which numbers one believes.

This is indicative of a problem endemic with the justice system’s IT procurement—other cases that evidence this problem include the reported “reinvention of the wheel” by creating a new courts IT system for the Supreme Court.

eWorking was the subject of a recent survey of commercial litigation-focused court users, carried out by the Commercial Litigation Association, in which 13 out of 20 people who had used the system said their experience of eWorking was “bad” or “very bad”.

The survey also asked some open questions, one of which was “what disadvantages over traditional paper working” respondents saw. Quotes returned included: “The new system simply does not work for our purposes”, “the original e-filing pilot scheme [i.e. CCIT] was much easier” and “The forms are not rule compliant. The form design is very poor and the use of Adobe smart forms has over-complicated what should be a simple process”.

This is the result of several years work and up to £10 million spent—when a system already existed that was delivering, or HMCS had admitted could (relatively easily) deliver those goals.

2. *“Reinventing the wheel” in justice IT*

The courts agency in England and Wales has systematically failed to deliver a “joined-up”, value for money IT project management approach or results of same over the last five to seven years when it comes to IT systems for the courts.

HMCS/MoJ have spent between £7–15 million (possibly as much as £20 million) developing and implementing IT systems to deliver the basics of what is called “electronic filing and document management”, without actually delivering this outcome (the Supreme Court’s IT system is an example of reinventing the wheel and does not serve a commercial court, so is separated here).

Each EFDM solution developed/delivered within the HMCS area has been an example of a new system created where an solution already exists. HMCS/MoJ have seemingly not cared that a solution in one arena (eg, Supreme Court) could be used in another. Instead, HMCS/MoJ have allowed money to be spent creating functionally identical systems for each new court project it embarks on, sometimes doing this more than once for the same court.

This is best evinced by HMCS/MoJ’s behaviour in creating new systems one after the other for the commercial courts, in which it developed a Visionhall solution (CCIT pilot), then spent considerable time working up a separate (and only theoretical) EFDM (electronic filing and document management) solution, then developed almost concurrently a case management solution for the Supreme Court using a commercial solution from Open Text that cost £1 million to adjust, to eWorking—which is based upon a completely different set of technologies, the cost of which is opaque even to FoI and face-to-face enquiries.

Over the past four years I’ve uncovered evidence, from primary sources and through FoI requests, proving the HMCS/MoJ have:

- failed to carry out proper or even partial cost/benefit assessments/tenders when seeking to buy systems from external vendors;
- failed to ensure primary IT suppliers to the justice system do same;

- paid far more than necessary for systems provided;
- failed to properly assess whether lightly-tailored commercial off-the-shelf systems would fit needs, rather than systems created using lots of internal contractor time;
- through poor contract writing and negotiation allowed a situation to persist in which a tiny number of large businesses essentially rotate their status as primary IT suppliers, creating a *de facto* cartel;
- failed to be open about methodology, to extent of obfuscation and behaviour in dealings with the press that would seem to be in contravention with FOI law;
- failed to give enough weight to analysis of whether open-source software could meet HMG's needs, despite a wealth of evidence from continental Europe that it could; and
- consistently behaved in an opaque way in disbursing public funds on IT development.

3. Contractual failures

Fundamentally almost all MoJ/HMCS problems in IT procurement stem from a failure to properly negotiate with IT suppliers from a position of power, which the ministry should be in but, in reality, it fails to use to its advantage.

The contract between Logica and MoJ means that Logica gains a percentage on work undertaken and solutions bought. This creates an inevitable bias on the part of the IT supplier to favour more expensive solutions over cheaper ones, and to do work rather than not do work.

I can substantiate this through FOI answers I've received in relation to the procurement of the Supreme Court IT system, and the committee can read the results of this as a story published in the *Private Eye* (issue 8 January 2010, I think) and in the text of a story published by the *Law Society Gazette* (14 January 2010), currently suppressed by an aggressive libel action by Open Text (both stories were written by me). I've attached a copy of the *Gazette* story as supplementary material. (NOT PUBLISHED)

4. Failure to examine the value of "commercial off-the-shelf solutions" (COTS)

Where COTS are available MoJ/HMCS shun them via the MoJ's primary IT supplier, because it pays the primary IT supplier to purchase more systems, and more expensive systems—see point (3) for the reasons and evidence of this.

This has the side-effect of denying access to the (justice side of the) government IT procurement process to SME businesses in the UK. I would posit that it is likely that this situation persists in many other areas of government.

SME businesses are deemed by the MoJ's primary IT supplier as being "too small to use"—whereas in other countries in Europe, for example, relatively lightly adjusted open source systems developed by SMEs in conjunction with agencies/departments/courts are the norm, and do not cost a vast amount (see point 9).

5. Co-ordination of technology policy

There appears to be no real evidence of a coherent technology policy within HMCS or even MoJ.

EFDM is a prime example of this. EFDM as a project was cancelled in 2008–9 after around £5 million had been spent (see <http://www.lawgazette.co.uk/news/more-delays-court-it-roll-out>), which had produced no solution whatsoever, and failed to outline any real reason why the working solution in place at the time (Visionhall's solution developed in the CCIT pilot project) should not be further developed.

Before then a PQQ had been issued to prospective bidders, which stated:

"The MoJ strategic preference for the delivery of IT solutions is to 'buy not build' and the re-use of existing components and services, or Commercial Off The Shelf (COTS) products, (integrated and configured as necessary to meet the business and technical requirements) is therefore the preferred approach for EFDM."

However, as can be seen from points 1–4 and the background supplied herein, eWorking, as a "successor" to EFDM, broke all these rules.

(Though the Supreme Court case management system was developed from a COTS, as you can see from the *Private Eye* and *Gazette* stories provided as evidence in point 3, when the MoJ has tried to follow these rules it is unable to bring the projects to fruition without incurring higher than necessary costs.)

Prior to eWorking, HMCS commissioned an operational review of the Royal Courts of Justice by David Ryan CBE. The report recommended that the 28 different case management systems in use within the RCJ should be consolidated and that no new systems should be developed. However, both the eWorking project and the Supreme Court's case management system stand as testament that this directive was ignored.

6. Governance in IT procurement in the courts

For the eWorking project, governance/oversight has been almost non-existent.

- The project commenced in October 2008 with a £2.2 million pilot in the Commercial Court.
- In February 2009 a further £4.7 million was allocated to roll out eWorking to three other courts. The new budget was approved based upon the success of the pilot that had not yet been completed therefore no results were known.
- User acceptance testing (UAT) was carried out by the development team rather than the users.
- The “lessons learned” exercise was allegedly officiated by the project manager and there was no opportunity to review.
- The project was developed by HMCS using a team entirely composed of external contractors. There was therefore not the usual rigour of a supplier contract with a scope of work, penalty clauses etc. Since the HMCS project manager was also part of the development team, the usual checks and balances did not exist.

7. Lessons from NAO and OGC reviews about unsuccessful IT programmes

The NAO recommendations appear to have been overlooked with regard to eWorking.

- *ensuring senior level engagement*—The RCJ directorate allegedly expressed a preference for the Commercial Court IT (CCIT) system, but were allegedly told there was no money for anything except for eWorking, as this was to be developed underneath the “cap” of money for passing on projects to Logica—it has however cost significantly more (by a factor of 10, possibly) than extending the CCIT project would have.
- *acting as an intelligent client*—as stated previously, the eWorking project was developed by MoJ contractors, who were managed by MoJ contractors. The contractors were able to make a succession of exaggerated claims about their system and their ability to deliver in a very persuasive manner. There appears to be no-one within the MoJ able to change the direction of the project.
- *realising the benefits of change*—Though HMCS and MoJ seem to be embracing change, this is happening for its own sake, and is costing far more than effective development of existing systems would have. eWorking has already cost up to £12 million—despite HMCS claims to the contrary—equivalent to £60,000 per user. If the system were to be rolled out nation-wide then perhaps a vastly reduced cost-per-user price could be achieved, but the RCJ staffer in charge stated at a recent Commercial Litigation Association Network conference that extending eWorking beyond the commercial courts was not intended. It is alleged by sources that the system will cost an estimated £2 million a year to support.

8. In answer to: “How will public sector IT adapt to the new ‘age of austerity’?”

Ministry of Justice IT needs to be far more aware of value for money in its IT procurement behaviour, and should look to other countries (see point 9) for good examples of how to deliver functional, useful justice system IT within “reasonable” cost parameters.

MoJ must learn to focus on delivering services that offer real benefits, as soon as possible. It has for too long constantly aimed at a kind of long-term IT plan that may offer some theoretical savings at some unknown time in the future—which instead means courts systems that are needed in the present are developed piecemeal and without direction, and that legacy systems are not retired while decisions on future systems are constantly delayed.

The MoJ running many legacy systems, some of which have their origins in the mid 1980’s. Those systems are very expensive to maintain and do not offer the features of a new modern solution. New solutions are significantly more reliable and cheaper to operate. New systems can often be purchased on a pay-per-use basis, with no initial capital outlay.

There are many good examples of the business sector moving to “software as a service” deliver methods for IT systems, and commercial off-the-shelf IT systems now exist to provide government with innovate pricing and flexible implementation that do not require expensive in-house development from scratch.

9. In answer to: “How well does the UK compare to other countries with regard to government procurement and application of IT systems?”

In terms of justice IT, procurement in the UK seems almost entirely decided upon the choice of development tools used to create a solution, rather than the functionality offered.

Many European governments have implemented innovative justice IT solutions for a fraction of the cost HMCS/MoJ have spent (often not even to deliver a working solution, such as in the case of eWorking)—examples would include systems delivered in Germany, Austria and at the European Court of Human Rights.

The Dubai International Financial Centre (DIFC) Courts also recently implemented a version of the solution developed by Visionhall (InterCOMM) and still in use in the commercial courts (CCIT project).

<http://www.lawgazette.co.uk/blogs/in-business-blog/why-are-we-behind-dubai-courts-it>

These are just some examples of the many that could be presented.

10. Summary of this submission

- MoJ/HMCS are currently wasting money building a system called e-Working for the courts—eWorking has been rejected by court users and is currently barely used, and does not function as required despite millions of pounds in investment.
- MoJ/HMCS are “reinventing the wheel”—they have delivered/developed several functionally similar/identical solutions across various court environments without heed to this replication and its concomitant cost.
- There is little to no proper, “intelligent” oversight of HCMS/MOJ IT procurement.
- The primary IT suppliers to MoJ/HMCS are, because of the nature of their contractual arrangements, “encouraged” to choose expensive, new solutions over extending cheaper/existing ones. It is my opinion that these contracts have created a *de facto* cartel in terms of provision and pricing.
- MoJ/HMCS’ vague will to develop a future all-encompassing courts IT system, that has never got off the ground, has also created a situation in which MOJ is still paying for solutions to be run and maintained alongside newer systems fulfilling the same function.

January 2011

Written evidence submitted by IT Profession Delivery Management Competency Group

SUMMARY

- This is a response from the IT Profession Delivery Management competency group to question 6.
- IT professionalism is a key factor in the effective use of IT by Government.
- There is significant value in a sustainable networking model for IT professionals.
- The Delivery Management group has demonstrated a useful role in developing IT professionalism.
- The value of links with the wider public sector and with other IT professional organisations has been observed.
- It is important to build delivery management skills by encouraging breadth of skills and experience.
- The Government IT Profession Skills Framework is an essential framework for mapping and developing new and relevant skills.
- A cost neutral learning and development model can play a strategic part in fostering appropriate skills.
- There is potential benefit in expanding the scope of the Delivery Management group.

BACKGROUND

1. This is a response to the invitation to submit evidence, particularly with regard to question 6 “what skills does Government have and what are those it must develop in order to acquire IT capability?”

2. Government promotes IT professionalism through the Government IT Profession. Part of the IT Profession’s work over the past few years has been the development of a Government skills framework that categorises skills into a number of discrete areas in line with the Skills Framework for the Information Age (SFIA). A network of competency groups has been established to promote and develop IT professionalism within the respective skills areas and to help build capability, skills and identity.

3. Within the framework, the Delivery Management competency group is one of two senior competency groups led by a National Competency lead. The Lead is charged with developing the group by creating and building communities for sharing best practice, providing development opportunities and networking.

4. An early deliverable of the Delivery Management group was to agree a definition of the Delivery Management competency to provide a focus for professional development. A Delivery Manager’s role is defined as “working together with the other leaders of the organisation to deliver its goals through the effective and efficient identification, provision, implementation and operation of information based services and solutions to deliver change and meet business requirements.”

5. The Delivery Management group has attracted membership from senior IT Professionals in a number of Government departments and Local Government Authorities. Over the past four years it has built a sustainable, strong, invigorating and positive network through which it has delivered a number of benefits to its members and to the wider public sector IT Profession community.

6. The Delivery Management group acknowledges that much of public sector IT is delivered through the supplier community and this response is set in that context.

RESPONSE

7. Through regular face-to-face meetings and conference calls the group has been able to share knowledge, experience and skills across organisations. Group members agree that this contributes to their continuous professional development and provides a valuable return on the time investment required to attend group meetings and conference calls. Networking in this way is an important part of the development of professionals who are capable of delivering successful IT programmes.

8. The group has been able to promote good practice by organising events and conferences eg on Information Security and Cloud Computing using specialist speakers and taking advantage of practical workshops. Delegates across the public sector have been able to learn lessons from key programmes and projects—both successful and unsuccessful. Feedback from these events has been very positive.

9. The group has been able to review, discuss and provide feedback on items tabled at Government IT Profession Board meetings and in some cases subsequently presented to the CIO Council.

10. Socitm (Society of Information Technology Management) has invested much time and resource, especially in the past two years, in the promotion and development of IT professionalism. There has been valuable engagement between the Delivery Management group and Socitm on this and a formal and sustainable relationship has been established between the two groups. This demonstrates some success in partnering with other organisations with similar objectives working in this space.

11. Arising from early work carried out by the Delivery Management group was an assertion that a broad skill set is a requirement for a successful delivery manager. This has been reinforced and supported over time not least by the diverse membership of the group, including delivery managers from a range of Government departments, local government organisations of varying sizes and emergency services, namely police and fire. Networking across different organisations promotes a broad based skill set, which is key to successful delivery management.

12. As the ICT landscape continues to change, and as suppliers take more responsibility for the delivery of products and services, an important element of successful delivery management is the management of supplier relationships and contracts. There is a need to build intelligent customer clients that are skilled in both challenging and enhancing supplier propositions in such a way as to promote a strong partnership approach. This is further evidence of the need to develop a broad skills base.

13. The Government IT Profession Skills Framework (based on SFIA) is an essential framework upon which staff developmental route maps should be based. These will promote the acquisition of new and relevant skills to increase breadth of knowledge and experience. It will promote breadth as a positive career progression rather than (as is often currently the case) a “random accident”.

14. The diverse membership of the group has helped it to understand that skills associated with understanding different organisations are important to the delivery manager role and IT professionals more generally. Although the group has identified that many of the issues facing IT professionals in different organisations are the same, the scale and opportunities to address the issues can vary greatly. Government IT programmes often require co-operation between different agencies and the success of these can depend on the ability of a delivery manager to understand how such programmes are viewed by other (receiving) organisations.

15. The group has identified the importance of the role of Learning and Development sessions to promote, support and encourage personal and professional development. These can be provided internally within an organisation at relatively little cost and deliver value for money; however, the impact and value for money can potentially be increased by offering such resources across departmental and organisational boundaries. Often learning and development that is either presented by or focuses on the viewpoint of an external department or organisation can have greater impact. Acknowledging this, and taking advantage of its diverse membership, the Delivery Management group is developing a model to share learning and development across Departments and wider public sector organisations on a cost neutral basis. This potentially could be a model adopted more widely across Government and not limited to the IT profession.

16. Aligned to the learning and development model, the group has taken advantage of appropriate technologies eg teleconferencing and collaboration tools to minimise travel and maximise economy.

17. The Delivery Management group framework of face-to-face meetings and conference calls has proved successful and sustainable. It is acknowledged however, that although strategic it is still a drop in the ocean. If the group is to support Government more effectively, it must have significant impact in developing delivery managers across the public sector. It must build on its success to establish a network of local professional communities.

18. An important element of the wide reach of the Delivery Management group has been access to resources. Although pressed for time (along with other Government organisations) a common vision of what might be achieved for the greater good has enabled us to release resources between us, to the point of being able to offer resources to the central Government IT Profession team.

19. Aligned to resource sharing, the Delivery Management group has modelled a principle of cooperation without extra cost. Although the Cabinet Office has sponsored some of the conferences, on-going group activities do not demand specific or central funding.

20. Government's policy has been to outsource many of the IT skills required at lower levels, for example programme and project management skills, with the result that a feed-through of skills and talent from junior staff to more senior positions is not always available. This has made it difficult for Departments to "grow their own" and in this situation the use of consultants has become a necessity to plug the resulting skills gap. The Delivery Management group supports the conclusions of the report of the House of Commons Committee of Public Accounts "Central government's use of consultants and interims" (Twelfth Report of Session 2010-11). The group believes that the development of competent delivery managers and more junior staff will enable Government to reduce its reliance on consultants and interims.

January 2011

Written evidence submitted by Philip Virgo

1. EURIM (www.eurim.org.uk) has made a formal submission from its members. This is a personal submission which expands on the points made in their answers to Questions 3 and 4. The views expressed are based on my personal experience and may or may not be shared by the members of EURIM or IMIS

2. I have been involved in the delivery of IT systems for over forty years since I was responsible for merging and decimalising (1971) the sales ledger systems of the companies that had come together to form ICL. My MSc (London Graduate Business School) paper on "Why Computer Systems Fail" was published in 1973 and I subsequently ran the ICL-DTI Study to help the new Regional Water Authorities with a Computer Development Plan that was not only based on established good practice but was actually followed and succeeded. I have been involved in many such studies since, including the original computerisation of PAYE and using the experience of decimalisation to advise companies (and government) on how to avoid problems with Y2K.

3. I have been involved in public policy with regard to the use of IT for 30 years, since working on policy studies during the run-up to the 1979 election (the liberalisation and privatisation of telecoms and the micros in schools programme).

THE MAIN POINTS IN THIS RESPONSE ARE:

4. The reasons why good practice is not followed are usually political. Most were well described by Machiavelli, Kipling and C Northcote Parkinson and can also be found in the Old Testament, Confucius and Sun Tse.

5. The core task is to ensure that ministers harness professional advice to find safer ways of implementing their change programmes and do not over-ride good practice because it is politically unacceptable in the short term.

6. That is not easy but improved consultation and scrutiny, including by Parliament, can help reinforce pressures to follow good practice, reduce temptations to over-ride it and limit the damage when it happens. IT itself should be better used to assist the process.

Question 3 *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

7. No. That leads to the Question "Why Not?". I have twice written well-received papers on the question of "Why do we never learn: the pre-conditions for public sector success".

8. That for the National School of Government, was published in 2008 and is available on-line at: <http://www.computerweekly.com/blogs/when-it-meets-politics/2011/01/why-do-we-never-learn-the-pre.html#comments>

9. Part of the argument was:

10. "Confusion and conflict over objectives and priorities and split responsibility for policy and implementation commonly mean that no one knows what success looks like or is responsible for achieving it from conception to completion. *In the worst-case scenario, proposals originate from policy professionals rather than operational staff; they are worked up by officials with equally little experience of implementation or operational delivery; and turned into procurement specifications by consultants and lawyers who have never seen a project all the way through from concept to success.*

11. "There will almost certainly be at least two changes of Minister and one of officials between enabling legislation and statutory instrument, let alone procurement. The supplier's "A" teams will then compete to negotiate lowest cost, blame avoidance contracts, to meet a re-negotiated compromise specification that has lost sight of the original objective. Finally the winner's "B" team arrives to do its best. Meanwhile those who

are to use the system have become increasingly frustrated with delays followed by broken promises as to what the system is supposed to achieve and when.

12. “The main reason why such problems persist long after they were first identified is that those who plan clever policies using fashionable technology are promoted to repeat their mistakes elsewhere before they have time to learn. Rudyard Kipling might have had the relationship between Policy Advisors, Technology Gurus and Ministers in mind when he wrote how:

13. *They sit at the feet—they hear the word—they see how truly the promise runs
They have cast their burden upon the Lord and—the Lord lays it on Martha’s sons*

14. “For Kipling the “Sons of Martha” were the engineers who made the systems and infrastructures of the Empire work. Today they are long gone and we no longer train their successors to do the same for the systems and infrastructure of today.

15. “Once the planning phase has over-run, leaving the more difficult problems to be sorted out during the procurement phase, which over-runs even more in consequence, there is a rush to catch up, using the newcomers in the performance monitoring team, after those who understood the original requirement moved on during the delay.

16. *“The obsession with studies of “Best Practice”, assuming skilled and experienced staff, is itself a prime cause of the continuity of bad practice. The need is to publicise and enforce adequate practice on the part of the people you actually have available.*

17. “They must then be trained to do so by those who have done it for real, with opportunities for mentored and supervised experience before they are left in sole charge of a project, let alone programme, of their own. The tendency to ‘muddle along’ delays corrective action while problems grow.

18. *“Private sector projects are commonly announced only after they have been shown to work. Moreover the commercial sector sees a reputation for reporting problems in advance and organising rapid remedial action, however brutal, as career-enhancing, not career-limiting.*

19. “By contrast, public sector projects are usually announced in advance. There may be increasingly desperate attempts to fix any problems in private, without calling for additional resources, with notification up the chain of command only if the problems cannot be solved with the resources to hand. This is almost certain to limit the careers of those who called for help.

20. “The culture of private cover-up followed by public witch-hunt used not to be peculiar to the public sector. It used to be found in many large businesses. But those facing global competition can no longer afford to try to conceal problems, as opposed to earning reputations for acting fast to resolve them.”

21. The paper leads through to action plans such as:

22. **“manage political expectations**, beginning with what is realistic, given the time and resources available. This requires ensuring that the minister’s policy team includes advisors with relevant practical experience of delivery.

23. **“confine risk to one dimension at a time**. For example, if there is a high risk that the objectives or organisational structures will change you should avoid changing supplier or systems at the same time.

24. **“Break the programme into modules**. In the private sector, projects which take more than three months are more likely to be cancelled than to go live. If the implementation team has not worked together before on programmes of this type it is even more essential to begin with a series of small projects and quick wins to build experience and confidence.

25. “Think big, but **“start small, test hard, scale fast”** is the route to systems success in the private sector. It is not a new technique and has had many names over the years: from structured evolution to rapid application development and dynamic systems methodology.”

26. The National Health Service Information Authority was following professional best practice to knit together the disparate clinical systems of the NHS to enable and encourage inter-operability based on common recording standards. Progress was beginning to accelerate when the Government (at the very top) lost patience and imposed a grandiose National Plan for IT.

27. Today we still have the problems with regard to semi-incompatible standards across the records and systems used for clinical or professional purposes, despite having spent billions on recording systems that are said to be insufficiently accurate, available and reliable to support anything other than “defensive” medicine.

28. The linking of an updated PAYE system that will cope with the income fluctuations of those who move in and out of employment to a new DWP benefit systems, to provide Universal Credits is, in key respects, even more ambitious than the attempt to give on-line access, anywhere in the UK, to an accurate current patient record. It also has similar political support and impetus.

29. Those who call for independent professional review to find low risk incremental ways of introducing such radical change will be as politically unpopular as those who counselled against the NPfIT, even before it

became obvious to senior clinicians that it did not relate to the realities of patient care and they would have to maintain their own parallel systems in order to meet their moral and professional obligations.

30. It is politically much easier to promise that a new system will be carefully planned and tested for several years by well-known consultants and suppliers before being introduced, than to admit that neither officials or suppliers have experience of successfully handling the scale and nature of the risks involved.

31. The UK benefits systems is uniquely centralised and complex. The UK is, however, also unique in having a single, centralised payment clearing operation. The transition of the banks, including their networks of automatic teller machines and other on-line systems, to internet protocols and common smart card standards is probably the only major change of equivalent risk to those being proposed to support the Universal Credit. The way that transition was planned and phased has many lessons for government. The scale and nature of the staff and customer education programme necessary for Universal Credit to work is, however, even greater.

32. It is therefore important to use IT itself to help prepare the way with better consultation and scrutiny, to ensure that politicians, staff and public, as well as the implementation teams, know what to expect.

Question 4 *How well is IT used in the design, delivery and improvement of public services?*

33. The EURIM response to this consultation by the PASC says “IT is rarely used in the design and/or targeting of public services. We commonly “retrofit” IT to deliver a service that has been specified, in primary and secondary legislation, without testing how it is likely to work in practice. The untested specification is then put to out tender in an expensive ritual driven by consultants and lawyers paid according to time spent, or given to the incumbent contractors to implement without external scrutiny of value for money.

34. “Policy initiatives should be subject to computer modelling during the design phase to see how they are likely to work in practice. Existing public records (tax and benefits) should be collated anonymously with private sector databases (eg credit reference and market research) to identify how many individuals or businesses will be affected. Those scrutinising legislation should have access to such simulations when debating the proposals and any suggested changes.”

35. I recently blogged <http://www.computerweekly.com/blogs/when-it-meets-politics/2010/12/how-to-prevent-the-dwp-univers.html#more> on the ideas of the late Donald Michie on how computer simulation might be used at each stage of the policy process, from formation and initial planning, through consultation and political scrutiny to procurement and implementation. The aim would be to help improve understanding of what is proposed and how it is intended to work and, at the same time, identify and resolve problems, including conflicts of priority, early enough in the process for to prevent them causing unacceptable delays and over-runs during implementation or chaos at the start of live running.

36. The process should not be used to help plan an optimised, delayed-bang “big” system. Times change, needs evolve and, by definition, what is optimal today is sub-optimal tomorrow.

37. The aim should be to help plan an evolutionary process in which the system will change incrementally over time, with each set of changes consulted on and tested before commitment, with the simulation helping ensure homogeneity and continuity of approach.

38. There are, of course, many issues around implementing such an approach but it is closer to the mainstream of current and evolving private sector best practice than the way in which big public sector systems are announced years in advance, constrained by legislation and implemented after several changes of customer (alias minister and senior departmental official responsible for the system).

39. In parallel an analysis of the live transactions flowing through the existing systems should be used to inform ministers and those involved in consultation and scrutiny as to how many individuals are likely to trigger which “rules”. This could lead to not only to better estimates of costs and impact but also better debate as to how rare conditions and exceptional hardship cases could and should be handled.

40. During the EURIM transformational government dialogues Lord Kirkwood (former chairman of the DWP Select Committee) commented that barely 20 of the 1,200 or so “rules” were needed for over 80% of claimants on one system and those responsible regarded the complexity as a matter of pride, not shame.

41. A new approach may also help ensure that the Universal Credit is indeed successful in addressing the problem that most welfare systems assume predictability of need and PAYE was designed for those in stable employment. Meanwhile “those in most need lead lives of quiet desperation, lurching from unpredictable crisis to unpredictable crisis. Then, if and when they get their lives together, with a brief period of work and prosperity, the system catches up with them and crushes them back to poverty with its demands for payback”.

42. To really help those trying to help better themselves, we require systems that assume chaos and unpredictability. That entails giving front-line staff (and those in the delivery “partners”) responsibility for holistic support and the ability and authority to over-ride the “system”. It is unclear whether the currently planned reforms are intended to go that far, although some of the “Big Society” rhetoric might be seen to convey that expectation.

43. Tasking IT professionals to design and support systems that allow humans to over-ride the “rules” in order to handle the unpredictable (and logging their decisions and reasons for audit and accountability) is unusual in central government, where there is a common presumption that the rule book and system, should cover all eventualities. We can see the consequences.

44. My personal professional “prejudice” has always been for simple systems with routines for manual over-ride, tools to help authorised human beings to decide how and when to do so and a log to record their actions and reasons. Having worked alongside some world-class systems engineers I would not, however, elevate that view to being anything more than “reasonably well-informed prejudice”.

45. I do, however, believe that this problem goes to the heart of why so many big and well-intentioned central government systems fail.

January 2011

Written evidence submitted by Software Industry Research Board

SUMMARY

- Public sector organisations are under unprecedented pressure to cut departmental budgets; and IT is not exempt.
- By employing software asset management processes, organisations can control the costs associated with software—which can represent anywhere between 30–35 of total IT budgets.
- Effective software management can reduce overall IT costs by more than 20%, helping public sector organisations to achieve significant savings without affecting public services.
- There are other equally important benefits of implementing a software asset management programme, including compliance, reliability and performance optimisation.

1. Introduction

1.1 The £18 billion annual public sector IT budget is one of the areas earmarked for cuts in the government’s plans to reduce departmental budgets by between 20 and 40%.

1.2 These austerity plans are forcing every government department to look at alternative ways of delivering services and new technologies that can provide cost savings.

1.3 Budget reductions in the public sector are nothing new. Socitm, the Society of IT management in the public sector, recently published a report revealing that since 2006 local government IT spending has fallen by 19.3% in real terms. The difference with today’s budget reductions is that they will affect every level of government. These cuts will be very real and arguably will be the hardest to manage in our recent history.

1.4 In the run-up to the last election, both opposition parties committed to making cuts in government IT spending. Since then, the new coalition government has confirmed that ID Cards will be scrapped; the ContactPoint child protection database terminated; and the cost of England’s NHS National Programme for IT (NPfIT) re-examined. Additionally, a number of quangos have been or will be abolished. These include the UK Film Council, the Health Protection Agency, National Patient Safety Agency, Appointments Commission, Human Tissue Authority, NHS Institute for Innovation and Improvement, all eight regional government offices, eight of the nine regional development agencies, Investors in People UK and a host of others.

1.5 Public sector IT projects have had a poor reputation, both in terms of value for money and on-time delivery. Whether or not this reputation is fully justified, all departments must exercise rigorous control over their technology spending if they are to meet the targets set by government and withstand closer public scrutiny.

1.6 This paper aims to demonstrate that software, like any other asset, must be managed throughout its lifecycle to achieve its maximum, potential benefit. Furthermore, it will show that public sector organisations can make significant savings from their IT budgets if they learn to manage their software assets more effectively. Software can represent anywhere between 30–35 of the total IT budget, and effective software management can reduce overall IT costs by more than 20%. Consequently, in this era of austerity and cuts, it is a rare example of where the public sector can save significant amounts of money without impairing public services.

2. Software asset management

2.1 During the last 25 years software has evolved into an invaluable business asset; however, a considerable proportion of organisations continue to manage the software lifecycle in an ad-hoc fashion. Furthermore, the proportional value of software has increased in relation to overall IT budgets: while hardware costs and human resources costs have both reduced in real terms, the unit cost of software has continued to increase alongside the increased number of applications in any one estate.

2.2 Any single government department may be using thousands of computers, based across the country in a mixture of centralised and remote locations, running numerous versions of operating systems and applications

residing in datacentres and distributed environments. Given the highly dispersed nature of many government departments there is an additional reason to manage software—control and compliance.

2.3 Organisations need to keep a detailed view of how, where and which licences to buy. This process is Software Asset Management SAM and should not be viewed as an optional administrative process, but rather as a key mechanism for transforming software from a cost centre to a strategic asset. For a public sector struggling with budget cuts, it can deliver a number of benefits, including controlling costs associated with software assets, improving the performance of those assets as well as the organisation and its employees and compliance with the law.

2.4 Over the last ten years, the main driver for Software Asset Management has been compliance. Research conducted on behalf of the Software Industry Research Board (SIRB) shows that 76 per cent of organisations with an SAM programme consider “surviving” a software audit one of their key SAM goals—more so than any other objective.

2.5 As more organisations recognise their legal obligation or are reminded of it by the software industry, enforcement groups or publishers, many have been driven simply to complete a license compliance review which has little return and in most cases has been seen as a costly exercise.

2.6 Recent developments such as the Sarbanes-Oxley Act in the US, the Turnbull Report’s recommendation in the UK, the publication of the “Best Practice for Software Asset Management” guideline from the IT Infrastructure Library (ITIL) and the launch of the ISO/IEC 19770–1 Software Asset Management International Standard, have meant that Software Asset Management has risen up the business agenda and has become a priority for CIOs.

2.7 Despite this, not all CIOs are aware of the importance of SAM. Inevitably, that means IT overspend on software continues apace, while organisations remain open to risk.

2.8 The primary objective of Software Asset Management, therefore, is to manage, control and protect an organisation’s software assets, minimising legal risks while maximising return on investment (ROI).

3. *Why manage software?*

3.1 Whether you are operating in the public or private sector—the challenges remain the same. What is driving the challenge for the public sector is the urgent need not only to contain costs, but to reduce them while keeping control of processes. Managing software estates is essential to deliver three core outcomes:

- Cost reduction and control.
- Performance optimisation.
- Compliance management.

3.2 Cost reduction and control

This is the most powerful argument for software asset management in the public sector.

Broadly speaking there are four core areas where cost savings can be found:

- Control of software acquisition costs.
- Control of hardware costs.
- Control of software support costs.
- Risk mitigation of legal costs.

3.3 Software acquisition

Procurement practices need to be clearly defined so that effective management processes are in place to minimise software acquisition costs. This can be achieved by identifying and communicating existing and future software needs, budgeting for acquisition and buying only what is needed.

3.3.1. A Software Asset Management programme empowers procurement teams and aligns strategies. By providing management information as an output of measuring application utilisation and identifying redundant assets where project-based demand has expired, existing software assets can be readily identified. This reduces both ad-hoc purchase requirements and mis-licensing, while supporting accurate project budgeting.

3.3.2 Within the IT budget, planned software spend needs to be a separate line item; and an effective tracking mechanism is needed to keep an eye on planned versus actual purchasing.

3.4 Hardware

A Software Asset Management programme enables any organisation to identify and communicate to employees what software is currently supported, as well as expected upgrades, disposals and retention policies for data and programs.

3.4.1 In collating and sharing this information, all software, data and programs can be managed in an effective way with the minimum of disruption.

3.4.2 The removal, or retirement, of software programs which are no longer used or supported frees space and alleviates system demands on hardware platforms. This means organisations can avoid the cost of expensive hardware upgrades caused by memory being taken up unnecessarily.

3.5 Software support and maintenance costs

By identifying what software you have, what you intend to have and when you will cease to support legacy programs, you can control your software support and maintenance costs.

3.5.1 Any organisation with effective software management processes can identify the degree to which support and maintenance contracts should be renewed.

3.5.2 In organisations where new project requirements are limited and the environment is largely static, support and maintenance software costs may represent almost the entire software budget and can only be effectively reduced with accurate usage and demand detail.

3.6 Risk mitigation

Managing your estate through a software asset management process will reduce exposure to the risk of legal challenges, fines and reputational damage. Crucially, it also reduces “unplanned spend”. One of the most common and damaging outcomes of non-compliance is that few firms prepare for the fines that they could incur. This unplanned expenditure can have a serious impact on an organisation’s cash flow and bank balance.

3.6.1 The process will create a record of all the documentation you need to avoid this risk, including:

- A written statement of your organisation’s software policy.
- Evidence of communication with employees.
- A total inventory of your estate.
- All documentation of actions undertaken in support of management processes.

4. *Additional benefits*

4.1 Performance optimisation

Cost control is not the only benefit associated with software asset management. Performance improvements across an organisation can also be delivered through efficiencies or soft benefits.

4.2 Reliability and quality

The process of adopting a software asset management programme will ensure the quality and reliability of the software estate itself due to constant review of software relative to business requirements.

4.2.1 Illegal software will be flushed out and with it the inherent threat of viruses. Licensed software on the other hand offers the assurance of product authentication and quality as well as the warranty of the software publisher, all documentation, manuals, tutorials, product support and upgrades.

4.3 Rationalisation and compatibility

Given the sheer number of software applications on the market today, one of the biggest issues confronting IT departments is that of compatibility.

4.3.1 By managing the lifecycle of all their software assets, organisations can generate the information they need to address this issue effectively, ensuring that employees in one arm of an organisation can access and use documentation from another.

4.4 Change

Anticipating future software needs is integral to the software asset management process. By undertaking a comprehensive review, organisations will be in a far stronger position to anticipate future software requirements, enabling cost efficiency of projects and accurate decisions on risk.

4.4.1 This process will also help organisations avoid acquiring outdated software that vendors or publishers are likely to discontinue, or from which they remove support.

4.5 Productivity

Software asset management ensures that employees have the tools they need to do their jobs efficiently, and the training they need to use these tools effectively.

4.6 Managing complexity

The evolution of new software delivery methods has made the software environment much more complex. The emergence of terminal services, desktop virtualisation, cloud computing and other delivery models means that end users typically take a hybrid approach to software delivery.

4.6.1 Conventional management techniques and approaches connected with native software installation will continue to be required: often, however, data integration and de-duplication reflecting various elements of the organisation's estate will be required.

4.6.2 Collectively, the complexity of hybrid approaches and licensing programmes creates an enhanced requirement for a robust and efficient Software Asset Management programme capable of managing demands of evolving approaches to software delivery.

4.7 Compliance management

Software is protected under copyright law and cannot be used, reproduced or distributed without the express consent of the rights holder or publisher.

4.7.1 Software is licensed to a user—not sold. This limits the right to use, reproduce and even distribute that program to the terms of the software licence agreement. This, it must be remembered, is a valid legal contract between the licensee and the software publisher.

4.7.2 In many cases a licensed copy of a software program can be installed and used on only one computer, unless otherwise stated. Each licence differs in its usage; this needs to be understood before any software package is installed and used.

4.7.3 Furthermore, copyright law exists to protect the publisher from infringements such as the unauthorised distribution and copying of the program itself. UK law is clear—violations are punishable with a maximum jail sentence of 10 years and the potential for substantial financial penalties, let alone the damage to reputation of those being found to infringe copyright law.

4.7.4 Given the role government plays in the protection of intellectual property—it is, after all, the body that creates the legal framework in which the publishers and licensees operate—it would be highly embarrassing if a department failed to comply and was convicted of doing so.

5. Case studies

5.1 Hinchingsbrooke Health Care NHS Trust

Hinchingsbrooke Health Care NHS Trust provides a full range of inpatient and outpatient healthcare services to more than 161,000 people in West Cambridgeshire. The Trust has an annual budget of £63 million and is currently undergoing a major ward upgrade programme to help improve the patient experience.

5.1.1 Business Challenge

With the NHS charged with saving £15 billion by 2014, organisations like Hinchingsbrooke Health Care NHS Trust need to make better use of their resources—whether it involves clinical staff or IT systems.

5.1.1.1 Software asset management is a key area for NHS organisations looking to reduce cost, and therefore a core component of the NHS IT Maturity Model (NIMM).

Developed by NHS Connecting for Health, NIMM aims to encourage trusts to enhance their IT management processes and move towards greater IT standardisation and optimisation.

5.1.1.2 Regaining control of the software estate would require extensive resources and licensing expertise. “We wanted to verify our licence position, but with 1,200 desktop computers and 70 servers this was a significant project and we were keen to complete it in the most accurate and efficient manner,” said the Trust's Desktop Services Manager, Barry Patton.

5.1.2 Software asset discovery

The Trust used software asset discovery and appraisal service from Computacenter. The service is designed to reconcile the software installed and used by organisations against the licences held to reveal an accurate licence position.

5.1.2.1 Following an evaluation of the Trust's IT estate, Computacenter implemented Centennial Discovery as the best-fit discovery and inventory tool. This tool collates information regarding the software installed and used on each desktop, laptop and server throughout the trust's IT infrastructure. This data formed the basis for a software asset appraisal.

5.1.2.2 As part of the appraisal findings, Computacenter highlighted any discrepancies between the licences owned by the trust and the software installed as well as opportunities to maximise utilisation. The appraisal

not only covered standard office-based software but also specialist healthcare applications, and helped to identify unauthorised applications that had been installed on NHS devices.

5.1.2.3 As well as establishing an accurate licensing position, the report made nine key recommendations on how the Trust can enhance software asset management on an ongoing basis. These recommendations included keeping an up-to-date inventory of software installed and harvesting licences from end-of-life devices.

5.1.3 Results

The Trust now has a comprehensive understanding of its software assets and is implementing Computacenter's recommendations to maintain control of its estate. "Computacenter's report showed that we did not have any significant under- or over-licensing, but without undertaking the project we would not have been able to demonstrate this to vendor auditors or NHS Connecting for Health," comments Barry.

5.1.3.1 This ability to prove compliance will entitle the trust to access centrally managed software in the future, such as Windows 7 and Microsoft Office 2010. The Trust is already assessing Microsoft anti-virus software, which could potentially save the trust £20,000 a year in cost-avoidance.

5.1.3.2 Enhanced visibility and control of its software estate has also enabled the Trust to:

- Enhance the efficiency of software management maintaining a balanced licence position without needing to invest in extensive resources.
- Helping staff to work faster and smarter: The trust now has visibility of the software versions on each hardware device, which means it can ensure staff have access to the latest versions.
- Make cost savings: the Trust has been able to reduce costs by maximising its existing licences in three ways: freeing up idle licences for re-use; harvesting licences for redeployment from end of life devices; and identifying over-licensing, which has resulted in surplus budget to invest elsewhere.

5.1.3.3 "We now have peace of mind that we are fully compliant with our licensing agreements, and are working towards better software asset management practices that will enable us to increase efficiency and reduce cost, freeing up more resources for patient care," concluded Barry.

5.2 Northwest Regional Development Agency

The Northwest Regional Development Agency (NWDA) promotes economic development in Northwest England. The agency leads by example in adhering to established guidelines for IT excellence and encourages businesses to follow best practices. These guidelines include Software Asset Management (SAM). In 2003 the NWDA implemented a SAM program that the agency has continued to refine over the years.

5.2.1 As early as 2003, the NWDA recognised the need to include SAM as a fundamental part of IT operations. At that time, and on its own initiative, the agency conducted an inventory of software and licenses and compared it with an analysis identifying the products that the organisation actually needed. Next, the NWDA developed a comprehensive SAM programme that includes the following policies and practices:

- Standardising the IT environment on the Windows XP and Windows Server 2003 operating systems.
- Defining a standard disk image for first-time setup of all agency computers.
- Restricting users from making significant system changes.
- Establishing a formal, written policy for software usage, distribution and compliance.
- Maintaining an up-to-date list of software titles and licenses and storing licensing records in a fireproof safe.
- Giving the IT department sole authority for purchasing and distributing software.
- Using automated third party tools to deploy software and maintain license keys.
- Entering into an Enterprise Agreement to cover Microsoft software.
- Licensing standardised software for employees to use on their personal computers at home and establishing usage policies for these computers.
- Joining the Microsoft Software Assurance maintenance programme.

5.2.2 Through SAM, the NWDA has improved IT efficiency and reduced costs. SAM also contributes to best practices that serve as an example in improving efficiency through high IT management and quality standards. Automated SAM tools help the department use staff more efficiently, avoiding the cost of hiring additional workers. Also the NWDA is a government agency that carefully tracks its licenses, so it benefits from the government's bulk buying discounts.

5.2.3 The NWDA know exactly what its software assets and needs are before entering into price negotiations with vendors. As a result, the agency buys the right number of licenses at the right price. According to the NWDA it has saved as much as £68,000 a year in IT costs.

January 2011

Written evidence submitted by Royal Borough of Windsor and Maidenhead

What role should IT play in a post bureaucratic age?

Summary

- IT needs to provide the dynamic force for the post bureaucratic age, not stand in the way of it.
- Establishing the new relationship with the citizen that comes with the “Big Society” requires a common technical platform that will support self-service and “zero touch” public service delivery.
- There is an excellent opportunity to do this with the implementation of RTI and Universal Credit.

1. INTRODUCTION

(a) There are two clear phases identified for the changes required in British government IT:

Lights on: deliver existing IT at better cost with increased transparency. Much of this process is already underway, although the required comprehensive audit has not yet happened and further significant savings are likely to remain.

Re-architect: the “new dawn” of reliable, well-designed IT that delivers better public service outcomes at orders of magnitude less cost. This has not yet started.

2. THIS REQUIRES A NEW INFORMATION ARCHITECTURE

(a) The government needs to commission public services supported by a post-bureaucratic, lean administration.

(b) The government needs to interact with citizens and with other bodies in order to do this. This is at the heart of the Big Society and the ideas of post-bureaucracy.

(c) Establishing this new relationship with citizens and third sector organisations requires a common technical platform that will support self-service and “zero touch” public service delivery.

(d) This platform depends on re-usable, shared components that support innovation and service delivery across government. It must have a practical approach to:

- (i) policy automation (rules engines);
- (ii) Identity; and
- (iii) security and privacy.

(e) It should provide open interfaces and public data for wider community and commercial purposes. It will provide a new model for interacting with accurate citizens’ personal data that will reduce complexity and cost.

(f) Achieving a genuinely shared, common platform, or architecture, to support the Big Society requires common oversight at the business, information and technical levels.

(g) This is unachievable from the perspective of any one government department—for the simple reason that departments cannot be expected to place the achievement of the wider political agenda above their own, very pressing, immediate operational requirements.

(h) A political agenda that hinges on sharing information and resources between various organisations cannot be expected to “self-execute” without firm direction, leadership and expertise driven from the centre.

3. A fuller description of this can be found in the attached paper, “Better for Less”. (NOT PUBLISHED.)

What skills does Government have and what are those it must develop in order to acquire IT capability?

Summary

Establish an academy to bring IT decision making into the civil service as a core competence. Base that competence on the best-practice recommended by the leading experts in the field.

1. Many of the mistakes, many of the strategic problems that have happened with IT in government have happened because the people with responsibility did not have the required skills to take the decisions properly. Faced with a requirement to act they outsourced the problem to expensive consultants who were only too happy to sell them limited forms of innovation and service delivery at premium prices. Indeed if one looks at the business models of some of the leading systems integrators, the reliance on the lack of capability among the customer is clear—and the ability to charge premium prices, to confuse senior officials and ministers. In the recent past a good ruse has been to encourage politicians

and civil servants to identify the government's size as a component of complexity rather than an opportunity for economies of scale. This is a clear indicator for concern.

2. When we say that government needs an “intelligent customer” approach we do not mean that pejoratively—we use that term to indicate that we need to have the same level of capability on the side of the government as one would find in a large multinational commissioning complex technology projects such as ERP systems.
3. If a multinational does not have the skill in-house (and it will need it for a long time) it does not buy in that capability on a consultancy basis—not for something so core to its ongoing business requirements. It either hires it in permanently or, more sustainably, it builds that capability in-house through career development.
4. Many of the IT systems that have failed to deliver value were put together after legislation was passed with the belief that the legislation was the technical business requirement. The Criminal Records Bureau was a classic example of this, but the lesson has not been learned and the Rural Payments Agency debacle is but the latest £350 million example.⁷³ In many cases outside contractors were called in not because it would be cheaper to listen to an expert, but because it was manifestly obvious that the skills to turn business objectives into a technical solution were absent in the civil service; furthermore, in many instances business cases have only acquired “legitimacy” in the first place through association with a “big consultancy” brand name.
5. This has to change.
6. As the Thompson Report made clear in 2008, the civil service must continually develop the skills for e-government.
7. A clear understanding of how to employ technology is a core competency, a mandatory skill, for all leading business executives in the private sector. It should be the same in the civil service as well as in the political layer: their professional competency should require it.
8. However a one off course of shock therapy will not be effective or sustainable.
9. Officials and ministers must be aware of what IT can successfully achieve and how to learn from documented failures: a high-level strategic understanding of “what the business needs to know about modern IT”. In turn, this will enable government both to understand “the art of the possible” in terms of how services can be delivered—as well as how such decisions affect the design of government itself.
10. A suitable curriculum for confidence and understanding of the issues of IT must be created for mid-ranking to senior officials and ministers. It should be provided in a series of short courses, akin to Cranfield University courses, and it should form a core component of the professional competence of this group. Like a business degree, all senior management should demonstrate their competence with the use of modern technology in government.
11. This mini university needs to be established with access to the best resources in the world, many of whom can deliver effective training and input from outside the UK. It would almost certainly form a core component of education at the Technical Academies proposed by the Conservatives in 2010.⁷⁴
12. This framework already exists in part through the PROCOM model at the e-skills sector skills council—a body established by the IT industry. In order to impose the sustainable skills and competencies with technology that modern government requires, this educational framework should be established and implemented immediately across the civil service. The development of the Professional Programme by e-skills UK, based on the PROCOM framework, is an example of how such courses can be based on industry best practice.

How will public sector IT adapt to the new “age of austerity”?

The economic climate provides an impetus for change in government IT, but to approach this simply through an agenda of across the board reductions would be to miss the opportunity.

1. We should save money by changing the way we do things, not by 10% cuts across the board. After all in an environment of plenty that logic would lead us to increase spending by a similar amount.
2. In Windsor and Maidenhead we think that it is possible to deliver government services from anywhere—regardless of the building one should be able to set up a trestle table in the shopping centre and serve residents.
3. This is possible through the use of a more flexible, cloud computing, model.
4. The approach to cloud is complex and requires detailed thought around identity and security. Some of the data that we process is extremely sensitive, some of it is locked up so badly that we cannot make effective use of it.
5. Our IT strategy, which is attached as an appendix (NOT PUBLISHED), explains how the savings that the age of austerity requires can be achieved through a different approach to IT service delivery.

⁷³ “NAO urges DEFRA agency to replace £350 million system that's only four years old” Computer Weekly 15 October 2009.

⁷⁴ Conservative Technology Manifesto—March 2010

6. We estimate that our savings will be around 30% of cost over the next four years. We anticipate that our service delivery will be better and our services to residents improved by the innovation, transparency and effectiveness that these changes allow.

Open Document Format—what is the hold up?

Summary

The failure to declare the Open Document Format as the standard format for government documents is difficult to justify and has obstructed progress in cost reduction.

Text

Why don't councils just go Open Source and save taxpayers money on the licences they don't need to use for commodity activity like word processing, non-macro spreadsheets, email and presentations. Bristol manage this quite well, Windsor and Maidenhead are moving to Open Office.

But it is difficult—why?

The specialist line of business applications that councils use in areas such as planning, housing benefit etc all have “break outs” to Word, Excel and so on. So a letter is created for a benefit claimant in Word (not in the benefits package) and so on.... and it is the supplier of the specialist software that has specified that only Word can be used.

If we required all local governments software suppliers to enable all their software to integrate with Open Source “Office” components as well as Microsoft office components, then 95% of all council staff would not have to buy Microsoft Office. They could choose to but they would not HAVE to.

Let's make it a free market.

After all if only half of the authorities did this it would be a significant saving.

Assumptions—FTEs in Local Government = 600,000 (it is more but leave it at that).

Microsoft Office costs 80 pence per day (Microsoft quote yesterday, their “bargain price to me”).

Only 50% of councils do this.

10% of all staff in all councils declare UDI and stick to Office because they love clippy.

January 2011

Written evidence submitted by EURIM (The Information Society Alliance)

1. EURIM (www.eurim.org.uk) is a policy research group concerned with the formation and scrutiny of legislation, regulation and government initiatives related to UK/EU competitiveness in the global information society and to the effective use of technology to serve society as a whole. It uses funding from its corporate and associate members to organise working groups of politicians, advisors, officials, industry (users as well as suppliers), professional bodies, trade associations and interest groups.

THE MAIN FINDINGS IN THE RESPONSE ARE

2. The pre-conditions for success and the causes of failure have been known for over 50 years but the short-term political and financial rewards for ignoring them are such that they are commonly ignored for projects that are large enough to require ministerial decisions and/or legislation.

3. Success requires clarity and continuity of purpose and responsibility, from the Minister, the Senior Responsible Owner and the programme managers (on both user and supplier sides), from initial planning, through procurement and project implementation to performance monitoring and acceptance testing.

4. Lack of clarity and continuity guarantees failure. In consequence many, perhaps most, projects are doomed before the implementation contracts have been awarded.

5. “Commercial confidentiality”, other than during a competitive tendering process, rarely correlates with value for money. It is used to conceal lack of clarity of purpose, to reinforce departmental silos and to control the re-use of products and services already paid for by the public sector.

6. Much of central Government no longer has the in-house skills to be an intelligent customer, or even to make effective use of consultants. Until these are rebuilt, including by using programmes of incremental change to give practical experience to the next generation of senior officials, any major programme is likely to fail.

7. Public sector systems are different—but not because of scale or complexity (both usually unnecessary). The main difference is that government cannot choose its customers. Also many of them have unpredictable needs. Success in meeting these leads to increased spend, not revenue.

A. How well is technology policy co-ordinated across Government?

8. There is little or no co-ordination of information technology policy across Government. There is confusion between the stimulation of new technologies and the effective use of existing technologies. The fragmented responsibilities for the management and use of publicly held information, as well as those for the technology systems to process it, reflect the silo structure of UK central Government, with limited co-ordination of policy across departmental boundaries, other than by Cabinet Committee.

9. Policy should be technology neutral and focussed on outcomes and processes, not the mix of products and services used to support delivery. The latter evolve over time. In an ideal world the “policy” should be to require that the systems used to help deliver policy objectives are based on re-usable and interoperable modules which follow industry-recognised open standards. True interoperability also requires action at the managerial, legal and people process levels. It is not just a matter of technical standards.

B. How effective are its governance arrangements?

10. Governance arrangements are similarly fragmented, with policy proposals scrutinised, if at all, by Select Committees which reflect the structures of Whitehall, and with the Public Accounts Committee as long stop. The Gateway Review process, (professional peer review), was emasculated because of embarrassing reports on programmes which had strong political support.

11. Government subsequently failed to “get the message” when reputable suppliers like Lockheed Martin and IBM declined to bid for major contracts (MoD and Health) or, like Fujitsu or Atos Origin, withdrew when their parent companies refused to accept one-sided risk clauses.

12. Decades of outsourcing mean the skills of central Government as an intelligent customer have been lost and need to be rebuilt. Major suppliers have run down their UK public sector skills, as new business has evaporated and existing operations have been moved off-shore. The solution entails harnessing the skills of Local Government (which has not outsourced to the same degree) and active participation in the professional development programmes of the relevant bodies (eg BCS, IET, CILIP) in co-operation with supplier trade associations (eg Intellect, UK Payments) and user interest groups (eg SOCITM). Such programmes should be run in co-operation with the National Audit Office, the Audit Commission (or its successor), the National School of Government and the National Archives (constitutionally responsible for “information” as opposed to “information technology” governance).

C. Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?

13. EURIM recently summarised these on one page <http://www.eurim.org.uk/activities/pubproc/0909ProcurementSummary.pdf>. but there is no sign that key messages, such as the need for clarity and continuity of purpose at the top, have been learned. “Strategic partnerships” are used as a substitute. The need to contractually separate programme planning, management and performance monitoring from project implementation is commonly ignored.

14. The governance, planning and monitoring structures for the DWP and HMRC systems to support the Universal Credit, and the proposals for scrutinising the legislation (both primary and secondary) provide a unique opportunity to demonstrate that the lessons have indeed been learned.

15. The White paper states: “Universal Credit will merge out-of-work benefits and in-work support ... For those in employment, Universal Credit will be calculated and delivered electronically, automatically adjusting credit payments according to monthly income reported through an upgraded version of the Pay As You Earn tax system (on which HM Revenue & Customs will be consulting shortly) ... This would involve an IT development of moderate scale, which the Department for Work and Pensions and its suppliers are confident of handling within budget and timescale ... Over the Spending Review period £2 billion has been set aside as part of the Department for Work and Pensions settlement to fund the implementation of the Universal Credit.”

16. Basing the Universal Credit on a revamped PAYE system that will cope with the monthly income fluctuations of those who move in and out of employment is an ambition as laudable as that for the universally available on-line patient records that were to be the heart of the Health Service National Plan for IT. Success will entail following best practice in enlisting the support of the front-line practitioners in programmes of incremental change. Repeating the mistakes of the NpflIT risks enthusiasm turning to frustration and bitterness as problems surface during the run-up to the next General Election, instead of a gathering momentum as success breeds success.

D. How well is IT used in the design, delivery and improvement of public services?

17. IT is rarely used in the design and/or targetting of public services. We commonly “retrofit” IT to deliver a service that has been specified, in primary and secondary legislation, without testing how it is likely to work in practice. The untested specification is then put out to tender in an expensive ritual driven by consultants and lawyers paid according to time spent, or given to the incumbent contractors to implement without external scrutiny of value for money.

18. Policy initiatives should be subject to computer modelling during the design phase to see how they are likely to work in practice. Existing public records (tax and benefits) should be collated anonymously with private sector databases (eg credit reference and market research) to identify how many individuals or businesses will be affected. Those scrutinising legislation should have access to such simulations when debating the proposals and any suggested changes.

19. There is also a need to be much better at identifying and replicating good practice. For example many of the global electronic invoicing standards were developed in the UK but are still almost unused in the public sector—resulting in massive wasted effort and expense.

E. What role should IT play in a “post-bureaucratic age”?

20. IT *enables* change. Attempts to use IT to *drive* change have unintended consequences. On-line services which are easy to use (like the on-line driving license renewal system) have rapid take-up. Those which are “as user friendly as a cornered rat” do not. Many of those dependent on public services cannot use a conventional screen or keyboard and/or live in areas with poor on-line access. The biggest benefits therefore come from enabling those in the front-line of service delivery (eg carer, sub-post mistress, district nurse, citizens advice volunteer) to act as trusted intermediaries and make “right first time” entries to public sector systems. The resultant savings dwarf those to be gained from merging back offices or moving call centres off-shore. Achievement depends on response to user choice: of contact channel, intermediary and even of identity system.

F. What skills does Government have and what are those it must develop in order to acquire IT capability?

21. There is an immense reservoir of skills within the public sector as whole, if not central government. The most obvious gaps are at the top: beginning with the ability to define what success looks like. Then come the skills to be an “intelligent customer”, particularly the relationship management skills to use simple “contracts” with alternative disputes resolution processes, so that all sides can focus on successful delivery rather than blame avoidance. Bodies like the London-based “Centre for Effective Disputes Resolution” lead the world in this area but their processes are almost unknown across the UK public sector.

G. How well do current procurement policies and practices work?

22. There are over 150 public sector procurement frameworks. Many cost more to create than the value of the business that flows through them. Most business flows through less than a dozen. The prices for the same product or service can vary by a factor of three, or more. The overheads (including royalties to those running the service and margins along the supply chain from prime contractor to subcontractors) can range from zero to over 70%.

23. The most efficient (including in the eyes of most of those submitting bids for business) appear to be organised by co-operatives of users concerned to get low price and a wide variety of choice, rather than to generate income from running the service. They levy little or no charge and follow continental interpretations of the EU procurement rules. Examples include those run by the Universities (JANET) and by the Grids for Learning: both can be used by others. They are unpopular with some of the main suppliers to central government because they commonly save 30–70% on list price. The Welsh procurement routines to enable IT and communications to be shared across previous silo boundaries also appear to give good value for money. There are particular problems with the procurement of security products and services, compounded by confusion as to what is current good practice and the inability to re-use accreditations.

24. Instead of creating a new centralised procurement regime it might be better to require publication of the price structures (bidding costs, overheads etc) and performance (prices, throughput, quality of service) of current services, using measures relevant to those wishing to place business or bid for it. Barriers that prevent other public sector organisations from using the most cost effective should be removed. Those buying other than via the cheapest channel (including published catalogues like Viking Direct) should expect to be asked why (eg quality of service, local support, service levels etc).

H. What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?

25. Not a lot. Most of the software used by government is supplied under license. Processing is increasingly on private sector data centres. Does Government “own” our personal data or is it merely a custodian?

26. Outsourcing is of most value when the needs are sufficiently predictable and the added efficiency of current and potential external suppliers sufficiently great, to outweigh the loss of flexibility and added financing costs. Efficient in-house IT departments and co-operatives of local government IT departments can, however, provide lower cost, more efficient and flexible services than most outside suppliers. This is especially so where open source material is re-used and pooled.

27. Sharing assets across public sector applications and/or with the private sector can enable improved quality of service and resilience: eg shared utility infrastructures (communications, power, gas, water and transport as well as data centres) with planned alternative routings to avoid potentially catastrophic single

points of failure (eg the co-location of several major data and disaster recovery centres and communications hubs on an industrial estate next to the fuel depot at Buncefield).

28. There is an urgent need for a service to “map” the critical national infrastructure so that major users can be informed of their vulnerabilities and act accordingly. As society becomes ever more critically dependent on on-line systems, we cannot afford situations such as when the Ministry of Defence discovered, after a fire in a tunnel in Manchester, that contractually diverse routings passed through a single point of failure. Much of the UK public sector is currently dependent on systems which have only one back-up centre: most major financial services operations have three or four.

I. How will public sector IT adapt to the new “age of austerity”?

29. Inflexible outsourcing and PFI contracts mean that central government is rarely able to follow local government or private sector good practice in organising “self funding” incremental economy programmes: for example rationalising server farms and duplicated communications networks or switching off systems that no longer serve any useful purpose, such as those to collect data for long dead ministerial initiatives. Some local authorities have been able to make further savings by co-operating with partners in joint services. Similar savings could often be made by local sharing with central government, health, education and welfare operations.

30. Equally significant is the potential for improving service while cutting costs by giving data mobiles to those delivering labour intensive services, eg community midwives, care workers or policemen (see example at [http://uk.blackberry.com/newsroom/success/Portsmouth%20NHS%20\(UK\).pdf](http://uk.blackberry.com/newsroom/success/Portsmouth%20NHS%20(UK).pdf)), so that they can update records, book actions or report incidents while with the patient or victim. The “pay back” (for example the reduced need for agency staff or overtime) can sometimes be achieved in days, not even months. The need is for budgeting and decision frameworks that encourage and reward such applications, especially if they fit within interoperability frameworks or replicate what has been shown to work elsewhere.

J. How well does Government take advantage of new technological developments and external expertise?

31. More time and money is spent hiring outside expertise (consultants) to look at new technologies than at what is being done better by other departments and agencies using existing technology. The need is not for more spend on benchmarking, but for rewards to those who re-use what is being done elsewhere, as well as those whose solutions are copied. Those who claim their needs are unique, so they cannot re-use what is done by others, should be made to feel embarrassed.

K. How appropriate is the Government’s existing approach to information security, information assurance and privacy?

32. The existing approach is reactive, fragmented and government-centric. It does not focus on the secure and reliable provision of accurate and timely information to those who need it, when and where they do so. That requires attention to the quality and value of information, security by design routines that do not get in the way of customer service, and the identification of those who should have access, under what circumstances. There is also a need to address the “duty of care” to those whose data is being handled.

33. Government departments need to be able to trust each other’s routines, so that they can share data in reasonable confidence. They need to learn from the private sector, especially from financial services, which has been handling trusted transactions between those who have never met for thousands of years (eg notaries, scribes, correspondence banking and international trade). It has also been done electronically (from cable authentication, through electronic data interchange, to internet protocols) for over 150 years.

L. EURIM has an active programme looking at these issues and has identified that

34. Poor information management leads to inferior performance, higher costs, poor reputation and even loss of life: http://www.eurim.org.uk/activities/ig/0911-Value_Summary.pdf.

35. Society can no longer afford to rely on security by afterthought, it must be built into systems from the start: http://www.eurim.org.uk/activities/ig/1010-SbD_Summary.pdf.

36. Important though it is for Government to rationalise the many systems that it uses to identify its employees and contractors and for its dealings with citizens, residents and visitors (including to cut fraud and waste), it is even more important for the UK to have an information and identity governance regime that attracts global players who will base on-line operations in the UK. Otherwise we will be dependent on systems and governance regimes based in jurisdictions over which we have little or no influence: http://www.eurim.org.uk/activities/ig/1012-Identity_Governance.pdf.

37. That probably entails allowing citizens, as well as businesses, to decide who they trust to manage their identities, focussing political attention on the governance arrangements for interoperability between trust systems.

M. How well does the UK compare to other countries with regard to government procurement and application of IT systems?

38. The UK public sector is said to spend 30% more for equivalent IT systems. It is also said to cost 30% more to bid for UK government business. A EURIM comparison with Holland found they had few large projects and did more in-house work, using small contractors.

39. Scandinavian countries are often cited as models of good practice. Only Sweden has a population larger than Yorkshire. Most “nations” with populations greater than London have Federal Constitutions. The largest US states (eg California and New York), are among the worst performing with regard to IT. Our problems are related to the centralisation of decisions within national silos that believe their needs require unique, large scale, and therefore high risk, solutions. A recent comparison of the English and Scottish (and rest of the EU) approaches to Farm Payments <http://www.eurim.org.uk/activities/psd/ScottishSingleFarmPaymentExample.pdf> illustrates this.

January 2011

Written evidence submitted by William Heath

1. This submission synthesises some discussion from the IdealGovernment.com blog, work by Ctrl-Shift Ltd and work of Mydex CIC.

2. It makes some overall observations on government IT before focussing on the architecture and role of personal data. It envisages a “Big Society” future of more participative public services coupled with reduced expenditure.

OVERALL OBSERVATIONS ON COST, EFFICACY AND DESIGN OF GOVERNMENT IT

3. PASC enquires about the overall strategy for government IT including procurement policy and practice. Much has been written about how Whitehall and public services spend too much on IT, and the lack of efficacy, poor value for money and ever increasingly intrusive nature of government’s large central databases. The very designs conceived under the *Transformational Government* policy, in the climate of the “War on Terror”, create an environment in which breaches of data protection and human rights law are inevitable.

4. It’s true that Government expenditure on IT has been excessive in the last decade. It’s the highest per capita spend of any major European economy, approaching the very high per capita spend of Nordic countries which offer higher and far more e-enabled levels of social care. Reasons include large, unmanageable centralised systems, excessive supplier margins, inflexible contracts which exact punitive charges for essential changes. But above all the problem is a deeper and wider failure to ensure government IT is based on the right intentions.

5. It would be a mistake to examine IT, including procurement and practice, in isolation of what public services are trying to achieve and what role public-sector IT plays in information-age society. Talking to officials, other IT experts and suppliers won’t be enough; to understand the effects of public-sector IT on people’s lives you have to talk to job-seekers, taxpayers, patients, students etc and judge how their real experience of public services measures up against aspirations. This is hard to do but there are proxies: user/patient/traveller associations, feedback services such as PatientOpinion and MyPolice, commercial market research and NGOs such as Citizens’ Advice Bureaux.

6. What will emerge is that many major government IT systems are not just poorly designed; they were never designed at all. They were never rooted in an understanding of the individual’s journey through life episodes and their interactions with public services. Ctrl-Shift’s work suggests that a very high proportion of services failures can be seen in the light of “information logistics”: the right person didn’t have the right information at the right time. This causes great inefficiencies for the organisation, and is frustrating and disempowering for the individual. But it’s solvable.

7. Structured processes and language exist to make it possible for customers to help create effective services. The discipline which understands this best is “servicedesign”. It’s possible to design and create government IT systems with empathy, but we never did. The public cycle of identifying a social problem, forming political resolve, drafting legislation, procuring and implementing IT based services was never a “service design” process, and turns out largely to have failed as an IT system design process.

8. The final general observation is that to attack government IT expenditure in isolation is to look at one percent of the problem.

9. Amazon or YouGov prove that an organisation taking a smart approach to IT can eliminate large swathes of running costs. Government’s running costs are 10 times what it spends on IT so this administrative overhead is perhaps 10% of the public expenditure problem. But Facebook, iTunes, Wikipedia and countless other examples prove that you can do quite different things or achieve results in a quite different way with contemporary technology.

10. To assess the impact of public-sector IT on public spend you need to look at public spend as a whole. The big-money question for government IT is what are the opportunities to use contemporary technology in a smart way to deliver core programmes: health, education, welfare, tax, transport, defence. Failure in strategic use of IT costs the UK far more than IT which is merely ineffective or cost more than it should. PASC should if possible focus on the big picture.

THE BIGGEST OPPORTUNITY: PERSONAL DATA

11. The biggest specific opportunity for radical improvement in public services at low cost lies in rethinking the approach to personal data and the opportunity it affords to improve the data logistics that underpin public services.

12. The present approach in government (and across all businesses with many customers) is entirely **organisation-centric**. Organisations hold personal records, often many times over. We know of no study which maps the full extent of government's holdings of personal data, or which measures the quality of that data. HMRC holds perhaps one billion records, the typical local authority has perhaps a dozen personal records per resident (with one customer database for each line of service).

13. The theory behind these databases or “customer-relationship management” (CRM) systems was that the organisation that achieves single version of the complete truth about its customers can cut costs, perhaps outsource customer contact, upsell, drive a shrewder bargain and achieve higher profits and overall deliver a complete “personalised” service. Furthermore, customers would like this service, and trust the organisation more.

14. This “organisation-centric” or CRM mindset informed the last administration's *Transformational Government* policy.

15. The problem is the data never lives up to expectations. The inaccuracies, omissions and duplications are such that it's expensive to operate and ineffective in delivering services. Worse, the process is so annoying and alienating for customers that they walk away from the so-called “relationship” in droves. We opt out of direct marketing, the edited electoral roll, we try to minimise the data we release or mislead organisations with inaccurate data.

16. Mydex's ethnographic research (which we can share with PASC) describes people who are somewhere between depressed and in denial about what happens to their personal data “out there”. The more they learn the less they like it. It's the very antithesis of a “Big Society” approach. Government is a substantial and growing part of the problem.

17. The alternative is to add a **person-centric** model for personal information management which can work with the existing organisation-centric model in a structured and scalable way. Many individuals have mobile phones; most of us are online with access to a computer and the Internet. The person-centric data model sees the individual equipped with structured personal data store (PDS) so they can control, manage and share their data. The PDS has additional capability. They can gain external verification of claims: proof they have a drivers' licence, a passport, are on the electoral roll or have accounts with a given bank or phone company. They are then able to share their data for example with a pre-completed and verified form, or as a “subscribe to me” service that underpins a relationship.

18. An early stage of this is being piloted by several London Boroughs, Cabinet Office and DWP in the Mydex Community Prototype. Full learnings on the technical, legal and social implications of the “person-centric” model can be made available to PASC from February 2011, along with an initial exploration of the implications for government IT.

19. This model of online working which adds a person-centric structure to the existing organisation-centric structure has been called in the UK “*buyer-centric commerce*” or “*customer-managed relationships*” and in the US—where much of the original thinking on social networks and user-centric identity on which this builds was done—it is known as “*vendor-relationship management*” (VRM).

20. The implications of this person-centric architecture for a “Big Society” with participative public services at its core are considerable. First in terms of cost saving when individuals have a convenient and trusted way to help clean the administrative content in records held many dozens or hundreds of times across public services. People will have a “tell them once” service but under their own control and provided at no cost to government.

21. Public services can then be planned and delivered on the back of clean data with clear potential for efficiency. Beyond that one can envisage user-driven journeys, through health, education or job search for example where the logic, the design and function are available from a competitive market of “apps” at the user's end rather than through huge central systems. This puts the energy and inventiveness of tech markets at the disposal of next-generation public services.

22. PASC should consider this possibility and make recommendations in preparation. This is not something which government has to “do”; it's a fundamental change in the personal-data ecosystem for which it can prepare and which it be instrumental in catalysing.

23. There is an analogy, which is the recent history of the “Power of Information” and data.gov.uk in changing the government mindset towards public data (in this case non-personal data about things, statistics, numbers, assets, geography). This very promising process drew on far-sighted political will and the effort—often voluntary—of a series of experts over three years.

24. PASC should consider a recommendation for a comparable new “Power of Personal Information” report or programme which looks at how government and the public sector works with personal data. This would examine the potential for what the new person-centric model could bring to the public services mentioned above but also national priorities such as the Census, voting, volunteering, child protection and CRB checks, smart energy metering and the London Olympics.

25. Pursuing this approach might entail:

- a high-level Power of Personal Information study looking at the implications and prerequisite conditions for flows of “volunteered personal information” that are possible with a person-centric model;
- cost-benefit analysis or business case by line of public-sector activity;
- a test or audit of readiness for each public service to work with the new model; and
- test of compatibility with existing legal and security requirements.

26. Prerequisite also is resolving government policy towards online identity, for example by moving explicitly towards a US-like “trust framework” model (such as was envisaged in UK policy in 1999–2000).

27. Both Labour and Tory manifestos included commitments to start to restore control over personal data to the individual (a sentiment wholeheartedly endorsed by LibDems but omitted from the manifesto probably for reasons of brevity). That is the personal data environment in which future government IT will operate. PASC would do a great service if it focusses government minds on the questions this raises.

January 2011

Written evidence submitted by Open Source Consortium

SUMMARY

Government does not exist in isolation from the rest of the economy: regarding IT it is particularly pervasive. No decision it takes leaves the rest of the economy unaffected.

There are certain “first principles”, not immediately obvious, that should be reflected on by HMG as a requirement. These first principles, over time, will be a boost to the market and enable permanent savings for the taxpayer within public infrastructure, provide a good basis for innovation in IT enabled services and limit the scope for any adverse effects on the rest of the economy arising from externalities associated with public sector IT decisions (strategy, policy or purchase):

- separation of data from applications (addresses questions 1, 2, 4, 5, 7, 9, 11)
- adherence to open, unencumbered standards for data exchange (addresses questions 1, 2, 3, 4, 7, 9)
- scrutiny of policy for adverse effects, [DN Govt OSS licence, fast stream recruitment, BECTA report, licence management, CD-ROM] (addresses questions 1, 7)
- technology neutrality in procurement specifications, focusing on requirements not products (addresses question 12)

Overall, these first principles collectively enable Government to exploit all aspects of the “post bureaucratic age” (q.5) by enabling unexpected sources of better use of IT, increase the likelihood of programme success (q.2) and through enabling market access help adapt public sector IT adapt to the “age of austerity” (q.9) and improve procurement (q.12)

DETAIL

Through at least three administrations⁷⁵ the Government has stressed the importance it places upon IT as being a critical part of:

- the public sector infrastructure;
- delivery of modern public services; and
- the wider economy generally.

⁷⁵ “Government Direct” pre 1997; e-government and the e-economy, Knowledge Economy, Transformational Government, Digital Britain 1997–2010 and current initiatives

Central and Local Government are significant players in the market for IT, as specifiers, purchasers and influencers. As a block, they are by far the largest purchaser of IT goods and services in the UK. To coin a phrase, if they sneeze everyone else in the UK catches a cold:

- Every decision taken by Government can directly influence both the supply side and the demand side of the IT market.
- Choice of internal infrastructure can affect economy-of-scale pricing elsewhere in the economy.
- Decisions affecting public facing services can affect business decisions of IT suppliers and their potential customers.

SEPARATION OF DATA FROM APPLICATIONS

The easiest way of discussing this is to focus on office productivity software (documents, presentation, spreadsheets, databases).

In October 2010 the Department for Health launched a consultation the *NHS Information Revolution*.⁷⁶ They helpfully provided a consultation response document for one to download and use. However it had been designed with a proprietary office suite and contained embedded software specific to the application, no doubt in order to make it more easy to process the responses.

Unfortunately, even though the document was in “.doc” format, a proprietary format but relatively easy to open in any application, the embedded code made it difficult-to-impossible to use an alternative office application to write a consultation response.

This reinforces the perception if not the requirement that one must use specific software to communicate with government and makes it more difficult to develop a market for computers based on alternatives.

Moreover the alternatives (at least five) are all available to the end-user, legally, free-of-charge, in contrast to licences for the chosen document format.

The use of embedded software in data is prevalent even between public sector bodies, as an enquiry the OSC received this week demonstrates.

This problem can and does happen throughout the public sector infrastructure. For example when the “government gateway” was launched early in the last decade it only worked with specific proprietary software—without that software it was impossible to register in order to use online services.⁷⁷

ADHERENCE TO OPEN, UNENCUMBERED STANDARDS FOR DATA EXCHANGE

Again this is most easily explained by reference to office productivity suites. There are two ISO standards for office productivity suites: IS 26300 and 29500.

IS 26300 is more usually known as “ODF” This format has been developed in the open by OASIS⁷⁸ and is supported by multiple software creators.⁷⁹ These organisations (including large IT multinationals) operate on a variety of business models, however they all acknowledge the importance of interoperability.

In order to ensure that the data contained in documents, spreadsheets etc, is fully accessible in any software application, these organisations engage in “plugfests”⁸⁰ to strength test the ability of their software to work well with each other.

These plugfests occur regularly, with the fifth one occurring in the UK in February 2011.⁸¹

Support for IS 29500 is less clear, with industry experts unsure that the standard even has a future.⁸²

Support for IS 26300 across Government appears to be honoured mainly in the breach. Further, Government departments are increasingly adopting a proprietary format⁸³ that can be difficult to open and certainly difficult to ensure fidelity unless one uses the associated proprietary application. Not only does this reinforce the way Government departments obtain and use software, it creates an externality on those that interact with Government departments and on businesses or other entities that seek to supply computers to those users based on alternatives.

Again this issue is not new, nor limited to office productivity suites.⁸⁴

⁷⁶ http://www.dh.gov.uk/en/Consultations/Liveconsultations/DH_120080

⁷⁷ http://www.theregister.co.uk/2001/05/31/eenvoys_office_defends_windowonly_portal/

⁷⁸ <http://www.oasis-open.org/home/index.php> (along with many other open standards)

⁷⁹ Producing: Abiword, Caligra, LibreOffice, OpenOffice, Star Office, Symphony,

⁸⁰ <http://blog.ce.org/index.php/2010/03/12/whats-a-plugfest/> (originally associated with hardware now a term used for software too)

⁸¹ <http://odfplugfest.co.uk/>

⁸² <http://www.adjb.net/post/Microsoft-Fails-the-Standards-Test.aspx>

⁸³ docx, .pptx, .xlsx

⁸⁴ http://www.theregister.co.uk/2001/06/28/uk_govt_new_encryption_system/

PICT, the body that supports IT for use in Parliament has long since grasped the wider issue,⁸⁵ recognising the importance of choosing data formats that support longevity. According to an FOI request PICT imposes the following constraints:

- Non-open standard formats should not be used to deliver content.
- Proprietary components or 3rd party plug-ins should not be used.
- The project should meet the requirements for digital preservation.
- The solution should reach the widest possible audience.

It's not that the Government doesn't understand the public policy importance of standards⁸⁶ and the benefits to economy arising from standardisation.⁸⁷

It is not only Acts of Parliament that need to be preserved digitally: all Land Registry documents have been "dematerialised"⁸⁸ with the potential challenges neatly demonstrated in a BBC News story.⁸⁹

Increasingly a way to reach the widest possible audience is to use FOSS (which focuses on ODF) as it is available free-of-charge⁹⁰ and can run a wide range of older and lower cost hardware thus enabling digital inclusion,⁹¹ (now and in the future).

SCRUTINY OF POLICY FOR ADVERSE EFFECTS

Clearly the purchasing decisions for public sector infrastructure can affect the supply side of the industry directly. However policy and practice relating to putting public services on-line as well as wider policy and practice can affect the supply side both directly and indirectly.

The government gateway is now "fixed" however using on-line tax services is still not technology neutral.

The Government is using a series of incentives and obligations to require firms to file tax returns on-line. For employers, HMRC helpfully provides a CD-ROM containing guidance and software calculators. However unless the employer uses a computer with a specific operating system much of the CD-ROM is useless.

A business to business offer promoting the advantages of using computers supplied with a different operating system is hampered by the disadvantage created by the relative difficulty of using the HMRC CD-ROM unless one uses the required operating system.

The situation with on-line benefits is even more stark.

The initiative recently launched by Martha Lane Fox to provide "cheap" computers for the digitally excluded⁹² is going to encounter a roadblock almost from the off should any of them attempt to access benefits on-line⁹³ because the service "is not currently available using Macs or other Unix based systems⁹⁴ even though you may be able to input information".

Applying to join the fast-stream of the Civil Service⁹⁵ (requires registration) begins with an online pre-qualification test. If not the case now, two years ago potential candidates were advised that the on-line test might not work properly unless one used computers using specific versions of a specific operating system—candidates were advised against using alternatives.

The Cabinet Office has reasserted a commitment to using "more open source solutions wherever possible".⁹⁶ While there are many open source licences to choose from, most software is released using a limited number of licences which are well understood with several tested in litigation, in Europe⁹⁷ if not in the UK.

For code produced in Government projects it would have been possible to use existing well understood licences acceptable to software creators that do not fully endorse or embrace FOSS.⁹⁸ Instead, the Open Government Licence (OGL) was produced.⁹⁹ To the credit of those involved the licence was discussed on a developers list however concerns were ignored.

⁸⁵ <http://www.computerweekly.com/blogs/public-sector/2010/12/banned-in-whitehall-the-techno.html>

⁸⁶ <http://www.bis.gov.uk/policies/innovation/standardisation/bsi>

⁸⁷ <http://www.bis.gov.uk/policies/innovation/standardisation/economic-benefits>

⁸⁸ http://www.skipton.co.uk/mortgages/about_skipton_mortgages/jargonBuster.aspx

⁸⁹ <http://news.bbc.co.uk/1/hi/technology/2534391.stm>

⁹⁰ <http://www.moneysavingexpert.com/shopping/free-office-software>

⁹¹ <http://www.bbc.co.uk/news/mobile/technology-12205412>

⁹² Reference 17 *ibid*

⁹³ <http://www.dwp.gov.uk/eservice/need.asp>

⁹⁴ eg Linux

⁹⁵ [https://candidate.faststream.gov.uk/faststream2011/\(v4bvXu45zpoib145dcxuxi55\)/login.aspx](https://candidate.faststream.gov.uk/faststream2011/(v4bvXu45zpoib145dcxuxi55)/login.aspx)

⁹⁶ <http://www.theyworkforyou.com/wrans/?id=2010-09-14b.14369.h#g14369.r0>

⁹⁷ <http://gpl-violations.org/>

⁹⁸ <http://www.oss-watch.ac.uk/resources/apache2.xml>

⁹⁹ <http://www.nationalarchives.gov.uk/information-management/government-licensing/the-framework.htm>

 TECHNOLOGY NEUTRALITY IN PROCUREMENT SPECIFICATIONS, FOCUSING ON REQUIREMENTS NOT PRODUCTS

As BECTA reported in 2010 on the use of Management Information systems in schools “many schools will want to procure a collection of integrated modules from a single supplier, and there can be advantages in that approach. The key is to require that the supplier offering the bundle of interrelated products is fully committed to an interoperability approach which will ensure that the contracting authority is not locked into that supplier for other areas of functionality in the longer term.”¹⁰⁰

Procurements should be technology neutral however, once a organisation is using technology that is not committed to full interoperability it can be easier to carry on with the same provider. The OSC received the following invitation to tender via our web form.

January 2011

Written evidence submitted by Gartner

EXECUTIVE SUMMARY

Thank you for the opportunity to participate in this important dialogue. Attached is the Gartner detailed response to the PASC questions.

Drawing upon our experience of assisting governments across Europe there are a four central themes that have emerged which are driving “Effective Use of IT”:

- Delivery of citizen centric services.
- Provision of assurance that government can be trusted with its citizens data and information in order to be “allowed” to deliver services.
- Transparency in the provision of services—that they represent value for money.
- “Joined-up government” in order to deliver more efficient and effective services to citizens and the operations of government.

The dilemma faced by all governments is whether this is best achieved via a centralised or decentralised model. The approaches adopted are partly based upon national “culture and behaviours” as much as legacy IT systems and supporting operational process and technology architecture.

In examining the 12 PASC questions the key Gartner observations are:

- **Technology Governance.** U.K. government has not provided the necessarily level of leadership and clarity on the governance model plus accompanying decision rights it wishes to adopt. This has led to confusion on what different levels of government can and cannot decide. Wherever this is the case Gartner experience indicates that decisions are based upon what it best for that department.
- **Programme Management.** The NAO and OGC represent elements of best practice in terms of assessing, auditing and cataloguing best practice with regards to programme management. Unfortunately there is little evidence to support the contention that their efforts are more than lessons “identified” rather than “learned”.
- **Design and delivery of IT Services.** Gartner has seen a move toward programmes based on “outcomes” with good guidance provided by OGC. However the relatively low level of maturity of complex programme and supplier management has frequently thwarted the delivery of the desired outcomes to time and cost as well as lacking in agility to respond to environmental changes.
- **Government IT Skill-Base.** The skills agenda will be a major challenge in the current environment. Significant numbers of highly skilled individuals will leave when they perceive there is no viable, rewarding career in the public sector and attracted by the allure of the commercial world. This will widen the skills gap that already exists and potentially result in even greater reliance on the supplier base.
- **Procurement Policies.** “Accountability to Parliament” is frequently used to justify overly complex procurement practices. When this is combined with a risk adverse approach to acquisition the result is poor structured contracts that do not represent value for money.
- **Ownership.** The “test” for government ownership is no different from commercial organisations— if it is vital to the “business of government”, and the loss of which would result in a catastrophic inability to deliver services and/or erode citizen confidence and trust in government then it should be “owned” by government. “Owned” is not the same as “operate”.

¹⁰⁰ http://localauthorities.becta.org.uk/index.php?section=pf&catcode=ls_pict_04&rid=18580

- **IT in the Age of Austerity.** In an age of austerity there are a number of options which can be adopted; skills services and programmes based on cost reduction, be creative (implies willingness to take risk) and innovative to deliver services in a more cost-effective way, remove duplication and overlap (implies an aggressive move to shared service environment), prioritise services based on agreed criteria. Managing the right blend of options will require mature capability based programme and portfolio management. There is a small amount of anecdotal evidence that the severity of the cuts is causing paralysis in decision making which can result in “kill services and programmes” to meet cost—irrespective of outcome.
- **IT & Innovation.** There are a number of very innovative programmes across government. In order to realise the true potential of technology there needs to be a stronger “sense and respond” mechanism with relation to citizen needs and a robust governance regime to drive adoption.
- **IT Security.** “Security” in widest sense—assuring and protecting citizen’s information plus data, protecting national commercial, financial and security interests is an absolute necessity. There is a need to implement a policy driven security architecture. The basis for this programme exists under “Cipher” the outcome of which should be a scalable solution that is capable of supporting all of government and eventually commercial interests.
- **Trends in Government.** Many governments have similar difficulties and dilemmas as the U.K. Unlike the U.K., the current pressure to cut the cost of government and the expected contribution from IT is not as great in other countries; hence the pressure for radical change is not yet present. As outlined in the opening paragraph there are however common drivers. Each country recognises the need to respond to citizen needs in a transparent and cost-effective way. The delivery of these “needs” is being enabled by IT. The successful governments have a clear articulated strategy and a defined governance mechanism which ensures “compliance”—be it based on a centralised or de-centralised model.

<i>Key Question</i>	<i>Key Observations</i> <i>Based upon experiences gained whilst supporting and assuring U.K. Government IT</i> <i>PASC Responses</i>	<i>Gartner Comments and Conclusions</i> <i>Gartner Opinion</i>
1	<p>How well is technology policy coordinated across Government?</p> <p>1.1 Historically, Gartner has limited evidence of coordinated translation of business policy between local and central Government when both areas provide different elements of the same service “supply chain”. For example, delivery of benefits centrally vs. through local council services.</p> <p>1.2 This situation is changing; we are aware of some leading local councils and Government departments changing business strategy and seeking to join up with third sector partners to deliver services and some emergent activities along cross-government lines.</p> <p>1.3 Gartner is aware of few consistent contractual principles which enable the overall integration and co-ordination of government IT services (other than the basic infrastructure level or networking services) in the numerous large IT supplier contracts. This situation inhibits the rapid and cost-effective roll-out of changes to government technology strategy or policy.</p> <p>1.4 Social Media is a good example of a disruptive technology that potentially undermines established policies. Gartner has examined and compared the different approaches Governments can take in this area.¹</p>	<p>1.5 Firstly, in Gartner’s view there is a need to articulate the difference between policy, strategy and standards.</p> <p>1.6 Secondly, the citizen-centric view of public services needs to drive Government business needs to join-up information technology solutions across organisational and budgetary boundaries.</p> <p>1.7 A clearer line of communication between the Office of the Government Chief Information Officer (GCIO), across Government, down to the lowest level may assist.</p> <p>1.8 Policies are needed that mandate standards, communicate best practices and promote the right behaviours to lower Total Cost of Ownership (TCO).</p>
2	<p>How effective are its governance arrangements?</p> <p>2.1 Governance processes on different large-scale, information technology enabled change programmes do not follow a single approach and can lead to delays or obviation of crucial early decisions.</p> <p>2.2 Some Agencies are audited so frequently, that some Government officers seek to avoid the process or have developed stock answers as the process causes severe disruption to their day job and do not see the benefits of the process</p> <p>2.3 Continual personnel changes at executive level and the pressure of SROs to be associated with success lead to poor execution of governance processes where often supplier staff outstay the intelligent client representatives of Agencies—especially in large IT programmes or the many Departments where IS functions have been primarily outsourced.</p>	<p>2.4 Poorly defined or supported change programmes are not stopped early enough, leading to the commissioning agency and the media blaming “IT programmes” for poor outcomes and not itself for poor governance. In addition, Gartner questions whether assurance is being performed too frequently, without context and at the wrong level.</p> <p>2.5 A major factor which sustains the wrong culture appears to be the rigid nature of funding itself. The current budgetary mechanism is yearly, specific to a department and does not reward efficiency. Breaking the current funding model by removing year on year funding and permitting shifting of budgetary spend across departments would engender a new culture focused on outcomes.</p>

<i>Key Question</i>	<i>Key Observations</i> <i>Based upon experiences gained whilst supporting and assuring U.K. Government IT PASC Responses</i>	<i>Gartner Comments and Conclusions</i> <i>Gartner Opinion</i>
3	<p>3.1 Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?</p> <p>3.2 Many Government departments do not consistently gather up and utilise programme delivery metrics to consistently assure new or in-flight programmes against.</p> <p>3.3 Changing requirement (NOMS, RPA) or poor interpretation of technology implications (NIS, CLG) as a result of new policy are consistently cited as reasons for poor performance yet politicians and the media continue to associate failure of Government programmes with "technology".</p> <p>3.4 Gartner has also found that that Government is inconsistent in how recommendations from NAO and OGC reports are followed up.</p>	<p>3.5 Based on Gartner's experiences we have yet to see improved consistency in the successful delivery of larger scale "IT" projects and programme. The same problems cited by the NAO in 2003 still exist, namely rapidly changing technology, dynamic user requirements, complexity and oversight.</p> <p>3.6 What constitutes success is not clearly defined or measured. Success is therefore perceived in the eye of the beholder and promotional capability of each programme's leaders.</p>
4	<p>4.1 How well is IT used in the design, delivery and improvement of public services?</p> <p>4.2 A not-well publicised example of a successful online system is the implementation of the RCUK's Joint Electronic Submission System (Je-S), developed in-house in 2005 and with a current user base of 140,000, it supports online submission of around 80,000 research grant proposals, fellowships and expenditure statements and allows research organisations to check the status of their grant portfolio online, helping to improve management of current awards and doing away with paper processes altogether.</p> <p>4.3 A Gartner report on kiosks in 2008 (commissioned by DWP) found limited central assistance available and concluded that there were as many as 20 different kiosk solutions within the U.K. public sector for something which could be bundled as a commodity solution. This is an example where better promotion of success could lead to less duplication of effort and perhaps better aggregation of demand to drive unit price costs lower.</p>	<p>4.4 Proven technology solutions and good practices are inconsistently promoted across government leading to duplication of effort or large scale solutions being developed which are inflexible and reflect the siloed departmental need and not the citizen-centric need.</p> <p>4.5 Government is getting better at using IT, but IT enabled services are undermined by two underlying issues: — Demand for IT services outweighs the capacity of public bodies to deliver; capacity to change, to deliver change and operation capability to accept change. — Ideology and Policy changes occur faster than departments and supplier's ability to respond. Policy changes invariably require swift turnaround or changes to requirement which usually result in delays, cost overruns or failure to deliver expected business benefits.</p>

<i>Key Question</i>	<i>Key Observations</i> <i>Based upon experiences gained whilst supporting and assuring U.K. Government IT</i>	<i>PASC Responses</i>	<i>Gartner Comments and Conclusions</i> <i>Gartner Opinion</i>
5	What role should IT play in a “post-bureaucratic age”?	<p>5.1 To date Government information mechanisms are not as polished as they could be. Data is still manually collated in spreadsheets and localised databases. Gartner is aware of measures and metrics being interpreted differently within the same organisation—with the aim to maximise business unit marketing rather than provide inter or intra departmental comparison. This is the largest obstacle for achieving the UK Govt’s “Clear line of sight” ambitions.</p> <p>5.2 The U.S. spending dashboard http://it.usaspending.gov/ is an initiative which enables transparency of IT spend and ultimately, the intention will be to enable pooling of demand.</p>	<p>Gartner believe PBA can only work if information is used as the glue to bridge the gap between political aspirations, the desire for a unified approach and the local desires for greater control.</p> <p>5.3 The role of government in a market-driven democratic society should set the boundaries and standards for the market for IT products and services and then encourage healthy competition. Where there is potential divergence in important areas then it should intervene as far as is necessary to bring cohesion. Where it spots excellence then it should give recognition and promote the best practice that actually works in a particular sector.</p> <p>5.4 This is what the post-bureaucratic age should mean; 80% light touch, 20% regulation and formal constraint.</p>
6	What skills does Government have and what are those it must develop in order to acquire IT capability?	<p>6.1 A Gartner survey of over 150 blue chip CIOs concluded that enterprises retain and develop five core skills. HM Government and its agencies already have these five skills but to varying degrees of maturity across departments and generally of less capability than its outsourced suppliers.</p> <p>6.2 The drive to procure the lowest costs does not encourage suppliers to provide and commit their highest performing staff or service offerings. Anecdotally there is evidence that Government Suppliers rarely provide “A Team” staff. Consequently project, programmes and other IT related change programmes often take longer to deliver the outputs, outcomes and benefits expected</p> <p>6.3 The Australian Queensland government has endorsed using the U.K. developed Skills Framework for the Information Age (SFIA) as part of its whole-of-government initiatives aimed at improving management of the ICT workforce. The U.K. lacks a transparent and coordinated use of a framework like SFIA to understand at the staff level where the real IT skill gaps are most evident, and then the development of meaningful and action orientated mitigation programme.</p>	<p>Gartner predicts that by 2014, government agency IT infrastructure and operational head count will fall at least 20%³</p> <p>The existing civil service career path is one well geared toward executive management, administration and operations. However the specialist nature of IT management across government is not well served by the existing structure and results in a heavy dependence on external consultancies and suppliers. To that end, HR departments struggle to attract the best talent in IT management.</p> <p>The next CEO of Tesco is their current head of group IT, Philip Clarke. Is this a career path that should be more prevalent in Government?</p>

<i>Key Question</i>	<i>Key Observations Based upon experiences gained whilst supporting and assuring U.K. Government IT PASC Responses</i>	<i>Gartner Comments and Conclusions Gartner Opinion</i>
7	<p>7.1 How well do current procurement policies and practices work?</p> <p>7.2 Whilst rules guarantee transparency and fairness for the select few, they also in practice, extend procurement life cycles, ramp up costs and preclude many smaller businesses from engaging with public sector organisations. Consequently, the high barriers to entry reduce the competitive landscape for Government.</p> <p>7.3 Extended procurements for complex solutions requiring fixed prices for unconfirmed requirements do not effectively transfer risk. System Integrators have mastered this process to a point where they often know more about the business than the internal IT team managing them.</p>	<p>Commercial practices confuse the process to reduce price and support the adage "you get what you pay for". A relaxation of the strict adherence to process would energise the competitive landscape, encourage smaller IT businesses to engage with public bodies and invigorate further growth in U.K. based technologies businesses.</p> <p>Adoption of proven sourcing models such as market comparison models and reverse auction methods for commoditised IT could stimulate further competition and help drive consumption of IT services away from a supply dominated market to a more cost-effective demand driven model.</p>
8	<p>8.1 What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?</p> <p>8.2 Data, networks and infrastructure that are sensitive, necessary for defence of the realm or vulnerable to exploitation by criminal elements must remain under the control of Government. Crucial to delivery of this is the evolving need for secure support, data operations and network infrastructures. These represent HMG's critical infrastructure and Gartner believes should be retained by publicly controlled bodies.</p> <p>8.3 Examples where data can be better and more efficiently managed if outsourced to third parties: — HR records, — Payroll, — Education, — Health, — National archive, — Operational management information, — Aspects of local government</p>	<p>Gartner predicts by 2015, public or community clouds will supplement at least 50% of government IT shared services and centralization initiatives.³</p> <p>Centralization and shared services can achieve 15% and, in some cases, 20% reductions in operating costs within three to five years; however, governments have rarely achieved the intended benefits of cost savings and service improvements in the planned time frame.</p> <p>Using public cloud services generates the types of economies of scale and sharing of resources that can reduce costs and increase choices of technologies.</p> <p>Resistance from user agencies to adopt shared or centralized services is one of the most challenging barriers to achieving benefits.</p> <p>The U.S. General Services Agency will be an early high-profile test case to help determine if large cloud suppliers, in this case Google, can adequately support the e-mail and collaboration needs of large federal agencies.</p>

<i>Key Question</i>	<i>Key Observations Based upon experiences gained whilst supporting and assuring U.K. Government IT PASC Responses</i>	<i>Gartner Comments and Conclusions Gartner Opinion</i>
9	<p>9.1 How will public sector IT adapt to the new “age of austerity”?</p> <p>9.2 Gartner research shows that simply forcing incumbent suppliers to reduce cost (and by definition services) has a significant reduction in service quality.</p> <p>9.3 As HM Government seeks to amalgamate, share services and merge to save money, it is also continuing to create new departments and break down agencies to foster new policies, processes and ways of working. This level of change is disruptive and adds to IT costs.</p>	<p>Gartner predicts by the end of 2011, at least 30% of governments worldwide will implement initiatives to reduce IT costs by 20% or more.³</p> <p>Alternative delivery and acquisition models, such as cloud computing, open-source software and “crowdsourcing,” will be increasingly attractive to government executives that need to achieve “better for less.”</p> <p>9.4 However, most government executives will protect their political turf rather than take necessary risks; therefore, unless governance and project and portfolio management are mature enough, departments, agencies and local jurisdictions will not reap the benefits of radical cost cutting.</p>
10	<p>10.1 Gartner recently provided input for a high level departmental report. Alternative suggestions for dealing with a subset of citizens were commented on as too radical and the comparison to the retail sector as “alien to Government.”</p> <p>10.2 This is an example where the U.K. Public sector often errs on the side of caution in comparison to countries such as Canada and Singapore, and this cultural psyche may well be stifling operational ambition as well as technology development for a set of citizens that regularly transact on the Web.</p> <p>10.3 Similarly, Gartner believes the lack of promotion of successful technology solutions across government suppresses the appetite for change.</p>	<p>10.4 Should Government be a technological leader? No</p> <p>10.5 Should Government support innovation using proven technology and ingenuity to apply this to the Government context? Yes.</p> <p>Gartner predicts by 2015, more than 50% of government outcomes will depend on consumer or highly commoditized technologies.³</p> <p>Like other industry sectors, government is affected by an influx of consumer devices, and although demographics and compliance requirements are less conducive to rapid adoption, consumer-class social media—such as Facebook, LinkedIn or Twitter—are creeping in to support internal and external collaboration. Employees will choose the right balance.</p> <p>10.8 The Hype Cycle for Government Transformation identifies technologies that have the potential to help public-sector organizations transform their operational and service delivery goals.⁶</p>
11	<p>11.1 New technologies continuously bring new challenges to the security arena, social media being a topical example.</p> <p>11.2 Governments implement information security according to a balance of risk, practicality and affordability. ISO 27001 provides a valid framework and set of standards for managing information security and as such can be independently audited, with maturity assessments being used as a constructive stimulant to improvement.</p>	<p>Gartner believe that in the context of the “Big Society” where there will be a much broader community of interests involved in the delivery of some traditional government duties that there is also a need to establish practical systems and methods for implementing a workable regime for maintaining the integrity of personal and/or operational data.</p> <p>Responsibility for establishing the generic security regime for the vast majority of government should not be owned by GCHQ, given their position as guardian of the most secure assets. GCHQ cannot but help over-specify and in doing so create a mini-industry around compliance and accreditation.</p>

<i>Key Question</i>	<i>Key Observations Based upon experiences gained whilst supporting and assuring U.K. Government IT PASC Responses</i>	<i>Gartner Comments and Conclusions Gartner Opinion</i>
12	<p>12.1 How well does the U.K. compare to other countries with regard to government procurement and application of IT systems?</p> <p>12.2 At the shared services level, the comparison among countries can be meaningful to learn about good practices across different jurisdictions: in particular, for shared services, Anglo-Saxon countries, such as U.K., Canada and Australia are certainly more mature than Southern European countries and to a certain extent more mature than U.S. (http://www.oecd.org/dataoecd/48/56/46342001.pdf).</p>	<p>11.5 Gartner Research have been working with the U.S. Government to reflect some of the latest thinking globally.⁴</p> <p>12.3 Gartner is aware of several international comparisons available. Unfortunately, these reviews put initiatives that are developed in very different contexts, political situations, and procedural and legal constraints on the same level. These surveys cannot always take into account that for the same service, different parts of government deliver different parts of the value chain, such as DWP and local councils supply chain for the disbursement of council benefits.</p> <p>12.4 In essence, Gartner believes that it is more important that each country assesses its own capability to define a complete vision for using IT to improve service delivery.⁶</p>
	12.5	12.5 With those caveats in mind, international comparison could be applied, but should be narrowed down to areas where apple-to-apple comparisons in terms of contexts, political situations and procedural and legal constraints are feasible.

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Who is Gartner?

- **Gartner is the world’s leading information technology research and advisory company**, four times larger than any of our competitors with greater depth and breadth. From CIO’s, IT Programme Directors, Project Managers and senior IT leaders in corporations and Government agencies, to business leaders in high-tech and telecom enterprises and professional services firms, to technology investors, we are the indispensable partner to 60,000 clients in 10,000 distinct organisations. Through the resources of Gartner, we work with every client to research, analyse and interpret the business of IT within the context of their individual role and organisation.
- The **U.K. Public Sector** is a key customer market giving approximately 40% of our U.K. advisory services in the last two years. Within the U.K. Public Sector, our current clients include (but are not limited to): Cabinet Office, HM Treasury, National Audit Office, Department of Health, Department of Education, Foreign and Commonwealth Office, Home Office, DEFRA, DWP, HMRC, MoD, DfT, Buying Solutions, HMLR, Environment Agency, RCUK., BIS, ONS.
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January 2011

Written evidence submitted by Public and Commercial Services Union

Introduction and summary

1. The Public and Commercial Services Union (PCS) is the largest civil service trade union representing over 300,000 members working in government departments, non-departmental public bodies, agencies and privatised areas. We are in a unique position to submit evidence to this inquiry as our members work with IT systems across government every day.

2. We welcome the committee’s inquiry as an opportunity to share our anxieties about how IT has been procured and delivered across government, specifically the outsourcing and privatisation of IT service delivery as a means of securing efficiencies.

3. This submission therefore covers:

- The impact of spending cuts on the delivery of IT projects.
- How well technology policy is co-ordinated across government.
- Whether past lessons have been learnt.
- How well IT procurement works.
- How public sector IT will adapt to spending cuts.

The impact of spending cuts on the delivery of IT projects

4. PCS has been concerned that UK governments have not utilised IT in the most effective manner to deliver high quality public services. Since the announcement of the Gershon review in 2004 which recommended cutting 100,000 civil service posts and rationalising government procurement, PCS has consistently held the position that these cuts could not be delivered without damaging front line services. Many reports by the Work and Pensions select committee and others have confirmed that the pressure to deliver this programme would involve an escalation of outsourcing and privatisation. One aspect of which was the greater involvement of private sector contractors in delivering the IT needs of public bodies and Whitehall departments.

5. We were alarmed that the 2010 spending review announced that the cost of government IT projects was to be cut by more than £1 billion and that the Cabinet Office had identified 300 IT projects that would be scrapped or cut back because they were deemed “unnecessary”. Since that announcement the government Deputy Chief Information Officer has confirmed that the figure of cancelled IT projects has now increased to 419 to be scrapped or scaled back.

6. We believe that no credible evidence has been forthcoming from departments or the Cabinet Office about the cancelling or scaling back of these IT projects and that given many of the projects are of great societal benefit—such as the new contact point child protection database—PCS strongly believes that the driving force behind the IT cut backs are purely financial. We think there has been little thought given to the damage the cuts will inflict on public services and the often vulnerable people who use them.

7. We also believe that many of these projects would have been better delivered and monitored had they been delivered in-house.

8. As examples, the Chancellor confirmed that while annual funding for police forces will be cut by 14% by 2014–15, this substantial cut should not impact frontline policing because of efficiency improvements to IT, procurement and back office functions. Leaving aside the doubts expressed by the Police Federation

themselves, PCS's experience with similar claims leads us to believe that cutting back office and IT support functions will adversely impact the effectiveness of front line police forces.

9. If the police cannot quickly access a database or IT package they need because it has not been updated or does not exist, or the administrative support that would have assisted them has been cut back, then this will clearly affect the time they can devote to being on the streets dealing with crime.

10. Similarly, the spending review's contention that the UK Border Agency's loss of about £500 million of its funding through the reduction of its IT (and the cost of its estate) will not affect the crucial role of the agency we believe is highly unlikely. At a time when quick and efficient IT support is essential for the UK Border Agency to keep abreast of personal data and international criminal databases, and to assist inter-agency communication in the UK and Europe, to cut the funding for such IT support PCS believes is profoundly irresponsible.

11. We also have similar serious concerns over the reduction in the running costs of HMRC by 25%, through staff cuts and from savings from its IT contracts. Firstly, the loss of staff will clearly impact the speed and efficiency of HMRC services at a time when an enhanced capability to collect tax (especially the estimated £120 billion of uncollected, evaded and avoided tax in the UK per year) could form part of the alternative to the massive public spending cuts the government is planning to deliver in the next few years. Secondly, many would assume that lessons had been learnt from the controversies that arose from HMRC's loss of confidential personal information that was transcribed to discs, primarily because of cutbacks to staff and other resources, and the consequent need to collate and transfer the information as cheaply as possible. It seems, though, that HMRC's staffing, technological and ICT infrastructures are to be cut even further, which could mean further shortcuts and potential loss or mis-use of citizens' personal data.

12. While PCS remains concerned that cuts of this nature will damage public services, our concern should not be taken as support for the current model of IT provision (i.e. through a private sector contracting model). We would argue that the most effective method of delivering IT services within government is to retain the provision of such services within government departments and agencies. We base our concerns on the very patchy record of outsourced and privatised IT delivery in recent years.

13. The most telling example of this process was the fiasco of the Child Support Agency's (CSA) outsourced IT systems. The NAO found that despite the CSA and its private sector supplier being fully aware that there were 52 defects within the system, the "go live" authorisation for the project was given. The subsequent NAO investigation found that the CSA project was "*one of the worst public administration scandals of modern times*".

14. Nor was this an isolated incident. An investigation in 2007 by Channel 4 News and *Computer Weekly* into the Defence Information Infrastructure project (DII) found that the Ministry of Defence (MoD) and its main private contractor, the Atlas consortium, had delivered only about a quarter of the systems that were due under the original plan by the end of July 2007.

15. Although the House of Commons were informed that the overall projected cost of the DII would be £4 billion over ten years, the cost was then estimated at more than £5 billion. The Chief of Defence Materiel, General Sir Kevin O'Donoghue, admitted in October 2007 that there were "*major problems*" at the first site to have DII installed.

16. More recently, the NAO found that the DII programme was 18 months late and at least £182 million over budget. It is hard to believe a major project like this would have gone so far over budget had it been subject to civil service departmental budgeting restrictions and more accountable systems of oversight and reporting.

17. PCS firmly believes that many of these failures are traceable to the model of outsourcing IT services that has become the default position of most recent government's.

How well is technology policy co-ordinated across government?

18. We don't believe it is co-ordinated very well. There is central IT strategy for government but it tends to offer great autonomy to departments to do what they want with regards to delivery. Although Chief Information Officers have to report on their programmes and results to the Cabinet Office in monthly round-ups, the Cabinet Office actually has limited oversight.

19. PCS believes that if a co-ordinated technology policy could be developed this would ensure there was a responsible framework within which IT projects could be safely and effectively delivered. This should be based on the public provision of IT to criteria of societal benefit and social use, rather than as a means to channel public funds to private contractors.

Have past lessons from NAO reports etc been learnt?

20. Some individual projects have learnt from the NAO's reports and recommendations, but we believe that central government policy making has not. The government tends to repeat the same basic procurement mistakes and does not appear to have the appetite for taking hard lessons on board. As an example, the NAO identified failings in computer systems used by the MoD which led to the loss of almost £300 million in

payments and equipment. The NAO also identified other serious losses, ranging from the Department of Health's flawed £12.7 billion National Programme for IT to the Cabinet Office's £24.4 million write-off of the Scope project. It cannot be said the NAO reports of these failures were genuinely considered and that new processes put in place to ensure the failings they identified were not repeated.

How well is IT used in delivery of public services?

21. We believe this is a very mixed picture. The disaster of the Rural Payments Agency (on which the NAO has very harshly reported, again with minimal acknowledgement or change in the outsourcing model) is one of the worst examples of inefficiency in government IT procurement and delivery.

22. The CSA and the MoD DII project are other examples. PCS believe that downgrading of public sector expertise and the unmerited inflation of the claims of private sector delivery are at the heart of such failures.

23. The best way to deliver high quality public services—in all aspects, whether it is front line, back office or IT support—is through well paid, properly trained and motivated public servants operating to non-profit making criteria.

How well does IT procurement work?

24. PCS believe this is generally a poor picture as departments forced to outsource key IT work tend use “template” contracts supplied by the Office of Government Commerce (OGC). These are often unchanged for years because of the limitations of OGC's framework procurement rules. As a result, departments buy what they believe is a particular service only to find it doesn't cover much of what they need.

25. Also if a department decides not to use OGC frameworks, the procurement process is very long and expensive and expediency can often leave them in the same place as following the OGC route. This is often a reflection of level of IT procurement knowledge in government, where key IT contracts are often let by procurement without any reference to the full time civil service IT staff.

How will public sector IT adapt to spending cuts?

26. In some departments most notably the MoD the spending cuts may have the effect of forcing managers to consider better and sharper ways to get value for money. PCS would recommend that one of these ways is to abandon their belief in the efficacy of private sector solutions and retain IT delivery in-house. In other departments such as DEFRA, the Home Office and the Department for Culture Media and Sport where budget cuts have already cut public services to the bone further cuts in essential IT projects and upgrades will inevitably reduce the quality of services and impact how the organisation functions.

January 2011

Written evidence submitted by Dextrous Web

1. How well is technology policy co-ordinated across Government?

This short question covers a broad and diverse set of issues. We will respond at three levels: at the standards level, at the project and programme level, and at that of day-to-day infrastructure and operations.

In terms of the definition of standards, Government will always face a dilemma: specify loosely and risk failing to deliver any standardisation at all, or specify tightly and restrict innovation and in the worst cases, distort a fair market for technology equipment and services. We are referring here to policy for the application of industry standards to Government business, not to the setting of distinct standards just for Government. Government should clearly be represented at the standards table, but as far as possible avoid establishing its own. Policies such as the GIF show that this response can be effective, and, at least at the generic whole-of-government level, this is reasonably fit for purpose.

At the level of projects and programmes, things are more problematic. We have seen examples where policy, although nominally set across government as a whole, is routinely subverted or ignored in its application at Departmental and Agency level. To pick on two specific examples: policy to converge all citizen and business-facing website content to two principal channels was clear enough. But enthusiasm for its application in practice has been harder to find. Whether such a broad-brush policy was well-founded in the first place is arguable, but it seems evident that coordination of its application could only go so far; it did not extend to mandation. The use of the Government Gateway to provide some consistency of user experience at the front end of transactions has also been patchy. This is an example of a policy with cross-departmental intent, but at the practical level, local decisions about specific registration mechanisms have almost always been dominant.

In terms of infrastructure and operations, our perception is that technology policy is not particularly well-coordinated. Nor, given the range and scale of government's activities, should it be overly centrally managed. But to address the question at a local level, too often policies either seem to be made up on the fly, or to be missing in certain crucial areas. User experience is a good example where policy is patchy or lacking. And in

a world of increasing digital participation and engagement of audiences beyond the traditional, “technical” community, this will cause problems if not addressed.

2. How effective are its governance arrangements?

A detailed answer to this question requires a knowledge of governance structures beyond that which is apparent to us in our activities as an external supplier to government. This tells its own story, to some extent, of course. There is some awareness of the activities of the CTO Council, and we welcome the renewed openness that this governance body and the Transparency Board, in particular, are displaying—but we are not in a position to comment in detail on how governance as a whole is working in practice, other than to reflect on the points made in Question 1 about examples where policy stalls in its implementation—evidence which suggests weakness in governance.

3. Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?

A detailed answer to this question requires analysis of specific reviews in detail against their impact on subsequent services. Within the timescales set for this call for evidence we have not conducted a specific review. However, we make the general point that it is inexcusable not to publish such reviews in full, without redaction, in every case. If lessons are truly to be learnt, and those responsible to be held to account, we expect a far greater commitment to openness.

The recent publication of a heavily redacted report on the National Programme for IT in the NHS is an excellent illustration of this, and the need to do better.

4. How well is IT used in the design, delivery and improvement of public services?

Again, a broad question which in the time available we can only answer with reference to some specific circumstances.

Generally, IT is poorly used. Projects are regularly over-specified and implementation takes too long. Contractual restrictions and excessively bureaucratic change control mean that lessons learned during development are often not applied—for fear of increasing cost or missing deadlines—resulting in poorer quality in deliverables, poorer outcomes, and poor value for money. A more agile and flexible approach is sorely needed to avoid technology solutions becoming handicapped from the outset.

Our suggestion in response to this embraces several points:

- Better understanding of the actual requirement: the conceptual models that sit behind the issue that technology is intended to address. Greater rigour at this stage may set projects on firmer ground from the start.
- Engagement of user perspectives; whether the public at large, a specific targeted audience, and/or the internal users of government technology. Failure to base solutions on real user need, rather than perceived need, to take into account embedded knowledge within a service about how it really works, and to engage those who will actually use a solution have been highlighted time and time again as contributing to IT’s failure to improve public services.
- Ensure the skills to carry out this analysis, and to provide adequate challenge to a policy or ministerial direction where appropriate, are readily available. We will not rush to the conclusion that they must be provided in-house: in some areas this will not maximise value. But if they are sourced externally the incentives to deliver, reliable, accurate, objective advice must be absolutely aligned with the needs of government, not with any potential solution or external provider of solutions.

5. What role should IT play in a post-bureaucratic age?

If we take a thumbnail definition of post-bureaucratic as meaning “faster, more transparent and less reliant on established process”, IT clearly has the potential to play a hugely important role. It increases engagement, it offers openness, and it disintermediates. But if we are truly to adopt post-bureaucratic principles we might usefully begin by addressing the bureaucracy that surrounds IT specification and adoption itself.

Too often we see IT projects thoughtlessly commissioned from an existing provider of services under a long-term, generalist, infrastructure-based contract. There are some sound reasons why such long-term services have been set up, but in a world of increasing technical modularity and interoperation, we expect far more scope for imaginative and creative sourcing. Your network provider might not be the best provider for your website. Nor are there the same technical reasons that might have prevailed 15 years ago as to why it would reduce your risk.

The key word is “agility”: being able to move fast, reflect volatile requirements, and ensure interoperation with existing systems and providers is a sign of being truly post-bureaucratic.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

We have not been able to conduct any form of skills audit, or to find skills information of this nature openly published in a format for analysis. However, we have referred in our response to Q4 to some of the skills that are required.

7. *How well do current procurement policies and practices work?*

Much of what we have said in response to Q5 above applies here: current procurement is bureaucratic. In an attempt to reduce risk, greater risk and poorer value can result: from bundling technology into ever-greater packages; from a lack of finesse in the differences between issues such as development and ongoing operation; and from favouring incumbent providers over new ones, even when the services being procured are far from traditional.

In what can sometimes be a dominant focus on ancillary policies, such as environment, or trading record, we see the risk of excluding truly agile innovators who will mitigate risk not by showing evidence of how they have done things (in largely the same way) for many years, but through new measures, such as agility of development, and the manageability of work packaged into smaller, more flexible units.

We strongly recommend the investigation and adoption of some of these new assessments of a preferred supplier: namely flexibility, freedom to innovate, scalability, modularity, interoperation, use of standards, and commitment to openness.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

In terms of absolute need for infrastructure and other technology assets, very little. Many infrastructural services and assets are now commodities. Outsourcing is long-established and reasonably well-understood. Assurance of external services is similarly a mature discipline. Bearing in mind the value of having a body of internal expertise in IT, it seems sensible to ensure that skills are developed and enhanced through the ready access to technology for testing and learning, and where this can be free of association with any particular external supplier, so much the better.

Data is a slightly different matter. Government creates, collects, and to a large extent, owns, data—by definition. To retain trust in data and its validity, its data assurance role is important. Its willingness to publish its data openly in raw formats is equally welcomed. Particular problems arise however in terms of “operational data”—the real-time reflection of the services that government provides, facilitates and commissions. This is some of the most valuable data that exists—with the most potential to support transformational new service development through the use of IT. And yet this data remains locked behind contractual walls—either with a view that its release would lead to commercial compromise and market destabilisation, or simple that release-and-publish mechanisms just haven’t been built into the contract, and can’t be without expensive (and unprioritised) changes.

Therefore we consider that the development of “contracting for data” as a discipline would provide enormous benefits in terms of more effective future use of IT.

9. *How will public sector IT adapt to the new “age of austerity”?*

This is hard to predict. There are a number of possible outcomes, not all of which are beneficial, nor co-existent. We may see a winding-back from all discretionary projects, in which the pilot, the experimental and the innovative will be badly hit. We may see a retrenchment to “lowest common denominator” infrastructure, trading usability and performance for cost reduction and perceived reductions in the risk of change. We may see radical business transformation—entirely rethinking the way services work in order to transform their cost base or the way they interact with and serve their users. We very much hope for examples of the latter. Applied carefully, with good preparation and scalable, agile methods, technology—as part of overall service design—has much to offer in an age of austerity.

Setting aside some of the traditional, “heavy-duty”, ways of working and embracing fresh approaches from new suppliers should be extremely attractive at this time. As well as being less bureaucratic, refreshing the way technology is approached could actually be triggered by reduction in available budget to continue doing things in the same old ways.

We have already seen some movement from the supplier community in response to tightening of budgets for external expertise, above and beyond the round of supplier cost reduction led from the Cabinet Office itself. A large consultancy provider has made much of its forthcoming “donation” of services to government technology projects, and we are aware of recent competitions where price has ceased to differentiate—all bidders eager to maintain relationships and continue programmes even if operating at a short-term loss.

We are strongly critical of this consequence of austerity. Short-term savings will be balanced in the longer-term as suppliers recover their costs, and in the meantime the ability of smaller innovators to enter this market (with any semblance of fair competition) will be hampered. We feel that government must show its commitment

to securing the right services at a fair price, rather than pursuing short-term reductions with a potentially negative overall effect.

10. How well does Government take advantage of new technological developments and external expertise?

On the question of new technological developments we have some concerns. Innovation is seen as a sporadic activity, rather than a culture. Isolated examples of innovation units are welcome, and the new government skunkworks has some potential (as do the projects fostered by those such as the Technology Strategy Board), but the lack of a consistent focus on research and development in its own right is worrying. Merely naming one chapter of a major tender response “Tell us how you would bring innovation” isn’t enough.

On the question of external expertise we have significant concerns. The culture of using external guidance at all stages of conception of a technology project has frequently led to a blurring of responsibilities and interests. In the worst examples, we have seen extensive planning and development conducted with no meaningful civil service presence at all. As we noted in our answer to Q4 we make no general presumption that in-house skills will always be best, but we feel there is scope for observing better separation of interests when using external expertise to provide client-side advice. Drawing on established systems integrator organisations to provide senior external Gateway reviewers can limit the credibility and transparency with which such reviews are perceived.

11. How appropriate is the Government’s existing approach to information security, information assurance and privacy?

Inevitably, detailed information on these areas is not widely and openly available (for obvious reasons), and sufficient analysis has not been possible within the timescale of this call for evidence.

We make the general observation, however, that the information security and assurance processes applied seem cumbersome: with little visible evidence that they are keeping pace with changing risks and development approaches. Government’s security requirements also vary significantly in their interpretation between departments, and are not well-aligned to those of the NHS or local authorities. Their complexity is a significant barrier to entry for SMEs wishing to enter technology-focussed contracts with government, who must rely on a small pool of CESG accredited advisers—whose rates are beyond the means of many organisations—for knowledge and information critical to the success of a bid.

The consistent application of information security and assurance methodologies to something of the nature of an agile development process is also unclear.

12. How well does the UK compare to other countries with regard to government procurement and application of IT systems?

We have not responded to this question. Sufficient analysis of international comparators has not been possible within the timescale of this call for evidence.

January 2011

Written evidence submitted by McAfee

INTRODUCTION

1. McAfee welcomes the opportunity to respond to the Public Administration Select Committee’s inquiry into good governance and the effective use of IT. As the world’s largest dedicated security technology company, we are relentlessly committed to tackling the world’s toughest security challenges and delivering proactive and proven solutions and services that help secure systems and networks around the world, allowing users to safely connect to the internet, browse and shop the web more securely. Backed by an award-winning global research team, a number of whom are based in Aylesbury, McAfee creates innovative products that empower home users, the private sector and the public sector and allow them to continuously monitor and improve their security. We serve as Vice Chair of Intellect’s Cyber Security Group, sit on Intellect’s ISAB SIAT Working Group, and participate in a range of other industry groups.

2. As the committee indicates, the current drivers of IT policy are the constraints created by the coalition’s deficit reduction plan and the need for greater efficiencies across all departments arising from this. The Cabinet Office has recently confirmed that £500 million has been saved as a result of its moratorium on spending, and IT has made a significant contribution to this. The Cabinet Office’s Structural Reform Plan outlines the need for savings going forward and the IT sector will be an important participant in this. McAfee believes that there are other steps the Government could take in this regard to realise greater savings, particularly through the rationalisation of security networks within and across departments. We comment further on this below.

3. Government should not overlook the wider role IT can play in enabling good governance and saving costs simultaneously. Recent moves towards increasing the proportion of public services available to citizens online, as recommended by Martha Lane Fox’s recent report to the Cabinet Office, are a welcome step in this direction. Such developments could, however, have wider security implications which we explore below.

Co-ordination of technology policy across government

4. The last 10 years have seen rapid and radical innovations in technology; with evolution taking place at a far more dynamic pace than government has been able to embrace in policy terms. Responses have traditionally lagged behind technology development, with official government guidance being published some time after relevant innovations.

5. As a result of this, government has often been slow to take advantage of new technologies, and policy has not been co-ordinated in a way that exploits innovation to the full. This is especially relevant in the context of the current Government's deficit reduction strategy as IT can play a positive role.

6. The speed with which the Coalition has moved forward with initiatives is to be welcomed. The transformation of the Cabinet Office into a powerful central hub at the heart of government should allow for more timely policy responses to ongoing technological development.

7. Recent reforms to CESG's Listed Adviser Scheme (CLAS) are to be welcomed in this regard. The current process whereby CLAS consultants provide Information Assurance advice on systems processing protectively marked information is extremely costly for government. The PACE initiative within CESG aims to promote delivery in a timely fashion whilst making this scheme more cost-effective and more appropriate to the particular risks under consideration. This is a positive step, although there is scope for government to go further. In technology terms, the financial services industry provides a good model for government to consider.

8. Another core issue at present is the fact that security drives technology in the public sector, meaning that government cannot be as fleet-footed as the private sector in adapting to change. In the private sector, business will demand enablement of new technology and quickly take advantage of the benefits that can be realised, but the reverse is true in the public sector. This results in lack of prioritisation and loss of value.

9. Other Cabinet Office reforms of interest, including increases in the powers of the CIO to drive integration and improve value for money and the new infrastructure for the CIO's office, will also assist in driving better policy co-ordination across government. We look forward to the Cabinet Office's forthcoming announcement on the future of the CIO office.

Effectiveness of governance arrangements

10. Many organisations find the government controls currently in place open to wide interpretation, leaving too much scope for risk. Widely cast standards and governance requirements increase cost and time delays, with organisations struggling to work effectively. This is particularly evident in the field of public sector IT security.

11. In addition, many of the governance controls in operation are manual. Greater use of automated assessment and risk management tools could both reduce costs and improve governance simultaneously whilst reducing human error; especially as 70–80% of security costs are attributable to manpower. Software licenses, on the other hand, represent only about 5% of costs. Operational efficiencies have often been neglected in the past.

12. Proposed reforms to government IT infrastructure are likely to impact on governance arrangements in the future. We note in particular confirmation in the Cabinet Office's business plan of the Coalition's commitment to ensure a level playing field for open standards. This aligns with the direction in which other government and commercial enterprises are heading.

13. McAfee itself launched an open architecture technology programme, largely in response to the needs of the US Department of Defense. The DOD's open framework enables the department to plug in any number of solutions from different vendors. McAfee's Security Innovation Alliance Programme has allowed accelerated development of interoperable security solutions and log management tools to meet these needs and simplify the integration of these products within complex customer environments. It provides an important value proposition for government and commercial customers who do not want to be locked into a single vendor.

Application of past lessons

14. The NAO and the OGC have published a number of reports in recent years outlining the problems the public sector has encountered with IT programmes. The NAO's June 2010 report *Assurance for high risk projects* provides a good summary of many of these issues, outlining two broad areas of concern with high-risk projects:

- Lack of a clearly stated and enforceable mandate for assurance across government and consequences for non-compliance; and
- Design of systems, particularly the lack of integration across individual mechanisms and the reliance on point in time assurance.

15. In terms of the wider lessons from unsuccessful IT programmes, learning and application of lessons learnt has been variable. Where projects and programmes have been large in scale, lessons have been disseminated through the media. At a lower level, organisations have been left to learn from their own mistakes. In many cases, however, there has not been a clear process for information dissemination to prevent the

mistakes of past projects being repeated in the future. Given the speed at which policy can change in response to external forces, it is easy to see why mistakes continue to occur. Most public sector organisations still seem to be in reactive mode, and we would recommend that IT security be consolidated into a common framework that allows intelligence to be correlated appropriately.

16. Reforms to IT assurance and ongoing changes to the structure of IT governance within the Cabinet Office are to be welcomed. There is an urgent need for a centralised point of information dissemination to help departments to avoid the mistakes of the past; the creation of the Efficiency and Reform Group seem to us to be a step in the right direction.

IT and public service design

17. Government has been slow to adapt to the pace of change in the past. There is considerable scope for using IT better in the design, delivery and improvement of public services, especially with regard to the interface between government and citizen. There are many benefits to the increased digitisation of public services, both to the Exchequer in revenue terms and to the citizen as engagement with government becomes simpler and more personalised.

18. Martha Lane Fox's recent report on Government internet services is to be welcomed. We note the report's recommendations on the development and opening up of Application Programme Interfaces, and that government move forward with a first wave of digital only services in relation to Student Loans, Car Tax and JSA applications.

19. Whilst such moves will bring many benefits, government needs to be alive to the security risks they entail. As government-citizen online interaction increases, existing protection of networks needs to be more resilient at the network level given the size of the cyber-threat, something that has become increasingly apparent in recent months. McAfee research shows that the number of global attacks has grown exponentially in the last year, with an increasing number of these attacks directed at government and critical infrastructure.

20. The OECD's January 2011 report on reducing systemic cybersecurity risk reinforces these concerns: *"World wide web portals are being increasingly used to provide critical Government-to-citizen and Government-to-business facilities. Although these potentially offer costs savings and increased efficiency, over-dependence can result in repetition of the problems faced by Estonia in 2007."*

21. On the other hand, increasing numbers of users will be accessing government networks to undertake transactions in the coming years, and many of these will have PCs that are unprotected and potentially infected. Identity fraud is a key ongoing risk, with the current cost of this to the UK economy estimated at around £1.2 billion. This raises further questions about the potential problems with users unfamiliar with IT and IT security attempting to access services.

22. Risks are complicated further by the generational divide. Younger generations are more IT literate but commonly have little concern about the risks and consequences of usage. At the other end of the spectrum the older population is traditionally far more sceptical, especially given the perceived security risks. Therefore, each group requires education, albeit in different ways. There are also issues over who should be liable in fraud cases, and where the burden of responsibility should fall. This is a particular issue in relation to online tax assessment.

The "post-bureaucratic" age

23. The phrase "the post-bureaucratic age" describes a whole set of ideas about putting the citizen in the driving seat of government through increased transparency, increased citizen-led delivery of services traditionally delivered by civil servants.

24. IT should be seen as an enabler of these ideas. Our comments on the security risks of increased government-citizen interaction are relevant again as the post-bureaucratic age presents its own unique security problems as citizen interaction with government increases and the proportion of citizen-led public services rises. Many will utilise IT in a sophisticated fashion to deliver services—but often without the detailed security architecture upon which government relies. This increases risk.

25. This is best dealt with through a proactive approach from government to educating citizens and potential deliverers of public services on cyber-threats and the most appropriate way to mitigate them.

Cyber-skills

26. There are already a number of pools of skills excellence within government, although more work needs to be done. The public sector can learn a lot from the work being undertaken in the financial services sector which is far ahead of government. The Sector Skills Council for IT Skills is currently moving forward with its own work in the specific field of cyber-security skills and we are engaging with its work.

27. It is important that government doesn't attempt to "reinvent the wheel" with training offerings. The private sector is already providing excellent training offerings which could easily be transplanted to

government. McAfee, for example, has provided hands on malware investigate and forensics training to investors from the Policy Central eCrime Unit and the Serious Organised Crime Agency.

28. Talent management and retention remain problems. Highly skilled experts, many of whom are initially trained in the public sector, will often move to the private sector, attracted by higher salaries. There is a risk that this “bleed” will increase given the current squeeze on public sector spending.

Procurement policies and practice

29. The public sector has been slow to take advantage of the economies of scale that can flow from central purchasing. Philip Green’s recent efficiency review for the Cabinet Office noted that “*government acts as a series of independent departments rather than as one organisation*”; this is particularly pertinent in the field of IT security, where significant savings could be made.

30. Green is right that lessons can be learnt from the private sector, where there has been a drive towards vendor consolidation and cross-portfolio purchasing. Public sector groups have also typically adopted a project by project approach to security procurement which has resulted in a patchwork quilt of products that bear little relation to each other. The private sector has already demonstrated that financial benefits flow from consolidation; the public sector should follow suit. It is welcome that ERG has stated that government should adopt a more “corporate” approach.

IT and the “age of austerity”

31. Government has already moved forward with a number of initiatives in the IT field which have already resulted in significant savings.

32. McAfee believes that substantial savings are still there to be made across government from rationalisation of IT security. Many departments continue to operate on the out-dated premise that optimal protection comes through use of multiple products from multiple vendors. This approach fails to recognise that many of today’s security solutions, including those offered by McAfee, proactively draw co-operatively on the research of other providers, thereby providing the user with a comprehensive security service.

33. McAfee’s own solution, McAfee GTI (Global Threat Intelligence), takes this process to an entirely new level, providing comprehensive detection and protection automatically to a suite of McAfee security products in real time. It uses 100 million sensors to monitor the Internet, continually seeking and identifying new and emerging threats before they materialise. More than 350 researchers in 350 countries across the globe, including the UK, focus exclusively on tracking and analysing this information.

34. The Gartner Maturity Model is a recognised methodology for describing an organisation’s state of security. Shifting the public sector from a state of compliance (where organisations demonstrate emerging policy and process definition but at a high cost) towards optimisation (with a dramatically higher overall level of IT protection accompanied by a considerably lower cost profile driven by Operating Expense and management efficiencies) on this model could save up to 40% of IT security spend. As we outline above, approximately 70% of security spend is on manpower and time, where major savings can be made.

35. The UK requirements in this area are not dissimilar to those of the US where we have undertaken considerable work. For example, standardisation of New York State’s systems cut expenditure on all endpoint security products by some 75%, saving the state \$20 million a year.

36. Cloud computing should also lead to significant cost savings but in itself presents considerable risks that must be managed on the front end. In migrating to the cloud and disseminating information broadly, public bodies inevitably surrender a certain amount of control to the cloud provider, increasing their risk profile. Cloud services must therefore be part of the overall strategy and not become a separate silo. McAfee is unique in having a framework to support such mixed models.

Government’s use of external expertise

37. There is a wealth of knowledge in the private sector on effective IT usage, much of which could add value to government, particularly as it looks to maintain its knowledge of risks and threats. The public sector can often benefit from the research activities that are already taking place in the private sector.

Existing government approach to security

38. Our own research has shown that the number of global attacks on IT systems has grown exponentially over the last year, with an increasing number of these attacks directed at government and critical infrastructure. We note the publication of the Strategic Defence and Security Review and the National Security Strategy, and the recognition of cyber-attacks as a Tier 1 threat.

39. Government faces a number of challenges in this regard including:

- A slowness to respond to emerging security threats;
- An inability to keep pace with private sector innovations;

- Standards being open to interpretation;
- Unnecessary complexity resulting in considerable lost time and wasted funds; and
- The timeliness to disseminate changes down to a local level.

40. Security spend is traditionally a comparative low piece of overall IT expenditure. The additional expenditure trailed in the SDSR is to be welcomed. However, this is an area that is rightly receiving considerably more attention at present. There have been a number of high profile cyber-attacks in the last few years, and the SDSR highlights the importance of this area to government and country alike. The trend towards increasing digitisation of government services will also need an increased focus on IT security. The Government is right to push for more government services to be delivered online.

41. Unprotected citizen computers could also pose significant risk going forward, especially as citizen-government interfaces increase. One potential solution could be to offer free six month trial versions of security software to familiarise users with the nature of IT security. Such a model has already been successfully adopted elsewhere; for example, McAfee has undertaken significant work with Facebook, educating its 350 million users about security threats through trial software, chatrooms and other education programmes. Government should consider how best to do similar things through, for example, DirectGov. Getsafeonline is a brand that could be better utilised to educate both the public and small businesses. IT education within schools should also focus more on security.

January 2011

Written evidence submitted by Conservative Technology Forum

THE MAIN POINTS IN THE FOLLOWING RESPONSE INCLUDE

- Clarity on EU Procurement rules is long-overdue.
- Open standards are essential and should be enforced upon suppliers.
- All services must include clear routes of engaging those not digitally connected.
- User groups and innovators should be consulted before policy formation, not after procurement.
- The movement of staff between Government and service providers must be significantly slowed.
- Government must drive the innovation agenda and do more to challenge the assertions of existing suppliers.
- There should be no “commercial in confidence” clauses in any contracts involving public funding, or settlements to end contracts [exceptions only for security rated clauses in defence contracts].
- Benchmarking clauses should be enforced vigorously, and failure not rewarded with further work.
- Any intellectual property arising as a result of a Government-commissioned scheme should absolutely remain the property of the UK taxpayer.

1. *How well is technology policy co-ordinated across Government?*

1. Since Lloyd George’s “Land fit for heroes” and the Haldane Report, service delivery has been fragmented by departmental barriers between policy areas. This often fails to reflect the complex and fast-changing lives of the public. Technology policy, while one of the areas in which pan-Government strategy can deliver the most, remains equally fragmented with a seeming preference to re-invent the wheel than re-use technology infrastructure.

2. Government infrastructure remains a steam-age endeavour in a digital age. Projects like online self-assessment or tax disc renewal have a major impact on Government back-office, yet are simply seen by the public as Government catching up with Amazon or their personal bank.

3. Localism and decentralisation is underpinned by a belief in returning power to the people. Technology has a huge role to play in this, supporting local delivery, meeting community priorities (including those of non-geographic communities) and reducing administrative costs while widening participation. However, the current web of purchasers, centrally and locally imposed specifications and differing objectives for the implementation of technology does not deliver anywhere near the full benefits of technology investment the private sector is able to harness.

4. For too long, Government has allowed a small fragment of the IT industry to dictate capability, cost and the pace of change. This has been possible because rather than acting as a unified, informed and clear user or buyer it has been fragmented, indecisive and all too often uninformed, relying on consultants whose own vested interest frequently differs from that of the taxpayer.

2. *How effective are its governance arrangements?*

5. The traditional approach to Government technology projects has been to rely on external consultants to specify the project, before running tendering exercises for the build and subsequent operation of the system. Scrutiny comes via the relevant department, and subsequently by the appropriate select committee.

6. While the Gateway Process did seek to introduce external (and non-commercially interested) opinion, it commonly came after the course of action was decided upon. Where criticism of the technological route contradicted policy objectives, the political force of policy invariably rode roughshod over the concerns of experts.

7. Government has suffered because the governance of project stages—from pre-procurement to dispute resolution following implementation—is crippled by a lack of expertise. Furthermore, the driver for senior staff is often to outsource a problem for long enough to allow their own career to move on, leaving the rapidly escalating service costs and technology failures for their successor.

8. Often this cycle is repeated for the most challenging systems, a “sticking plaster” approach that perpetuates Government’s inability to tackle the underlying problems and deepens Government’s reliance on the outsourcing provider, as domain expertise and technological understanding is gradually lost.

9. Little or no governance arrangements exist to prevent the loss of understanding of existing system functionality. As a result Government can find itself forced to choose between a costly rebuild project, paying ever-escalating service costs or terminating a service.

10. The movement of staff between Government and outsourcing providers is particularly acute here. The decision of whether to outsource a project is the point at which Government begins to lose its domain expertise—once this process begins it is extremely difficult to claw back, as employees are transferred and other staff retire. There must be restrictions to prevent those making long-term outsourcing decisions benefiting at any point in the future from contractors they commission.

11. Governance can only be as strong as the expertise and objectiveness of those in governance roles. For too long, Government has failed to deliver either an objective or expert oversight of technology throughout specification and implementation.

12. Commercial confidentiality arguments have frequently stifled discussion of why projects have failed, and indeed the cost to the taxpayer of failures. While undermining the transparency agenda, they also make it harder to propose alternative solutions in future and should be avoided.

3. Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?

13. The underlying way Government specifies and procures IT has not changed significantly despite well-informed criticism and repeated technical failure. It could be argued this is because while the criticism of such bodies is uncomfortable, there lacks the political, media and indeed public interest in finding an alternative. IT project failure has become so commonplace that is seen as almost inevitable—and as long as those responsible manage to keep everything ticking over and discomfort is minimised, there is no clear will to address the fundamental problems.

14. There continues to be a tendency towards large projects based on expectations rooted in sales language and not technical viability. The language of transformation dominates discussion, yet technical solutions are growing ever more remote from tackling the underlying issues of an ageing, fragmented architecture.

15. Frequently stated concerns around flexible specifications, open standards and interoperability, continuity of project management and supplier dependence remain as significant as they have ever been.

16. International experience and best practice has frequently been overlooked amid cries of “we are different” and “that would never work in the UK”. Britain continues to fall behind competitor economies in the value levered from technology investment and this certainly impacts on the success of the UK technology sector, particularly homegrown SMEs.

4. How well is IT used in the design, delivery and improvement of public services?

17. The historic—and continuing—trend is to develop policy, legislate and then implement the necessary IT changes or new systems required. The policy development and legislation stages are pursued largely in isolation to the technical environment or implications. As a result, the technical solution is often dictated by time or legal constraints. A more thorough interrogation of existing systems to establish “where we are” during the policy making progress would not only help inform debate, but highlight technical challenges and unforeseen opportunities.

18. IT has the potential to deliver potentially huge back-office cost savings. However, the subsequent job losses in admin-heavy departments, and loss of revenue to existing community facilities like post offices, gives rise to a tension at the heart of the use of IT in the delivery and improvement of public services. Indeed, it could be argued the failure of IT in a range of public services is the result of conflicted interests.

19. For example, a programme to move a specific benefit from a paper-based system, administered in a job centre, to a web-based system would result in administrative over-capacity in the relevant back office, loss of activity in the job centre and a reduced need for complex IT changes to manage the existing system. While it would deliver budget savings, it is arguably not in the interest of the IT supplier, local MP or civil servants for such a scheme to succeed if it were to result in a significantly smaller department, loss of a job centre or lower

maintenance revenues. Magnify this to the scope of large-scale projects (eg Universal Credit) and it is fair to question whether the best interests of many existing stakeholders would be better served by the failure of the IT scheme required to deliver the policy.

20. From electronic invoicing to the online provision of services and use of off-the-shelf solutions, too many vested interests—masquerading as best practice—are served by the preservation of the *status quo*.

21. The only way this conflict of interests will be broken is if the success of genuinely transformative IT is in the best interests of those in critical positions in the design, delivery and improvement of public services.

22. Benchmarking clauses are a key tool in ensuring the ongoing improvement of services while controlling costs. They should be a central part of all contracts and their enforcement pursued vigorously.

5. *What role should IT play in a “post-bureaucratic age”?*

23. An overwhelming majority of the public have seen the way they interact with consumer services transformed by the internet. In a post-bureaucratic age, IT must deliver the same transformation to their experience of interacting with Government.

24. Government’s brittle systems are often unable to adapt to the pace of change in modern life, with the underlying systems that have churned for decades simply wrapped with a glossy website. If Government is to truly move beyond a bureaucratic age, IT should serve the people. IT should be the means by which Government becomes more responsive, informed and efficient.

25. The foremost challenge should be to reconcile the fact that those who most frequently interact with the state are the least likely to be digitally active, whether that is through a lack of ability or a lack of access.

26. The wider populous can be engaged online, but there will remain a need to bridge this digital divide. The goal should therefore be for the state to bridge that divide, enabling the disenfranchised to use the same service gateways as the rest of the population. This could be provided by job centres, post offices, charities or the private sector, but IT cannot be relied upon as the means to post-bureaucratic Government. It is an enabler, but ultimately society as a whole must achieve the end itself.

27. Intellectual property will remain the primary currency of the post-bureaucratic age, and Government must ensure that it retains ownership of any IP which is created as part of public projects.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

28. Many of the systems Government is entirely reliant upon have long since become the exclusive bastion of outsourcers, with Government possessing little or no knowledge of the underlying system. In the event of a dispute, Government could be forced between risking a critical system or database going off-line and paying the price of the supplier. Government is a hostage to fortune, and at present lacks the ability to overcome this.

29. The question is whether Government should aim to build a skill set which enables it to subsume suppliers, or whether it needs to recognise the need to look further ahead and take a more strategic approach. Recapturing domain knowledge is equally as important as contract management or dispute resolution.

30. Government must become an intelligent customer. Government all too often, with little justification, relies on the supplier community to highlight best practice and where innovation should be adopted. Government appears to lack the skills and knowledge to challenge supplier assumptions about why approaches are not suitable and frequently appears all too keen to accept the argument that “Government is different” and therefore bespoke solutions are required.

31. At a strategic level, Government needs to look at the skills that are needed to transform the existing infrastructure into one that is manageable, flexible and efficient. This requires a robust management skill set of existing contracts, but also a broader shift to lateral thinking and innovative exploration. Government at present is not naturally suited to conducting small pilot experiments or demanding suppliers come up with alternative proposals. If any kind of transformation is to be achieved, it needs to be far better at both.

7. *How well do current procurement policies and practices work?*

32. Current procurement policies perpetuate the weaknesses in the system. As well as following a process that invariably excludes user input or lateral thought until after policy and framework have been specified, it is also heavily reliant on incumbent suppliers and consultancies.

33. At present two key problems exist: firstly, the tendency to roll several small projects into one large project and secondly the preference for “primary” contractors. An ancillary challenge has been the interpretation of European rules and the proliferation of procurement frameworks.

34. The net effect of these issues is to make it prohibitively expensive for many small and medium sized businesses to even get onto frameworks, let alone actually tender for projects, while the Government has failed to ensure that supply chain maturity is achieved on the supplier side. This has resulted in large suppliers having

the ability to block innovation that threatens their own revenue stream, while in fact such innovation could be hugely beneficial to the Government.

35. Finally, there is minimal—if any—investment in thorough testing of innovation or alternative approaches to inform the procurement (or indeed policy making) process.

36. One alternative is a greater use of “Pre-Commercial Procurement”, which encourages user data driven solutions while providing a clear incentive for supplier innovation. It has been shown to support the growth of new companies and provide royalty income to the public purse through shared intellectual property.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

37. Government needs to understand what it owns, and then be able to take a strategic view of where existing intellectual property and infrastructure can be re-used. It also needs to be far more robust in demanding that existing infrastructure is re-used wherever possible,

38. The nature of IT is that the physical infrastructure is becoming less important, and the shift to standards-based approaches should be seen as an opportunity to reclaim control of systems. As a result, Government should ensure the data held within systems is not in proprietary formats and can be extracted without huge costs or risk.

39. Crucially, Government needs to own and protect the domain expertise of systems and staff. Without this knowledge, the maintenance and modernisation of systems is dependent on suppliers.

9. *How will public sector IT adapt to the new “age of austerity”?*

40. Key to success is Government becoming an intelligent—and extremely robust—customer.

41. A huge amount of existing budgets are tied up in long-term service agreements and PFI contracts. These deals cannot be sacrosanct. Supplier performance should be monitored closely and benchmarking clauses exercised ruthlessly. Litigation should not be avoided to protect the reputation of civil servants.

42. The greatest opportunity exists where Government and service providers are willing to think outside of the box—while demanding 10% savings from existing suppliers is a short-term solution, who is responsible for seeking out and testing the transformative ideas that could deliver 50% savings and beyond?

10. *How well does Government take advantage of new technological developments and external expertise?*

43. Rather than pursuing bespoke systems and large-scale projects, Government should focus on replicating best practice and testing successful innovations for their value in the public sector.

44. Overseas governments, for example Sweden, are far quicker to adopt new technology and this is driven by a combination of small pilot schemes and continuous engagement with user groups.

45. There is no one group across Government who have responsibility for finding and testing innovation or new technological developments.

46. There is a critical architectural issue here, with many Government systems operating far beyond their expected lives and based on hardware and software that is difficult to maintain and integrate. This will continue to hamper the uptake of new technology.

11. *How appropriate is the Government’s existing approach to information security, information assurance and privacy?*

47. Arguably the last Government sought to centralise personal data to deliver a single view of an individual. The Coalition has signalled this will not continue, although there lacks a coherent strategy to address the clear challenges that exist in this field.

48. Policy should be based on the concept that, as far as possible, individuals should own their own identities and personal data and be the ultimate arbiters of whom they trust with it and whom it should be shared with. Government also needs to proactively identify who, and in what circumstances, can bring together different data sources and cross-reference them. In a host of areas, from tackling welfare fraud to improving the electoral roll, this approach would improve information assurance without compromising personal liberty or increasing security risks.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

49. Many studies exist which highlight the UK’s comparatively poor performance in this area, based both upon the returns gained from investment and technological measures (for example, high speed broadband coverage).

50. Co-ordination at a national and local level appears weaker than many international competitors, with Britain failing to implement (for example, the difference in implementation costs of the Rural Payments scheme, where England's solution was almost three times more expensive than the Scottish solution, yet proved a catastrophic failure in many regards of its implementation.)

51. One clear trend across the EU is that Britain conducts far more large procurement exercises for IT systems than similar economies. Many argue this is due to an over-zealous interpretation of European rules and a failure to grasp the connection between project size and the probability of project failure.

52. The Coalition has done much to accelerate the open Government agenda, but like many areas this has been a catch-up exercise with competitor economies.

This submission is made by Malcolm Harbour MEP, Chairman, on behalf of the Conservative Technology Forum. The Forum provides a platform for Conservative Party members to influence the use and introduction of new technologies in both government and the wider economy, and to assist in the preparation of policy for the Conservative membership of the coalition government. It also holds discussions and debates on technology-related issues.

January 2011

Written evidence submitted by Communications Management Association

ABOUT CMA

CMA is an association of ICT professionals from the business community who have a professional interest in communications, in both private and public sectors. It is a registered charity 50 years old, totally independent and without supplier bias. It is run by the members, for the members and aims to influence regulation and legislation, provide education and training and disseminate knowledge and information, for the public good. CMA's contribution to public consultations is generated via the process described in the Footnote to this response. (www.thecma.com)

BUSINESS IMPACT STATEMENT

To the business community, "IT" does not just mean computers on desks. No computer terminal can be fully effective unless it is part of a communications network that connects it to a wider community—hence the broadly accepted terminology of "ICT", adopted to counter the earlier tendency to overlook the essential communications component of systems.

During the past decade the business community has increasingly focused its "ICT" strategies on connecting with its customers. Unfortunately, while (as the PASC inquiry asserts) "IT is ubiquitous", that cannot be said of the underlying communications infrastructure that, in the national sense, should provide the means of reaching out to a mass market and enable a

vast range of innovative services and products. This infrastructure investment point (along with its societal implications) was well made in President Obama's inaugural speech where alongside concern for roads, rail and bridges he recognised the vital role of *"the digital lines that feed our commerce and bind us together"*.

Therefore, while the primary thrust of the questions posed by the inquiry appears to be aimed at the acquisition and use of government computers on government desks, CMA is clear that the success of government ICT programmes is increasingly dependent on these systems' interactions with businesses of all sizes and the customers of these businesses, the citizen-consumer.

To achieve that (ubiquitous) interconnection requires an understanding, across all Departments, of the importance of ubiquitous communications. Regrettably, we find that such understanding in government appears limited to a few pockets of expertise and that there seems little appreciation at other levels of the need to pay equal attention to communications infrastructure and its design qualities. Indeed, the prevailing—perhaps unthinking and potentially mistaken—view appears to be that "BT will provide".

SUMMARY

CMA has chosen to provide a response only to Question 1: "How well is technology policy co-ordinated across Government?"

We use, as examples rather than exemplars, recent policy documents produced by government and we express the view that unless there is better understanding and better coordination between Departments it is unlikely that UKplc (and therefore its customers) will benefit to the full extent possible from government investment in the national communications infrastructure.

DETAIL

Whether the need is reflected in government papers

Government attitudes to the relevance of communications for the broader context of policy and administration are deep-seated. Despite “market” reviews (Caio and Carter) the underlying policy view reveals a disconnect between “internal” administrative needs and “external” market-driven regulation. In general terms the relative administrative ignorance of the interdependency of administrative needs and the national infrastructure can be revealed by analysis of official statements that might reasonably be expected to make that connection.

Whilst CMA recognises that the coalition government affords an opportunity to adopt fresh perspectives it is inevitable that it also inherits a continuity of established policy and practice—so in this analysis it is worthwhile reviewing the evolution of attitudes over the past three to four years, sufficient to illustrate the long-term view.

A useful starting point is the Comprehensive Spending Review of 2007—completed just prior to the last phase of the previous government. This CSR created clarity around departmental objectives and designated leadership and subordinate responsibilities for achievement of policy objectives. Particular attention was given to the necessity of encouraging “*sub-national economic growth and regional development*”.

The Treasury paper of July 2007 was focused on correcting the recognised over-dependence of the economy on the City of London and the relatively prosperous South East. In that paper the word “network” was used many times but never in the context of either communications or broadband. It highlighted interworking between government departments, local administrations, the value of transport networks but not once did the paper consider digital networks as relevant to either economic growth or societal development despite significant evidence of this in countries where this was already evident at that time.

This “disconnect” was equally apparent in the follow-up 2008 paper “Prosperous Place” where analysis of the “network” count again shows recognition of interconnectedness of administrative, enterprise and private/public life but no recognition of the need to ensure or demand provision a digital infrastructure to support that increasingly apparent component of economic policy. At that time public commentary from the UK’s primary provider suggested that advanced broadband was not very much in demand and that the country could get by with gradual upgrades (mainly in urban/city areas) to copper-based local networks.

By 2009 this position began to change following Lord Carter’s Digital Britain report and all three main parties headed towards the 2010 election with at least some half-hearted recognition of the significance of broadband for citizen-consumer markets. The focus on localism led to hopes of an understanding of the economic value of locally-managed infrastructure overhaul but subsequent statements from both BIS and CLG (often as one) have failed to identify digital infrastructure as a key enabler of employment and local services innovation. The enthusiasm for localised TV stations failed to embrace the notion of all-IP technology and remained mired in the economics of broadcasting to mass markets. The papers for Local Enterprise Partnerships have, similarly, little to say on the relevance of local access networks.

BT meanwhile has at last acknowledged that in some areas its fibre-to-the-cabinet plans are not fit for purpose and should be replaced by fibre-to-the-premises but their plans still do not embrace the opportunities for local innovative and societally-cohesive services at a level affordable within Big Society initiatives dependent to a large part on community endeavour. It is this arena that local government (with overt support from Whitehall) can play a significant role. In other countries, local investment in replacement networks (this is not an upgrade but a total transformation) has been assured by advance commitment to switch to the new networks. Such a move does not imply a change in supply arrangements for Services—merely a determination that those services are delivered across a network that is fit for purpose—for government, for local enterprise and for wider societal use.

Most recently, we have seen the DCLG paper “A plain English Guide to the Localism Bill”, published earlier this month. It is full of fine words but no mention of telecoms, broadband or fibre and the only network is transport.

FOOTNOTE—CMA’S INTERNAL CONSULTATION PROCESS ON REGULATORY ISSUES

Any consultation document (condoc) received by or notified to CMA is analysed initially by the appropriate Forum Leader for its relevance to business users based in the UK. (The majority of CMA’s members are based in this country, with a third of them having responsibility for their employers’ international networks and systems).

If the document is considered to be relevant to CMA, it is passed, with initial comments, to members of both the appropriate Forum and the 20 or so members of CMA’s “Regulatory College”—ie those members who have experience in regulatory issues, either with their current employer, or previously with a supplier. The CMA Chairman is also a member of the College. The detailed comments from the College are collated by the Forum Leader in the form of a draft response to the condoc. Note: if the condoc has significant international import, the views of the international user community are likely to be sought. This is done through the International Telecoms User Group (INTUG).

Time permitting, the draft response is sent to all members of the Association, with a request for comment. Comments received are used to modify the initial draft. The final version is cleared with members of the appropriate Forum and Regulatory College (and, if the subject of the consultation is sufficiently weighty, with the CMA Board). The cleared response is sent by the CMA Secretariat to the originating authority. It might be signed off by the Leader of CMA's Regulatory Forum, and/or by the CMA Chairman.

January 2011

Written evidence submitted by Citrix

BACKGROUND TO CITRIX SYSTEMS INC

Citrix Systems, Inc. (NASDAQ:CTXS) is a leading provider of virtual computing solutions that help companies deliver IT as an on-demand service.

In the UK Citrix employs 450 people with the majority engaged in product development and engineering not just for the UK market, but globally.

More than 230,000 organizations worldwide rely on Citrix to help them build simpler and more cost-effective IT environments. Citrix partners with over 10,000 companies in more than 100 countries. Annual revenue in 2009 was \$1.61 billion.

Citrix combines virtualization, networking, and cloud computing technologies into a full portfolio of products that enable virtual workstyles for users and virtual datacentres for IT.

Citrix by the numbers:

- 2009 revenue: \$1.61 billion.
- 4,600+ employees in 35 countries.
- 10,000 partners in over 100 countries.
- More than 230,000 corporate customers.
- One million servers running Citrix.
- Touch 75% of Internet users daily.
- Top 5 SaaS provide.

Citrix has a significant number of UK public sector customers spanning local, central, health and education including the DWP, Transport for London, NPIA, DEFRA and numerous local authorities. Three brief examples below:

- **Basildon District Council** is saving £500,000 per year for the next four years in office leasing costs with extra cost savings guaranteed from the reduced utility bills by delivering a shared hosted desktop to its 1,000+ employees. It has also provided flexible working and increased the lifespan of existing hardware thus freeing up IT budgets for other areas.
- **Nottingham City Council** has adopted Citrix XenDesktop to introduce a phased disposal of hardware and move to a more energy efficient thin client device estate. Even though in the early stages of the project, it is already delivering virtual desktops to 5,000 users and has significantly reduced its desktop management costs as well as savings across data centre running and power spend.
- **Hampshire County Council** was able to avoid the cost of buying 8,000 PCs resulting in saving a minimum of £2 million a year in IT costs thanks to Citrix XenApp. It was also able to reduce a planned Microsoft Office upgrade that would normally take weeks to just one weekend, offer partner services, improve community services and centralise IT administration and support. The application architecture is also flexible and scalable enough to enable the council to provide IT services to other local government organisations.
- **Bracknell Forest Council** has waited an extra year to replace 50 PCs thus saving £25,000 and extending the desktop refresh cycle from three to five years by using Citrix XenApp. It has also negated the need for the support team to take journeys of over 200 miles each time a visit was necessary to the Manchester office or many cumulated shorter trips within the Borough and cut application deployment times across approximately 40 sites from weeks to typically a day or even a few hours.

EXECUTIVE SUMMARY OF WRITTEN EVIDENCE

- The public sector will need to continue to invest in new technology to improve public services despite the era of austerity. However, austerity will encourage greater competition and create a more innovative and leaner UK technology sector.
- IT is reaching its own “*post-bureaucratic age*” and moving away from large infrastructure towards simpler systems with greater flexibility for the individual.

- Virtualisation and cloud computing provide significant opportunities for the public sector to meet its current IT challenges and achieve greater localism in public service decision making and delivery. Still greater benefits could be realised if the government made use of open source software.
- Tight budgetary controls over IT spend and back office functions need to continue after the era of austerity to ensure a permanent change in culture towards developing shared services.
- The role of Chief Information Officer in public sector organisations needs to have greater recognition within organisations when making strategic decisions.
- Procurement processes within the public sector are broadly effective. However, project over-run and cost escalations in delivery derive mostly from either the public sector over or under-specifying business needs and changing requirements during project delivery.
- Government needs to better understand the resource cost of change as well as the perceived benefits when making policy decisions.
- Over-specifying business needs also acts to exclude new and innovative technology solutions in favour of more familiar ones.

TECHNOLOGY IN THE AGE OF AUSTERITY AND THE “POST-BUREAUCRATIC AGE”

The use of information technology is essential across the public sector for the efficient and cost effective delivery of public services. More than many commercial organisations, the public sector is undergoing wide ranging and extensive reforms both structurally and in what services are delivered to the public. Therefore, despite the reductions in government spending announced in the comprehensive spending review, the pace of technology procurement will not slow down greatly.

The solution to reduced spending is not to use less IT, but to challenge existing ways of procuring and to find innovative new technologies that are more cost efficient.

Virtualisation and the use of cloud computing technologies are able to meet the challenges faced by the public sector as it addresses the government’s drive for localism and the “*post-bureaucratic age*”, while at the same time drastically reducing costs.

The Prime Minister has used the term “*post-bureaucratic age*” to describe the move to more localised and responsive decision-making that is nearer to the public. Similarly IT systems have historically been large, complicated and inflexible to individual needs. They also become increasingly costly to maintain or replace. Such lack of flexibility creates its own bureaucratic cost. Virtualisation allows for the centralised maintenance and development of an organisation’s IT system while giving greater flexibility and access to individual users. This is the start of the “*post-bureaucratic age*” for technology in organisations, to use David Cameron’s words. With one centre for all data and activity, an organisation needs fewer IT staff to manage or deliver upgrades because only one place needs to be worked on. This is in contrast to having a system with data stored in multiple areas and desktop PCs, which would all need individual servicing.

The use of open source for new programmes is key to establishing “*post bureaucratic*” technology. Many current programmes use proprietary code, often making it costly to upgrade systems and reducing competition for different suppliers to provide services in future. It is in the government’s own interests to get the best value for money and to reduce the long-term costs for IT development.

The standardising of procurement policies and the drive for economies of scale in purchasing IT is an essential part of developing effective public sector IT. Virtualisation and cloud technology now allows for such centralised activity while maintaining the flexibility for more local IT development and delivery. This ability mirrors the government’s localism agenda. In effect decision-making will happen at the most appropriate level—frameworks and procurement policies at the centre and the development of systems locally that are flexible to specific demand. The opportunity for shared services are also greatly increased by ensuring decisions are made in such ways.

It is important to note that sharing services has not been a natural tendency for public sector organisations. So the drive to localise decision-making will need to continue to be matched with budgetary pressures so that the incentives for shared services is maintained.

WHAT IS DESKTOP VIRTUALISATION?

Desktop virtualization technology replaces traditional, costly, time-consuming PC desktop lifecycle management with a more efficient solution to meet today’s demands for Government to meet lower costs, tighter security, and greater flexibility. Citrix desktop virtualization enables IT to centrally store and manage one instance of an OS, applications, and user settings, then dynamically assemble them on demand to deliver a pristine, up-to-date desktop and set of applications to any device, anywhere. It could be a thin client terminal on someone’s desk, a laptop, a traditional PC or an iPad.

WHAT ARE THE BENEFITS OF USING VIRTUALISATION?

Evidence from both private and public sector implementations of virtualisation technology indicate:

- Reduced hardware and operating costs by as much as 50% and energy costs by as much as 80%.
- Reduced time taken to provision new servers by as much as 70% as you no longer need to conduct repetitive installation and configuration tasks.
- Decrease downtime and improved reliability with business continuity and built in data disaster recovery.
- Deliver IT services on-demand and totally free of hardware, OS, application or infrastructure.
- Effective enforcement of corporate standards in terms of anti-virus and management software in any machine connected to the network.

In turn will enable government organisations to:

- Build reliable and efficient disaster recovery plans eliminating the cost and unpredictability of traditional disaster recovery solutions by taking advantage of the inherent flexibility of a 100% virtualised datacentre.
- Ensure full data protection for your IT infrastructure and your data delivering easily recovered data within your recovery time objectives using your existing backup tools and methodologies.
- Eliminate planned and unplanned downtime with high availability for government and departmental applications with built-in service-levels that are easier and more cost effective than traditional solutions.
- Migrate virtual machines live and perform maintenance on physical servers anytime, without user or service disruption.

Desktop manageability and security—Improve manageability and security of enterprise desktops to lower cost, reduce risk, and improve flexibility of desktop infrastructure.

Virtualisation reduces the amount of hardware in the data centre as well as seamlessly operates through open interfaces and standards-based technology. When implemented correctly this can:

- Manage and monitor virtual machines from a central location.
- Reduce the time it takes to provision new servers by 50–70%.
- Allocate shared IT resources with greater flexibility.

CHALLENGES FACING GOVERNMENT IN THE EFFECTIVE USE OF IT

Managing data

A rapidly growing problem for government is to accommodate the changing demands and costs of managing data from across the public sector. Power and cooling costs mean that greenhouse gas emissions from data centres are expected to overtake the airline industry in the next five to ten years and quadruple by 2020. The lack of joined strategic thinking has resulted in an often-haphazard collection of different hardware in different public sector organisations with varying degrees of operability between them. This complicated situation requires a large number of technical employees to manage existing systems. It also increases the complexity—and therefore the number of people needed—to upgrade or replace legacy systems. There is also a rapidly increasing amount of data stored in public sector data centres. This will only compound the problem of upgrading systems and to transfer data to use in new applications.

With far less funding available, the cost of maintaining existing inefficient systems can act as a drain on dedicating resource to upgrading or replacing legacy systems to better meet changing demand. Continuing to maintain such systems also makes it harder for IT to keep up with the decentralising agenda of the government.

Data security

Public sector organisations have suffered a number of security issues with confidential data being lost primarily because storage devices (such as CDs, memory on laptop computers, memory sticks) are so easily lost or stolen. By having a single datacentre information never leaves the central location. When a terminal is switched off or disconnected from the datacentre no information is left behind on the terminal.

Virtualisation therefore can make a significant contribution to preventing loss of confidential data within the public sector.

The role of the CIO in the public sector

Though 55% of the UK's productivity comes from technology-intensive sectors (according to the Office of National Statistics) there is scant recognition of the post of CIOs both in the public and private sectors.

But the job is incredibly complex, with CIOs involved in issues that span cost management, workforce, environmental concerns, corporate responsibility and ethics, business processes, strategy, innovation, competitive advantage, outsourcing and offshoring, IT governance and legal compliance.

Analyst Clive Longbottom, the service director at Quocirca, said the CIO's lack of recognition is a problem peculiar to the U.K., and one that has a wider impact on the economy as a whole. "In Britain, the CIO is a CIO in name only. He [or she] is likely to report to the CFO and won't have the recognition at board level of other C-level executives. The department is seen as a cost centre and inflexible. A CIO in the U.K. is likely to be perceived as separate from the business," said Longbottom. "If the perception changes, they might be of more strategic use."

We would argue that this needs to be addressed also in the public sector.

But many CIOs are too tied up in conflict lower down the hierarchy to advise on strategy, according to a new report by Butler Group. The firm's group infrastructure expert Roy Illsley has warned that Britain's CIOs don't even have control of the data centre yet, let alone influence on the wider economy.

Only about 30% of the CIOs in the U.K., for example, are held to account for the electricity bill according to some reports (Butler Group). And yet this is now one of the most expensive and politically charged variables in any public sector organisations' itinerary, especially with the rise of the Carbon Reduction Commitment.

GOVERNMENT PROCUREMENT AND PAST IT PROGRAMME FAILURES

The procurement process within the public sector is broadly effective. A classic point made is that it takes considerably longer to go through the competitive tender and procurement process than in the private sector. However, this can be mostly put down to the increased accountability measures that need to be in place to justify any spending of public money; and to demonstrate fair and open decision making.

The "competitive conversation" process used by central government has proven to be an extremely effective way of negotiating the best use of technology at the best price with the most appropriate supplier.

More often than not project over-run and cost escalations occur because of two reasons: either over or under-specifying business needs; and the client changing demands once project delivery has begun. Many parliamentarians place blame on technology companies miss-selling products and confusing those making procurement decisions. Rarely is this the case.

Government also needs to better understand the costs of change. Too often thought is only given to the benefits of change but not to the costs (financial and human) of making those changes. Commercial organisations are acutely aware of the costs to change when making decisions and change their strategies far less regularly than government or the public sector.

TAKING ADVANTAGE OF NEW AND EMERGING TECHNOLOGIES

While it is important to learn the lessons from the past (and the public sector does this to varying degrees of efficiency), it must not be forgotten that technology is a rapidly developing sector. This means that lessons learnt may not be relevant after a short period of time. It is just as important that the public sector does not "fight the last war" and has a clear sight of new and future technologies. As well as increasing the risk of over-running and expensive IT programmes, over-specifying the business requirements can also shut out technology solutions that are new or particularly innovative. It is often the case that business requirements will be drafted with a solution in mind. Suppliers of new solutions may therefore not tender for contracts because their product goes beyond the specification that is outlined—despite being significantly more efficient and cost effective than proposals using older and less efficient technology.

January 2011

Written evidence submitted by Commercial Litigation Association (CLAN)

SUMMARY

(a) The procurement of IT in the civil justice system in England and Wales has been marked by a failure of leadership in terms of managing contracts to ensure best value for money.

(b) This failure has led to an approach to procurement that ignores readily available solutions for in house developed solutions that have always ended costing the tax payer far more than an off the shelf solution would have cost principally because of the role and remuneration basis of consultants.

(c) There has been no or too little engagement with users to inform the design of the project brief.

INTRODUCTION

1. The Commercial Litigation Association (CLAN) represents all those with an interest in the resolution of business disputes. Our membership is diverse and includes solicitors, barristers, trainee lawyers, academics,

those businesses providing third party funding for the bringing of claims, costs lawyers and all others with an interest in this field. Our Patron is the Right Honourable the Lord Woolf of Barnes. Our web site address is: www.comlit.co.uk.

2. Our recent work in this area includes:

- Our submission to Lord Justice Jackson’s Review of Civil Litigation Costs in July 2009.
- A paper which he specifically requested CLAN to prepare on IT in the civil courts not only in England and Wales but overseas. This paper subsequently came to form the basis for Chapter 43 in Section 6 (Controlling the Costs of Litigation) of Lord Justice Jackson’s Final Report published in December 2009.
- We held a dedicated session at our Annual Conference in November 2010 considering e-Working and receiving presentations from HMCS’ e-Working team and a contractor, Visionhall Limited, who have installed a system in Dubai and elsewhere.

3. Prior to our November 2010 Annual Conference we undertook a survey of our members and others to explore the effectiveness of the e-Working solution which has been in place since 1 October 2010 and available as a pilot for some time before then. The results were analysed for the benefit of the conference and are attached to this submission. The results were not encouraging. Of those responding 63.7% considered e-Working to be either “bad” or “very bad”. 36.3% were not prepared to commit an answer. Such results may be explained as the result of users’ experience of a pilot version of the system which suffered from difficulties. CLAN intends to repeat the survey during the first half of 2011 to test how well the system has been working since it was fully deployed at the RCJ from 1 October 2010.

4. CLAN has argued that the cost-effective delivery of access to justice can only be achieved by the use of modern technology in particular by providing effective access to the Court office for the purpose of filing court documents electronically and for reviewing documents which have already been filed. In other words by a system which enables the Court file to be as easily accessible and capable of use as a bank account. HMCS has called this Electronic Filing and Document Management (EFDM).

5. However, EFDM has led to a wide range of different solutions in different jurisdictions (eg the new Supreme Court) leading to duplicated effort and a leitmotiv of expensive method led (rather than output led) systems. Ultimately it was abandoned in favour of e-Working.

6. Building a bespoke system should not be necessary as there exist many proprietary systems which would provide a modern system for enabling access to the justice system to be achieved at a fraction of the (substantial) cost of the existing solution. Such a modern system (if properly procured) would also, we believe, bring with it significant cost reductions in terms of the running of the civil justice system. At a time when such reductions should be maximised we believe that a modest investment in effective IT could bring significant cost reductions.

Procuring the Delivery of Electronic Working in the Civil Courts

7. The history of the procurement of an effective e-Working system for use in the civil justice system is poor, very expensive and ultimately disappointing. The robustness of the solution which has been procured has yet to be fully tested in our view despite having been years in development¹⁰¹.

8. These failings arise from a lack of clarity about the objects which the system was intended to achieve.

9. The software’s utilisation in the civil courts is limited to certain specialist courts in the Royal Courts of Justice which have relatively low levels of business compared to the wider system. The Access to Justice Director for IT (Paul Shipley) has confirmed to us that there are no plans to deploy e-Working nationally where the greatest cost reductions could be achieved. Perversely this pleases CLAN as the rigid working system adopted at the RCJ would inhibit national roll-out and we therefore urge the Government to procure a more cost-effective and flexible system for the national solution.

10. The very helpful Issues and Questions Paper issued by the PASC states that “Information technology is now ubiquitous”. Whilst that is the case in the civil justice system the availability of effective IT systems is sorely lacking. Some examples follow:

- (a) Judges often lack access to computers whether laptop or desk top.
- (b) There is no on line access to a Court file.
- (c) Electronic filing in the sense that one can attach a court document to the relevant court file is not available so that documents are emailed to the Courts where those emails are printed and the printed versions placed with the Court file. Not much advance.
- (d) Electronic disclosure of documents is becoming almost ubiquitous as commerce has driven business to adopt electronic methods of working. Yet the civil justice system lacks the means whereby such

¹⁰¹ HMCS would dispute the reference to years but that can only be done by referring to the current solution (e-Working) which is of relatively recent origin. However, that would be to ignore the many failed projects (eg EFDM) which have not come to fruition for one reason or another typically attributable to a failure of confidence in terms of funding commitments and/or controlling the design brief.

material can be reviewed and considered effectively (that is to say electronically) during the course of a trial. Unless, of course, the parties themselves pay for the installation of appropriate equipment in the court.

- (e) Manchester Civil Justice Centre is one of the most modern and well-equipped court buildings in the country yet it lacks any form of proper e-filing system.
- (f) Increasingly more and more judges are familiar with electronic methods of working but lack the means to effectively case manage a case for want of a simple and effective system of electronic file.

There are many other criticisms that could be made yet these will hopefully serve to illustrate the point that years of procurement of IT solutions in the civil justice system have not led to basic issues such as those summarised above being addressed. Given the millions of pounds spent on such exercises it is nothing short of a national disgrace. Ultimately the system of procurement is a question for Government and the failure to have an effective national system of IT in 2011 is a product of failed leadership. Meanwhile other jurisdictions such as: Austria, Dubai, New York State, Singapore, the State of Texas, Turkey and elsewhere have had effective systems for years without spending the millions spent in our country and within timeframes that are far shorter from start to finish.

11. Another unnecessary complicating feature which has been the focus upon the Government Secure Intranet (the GSI) as an excuse for not allowing a straightforward, uncomplicated procurement exercise to lead to a solution being bought off the shelf. The GSI exists to protect Government departments from attack. What is often not sufficiently appreciated is that whilst the Courts are run by a Government department (MoJ) they are not within Government. They are in fact within the public domain and must be in order to enable the citizen to engage with the Courts. The GSI is therefore a hindrance to access to justice insofar as the citizen's engagement with the Courts is positively impeded by the requirement to design systems within the GSI. Such a requirement adds significantly to the cost of such systems.

SPECIFIC QUESTIONS RAISED BY THE ISSUES AND QUESTIONS PAPER

12. Our responses to these are outlined below adopting the numbering in the paper:

1. *How well is technology policy co-ordinated across Government?*

We can only speak of our experience of observing the delivery of technology policy at the Lord Chancellor's Department and in its different incarnations since the early 1990s. The failure to have an effective system of IT giving access to the civil courts for all users is testament to its poor co-ordination in the civil justice system.

2. *How effective are its governance arrangements*

Poor. Projects are constantly being developed only to be abandoned for reasons which are rarely made clear to the civil justice community. Frustration has developed within the user community and a deep sense of despair that anything effective will ever be delivered.

3. *Have past lessons been learned from NAO and OGC reviews about unsuccessful IT programmes?*

This cannot be seen from the limited perspective of court users of the civil justice system. The lessons learned from those reviews seem largely to have been ignored as bespoke systems are developed at huge cost then abandoned only for new bespoke systems to be developed in their place.

4. *How well is IT used in the design, delivery and improvement of public services?*

There is a marked dis-connect evident in civil justice between users and the civil servants developing systems. Limited contact has been made with users in terms of the Government gaining an understanding of the type of system wanted by the user community.

IT could improve this but until such time as the MoJ decide that the users' voice has a relevance the role of IT in gaining insights into what users actually want is unlikely to be prominent.

5. *What role should IT play in a "post bureaucratic age"?*

IT should enable access to the civil courts in a way which is not deterred by a firewall such as the GSI preventing the development of cost-effective systems that could transform the delivery of access to the civil courts.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

MoJ must first design from universal need not unilateral vision.

Consultation in relation to the national roll out of any IT solution must first take account of users' needs. CLAN has proposed a pilot of an off the shelf system in Manchester to explore how costly and/or difficult it would be to provide a system that will deliver the required outputs without the angst that has accompanied EFDM and e-Working.

7. *How well do current procurement practices and policies work?*

Badly as the history of IT procurement in the civil justice system testifies. Specialist jurisdictions in the Royal Courts of Justice have a system called e-Working which is based on emails rather than the obvious need for a system based on access to the Court file via the internet as one would access a bank account.

8. *What infrastructure, data or other assets does Government need to own, or to control directly, in order to make effective use of IT?*

The system we seek is not based on complicated, cutting-edge technologies but makes use of existing software programs which are readily available. There has to be an engagement with such programs.

9. *How will public sector IT adapt to the new "age of austerity"?*

The civil justice system has many opportunities to adjust to the new age of austerity. Cost-effective off the shelf systems are available now and could save millions of pounds in terms of budget whilst delivering real outcomes. In addition the concept of Cloud Computing is worth considering.

10. *How well does Government take advantage of new technological developments and external expertise?*

There has been too great a readiness on the part of Government to recruit consultants ready to develop new solutions which lead to a greater need for consultant input. This is all led by fees and because such consultants have briefs which are poorly drafted with limited input from users this approach also leads to considerable cost for very limited return, if any.

The starting point must be with a small and focussed design team within Government who begin with the needs of the users and seek ways in which to gain their experiences and insights. There has been too little engagement with Court users in this context.

11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

The over-reliance on the GSI has undoubtedly hindered the citizen's access to justice and a new approach must be considered at the same time as off the shelf solutions are being considered.

12. *How well does the UK compare to other countries with regard to Government procurement and application of IT systems?*

Very badly. In this paper we have already listed jurisdictions which are far ahead of England and Wales in their provision for their civil courts. Valuable lessons could be learned from places such as Austria and Dubai.

Robert Musgrove, the former Chief Executive of the Civil Justice Council, has been recruited to act as Chief Executive of the new Qatari Financial Courts and is actively procuring an IT system to serve his court system. He is likely to be in a position to provide valuable insights about the procurement process whilst also understanding the limitations of the civil courts systems in this jurisdiction.

January 2011

Written evidence submitted by CISCO

CISCO SYSTEMS

CISCO has around 2,500 employees in the UK and had revenue of over 7 Billion GBP in 2009. Cisco is a provider of network services and products to all the major fixed and mobile telecoms providers in the UK. Additionally, most FSTE companies use Cisco equipment in the design and building of their networks. Government is a major client and CISCO has a presence in educational, health service, local government and defence.

1. *How well is technology policy co-ordinated across Government?*

A Reasonable job of co-ordination has been done in the recent past but current management and impact of austerity measures are a cause for concern.

Central leadership and vision is needed as well as single mandate. The use of CIO and CTO councils to co-ordinate needs re-emphasis. Examples of success include the CTO council development of Cross Government Enterprise Architecture (XGEA) that offered a strong point of co-ordination. Examples where central co-ordination has not succeed in introducing common standards and savings include the NPIA, Identify Services and Healthcare. There needs more executive backing to bring changes desired. Structures need to be revisited.

Cabinet Office appears to be under-resourced and in a fast changing technological area under-skilled for such as task. Cabinet Office using and relying on industry more could meet this gap.

2. *How effective are its governance arrangements?*

Concern of resourcing, skills and prioritization. There is a concern that dispersed efforts are largely ineffective. Externally, it is difficult to be clear on the overall governance arrangements on security, identity, communications, infrastructure, education, shared services, economies of scale. Recent reorganization around security according to the National Security Strategy shows direction and intention but in other departmental areas clarity is lacking. During workforce reduction in central government, attention needs to be paid to maintain ICT resource required to govern effectively.

There may be scope for creation of a Minister for ICT. Other leading ICT nations such as Nordics, India, Korea, Japan have adopted this solution to ICT governance. This unifies some of the challenges and provides the leadership needed which supplements the health, education, tax, etc.

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

Each IT project fails for its own reasons. However, commonly skills, understanding user requirements, change in leadership/ policy and changing remit lead to failure. The UK does not have sufficient grasp of management optimization to deliver ICT productivity and service improvements. Given how central UK governance is, the inability to provide integrated enterprise architecture supported by unique administrative and budgetary systems is probably the main current “issue”. If management optimization and constant review were made, this would allow innovation of public service to be built upon a solid framework.

4. *How well is IT used in the design, delivery and improvement of public services?*

Historically, we have a poor track record. Nonetheless, it does appear to be improving. Industry has invested a large amount of time and effort into working with and educating government actors on how they should expand their use of ICT for business value.

Unwillingness to address cultural and process change has limited the impact and benefits of ICT design and innovation. To some degree this is beginning to change and austerity may force rethinking of management and services methods more suited to deliver productivity—simple, structure and responsive.

5. *What role should IT play in a “post-bureaucratic age”?*

Post-bureaucratic age requires government agencies to use data better to provide information. The inability to share information is an issue. Privacy and security needs to be balanced with usability. The UK has the highest economic use of the Internet for ecommerce of all OECD nations—without the highest access speeds or any better security. The population’s willingness to use effective ICT solutions may well be ahead of the government’s willingness to provide them. In Cabinet people avoid using shared services at all costs due to three password/login all of which needs to be a combination of letters, numbers, capitals and symbols. In the NHS, only being allowed to take two pieces of private information on house visits—a postcode, name or telephone number on scraps of paper—while hand held devices with security would resolve the issue.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

Government needs to rethink its’ approach to ICT. Should government continue to have such high reliance on outsourcers in the future? In 2004 the Transformation Government paper highlighted IT professionalism in Government as a key issue—this was heralded as an opportunity to rebalance skills into Government so that there would be less dependence on external providers. This has not happened and bringing in skilled ICT personnel may well be key to developing and managing growth in a more economical manner and provide the freedom from vendor “lock-in” which would offer savings.

7. *How well do current procurement policies and practices work?*

There is scope for improvement. OGC and BuyingSolutions need to interface better with industry and draw on trusted advice. They are now in ERG and substantial change is afoot. Change Management is an issue as policies change frequently and without consultation. There is often little or no commentary or narrative around changes and no real feedback opportunities on new requirements. It is not unusual for published timescales and given dates to be missed.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

In most instances, outsourced managed services can deliver basic services if there is an adequate contract and review process. In areas of vital national interest networks, data centres and software should be government specific.

There are major benefits in central provision and management of data. Identity management is a high-risk area in which central government action would be appropriate. Having multiple government sites with numerous sign-on is in itself counter productive, fragmented and frustrating.

9. *How will public sector IT adapt to the new “age of austerity”?*

ICT can drive costs savings in the workforce, the workplace and in the use of energy and resources. IT options are well understood. Two examples are location independent workforce (LIW) and shared services. Location independent workforces need to be provided the necessary infrastructure and support tools. Given the work of the BDUK and ultrafast broadband roll out in the UK, there is a real opportunity for government to jump to the next level of workforce management. LIW would allow large numbers of staff to be relocated across the country and provide virtual decentralization to support the localization agenda. Additionally, where needed telepresence centres could be established and shared in local government offices to facilitate the one-to-one meetings needed as part of the LIW movement.

Shared infrastructure and shared services would underpin the development of LIW. While the government is intellectually aligned to these two ideas, there remains reluctance to move quickly to converge organisations at a business level and to drive cultural and process change. Government department all are behind sharing services, but the overall approach is “you are free to share my services”.

The taking back of central procurement and the renegotiation of ICT contracts is a major step in sending out a strong message of control. Along with the £95 million cut in spending, government can set the agenda is enforcing innovation in management, design and delivery of ICT; nonetheless, £95 million as part of £16 billion will be of limited impact. The objective of more online delivery of service needs to be incentivized. This could be done through supply-side control of ICT budgets and minimal interoperability and open standards approach or this could be done through demand-side actions.

Demand-side would provide either financial incentive to complete transactions on line—a reduced cost to citizens. However, countries, which have better connectivity and higher rates of ICT literacy and home computer usage, attest to the fact that many citizens prefer one-to-one engagement between public/civil servants. This includes younger ICT trained citizens not solely the hard-to-reach or frequent users of public services. The existing physical presence trust models of “civil servant/public/ business” relations have been created over 150 years so the extension to government web-presence requires targeted actions. Additional study needs to address reticence in using interactive government services. How could this be addressed?

Firstly, ICT can be placed into the citizen/civil servant interaction. Any one-on-one meetings would revolve around the LCD screen being shared with the citizen instead of the civil servant owning their PC. The actions taken on the PC need to become a common activity. Gradually, this would move from data input by the civil servant to data input from the citizen. This prepares the citizen for remote delivery or kiosk input if assistance is needed. Gradualist actions are needed to build confidence and trust in ICT enabled government.

Secondly, the ICT enablement of public services is built upon the pre-requisite of simplified interactions; however, provision is not enough. The handing in a set of complete papers to a local authority and having this signed-off or accepted is an act of completion, which has psychological and social significance. The sense of completion of ICT delivery services is “missed” by the public. One of the immediate concerns is the autocorrecting of input on online forms. This needs to be done after each field is completed, not after a page is submitted.

10. *How well does Government take advantage of new technological developments and external expertise?*

Civil servants are often too internally focused between lead government departments and “bilaterals” when the actual advice needed is external. Government needs to strengthen its industry engagement. Events with industry are seen as risking commercial involvement or endorsement. Nevertheless, this also varies greatly between companies. Personal connections are not a basis for government/industry interaction. Central government would benefit from developing an industry engagement strategy, which is public and understood by civil servants. It would address the fragmented and unsystematic engagement to date. If advice is sought, then this would also provide the feedback loop needed to understand when advice is implemented in a selective or restricted manner.

11. *How appropriate is the Government’s existing approach to information security, information assurance and privacy?*

There is a need to balance the cost and ICT constraints associated with security provision against the genuine need of Government to exploit ICT for business gain. It is appropriate to begin a dialogue with industry in this area. The challenge of cyber security and terrorism require a united effort to ensure the UK has the optimal solution for industrial, economic and military purposes.

This has been of concern within PSN where there was a genuine industry view on the right approach for securing IL3 traffic. The industry consensus was view set aside and a government department implemented their preferred approach. The detail behind the decision (in as far as possible) needs to be feedback into the industry. Failure to provide feedback after active engagement jeopardizes goodwill and future co-operation. The decision taken, against industry opinion, may already be having adverse effects in connected areas of ICT.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

In a post-bureaucratic age, identity/ identities' management is key to enable simpler, faster services. The ending of national identity programme will have a serious impact on delivery of full interaction in ICT services.

Other countries do have a Minister for ICT that regroups many of the challenges currently dispersed between delivery organisation and Cabinet Office.

Other countries do have significant failures.

On value-for-money the UK does need to have better tendering and negotiation positions. Services procured and delivered on an ongoing basis which are significantly higher than those available outside contract should be used as leverage in a more routine manner.

January 2011

Written evidence submitted by Canon UK Ltd

INTRODUCTION

The following answers relate, primarily, to the experience of Canon (UK) Ltd. as a major supplier of print, software and associated services to the UK public sector.

Please note, answers have been limited to the questions where Canon UK is best placed to provide insight.

1. Question 4. *How well is IT used in the design, delivery and improvement of public services?*

A frequent issue is the lack of centralised ownership of horizontal processes. For example, in the procurement of print, along with associated software and support infrastructure, public sector organisations often procure products and services for one department or organisation at a time.

As the procurement of print delivers similar services regardless of organisation, there is scope for such horizontal processes to be procured on a pan-departmental or even pan-organisational level. This offers significant efficiencies in terms of cost and the procurement process itself.

2. Question 6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

A key opportunity for the Public Sector is to support a shift away from narrow industry service level agreements (SLAs) to an outcome-centric approach to add value to an organisation.

Narrowly defined, industry-standard SLAs are a common element of IT procurement. Typically, supplier performance will be measured against their pre-negotiated SLAs with little consideration for the value and impact they have on an organisation's business requirements and public service deliverables. By shifting to an organisation-centric approach, suppliers can be measured on how their service and service levels enhance the delivery of public services thereby creating a win-win situation.

3. Question 7. *How well do current procurement policies and practices work?*

There are three key areas where current procurement policies have a significant scope for adding more value: ongoing contract management, the procurement process itself and the primary objectives of public sector procurement.

Successful contract management enables an organisation to ensure best-value from a supplier and ensure that the ongoing and evolving needs of the organisation are adequately supported. Whilst the public sector is often highly pro-active during the procurement process, frequently this approach does not continue to the "business as usual" phase once a contract has been signed. By ensuring there is constant and ongoing management of all contracts additional efficiencies will be gained by ensuring suppliers are aware of an organisation's business requirements, are held to account when and if under-performing and are able to plan and develop services as the organisation's needs evolve.

Secondly, the procurement process itself provides great scope for improvement. Whilst there are certain legal requirements that need to be fulfilled in public sector procurement, organisations often engage in a long, costly and onerous process without "commercially interrogating" EU legislation to understand how perceived barriers can be overcome to eliminate cost.

The primary objective of procurement projects is the third area that needs to be addressed. The public sector typically procures on price, and is often highly effective at ensuring significant discount levels for contractual business. Whilst this reduces spend on certain commodity items, it does not support maximising operational efficiencies. A value-centric approach that focuses on the key service deliverables of an organisation would open up supplier negotiations to generate innovation in procurement.

By linking the value added to operations through IT systems and stipulating deliverables such as reducing the time taken to access data or days taken to process invoices, organisations would have the opportunity to unlock significant value in supplier negotiations and thereby enhance service delivery.

4. Question 8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

Whilst the public sector is often able to effectively negotiate best-pricing for certain commodity products through framework agreements, there is still significant overlap in commodity procurement.

By enabling defined pricing and procurement channels for commodity products with pre-defined specifications, substantial cost and process efficiencies could be made. Organisations would no longer need to invest in costly procurement processes for commodity items if access to a simple preferred supplier catalogue were created. Commodity items with a defined specification could be purchased directly by the department needing them, freeing up time of procurement professional to invest in more complicated projects.

5. Question 9. *How will public sector IT adapt to the new “age of austerity”*

Process mapping will support a great deal of the shift IT will undergo in the age of austerity. Understanding of information flows and the requirements of organisations will be key to their cost effective development.

This approach will lend itself to the development of greater IT flexibility to support a more mobile and agile workforce. For example IT will need to adapt to support mobile users with seamless technology access including back office systems and printing. IT will also need to be agile enough to effectively cope with the ebbs and flow of organisations’ workflows and workforces. A good example of this is the proposed closure of schools in Scotland due to demographic changes. (www.scotland.gov.uk/topics/education/schools/buildings/guidance) Further demographic changes can also be expected as a result of the baby boom experienced in the credit crunch, both are examples of where public sector IT will need to adapt its deliverables within a few years.

6. Question 10. *How well does Government take advantage of new technological developments and external expertise?*

As a major supplier to the UK public sector, Canon UK has seen an encouraging uptake of new technology and services to support greater efficiencies. Whilst this is not the case across the board, there are many examples of best practice such as Fife Council, Hertfordshire County Council and South Tyneside NHS Foundation Trust to name a few.

The main difference to the private sector is that of agility. Typically, private sector organisations are able to implement new technology at a much faster pace.

7. Question 11. *How appropriate is the Government’s existing approach to information security, information assurance and privacy?*

There is a need for a greater level of consistency in IA policies. A good example of this is Hard Disk Drive (HDD) policies. Organisations often have detailed and robust policies for HDD management, storage and disposal at end of life, however, these policies are rarely implemented across the board.

PCs and laptops are generally subject to strict IA procedures as are IT networks. An area that is often overlooked is that of HDDs embedded within multifunctional printing and copying devices. These modern MFDs effectively have similar capabilities to PCs and can store significant amounts of data. There are, however, rarely subject to the same IA policies of PCs.

By extending the IA policies of PCs and laptops to MFDs and including data encryption, overwrite and HDD removal options where appropriate, a considerable hole in current IA would be plugged.

January 2011

Written evidence submitted by The Institution of Engineering and Technology/The Royal Academy of Engineering

How well is technology policy co-ordinated across Government?

There are inter-departmental links in some areas, and in some cases, e.g. security, there are clear government-level leads. There are also specific initiatives to try to coordinate activities, eg a GCHQ hosted workshop on software development in government which attracted people from many government departments and agencies, including MoD and Ordnance Survey, and there is coordination of spectrum allocation. So far as we can see, however, such coordination is inconsistent across Government.

Co-ordination of technology policy has been the responsibility of the Departmental Chief Information Officers, working together on the inter-departmental CIO Council, which was chaired by Government CIO

John Suffolk until his recent retirement from the post. We recommend that the Committee asks John Suffolk to give oral evidence on his experiences.

As of 1 February 2011 Joe Harley CBE has been appointed Chief Information Officer for the UK Government. Two key policy documents relating to Government IT strategy, “Transformational Government enabled by IT” (2005) and UK Government ICT Strategy (2009) appear to have been removed from the Cabinet Office website.

The policies developed by the CIO Council included common architectures for Departmental IT, and the G-Cloud. The rate of progress towards implementing these policies appears to be slow.

We are concerned that the departure of John Suffolk may mean that even the limited co-ordination provided by the CIO Council may decline or disappear entirely. This would be unfortunate, as the CIOs play an important role.

In addition to reinstating the CIO Council, there should be a computer scientist in the CIO community to advise on developments in the research pipeline with the potential to impact government IT systems beyond the horizon of current deployments. This will help to future-proof investments and to prepare Government for disruptive technologies ahead of time. This would be a similar role to Departmental Chief Scientific Advisers.

How effective are its governance arrangements?

The governance of Government procurement of IT appears somewhat weak. It relies on the existence of Senior Responsible Owners (SRO) and on the Gateway process of the Office of Government Commerce. However, this system is vulnerable because the SRO is likely to change at least once during any significant project and project overruns or failures can be attributed to suppliers, consultants, internal advisors or previous SROs.

The Gateway process would be more stringent if it were mandatory, were a truly independent process, and the reports of the process were published. The National Programme for IT in the NHS (NPfIT) adopted a modified Gateway process but external reviews were not carried out, despite advice that they would be useful.

However, the issue of governance is understood by Government and there are organisational structures in place to support it; the challenge is to make them effective across a very large and disparate organisation. It should be acknowledged that this is a significant challenge, having to span in-house IT and operational systems, some of them geographically dispersed. There are policies and procedures for basic compatibility, such as “network joining rules” for new equipment/systems, but much more limited capability at seeing the “joined up” or end-to-end IT picture, for example, how is benefit delivered from services which are built up by linking these systems. There tend to be initiatives in stove-piped areas, for example, there is work in one Government Department on safety of logistics IT systems, but this approach is being developed independently of other work on networked systems safety.

Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?

There appears to have been incremental improvement but no solution to the two major issues described under “How well do current procurement policies and practices work?” below.

In some Departments the lessons have been understood, although it is quite possible that similar problems will arise again. It appears that Departments respond to NAO reviews initially but without correcting systemic faults; a characteristic is for there to be occasional emphasis on particular programmes without a consistent overview and scrutiny of sufficient technical depth. Office of Government Commerce (OGC) processes are used and these seem to be quite effective for some of the systems procured; however they do not seem to be robust or searching enough for the more complex technical systems, and pressures of Government policies and timescales are too often allowed to override professional engineering judgement. NPfIT and the ID Card programme are recent examples.

How well is IT used in the design, delivery and improvement of public services?

IT seems to be considered late in the process of developing and implementing policy. Policy initiatives are developed, and timescales for delivery announced, without detailed consideration of the IT implications. The DECC/Ofgem Smart Metering programme is one recent example, where ambitious timescales have been set which do not leave sufficient time to develop systems that could deliver the policy goals effectively whilst taking into account system security and privacy issues.

The IET and the Academy have made the point in a number of forums that new public services are fundamentally *business change projects*, not purely IT projects, and that the cost and time required for the business changes will normally exceed the costs and time required to develop new IT systems. However, the Treasury Green Book does not require that these costs are properly analysed, and as a result they are often neglected or underestimated.

The use of IT and modern communications could be transformative, but this requires the development of strategic objectives and system architectures that transcend Departmental boundaries and budgets, even if the

resulting services and systems are subsequently implemented in small steps following thorough prototyping and field trials.

We would like to stress the importance of small-scale trials and incremental roll-out of systems of the scale required by Government. It is clearly impossible to get a multi-million or -billion pound project completely right first time. A programme of ever more realistic prototypes and trials is essential. Incremental roll-out of Government projects may create elements of “post-code lottery” in the provision of services; this should be addressed at a policy level as well as an engineering level.

For such an approach to be effective, however, it is essential to ensure that lessons learned from trials are applied to the subsequent development. The aim of the trial should be to identify problems with the system, so that it can be improved. Unfortunately, a combination of human nature and commercial incentives sometimes discourages this.

What role should IT play in a “post-bureaucratic age”?

IT offers the opportunity both to be more effective and more efficient, and there are many opportunities to improve Government systems. It is important that the benefits of using IT systems are fully explored by considering the opportunities and risks posed by the development of new IT systems early in the processes of policy development and implementation.

What skills does Government have and what are those it must develop in order to acquire IT capability?

The level of skill varies enormously across Government. In some areas there are still software development skills, but in most places IT systems and software are bought in. The skills required are therefore those necessary to enable civil servants to be intelligent customers and operators of systems, viz:

- (i) Requirements definition (and managing requirements creep);
- (ii) System and system-of-systems architecture (MoD, for example, retains overall responsibility for the integration and inter-operation of systems, although they buy-in individual systems);
- (iii) Systems integration;
- (iv) Cyber security including risk assessment;
- (v) Safety (some systems are safety-related or safety-critical, or have the potential to be so. An example is the Smart Grid being developed under DECC responsibility);
- (vi) Programme management;
- (vii) Programme/project risk management and trade-offs (often systems are challenging, and not all requirements can be met to time and budget, so trade-offs need to be made); and
- (viii) Knowledge of commercial technology—some specifications make it hard to get benefits from commercial developments (and may preclude their use).

How well do current procurement policies and practices work?

There are successful programmes in many Departments, but cost and time overruns are quite common, and some serious problems, such as delaying major systems into service, have occurred. This remains a high risk to the implementation of Departmental policy and its ability to operate effectively.

There are two major faults that often hamper Government procurements of IT services. The first is that Departmental policies and timescales are often announced without detailed analysis of the practicality of introducing new technology by the dates required. The second is that there is always a risk that civil servants responsible for IT procurement will underestimate the timescales and true costs involved in implementing the IT systems required by a policy initiative, due to a variety of reasons or pressures.

The Academy and the IET proposed a solution to the second fault through the use of a two-stage procurement process in which the first stage would involve the use of a systems architect that would thoroughly explore the requirements and develop a comprehensive and consistent procurement specification. Discussion of this proposal can be found in our report *The Challenges of Complex IT Projects* at this location: http://www.raeng.org.uk/news/publications/list/reports/Complex_IT_Projects.pdf.

What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?

There is no general answer to this question, which is perhaps best addressed from the point of view of design knowledge, more than infrastructure. More specifically, in each Department and across Government and the public sector, what aspects of the system architecture (and implementation) does the Government need to understand and control to deliver its policies?

Key to this is the system architecture in terms of data definition and provenance; security mechanisms; archiving and data storage; resilience mechanisms and so on. With an architectural perspective, it should become clear what elements of the system are critical to its success, and which do need control.

The US Department of Defence has a scheme whereby they identify critical components for which they need complete visibility and control of provenance (where developed, by whom, where manufactured, etc.) because compromises to these components could undermine the whole system. The UK government, or CPNI, may benefit from a similar process so it can identify those critical parts of their systems which require a greater level of control and management.

How will public sector IT adapt to the new “age of austerity”?

It may adapt badly. There is a risk that managers will make expedient decisions, cutting immediate costs, which store up significant and expensive problems further down the line.

One way to reduce expenditure would be by adopting more off the shelf solutions (ie software products) and reducing expenditure on bespoke systems and customization (ie software [consultancy] services). The positive outcomes of this would be that maintenance of systems built using off the shelf solutions is often provided by the supplier as an upgrade service to maintain the presence of the product in the market, and bugs get fixed as part of product improvement, helping reduce life time costs. Products also tend to migrate faster to new hardware platforms than bespoke systems, allowing cost reductions and additional capabilities from newer technologies to be exploited sooner. To be balanced against these advantages, products are rarely exact “solutions” to the business requirement and will usually require changes to business processes to those that the product supports. This is not always possible in public sector IT as the public sector has some unique requirements, though perhaps not as many as is sometimes thought.

Another effect of the reduction in budgets may be greater use of Open Source software, such as OpenOffice and Linux. This approach has the potential for significant savings but will require careful implementation planning and represents a cultural shift in the computing environment.

The new austerity may well accelerate the adoption of cloud computing by the public sector to reduce the capital costs of deploying a new system through not having to invest in building data centre capacity, and to gain the ability to scale up and down based on demand and budget. But for the public sector to export mission critical systems to the cloud, there are many challenges to be overcome: for example, finding cloud vendors who will support appropriate service level agreements, including dependability, and resolving data sovereignty issues when public sector data and applications are hosted offshore. Government needs to engage with the industry to develop policy in this area, so that the “G-Cloud” can become a cost-effective reality.

It is essential that decisions are based on a through-life perspective, and Government departments should be prepared to cut back on their ambition and only do what they have the resources to do well. If they do not, then we are likely to see more project overruns or cancellations at very high cost to the taxpayer.

How well does Government take advantage of new technological developments and external expertise?

In our experience, this varies widely. A risk here is that Government is too dependent on external expertise, and lacks personnel with the skills to make the necessary informed decisions. Until it does change, there is a continuing risk of policy and strategic decisions being made that prove difficult and expensive to implement.

How appropriate is the Government’s existing approach to information security, information assurance and privacy?

This is a very complex area. The recent establishment of some national initiatives in cyber security is welcome and in this area we suspect the UK is ahead of most countries, other than the USA (with whom the UK collaborates fairly closely). Whilst there is much to be done—and combating cyber threats is an ongoing activity, not a project with a set end-date—the UK is on a good track in this area. The new initiatives, such as the Cyber Security Operations Centre, need to be given continued support as their mission will remain important.

Work is also needed to build a more integrated community in the UK, drawing on expertise in universities and industry as well as in Government. Some work is underway in this area, and it needs to be given time to come to fruition. The UK’s approach to information assurance is well-founded and pragmatic, and the work done by the Government Communications-Electronics Security Group (CESG) is sound and sensible. However more needs to be done to raise the awareness of the issues in the supply base, and setting up some equivalent to the US DHS’ “Build Security In” programme to engage UK industry in improving the standards of (secure) software development would be welcome.

A Secure Software Development Partnership has been established (with Technology Strategy Board support) and has developed a work programme, but this will need seed corn funding to make significant progress.

The UK approach to privacy is a major concern, as the UK Data Protection Act does not fully implement the European Directive, and the Information Commissioner’s Office lacks adequate technical expertise. This puts programmes such as the Smart Meters Rollout at serious and unnecessary risk.

How well does the UK compare to other countries with regard to government procurement and application of IT systems?

It is very difficult to make international comparisons, though there are examples of good practice overseas that the UK should consider adopting, such as the secondment of very senior technical experts into positions with real executive power.

February 2011

Written evidence submitted by NLAARP

PREFACE

This paper presents the response from the National Local Authority WARP to the Public Administration Select Committee's inquiry into the Effective use of ICT by Government.

The NLAARP is an umbrella project for Local Authority Warning, advice and Reporting points. It represents approximately 100 Local Authorities and other public sector organisations which share knowledge, expertise and experience on both the technical and also policy sides of Information Assurance.

The NLAARP promotes the CPNI (Centre for the Protection of National Infrastructure) WARP concept, which aims to provide three core services to members: Advice brokering, Trusted sharing of incidents, and the ability to receive updates on developments, threats and vulnerabilities in the area of Information Assurance. Additionally, NLAARP members are regularly updated on the policies and guidance coming from Central Government.

The NLAARP works closely with Socitm and the Local Government Association to both deliver effective guidance based on industry best practice, but also to lobby central government policy makers on behalf of our members.

1. How well is technology policy co-ordinated across Government?

1.1 There is very little co-ordination on technology policy across Government. Security Policies and frameworks which Local Authorities must work towards are often written for Government Departments and bare little consideration for the wider public sector.

2. How effective are its governance arrangements?

2.1 Local Authorities have little if any input to the Governance of Information Security. The importance of good information governance has become increasingly apparent, however, many areas of the business still don't understand this and in the current austere climate, securing funding for Information Security is far more difficult than ever before, despite the increasing cyber security threat.

2.2 While the Security Policy Framework (SPF) mandates the appointment of a Senior Information Risk Owner (SIRO), the SPF itself cannot be mandated on Local Government as each Local Authority is a sovereign democratic entity. This can create issues as policy writers often assume that Local Authorities are working the SPF and this then creates a further disparity between policies written by Central Government that are not fit for purpose in a Local Authority.

2.3 The Local CIO council has created an avenue into Central Government, but there is a feeling that the wider public sector is still consulted too late in the policy making process.

3. Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?

3.1 OGC focuses on central government, so their work apart from PRINCE, MSP and other standards they have developed have been of little use. The OGC approach towards large frameworks also precludes small companies from bidding for government work, to the point where smaller companies are sub-contracted in by larger ones, to deliver work, simply because the smaller companies could not bid themselves. This wastes huge amounts of money.

4. How well is IT used in the design, delivery and improvement of public services?

4.1 In these austere times, cost reduction is almost the only driver for change that has remained. IT is seen as a key cost reduction mechanism: delivering services digitally is far cheaper than other, more traditional delivery mechanisms, but strong Information Governance is required to enable these services. As citizens increasingly carry out transactions over the Internet and services are shared both in and between organisations, maintaining control over data becomes more complex. Even though the majority of citizen services are delivered at the local level, Local Authorities have not seen a single penny of the £500 million spent on cyber security.

5. *What role should IT play in a “post-bureaucratic age”?*

5.1 IT and data should become commoditised and be used to facilitate and drive business operations. Aggregating separate datasets will allow the business to far more effectively utilise the data it already holds, but there are privacy implications associated with this that need to be taken into account.

5.2 The key message is that IT must be aligned to the businesses goals and requirements of each individual organisation.

6. *What skills does Government have and what are those it must develop in order to acquire IT capability?*

6.1 There have always been a number of facets to the ICT world, the one often ignored, is procurement, only through smarter procurement can we ensure the right solutions at the right price.

6.2 We need standards, world class ones, which will ensure full integration and inter-operability. We need excellence in enterprise and security architecture. We need our own capability to develop the services and systems that government needs for the future. Good governance, programme management and audit.

7. *How well do current procurement policies and practices work?*

7.1 There is much room for improvement on the procurement front. Much of the inefficiency is due to the EU procurement regulations. These often bind government into bureaucratic contracts, which do not deliver best value and can even become systems in their own right. We need an appropriate regime for our government.

8. *What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?*

8.1 Government must maintain its own strategy, policy, standards and security capabilities. We need our own network and authentication mechanism. Aspects of this will be outsourced, but we must maintain our own capability to ensure that we have the security, resilience and capabilities necessary to deliver government systems.

9. *How will public sector IT adapt to the new “age of austerity”?*

9.1 Government needs to carefully consider the overheads of procurement, the procurement exercise should itself be a measured percentage of the overall contract price. The government needs to understand the assets it already owns and ensure that the maximum use of these assets is being made. Where new initiatives are planned, fully implement the gateway review process and ensure that best value is being realised. Check before buying new, that there isn't already something similar, no longer required elsewhere, but still contracted to be paid for, that cannot be re-purposed.

10. *How well does Government take advantage of new technological developments and external expertise?*

10.1 Government does work with industry; there are many forums and a whole micro-industry around this. However, it is very difficult for smaller SMEs to engage. There is a vast amount of knowledge and expertise in the civil service, it doesn't always get used to its best advantage.

10.2 Money should be invested in developing communities of practice. Collaboration and knowledge sharing is critical for the retention of knowledge, skills and experience moving forward.

11. *How appropriate is the Government's existing approach to information security, information assurance and privacy?*

11.1 Government does work with industry, there are many forums and a whole micro-industry around this. However, it is very difficult for smaller SMEs to engage. There is a vast amount of knowledge and expertise in the civil service, it doesn't always get used to its best advantage.

11.2 Money should be invested in developing communities of practice. Collaboration and knowledge sharing is critical for the retention of knowledge, skills and experience moving forward.

12. *How well does the UK compare to other countries with regard to government procurement and application of IT systems?*

12.1 Government has over a long time, got the security and information assurance and resilience basically right, although it is not very well co-ordinated. Resilience especially is not being properly invested in. The new cyber approach is wholly focused on the central government and defence, ignoring the wider public sector. A holistic approach needs a holistic solution. As more services get devolved and delivered locally, the threat surface will change and the capability and focus to respond to new threats, needs to change with it.

Additional written evidence submitted by David Chassels

One comment, I think it came from Sir Ian, when he stated “It’s not the underlying technology that’s the problem”. Actually it is. IT covers all aspects from hardware, delivery security and the application. It is the latter which remains in the relative dark ages. The others have evolved to be highly competitive and thus mature set of products that have reached commodity stages so it is relatively easy for the buyer to get “good deals”. Yes there will be management and organisational skills to ensure a good deployment but the technology will be well proven and do the job.

We all know it is the application that adds value to both users and sellers but it is where most problems lie. If you think about it business logic never changes so why are we still custom coding in the geek language that creates interpretation gaps? “Agile” is an industry mind set/methodology that attempts to bring end users closer to the technical developer. The trouble is this developer environment is hugely complex as I described in my submission and the underlying technology is now dominated by a handful of global players who have no interest in the required step change that would remove such complexity—and in the process crater their business! That step change is what our founder set out to create and what we have now does just that. You will see in my letter to Sir Ian (NOT PUBLISHED) the quote from Bill Gates and this indeed will change software development; we know—we have it! The good news we are no longer alone which helps credibility.

Trouble is in Government those in charge are not asking this small group of suppliers the right questions as indicated in my submission on how to become the “informed buyer”—asking the right questions is a skill we had to learn quickly in our earlier days!

On open source needs to be carefully thought through—it may not be the cheapest way—we actually use open source but to allow “geeks” (it’s a term used in “hack days” that was mentioned) to build from scratch business applications could end up very expensive. They are a breed apart—many verging on genius—we have one they are difficult to manage and all do it slightly differently so could be a difficult job to manage such applications in the future. But using open source plug and play modules like browsers operating systems etc is definitely the right thing. What users need to avoid is the “lock in” that all these big vendors and their ecosystems “love”. Related to this there are two important aspects that need to be clarified first the “upgrade” policy which can be expensive perhaps more importantly you must make sure that future change is readily supported to make any new investment “future proof”.

I believe the skunk works will be important in many respects. For us with “disruptive” but proven innovation a chance to be adopted by government to aid commercial exploitation and that includes selling globally. But also a point came up at the hearing re policy v implementation. I would suggest that before policy is finalised the skunk works could have an important role where using our technology working prototypes can be quickly created that seek out the real problems or even opportunities not thought of. It will also allow informed views of likely cost of the final system—no more “blue sky” thinking without solid foundations? The return from the proposed skunk works could be quite significant.

March 2011

Additional written evidence submitted by Open Source Consortium

SUMMARY

The recent Institute for Government report “System + Error” calls for agile government IT. This latest emerging thinking still refers to moving forward, doing something. Essentially, it the same paradigm of public sector provision presented in a new way.

It is a spoiler for choice based customer/client focused services. Agile IT will move in more than one direction. It need not be an excuse to do something, it is also an opportunity to stop and/or recede.

The policy basis for doing things differently was established in 2003.

Essentially this policy provides a framework to enable existing customer channels to include public sector products as a choice based alternative to creating new outlets for public sector customer channels.

DETAIL

Events that have occurred since the original call for evidence the Open Source Consortium asks that further evidence be taken into consideration.

- On 22 February and 1 March 2011 the British Computer Society (BCS) Open Source Software Group¹⁰² held two open meetings to discuss how to progress the “Adoption of Open Source across HM Government”
<http://www.guardian.co.uk/society/2011/feb/21/david-cameron-public-services>
- On 2 March 2011 the Institute for Government (IfG) published System+Error, a study setting out “the case for a new approach to IT in the public sector”.

¹⁰² <http://oss.bcs.org/>

The audio recordings of the BCS events are available online however we learnt that:

- all software and systems inside the government estate has to be certified by CESG;¹⁰³
- CESG is a bottleneck; and
- it's an expensive process and OSS projects or small suppliers will find it impossible or close to impossible to finance such certification.

This information skews any discussion of how IT contracts could be smaller or directed towards SMEs back toward the usual arrangements and this then skews any discussion of the degree of agility possible with Government IT unless a different approach is adopted.

Reducing the size of the IT estate is one way of reducing the bottleneck.

IFG REPORT

This links very closely to the IfG report which is simply a call to action predicating that a new approach by the same organisations that got into the current circumstances will get themselves out of it.

And the thinking that hasn't changed is the **difficulty of doing nothing**. The report is a **call to action** and it could better have been an opportunity to think laterally and focus on removing a few barriers, the real obstacles to innovation.

In "**making the case for change**" the report begins by highlighting online vehicle road tax as an example of successful IT. Unfortunately, on the day the report was published the DVLA system was down for essential maintenance.¹⁰⁴ More importantly, when working, the final stage in the process is to check for a valid insurance on the motor insurer's database¹⁰⁵ and there's a clue.

As long as Government IT isn't sufficiently agile to cope with the idea that motor insurance companies do everything else (identity, address, money, V5, insurance, provide MOT services) so just give them a stack of tax discs and tell them to get on with it, then we are stuck in the same paradigm.

The system supplier published a case study¹⁰⁶ among other things describing:

- the number of awards the project got; and
- that it took **12 months to build**.

It would also be necessary to add **18 months for procurement**¹⁰⁷ and however long it took to develop the business case and project specification documents.

Given the legal requirement for obtaining a tax disc and the inconvenience associated with alternative public sector customer channels is it not a surprise that it has such high take-up figures but that does not mean it is a success.

If people are obtaining tax discs on line, they have entered all their details once already¹⁰⁸ into their online insurance service and one click could have added a tax disc.

Water utilities¹⁰⁹ are prepared to enable billing and payment to be embedded in online banking, it is not difficult to envisage tax, benefits or other public services being similarly embedded, with similar advantages for reduced data entry. As online banking becomes ever richer, including for example, free money planning and management utilities, it could include tax calculators and so forth, with government building nothing or little.

This is in contrast of the desire to build government information and payment channels that require legislation to get them to be used.

THE DO NOTHING OPTION IN AN OPTIONS APPRAISAL IS A HURDLE TO BE JUMPED

The idea of building in a role for Government IT rather than building out the need for a role pervades the IfG report (launched it seems with considerable engagement from Government CIOs with at least one speaking at the launch event).

The concept of doing nothing, the first stage in any options appraisal¹¹⁰ is noticeable by its absence.

¹⁰³ <http://www.cesg.gov.uk> the information assurance arm of GCHQ

¹⁰⁴ See appended image

¹⁰⁵ <http://www.mib.org.uk/Home/en/default.htm>

¹⁰⁶ www-304.ibm.com/easyaccess/fileservlet?contentid=120420

¹⁰⁷ A well known figure cited as 77 weeks at the evidence session on 8 March 2011

¹⁰⁸ Entering the same data more than once was highlighted as a problem in the evidence session on 8 March 2011

¹⁰⁹ For example, Thames Water and LloydsTSB

¹¹⁰ http://www.hm-treasury.gov.uk/data_greenbook_index.htm

A CASE STUDY BASED ON PUBLICLY AVAILABLE INFORMATION

PayPoint was born from the insight by utility companies that maintaining a high street presence (the “showroom”) was an expensive way of enabling customers to pay their bills over the counter. Instead the now well known facility of an electronic terminal in local convenience stores was established producing a service that was so cost effective for the utility companies that it was free at the point of delivery for the consumer.¹¹¹

In November 2008 after how long or at what cost the tendering exercise for the Post Office Card Account was terminated.¹¹² The quote by PayPoint was stoic “we are disappointed by the decision”.

And while in March 2011 PayPoint was ultimately successful¹¹³ in embedding central government in its highly successful business model against a background of special pleading for the status quo it was doing so against a parallel attempt by a state funded enterprise to undermine its business model¹¹⁴ which was essentially stopped only by fiat.¹¹⁵

THE POLICY FOR MULTI-DIMENSIONAL AGILITY WAS ESTABLISHED IN 2003

The policy is still available to read from an EU website¹¹⁶ and enables existing customer channels to compete with or replace government channels. The archived Cabinet Office web page¹¹⁷ reads:

Delivering choice and a better experience is a huge challenge and there is no reason to assume that government acting alone will have the best approach. Our strategy, therefore, is:

to create a mixed economy in the supply of e-government services.

We aim to create a marketplace where government and organisations from the private and voluntary sectors can come together to deliver e-government services that better meet the demands of our customers.

There are benefits for all:

FOR CITIZENS

- It’s easier to deal with government.
- There are time and effort savings.

FOR INTERMEDIARIES

- It can deliver added value.
- It can help strengthen relationships with clients.

FOR GOVERNMENT

- It improves the delivery of services.
- And allows better resource management.

Page 14 of the consultation document contains the following example:

A motorist services company might want to add Vehicle Excise Duty (car tax) to their portfolio. Their offer becomes more of a “one-stop-shop” and is likely to increase customer loyalty, or attract new customers to the service.

March 2011

Written evidence submitted by Olswang LLP

SMARTER PUBLIC PROCUREMENT IN THE UK

1. In his speech to the Tory conference in early March 2011, David Cameron directed his ire at government bureaucrats and public sector procurement managers saying:

“...we are taking on the enemies of enterprise. The bureaucrats in government departments who concoct those ridiculous rules and regulations that make life impossible, particularly for small firms. ... The public sector procurement managers who think that the answer to everything is a big contract with a big business and who shut out millions of Britain’s small and medium sized companies from a massive potential market.”

2. It is not unusual for politicians to attack the public procurement regime in the UK. However, it is very important to be particular in terms of what should be criticised. Is it (i) the regulatory regime, namely the Public Contracts Regulations 2006 as amended (the “Regulations”), the majority of which simply brings into

¹¹¹ in contrast to online tax discs which adds £2.50 on top due to a particular interpretation of government accounting rules

¹¹² http://news.bbc.co.uk/1/hi/uk_politics/7726435.stm

¹¹³ <http://www.thegrocer.co.uk/articles.aspx?page=independentarticle&ID=216331>

¹¹⁴ <http://www.thegrocer.co.uk/articles.aspx?page=articles&ID=211510>

¹¹⁵ <http://www.bbc.co.uk/news/business-10658334>

¹¹⁶ <http://www.epractice.eu/en/library/281283>

¹¹⁷ [http://webarchive.nationalarchives.gov.uk/20100807034701/http://archive.cabinetoffice.gov.uk/e-envoy/about-epolicy-intermediaries/\\$file/interm-index.htm](http://webarchive.nationalarchives.gov.uk/20100807034701/http://archive.cabinetoffice.gov.uk/e-envoy/about-epolicy-intermediaries/$file/interm-index.htm)

domestic law the UK's obligations under the EU public procurement Directive (2004/18/EC) or is it (ii) the manner in which that regime is interpreted by UK policy makers—at central and local level?

3. Having worked in the area of public procurement law for over a decade, we are firmly of the view 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.

4. Whilst there are moves afoot at European level—namely the European Commission's ongoing consultation on its Green Paper on the modernisation of EU public procurement policy, "*Towards a more efficient European Procurement Market*" (dated 27 January 2011)—this will take some years and will face difficulties due to the need to align the different demands and current practices of the 27 EU Member States. So, what can be done now in order for UK public authorities to procure, particularly IT, in a smarter fashion?

5. We would propose that serious consideration is given on a more frequent basis to the use of two procurement routes. Namely,

- (a) the use of the negotiated procedure (regulations 13,14 and 17 of the Regulations); and
- (b) the use of multi-party framework agreements (regulation 19 of the Regulations).

6. **Negotiated procedure:** It is important to remember that there are two versions of the negotiated procedure—with or without a contract advert in the Official Journal of the EU ("OJEU"). Clearly, in relation to the version without an advert, which is pure direct tendering, there are limited circumstances where the procedure can be used as this is a radical departure from the main aim of public procurement law—to open up public contracts to cross-border competition. However, the key point which should be borne in mind is that both versions of the procedure are on the face of the legislation, permissible and should be used where appropriate.

7. The reality is that, for policy as opposed to legislative reasons, UK public authorities very rarely consider the applicability of the negotiated procedure. This is a real shame and is an area where we are out of step with other EU Member States such as Germany. We would advocate a more robust, confident approach to the interpretation of these provisions to cut UK procurement red tape.

8. Since the UK introduced the Regulations the official OGC policy steer has been that the "new" Competitive Dialogue procedure should be used for complex contracts (eg PPPs) as opposed to the negotiated procedure (which, prior to 2006, had been used for complicated procurements such as PFIs). In the new order, the negotiated procedure is to be reserved for "exceptional circumstances" such as the London Underground PPP deal—ie on very few occasions (see paragraph 2 of the OGC Guidance on the *Competitive Dialogue Procedure* dated January 2006).

9. However, in Germany for instance, such a rigid interpretation of the EU public procurement Directive has not been taken. There, seemingly concerned about the new and untested nature of the Competitive Dialogue procedure, the negotiated procedure continues to be used for complicated procurements and it appears from the list of infraction cases against Member States that the European Commission is not overly concerned about the legality of this approach.

10. Obviously, the negotiated procedure without an advert is a very easy procedure to use, with minimal red tape, but even the version with an OJEU advert has significant advantages over the other three procurement procedures (ie Competitive Dialogue, Restricted and Open). The only mandatory time scale with this procedure is the minimum 37 days—normally reduced to 30 days as authorities send their OJEU adverts to Luxembourg electronically—which must be allowed between the publication of the OJEU advert and the deadline for receipt of requests to be selected to negotiate (this deadline does not apply to the use of the negotiated procedure without an advert). Provided that the process which is then adopted is run in a fair and proper manner—and respecting the EU Treaty principles as far as possible in the circumstances is a good way of achieving that—there should be limited procedural complexity.

11. Thus, we would advocate that public authorities should not be fearful of legitimately using the negotiated procedure and should routinely give some thought to whether an individual procurement fits within one of the justifications for using either version of the negotiated procedure. As ever, support from central government in this regard would be welcomed by the myriad of smaller, regulated public procurers.

12. If this is not done, the risk is that UK public authorities will be needlessly held back compared to their Continental neighbours, whose current practices may well have been picked up by Professor Mario Monti—no less than a former European Commissioner in the Directorate-General which handles EU public procurement law—who in his May 2010 report on the single market to the European Commission posed the question of whether the negotiated procedure with an OJEU advert should become the *standard procedure* for the public procurement regime.

13. **Framework agreements:** Since their introduction into UK legislation in 2006 there has been a massive uptake of this very convenient procurement mechanism for making repeat purchases over a period of time—up to four years (longer in exceptional circumstances). Whilst these structures have faced criticism, largely on the basis that they exclude SMEs from participating (at least at the prime contractor level), they can be a means

of innovative, smart procurement provided that the general tenets of the EU Treaty—notably transparency—are respected.

14. The framework provisions require that there is an open, competitive procurement for the appointment of framework places, which can go to a number of providers. The overarching framework agreement needs to be broad enough to cover all of the potential phases of the particular programme which is to be undertaken—for example an IT programme of work—so that the market players can make a sensible decision as to whether they want to bid for a place or not. Thereafter, each time a particular work stream arises, the public authority can select one of the framework providers to undertake the work without the need for another full public procurement process commencing with an OJEU advert. Ideally, in order to ensure that the agreement is as pro-competitive as possible, the authority would run a mini-competition between the framework providers for the award of a particular tranche of work and may well insist upon certain key sub-contracts being openly competed by the successful provider in order to open up opportunities for smaller firms.

15. Provided that sufficient procurement planning takes place and there is sufficient transparency so that the market knows what is to happen over the years, multi-party framework agreements can be used in an innovative and flexible manner to ensure that evolving, medium-term requirements—such as IT infrastructure—can be delivered over time by different providers. Instead of offering a single provider a very long term contract for services, which may not deliver optimal flexibility and value for money over the life of the contract, a more agile procurement process can be devised using the framework agreement model.

16. Such a model would require sensible, commercial thinking on behalf of both public authorities and market providers alike. Gone would be the days of large, long-term deals so advantageous to the companies which win—which frequently, through scope creep, end up morphing into even larger beasts which lock-out the SMEs referred to by David Cameron. A public authority would not have the crutch of one service provider to satisfy its every need but would have the opportunity to operate in a more fluid manner, testing the market to obtain the optimal offering for each increment of work. Whilst issues such as ownership of IPR would need to be addressed (ie it should remain with the public sector), the framework agreement model would have the benefit of harnessing the skills of a relatively broad range of service providers with minimal procurement administration.

March 2011

Written evidence submitted by IBM

1. EXECUTIVE SUMMARY

1.1 IBM welcomes the opportunity to submit this discussion paper to the Public Administration Select Committee (PASC), to be taken into consideration as part of the report “Good Governance: the effective use of IT”. There are a great many excellent examples of good practice in IT in Government, many of which IBM and our business partners, including UK based small to medium enterprises (SMEs), are delighted to be involved in. Our experience of these successes informs our views on how Government, and the IT supply industry, could improve the use of IT in future.

1.2 In this document we highlight some of the main inhibitors to the effective use of IT in Government and we make proposals as to how the current situation might be improved. The areas identified are:

- Project initiation.
- Contracting approach.
- Appropriate methodology.
- Collaboration and reuse.
- Benefits realisation.

1.3 For improvements to the current situation to be made, conditions need to exist that provide the necessary motivation for those impacted to undergo the discomfort of change. We believe that the current economic circumstances may create greater motivation to change than has been seen to date. We hope that the PASC’s report will be influential in helping Government seize this opportunity.

2. IBM BACKGROUND

2.1 IBM is a globally integrated technology company which operates in over 170 countries. Founded in 1911, we celebrate our centenary this year. In addition to being the world’s largest IT and consulting services company, we are a global business and technology leader, innovating in research and development to shape the global future technology, business and broader landscape across society. In 2010, IBM filed nearly 6,000 patents in the US, leading the list of patent winners for the eighteenth consecutive year. We bring our researchers, technologists and business consultants from around the world to partner with governments, corporations, thinkers and implementers to solve real world problems, to help make the world work better and to build a “smarter planet”.

2.2 In the United Kingdom we have over 20,000 employees, bringing innovative solutions to a diverse client base to help solve their most challenging business problems. We work in partnership with the UK Public sector, at a national and local level, to help respond to challenges by applying commercial best practice, industry standard technologies, and world leading research and innovation, combined with decades of experience in the public sector.

3. PROJECT INITIATION

3.1 We believe that the cause of many underperforming public sector programmes may be rooted in the activities prior to any engagement with possible delivery suppliers. Often Government policy is defined without consideration of how best it could be implemented and how the costs of any enabling technology support could be reduced. Once policy has been decided, the areas of requirements definition and procurement governance are key to eventual success. The quality and appropriateness of the work completed in these areas has significant impact on the implementation of the programme and on the chances of the successful delivery of the envisaged operational benefit.

3.2 Governance

3.3 It is important that the correct governance for a programme is set up during project initiation. It is entirely reasonable to develop the delivery governance during the procurement, with input from suppliers. However, if, during initiation, governance is not put in place to allow the operational team, rather than the procurement function, to have overall control of the procurement there a danger that the procurement becomes a “slave to the process”. While there is a need to adhere to the OJEU procurement regulations, the target must be to address the operational need.

3.4 As we have seen following the outcome of the General Election in 2010, the operational need can change substantially during the life of a procurement. In our experience there is a bias towards focusing on procurement policy and process in Government procurement, rather than on operational benefits, behaviours and outcomes. This needs to be addressed if better results are to be achieved. Unless there is operational control of the procurement it is entirely possible that the wrong decision, for the Departmental or Agency objectives and for the taxpayer, may be made.

3.5 In 2006 the National Audit Office completed a report, “Delivering successful IT-enabled business change”, that recommended that programmes focused on ensuring senior level engagement, on acting as an intelligent client and on realising the benefits of change. This advice is still appropriate but is often ignored.

3.6 Although some senior decision makers have gained a greater understanding of what is needed to ensure that projects and programme are delivered effectively, many are given this responsibility without the experience and background to be effective SROs. The mantra that “there are no such things as IT projects, but only business change projects” is gaining some support, but there is some way to go to achieve universal acceptance and for business leaders to be comfortable and confident that they can take on these responsibilities successfully.

3.7 Requirements

3.8 The definition of requirements, both in their content and their level, and the manner in which they are contracted is absolutely critical to the success of a programme. As we will discuss in this paper, the area of requirements has not only been a major inhibitor of effective IT in Government in the past, but could also compromise the “Agile” development approach Government is looking to take in the future.

3.9 If requirements are generated outside solid operational governance and are not grounded in the timescales and financial reality of the programme, then there may be a tendency to “gold plate”, ie to specify everything that is possible, rather than to be “good enough”. The security arena is often an area where excessive constraints may distance the programme from the original operational need.

3.10 “Gold plating” adds complexity, duration and risk to the delivery of a programme. This not only increases the chance of failure but also reduces the number of possible suppliers, potentially excluding SMEs. One method to reduce the impact of excessive requirements is sensible prioritisation based on operational need balanced against cost impact. This should be coupled with the expectation within the stakeholder group that a new system will not be “everybody’s answer to everything”.

3.11 A further significant point in relation to avoiding “gold plating” is that it should be accepted that IT systems are best placed to automatically handle the majority of cases that are relatively straightforward and that the minority of cases that are highly complex may be better handled with some manual intervention. This is often called the “80:20 rule”. Accepting that the IT system will not address the minority of highly complex cases allows the system design to be greatly simplified and costs therefore reduced.

3.12 Requirements should be generated with the anticipated development methodology in mind. If “Agile” is to be used there should be high level, outcome based, business requirements that the supplier should be contracted to meet. If it is helpful, lower level requirements can also be documented, but these should be advisory unless strictly required for minimum interoperability purposes. “Agile” development does not work with two thousand requirements against which a supplier is contacted to deliver, with complex change processes

and punitive penalties for delay or deviation. Even in traditional “waterfall” development, we are not convinced that the vast requirements documents generated by Government, and their associated client side advisers, are helpful.

3.13 Closely associated with the issue of excessive requirements detail is the length of time spent in the project initiation phase. A key factor in the ability of a programme to deliver its intended business requirements, especially in the fast moving world of IT, is the time between the inception of the operational vision and the commencement of the development. Excessively lengthy and detailed requirements gathering phases may impact this ability.

3.14 We would propose the time boxing of the requirements work stream be considered. To assist with this, client side advisers should be engaged on a fixed price basis to build requirements with specific success criteria applied as per the delivery contract.

4. CONTRACTING APPROACH

4.1 Once an OJEU procurement has commenced and potential suppliers engaged, sometimes behaviours are exhibited that, while intended to improve the chances of success of a programme, may have the opposite effect. In this area we would highlight:

- Risk aversion.
- Financial and contractual solution.
- Procurement duration.

4.2 We understand that Government is recruiting a Chief Procurement Officer and that this position will combine the role of CEO of the procurement agency, “Buying Solutions”, and the head of procurement in the Cabinet Office’s Efficiency and Reform Group. We hope that the mandate of this role will address the issues in the current procurement processes discuss below.

4.3 Risk

4.4 Overall, we find that Government procurement is becoming increasingly risk averse. Procurement officers and advisers tend to follow an approach of endeavouring to drive all possible risk to the supplier. In our view, risk should be owned by the most appropriate party, with other parties assisting in the mitigation. Forcing suppliers to take inappropriate risks, e.g. transfer of liabilities from existing Government contracts unseen by the supplier, at a minimum will lead to additional costs and time to deliver.

4.5 As with most aspects of a programme, the factors we discuss in this paper are interconnected. Risk aversion also drives the “I need to know exactly what I’m buying” approach that can create lists of two thousand requirements, as discussed earlier. A system designed to pass risk to one party, without also encouraging the other party to work to mitigate that risk, is doomed to failure.

4.6 The Committee will be aware that the Government can never fully subcontract risk to its suppliers. As we have seen time after time, in the eyes of the media and the citizen, if a supplier fails on a major programme then so does the Government. Many press stories of “Government IT disasters” reinforce this point. There is therefore a need to have a more sensible discussion about the appropriate allocation of risk.

4.7 Financial and Contractual Solution

4.8 We believe that Government should not treat all major IT projects in the same manner. A systems integration “build—deliver” contract is different to a “run—operate” contract with different risk profiles, skills, commercials etc. There are many contractual and financial solutions open to Government and there is a need to move away from current contracting practices should Government wish to reap the benefits of an “Agile” methodology.

4.9 We would propose a focus on the operational outcomes, rather than day rates. The supplier who can give the highest confidence in delivering the best operational outcomes needs to be balanced in selection against the lowest total cost at point of Contract signature. The trend to decisions based mainly on price at point of Contract signature appears to be increasing; we suggest that this may be overly simplistic.

4.10 Connected with a risk-averse approach is the tendency to make contracts as punitive as possible. We believe that this drives the wrong behaviour, forcing suppliers to expend excessive effort managing the contract rather than working with Government to produce the deliverables and achieve the desired outcomes. In a similar manner, if suppliers are squeezed too hard on price, to the level of unprofitability, they may err towards delivering the contractual minimum, thus reducing the chances of a successful operational outcome.

4.11 We would emphasise again that in the event of a contract breaking down, Government’s ability to financially punish the supplier does little to mitigate the political embarrassment of the failure to deliver key parts of the Government’s policy agenda and consequent adverse press coverage. We recommend a move towards creating a contract that facilitates success, rather than one to be relied on in failure. In summary, excessively onerous contracts and low margins may look good at Contract signature, but they also add risk and may not deliver over the duration of a programme.

4.12 On a behavioural point; we have noticed on occasion that the adversarial style adopted in some procurements tends to spill over into implementation. We would caution against the extremes of this style of procurement as, having spent a year or more “across the table” it can be hard to then get “around the table” to work as partners to implement.

4.13 *Duration*

4.14 Continuing the theme in Section three on the time taken to develop the requirements, this is compounded by the lengthy duration of many procurement exercises. With both project initiation and procurement phases often taking well over a year, the original (highly prescriptive) requirements may be as much as three years old at contract award. In the fast moving IT arena this means that the contract can be semi-obsolete at the start of delivery.

4.15 This situation may lead to a large number of change requests precisely at the time when the supplier is ramping up the programme. Compounding this may be punitive delay payments which drive the supplier to continue to advance the development in parallel to the assessment of the impact of the changes to existing requirements. Such activities compete for key resources such as the Design Authority and the Programme Manager, leading to further distraction, risk and unmet expectations.

4.16 Supplier behaviour at this time may be driven by the risk that the Contracting Authority rejects some or all of the changes, and holds the supplier to the original plan with associated penalties. The danger is that, with both parties trying to do two activities at once, neither activity is completed successfully.

5. APPROPRIATE METHODOLOGY

5.1 *Increased use of “Agile” methodology*

5.2 There has been much discussion recently about the use of “Agile” methodology in Government, including the recent “System Error” report by the Institute for Government.¹¹⁸ We are broadly in agreement with the report. However, there are two areas we wish to highlight. Firstly, we do not believe that “Agile” methodology can deliver effectively under the Government’s current contracting approach, and secondly we are concerned that “Agile” should be appropriately applied to IT projects that can benefit from it, and not seen as a “silver bullet” approach to all contracts.

5.3 Relationships, trust, collaboration and joint team commitment are key to the success of an “Agile” approach. This is often not understood by procurement and legal departments, and contracts are written which drive behaviour in the opposite direction.

5.4 Fixed price contracts, penalty clauses, rigid quality measures which force development teams to work on low operational value fixes, rather than a gem of new functionality which would provide significant value, are also at odds with the “Agile” approach.

5.5 A commercial model that reflects whole joint team collaboration will create a more productive delivery engine. If one party is incentivised financially to make a case that another party has worked less productively, or has not delivered a pre-requisite, then this drives behaviours away from some of the underlying principles of “Agile” methods.

5.6 A development approach that meets the high level operational requirements, and time / price boxes the development of the detailed requirements is necessary. A move away from contracts that articulate every detail of the solution at Contract signature is necessary for “Agile” development to be effective.

5.7 Of course, this approach means that Government needs to accept some level of risk. This is contrary to the recent contracting approach, which has been to move as much risk as possible the suppliers. As mentioned in Paragraph 4.6, we would argue that some level of risk always remains with Government.

5.8 Our experience is that “Agile” is now frequently the first choice of approach for many types of projects, but not necessarily all. Historically we have seen “Agile” very successfully applied to prototyping, and small projects with unstable requirements, where input from business users was vital as the project progressed. Over time, the use of “Agile” has expanded successfully in to larger scale projects, and in fact it is now widely used in IBM’s software development laboratories, including in the UK, to produce industrial strength, high quality software products. However large systems integration projects (particularly those which involve complex integration of legacy systems—such as a number of the government’s IT projects), are challenging regardless of approach, and “Agile” methods may need to mature further to cope adequately with these. One of IBM’s responses to reduce the risk of “Agile” on such projects has been to develop and deploy a number of enhancements (such as our “‘Agile’ with Discipline” approach).¹¹⁹ We would be pleased to share our expertise in this field with Government.

¹¹⁸ <http://www.instituteforgovernment.org.uk/publications/23/>

¹¹⁹ <ftp://ftp.software.ibm.com/common/ssi/sa/wh/n/raw14204usen/RAW14204USEN.PDF>

6. COLLABORATION AND REUSE

6.1 *Political Mandate*

6.2 Collaboration and reuse are the routes to increased productivity, decreased risk, and decreased time to deliver. However, the most powerful force for collaboration is generally beyond the control of suppliers. Considerable will is needed at the highest levels in Government to make use of solutions cross-Departments and Agencies, and the determination to enforce this requirement, despite special pleading from Department and Agencies.

6.3 Collaboration usually requires some level of pain and compromise, which are not always evenly distributed, to reap the benefits. Additionally there are the thorny issues of budgets and control: not every Department can be the shared service supplier. There is huge potential for re-use of existing services and for the establishment of shared services in Government, for example the consolidation of Government infrastructure, however we see little evidence of practical steps to achieve this at present.

6.4 *Architecture, methodology and tooling*

6.5 Coordination across Departments and Agencies is currently voluntary. Organisations such as the CTO Council do not have the mandate to insist on standardisation and, therefore, the success of initiatives such as common architecture is patchy. However, before a reference architecture is rolled out there are easier opportunities such as common methodology and tooling. These significantly aid reuse, reducing time and cost to implement and increasing productivity. To cite an example; we would propose that the elements of a common data model necessary for practical interoperability, ie a common definition of data entities, would be a key item for the CTO Council, or other suitable organisation, to develop and enforce.

6.6 In designing and implementing IT systems, it is important to consider the wider impact of these on other existing systems, since any new system will need to integrate with other systems. From an IT perspective this integration demands consistency of, for example, definition of data entities as per Paragraph 6.5. Where such consistency does not exist, a significant degree of complexity is introduced. Also, at a day-to-day operational level, integration requires consistency of business processes, for example HR and financial, without which inefficiencies occur.

6.7 This is an area where IBM has direct experience. Our Unified Method Framework, implemented company wide, provides a single framework to enable a common language among all our practitioners delivering business solutions. This has been hugely successful in accelerating our shift to asset based services and facilitating the reuse of knowledge and assets (services as well as architecture) via a consistent, integrated approach.

6.8 *Open standards and source*

6.9 We fully support the UK Government in its move to ensuring open standards are used to ensure modular, flexible solutions and avoid proprietary lock-in. We are currently assessing the standards survey, but we believe it is likely that actual priorities and mandates will need to be restricted to standards affecting interoperability. Such an approach will simplify the proposal in the number of standards and allow a simple, clear definition of open standards. In turn, this will maximise the benefits to the public sector and minimise the costs of interactions with Government and between other parts of the public sector. At the same time a strong mandate limited to standards for interoperability will promote local flexibility.

6.10 Open standards, adopted by many vendors, reduce the risk of lock in to a single supplier, offer flexibility in terms of access to a wider set of capabilities, and reduce costs. Skills and support for solutions delivered through open standards are typically more common in the market place, and so wider competition delivers better value for money. Moreover widespread adoption of open standards allows the reuse of assets throughout the eco system, further delivering standardised approaches and reducing costs and risk.

6.11 Looking forward, and acknowledging the need for a more joined up approach, the single biggest cost inhibitor to integration of systems is the transformation of data needed when it passes between non-standard systems and processes. Not only is the cost of integration and support significant, but the constant retranslation of data brings in a high risk of data corruption. Once data becomes corrupted, and the integrity questioned, then the impact becomes even larger.

6.12 This combination of wider choice, better competition, and more available skills, made possible through the use of open standards, also delivers the benefit of decreased time to delivery. Better understood development processes allow more rapid production, and therefore enable a much more interactive and inclusive development cycle. End users can see functionality demonstrated faster, and changes can be incorporated with much lower cost. This negates the need to front load all requirements, as otherwise requirements specification is typically the only time users currently get to request functionality. The direct result is that suppliers are not required to build “gold plated” over-complex solutions with questionable functionality, rather to symbiotically develop a user based solution.

6.13 On “open source”, the UK government’s commitment to delivering a level playing field is welcomed—giving significant confidence in the execution of policies that have long been subject to doubt. We look forward

to working with the Government on its successful implementation. It should be recognised that open standards and open architectures are key enablers of open IT markets for both open and closed source solutions.

6.14 COTS “v” Bespoke

6.15 We recommend COTS products or reuse of existing systems rather than bespoke development, if possible. Bespoke systems are often unique implementations and therefore there is no directly comparable prior experience that can be built upon. COTS products have been implemented several times in similar situations. Maintenance of, and enhancements to, COTS packages are frequently easier and more cost effective.

6.16 However, the relative benefits of implementing, maintaining and enhancing a COTS package when compared with a bespoke system can only be achieved if Government does not request that the COTS package is significantly customised and changes made to core functionality, to meet the particular circumstances. This brings the worst of both worlds—attempting to make a COTS package into a bespoke system and the consequent increases in development and support costs.

6.17 It is a mistake to think that the implementation of bespoke systems, where the system is designed to match the existing needs of users and the existing processes, is always more advantageous than the implementation of a more generic system, which may require working practices to change to be more in line with best practice processes in use elsewhere. The former assertion is based on the, often false, assumption that existing working practices are optimal. Often an organisation would benefit from the change in business processes, even taking into account the change management challenges that this brings. This emphasises, again, the need for the engagement of senior business people in the initiation phase and in the ongoing requirements specification and governance.

Benefits Realisation

6.18 *Driving the savings from effective IT*

6.19 Ensuring that focus is maintained on achieving the operational benefits that are sought from the IT system is essential, as opposed to simply a focus on the delivery of the IT system itself, as these are ultimately the real benefits that the Government will obtain from the system. For example, there is little point in achieving a successful “go-live” of an IT system, if the benefits sought such as staff redeployment, channel shift and asset reduction, for example real estate, are not driven out as well.

6.20 It should be recognised that, according to UK Public sector productivity reports,¹²⁰ benefits realisation is currently limited in most public sector ICT projects, even those rated as successful in technical terms.

6.21 Government needs to retain (or build) sufficient skills to be an intelligent client, without excessive reliance on client-side advisers who may not always be entirely motivated by the need to deliver in the fastest, least complex manner commensurate to the task. This should allow for the staff, facilities and technical reductions that the IT delivery facilitates. In our experience this does not always happen. Success should be assessed on clearly defined measures of benefit delivered, converted to a financial position, or social or operational outcome, as appropriate

6.22 When re-engineering IT, benefits realisation should consider the full spectrum of possibilities, including the management model, methods, technical design, resource pooling etc. IBM’s own re-engineering, which continues to evolve, provides a prime example of such a programme.

7. ADDITIONAL MATERIAL

7.1 There is a wealth of information on de-risking and optimising IT programmes with many and varied opinions. The Lovelace Lecture “The Sins of IT Projects and why they can fail”¹²¹ presented by Maurice Perks, IBM Fellow, is a recommended example.

April 2011

¹²⁰ Examples include: <http://www.reform.co.uk/portals/0/Documents/Public%20Sector%20Productivity%20v2.pdf>,
<http://www.statistics.gov.uk/cci/article.asp?id=2116>,
<http://voetek.com/ntouk/?view=plink&id=437>

¹²¹ <http://www.bcs.org/category/10601>

Additional written evidence submitted by Open Source Consortium

In the light of the emphasis of all participants placed upon the role of open standards, the Open Source Consortium (OSC) should like to submit a **third** set of evidence to the Inquiry by the Public Administration Select Committee into the way in which Government develops IT policy and the strategy for its implementation.

INTRODUCTION

Cabinet Office is currently conducting a survey,¹²² of “Open Standards” due to finish by 20 May 2011.

However, this survey is being conducted seemingly without understanding what is or is not a standard in either a strict sense or according to previously published policy on open standards. Further the survey appears to have been created without reference to relevant cross-cutting policy such as that relating to accessibility of web content.

We are concerned that this is a survey:

- as it is not a consultation there is no obligation to meet the requirements of a government consultation including the requirement to publish survey responses or publish a government reply.

Consultations are a formal engagement process emphasising openness as contained in the official guidance¹²³ including when not to consult:¹²⁴

“Clearly, if there is no scope for consultees to influence the policy, a formal consultation exercise should not be launched”.

The informality of the process is confirmed by the survey itself:

- the front page states: “The results from this survey will be reviewed by the Chief Technology Officers Council and their conclusions will be published on the Cabinet Office website in the Autumn. Bear with us while we work through your suggestions and please understand that we’ll have to prioritise our responses.”
- the last page states: “Thank you for taking time to complete this survey. We’ll take your feedback on board and consider it in the development of a new Technical Standards Catalogue for the UK public sector.”

We are concerned that this survey includes proposals to amend what appeared to be settled policy on open standards:

- The survey redefines the status of the definition of an “open standard” provided by OGC in January 2011¹²⁵ as part of its policy and standards framework.¹²⁶ Having redefined the definition as a draft the survey invites participants to comment on it.

The OGC definition of an open standard provides a basis for what the government considers a valid standards reference.

We are concerned that the survey does not define “common standard”. Without a definition of common standard no mechanism is provided for determining in what manner common standards differ from open standards.

- The recently published Government ICT Strategy,¹²⁷ in the section “Interoperability enabled by open standards” contains no mention of open standards instead stating:

“The use of common standards can make ICT solutions fully interoperable to allow for reuse, sharing and scalability across organisational boundaries into local delivery chains”.

We are concerned that the survey reflects a seeming failure to understand the importance of careful referencing of standards:

- this failure can be highlighted by considering the treatment of two International Standards—informally known as “Open Document Format (ODF)” and “Office Open XML (OOXML)”.

The first is cited using a dated reference (“ISO/IEC 26300:2006”), while the second has an undated reference (“ISO/IEC 29500”). ISO convention means that the first cites a specific version while the undated second automatically binds the reference to the latest version.

We are concerned that the survey proposes to include a number of file formats that are proprietary and have never been standardised including:

.doc, .ppt, .xls, .rtf, .nsf, .gif (there are others)

We are concerned that the survey makes reference to draft standards that are far from ready for use while failing to properly reference more appropriate standards:

¹²² <http://www.cabinetoffice.gov.uk/content/uk-government-open-standards-survey>

¹²³ <http://www.bis.gov.uk/policies/better-regulation/consultation-guidance>

¹²⁴ <http://www.bis.gov.uk/policies/better-regulation/consultation-guidance/when-to-consult>

¹²⁵ http://www.ogc.gov.uk/documents/PPN_3_11_Open_Standards.pdf

¹²⁶ http://www.ogc.gov.uk/procurement_policy_and_application_of_eu_rules_procurement_policy_notes.asp

¹²⁷ <http://www.cabinetoffice.gov.uk/content/government-ict-strategy>

- the survey includes HTML 5 which is a W3C project expected to lead to a W3C recommendation¹²⁸ by 2014 or 2015. At present it is simply a partial draft. HTML 4.01 and XHTML 1.0 recommendations from W3C are in wide adoption (in preference to the ISO standard).

We are concerned that the survey seemingly confuses applications with the underlying file format:

- Portable Document Format (.pdf) is an ISO standard (currently ISO 32000:2008). Acrobat Viewer is just one proprietary software application for reading .pdf files, there are many alternatives.¹²⁹

We are concerned that this survey appears to have been prepared without proper consideration of cross-cutting policy relating to web content and accessibility:

- The survey proposes using W3C Web Content Accessibility Guidelines (WCAG) for web content. WCAG 2.0 is a W3C recommendation in December 2008¹³⁰ so it is unclear why WCAG 1.0 has been included.
- The survey makes no mention of BS 8878:2010¹³¹ which referenced the government's e-Accessibility Action Plan¹³² (itself updated as recently as January 2011). The plan which provides a basis for developing accessible online services including recommendations for:
 - involving disabled people in the development process and using automated tools to assist with accessibility testing;
 - the management of the guidance and process for upholding existing accessibility guidelines and specifications.
 - The survey points to the Central Office of Information Standards and Guidelines¹³³ which hasn't been updated either to mention the e-Accessibility action plan or the Equality Act 2010¹³⁴ managed by the Government Equalities Office.¹³⁵

April 2011

Written evidence submitted by Microsoft

Thank you for the opportunity to submit evidence to the Public Administration Committee's inquiry into "*Good Governance: the effective use of IT*".

ABOUT MICROSOFT

The Reading based UK subsidiary of Microsoft Corporation was formed in 1982. It currently employs nearly 3,000 people, with nearly 400 UK employees focused on R&D activities. It also has offices in London, Manchester and Edinburgh. The Microsoft European Research Centre is based in Cambridge. Microsoft has made major investments in the UK computer gaming industry bringing computer game developers, Rare and Lionhead, into the Microsoft Game Studios (MGS). Microsoft also has a Search Technology Centre (STC) with a hub in London. The STC will join Microsoft's other internet businesses which are based in London, including MSN, Microsoft Advertising, MultiMap and Massive.

Our business relies on our partners, who work with us using Microsoft technology to run their own businesses. We have 32,000 partners in the UK, the large majority of which are SMEs, which in total amounts to over half a million UK jobs.

SUMMARY RESPONSE

Microsoft is proud of the partnerships it has to support public service delivery in the UK and is committed to helping the Government secure best value and most effective deployment of IT.

In 2009, the UK public sector spent a total of £17.9 billion¹³⁶ on Information Technology (IT). Only 8% of the UK public sector's IT spend is on software (and just 1.6% spent with Microsoft).¹³⁷

In the UK, Microsoft has enjoyed strong relationships across the public sector and at all levels of government which has led to, amongst other things, the pan-Government pricing agreement PSA09. Microsoft is keen to help organisations to use IT as a means of actively creating value as well as reducing overall cost.

¹²⁸ such recommendations would meet the definition of "open standard" in OGC PPN 3/11 reference supra

¹²⁹ http://en.wikipedia.org/wiki/List_of_PDF_software

¹³⁰ <http://www.w3.org/TR/WCAG20/>

¹³¹ <http://shop.bsigroup.com/ProductDetail/?pid=00000000030180388>

¹³² <http://www.culture.gov.uk/publications/7798.aspx>

¹³³ <http://coi.gov.uk/guidance.php?page=188>

¹³⁴ <http://www.legislation.gov.uk/ukpga/2010/15/contents>

¹³⁵ http://www.equalities.gov.uk/equality_act_2010.aspx

¹³⁶ Source: "*UK Public Sector ICT Overview and Forecast to 2014-15*", published by Kable in November 2009. (<http://www.kable.co.uk/>)

¹³⁷ Kable, 2009

We welcome the opportunity to respond to this inquiry and there are several key themes which we would like to emphasise in our response:

1. Government use of IT has improved over recent years but continues to lag some way behind the private sector. This is caused by a number of factors which we explore in more detail below, from the prevalence of a silo-mentality within departments which fails to see best practice and expertise shared; to a simple lack of experience or appropriate seniority of IT experts within government.
2. The Government has an opportunity to achieve significant savings if it reduces its capital investment and moves to commodity IT. Part of these savings will be achieved by embracing “cloud computing”, which will require important decisions to be made in relation to risk, security and control of assets and for government to take action to ensure public procurement supports cloud technology. However, other savings can be made from using “on the shelf” software and customizing it appropriately, rather than building bespoke systems. Government must also support cross-departmental working as a way of making best use of the potential of new technologies to achieve both cost savings and a better way of working.
3. It is vital that government focuses on lifetime value when procuring contracts. There is a growing tendency towards bidding wars which see very low entry prices and the impression of savings that disappear when lifetime costs are taken into account (eg for ongoing training, maintenance and so forth).
4. Government must safeguard interoperability from its IT suppliers and require open standards from suppliers. This will limit the administration costs for the public sector and safeguard entry into connected IT needs from as wide a range of suppliers as possible. This will become more important as the public sector commissions services from both the private and third sector. Standards provide the ability for disparate organisations to work together, share information etc.
5. Government must do more to facilitate a wider market share for small and medium sized suppliers if it is to secure most effective IT services and provision. The current procurement approach deters smaller suppliers so that almost 70% of the market is dominated by just 20 leading firms. Microsoft is actively working to support our network of 30,000 SME partners to help them navigate public sector procurement processes.
6. It is essential that government departments focus their attention on the outcome they wish to achieve through IT, rather than the input. By “picking winners”, for example by determining the type or form of IT government wishes to procure, rather than the function it is intended to deliver, the Government risks reducing competition, innovation and value for money.
7. 80% of total public sector spend is on salaries and pensions. It is therefore critical that we enable public sector workers to be as productive as possible. Discussions often just focus on the cost of the IT and not how it can help in driving up productivity and therefore have a massive net benefit. Government needs to ensure it provides the right technology to make workers as productive as possible.

1. How well is technology policy coordinated across Government?

The creation of a Government CIO role and the CIO and CTO Councils has helped in providing some degree of co-ordination and a move towards a more common infrastructure, specifically within Central Government, technology policy.

However, there remains limited co-ordination of technology policy across Government and there is limited co-ordination across departmental boundaries. This can create three important consequences:

1. Best value is not achieved.
2. Opportunities are missed to meet public sector goals.
3. The high cost to Government (due to, for example, civil servants not being able to work in other departments and the loss of productivity associated with that).

Securing best value

Microsoft is a major partner to Government. However, it represents less than 2% of the UK Public Sector’s spend on ICT.

In 2009, the total ICT spend for UK Public Sector was £17.9 billion.¹³⁸ Of this though, only 8% (£1.4 billion) was spent on software,¹³⁹ a further 12% (£2.2 billion) of the total spend was on hardware whilst the largest single category in Kable’s analysis was for Services which consumed 49% (£8.7 billion) of total public sector ICT spend.

¹³⁸ Source: “UK Public Sector ICT Overview and Forecast to 2014–15”, published by Kable in November 2009. (<http://www.kable.co.uk/>)

¹³⁹ This low percentage is also supported by an analysis undertaken by the leading IT industry analyst, IDC, who looked at Total Cost of Ownership (TCO) for a server over a typical three-year lifecycle. IDC found that software represented just 7% of the total TCO: <http://www.microsoft.com/windowsserver/compare/linux/windows-server-tco.msp>

Microsoft has worked closely with Buying Solutions (the government's national procurement partner for UK public services)¹⁴⁰ to develop a new software purchasing model which treats the public sector as a single entity in terms of pricing equality and licensing. The result is PSA09 (Public Sector Agreement 09)¹⁴¹ which replaces the previous Memorandum of Understanding (MOU8) and which offers better value for money, greater choice and flexibility in the licensing of software. PSA09 presents four critical benefits for public sector organisations:

- **Maximise existing investments** through the ability to transfer software licences between public sector organisations. Transferability, re-use and flexibility of licences are key features of PSA09.
- **Value for money.** PSA09 offers the potential for public sector organisations to save money whilst achieving best value in procurement and gaining new tools to improve service delivery to citizens, communities, public sector organisations and partnerships across the public sector.
- **Matching Business Needs.** Increasing choice with more flexible software access for different users. PSA09 addresses changing requirements of public sector organisations over time through two key principles:
 - Pay for what is needed, and
 - Choose software for different needs rather than just by product alone
- **Public Sector Reform and Innovation.** Supporting delivery of the UK Government agenda by supporting more effective use of ICT for collaboration and information sharing.

This agreement is a good illustration of how effective cross-government working can be in securing best value and outcomes for the public sector.

It is essential that the Government secures equivalent commitments from other suppliers, including open source and license providers, through similarly well co-ordinated buying agreements.

The Government must also safeguard interoperability when procuring ICT supplies and services. Only through interoperability, is it possible to scale projects and re-use software beyond the original scope of its procurement. The Government must seek interoperable, open standards from software and hardware providers to reduce the impact of a continuing lack of coordination between departments and projects.

Achieving public sector goals through ICT

As technology becomes more ingrained throughout everyday life, the expectations of citizens are increasing in terms of what they expect from Government services. Therefore, technology is a key element of all Government policy not just those relating to technology infrastructure. From the outside it often appears that those creating government policy have limited understanding of the possibilities available through technology and that only once policy has been agreed is this then passed onto IT departments to actually deliver a solution.

This approach undervalues the potential benefits from technology as well as causing friction between the business and IT functions of the organisation. A more business-like and collaborative approach to policy development as well as education and training on technology for non-IT civil servants would undoubtedly help in delivering more value, reducing costs as well as limiting the potential for high profile failures. It would also secure better results in terms of meeting the needs of the end user or citizen.

A good example of where this can work well in terms of using IT to place the citizen at the centre is, HeyGov,¹⁴² is a solution developed by two Miami city employees in less than eight days over their holidays. Built on Windows Azure cloud computing technology, the site allows citizens to review progress on an average of 4,500 reported and “in progress” issues such as pot-holes, missed refuse collection, illegal tipping etc. Represented on a map of the City of Miami, the citizen gains useful, usable information whilst the city saves money through “avoidable contacts” (much reduced call volumes).

Smart organisations will take the opportunity to do less, but to focus on creating a platform (in both an IT and a broader sense) for others to be successful.

Building for the Citizen at the Centre requires government to:

- build for transparency;
- build for collaboration; and
- build for participation.

In exploring these principles, organisations are realising 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.

By securing effective input from ICT expertise when policy is being formed and developed, there is an opportunity to achieve far more effective outputs for the public, as well as reduce the risk that a project will run into issues such as increases in cost, user experience issues or increased time to delivery.

¹⁴⁰ <http://www.buyingsolutions.gov.uk/>

¹⁴¹ <http://www.microsoft.com/uk/publicsector/government/licensing/default.aspx>

¹⁴² <http://www.heygov.com> previously known as Miami 311. For more background detail, see the following report: <http://port25.technet.com/archive/2010/03/03/miami-311.aspx>

2. *How effective are its governance arrangements?*

The current governance arrangements would appear to suffer from some of the same issues as in the response to question 1.

Governance is often siloed and those involved in the governance process may not have the ideal technological understanding when scoping, monitoring and reviewing projects. As levels of outsourcing increase as a result of the desire to achieve budget savings and increased efficiency of service provision, the Government must not erode expertise in project governance.

Changing governance needs

There is an opportunity through the move towards cloud technologies to change the dynamic of government procurement and the necessary governance arrangements that lie therein. It will see a reduction in public sector bodies purchasing a specific product or technology, to instead purchasing a service. This requires a different set of skills, focused more on correctly identifying business requirements, specifying needs and then effective monitoring.

Government should invest now in developing the skills necessary to meet this changing procurement environment so that it achieves best value in future.

Making better use of peer review

There is also an opportunity to make better use of the role of local officials and delivery experience. Large centralised public sector IT projects limit the options for supply to a few very large companies and increase the risk and likely cost of projects. Steps need to be taken to reduce the scale and risk of the typical project. A first step is to devolve procurement to local officials, but publish standards of data interchange between systems, based on industry-driven, international standards.

To secure effective sharing of skills, secure networks can help officials learn from the experience of others. The Shared Learning Group in local government¹⁴³ creates and shares IT solutions that have worked well for one local authority to prevent the same issue being solved separately by each local authority.

Centrally, there is also scope to bolster this review process to ensure lessons are learnt across public sector bodies. The Gateway Review process provided professional peer review but was stopped as it often came into conflict with projects which were politically sensitive. Such peer review is required to provide independent, expert analysis and recommendations to ensure that HM Government truly learns from project success and failure.

Government should commit senior level support for reviewing ICT procurement projects to ensure best practice is shared and lessons learnt in any future procurement.

A good example of reuse within Government is LoveCleanStreets.¹⁴⁴ This is a free online tool that enables people who work or live in London to upload photographs of the area around them. These can be of a neighbourhood's "loved" qualities, or something "unloved" that the user would like to bring to the local authority's attention. The photos are then displayed for any user to see, and the reports can be tracked to see how local authorities are responding to "unloved" areas. Originally developed for one borough (Lewisham) it's now being used by all others, rather than spend money developing new solutions many times over.

3. *Have past lessons from NAO and OGC reviews about unsuccessful IT programmes been learnt and applied?*

Undoubtedly lessons from these reviews have been taken onboard and have delivered specific improvements in project development and delivery.

However, it does not seem that this has been done in a co-ordinated and consistent way across government and learnings are applied differently from department to department, for example regarding senior level leadership. The concern must be that without the co-ordination and consistent application of the learnings, programme failure is still likely to happen somewhere within government in the future.

The move to a Universal Credit will require significant change in IT systems in both DWP and HMRC. This would seem to be the ideal opportunity to take the learnings from the NAO and OGC reviews and provide a true practical case study for HM Government on large scale programmatic change with significant IT involvement.

To avoid the future unsuccessful implementation of IT programmes, government must ensure that there is a co-ordinated and consistent application of the learnings from programme failure.

¹⁴³ <http://www.publictechnology.net/modules.php?op=modload&name=News&file=article&sid=9174&mode=thread&order=0&thold=0>

¹⁴⁴ <http://lovecleanstreets.org/Reports>

4. How well is IT used in the design, delivery and improvement of public services?

As detailed in earlier responses, there have been improvements in the degree to which ICT is valued as a key delivery agent for public services, but too often it remains an after-thought.

From the outside it often appears that those creating government policy have limited understanding of the possibilities available through technology and that only once policy has been agreed is this then passed on to IT departments to actually deliver a solution.

Smart organisations will take the opportunity to do less, but to focus on creating a platform (in both an IT and a broader sense) for others to be successful. This requires government to:

- build for transparency;
- build for collaboration; and
- build for participation.

In exploring these principles, organisations are realising 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.

By securing effective input from ICT expertise when policy is being formed and developed, there is an opportunity to achieve far more effective outputs for the public.

5. What role should IT play in a “post-bureaucratic age”?

There are potentially big savings to be made in public sector spending by cutting red tape, improving project management skills and ensuring that the right IT project architecture is in place to allow for a level playing field for public sector IT procurement.

If the cost and bureaucracy of public sector IT procurement and delivery was reduced, it could deliver as much as 10% saving on all public sector IT spend, amounting to £1.76 billion (Kable), while at the same time increasing innovation.

Making better use of current technologies to reduce travel and transportation, as well as the introduction of cloud services, will also do a great deal to reduce the cost burden to government.

Creating a level playing field

There needs to be a level playing field for all ICT businesses, irrespective of development model and size, if real savings are to be achieved. If there isn't a true level playing field, it will mean that many UK ICT companies won't even have the opportunity to pitch for government contracts. This would close off any possibility for many smaller businesses ever being able to win public sector business even if the current system is reformed to make it easier for them to do so. It is only a truly level playing field that will provide more opportunity to SMEs to bring their efficiency and innovation to public sector IT contracts.

In order to help achieve the Government's aims to bring smaller suppliers into the procurement chain, Microsoft is working with its small and medium sized enterprise (SME) partners to provide free training in tendering for, winning and executing public sector contracts. It also has a strong history of collaborating with its SME partners on government contracts, where the SME and Microsoft have complementary skills and have both benefitted from the contract. Actions like these are important to help SMEs succeed in winning public sector business, but ultimately will only be successful if all companies can operate equally, rather than battling against a biased system.

The Microsoft ecosystem in UK includes those companies that sell PCs, servers, storage, and smart handheld devices running Microsoft software; software vendors that write applications that run on Microsoft platforms; resellers that sell and distribute these products; and service firms that install and manage Microsoft-based solutions, train consumers and businesses on Microsoft products, and service customers for their own applications. It also includes companies that do combinations of these functions. As a group, companies in the Microsoft ecosystem in UK generated more than 18 billion GBP in revenues for themselves in 2009. In other words, for every £1 made by Microsoft in the UK in 2009, its partner companies made £8.84.

Companies in the Microsoft ecosystem employ 241,000 people and IT-using organizations employ another 281,000 IT professionals who work with Microsoft software or the products and services based on it. Together, these employees will account for 38% of IT-related employment in 2009 and 42% of IT-related taxes in the country.¹⁴⁵

Making better use of technology

Even more public sector savings could be found by using currently available technology innovatively, for example, reducing public sector travel costs by using web cams and instant messaging technology. If the savings made by some private sector businesses are mirrored in the public sector, the wide adoption of these

¹⁴⁵ IDC Economic Impact Study 2009

readily available technologies could result in a 10% cut in travel costs per employee across government with millions of pounds saved along with a positive environmental impact resulting from reduced train, car and air travel. Utilising unified communications technology within Microsoft in the UK has helped us to reduce our carbon emissions from travel and commuting by 23% over the last three years as well as delivered a significant reduction in our travel budget.

Cloud computing

Cloud computing provides the most significant opportunity here. There are large savings to be made by a move to the cloud not least in reduced upfront capital investment, maintenance and service costs. Businesses and the public sector would no longer need to set up and maintain their own back office computing functions. Currently, Whitehall and the UK's public bodies rely on approximately 130 data centres. Cloud computing makes a reduction down to less than 20 data centres conceivable.

Cloud Computing delivers IT as a Service. It does this by delivering computing as a utility (much like the utility companies deliver electricity today) in that consumers can vary their usage over time and pay for what they use. Utility IT Services delivered over the internet directly to customers (organisations both large and small, public and private) from large datacentres is termed Public Cloud. These services benefit from economies of scale and can therefore offer incredibly competitive price points. Public Cloud services are evergreen, they are always up to date, therefore removing the need for Government organisations to plan, manage and pay for upgrades. With Public Cloud upgrades are included as part of the service.

Whilst these Public Cloud services are suitable for a number of Government workloads today it is recognised that some services will need to remain inside of Government datacentres. We believe that there are also efficiencies to be gained by Government adopting cloud computing principles in their own datacentres ie creating Private Clouds. Microsoft believes that the best strategy for government is to exploit both Public and Private cloud technologies—taking the best of both worlds—to create a modern, rich & unified set of services to public sector employees at the best possible price point.

For example, the current proportion of public sector ICT spent on services is 42%¹⁴⁶ with a further 16%¹⁴⁷ on hardware from an estimated total spend of around £17 billion.¹⁴⁸ Both could be substantially reduced by using cloud computing.

6. What skills does Government have and what are those it must develop in order to acquire IT capability?

In an article on ComputerWeekly.com¹⁴⁹ in July 2007, London School of Economics' Professor Leslie Willcocks and Mark Thompson of Judge Business School, Cambridge University both identified lack of project management skills as being a fundamental issue for government IT projects. Mark Thompson is quoted as saying that, "*There is usually really lousy management of the contract once it is in place.*" Meanwhile, Professor Willcocks said:

"The NHS IT programme is a prime example. These are very big contracts, but the internal capabilities to manage them are not there—in the public sector, or in the managers hired to manage the programme. Ultimately, even though the work is being fulfilled by a third party, the user remains accountable and must retain control."

There has been some improvement since this point, yet still the public sector lags behind its counterparts in the corporate world.

As has been stated previously, at senior levels in the private sector, the importance of IT has long been recognised. This is reflected in the senior positions held by Chief Information Officers (CIO) in most major private sector companies. This is generally not the case in the public sector. In the public sector each Departmental CIO needs to be given real power and influence to ensure better decision making

The CIO should be given a place on the senior management team of each Department. More generally, the knowledge amongst senior civil servants, including permanent secretaries about the role of information technology needs to be improved.

The Government also needs to secure procurement teams with the ability to focus on the life time costs of individual IT projects rather than just initial costs. The current system is encouraging companies to bid low and then overcharge later. The principle of best value needs to be retained but the total cost of ownership over the lifetime of the project should be clearer at the start of each project.

¹⁴⁶ "UK Public Sector ICT Overview and Forecast to 2014–15", published by Kable in November 2009: <http://www.kable.co.uk>

¹⁴⁷ Ibid.

¹⁴⁸ Ibid.

¹⁴⁹ ComputerWeekly.com, "*Outsourcing projects offer business lessons*" (6 July, 2007); available as a cached page at: <http://cc.msnsnscache.com/cache.aspx?q=%22computerweekly+com%22+outsourcing+projects+offer+business+lessons&d=74749678791719&mkt=en-GB&setlang=en-GB&w=ee76f0d3,f5b8f2f6>

Outsourcing skills through Cloud technology

Again there is potential benefit through cloud technology. Where, previously, departments would be required to service and staff data centres and IT services, cloud technology would allow that activity to be effectively outsourced to a secure and safe environment, whilst enjoying the benefits that economies of scale in capital and expertise can bring.

7. How well do current procurement policies and practices work?

The sheer scale and complexity of public sector IT contracts and the preference for large centralised contracts puts intolerable pressures on Government IT procurement and project management staff. Complex and opaque processes, high bidding costs and limited scope for innovation combine to limit procurement choice to a limited set of large system integrators and excludes smaller innovative companies from health, education, local and central government projects. Consequently, despite the Government's stated intention to award 30% of contracts to SMEs, the top 20 IT suppliers account for over 70% of all spending.¹⁵⁰ The reasons for this are fourfold:

- 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.
- The complexity of the process by which contracts are notified and bids received favours larger companies at the expense of smaller, not on their ability to deliver excellent solutions, but because of their employment of contract specialists who can navigate the system (and whose costs are ultimately built into the final price).
- There is a tendency for the IT consultants specifying public sector IT systems to favour large centralised systems at the expense of more locally sourced, smaller systems with internationally recognised data standards enabling them to share information between themselves. Not only does this increase the costs by limiting the range of possible bidders, but also increases the risk and complexity of the resulting system. It also prevents the re-use of a demonstrably effective solution in one locality by purchasers in other areas.
- Small and Medium sized Enterprises (SMEs) often lack the skills and knowledge of the public sector procurement process to enable them to effectively address the market opportunity and they are generally unclear as to where they could go to access those skills.

Yet both public sector customers and smaller businesses themselves would benefit from a level playing field where SMEs could bring their efficiency, innovation and commitment to public sector contracts. 64% of commercial innovations come from small firms¹⁵¹ and greater competition and the resulting efficiencies are urgently needed in order to address the 60% of IT project expenditure that goes on services¹⁵²—services all too often limited to the same large system integrators. There is a great opportunity to improve the innovation and efficiency within public sector IT by enabling more small and medium businesses to participate in this market, regardless of development models. It is only by taking this approach that a true level playing field for smaller software businesses is possible. This will result in more innovative and cost effective public sector IT procurement.

We also recommend that the Government should reconsider a recently announced policy which we believe will hinder SMEs and others from bringing the benefits of their innovation to the UK public sector. Specifically, we are concerned that the Procurement Policy Note on "Use of Open Standards when specifying ICT requirements" which was published by the Cabinet Office on 31 January 2011 will have the unintended consequences of reducing innovation and choice in the public sector IT market. We shall be responding to the Government's consultation on this policy, and arguing that the Government should align itself instead with the best practices set out in the European Interoperability Framework v2, which were set following extensive consultation with European industry and SMEs.

We recommend that the Government takes steps to secure greater access to government contracts for SMEs. This should include actively encouraging more companies to bid for public-sector business by helping them acquire the skills and knowledge that enables them to bid competitively. **Importantly, the Government should also require that all bidders declare the proportion of the project that is being sub-contracted to SMEs.**

8. What infrastructure, data or other assets does government need to own, or to control directly, in order to make effective use of IT?

In short—as little as possible. The actual amount will be governed by two core factors: what is politically acceptable and what is acceptable from a security perspective. In reality why would HM Government wish to be an infrastructure provider unless for clear and accepted needs? Moving forward with the move to cloud computing and the provision of services the Government will find it harder and harder to justify the need to

¹⁵⁰ Kable research, *The supplier landscape in the UK public sector marketplace 2007*

¹⁵¹ Federation of Small Businesses: May 2008

¹⁵² Source: IDC, 2007. Three Year Server TCO. Based on more than 300 interviews conducted across numerous platforms.

have its own infrastructure if it can be provided more efficiently, environmentally and securely in the cloud by another organisation.

For example, Microsoft has estimated that the operating and capital expenses savings attributable to email alone amount to approximately £700 million over the next five years, based on three million government email users and 100% cloud adoption over the next five years.

The role of Cloud technology

The more that government can utilise the public cloud moving forward the better. This should allow for a reduction in costs, greater flexibility for elastic services as well as considerable environmental benefits. There will always be infrastructure that the Government will need to keep in-house and the key here is to ensure that this is done in as joined up a way across Government as possible, to ensure effective use of resource.

In moving services and data to the public cloud, government will need to be clear about its requirements to ensure it does not become locked into services provided by specific suppliers and that both applications and data can be freely moved between suppliers and technology platforms.

As mentioned in the responses to earlier questions, this would potentially mean different skills and experience than is the current situation and hence a programme of re-skilling should be considered.

With regard to data this raises the perennial question of whether government actually owns citizen data or is just the custodian of the data. Currently government sees itself as the owner of the data which brings with it serious responsibilities (eg data security) and creates issues around combining data from multiple sources and also deriving maximum value from a complete citizen record. A move to Government taking more of a custodian role and the citizen being the ultimate owner of their data would negate many of these issues as well as creating potential opportunities. This would also create issues around privacy as well raising questions around the ability of all citizens to use such a service eg older people, the vulnerable and those who are digitally excluded.

Microsoft HealthVault is a good example of such a service for storing, managing and maximizing an individual's health information by creating a single data repository taking data from multiple sources, putting the citizen in control of their data and providing added value services to the citizen based on all the data being in the same place. In the US the HealthVault service is funded through advertising and hence can be provided free of charge to the citizen. The move to citizen owned data would mean a complete change for the UK Government which would need to require citizens to provide certain data in exchange for the provision of specific government services.

A good example to demonstrate the concept of "Government-as-a-platform" is the Foreign and Commonwealth Office's Travel Advisory service.¹⁵³ This takes a core government service, federates it through an open data api and matches that data with a social networking platform and useful information like currency exchange, weather and translation services.

The Government should take steps to increase the rate at which it reduces its capital ownership of data. If managed correctly, this will secure improved service levels, consistent or improved security standards, and major savings in cost.

Government should seek to move away from capital ownership of infrastructure and data, as doing so would enable cost savings, drive efficiency and improve security and services standards.

9. How will public sector ICT adapt to the new "age of austerity"?

As stated in previous responses, Microsoft has worked with the public sector to achieve best value during the current economic climate. The PSA09 is a good illustration in which Microsoft has developed a new software purchasing model which treats the public sector as a single entity in terms of pricing equality and licensing (see response to question 1 for further details).

Taking a holistic approach

ICT has an important part to play in delivering value for public sector organisations. Decisions need to be made carefully in order to ensure that the value generated is both real and sustained. This requires a holistic view of value and an objective means of measuring value. In looking to reduce costs, organisations need to understand where the ICT related costs are actually incurred. Again, cloud computing will achieve major savings if strategically sourced by government.

It is equally important to recognize that cost is much more than simply the price of software licenses (which represents only 8% of total ICT spend) and a robust, objective assessment framework is essential to avoid unintended consequences such as an increase in often unseen costs such as training, productivity losses and document conversion. Tools such as Microsoft's Business Value Framework or the WiBe 4.1 Framework look at changes across the organisation to ensure an accurate assessment of both cost and value.

¹⁵³ <http://www.theenvisioners.com/index.php/2011/03/15/bringing-government-as-platform-to-life-introducing-travel-advisor/>

Increasing value means more than simply reducing cost. Smart organisations are taking the opportunity to do less, but to focus on creating a platform for others to be successful by:

- Designing for Re-use; and
- Placing the Citizen at the Centre

As well as reducing cost and increasing value internally, this will enable and encourage the local software economy, nourishing an ecosystem of small, local IT firms to the benefit of the broader economy and to the aims of the Digital Britain strategy.

10. *How well does Government take advantage of new technological developments and external expertise?*

Not as well as it might. The existing procurement framework actually makes it hard for the public sector to make use of technological innovation in real time. High barriers to entry also ensure that new entrants—especially SMEs—are deterred from participation even where they have a different perspective or potentially valuable expertise. Whilst government is better networked with external and third party organisations than in the past, there are still improvements which can be made to ensure that government is encouraging suppliers to innovate to drive efficiency or value for money.

Another issue here is that the Government approach has been “you need to fit in with us” rather than being willing to adapt to benefit from new technological developments. This has caused issues with the current desktop (for example, onerous security) as well as with the adoption of cloud computing.

11. *How appropriate is the Government’s existing approach to information security, information assurance and privacy?*

The Government rightly places issues of security, assurance and privacy at the heart of its ICT procurement approach. The need to keep certain information secure and ensure a resilient service level across public services will remain critical no matter what technological advances are made.

It is sometimes suggested that open source software (OSS) is more secure by design. However, there is no evidence that the myth of the “million eye-balls” holds true or that—because the underlying source code of open source software is available for all to see—security issues are more quickly identified and resolved. In reality, only a small percentage of those million eyeballs actively contribute to any OSS projects.¹⁵⁴

Security is, of course, a bigger issue than purely source code. It covers all aspects of system design and use including configuration, system management and user behaviour. Frequent press coverage illustrates how security is an issue for everyone.¹⁵⁵

And whilst the need for a secure and resilient approach will not change, the means to achieve that may have to change if Government is to achieve good value and most effective implementation of public services. As stated in response to question 8, the Government must consider taking the role of custodian of data source, rather than direct controller of all data, in order to make best use of cloud technologies.

May 2011

Written evidence submitted by Alpine Resourcing

SUMMARY OF FINDINGS

The paper highlights:

- New challenges to successful delivery, highlighting areas where current practice and capability are under particular strain.
- The increased need to tackle issues which to date have been intractable.

The paper concludes that greater emphasis will be required on team-based constructs (real and virtual), explicitly providing skill mixes which are designed to encourage collaborative working at all stages of the lifecycle, and bringing to bear:

- an understanding of government and its workings;
- the capacity, credibility and willingness to inject real rigour at the formative stage of programmes;
- the discipline to articulate clear outcomes;
- the ability to calibrate risk and willingness to take balanced decisions;
- understanding of the potential and shortcomings of technology;

¹⁵⁴ As an example, a report by the Linux Foundation found that Red Hat, Novell and IBM were responsible for 24% of all changes to the Linux kernel over 16 months and that although over 5,000 developers had contributed over five years, the top 30 individuals had contributed over 25%:
<http://www.networkworld.com/news/2009/081909-linux-kernel-report.html>

¹⁵⁵ See as examples: <http://www.f-secure.com/weblog/archives/00001997.html> (a security firm blog concerning a security scam targeting the Firefox browser) and <http://www.washingtonpost.com/wp-dyn/content/article/2010/08/24/AR2010082406154.html> (covering a recent security breach within the Pentagon).

- relationship and alliance building;
- an experienced insight into the factors influencing success and failure in public sector IT;
- a willingness to embrace the recommendation in Martha Lane Fox's report on *DirectGov* to exploit the Internet to shift the lead in the design of services from policy and legal teams to the end users;
- a systematic approach to project review and applying lessons in real time. OGC reviews, properly applied, were a potent weapon which seem to have been abandoned; and
- numerous examples exist where poorly performing programmes that exhibit all the characteristics detailed above have been recovered when properly skilled individuals or teams have been brought in to rescue them.

OUR PERSPECTIVE

- *Exploiting capability which exists rather than building anew.* Strategies based on loose-coupled interoperability across existing platforms, rather than tight integration on standardised environments, are more likely to be cost and time effective. The role model needs to be based more on the approach taken to "Wiring up Youth Justice" and less on grand Departmental architectures.

At the same time, the policy drive towards more local engagement; the devolution of decision making and the opening up of information sources to allow better informed client / citizen choice implies:

- Greater flexibility and variance in the way solutions are implemented locally (ie the emphasis from the centre will increasingly be on outcomes rather than process);
- Fewer cost barriers to entry (expensive security options such as GSI will remain a part of, but cannot be the only way of, gaining deep connectivity across Government services and information);
- Greater emphasis on applications and information services which meet a defined need, and less on heavyweight infrastructure.

The challenges to existing programme management mechanisms are evident:

- The "single line of sight" on which so many of today's control and reporting processes are predicated will not be possible;

Command structures based on an implicit hierarchy will need to be supplemented, and in many instances replaced by, collaboration frameworks built on more explicit recognition of participants' different agendas, constraints and success criteria.

The successful programme manager in this new age will have skills geared towards alliance and relationship building, not just driving milestones in a plan; the technology manager will have skills centred on pragmatic "good enough" solutions using proven and available components not just implementing a ring fenced elegant architecture; the procurement manager will seek partners whose comparative performance can be measured on the ground rather than in a price schedule.

These skills exist in Government; but not in large numbers and in many instances they are disadvantaged by existing selection, appraisal and reward mechanisms (both formal and informal) which continue to value the "strong deliverer" over the "collegiate enabler"; the individual over the team.

We see a significant risk here: attempting to use traditional command and control techniques to initiatives which by their nature need to be flexible and engaging is likely to lead to very significant problems.

IN A NUMBER OF AREAS THE CHALLENGE REMAINS THE SAME

Notwithstanding the novel features of the IT landscape in future, some of the underlying causes of failure in the old model will continue to be relevant. The fact that successive reviews have drawn similar conclusions about the causes of failures despite several years' worth of investments in processes and skills training suggests that real underlying causes have not been fully analysed and addressed. We believe there are a range of alternative factors which, if misunderstood or incorrectly managed, can lead to failure. These are not easily discussable and that in itself lies at the heart of the problem. They include:

1. Project duration can exceed Ministerial and senior management tenure.
2. The adoption of big, high-risk, projects is incentivised by Departmental behaviours and norms (much kudos attaches to the large project) but execution is not so incentivised (competing priorities ensure that incentives are not aligned within a Department). More generally, there are no consistent rules of engagement between all participants in the delivery chain for a programme. Processes assume a commonality of interest which does not and cannot exist and although initiatives such as the Joint Statement of Intent have attempted to address part of this problem, it remains an issue.
3. Expectations are mismanaged from the outset because both Ministers and Civil Servants have become inured to a gap between presentation and reality.
4. Informed challenge is, in practice, neither welcomed nor acted upon.
5. Projects are required to make estimates, and contractors to offer prices, over timescales and uncertainties which are beyond the capability of current estimating tools and processes.

6. Aspiration is allowed to trump experience.
7. Inadequate use is made of data to underpin initial analysis. Customer behaviour in particular is poorly understood, whether it be about what is important in choice terms (in permissive regimes), or about differentiating between effective deterrence and detection (in compliance regimes).

Established policies carry momentum long after they have become overtaken by new circumstances and can therefore serve to inhibit effective action in a changed environment. (The great weight of current Government IT thinking is based on concepts of centralisation, standardisation, integration and economies of scale. These tend to be accepted as self-evidently good things, but they have not necessarily delivered what was expected of them, nor will all of them translate into the new age without some modification).

What stands out is that IT itself is rarely the issue. Many problems implant before any IT programme is underway. The challenge for the future is to ensure that programmes from the outset attempt to do the right things; at achievable scale and, critically, meet with customer expectations. In our experience, **every** large scale project which runs into difficulty knows, well before failure occurs, that excessive risks are being taken. One of the characteristics which distinguishes those projects which manage to stage a recovery from those which run into the sand is the willingness of the wider management environment to make the problems discussable so as to define the problem accurately, and the ability to inject the right skills into the mix so as to construct effective solutions. Indeed numerous examples exist where poorly performing programmes that exhibit all the characteristics detailed above have been recovered when properly skilled individuals or teams have been brought in to rescue them. (This is consistent with the recommendation in Martha Lane Fox's report on DirectGov that SWAT teams be used to support and challenge departmental teams.)

We believe that these factors are endemic across the public sector and its supplier base. A failure to understand these factors and how they can be addressed will almost certainly ensure that future IT programmes, no matter what governance arrangements are used, will fail to deliver the benefits needed within reasonable timescales and affordable costs.

SUMMARY

The nature of the coming challenge means that existing approaches to the definition and delivery of change through projects and programmes will need extensive modification. In particular, greater emphasis will be required on team-based constructs (real and virtual), explicitly providing skill mixes which are designed to encourage collaborative working at all stages of the lifecycle, and bringing to bear:

- an understanding of government and its workings;
- the capacity, credibility and willingness to inject real rigour at the formative stage of programmes;
- the discipline to articulate clear outcomes;
- the ability to calibrate risk and willingness to take balanced decisions;
- understanding of the potential and shortcomings of technology;
- relationship and alliance building;
- an experienced insight into the factors influencing success and failure in public sector IT;
- a willingness to embrace the recommendation in Martha Lane Fox's report on DirectGov to exploit the Internet to shift the lead in the design of services from policy and legal teams to the end users; and
- a systematic approach to project review and applying lessons in real time. OGC reviews, properly applied, were a potent weapon which seem to have been abandoned.

Numerous examples exist where poorly performing programmes that exhibit all the characteristics detailed above have been recovered when properly skilled individuals or teams have been brought in to rescue them.

May 2011

Written evidence submitted by Industry Technology Facilitator (ITF)

Established in 1999 by Oil and Gas Companies, ITF (Industry Technology Facilitator) was developed as a joint programme involving the Government and the UK oil & gas industry—Operators, Contractors, Suppliers, Trade Unions and SME's—aiming to secure the long-term future of the industry in the UK. This was in recognition of the dramatic fall in oil prices at the time, the maturity of the UKCS, and the urgent need to reduce the cost base of activity in the basin.

A new approach was required to foster a genuine spirit of collaboration between all parties to maximise their shared knowledge, experience, and to identify the key challenges faced of the Oil and Gas industry. Over the years, ITF has adopted a global remit in response to our members' needs, and is now the internationally recognised champion for technology innovation within the oil and gas and related energy sectors. ITF acts as a conduit between technology innovators and the major global operators and services companies.

ITF, a “not for profit” organisation, is owned by 28 of the major global operators and service companies. Our key objectives are to identify technology needs, foster innovation and facilitate in the development and implementation of new technologies. ITF membership provides the opportunity to define ITF’s goals and objectives in order to bring much needed new technologies to the market place through partnership and collaboration with developers and end users. Each year, we embark on a consultative process which identifies the changing gaps and needs of our membership, then we follow the **ITF Process™** which ultimately focuses on implementation. ITF is seen by all as an Honest Broker, and we embrace every opportunity to work with other funding partners throughout the globe, in a genuine spirit of sharing and collaboration.

THE PROCESS™

— **To identify the shared technology needs of our member companies**

Achieved by conducting regular surveys of our members needs, an Annual Technology Conference, and twice yearly face to face meetings with our member companies.

— **Seek out innovative solutions**

We run facilitated Technology challenge workshops, and invite our members, researchers, academics, developers, and SMEs. We then drill down into the subject in order to identify the specific technology gaps required by the industry.

— **Engage the development community**

The output from these workshops is our Call for Proposals, which is circulated to our members for review and approval prior to being distributed to our data base of global developers (universities, research centres and innovative companies).

— **Screen and evaluate proposals**

Once received, the proposals are reviewed in conjunction with our members to ensure that the scope of development work undertaken is closely aligned to their specific needs and objectives.

— **A technical clarification meeting is held**

The developers, whose submissions have been recommended, are given the opportunity to present their proposed technology, ask for funding, and answer questions from our panel of members interested in the specific technology.

— **Launch a Joint Industry Project**

Once agreement is reached, a separate contract is then signed between the interested parties and the developer outlining the clear deliverables. A steering committee is established, and the role of ITF is as an observer to ensure that the project stays on track.

— **Technology Implementation**

Implementation is the demonstrable proof that success has been achieved. Many of the technologies developed through ITF are now commercially available, other knowledge based algorithms and are incorporated into members workflows.

There is no doubt that a version of this “unique” process could be transferred and adapted to suit other industries in order to find the solutions which they require.

June 2011

Written evidence submitted by Kelvin Prescott and Susan Atkinson

AGILE IN GOVERNMENT IT

AN ANALYSIS OF THE BARRIERS TO THE PROCUREMENT OF AGILE DELIVERY SERVICES

INTRODUCTION

This Note is written in response to a request from the PASC for an insight into what changes are required to the public procurement process to enable greater use of agile development.

We do not believe that agile development is a panacea for the problems of Government IT. However, it may be able to help. For this reason, we have slightly amended the scope of this note to ask:

What needs to be done differently in the public procurement process to enable more appropriate use of agile development?

In our view, there are two key areas that need to be addressed in order to enable appropriate use of agile development.

- (i) The implementation of an Evolutionary Contract Model that reflects the principles of Agile and Lean.

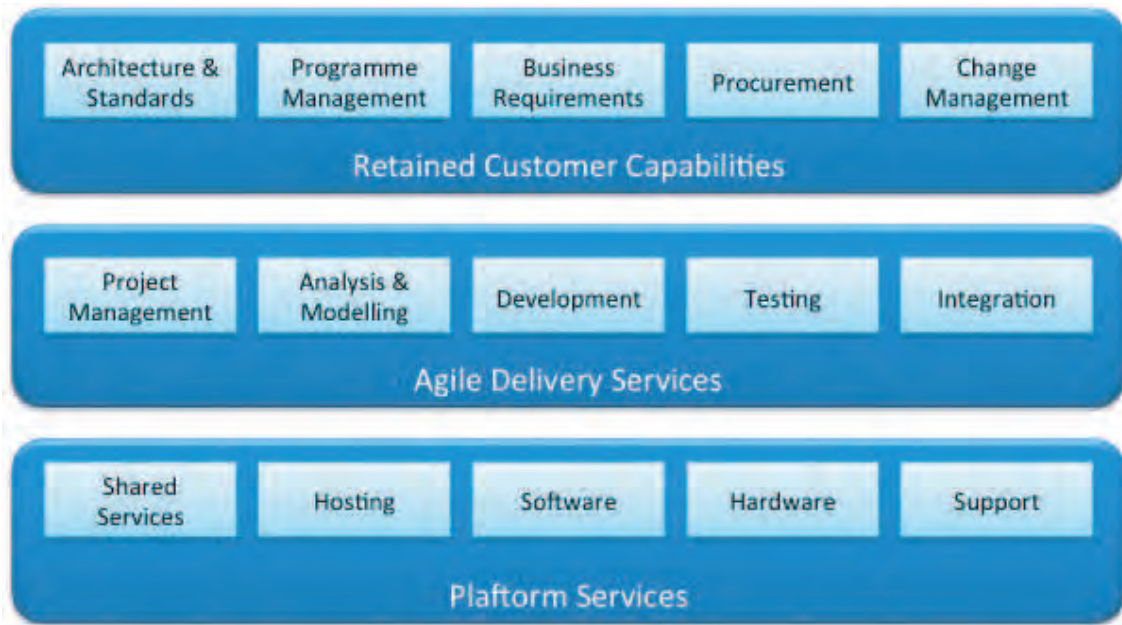
- (ii) The adoption of an Agile Procurement Strategy that enables public sector buyers to select and engage suppliers rapidly, with low transaction costs, whilst complying with the Procurement Regulations.

The barriers to agile development cannot be effectively removed unless each of these areas is addressed.

In this Note we put forward a proposal for a contract model and a procurement strategy, each of which complements the other, and which we believe work well together. We have also identified some specific areas in the Public Contract Regulations 2006 that constrain Agile Procurement.

THE SCOPE OF AN AGILE PROJECT

A successful agile development project requires a range of skills and services to be available in a timely and cost effective way. A typical agile development project will require most or all of the elements set out in the diagram below:



Looking at each of these elements in turn:

- *Retained Customer Capabilities.* An informed customer must retain various capabilities to initiate, manage and deliver an agile project in a way that delivers value to the business. In our view these should be part of the core competency of the public sector body (the “PSB”), rather than bought in from the private sector. Typically, these capabilities account for 15–20% of the total cost of an agile project.
- *Agile Delivery Services.* This is a reference to the various services required to undertake an agile development, from project management through to requirements analysis, development, test and integration. These can be either provided in-house or procured from a third party supplier, although they are generally procured externally by most PSBs. Typically, these services account for 30–45% of the total cost of an agile project.
- *Platform Services.* These services comprise a range of enabling services, including authentication, identity management, transaction processing, hosting; as well as end-user infrastructure and support of software and hardware. Whilst these services are essential for the delivery of an agile project, it is more efficient for them to be provided as platform services with the costs shared across multiple projects and programmes, and they are generally procured externally. Typically, these services account for 30–40% of the total cost of an agile project.

This Note only considers the procurement of Agile Delivery Services. However, we recognise that the procurement strategy for an agile development project also needs to identify and make use of the optimum procurement route for Platform Services. Agile projects can only be successful if they are also implemented in conjunction with the development of the required Retained Customer Capabilities, and governance that is adapted to reflect the nature of agile projects.

THE EVOLUTIONARY CONTRACT MODEL

The issue

Traditional contracts are unsuited for software or product development projects. They are based on defined process control with great emphasis placed on plans, requirements and estimates that are created at the start of the project. This assumes that development projects are predictable, but sadly they are not. There is a huge amount of complexity and uncertainty surrounding a development project, particularly in IT. The level of complexity and uncertainty has increased in recent years as the pace of change increases and technology becomes more sophisticated and all-pervasive.

The only way in which traditional contracts can adapt to change is by means of the change control mechanism. However, instead of facilitating change, the change control mechanism actually serves to restrict change. The process of documenting changes is time-consuming, consumes valuable resources, can be expensive to implement, and adds no real value to the project. It simply attempts to keep the contract in step with the pace of change.

A possible solution—the Evolutionary Contract Model

(i) The background to the Evolutionary Contract Model

The Evolutionary Contract Model has been developed by Susan Atkinson from gallenalliance Solicitors together with Gabrielle Benefield from the Scrum Foundation, and with input from some of the leading organisations (notably emergn Corporation) and thought leaders in this space. This model is suitable for use with any agile methodology. It draws upon the principles of Scrum, XP, DSDM Atern and Evo as well as Lean thinking.

(ii) The nature of the Evolutionary Contract Model

The Evolutionary Contract Model is a goal-oriented contract for the provision of services. Unlike a traditional contract for services, it is not based on defined process control but on empirical process control as advocated by Scrum. This is a form of control driven by experience and experimentation.

The fact that there are no detailed plans and specifications in the contract means there is no need for a change control mechanism. Instead, the customer's desired features of the solution are captured in a central repository which takes the form of an evolving prioritised queue of work (the "EPQ"). The EPQ does not have contractual status. However, the EPQ must be within the scope of the contract, and the ability to change it is regulated by the contract. The EPQ may be, and should be, amended and refined by the customer throughout the life of the project. It is this ability of the customer to make changes to the EPQ at any point in time that is key to building flexibility into the development process.

In order to achieve empirical process control there must be visibility, inspection and adaptation. To achieve this, (a) the work involved in the development project is decomposed into a number of small, prioritised, concrete deliverables; (b) the project is broken down into short fixed-length iterations at the end of each of which completed deliverables can be inspected by the customer; and (c) the project team must be able to self-organise which in turn means that it must be small and cross-functional.

Essentially, under the Evolutionary Contract Model the project is broken down into a series of iterations during which the customer has full transparency of the development process and can inspect the process for correct operation and results. At the end of each iteration the customer can adapt the process as needed to achieve the desired outcome. The customer should be able to make the adjustment as quickly as possible to minimise further deviation.

Delivery of an agile project is measured in terms of delivery of quantifiable value to the stakeholders, within the parameters of the scope of the project. Working software is the primary measure of progress. Measures such as the completion of tasks, work in progress or the production of documents are not relevant to the delivery of value.

Quantified value is delivered incrementally to the stakeholders from more-or-less the start of the project. This can be achieved because, firstly, the customer is responsible for prioritising the order in which increments of the solution are delivered at the end of each iteration and, secondly, at the end of each iteration the supplier provides quantified metrics showing the progress of work and the extent to which the customer's desired outcomes have been achieved. These metrics inform both of the parties where to focus the development activities and how they may improve the process.

One of the key objectives of the Evolutionary Contract Model is to delegate responsibility and accountability for the project management to the team. The customer must be represented on the team but the role of the customer is quite different from that of the supplier: the customer provides the domain expertise and the supplier provides the technical expertise.

Accordingly, neither the EPQ nor the project-specific details form part of the contract. This means that there is far less administration surrounding management of the contract, making it a more attractive model for SMEs.

The Evolutionary Contract Model only differs from a traditional contract in terms of how the solution is delivered. There is no reason why, for example, provisions regarding the treatment of intellectual property rights, data protection, assignment and so on should be treated any differently.

(iii) The structure of the Evolutionary Contract Model

In terms of the project-specific details, the contract contains merely a succinct and high level description of the scope of the project in terms of the customer's vision for the project, the desired outcomes and the constraints. This is for a couple of reasons: firstly, all parties should be aligned in terms of the goals of the project and, secondly, more granular planning is considered to result in waste given that detailed specifications are likely to become obsolete relatively quickly.

The contract structures the project as several discrete phases: (a) the Discovery Phase, (b) the Calibration Phase, (c) the Delivery Phase and (d) the Deployment Phase. Initially the parties only make a firm commitment to conduct the Discovery Phase. The contract is structured as a framework under which the customer may (but is not obliged to) place statements of work to initiate the Calibration Phase and each of the releases in the Delivery Phase and the Deployment Phase. The ability of the customer to develop the solution in stages, without an upfront commitment to the project as a whole, greatly reduces the probability of significant cost over-runs and provides strong incentives for the supplier to deliver value early.

During the Discovery Phase the customer works with the supplier to validate the outline business case for the project. This involves identifying the stakeholders and modelling their requirements, modelling the constraints, assessing the associated risks, mapping the solution and context modelling. As part of the solution mapping, the solution is broken down into constituent solution subsets, each of which is to be delivered as a separate release. The end of the Discovery Phase provides an ideal point for Gateway review of the project. If the business case is validated, the parties move into the Calibration Phase.

During the Calibration Phase the parties work on a small amount of key functionality of the solution to inform their decisions regarding the high level architecture of the solution and to calibrate the velocity of the team. This in turn enables the supplier to create more accurate estimates for the purposes of scheduling and cost. The parties also develop the rules of governance for the project. Once the team and the solution have reached a certain level of maturity, the parties move into the Delivery Phase.

During the Delivery Phase the solution is designed, built and tested as a series of modules, each of which will build upon the modules previously delivered. The Delivery Phase may comprise anything from 3 to 20 separate releases.

Whichever charging model is used, it is important that there is some form of incentive linked to the delivery of value to the stakeholders. More advanced teams are looking to link charges directly to a quantifiable measure of value.

THE AGILE PROCUREMENT STRATEGY

The issue

Current public sector procurement strategies are based on the traditional contract model and have as their central objective the need to reduce risk to the fullest extent possible prior to the award of contracts that commit HM Government to the full investment in a new capability. The OGC Gateway Review process, and the guidance issued to PSBs encourage Senior Responsible Officers (SROs) only to submit business cases for approval when they have met the highest possible standard of maturity.

These strategies are appropriate for Platform Services, where the specification is relatively stable and service volumes are very high. PSBs have tended to put in place long term contracts to offset the high entry and transition costs.

However, a fundamental principle of Agile and Lean is to fail early, and fail often. "*Software is nothing else than codified and explicit knowledge.*"¹⁵⁶ So, the best approach for generating knowledge is through experimentation with small, rapid try-it, test-it, fix-it cycles.¹⁵⁷ Rather than seeking approval when the project business case has reached a given standard of quality, agile projects seek approval when a fixed time period has elapsed. Agile business cases have a built-in presumption that, if insufficient value has been delivered by a given date, the project will be cancelled and resources diverted to other initiatives that appear more fruitful.

The contrast between the two approaches could not be more stark.

A possible solution—the Agile Procurement Strategy

The Agile Procurement Strategy is based on the "*Fail Early, Fail Often*" principle. Buying organisations must maintain access to an eco-system of suppliers that enables them to rapidly appoint suppliers to support

¹⁵⁶ "*Agile Software Development with Scrum*" by Ken Schwaber and Mike Beedle, 2002.

¹⁵⁷ This is a variation on the iterative four-step management process of "*Plan, Do, Check, Act*" as popularised by Dr W Edwards Deming, who is considered by many to be the father of modern quality control.

individual projects. Equally, they must also have the ability to rapidly terminate contractual arrangements if a particular project fails (whether due to a supplier default or for any other reason).

The supplier eco-system must cover the full range of services, from Platform Service providers through to Agile Delivery Service Providers. In the private sector, large scale systems integrators often provide Platform Services and integration of the software with existing systems, with a range of SMEs to provide specialist resources to support the development phase of the project. However, public procurement is more constrained than private sector procurement.

An Agile Procurement Strategy for PSBs must meet the following criteria:

- (a) It must be compliant with the EU procurement directives.
- (b) It must significantly reduce the time taken to select suppliers and place contracts when compared to current procurement routes.
- (c) It must reduce transaction/overhead costs for all parties.
- (d) It must be supported by procedural changes in the way that ICT projects are defined and delivered, to enable more flexible, rapid decision making.

We propose that PSBs could engage an equivalent eco-system of suppliers for the procurement of Agile Delivery Services by means of one or more framework-based Electronic Marketplaces. Each framework should have the following characteristics:

- Its scope is limited to a defined ICT category, potentially in line with those used for existing Buying Solutions frameworks.
- Only one service provider is selected—the Market Manager.
- The role of the Market Manager is to:
 - establish and maintain an electronic trading environment for suppliers to provide in-scope services, and for public sector buyers to publish requirements;
 - provide central administrative services including registration, prequalification of suppliers for different sizes of opportunity, process management, provision of security vetting services for market participants, marketing and promotion of the marketplace;
 - to maintain and apply Market Rules: standard terms and conditions and contracting procedures that enable the rapid selection and engagement of individual suppliers to support specific requirements.
- The Market Manager recovers its costs through the application of a mark-up to the services procured through the framework.
- Crucially, the Market Manager must be a neutral party: it must not be involved in the delivery of the services. This removes the inherent conflict of interest in the operation of current framework agreements, where a large systems integrator has a strong incentive to propose its own services in preference to those of its subcontractors.

Electronic marketplaces are not new—a number have been established within the public sector in the course of the last decade. They provide an electronic trading environment in which buyers can advertise their requirements to a pre-selected group of suppliers, with the majority of the steps in the purchase to payment process automated. The Zanzibar platform provides an example of the efficiencies that can be achieved through this approach.

However, the existing electronic marketplaces have tended to focus on improving the efficiency of existing supply arrangements, rather than as a mechanism for enabling new providers to enter the marketplace. A framework based Electronic Marketplace could deliver a fast, efficient mechanism for the delivery of agile development projects, and also meet the parallel government objective of extending the involvement of SMEs in the delivery of government IT.

THE PROCUREMENT CONTRACT REGULATIONS 2006

The background

The Procurement Contract Regulations 2006 (“PCR”) permit the use of Dynamic Purchasing Systems (“DPS”), e-auctions and framework agreements to facilitate the more rapid placing of contracts. Each of these mechanisms is suitable for the award of contracts in support of agile development projects, and should be used in preference to either the Negotiated or Competitive Dialogue procedures.

Electronic auctions and dynamic purchasing systems

In the private sector the use of e-auctions and DPS is a well established mechanism for placing small to medium sized contracts for software development. For example, www.elance.com and www.guru.com have demonstrated that this is a viable option. The PCR also allows the use of e-auctions and DPS when the goods or services in question meet certain criteria.

In relation to e-auctions Regulation 21 of the PCR states:

- (3) The contracting authority shall *not hold an electronic auction* to precede the award of a public services contract or a public works contract having as its *subject matter intellectual performance*, such as the design of works.
- (4) The contracting authority may only hold an electronic auction to precede the award of a contract when the contract specification can be established *with precision*.
- (5) The contracting authority shall base an electronic auction on—
 - (a) price alone where the contract is to be awarded on the basis of the lowest price; or
 - (b) *price or the values of quantifiable elements of tenders* indicated in the contract specification, where the contract is to be awarded on the basis of the offer which is the most economically advantageous in accordance with regulation 30(1)(a).

(i) The issue

Regulation 21 of the PCR limits the ability of PSBs to use e-auctions for agile projects for the following reasons:

- (a) Regulation 21(4) requires the contract specification to be established “*with precision*”. However, Agile and Lean thinking advocate that the project is initially described at a high level, and that the specification of the solution evolves and matures within the scope of the project.
- (b) Regulation 21(3) prohibits the use of e-auctions for contracts whose subject matter is “*intellectual performance*”. Arguably, for this reason e-auctions are not permitted for software development.
- (c) Regulation 21(5) only permits a contracting authority to base the auction on elements of the tender (whether price or quality). However, the experience of the majority of e-auction sites is that one of the principal factors determining customer choice of a particular supplier is historic feedback on that supplier’s performance—a measure which, by definition, cannot be provided impartially by the supplier in question.

(ii) Proposed amendments to the PCR

It should be clarified that e-auctions can be used for software development projects.

The selection and award criteria for tenders should explicitly enable PSBs to take account of direct feedback from previous customers in evaluating bidder suitability, regardless of whether these were included in the bidder’s tender.¹⁵⁸

Contracts placed under e-auctions should allow for staged commitment, comprising an initial contract specification, which would be fixed in the same way as are set out in Regulation 21(4). Commitments to further contract specifications should be permissible, subject to the supplier having satisfactorily delivered the initial contract specification.

Thresholds

The objective of the thresholds is to maximise the level of visibility and participation by the market in all public sector opportunities. Contracts below the threshold may be awarded by PSBs without reference to the PCR, although they must still follow general Treaty of Rome principles such as non-discrimination, transparency, and equality of treatment. Contracts above the threshold may only be awarded after a compliant procurement process, using one of the procedures set out in the PCR.

(i) The issue

In practice, the thresholds are set so low that they have the opposite effect to the intended objective: they artificially restrict competition and access to the public sector market by SMEs. This is for the reason that the thresholds do not take into account the real cost to market participants of bidding on each opportunity, particularly in the IT category, where the requirements are complex and difficult to specify in advance.

Recent evidence presented to the PASC shows that a buyer’s transaction costs associated with running a typical Competitive Dialogue procedure for the award of an IT contract are in the order of £1 million. Bidder costs will be of a similar order of magnitude. When faced with these transaction costs, it does not make sense for the minimum threshold to be set at 220,000 Euros for the value of the resulting contract. Public sector buyers are forced to aggregate their requirements into large contracts (far higher than the threshold), and only large companies have the resources to bid on them.

Regulation 19(9) of the PCR regarding framework agreements already recognises this issue and makes some allowance for PSBs to set a suitable timescale and invite tenders from a number of framework suppliers (one of the most common methods used for the procurement of IT systems). However, the award criteria have to be the same as those set out in the original framework competition, which restricts the level of discretion to select the most suitable supplier at the time of the tender being submitted.

¹⁵⁸ Whilst this Note focuses on IT projects in particular, this principle is also applicable to other categories of spend.

(ii) Proposed Amendments

The relevant threshold for the application of the full procurement procedures should be set by reference to:

- the nature of the goods and services being sought; and
- the transaction costs associated with the procurement process.

In the case of IT services, this would result in the threshold being significantly higher—enabling PSBs to adopt selection and award processes that are more proportionate in terms of the ratio of transaction cost to contract value.

SUBMISSION DETAILS

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June 2011
