Chapter 8

The Journey to Digital Government

"In the current economic circumstances businesses are facing up to real challenges of cutting costs in order to stay in business and emerge stronger from the downturn. The public sector needs to do likewise, looking for savings in addition to the routine savings departments are expected to make each year, so that the Government can continue to invest in excellent public services while maintaining sustainable public finances."
Operational Efficiency Programme: final report: April 2009

AMBITION: TO ENSURE THAT DELIVERY OF PUBLIC SERVICES IN THE UK KEEPS PACE WITH USERS' EXPECTATIONS OF NEW TECHNOLOGY AND THAT THE PUBLIC SECTOR IS EFFICIENT AND SMART IN PROCURING AND USING ICT SYSTEMS

The Government as a Player in the Digital Economy

1. As well as the regulatory and policy decisions described elsewhere in this document, the Government impacts the digital economy in significant ways:
   1) as a deliverer of public services;
   2) as a major purchaser of ICT systems products and standards;
   3) as a commissioner and controller of data and content, and gatherer, keeper and user of public and personal data; and
   4) as strategic hub for development of the nation's future digital strength.
2. This Chapter addresses measures to improve our performance in each of those four areas.
3. The journey towards Digital Government to date has been in two phases. The first phase, from the later 1990s to around 2004/05 was about driving Britain, private sector and public sector, from being a laggard, as we were in the mid-

1990s, to a leading economy in terms of e-readiness. Institutionally it was characterised by the e-Envoy and an e-Minister in Government and a new unified communications regulator, Ofcom, which radically altered the structure of the broadband market, giving Britain among the most widely available and affordable first-generation broadband services of any developed economy.

4. The proportion of public services online went from less than 30% of the total available (and that mostly alternative access to paper-based brochures) to 75% plus by 2005; though still in many cases they were an online replica of the offline service, based around the silos of providing departments rather than the actual public service needs of the citizen.

5. In this period, the public sector procured a range of substantial networks, from the research and Higher Education network Superjanet to the NHS network – the world's largest virtual private broadband network – and the Government's own network, the world's largest wide area network; but again built and commissioned in silos with extensive and expensive duplication, different terms and conditions, different service standards, etc. This last is by no means a phenomenon unique to the United Kingdom: around the developed world departments of state exist largely as silos to address a particular set of relatively stable analogue-era interests and issues. They are not well adapted to the fluid, iterative nature of the digital world where technology interacts with and re-shapes the underlying business process (itself a concept imperfectly understood by the policy, rather than operationally-focused, parts of the public sector).

6. The second phase, since 2004-05 can best be described as 'Government on the web', characterised by the creation of the office of Chief Information Officer and the CIO Council across Whitehall and the institutional support for the Transformational Government programme in the Cabinet Office. Together these are driving towards more common procurement systems, smarter procurement, developing new ways of e-engagement with the citizen and effective savings, based on process re-engineering of online delivery of public services, particularly the large operational units such as JobCentre Plus; a process which HMRC have probably taken furthest with the complete 'analogue switchover' to online in the tax returns from all businesses.

7. The other changes flowing from Digital Britain mean that the time is now right to make the step change to the next, third, phase – not merely Government on the web, **but Digital Government Phase Three: Government of the Web**.

DELIVERY OF ONLINE PUBLIC SERVICES

8. Websites such as Directgov and businesslink.gov are successfully serving the citizen and business audiences for Government. Directgov today delivers a wide range of services and has more than 14 million visits each month. It is the place to go to apply for a job, plan a journey, find local services on a mobile phone, and find clear information about income tax, benefits and employment.

9. The delivery of online services have brought significant benefits to both Government and users:
   - Services such as NHS Choices have provided a step change in E-Health delivery in the UK. NHS Choices had 5.2 million visitors a month as at January 2009.
   - The Electronic Vehicle Licensing (EVL) scheme, which enables customers to tax their car online, saves the DVLA around £8m per annum, and attracted 18m users last year. For every additional re-licensing transaction that is processed through the EVL channel a further 93p will be saved.
   - The Government Whole Farm Approach enables farmers to provide a common set of information once to all of the interested agencies, reducing form filling by 15% and saving the industry £16.5m per annum.

The US Army

In February 2005 the US Army decided to automate some of its processes, transforming business processes across the Army Enterprise. The process sought to move to a fully electronic, web based solution. The results of the exercise were compelling, including:

- Savings estimated at $1.3bn per annum by taking paper out of the organisation and improving their process work flow;
- Saving of countless labour hours – the implementation of e-forms is estimated to save every person in the US Army 30 minutes per day; and
- Greatly reduced lost documents by providing online reporting and tracking of forms.

10. Almost half of the UK population today have used the Internet in the last year to access information about Government or local council services or completed a Government form or process online, according to Ofcom research. And 42% of people said that they had looked for information online about a Government or local council service, or used services such as paying their road tax or registering for Child Tax Credits online. Among people who have the Internet at home, 55% have used these services online.

11. Additionally, the number of Government websites has been too large. A profusion of websites with targeted audiences and no overall architecture to link them can make the interface with customers confusing, and undermine each website's importance and value. To address this, we need to press on with cross-Government work in improving the offer to customers by streamlining the sheer number of Government websites and brigading them either through the Directgov portal (for citizens) or the Businesslink portal.

12. This progress is encouraging. However, in order to maximise the opportunity afforded by universal broadband for the delivery of online services, digital Government will need to become genuinely "of the web", not simply "on the

web". That means designing new services and transactions around the web platform, rather than simply adapting paper based, analogue, processes. It also means more closely integrating web, telephone and face-to-face channels. **The Government has set a target of closing more than 95% of citizen- and business-facing websites and moving the content to Directgov and businesslink.gov by 2011.**

13. Bringing about this scale of change will require significant leadership and focus and a willingness to put this reform at the heart of Government activity as opposed to tacking it onto the side of existing ways of working.

14. The announcement of a 2Mbps Universal Broadband can signal the starting point for the preparation of a roadmap to a truly Digital Government. Government has already started this process.

15. Discussion with stakeholders inside and outside Government[36] has demonstrated a consistent view that Government should develop a roadmap to a new programme of Digital Switchover of Public Services (by which we mean online being the primary means of access, rather than one among many – though clearly with a safety net in delivery for those unable to access the service online). The services most suitable for earliest switchover will be identified by **six criteria**:

    1) **Transaction volumes:** is this a low value but very well-used service?

    2) **Complexity:** can users be expected easily to work their way through the process without assistance?

    3) **Customer groups:** is this service likely to be used by the general population, or is there a specific user group? (e.g. older people)

    4) **Legislative impacts:** what are the legal requirements on Government to use certain channels or signatures?

    5) **Physical verification:** is there a need for witnessing or token exchange

    6) **Efficiency:** what is the scope for cost savings that will provide better value for money in public service delivery?

16. **We propose starting a Digital Switchover of Public Services Programme in 2012. We will need to consider in more detail the ramifications of switching each service to digital but an initial list might include:**

- **Student loans**
- **Companies House registration**
- **Personal tax returns for higher rate taxpayers**
- **Electoral roll registration**
- **School registration**

36 To take one example, IBM have proposed to us that Government should develop a "heat map" identifying those services that have the most potential to be candidates for 'digital switchover'. The criteria listed here are adapted from their submission.

- **Redundancy advice processing**
- **Debt advice**

We suggest each Government department should identify, before 2012 and against the criteria outlined above, at least two such services to form part of the Digital Switchover of Public Services Programme. These targets should be set and monitored in the context of departments' individual customer contact strategies.

17. Rather than providing a barrier to the wider delivery to Digital Government, this simply emphasises the need to ensure that a roadmap to the future delivery of Digital Government will need to consider how and to whom the services are targeted and whether an online only or a multi-channel approach is needed, rather than a one size fits all approach.

EFFICIENT AND SMART PUBLIC SECTOR PROCUREMENT OF ICT SYSTEMS AND PRODUCTS

18. In delivering the second phase of Digital Government, the Government's Chief Information Officer (CIO) and the CIO Council have made huge progress in developing the capability and strategy in the public sector for efficient procurement and use of ICT. Work is well underway to create a Public Sector Network (PSN), to supersede the overlapping and duplicative patchwork quilt of departmental or sectoral (e.g. health or academic) networks. In keeping with the philosophy underpinning Digital Britain, the PSN concept has moved beyond physical networks to a virtual network with common design, standards, service level agreements, security and governance.

19. The CIO Council has also been laying the foundations for Digital Public Services by standardising on the desktop computer designs and approaches; the use of open source, open standards and reuse – ensuring all parties reuse the IP created by the Public Sector; the green ICT Strategy to drive sustainability as well as efficient and effective infrastructures.

20. This has put the UK's digital public procurement in a world-leading place. But, as ever, as we move to Phase Three of Digital Government, there remains further scope to drive significant improvements.

21. Martin Read's review of Government's back office operations and IT for Budget 2009 suggested that better management information was needed about expenditure on IT, governance of project management needed to be improved, costs should be cut, and procurement should be smarter, with more sharing of products and more central procurement rather than bespoke solutions for every department, ultimately leading to a common IT infrastructure.

22. The historic legacy of multiple different procurement contracts signed by different departments at different times militates against a 'Big Bang' adoption of PSN across all departments at once. However, the FCO's current OCEAN procurement will be the first to adopt the PSN concept.

23. Public procurement of major ICT contracts faces three big challenges. **Firstly**, the barriers to entry can lead to the Government or wider public sector becoming dependent on incumbent providers. The complexity and scale of both the tender process and procurement information demands can often also militate against entry to the market of smaller, innovative companies, to the detriment of public service users. The CIO Council recognises this challenge, and through its PSN concept aims to create a more open market in procurement and to reduce lead times – currently a typical IT procurement can take up to three years from initial approval to tender to the contract being signed.

24. **Secondly**, the structuring of contracts, and the offloading of risk to the supplier, can lead to rigidity in the relationship with suppliers, and can see the public sector cede control over delivery. This is particularly pertinent in relation to ICT, where services need to evolve constantly as technology does.

25. **Thirdly**, these two factors can combine to accentuate the bespoke nature of contracts, which can militate against scalability and sharing of core services, even where this would be more efficient.

26. **The Digital Britain Report therefore recommends that the CIO Council agree a small number of potential areas for tender, and ensure the availability of a simplified, fast-track process (consistent with EU procurement rules) aimed at allowing such innovative companies to participate at the main contractor level rather than seeking sub-contractor status with incumbent bidders who may not wish to fit the particular innovation into their wider procurement bid.**

27. In addition to the Public Service Network we need to be able to add business applications to create a 'G-Cloud', using Cloud Computing. At the time the Government procured its secure intra-departmental email system – GSI – it did not have the knowledge or procurement capability to specify and add applications to the basic network. Now, with the CIO and the CIO Council, Government does have the capability and cannot afford not to use it.

28. Cloud Computing is a model of shared network-delivered services, both public and private, in which the user sees only the service or application, and need not worry about the implementation or infrastructure. The cloud offers the ability to treat IT as a ubiquitous, on-demand service and to flexibly consume as much or as little as is needed. Cloud services are quickly and easily provisioned online and feature granular service catalogues and user-based pricing. The biggest IT companies are now rapidly introducing cloud services, with companies like HP and IBM both introducing cloud services and providing the infrastructure inside public and private clouds.

29. The CIO Council and the Public Sector Council of Intellect, the trade association for the UK high tech industry, therefore commissioned a strategy study to see whether the technical advances associated with Cloud Computing – server and storage virtualisation, systems management automation, image management, and self-service provisioning – could be used to provide a private cloud for Government – a 'G-Cloud'.

30. The "public" cloud – where services can run on any server anywhere in the world – has attracted attention from industry commentators. Achieving it, would be a first around the world for Digital Britain. But there are issues of meeting governmental needs for data location, security, data recovery, availability and reliability.

31. The strategy study has established a route-map towards the creation of a G-Cloud, as part of the rationalisation of data centres used by Government and the wider public sector. This would both allow Government to benefit from the core attributes of Cloud Computing e.g. enhanced user experience, flexible pricing, elastic scaling, rapid provisioning, advanced virtualisation while also maintaining the appropriate levels of security, accountability and control required for most Government systems, and lead to substantial savings in costs.

32. The G-Cloud delivery model would also help make other parts of the Government IT marketplace more cost-effective, flexible and competitive. It would support and encourage the adoption of higher levels of standardisation and sharing of IT services across departments. It would allow Government to provide more cost-effectively for peaks and surges in demand for e-Government services; and it would reduce the barriers to entry to the Government marketplace for application and other IT vendors, including SMEs, who would be able to provide services running on standardised, secure infrastructure without having to incur the costs of establishing and accrediting their own infrastructure (in the same way as companies such as 37Signals have used public cloud facilities).

33. **The establishment of a G-Cloud will however require investment in technical development and physical facilities, and the CIO Council and the Intellect Public Sector Council are now developing the strategic business case to justify funding the G-Cloud. Provided that this business case can be properly developed, the adoption of the G-Cloud will be a priority for Government investment to secure efficiencies, even within the very constrained framework for public expenditure, over the next 3 years.**

34. **In the meantime, all those Government bodies likely to procure ICT services should look to do so on a scaleable, cloud basis such that other public bodies can benefit from the new capability.**

35. All of the above are major developments (there are many other aspects of ICT procurement which this report does not have space to comment on) and they require a clear, single-point, single-minded management focus. The CIO and his Council have been significant drivers of Digital Government Phase Two reforms. But there are limits to the pace at which change can be driven by guidance, exhortation and discussion. Government as a whole cannot afford an excess of departmental particularism to frustrate the necessary drive to common systems and procurement.

36. **Currently, final sign-off for all new internal system procurements rests with individual departmental Accounting Officers; the Government CIO is consulted but it is not his decision. The Digital Britain Report recommends**

that the Government take the necessary steps to secure that the Government CIO has a 'double lock' in terms of accountabilities and sign off for such projects. That will secure Government-wide standards and systems.

RECOGNISING DATA AS AN INNOVATION CURRENCY

37. Data and information are the lifeblood of the knowledge economy. It is monetisable: businesses are built around the gathering, control and manipulation of data. But it is also a public good, and availability in data on the web has led to an explosion in user-generated, non-profit content and collaboration.

38. There are though two broad categories of data: the public and the personal. Public data (for instance geographical information, generalised census information, meteorological information), might attract a greater or lesser monetisable value but its existence raises few issues for privacy. Personal data, on the other hand (for instance individuals' date of birth, home address, family circumstances etc), is often necessary for identification or in delivering public services, but access to and use of it raises significant issues.

39. If we see data as an innovation currency in the digital age, public data has a value but is in open circulation; personal data is put in safe deposit.

40. In carrying out public duties, the Government and other public sector organisations collect and create vast amounts of both categories. We therefore have the ability to generate new opportunities for innovation, added value and growth in the wider UK economy and society, but we also have the responsibility to protect the safe deposit of personal data. Doing so requires a clear separation of policy between the two categories.

DERIVING MAXIMUM VALUE FROM PUBLIC, ANONYMOUS, DATA

41. The US has taken the lead in increasing public access to high value, machine readable datasets generated by the Executive Branch of the Federal Government through the creation of www.data.gov, which provides a limited portion of the rich variety of Federal datasets presently available. It has also invited people to actively participate in shaping the future of data.gov by suggesting additional datasets and site enhancements to provide seamless access and use of Federal data. This gives people a single place to go for all anonymous Government datasets to make it easier to reuse and innovate with Government data.

42. In the UK, the majority of public sector information is covered by Crown copyright, and as such falls under the responsibility of OPSI who operate a Click-Use PSI Licence to allow for the commercial and non-commercial re-use of that information.

43. The Power of Information (POI) Task Force Report, published in February 2009, highlighted the lack of clarity in the licensing of information and data under Crown copyright. There is a common misunderstanding – not least within the public services themselves – that Crown copyright is a restrictive and

prohibitive structure that does not allow for the reuse of data. Further confusion arises from inconsistency between OPSI's guidance and the practical execution of licensing regimes by Government departments.

44. **Government has accepted the vision of the POI report, and set out in its paper of 13th May 2009 a series of initiatives aimed at achieving the principles of Open Information, Open Innovation, Open Discussion and Open Feedback as outlined below. Government is still working on some of these recommendations and an update on progress is planned for the Summer. The Cabinet Office will take a leadership role in catalysing this change.**

45. In order to deliver a single online point of access for all public UK datasets, bring forward specific proposals to make public data more accessible and useable, and drive use of the Internet to improve government consultation processes, **the Prime Minister announced on 10 June 2009 that Sir Tim Berners-Lee will form a panel of technical and delivery experts to deliver better use of public data**.

Government response to the Power of Information Task Force Report

- Recommendation 8: OPSI is developing a new licence model, building on the success of the Click-Use Licence. The new licence will not require users to register and apply, and will offer a higher degree of interoperability with other licences such as Creative Commons and GNU Open Document Licence. Details of the licence terms and conditions are available on the OPSI website.
- Recommendation 12: The current Crown copyright regime is in general permissive and grants extensive rights to reuse Government information, however user research has confirmed certain negative perceptions with many users regarding the terminology a barrier to use and reuse. The same research also showed a lack of awareness of the term 'Creative Commons'. OPSI is developing a simplified licensing model supported by easy to understand guidance that will build a level of clarity and reinforce the enabling aspects of licensing Government data.
- Recommendation 14: OPSI and COI will create a data service, akin to the proposed data.gov website, which will expose Government's data feeds in a well-ordered and useful way. It will provide a focal point for development using Government information. A basic service is due to go live within 3 months of the Government's response to the Power of Information Task Force report.

Source: Government response to the Power of Information Task Force report

46. In addition to central Government departments, a substantial amount of public sector information is collected, held and administered through trading funds, which charge fees to cover their operating costs. These trading funds include Ordnance Survey, Met Office, Land Registry, DVLA, Companies House and the UK Hydrographical Office.

47. Geographical data sets present some of the most valuable assets from which to develop online applications and services, as they provide a simple way to present complex information. New software and middle-ware applications allow geospatial data to be used in a wide range of innovative ways for both economic and social benefit. It allows parents, patients and relatives to garner a much wider range of information from Web 2.0 data mashing on location, facilities and qualities of key public services such as schools and hospitals; and to communicate census and societal data, and provide an opportunity for Government to deliver personalised location-based services.

48. The POI Task Force report set out under Recommendation 7 the need to prioritise the 'freeing up' of geospatial data held by Ordnance Survey. This was echoed by the Trading Funds Assessment, which concluded that there was a need to improve access to Ordnance Survey data and services for further innovative uses in economy and society. It also suggested that in the interest of preserving and maintaining quality, Ordnance Survey should operate through a self-funded, revenue model rather than direct funding from taxation.

49. **Ordnance Survey's new business strategy, announced at Budget 2009, includes a commitment to improve access to data and encourage new entrants into the market. As part of its strategy, Ordnance Survey has launched an enhanced free digital mapping API (OS OpenSpace) and a clearer pathway from innovation to large scale commercial use. Government welcomes the opportunities this enhanced service will bring.**

50. **Government and OPSI, in consultation with OFT, will review progress with Ordnance Survey's strategy on a regular, on-going basis, particularly over the next 6 to 12 months.**

Ordnance Survey: new business strategy

Ordnance Survey collects, maintains and publishes high quality and up-to-date geographical information for the whole of Great Britain. At Budget 2009, Government announced a new business strategy for Ordnance Survey in which it will continue to be self-funded and earn revenue by licensing its data, but it will make it easier for customers and other businesses to access its data and services.

The strategy covers five key areas:

- Innovation – an enhanced, free OpenSpace service to promote innovation and experimentation with digital information and a clear path from this service to greater commercialisation;
- Reform to the Ordnance Survey licensing framework – so that it is easier to use Ordnance Survey data and services in other applications;
- Reducing costs over time – to ensure that Ordnance Survey continues to offer value-for-money;

- Supporting the sharing of information across the public sector – to enable better public policy and services; and
- Creating an innovative trading entity – to explore further commercial opportunities around Ordnance Survey data and services.

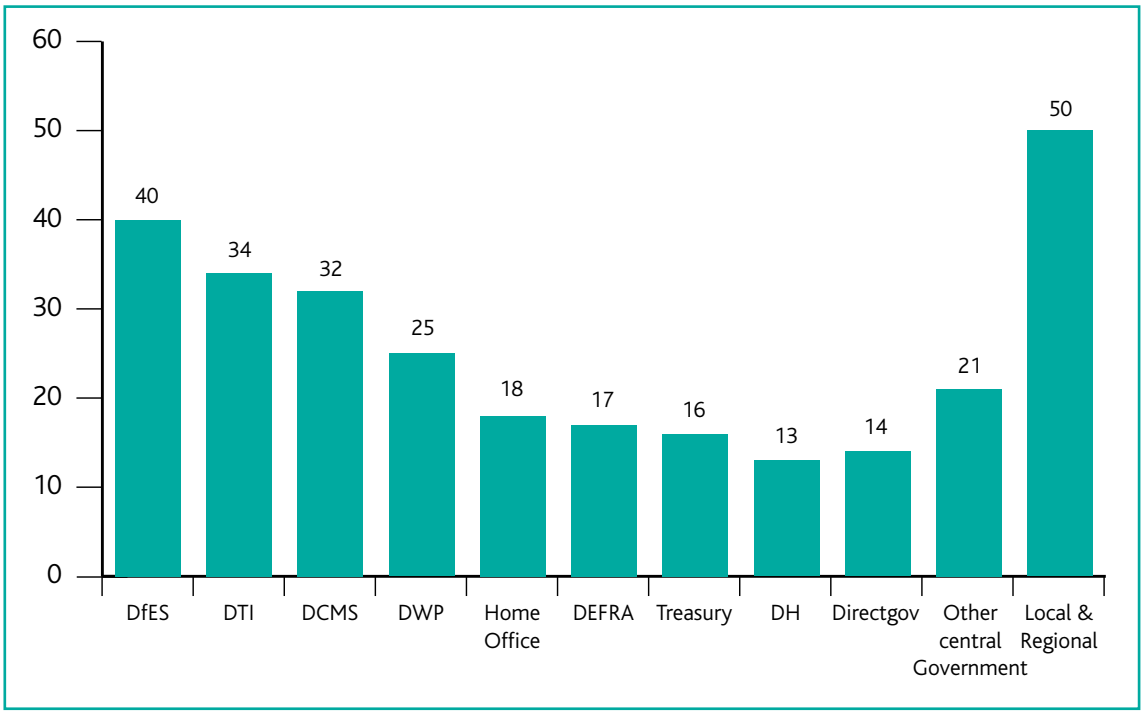
The Government has set key milestones for delivery over the next year and has recently consulted on its new strategy. Further details are available at: http://strategy.ordnancesurvey.co.uk/

Source: Shareholder Executive

GETTING FULL NATIONAL VALUE FROM PUBLIC SECTOR CONTENT

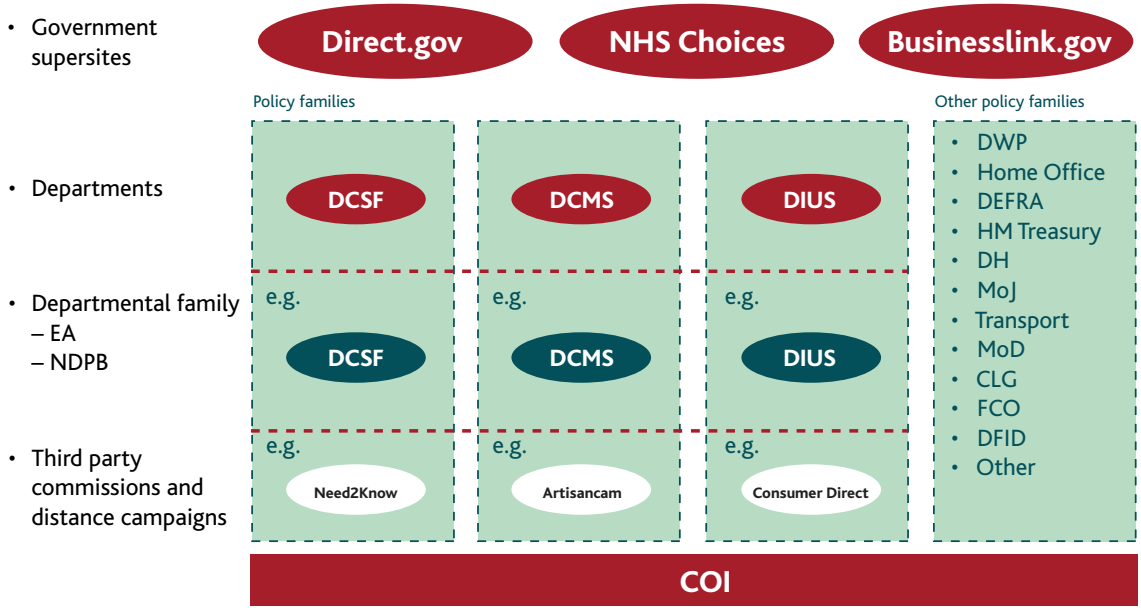
51. As we discussed in Chapter 5, public service content is no longer the preserve of the broadcasters. The public sector provides significant investment in the development of online content, services and applications in the UK. Research by Analysys Mason shows that Government commissioning may represent as much as 30% of total investment in professional UK online content (c.£280m in 2007).

Figure 9. Government spending on new media in 2006/07 (£m)



52. Beyond central and local Government, many arts, cultural and scientific institutions supported by public finance are also exploring the opportunities presented by digital media. The Royal Botanical Gardens, Kew regularly welcomes around 1.7m visitors to the gardens every year, while attracting double that in visits to its website. Digital media has become a core component of Kew's public service offering, allowing the organisation to extend its reach and unlock new forms of collaborative and interactive knowledge sharing.

Figure 10: Key public sector commissioners of digital media projects (Source: MTM London)



53. Much of the digital media made available through Government and NDPB websites is commissioned from external suppliers under framework agreements that draw on guidance from the Office of Government Commerce (OGC). OGC states that the "overarching policy should be to achieve best value for money and the guiding principle should be that in each case the IPR should be owned by the party best able to exploit them".

54. Under the guidelines set out by the Office of Public Sector Information (OPSI), it is up to the commissioning department to decide whether copyright is retained by the producer or assigned to the Crown. It is OPSI's overriding recommendation that, wherever possible, IP under Crown copyright is made available for re-use by anyone, thereby maximising the potential economic benefit. This is consistent with the Government's approach to open source, open standards and reuse, where IP created by Government IT is available for re-use by anyone.

55. However, despite OPSI's guidance, it appears that the many of the frameworks used still prohibit the re-use of IP. For example, the terms of the COI Digital Media framework agreement explicitly restrict further use of the IP. Further, it appears that the definition of Intellectual Property may not be consistent across departments, and this lack of clarity is confusing the landscape for both commissioners and suppliers in interpreting and implementing best practice.

56. This resembles the approach adopted by broadcasters in relation to content-creators in the early stages of developing an independent production market. It makes sense to learn from the example and avoid the pitfalls. By adopting open frameworks and allowing for a commercial negotiation in the assignment and exploitation of IPR, the public sector could benefit from increased price

flexibility. Further, suppliers may be encouraged to drive innovation and increase the quality of the commissioned product, thereby maximising the resulting commercial opportunity.

57. Such incentives may help to foster competitiveness in the production market, as has been the case in the independent television sector. A common open framework for procurement would also allow for greater transparency when entering negotiations, and this would be particularly beneficial for SMEs with limited resource to administer different sets of rights agreements.

58. NDPBs have already started experimenting with more open and transparent procurement frameworks, and these are proving highly successful. The Royal Botanic Gardens, Kew has implemented a revenue sharing model with one supplier, allowing IPR to be retained while granting a non-exclusive licence to Kew. A similar model in operation at Tate allows coding and software IP to rest with the supplier while any content IP developed in-house is retained by Tate.

Categories of IPR in digital media

At a high level, digital media projects tend to incorporate four distinct categories of IPR, each of which can be broken down into sub-categories:

- Format: the core concept, format and idea underpinning a particular interactive experience;
- Content: design assets (e.g. icons, brand names, logos), original content and licensed content;
- Software: bespoke and licensed software; and
- Information: data and information supplied to or created by use of a digital media application.

Importantly, these categories of IPR have varying values, uses and licensing potential. In digital media, certain categories of software have considerable potential for reuse in other implementations – much of the value in digital media IPR is likely to reside here. In contrast (and unlike television) digital media formats and content tend to be highly bespoke, limiting the value of the IPR on a significant proportion of projects.

Source: MTM London

59. To demonstrate the potential for change in this area, the **National Endowment for Science, Technology and the Arts (NESTA) will lead a pilot to develop, test and implement a simplified IPR framework for publicly procured digital media. The pilot will bring together stakeholders from across industry, and key public bodies including OPSI, COI, Cabinet Office, Kew, Tate and the Arts Council of England to:**

- **Clarify a consistent set of terms and language across Government departments;**

- **Test a set of frameworks on specific projects across different types of IPR, and analyse their performance, the potential for secondary exploitation and the benefits created; and**
- **Share the findings with stakeholders and agree a new IPR framework for the procurement of digital media by public sector organisations.**

60. **The pilot is likely to be based on the BBC's online commissioning rights framework** which allocates IPR according to the nature of the project across both content and technology production. However, the pilot framework will reflect the specific needs of public organisations and will draw on the experiences of OPSI and the OGC.

61. **The pilot will launch before the end of 2009 and will last for 12 months.** After this period, the pilot will be reviewed by the stakeholders. The primary output of the pilot will be a standardised IPR framework to allow simple procurement of digital media for adoption by Government and other public organisations.

THE SAFE DEPOSIT OF PERSONAL DATA

62. In the digital economy information, from the mundane to the highly personal, is easily disseminated and manipulated, but control and access to this information can be extremely valuable. The new forms of gathering and using personal data can lead to concern from users and mistrust not only of bodies and institutions but of the technology itself. To ensure that the UK economy and UK taxpayers gain the benefits of our ability to gather and use data, while retaining confidence that proper protections are in place, Government needs to play a leading role in the debate.

63. To take one example that does not involve the Government, behavioural advertising, in which users' online activity is in some sense 'monitored' to provide advertisers with a better view of their audience, is considered by some to be one of the biggest concerns to users' privacy online. The Government's view is that the principles behind the current legislation are sufficient to protect any violations of data protection law through behavioural advertising. Targeted advertising is a new business model and, properly handled, could be an important revenue earner. It is though one that can provoke a very strong consumer reaction, and all those involved in the provision of behavioural advertising (including ISPs, advertising networks, advertisers and online publishers) will need to bear the value of their brand in mind.

64. Concerns over privacy are only multiplied when arms of Government are involved in data gathering. To address this, we need first to have strong information assurance protocols in place.

65. Information Assurance involves managing risks to the confidentiality, availability and integrity of data held on ICT systems. The Cabinet Office works with CESG, the national technical authority on Information Assurance, in conjunction with partners such as the CPNI and the Ministry of Justice, to ensure that there is an effective strategic approach to information assurance for the UK.

What is Information Assurance (IA)?

Information Assurance is the confidence that information systems will protect the information they handle and will function as they need to, when they need to, under the control of legitimate users.

There is little information that exists that will not at one time or another be stored or transmitted electronically.

Information on paper as soon as it is fixed or input into a computer, enters the electronic world. From here the information can be changed, deleted or broadcast to the world.

Electronic information must be readily available when needed and trusted to be accurate. Sometimes there are confidentiality concerns. Ensuring the confidentiality, availability and integrity of all electronically held information is the goal. "Information Assurance" is the term we use to describe this goal.

Through the use of appropriate security products and procedures we hope to achieve reasonable assurance that electronic information is adequately protected from unauthorised change or dissemination and ensure the information is always available.

CESG helps the owners of electronic information to determine the products and procedures to achieve Information Assurance.

66. Following a number of high profile data losses, the Cabinet Office conducted a review of cross-Government data handling procedures. The Data Handling Report published on 25th June 2008 put in place a set of mandatory requirements for Government departments to meet in protecting people's personal data and to restore confidence in Government's ability to handle personal data. These measures include improved technical precautions, greater scrutiny and accountability and a focus on cultural change including training and education.

67. Government departments have invested considerable resources to improving their data handling capabilities and improvements include enhanced technical precautions such as large-scale encryption programmes (over 30,000 laptops have been encrypted in the Ministry of Defence). Leadership and governance as well as greater accountability are being encouraged in the form of the establishment of a network of over 50 Senior Information Risk Owners (SIROs) at Board level within their organisations from central Government departments and agencies.

68. Cultural change has also been a major focus of efforts through education, training and increased professionalism. The Cabinet Office, in conjunction with the National School of Government, has rolled out a civil service-wide e-learning package with over 200 public sector organisations already accessing this training. By Spring 2009, more than 130,000 staff across the civil service

have received training in data handling, in support of the Data Handling Review commitment to train all civil servants who handle personal data.

69. To address the requirement for greater professionalism, the Cabinet Office has joined the Civil Service Information Security Accreditation Scheme with the Institute for Information Security Professionals to enable cross fertilisation between the public and private sectors. The Cabinet Office has also funded the development of an MSc in Information Security and Assurance for the Public Sector at Cranfield University, as part of the effort to educate the next generation of managers to better understand and manage information assurance and cyber security in complex business environments.

70. Going forward, the Government may need to consider further steps to ensure handling of personal data is firmly placed in the safe deposit category, on a similar footing to the handling of money. In considering this we need to build on the valuable work to date of the Information Commissioner and the progress in transparency and governance driven by the Cabinet Secretary's Data Handling Review.

A DIGITAL DELIVERY AGENCY FOR DIGITAL BRITAIN

71. Finally, we propose that as the result of this process, Government explores the possibility of a new Digital Delivery Agency to implement many of the key recommendations of Digital Britain.

72. In the past communications policy was delivered in silos of telecoms, content and standards, broadcasting, radio and spectrum. The Communications Act 2003 was the first important step in breaking down that siloed approach to reflect changing market circumstances. The creation of the converged regulator Ofcom was also an important step forward.

73. Whilst there has been marked progress in relation to policy development and regulation in terms of coordination, there is an increasingly complex picture emerging in relation to policy implementation and delivery. As we move forward, it is sensible to consider the case for a consolidation of the responsible delivery bodies.

74. The table below sets out the skill-sets for each of the key delivery bodies require to meet the task that Government has given them (Digital UK, Digital Radio Delivery Group, Stakeholder Consortium on Digital Participation, Digital Inclusion Task Force, USC Network Procurement Body). From this it can be clearly seen that there are some significant overlaps. Bringing some or all of these bodies together into one Digital Delivery Agency could bring significant benefits, including:

- significant economies of scale;
- greater ability to understand an increasingly converging marketplace;
- better coordination across stakeholders;
- removal of unnecessary overlaps;

- effective transferral of lessons learnt from one policy area to another;
- better coordination of interlinkages and opportunities they present; and
- greater clarity for consumers about where to go for help and advice.

75. As the most established of these bodies, Digital UK will have a particularly important role to play in helping Government to understand the opportunities and challenges in relation to creating a single Digital Delivery Agency.

76. **We therefore propose that DCMS, BIS and Ofcom carry out an assessment, to be completed by the end of this year, of the opportunity for bringing together either some or all of those delivery agencies either into one body or through a federated structure to achieve economies of scale and greater operational efficiency.**

	Digital UK (Delivering television switchover by 2012)	Digital Radio Delivery Group (Driving Digital Radio Upgrade by 2015)	Stakeholder Consortium on Digital Participation (driving digital participation)	Digital Inclusion Task Force (helping the socially and digitally excluded)	USC Network Design And Procurement Body (delivering the Universal Service Commitment by 2012)
Stakeholder coordination including commercial, third sector and consumer bodies	Yes	Yes	Yes	Yes	Yes
Working with multiple Government departments	Yes	Yes	Yes	Yes	Yes
Developing a clear communications campaign around complex and technical issues	Yes	Yes	Yes	Yes	No
Developing a rallying cry to drive take-up/participation	Yes	Yes	Yes	Yes	No
Considering national and regional variations and/ or working with devolved administrations and RDAs	Yes	Yes	Yes	Yes	Yes
Managing technical network and coverage issues	Yes	Yes	No	No	Yes
Providing support to vulnerable consumers	Yes	TBC	Yes	Yes	No
Commercially driven management with public purpose	Yes	No	No	No	Yes
Using public funding to leverage additional commercial/other funding	No	TBC	TBC	Yes	Yes

CASE STUDY

Teacher: Emily Segal

Students of Emily Segal are encouraged to do something banned in most secondary schools: to use their MP3 players in the class-room.

The head of music at a leading state school in Harrogate, North Yorkshire, uses digital technology to record pupil progress, experiment with sound mixing and download the latest class-room compositions.

"We also use SD cards, which is like a little chip on which I can put 50 hours of recording, and then download on to an MP3 player – I can access a whole year-group's work," she says.

But e-music is just one part of the technology shift underway in Harrogate and other secondary schools across the country.

Such schools are also embracing the "Virtual Learning Environment" in which books are becoming a thing of the past, and most pupils email their homework. "In five year's time, I doubt we will have exercise books and all the resources will be in a VLE," according to the head of music in Harrogate. "I can tell exactly who has completed their work by looking online; there is no more of 'the dog ate it'."

Nevertheless, she acknowledges that not all staff are ready for the changes. "It depends what generation you're from. Some staff kick against it or don't like technology – others, particularly in languages, use it all the time."

But the trend appears to be in one direction. All student reports are now compiled electronically, and most dispatched by email. "Even the staff talk to each other by email. No-one goes to the staff room anymore."