Electronic Government (e-Government)

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Section Science and Environment

This note describes e-Government, outlines Government efforts in this field, and related issues.

Contents

1   Definition of e-Government

Electronic Government, or e-Government, refers to the use of information and communication technologies (ICT) by Government agencies in order to better manage relationships with citizens, business and other arms of Government.[1] Examples might include: greater use of the internet to deliver services such as tax collection or licence issuing; providing more information about planning inquiries online; undertaking consultations over the internet. The Government website, www.direct.gov.uk, is an example of e-Government.

The World Bank found that e-Government can: improve "citizen empowerment" through greater access to information; enable business and industry to interact more effectively with relevant government agencies; and, allow more efficient government management. The World Bank said that the resulting benefits can be "less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions".[2]

2   The e-Government Unit (eGU)

The e-Government Unit in the Cabinet Office, the largest unit in the Office, is in overall charge of e-Government. Its mission is 'ensuring that IT supports the business transformation of Government itself so that we can provide better, more efficient, public services'.[3] Its responsibilities include:

- formulating information technology (IT) strategy and policy

- developing common IT components for use across government

- promoting best practice across government

- delivering citizen-centred online services[4]

The eGU also has 16 objectives including to: "sponsor cost effective IT security"; "build partnerships with IT suppliers"; and, "stimulate joined up business led IT strategies and policies".[5]

The eGU took over from the Office of the e-Envoy in May 2004. The Office had three core objectives:

- to make the UK the best environment in the world for e-commerce by 2002

- to ensure that everyone who wants it has access to the internet by 2005

- to make all government services available electronically by 2005.

[1]
http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTINFORMATIONANDCOMMUNICATIONANDTEC HNOLOGIES/EXTEGOVERNMENT/0,,contentMDK:20507153~menuPK:702592~pagePK:148956~piPK:2166 18~theSitePK:702586,00.html

[2] ibid

[3] http://archive.cabinetoffice.gov.uk/e-government/

[4] ibid

[5] http://archive.cabinetoffice.gov.uk/e-government/responsibilities/

3   Progress on e-Government 1999-2002

The National Audit Office (NAO) published *Better Public Services Through e-Government* in 2002 to examine progress in improving the management of IT projects across the public sector and the potential benefits and risks of electronic service delivery for the UK.[6] The NAO followed this report with *Government on the Web II*, an analysis of how government organisations "have changed the way that they plan and provide Internet-based services and interactions since 1999".[7] This report:

> …recognised the effort and resources being put into boosting central government presence on-line and in promoting e-government among local authorities. The Office of the e-Envoy has given a clear cultural lead from the centre to departments developing e-business initiatives. But to maximise the potential benefits from these resources (244 staff and £52 million annual expenditure), the Office needs to move beyond campaigning for e-government towards a service delivery style with emphasis on implementation.

> Government has set the target that 100 per cent of services should be available on-line by 2005. Progress has been made in developing Web sites and in encouraging the development of e-services across government. The report found that the number of organisations with a web site has increased but 66 out of 376 central government organisations were still without a web site (Those organisations without a site at the time of the census are chiefly small government bodies which have few if any dealings either with citizens at large or with firms and enterprises, normally because they are units which provide a specialist service within government itself). All the major Cabinet departments have well-developed Web sites.

> But there are real issues still to be addressed. There is still no methodology for establishing the financial costs and benefits of on-line services. There is no central collection of data on web site usage. Such data would provide valuable information about what works – and what doesn't work – for citizens using on-line government services. And government needs to place maximisation of take-up of electronic services at the heart of the e-government agenda.

> The proportion of agencies allowing users to fill-in and submit forms on line has improved from one in seven to one in four. However, the usefulness of most search engines on government sites is low, and most information is not tailored to user needs; for example, only one site in 16 presented relevant information in response to users' inputting a postcode. The UK Online site represents some progress towards a central government portal for the UK but the site's design has been problematic and usage numbers have been lower than expected. A 'rebuild' of the UK Online site was launched in late January 2002, with a better-designed and more useful homepage and an improved search engine which delivers more intuitive results…

> The Office of the E Envoy should review its target regime to include specific requirements for departments and agencies to grow their web site usage and take-up of electronic services and put in place an information base to identify the value added by e-government projects.[8]

Similar problems were identified by a survey conducted in 2003 by Citizen's Advice:

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[6]

[7] http://www.nao.org.uk/publications/0102/government_on_the_web_ii.aspx

[8] http://www.nao.org.uk/whats_new/0102/0102764.aspx?alreadysearchfor=yes

Online government is letting down the people who need it most, according to an authoritative survey of government websites published today. Anyone needing internet help in such crises as getting into debt or applying for state benefit will have trouble finding and using the relevant government websites…Not all the findings are bad news. It finds several gems among public sector websites and suggests simple steps, such as additional links, that could lift others to the same standard. However, it will not be welcomed by the office of the e-envoy, responsible for the e-government programme. Its portal site UK Online came in for criticism as "patchy" and for not taking citizens' perspectives into account. The survey is significant because it was carried out by Citizens Advice, which represents citizens' advice bureaux, and SocITM, the local government IT managers' association, to test e-government from citizens' point of view.[9]

4   Abandonment of the 100% by 2005 target

In December 2004 the Government announced that it no longer expected all Government services to be accessible online. Some felt the 100% target placed an impossible burden on the head of e-Government, and that it would not be practicable or desirable to place all services online. The following article discusses the impracticalities of the target and notes the aims that replaced it:

…the government this week abandoned the fiction that it will put every single public service online by the end of next year. The Cabinet Office announced that, for reasons of policy, 26 government functions - 4% of the theoretical total - would continue to depend on pieces of paper and personal visits.

…

[Ian] Watmore [head of the eGU] told the Guardian this week that he could not remember exactly which of government's 657 services had been dropped from the 2005 target. However, they include procedures where officials need to scrutinise original documents, in applying for new passports for example. Other exemptions are to cope with the need to phase in new systems gradually "to mitigate project risk".

Others have been subsumed into separate initiatives, such as the NHS IT programme, which has its own deadlines, mainly around 2008. Still others are awaiting policy changes such as reforming the common agricultural policy. E-enabling services ahead of reforms would require "disproportionate effort for minimal gain", the Cabinet Office said.

While the change in target removes one worry, Watmore's e-government unit faces a busy year. Today, 75% of government services are available electronically, but the 130-odd that are left tend to be the awkward ones. Many involve connecting separate databases, or the applicant having to prove his or her identity.

The good news is that, after a slow start, Britons seem to be taking to e-government, especially for business processes. Nearly 80% of vehicle registrations are now electronic, as are 67% of company incorporations.

The Cabinet Office also claims that its new government portal (www.direct.gov.uk) has been a success.

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[9]   "On a quest", *Guardian*, 20 October 2003 p 15

However, its traffic - 600,000 unique visitors a month - is still lower than major portals such as the BBC (and the Guardian). For the future, beyond 2005, Watmore set out four priorities:

- To create more "citizen-centric" government by connecting more organisations to the Directgov site. This will include local councils, which run most public services.

- Encourage more citizens to do business with government over the web.

- Set up ways for private firms and voluntary agencies to act on behalf of government on the web.

- Use IT to help public servants do a better job.[10]

5   E-Government strategy 2005-2011

In November 2005 the Cabinet Office published *Transformational Government, Enabled by Technology*. The six year strategy "set out how effective use of technology to deliver services designed around the needs of citizens and businesses can make a real difference to people's lives".[11] The *Transformational Government—Implementation Plan* described the tasks to be completed by July 2007.[12] The NAO gives the following description of the strategy:

> In January 2005 the Prime Minister told the Government CIO Council that 'Departments need to work together in delivering more public services built around the needs of the citizen'. In e-government services he identified Directgov as 'our flagship digital service'. Following this Transformational Government, a command paper, was published by the Cabinet Office as the policy of government, which said that services enabled by IT must be designed around the citizen or business, not around the provider. It also called for a move to a shared-service culture, releasing efficiencies in IT provision, and for an improvement in the professionalism of the government IT function. A process for achieving 'service transformation' was set in place, complete with annual reports and monitored by the e-Government Unit, subsequently made part of the Delivery and Transformation Group in the Cabinet Office.[13]

This was followed in December 2006 by Sir David Varney's report *Service Transformation: A better service for citizens and businesses, a better deal for the taxpayer*. Sir David was asked to advise the then Chancellor of "the opportunities for transforming the delivery of public services, in particular by looking at how the channels through which services are delivered can be made more responsive to the needs of citizens and businesses". Sir David made a number of recommendations including:

- developing a change of circumstances service starting with bereavement, birth and change of address by 2010, so that citizens don't have to notify multiple public services;

- providing citizens and businesses with single information and transactional websites through Directgov and Businesslink.gov;

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[10] "Reality hits home: Michael Cross asks what happens now that the prime minister's goal of 100% e-government has been abandoned," *Guardian*, 16 December 2004.
[11] http://www.cabinetoffice.gov.uk/media/141734/transgov-strategy.pdf
[12] http://archive.cabinetoffice.gov.uk/e-government/
[13] http://www.nao.org.uk/publications/0607/government_on_the_internet.aspx

- improving public sector contact centre performance including reducing operating costs by 25 per cent to release £400 million; and

- developing a cross-government identity management system to enable greater personalisation of services and to reduce duplication across government.[14]

Sir David's vision "was that by 2011 almost all citizen-facing and business-facing services will move to the two supersites, including all e-transactions [—a]ll departments will then have one corporate website utilizing shared infrastructure, and other websites will be closed".[15] The principles of Sir David Varney's work were to be taken forward in the Comprehensive Spending Review 2007.

6   Progress on e-Government 2004-2007

The NAO examined e-Government in its 2007 report *Government on the internet: progress in delivering information and services online.*[16] This found:

> … the ability to find relevant government information via the internet and to accomplish public service transactions online is perhaps the most radical extension of access to public services as a whole for several decades. For example, around 45 per cent of online accesses to government websites occur outside normal office hours in the evenings or weekends, and so could not take place by phone or office visits. For government and taxpayers, providing information and processing transactions online can also be much cheaper than conventional forms of service delivery such as call centres, mailed-in forms or office visits.
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> Not everyone uses the internet, and internet access rates are much lower than average amongst the elderly and people in receipt of means-tested benefits. There is, therefore, a need for departments to understand how to deliver services to citizens through the channels that suit them best. While government policy is to promote digital inclusion by seeking to increase internet access and skills there will be an important group of citizens who cannot make use of the internet, or who prefer to make use of more traditional forms of communication such as the telephone or post. But encouraging greater use of the internet has potential benefits for these customers as well, because money released from improved efficiency can be redirected to fund more focused and improved services for hard-to-reach groups.
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> Departments and agencies made good progress towards meeting the Prime Ministers ambitious target of providing access to all relevant services in electronic form by 2005 and recent achievements in the use of the internet can be found in many of the most important sectors of government (see Figure 1). This progress reflects heavy investment in e-services from 2000 to 2005, a period when around 6 billion was spent in new IT services, of which 1 billion (channelled through the Office of the e-Envoy) specifically promoted e-government.
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> Previous studies by the National Audit Office in this area have found that the size and complexity of the Governments web-estate makes it hard for citizens to find the information they want in a comprehensible form. Since 2004 the Government has taken a new strategic direction, intended to tackle these issues in the long term by:

- re-ordering information to make it easily findable;

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[14] http://www.hm-treasury.gov.uk/prebud_pbr06_pressvarney.htm

[15] http://www.nao.org.uk/publications/0607/government_on_the_internet.aspx

[16] http://www.nao.org.uk/publications/0607/government_on_the_internet.aspx

- re-presenting information so that it is clearer and makes sense for citizens or businesses, and;

- joining up information effectively so that it better meets peoples and enterprises overall needs.

This approach is challenging because of the complex departmental structure of national government against a background of ten or more years of un-coordinated growth of government websites.

These changes are intended to be delivered by moving customer facing content across to two supersites www.Directgov.gov.uk for citizens and www.businesslink.gov.uk for businesses. Both sites involve substantial process re-engineering behind the scenes to produce high quality information in language targeted at the customer, not the producer. Both sites so far show traffic levels indicative of early success, and some significant organisations have moved their customer-facing content onto Directgov.

Government sees the next logical step as rationalising its current sprawling web-estate so as to focus upon these sites, plus a small number of other sites that target specific audience segments. There is a strong policy commitment to this approach, which has been approved by the relevant Cabinet Committee. Some 951 sites deemed as surplus have already been reviewed, of which 551 so far will definitely close.

There are significant challenges ahead [.] Moving the majority of internet based services to the supersites is an ambitious undertaking which will require effective joint working across many different departments and agencies, all with very different customers. Future investment in internet provision of services will need to be aligned to channel strategies based on robust knowledge about how citizens will choose to access and use public services.

Key challenges identified included:

- …focus group participants found some government online services and most online information-giving useful, but they were not aware of many services and often found the design of departmental and agency websites textheavy and off-putting

- Government websites are rated reasonably well by users but their quality (as measured in our census of features) has improved only slightly since 2001

- We estimate the annual running costs for central government websites as 208 million.[Footnote 5] Some departments and agencies still have weak information about the costs and usage of their information provision and other facilities online. Hence they are unlikely to be maximizing the value gained from these expenditures

- To optimise investment in the internet better ways of determining the value of IT and online services as assets and judging appropriate levels of investment are needed[17]

The report made 13 recommendations, which can be viewed here:

www.nao.org.uk/publications/0607/government_on_the_internet.aspx

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[17] http://www.nao.org.uk/publications/0607/government_on_the_internet.aspx

7 Recent issues

7.1 The Power of Information—better use of public service data

Cabinet Office Minister Hilary Armstrong commissioned an independent review to look at new was of using public service data and how to combine citizen to citizen advice with information from the Government. The final report, *The Power of Information*, was published in June 2007:

> It highlighted the importance of public sector data, ranging from maps to heart surgery mortality statistics. Online tools are emerging to handle this information in new ways. The review recognised that the government has a role to play in maximising the benefits for citizens. A key outcome of the report was the setting up of the [Power of Information (POI)] taskforce, whose work is in two key areas:
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> • Exemplars: projects that will demonstrate the POI principles in action, broadly in the fields of criminal justice, health and education. In a search for 'exemplars' the POI has run a competition for the public to devise better ways to use government data (www.showusabetterway.co.uk). Five ideas will be taken forward. They include a website where users can see the boundaries of school catchment areas and one which helps users find their nearest postbox.
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> • Enablers: for example, the publication of civil service guidelines on the use of social media in June 2008. Before this civil servants were impeded from blogging or joining in online forums in a professional capacity.[18]

7.2 Privacy concerns

There has been growing concern about the collection and use of personal data by Government agencies. Concerns typically centre on the National DNA Database, but these issues are generally relevant for all personal data held by the Government and therefore e-Government more widely.

In May 2008 the Home Affairs Select Committee published *A Surveillance Society?* It recommended that the "Government should adopt a principle of data minimisation: it should collect only what is essential, to be stored only for as long as is necessary". It argued that "loss of privacy through excessive surveillance erodes trust between the individual and the Government and can change the nature of the relationship between citizen and state".[19] It set out a series of "ground rules" to "build and preserve trust", including:

> The Government should give an explicit undertaking to adhere to a principle of data minimisation and should resist a tendency to collect more personal information and establish larger databases. Any decision to create a major new database, to share information on databases, or to implement proposals for increased surveillance, should be based on a proven need.
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> The Government should take responsibility for safeguarding the personal information it collects and should exercise this responsibility before collection takes place: when it is possible by obtaining consent for collecting and processing data, and when it is not possible by providing an explanation.
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> The Government should hold information only as long as is necessary to fulfil the purpose for which it was collected. If information is to be retained for secondary

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[18] POSTnote 321, E-DEMOCRACY
[19] www.publications.parliament.uk/pa/cm200708/cmselect/cmhaff/58/58i.pdf

purposes as well as for service delivery it should normally be anonymised and retained only for a previously specified period.

Every system for collecting and storing personal information should be designed with a focus on security and privacy. This process should involve planning not only the technical aspects of access to systems but also the staff management protocols for access and information-handling.

The Information Commissioner should lay before Parliament an annual report on surveillance. The Government should make a formal response to his report, also to be laid before Parliament.[20]

Similar concerns were raised in a Lords Constitution Committee Report, *Surveillance: Citizens and the State*. The report concluded that "the rise in surveillance and data collection by the state and private sector risks undermining the fundamental relationship between the state and citizens, which is the cornerstone of democracy and good governance".[21]

7.3   Data loss

There have been a number of occasions where Government-held data has been lost. These incidents might undermine public trust in e-Government projects that rely on such data. The loss of this data has been used as an argument against national identity cards. Incidents include:

- the loss of two CDs with personal details of 25 million child benefit claimants and their parents;

- the loss of a hard drive with three million learner drivers' details; and,

- the discovery of CDs with the personal information of thousands of benefit claimants at the former home of a former contractor to the Department of Work and Pensions.[22]

In response to data loss the Prime Minister asked the Cabinet Secretary, Sir Gus O'Donnell, to review information security measures in Government. The report, *Data Handling Procedures in Government*, "sets out how the Government is improving information security by putting in place". It recommended:

- core measures to protect personal data and other information across Government;

- a culture that properly values, protects and uses information;

- stronger accountability mechanisms within Departments; and

- stronger scrutiny of performance.[23]

Specific measures included mandatory annual training for civil servants dealing with personal data and the introduction of Privacy Impact Assessments.[24]

It was alleged in January 2009 that Government Departments were failing fully to respond to Sir Gus's report:

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[20] www.publications.parliament.uk/pa/cm200708/cmselect/cmhaff/58/58i.pdf

[21] http://www.parliament.uk/parliamentary_committees/lords_press_notices/pn060209const.cfm

[22] http://www.telegraph.co.uk/news/newstopics/politics/1574687/Governments-record-year-of-data-loss.html

[23] http://www.cabinetoffice.gov.uk/newsroom/statements/080625_data_handling.aspx

[24] http://www.out-law.com/page-9209

Staff are still able to copy unencrypted information from internal databases on to USB sticks, the portable memory devices that have been involved in many of the recent high-profile security breaches.

The health and transport departments – as well as the Driving and Vehicle Licensing Agency – have failed to make encryption mandatory despite the recommendations of a Cabinet Office report last year.

The Department for Children, Schools and Families and the Ministry of Justice are among the major departments that allow the copying of data of encrypted data onto memory sticks, but it is not clear whether the encryption is actively enforced.

The Department of Business, Enterprise and Regulatory Reform is one of the few departments to force encryption on memory sticks.

Departments were told to improve their security procedures following a series of embarrassing data losses, including the loss of 25 million personal records by HM Revenue & Customs in November 2007. In a report commissioned to prevent future blunders, the Cabinet Office recommended that data be encrypted before being copied onto any devices that can be removed from the office, including laptops, discs and USB sticks.

All 13 government departments were asked about their data handling procedures in Freedom of Information requests submitted by public relations firm Lewis PR and published in the Financial Times.[25]

7.4 Free data

The Guardian newspaper has a long-running campaign calling for the release of Government-owned data, such as that held by the Ordnance Survey, UK Hydrographic Office and Highways Agency. It aims to "persuade the government to abandon copyright on essential national data, making it freely available to anyone, while keeping the crucial task of collecting that data in the hands of taxpayer-funded agencies".[26] The Free Our Data campaign website explained:

Even though OS and the UK Hydrographic Office are designated as trading funds (which means that they operate as self-contained commercial entities receiving no direct tax funding), substantial parts of their income - up to 50% in the case of OS - comes from the public sector; meaning, in effect, they are part-paid by taxes. Yet they charge for that data, with onerous copyright restrictions that prevent the re-use of the data.

That restricts innovation and artificially restricts the number and variety of organisations that can offer services based on that most useful data - which our taxes have helped to collect.

Making that data available for use for free - rather as commercial companies such as Amazon and Google do with their catalogue and maps data - would vastly expand the range of services available. It cannot make any sense that Google, an American organisation, is presently more popular with people aiming to create new map

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[25] http://www.telegraph.co.uk/news/newstopics/politics/4220321/Government-failed-to-clamp-down-on-data-loss.html
[26] http://www.guardian.co.uk/technology/2006/mar/09/education.epublic

applications.[27]

7.5 Government ICT problems

Government ICT projects have faced a number of problems. ICT difficulties have affected a number of departments and agencies including the Criminal Records Bureau, Inland Revenue, National Air Traffic Services and the Department for Work and Pensions.[28] Recent criticisms of Government ICT projects are centred on the delivery of the Connecting for Health programme for the NHS[29] and the Rural Payments Agency[30].

A POSTnote examined the reasons why Government ICT projects appear to have so many difficulties. It pointed out that ICT projects also often fail in the **private** sector, with "only 13% of all IT projects, and less than 1% IT development projects, [being] successful (on time, to specification and to cost)". Reasons why Government ICT projects can fail include political considerations such as the announcement of a project without a clear understanding of how it will be delivered, or the need for last minute changes to ICT projects to fit into the parliamentary timetable or decision-making process.[31]

The POSTnote also identified issues related to project management and technology challenges that can cause difficulties for ICT projects. Some of them include:

Technology issues:

- Rapidly changing technology. Government departments may not be familiar with the latest IT, so may be unable to judge whether suppliers are overselling a technology and the ease with which it can be delivered. Technological advances can make projects obsolete before they have been completed, while cutting-edge solutions carry greater risk.

- For IT projects, user requirements are often not clear at the start and can change. A 'simple' change to requirements may lead to a fundamental redesign of the system, with time and cost implications.

- Complexity. Large computer programmes can be extremely complex, with millions of lines of programming; it is often not possible to estimate how difficult a job will be before it starts.

- Oversight. It is hard for non-technical management in government departments to judge the quality or completeness of software being developed between awarding a large contract and the delivery date.

Project issues:

- Relations with suppliers. Much government IT is now delivered by external suppliers, so government needs to be an intelligent client. Departments require a range of skills to scrutinise bids, keep up to date with technology, be realistic about what systems are likely to deliver, understand commercial drivers and actively manage suppliers. As government now has relatively little in-house IT capacity it

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[27] http://www.freeourdata.org.uk/

[28] http://www.parliament.uk/post/pn200.pdf

[29] http://www.politics.co.uk/news/health/nhs/nhs-organisation/nao-condemns-patient-record-timetable-$1222946.htm

[30] www.nao.org.uk/news/0506/05061631.aspx

[31] ibid

may be difficult to find people with these skills, although departments can bring in outside expertise if needed.

- Project management. IT projects should be tied into departments' overall objectives, and not simply seen as about technology. High quality project management skills and good communications are essential, so that problems are identified early when they can be more easily solved. Involving the people who will have to use the final service is also critical, to define the requirements, reduce resistance to change and provide for training. Breaking projects down into small, manageable steps increases the chances of success and makes contingency planning easier. The Cabinet recently ruled out 'big bang' developments, unless agreed by a senior central scrutiny group. But government departments often have very large systems, which need to be re-developed at short notice due to policy changes - and it can be easier to obtain funding for big, high profile projects.[32]

A December 2008 report by the National Audit Office appeared to show that many parts of Government have failed to address project management issues that can cause ICT projects to fail:

- Central government organisations are not always according contract management the priority it deserves

- Central government organisations do not always allocate appropriate skills and resources to the management of their service contracts.

- There are weaknesses in key performance indicators and limited use of financial incentives to drive supplier performance.

- Despite the critical nature of the contracts in our survey, many did not have in place some or all elements of good practice risk management processes.

- Value for money testing can result in significant savings but the extent to which central government tests the value for money of ongoing services and contract changes is variable.

- In general both central government organisations and their suppliers are positive about working relationships, though less than half of organisations had implemented a supplier relationship management programme despite what appear to be clear benefits.

- The Office of Government Commerce can do more to support central government organisations to improve contract management.

The NAO concluded that better contract management could deliver savings of £160-£290 million a year, and these figures might be conservative. Better management would also "bring improvements in the quantity and/or quality of services, the avoidance of service failure, and better management of risk". The full conclusions and recommendations can be found on the NAO website:

http://www.nao.org.uk/publications/0809/central_governments_managemen.aspx

The Office of Government Commerce has sought to respond to the problems identified by publishing a "good practice framework for contract management". It will provide

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supplementary guidance, specifically appropriate to the most complex forms of contract, during 2009.[33]

7.6   Greening Government ICT: Efficient, Sustainable, Responsible

The Government has launched *Greening Government ICT: Efficient, Sustainable, Responsible*. This is a strategy for reducing the environmental impact of Government computer systems. It has two main aims:

- to make energy consumption of… ICT systems carbon neutral by 2012

- to make [Government ICT systems] carbon neutral across their lifetime (including manufacture and disposal) by 2020.[34]

In April 2009 the NAO reported that:

> The ICT programme was established in 2008 and, working with the Energy programme, in July 2008 launched a pan-government framework for software to reduce the power consumption of ICT. Six central government departments have begun to implement this or similar software: the Department for Children, Schools and Families, Department for Culture, Media and Sport, HMRC, the Home Office, MoJ, and DWP (who have done so independently of the collaborative framework). Government has estimated that switching-off PCs when not in use, using this software, can achieve annual energy cost savings of up to £10.2 million (equivalent to £9 per PC) and carbon emission reductions of up to 55,700 tonnes. This work builds on a pan-government Green ICT Strategy under which the Cabinet Office is leading work to identify other technologies with opportunities to achieve savings and reduce carbon emissions.[35]

[33] http://www.ogc.gov.uk/documents/Management_Framework_Good_Practice_FINAL.pdf
[34] http://www.cabinetoffice.gov.uk/cio/greening_government_ict.aspx
[35] http://www.nao.org.uk/publications/0809/addressing_sustainable_procure.aspx