Government on the Internet: Progress in Delivering Information and Services Online

Research Report

This report was produced on behalf of the National Audit Office by a joint team from LSE Public Policy Group at the London School of Economics and Political Science and from the Oxford Internet Institute, Oxford University. The team was led by Professor Patrick Dunleavy (LSE) and Professor Helen Margetts (OII), and its other members were Patricia Bartholomeou, Simon Bastow, Tobias Escher, Oliver Pearce, Jane Tinkler and Henry Broughton on secondment from the NAO. The project was overseen by Mark Davies and Theresa Crowley.

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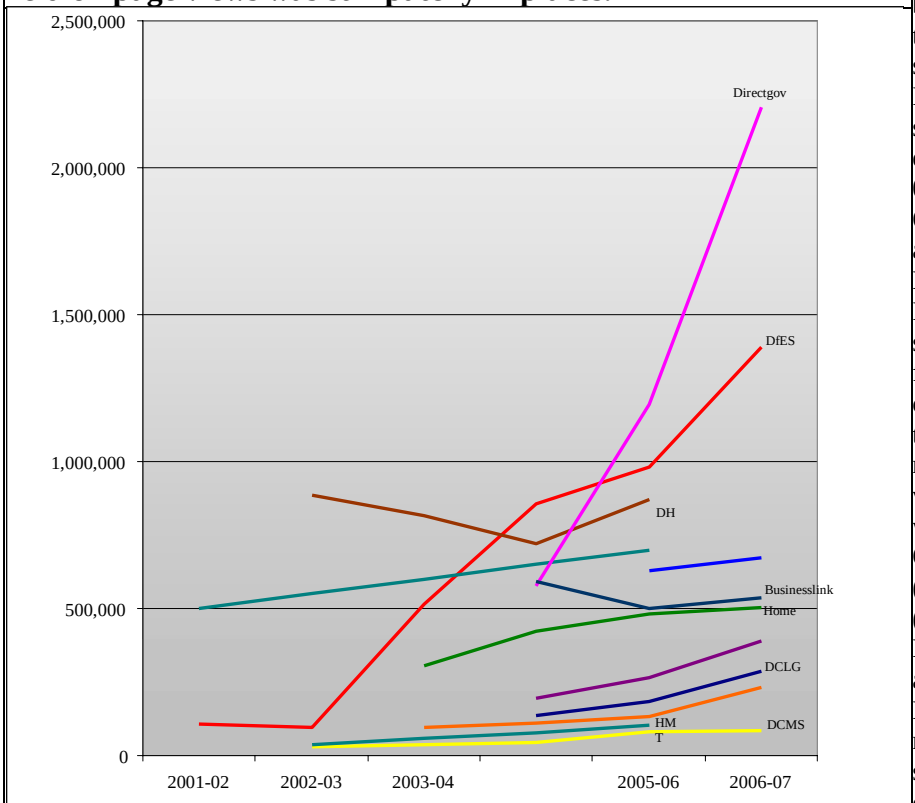
Section A: Supplementary Information from Main Report

PART 1: THE QUALITY OF ONLINE PROVISION

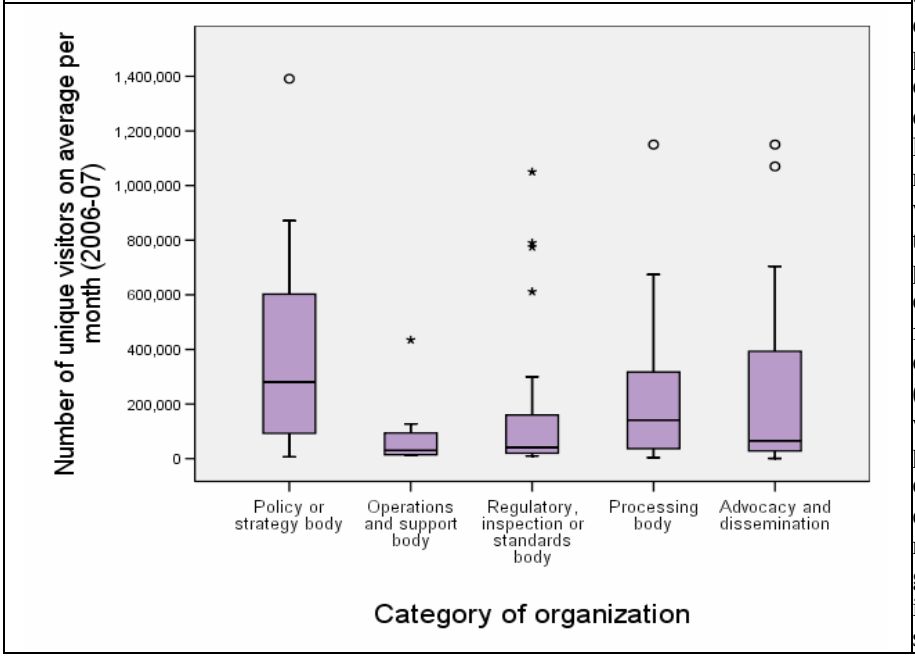
Starting with data from our survey of government departments and agencies:

Figure 1: The rates of growth in average number of page views per month on major departmental websites varied widely. Data held on page views was still patchy in places.



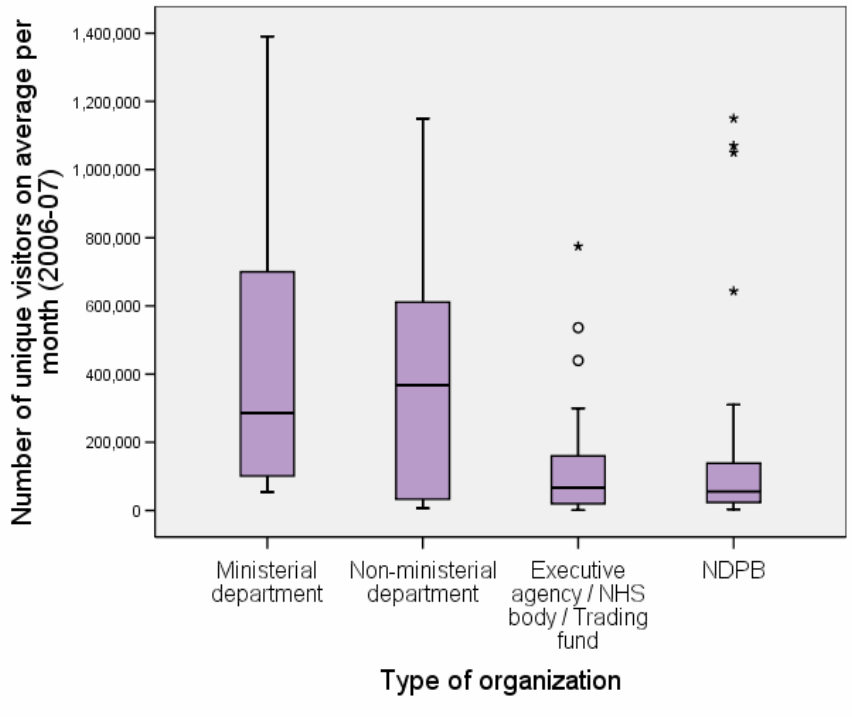
Data for 2000-01 is taken from the *Government on the Web II* study carried out by this research team on behalf of the NAO. Data for 2001-02 to 2006-07 is taken from the 2006 survey of government organisations. In cases where departments could not supply a full 6 years of page view data, we have used data from 2001-02 collected in the 2002 survey. Organisations marked with an asterisk in the graph above (Defra, DFES and HMRC - previously Inland Revenue and HM Customs) show where we have combined data from 2001 and 2006 to give as complete a picture as possible over time. In our survey, 9 organisations reported monthly averages of page views higher than 7 million. These were: Companies House (40m), Met Office (30m), National Archives (20m), Student Loans Company (23m), Ministry of Defence (17m), Legal Services Commission (14m), and the British Council (7.4m). Departments use a variety of tools to measure and report on website usage, so data shown here may not be comparable.

Figure 2: The average number of unique visitors per month to central government websites was around 242,000. Policy or strategy bodies (mainly major departments) had the highest median number of visitors.



This Figure is based on data from 90 organisations (out of 128) on the monthly average number of page views to their main website. The blocks contain the range of organisations from 25 per cent to 75 per cent (inter-quartile range containing 50 per cent of the organisations). The horizontal black line inside the box shows the median number of unique visitors. The vertical bars show the range from 0 to 25 per cent and 75 per cent to 100 per cent. Outliers are shown by circles and stars (see Note 1 below for a comprehensive list of our categorizations).
(One Executive Agency reported very high numbers of unique visitors per month (4.6 million) compared to other organisations in our survey. In order to illustrate more clearly the range of unique visitors to central government websites, we have not included this organisation in the scaling for this graph.)

Figure 3: On average 242,000 users visited central government websites per month. Non-ministerial departments had the highest median number of visitors.



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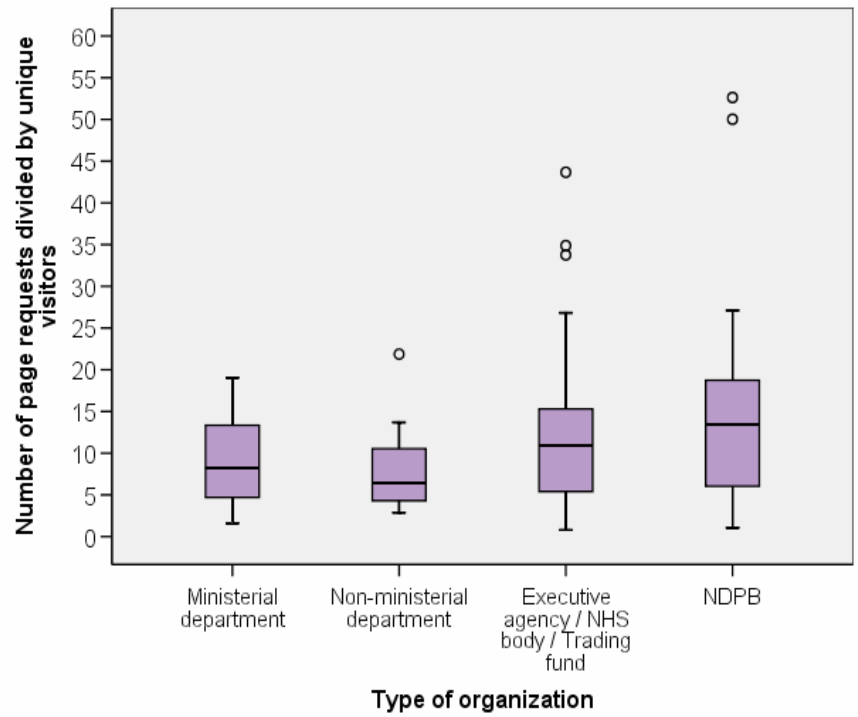
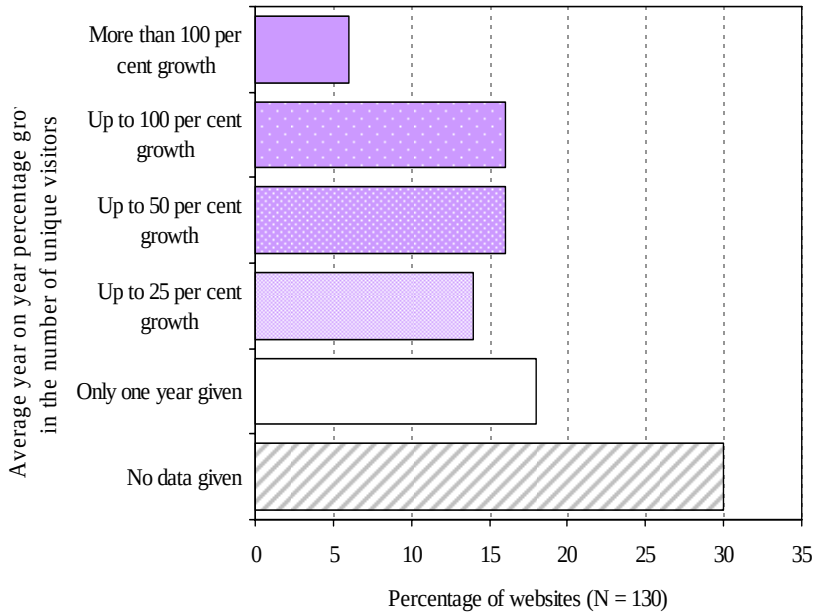
(One Executive Agency reported very high numbers of unique visitors per month compared to other organisations in our survey. In order to illustrate more clearly the range of unique visitors to central government websites, we have not included this organisation in the scaling for this Figure.)

Figure 4: On average visitors to central government websites clicked through 12 pages before leaving(*). NDPBs had the highest median number of page views per visitor – suggesting that people lingered longer on these websites.



(*)This number is only a rough guide to the number of pages viewed per visitor. It is common that page view data will count documents stored on individual pages, and so the average may well be lower than 12. In total, 77 out of 130 organisations provided data for average number of page views per month and average number of unique visitors per month. Average page views per unique user varied between 0.8 to 53. Twelve organisations returned an average above 21.

Figure 5: Central government organisations had shown varying degrees of growth in the number of people visiting their main website each month. Just over one fifth of websites were growing visitors by at least 50 per cent year on year.



All organisations providing data on average monthly unique visitors to their website have seen varying degrees of growth in the number of unique visitors year on year. Out of 130 organisations, just under one third did not provide data on unique visitors. A further one sixth of organisations could only provide data covering one year (taking into account new organisations which have been established in the last year). Organisations with average year on year percentage growth greater than 100 per cent included 1 large citizen-facing Ministerial department, 1 non-ministerial department, 1 Executive Agency, and 3 NDPBs.

Figure 6: A selection of well-visited websites showed the wide scope of e-government development in recent years.

Organisation	Number of unique visitors per month (000s)	Average cost of running the website per unique visitor (pence)
Companies House	4,600	0.25
Department for Education and Skills	1,390	*na*
National Saving & Investments	1,150	35
Visit Britain	1,150	17
British Council	1,070	15
Department of Health	871	*na*
Office for Standards in Education	790	5
National Statistics	705	*na*
Foreign and Commonwealth Office	700	*na*

Companies House receives an impressive 4.6 million visitors on average per month at a cost to the organisation of 0.25 pence each (see also Case Example 2 in the Main Report).

This Figure only shows data from organisations responding to our survey. We have not reported visit rates for organisations not responding to the survey or not responding to this particular question in the survey.
Note: Data shown for National Statistics includes the complete suite of ONS sites: NS Online, GRO, About, EU Stats, Stats4schools and NeSS.

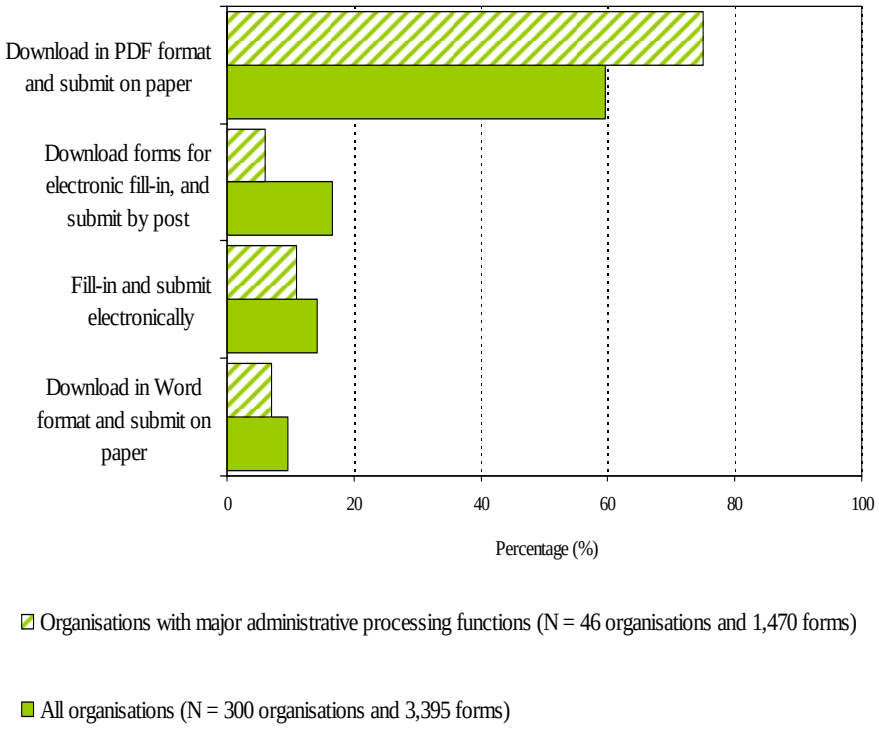
Moving on to data from our census of 300 government department and agency websites:

Figure 7: Central government websites had made significant improvement since 2001 on making available access aids, online complaints forms, and search engines on their websites. It was harder however to find email contact details for senior officials in the organisation.

Website feature	Percentage change 2001 to 2006
Tools or technology for users with special needs	+38
Online facility for making a complaint to the organisation	+37
Site map on or near the homepage	+35
Information for assessing the organisation's performance	+32
Free email news service that you can register for	+30
Search engine	+26
Link to UK Online / Directgov website	-7
Telephone numbers listed for senior management officials	-8
Details for contacting the website team	-13
Clickable emails for senior management officials	-16
Email or online facility for ordering publications	-27
Information about when the website was last updated	-50

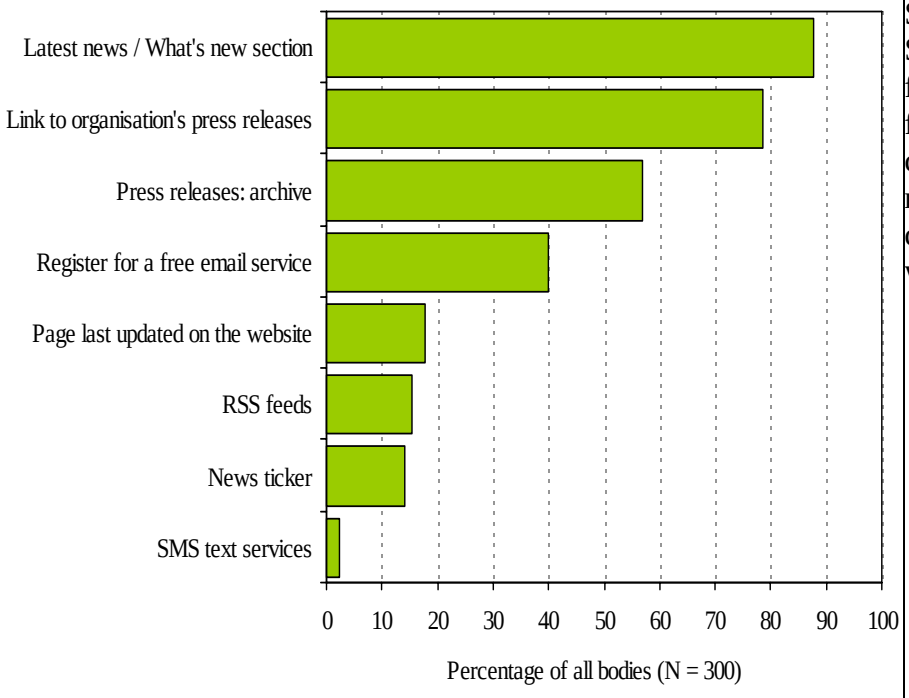
We list here six features which have increased and six features which have decreased most obviously since our 2001 census. The percentage figures show the difference between the percentage of websites with the coded feature in 2006 minus the percentage of websites with the equivalent coded feature in 2001. Positive scores denote increase and negative scores denote decrease since 2001. For example, the proportion of websites with a search engine in 2001 had increased by 26 per cent in 2006. We have not shown all 60 features in this Figure for reasons of limited space. See Figure 6 in the Main Report for the overall picture of progress on available website features since 2002.

Figure 8: We estimate that just under two thirds of administrative forms in government were only available as PDF downloadable documents. Around 15 per cent of forms could be completed and submitted fully online.



We asked our coders to provide an estimated count of the number of administrative forms available on websites, and record the way in which forms could be accessed, filled in and submitted. In total we found around 3,395 forms, including major application and registration forms, feedback forms, and other types such change of address forms. This graphs shows the proportion of total forms in each category. The cross-hatched bars show the distribution of forms for organisations which have specific and major administrative processing functions.

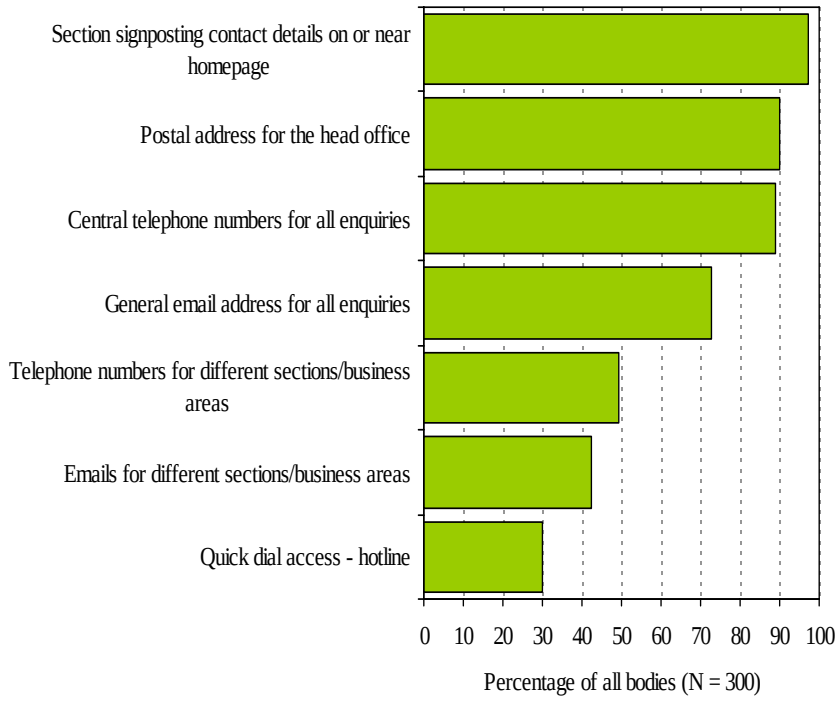
Figure 9: Over four fifths of websites had sections such as 'What's New' or 'Latest News'. Less than one fifth were using RSS feeds or SMS messaging services.



RSS (Really Simple Syndication or Rich Site Summary) is a family of web feed formats used to publish frequently updated digital content such as blogs, newsfeeds or podcasts. Users can have updated content from websites delivered to them.

Figure 10: A high proportion of government organisations used their websites to provide basic information about their functions and responsibilities.

Figure 11: Websites serve as important sources of information about how to contact the organisation. It was still comparatively hard to find information about how to contact directly specific parts of the organisations by email or telephone.



We asked our coders to find any features on the website which provided a hotline telephone number for any enquiries about the organisation's work or services. This covered any telephone services which were explicitly designed for quick access to information and were advertised in such a way. A basic listed number for the organisation in the Contact Details section would not count in this case.

Figure 12: Websites serve as important sources of information about employment and jobs at the organisation. Just under four fifths of websites had information about current employment opportunities. Two fifths of websites allowed applicants to download job application or personnel forms.

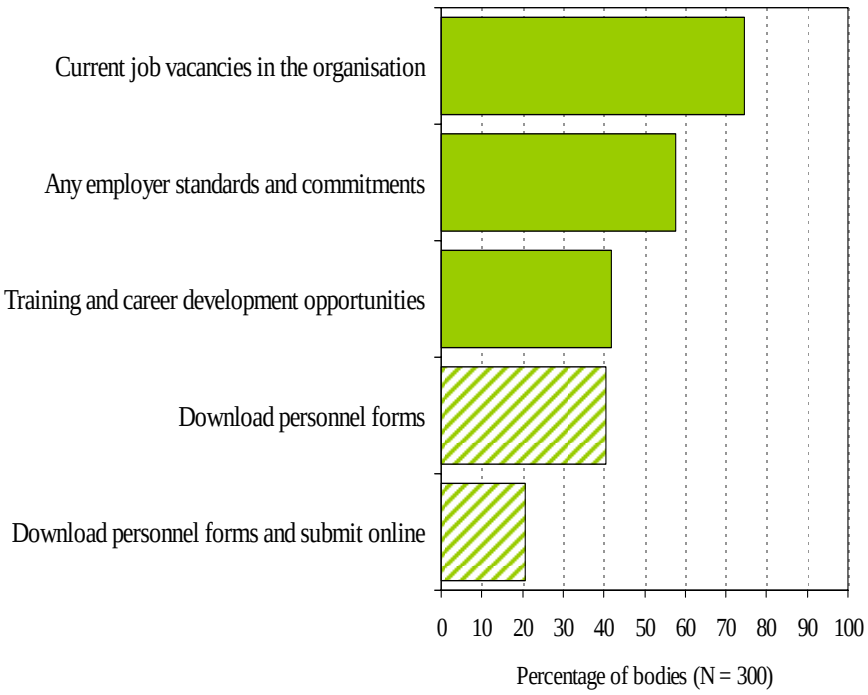


Figure 13: Websites are important sources of information about how to access information under Freedom of Information (FOI) legislation. Over four fifths of government websites in our census contained information about FOI provisions, and just under two thirds had a specific email address for people to register FOI requests.

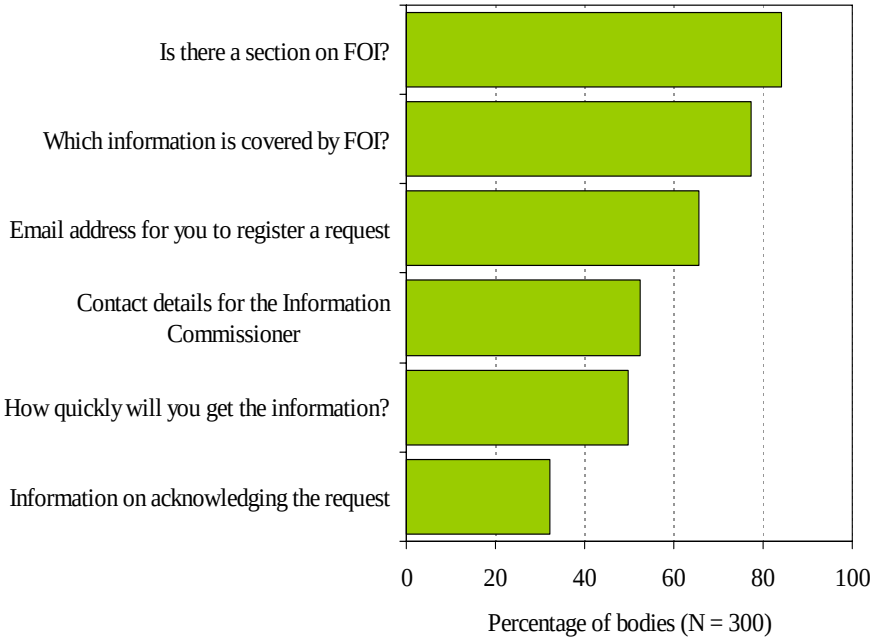
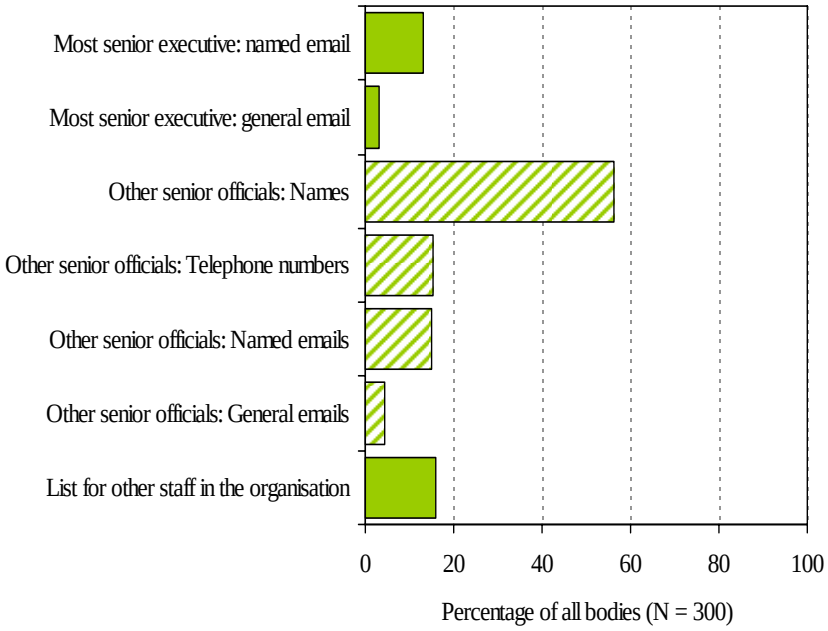


Figure 14: It is still relatively difficult to find information on government websites about how to contact directly senior officials at the organisation, either by telephone or email. Just over half of the websites covered provided names of senior officials. No more than 20 per cent of all organisations provided telephone numbers or email addresses for these officials. Features that are relatively common at local authority level such as 'Email the Chief Executive' were quite rare at central government level.



In two of our comparator countries, the USA and Canada, it was more usual for email addresses for relevant officials to be provided on federal government sites. In Sweden it is normal practice for all civil servants' emails to be provided and for officials to be extensively emailed.

Figure 15: Around half the websites in our census contained specific invitations to users to submit evaluative comments about the organisation through the website. Far fewer websites offered surveys or question and answer sessions with officials.

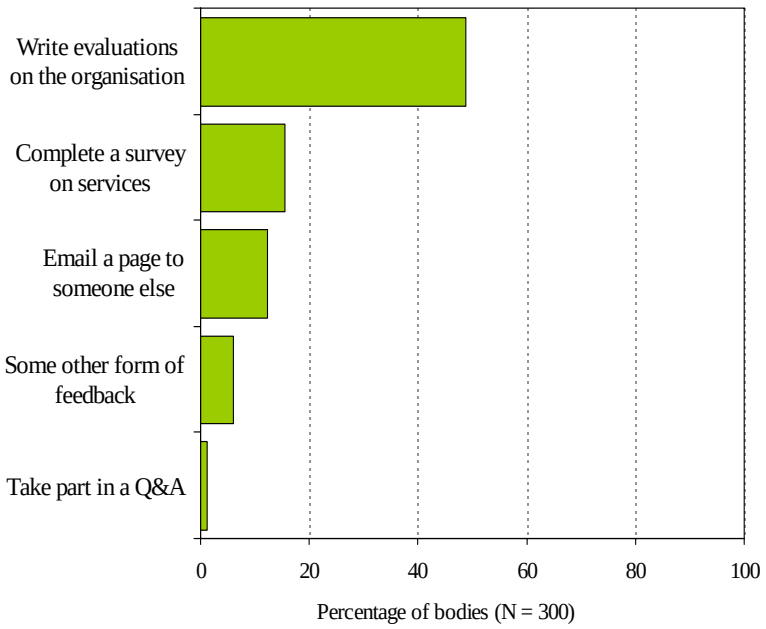


Figure 16: Multimedia features commonly associated with popular private sector websites were scarce on central government websites. Only 12 per cent of organisations offered any video files and 8 per cent offered audio files. Few had any more sophisticated multimedia such as podcasts or WIKI tools.

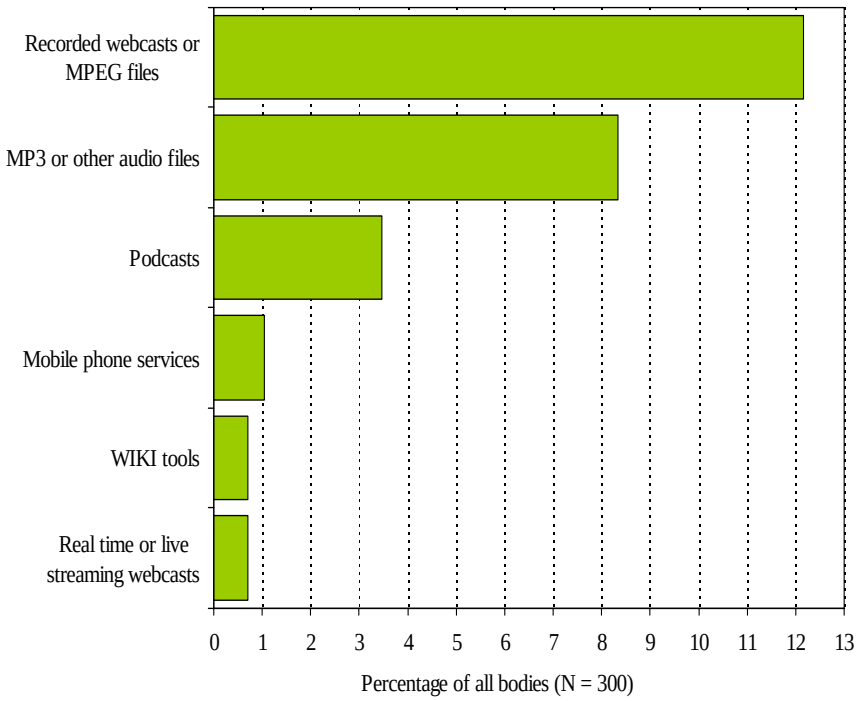


Figure 17: Very few government websites provided any information about the most popular aspects or sections on that website, or provided feedback to users about what other users were doing. Data provided in our survey of government organisations suggested that many organisations had information available which identified the most popular sections and downloaded documents, but this was not being communicated to users.

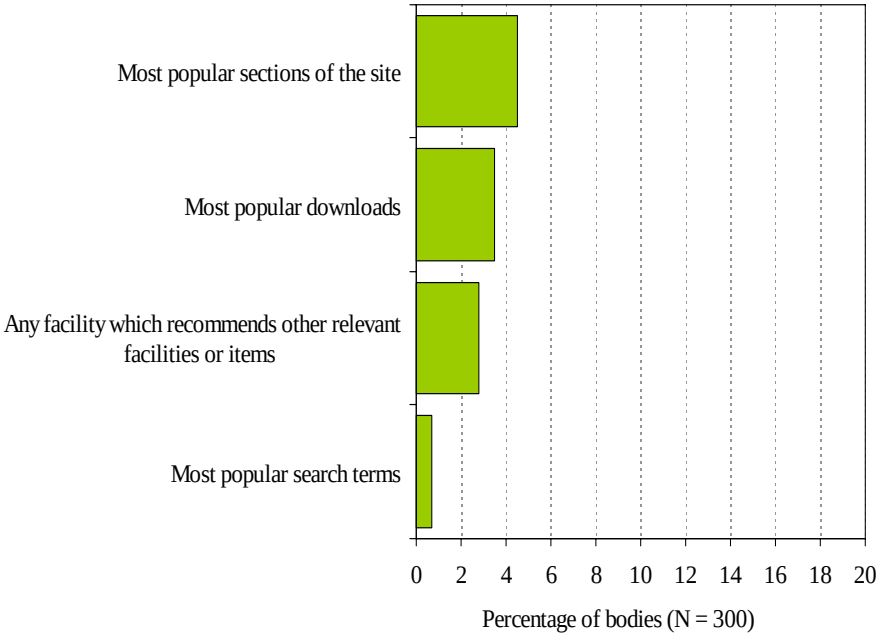
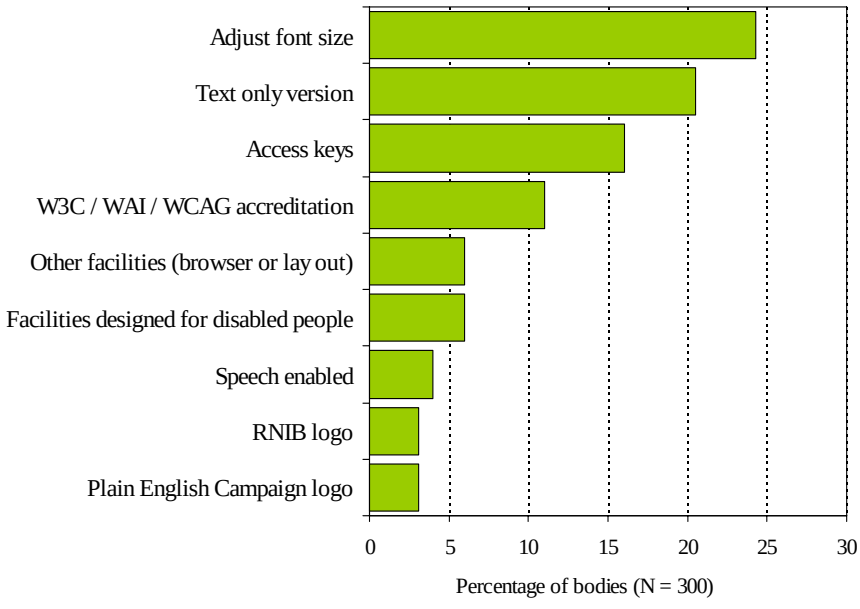
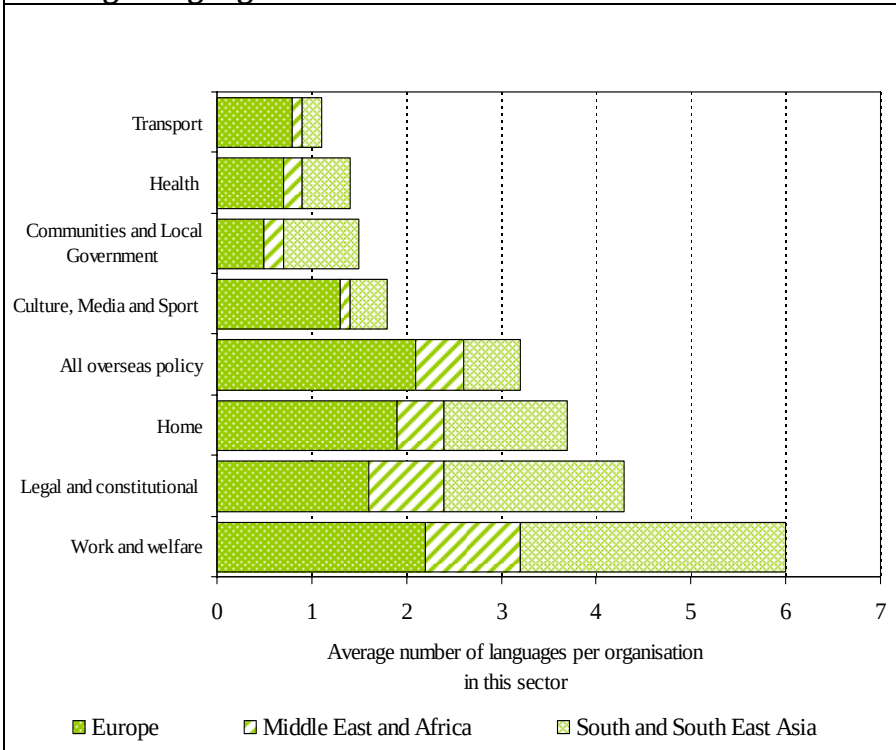


Figure 18: Major progress had been made since our 2001 survey to improve the availability of accessibility aids and standards marks on government websites. Around one fifth of websites were available in 'text only' format and one quarter allowed users to adjust font sizes. A smaller minority had speech enabled tools or 'browse aloud' adjustment features.



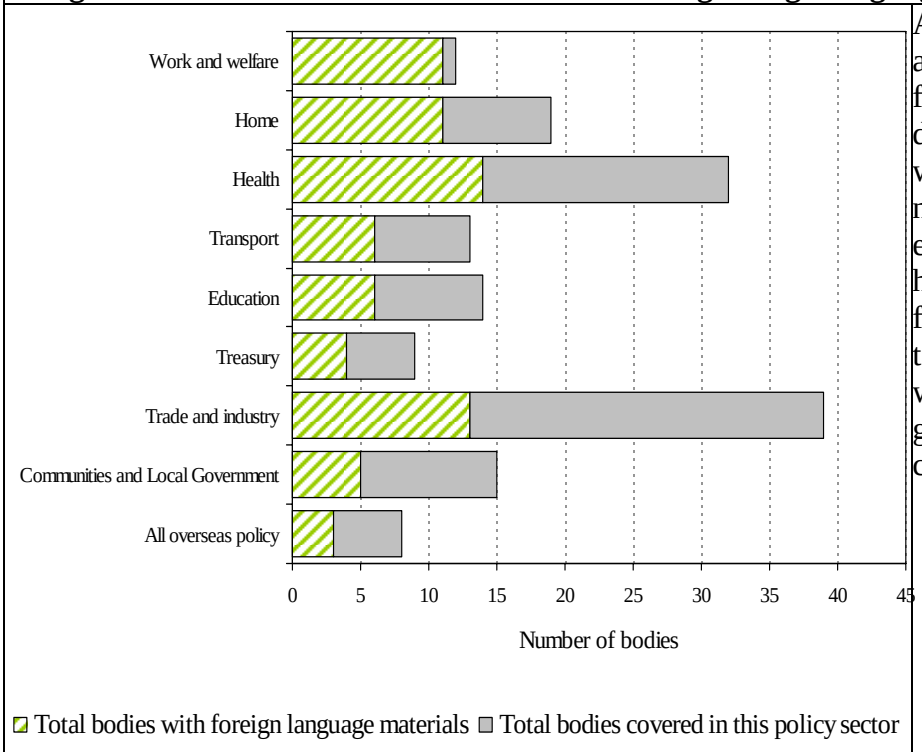
Note: W3C is the main standards organisation for the web. WAI stands for Web Accessibility Initiative (WAI) organised by the W3C to improve the accessibility of the web particularly for people with physical disabilities. WCAG stands for Web Content Accessibility Guidelines, a set of guidelines developed since 1999 focusing on making the content of the web more accessible. Our census coders were asked to note down any reference to any of these three acronyms displayed on government websites. It may be the case that organisations are accredited through W3C but our coders were not able to find any information or logos verifying this.

Figure 19: We found 45 different foreign languages on central government websites. Work and welfare, legal and constitutional, and home affairs were the policy sectors with the largest number of foreign languages.



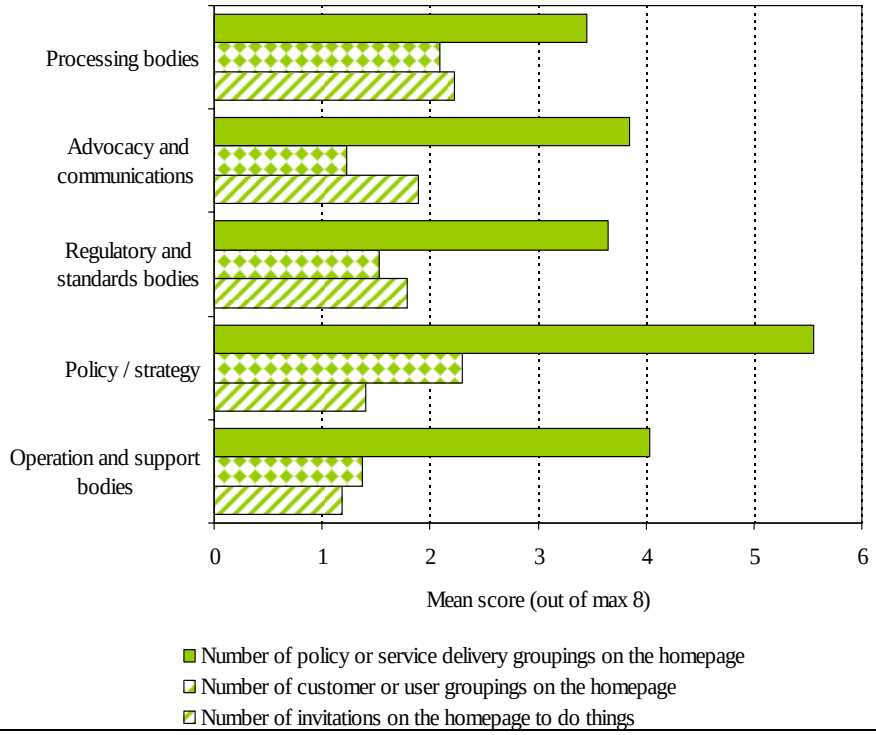
We asked our coders to record any foreign language material or documentation on government websites. This Figure divides total number of languages found for each policy sector by the number of organisations in the policy sector. This gives a proxy indication for the extent to which different policy sectors are providing information and material in foreign languages. Work and welfare organisations on average provided around 6 foreign languages, of which just under three are languages from South and South East Asia. Some government organisations produce content in a large number of languages, for example the Foreign and Commonwealth Office produce web content in 43 different languages The most commonly found languages were as follows: Welsh (34 per cent), French (10), Mandarin Chinese (9), Urdu (9), Arabic (9), Punjabi (8), Spanish (8), Bengali (7), Gujarati (6), German (6), Hindi (6), Somali (5), Turkish (4). Note: The 'All Overseas Policy' category (used here and in future Figures) covers departments and agencies relevant to this area (10 bodies in all), and includes the Department for International Development and the Foreign and Commonwealth Office.

Figure 20: The work and welfare and the home affairs policy sectors had the highest proportion of organisations with at least one website containing foreign language material.



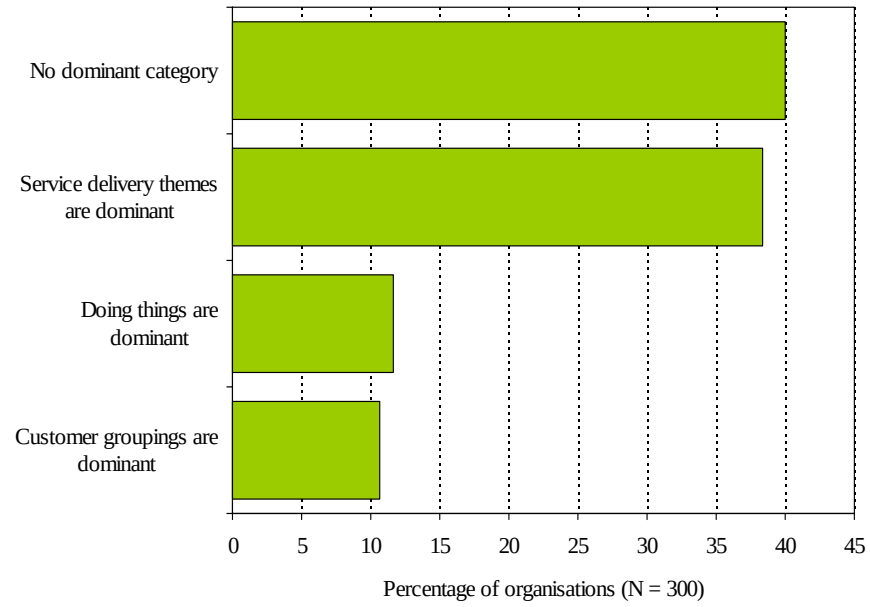
As shown in Figure 19, we asked our coders to record any foreign language material or documentation on government websites. This graph shows the number of organisations within each policy area grouping that had websites containing foreign language material. The total number of organisations within each policy area grouping is also shown for comparison.

Figure 21: Policy and strategy bodies tended to arrange information on their home pages around service delivery themes. Government bodies whose predominant functions are either administrative processing or advocacy and communications tended to have the highest proportion of home pages inviting users to do things on the website.



In our 2006 census we looked at how key information is organised on the homepage of central government websites. We counted the presence of three distinct types of label or signposted section: [1] information organised by service delivery themes (e.g. agriculture, benefits, navigation); [2] information organised by customer groups (e.g. claimants, mothers, lawyers); and [3] information organised by things that users can do on the website (e.g. check your account, make a claim, tell us what you think about us). We counted these items (up to 8 maximum) and then compared the balance. (See Note 1 below for a comprehensive list of our categorizations.)

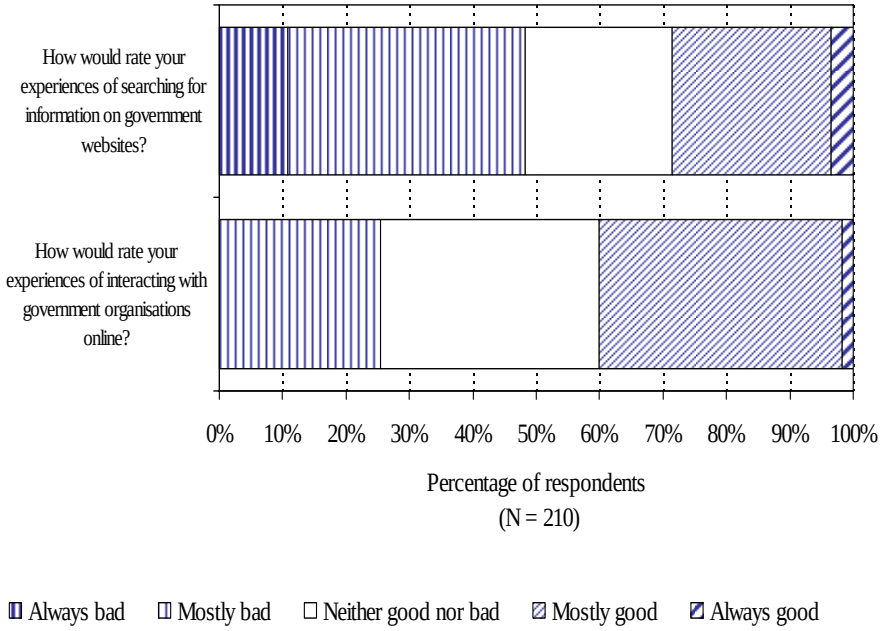
Figure 22: Around 40 per cent of websites organised the information on their home page predominantly around key service delivery areas or themes. One in 10 websites focused the home page more predominantly on things that users could actually do on the website. A further 1 in 10 websites segmented information on the home page predominantly around customer groups.



Following on from Figure 21, we counted the presence of 3 distinct types of label or signposted section: [1] information organised by service delivery themes (e.g. agriculture, benefits, navigation); [2] information organised by customer groups (e.g. claimants, mothers, lawyers); and [3] information organised by things that users can do on the website (e.g. check your account, make a claim, tell us what you think about us). For each website home page we looked at the prevalence of these three features and which of them were in dominant. No dominant category means that all three are low. For categories to be dominant, they must score 4 or above. In cases where more than one category is dominent, we coded them according to the following rules: If 'Doing Things' scores more than 4, we code as 'Doing things are dominant'. If Customers Groupings score more than 4, we code it is as 'Customer Groupings are dominant' providing 'Doing Things' is less than 4. If Service delivery themes score more than 4, we code as 'Service delivery themes are dominant' providing 'Doing Things' and 'Customer Groupings' are both less than 4.

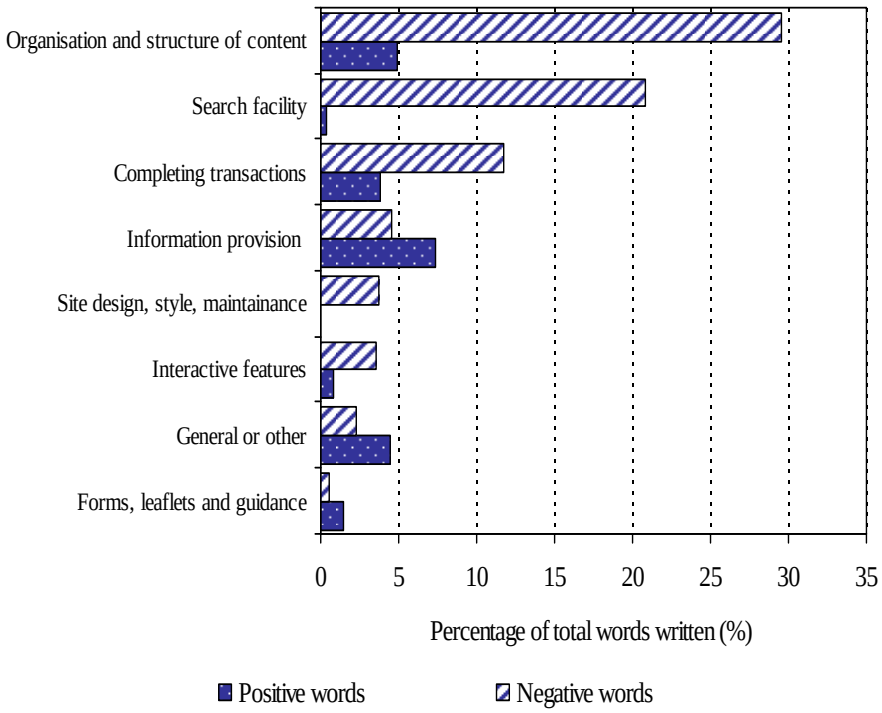
Turning to data from our public access website (where we asked people to comment about their experiences of using government sites):

Figure 23: Just under half of those people commenting and who had used government websites to find information would describe their experience as bad or very bad. People were more inclined to have better experiences with completing transactions with government online than searching for information.



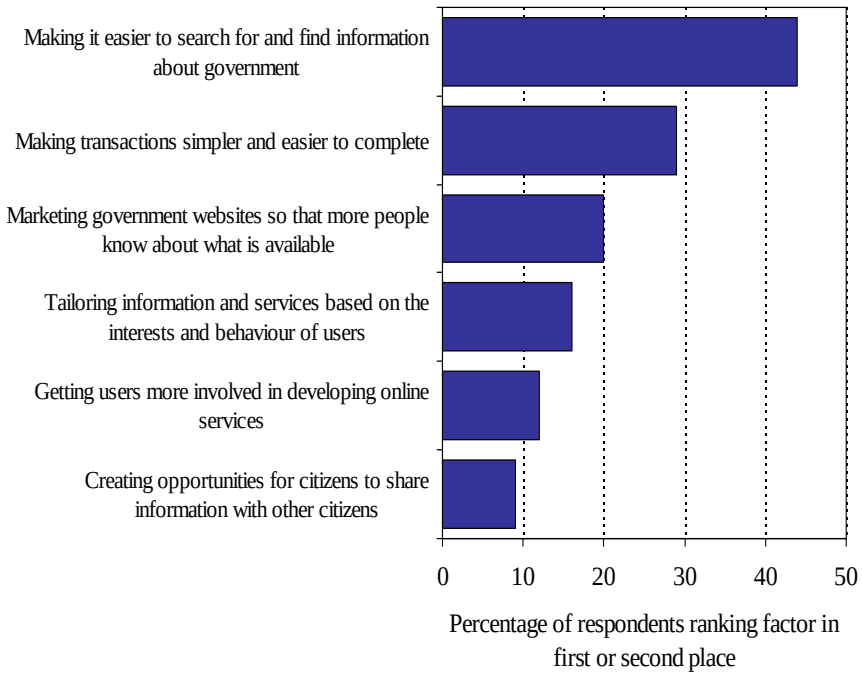
This data is from a short online survey for members of the public hosted on the NAO website. We advertised this survey widely across major organisations with an interest in the UK e-government community. This graph is based on the 210 responses received. We would point out that this data is in no way statistically significant, and should only be used as a guide to some views on government websites.

Figure 24: On average three in every four words submitted as comments to our public access comment site were part of critical points about government websites. The main points of concern for people were weak organisation and structuring of content on websites, and the quality of the search facility. People had positive comments about the degree of information provision.



In our public survey hosted on the NAO website, we asked respondents to answer a number of questions on their experience of using government websites. We asked respondents to write in free text boxes things they liked or disliked about government websites. Over 7,000 words were written by 147 individual respondents. This Figure separates positive and negative comments made, counts the number of words attributed to each, and displays some categories of comments as a percentage of total words written.

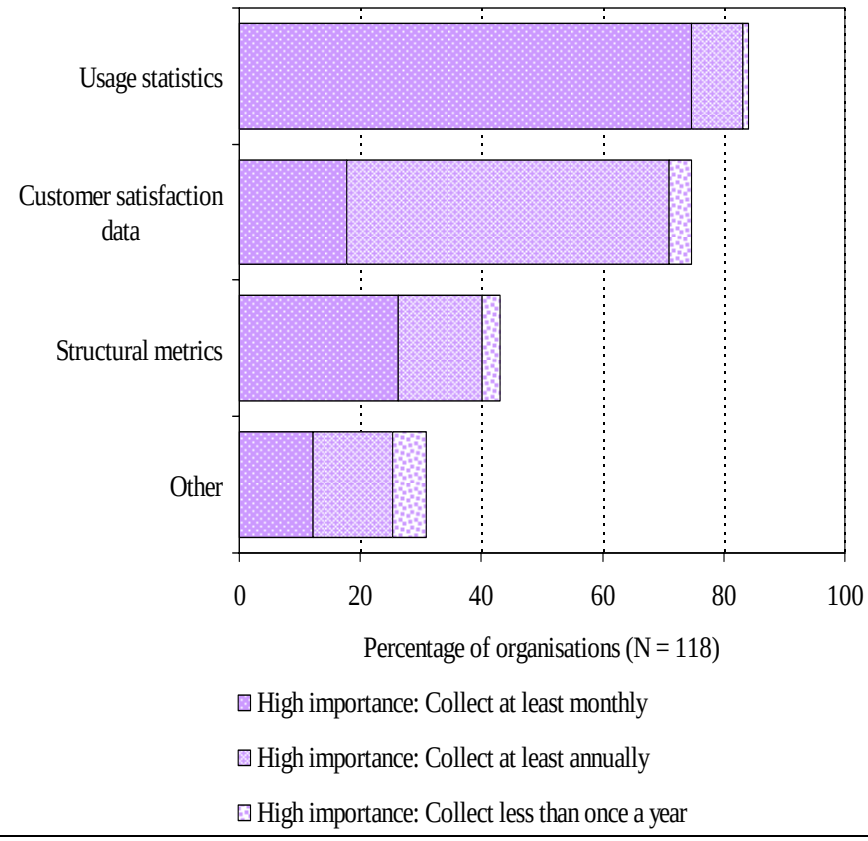
Figure 25: For people commenting, the most important priorities for government websites were to make it easier to search for and find information, and to make transactions simpler and easier to use.



We asked our public survey respondents to rank different priorities for government organisations focusing on how they could improve their websites. This graph shows the distribution of rankings for different priorities.

Returning to our survey data:

Figure 26: Government organisations placed high importance on collecting usage statistics and customer satisfaction data. Over three quarters of government organisations collected usage statistics at least every month. Customer satisfaction work was equally as important but was more likely to be carried out at least once a year.



We asked respondents to give a score for how important different kinds of website metrics are to their overall website strategy. The scale ran from 1 to 7, where 1 = Not at all important and 7 = Very important. We also asked organisations to estimate roughly how often they collect these different types of web metric data. This Figure shows organisations assigning a high importance (scoring either 5, 6, or 7) to certain types of metric and how often these organisations collect each type of data.

Figure 27: Keeping track of how people use government websites.

QUOTE BOX 1:
Keeping track of how people use government websites

We use deep interviewing of a cross-section of our target audience about their needs and views of the corporate website (Major citizen-facing Department)

Work coming into the content team is monitored and reported to Directors every 3 to 4 months. Our online reputation is monitored using Google and blog sites every month (Research council)

We recognise the importance of cross-linking between relevant content within the sites that we manage, and with external sites with related content (Major citizen-facing Department)

Another key metric is the website's technical performance, such as the amount of unscheduled downtime (NHS body)

The redesigned website has been trailed to customers at the regulator's stand at [policy area] *events to pick up on additional feedback on the redesign prior to going live (Regulatory NDPB)*

We do an annual impact survey that takes a sample of those that have used the website […] to measure the economic impact they attribute to it. This is balanced by a counter-factual look at those who have not used the site (Business NDPB)

Figure 28: Using metrics to inform changes to government websites.

QUOTE BOX 2:
Using metrics to inform changes to government websites

Our programme to make all our past reports back to 1950 available on the website was influenced by the popularity of the reports section of our site as shown in our user statistics and by requests by site users (Regulatory NDPB)

Peaks in visitor numbers (especially during emergencies) are used as an input to ensure our infrastructure can support potential future needs (Ministerial department)

We used responses to change the home page to reflect what customers wanted to do, for example downplaying the corporate About Us contact, […] introducing new topic-based summaries, and structured RSS fields (Citizen-facing Ministerial department)

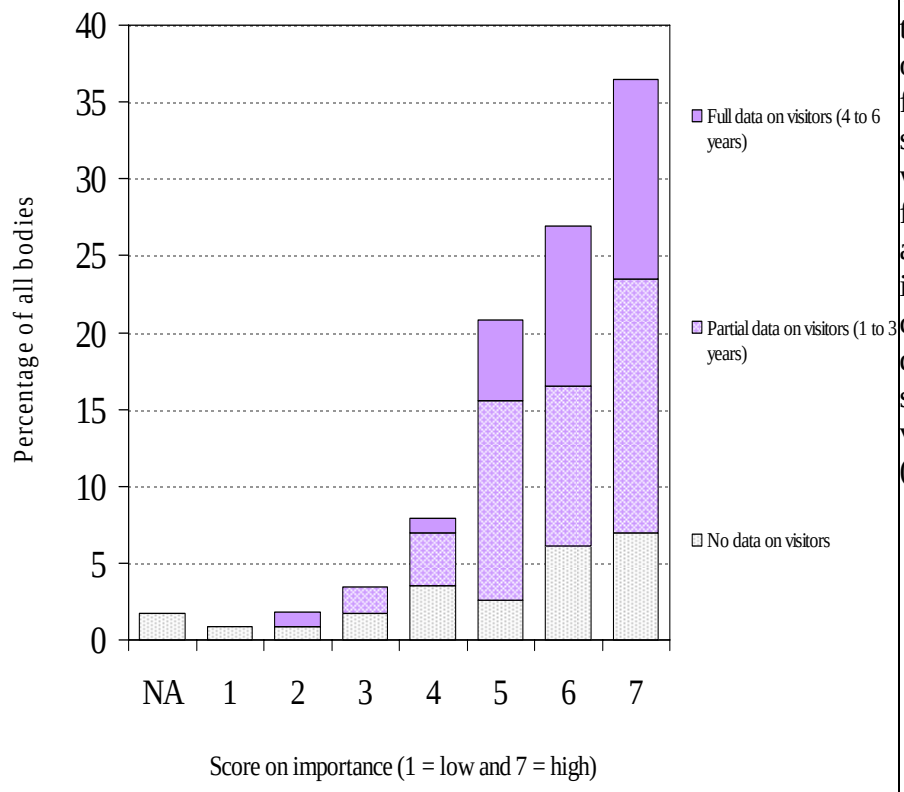
Customer research indicated that users would like an area where they could sign up for discounts and email alerts. This led to the development of a new area called My [name of organisation] (Executive Agency)

The website was restructured in 2005 based on the results of traffic and usage surveys. The home page was divided into three top-line sections to provide clear routes through the site based on user activity and traffic (Culture NDPB)

The homepage now displays prominent links to the most looked for and most downloaded PDF forms, leaflets and applications. These were placed on the home page after analysing website statistics (Executive Agency)

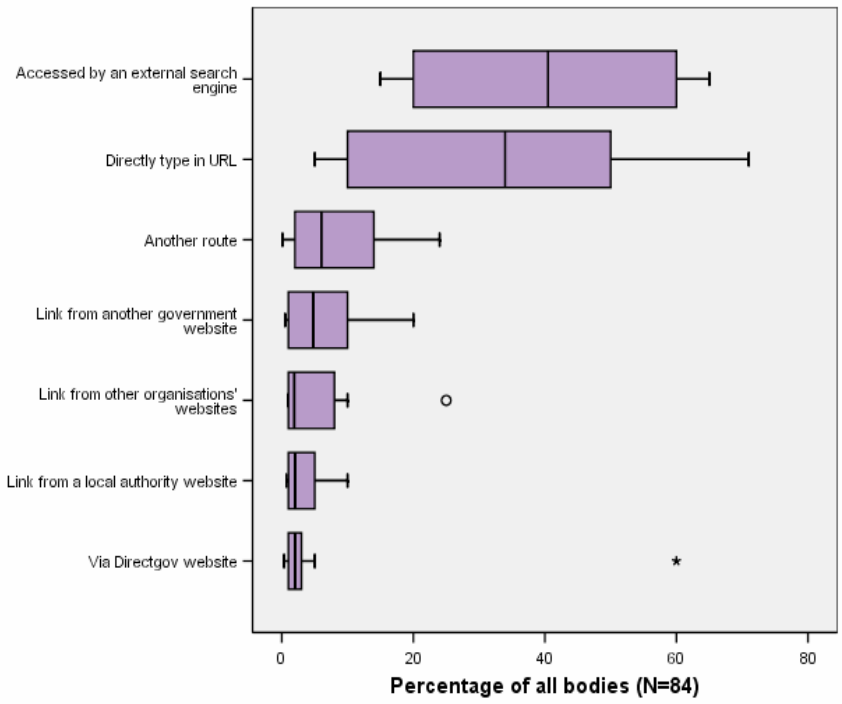
The popularity of a printer-friendly version of each key guide became the basis for building a more sophisticated facility that allows users to pick up items of content as they travel across the site, and have them bundled into a higher-quality PDF file, with cover page and table of contents (Business NDPB)

Figure 29: Around 15 per cent of organisations who said that usage statistics were important to them (i.e. giving a score of either 5, 6 or 7) were not able to provide us with usage statistics from the last five years.



This Figure follows on from the previous one. We asked organisations to give a score for how important usage statistics are to their overall website strategy. The scale ran from 1 to 7, where 1 = Not at all important and 7 = Very important. These data are cross-referenced here with the quality of data provided in the survey on usage (i.e. unique visitors or page views) (N=118).

Figure 30: Government organisations estimated that the most common routes for people coming to their websites were either from an external search engine (38 per cent) or by typing in the URL or using a bookmark (39 per cent). On average less than 2 per cent of people coming to government websites came via Directgov.



We asked organisations to estimate what proportion of total visitors to their website originated from different sources. Out of 130 organisations responding to the survey, 84 (65 per cent) provided estimates. These organisations account for approximately 95 per cent of total visitors recorded in our survey.

Figure 31: How people access government websites.

QUOTE BOX 3:
How people access government websites

From experience I would expect the majority of our traffic is split between typing in the URL directly and using specific terms in search engines (Large NDPB)

We have a core of regular users who would type in the URL or use a bookmark (Defence Executive Agency)

It is possible to get the exact data for this question but this would require analysis of a 700-row table. We have instead made estimates based on a sample of rows (Government Office)

We recognize that the most common way to navigate to our website is usually through Google (Transport Executive Agency)

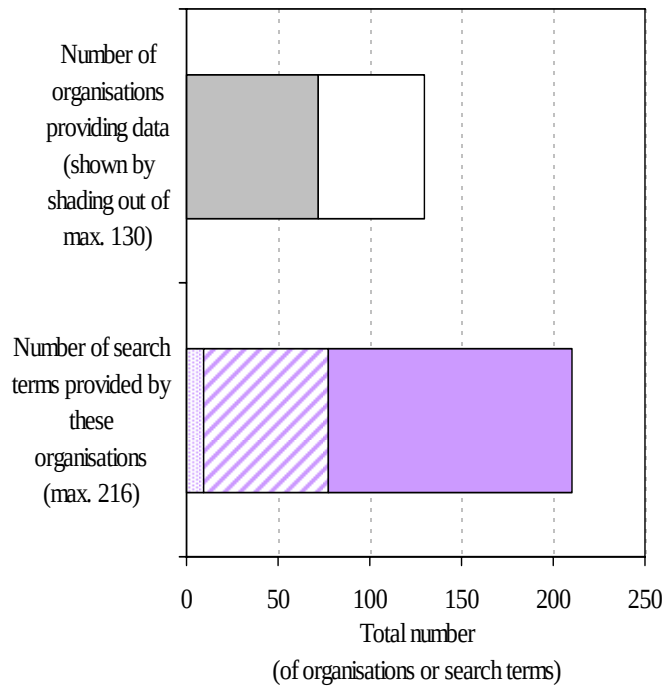
Our stats show 65 per cent as 'no referrer'. We assume these users typed in the URL or had it bookmarked (Regulatory NDPB)

The majority of our visitors come direct to our website using the address that we have provided to them through written communications or information leaflets (Large NDPB)

We collect information on top referrals – search engines are listed but government websites, local authority sites and other organisations are too few to show up […] Most referrals are from search engines (Culture NDPB)

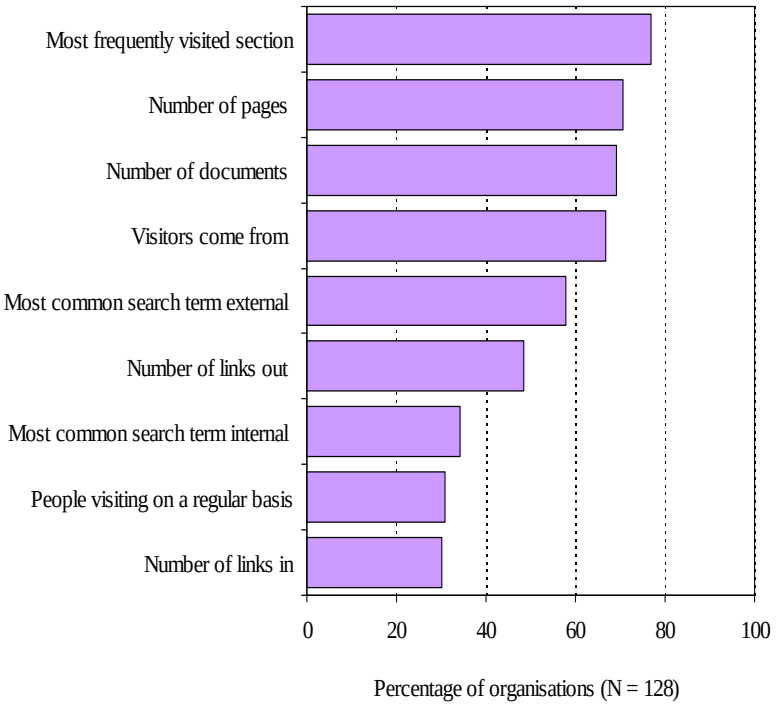
We are not listed on Directgov and therefore no traffic comes through this source (Large NDPB)

Figure 32: According to departments and agencies responding to our survey, a high proportion of people visiting government websites via external search engines used the name of the organisation (or a variant of it) as their primary search term. Out of 220 search terms provided by 72 organisations, 133 (60 per cent) were a variant of the name of the organisation.



In our survey of government organisations we asked for details on the top 3 most frequently used search terms by people visiting their website. Seventy-two organisations out of 130 provided this data.

Figure 33: Just under four fifths of organisations provided data on which sections of their website were most frequently visited. Far fewer reported which groups of users visited the website on a regular basis, or how many links pointed to their website from other websites.



We asked government organisations to provide estimated data on the size of their website, how people used their website, and how many links come into and out of their website. The Figure shows the percentage of all organisations which provided at least estimated figures.

Figure 34: Knowing who are the regular users of the website.

QUOTE BOX 4:
Knowing who are the regular users of the website

The friends and family of those currently working in the Antarctic visit our site on a regular basis to read the online diaries written from each research station and ship (NDPB)

Content is event specific… I doubt we have the concept of a regular user (Non-ministerial department)

It is very difficult to get reliable information from the stats about who visits our website. From anecdotal evidence and seeing where they go we can make assumptions (Large NDPB)

The repeat visitors figure was based on two weeks of traffic to [the website] using Google Analytics (Non-ministerial department)

Our stats show that 5,000+ people visit the site more than once in any one week, but we cannot estimate from this how many use the site on a regular basis (Regulatory NDPB)

We can only track repeat visitors which is not necessarily the same as regular visitors. We know from feedback that the application that allows the user to look up their business rates is consistently used by rating agents but how many we do not know (Executive Agency)

Repeat visitors is not a figure that can be relied upon. Multiple individuals from a single organisation may appear as one IP address and stats will therefore suggest repeat visitors (Education NDPB)

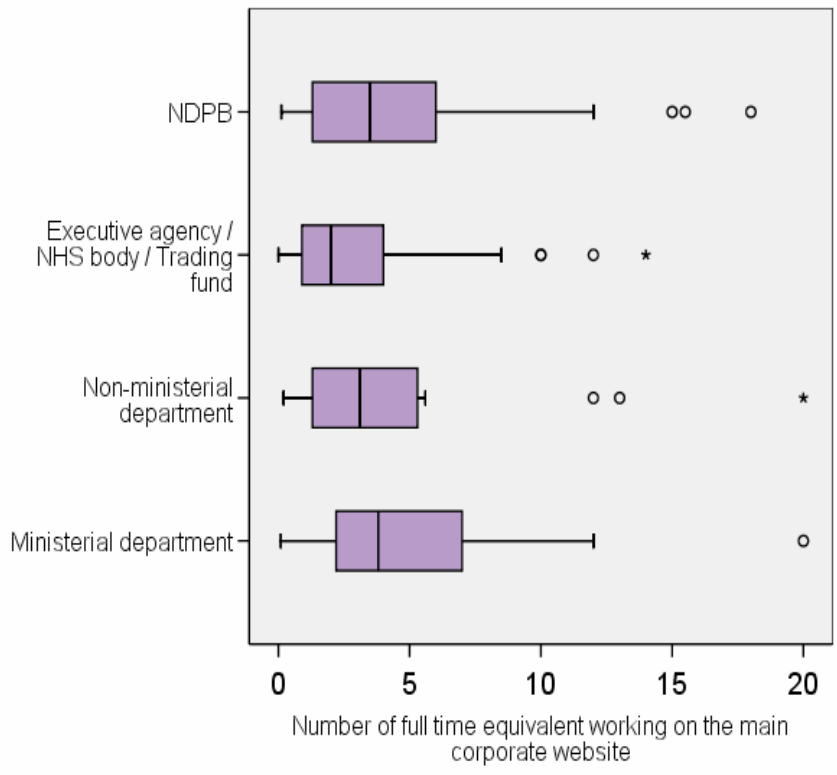
PART 2: HOW GOVERNMENT ONLINE PROVISION IS CURRENTLY ORGANISED AND WHAT IT COSTS

Figure 35: Nine in every ten organisations responding to our survey of departments and agencies had an in-house capacity to update content of their website. Just over two thirds of organisations had in-house capacity to modify the structure or main design of the website.

Percentage %	In-house	Private firms	Other
Looking after technical operations	59	55	16
Modifying structure or main design	69	41	18
Updating content	89	8	8

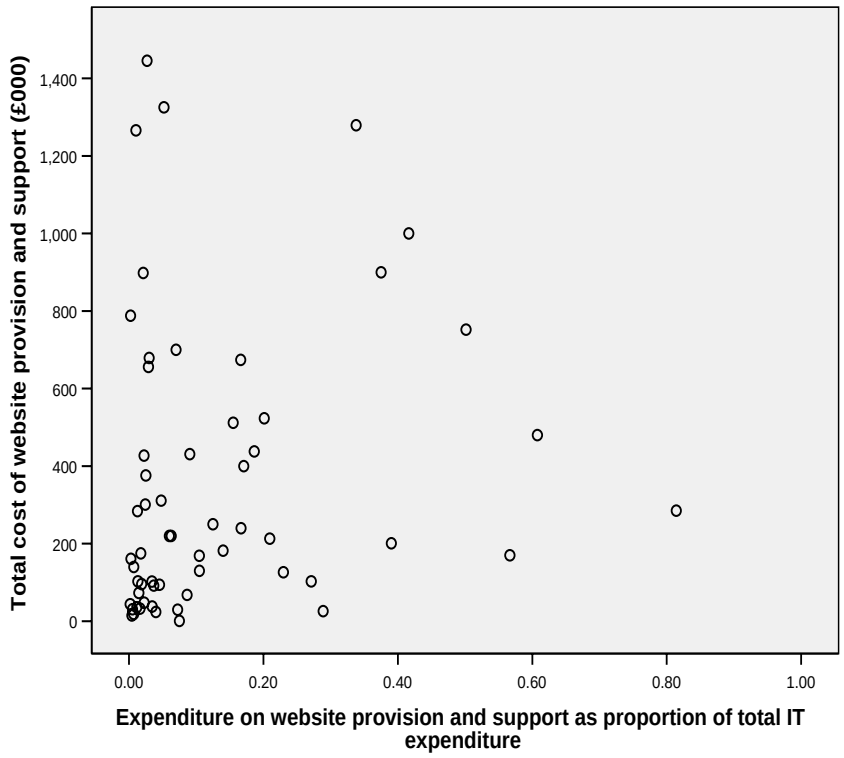
These figures are percentages of all organisations responding to our online survey. Columns and rows do not total to 100 as each field is a percentage of the total (N = 128).

Figure 36: On average central government organisations had 4 full time equivalent staff working specifically on their main websites. This figure varied significantly across different types of organisation. Ministerial departments and NDPBs tended to show the largest variation in numbers of website staff.



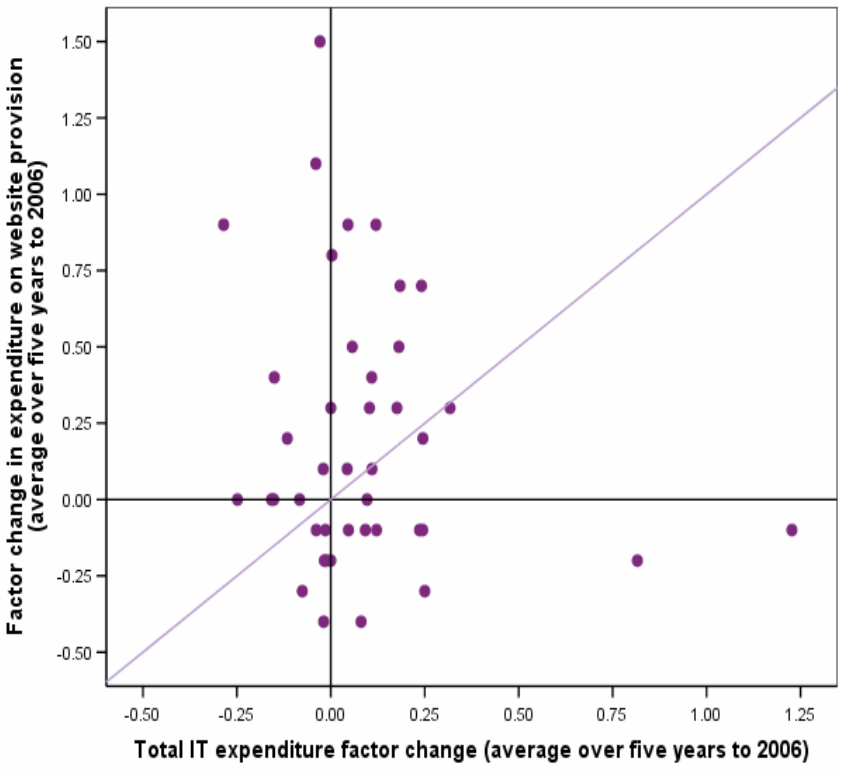
Nine organisations had high numbers of staff working specifically on the website. These included 1 large Ministerial department (30 staff), 1 large Executive Agency (30 staff), 2 non-ministerial departments (26 and 35 staff respectively) and 4 NDPBs (21, 23, 25, and 75 respectively). We have not included these organisations in the Figure.

Figure 37: On average, organisations said that they spent around 12 per cent of their total IT expenditure on website provision and support. This figure varied widely across different organisations. Of 67 organisations that provided sufficient data, 13 organisations spent more than 20 per cent of their IT expenditure on website provision and support.



Comparing total cost of website provision to total expenditure on IT gives a proxy for the level of importance of website services in relation to wider spending on information systems. There is no strong relation between these two variables.

Figure 38: There was no discernible direct positive correlation between the change in expenditure on websites and change in expenditure on IT. Most organisations which have increased expenditure in both areas had increased expenditure on website provision by relatively more than on IT as a whole.



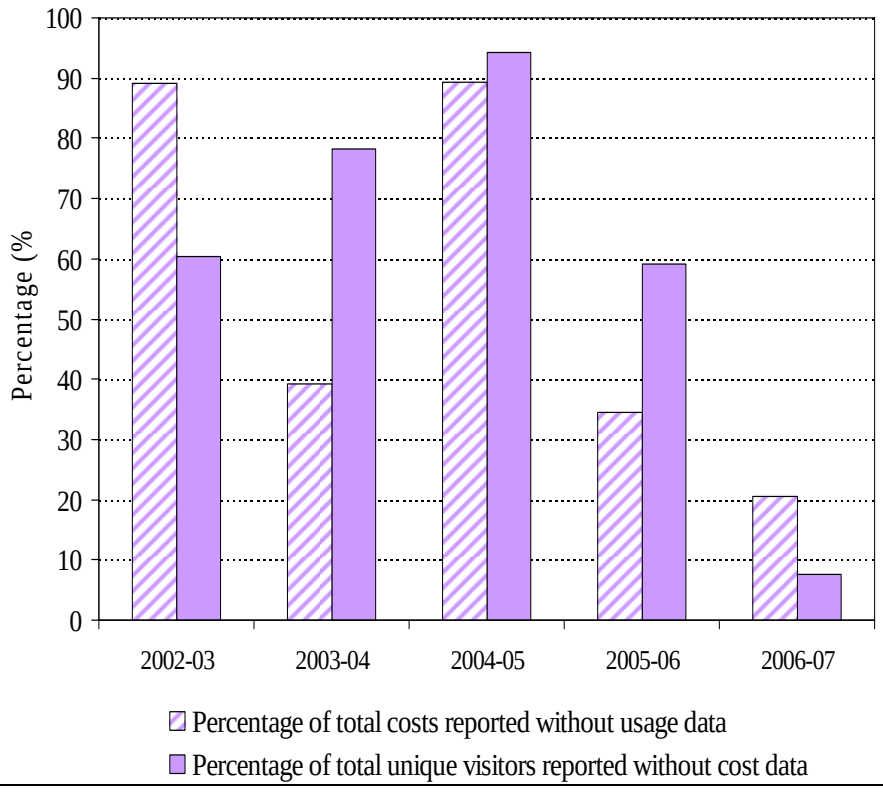
Only 42 out of 124 organisations supplied sufficient data for us to calculate change over time for expenditure on IT and expenditure on all website provision and support. The line is at 45 degrees as a guide. It is not a regression line and does not show correlation.

Figure 39: Forty-three percent of organisations provided full data over 4 or 5 years on expenditure on website provision and support across their organisation. Fifteen per cent of organisations could not or did not provide data on costs. Seven out of 15 ministerial departments responding to the survey could not provide costs of total website provision and support across the organisation.

	Data on costs of website provision			TOTAL
	None or negligible	Partial data *(1 to 3 years)*	Full data *(4 or 5 years)*	
Ministerial department	7	4	4	15
Non-ministerial department	3	12	7	22
Executive agency	2	13	19	34
NDPB	8	25	26	59
TOTAL (N)	**20**	**54**	**56**	**130**
TOTAL (%)	15	42	43	**100**

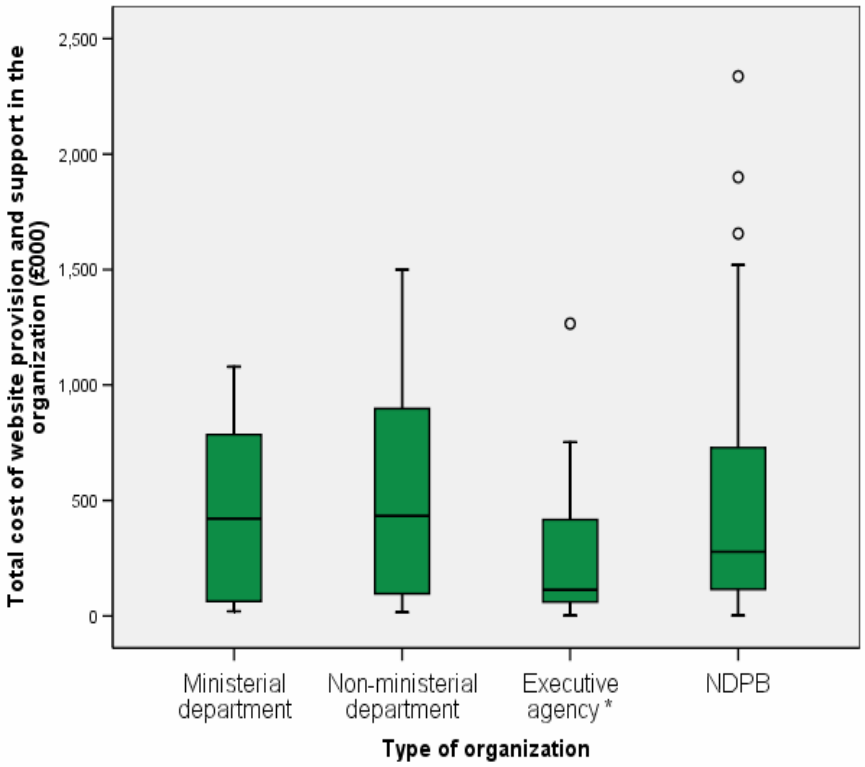
We asked organisations to provide annual cost figures for the most recent year and previous five years. We assessed each response using the following criteria. Full data – organisation could provide at least 4 out of 5 years including the most recent and could provide full data for the breakdown for the current year. Partial data – organisation could provide 1 to 3 years of data and a total for the current year. None or negligible – no data provided or figures that seemed grossly unrealistic. A judgement was made on borderline cases between Full and Partial in favour of Full (i.e. benefit of the doubt).

Figure 40: The extent to which organisations could provide annual figures on the costs and usage of their main website has improved over recent years. For 2006-07, 20 per cent of organisations' total reported costs of running websites did not have accompanying usage data. Around 8 per cent of total reported usage did not have accompanying cost data.



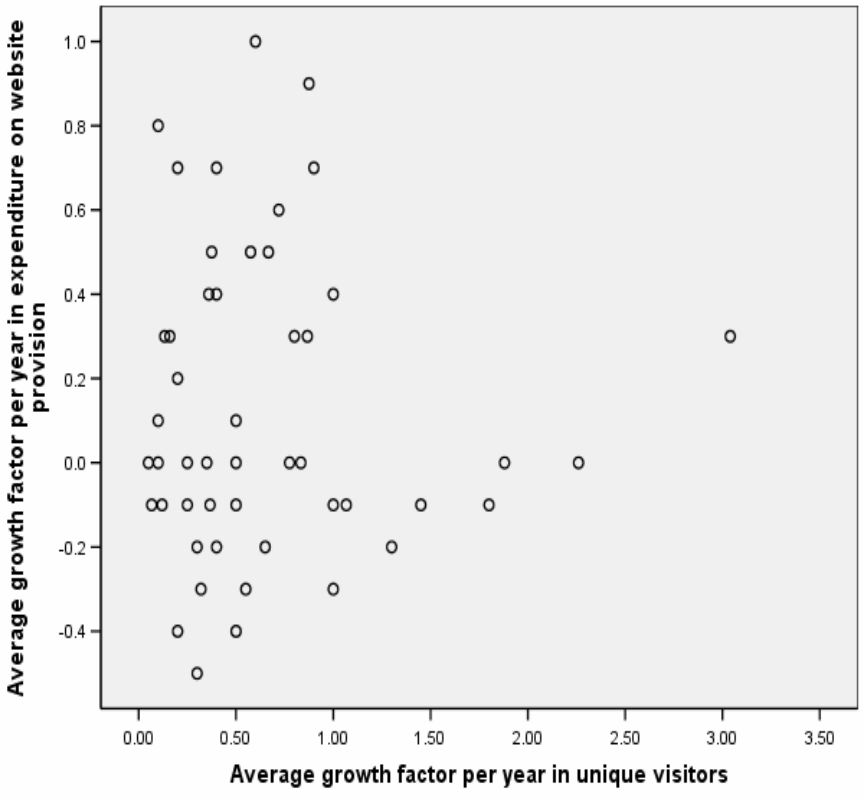
We asked organisations to report figures for: [1] the annual cost of running the main website; and [2] average number of unique visitors coming to the website per month. Figures were requested for the following years 2002-03, 2003-04, 2004-05, 2005-06, and 2006-07. For each year we calculated the proportion of total costs given where the equivalent usage figures were not given, and vice versa, the proportion of total visitors where the equivalent cost figures were not given.

Figure 41: Average expenditure per organisation on website provision and support reported in our survey responses was around £430,000 per year. This figure varies greatly across different types of organisation.



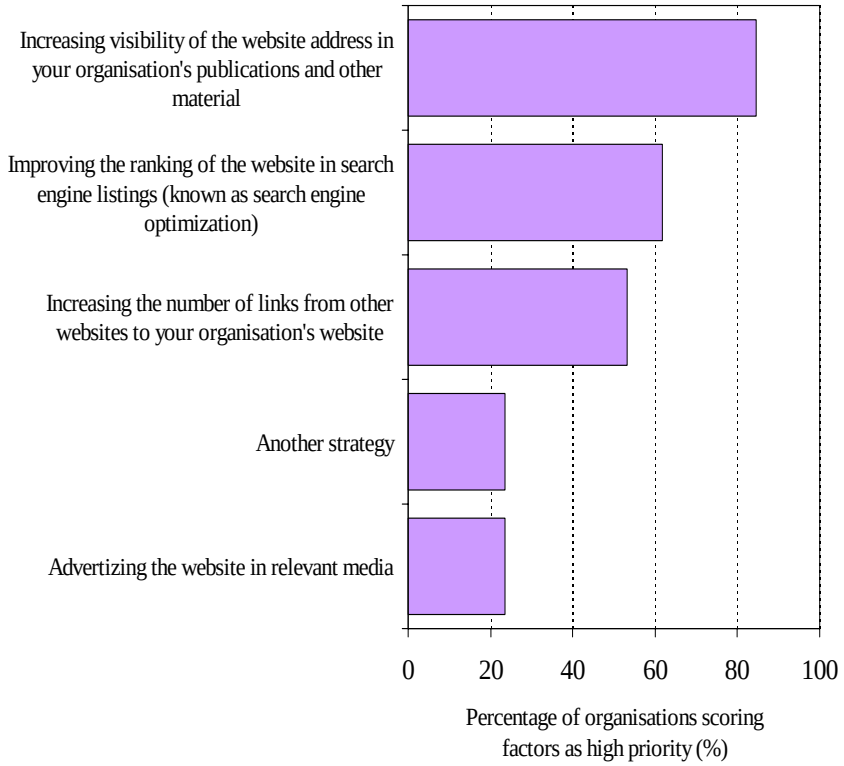
We have not included expenditure figures for seven organisations in this graph. These are as follows: Two large Ministerial departments (£28.5 million and £11.9 million respectively); 2 non-ministerial departments (£4.85 million and £3.58 million respectively); 2 NDPBs (£14.3 million and £4.05 million respectively); and 1 cross-government site (£18.62 million).

Figure 42: We could find no discernible direct relationship between growth in expenditure on the main website and growth in the number of unique visitors to the website, as reported in responses to our survey.



We calculated average growth factor for expenditure on the main website year on year. As in the previous Figure, expenditure on websites is rarely gradual or smooth over time. It tends to show lumpiness as some years incorporate development spending while others do not. For each organisation, we took the first figure as a baseline, took an average figure for all years, and then subtracted the baseline year figure from the total average figure. This gave an indication of whether total average spend had risen or fallen over the period. A growth factor of 0.2 for example means that expenditure has on average increased by 0.2 of the original baseline figure. We calculated a growth factor for visitors coming to the website. These figures tended to show gradual increase year on year. The average growth factor was calculated by subtracting the first figure given from the last figure, and dividing the result by the number of years for which data had been provided. A growth factor of 1.0 means that each year the number of unique visitors has doubled or increased on average by 100 per cent.

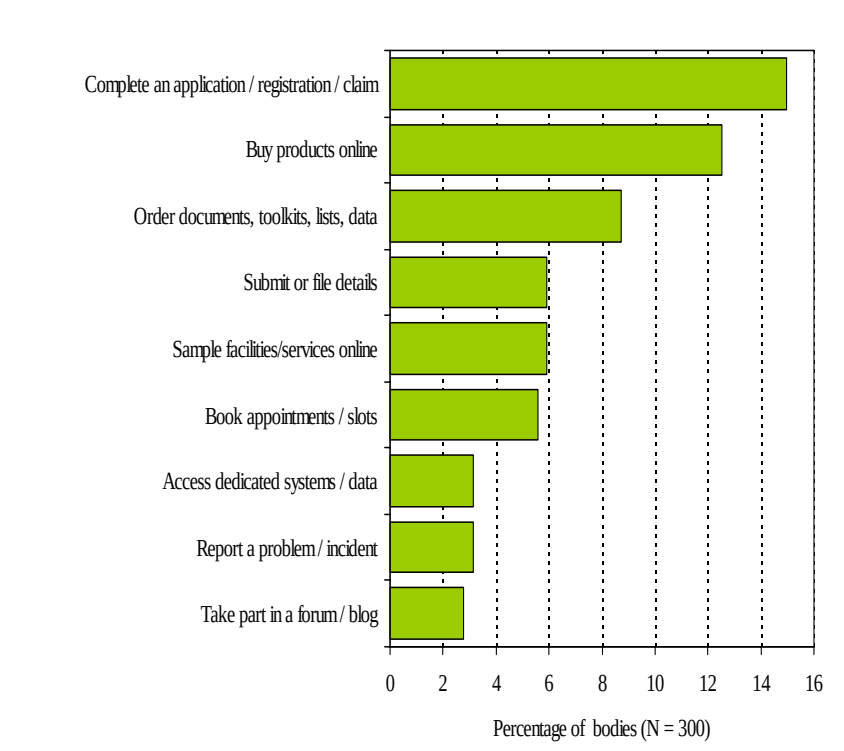
Figure 43: Most organisations placed high priority on increasing the visibility of the website address in published corporate material. Around 3 in every 5 organisations used search engine optimization methods. Only 1 in 5 organisations attached high priority to advertising the website in relevant media.



We asked respondents to tell us how much of a priority each of these strategies were in terms of growing traffic to their website. Respondents gave a score from 1 to 7, where 1 = Very low priority and 7 = Very high priority. This Figure shows the percentage of organisations scoring each factor as a high priority (score of 5, 6 or 7).

In our web census:

Figure 44: We found that around 15 per cent of organisations allowed users to complete a substantial transaction online, either an application, registration or another administrative process. Only a very small minority had web logs, web chats or forum applications.



In our website census we asked our coders to identify any features on websites which are transactional, in the sense that they allow the visitor to complete a substantial process such as filing an application, submitting information, receiving information, or buying items. We asked coders to note down the exact transaction and we recoded all our findings into five general categories featured in this graph. Figures are percentages of all organisations included in the census (N = 300).

Figure 45: Around one quarter of organisations had facilities on their websites that allowed people to search databases or access collated data of some description. This included the small minority of websites which provided personalized evaluations (i.e. postcode searches). Around 1 in 6 websites allowed for electronic submission of applications, claims, registrations or other administrative processes.

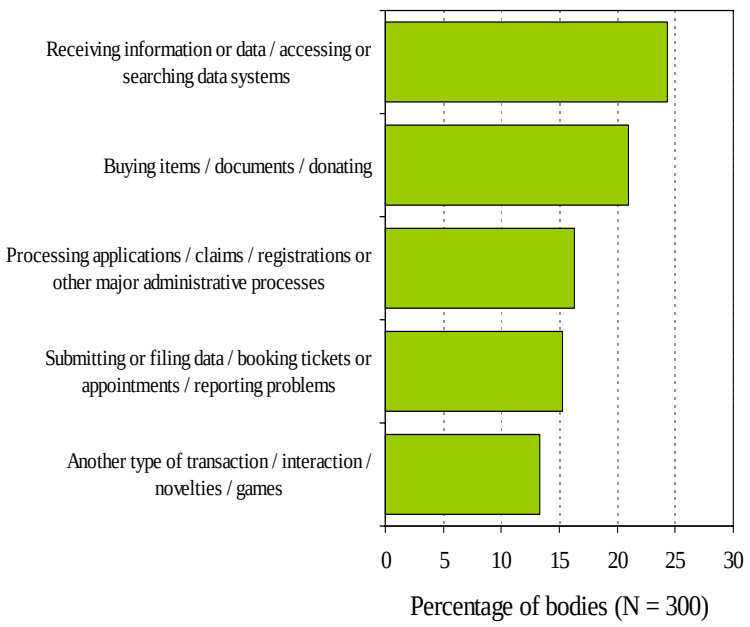


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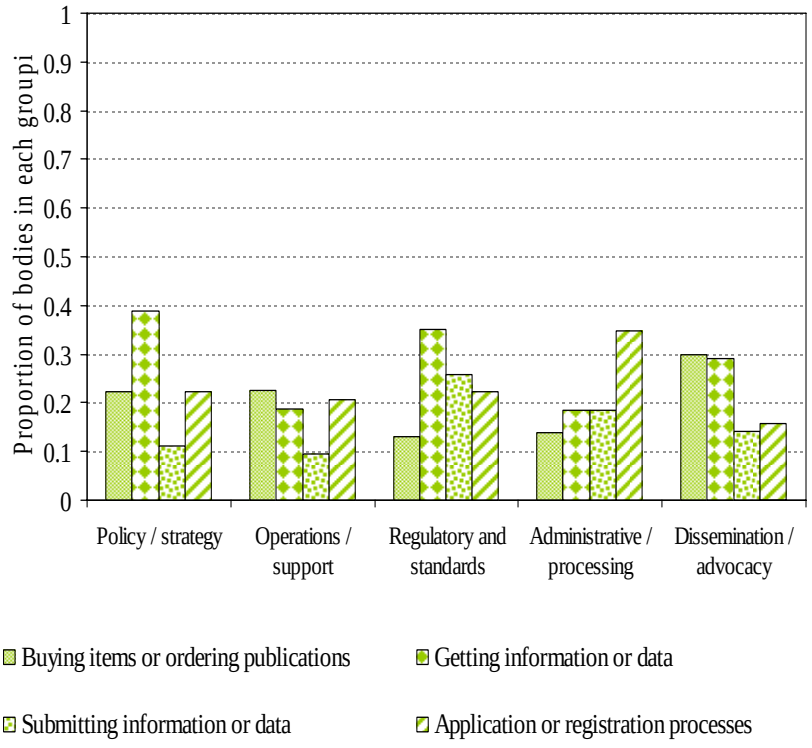
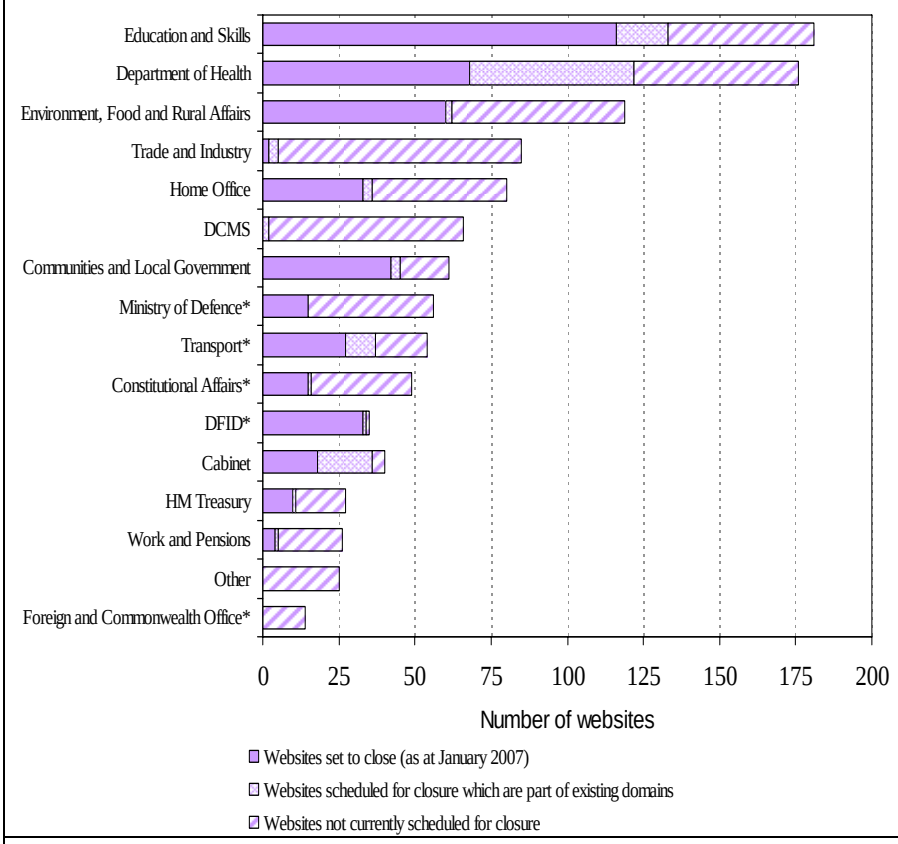
Figure 46: We found that around one third of organisations with significant administrative processing functions allowed users to submit or process applications or registrations online. Around one third of organisations with significant advocacy and dissemination functions allowed users to make purchases online (these included museums and galleries).



See Note 1 below for a comprehensive list of our categorizations.

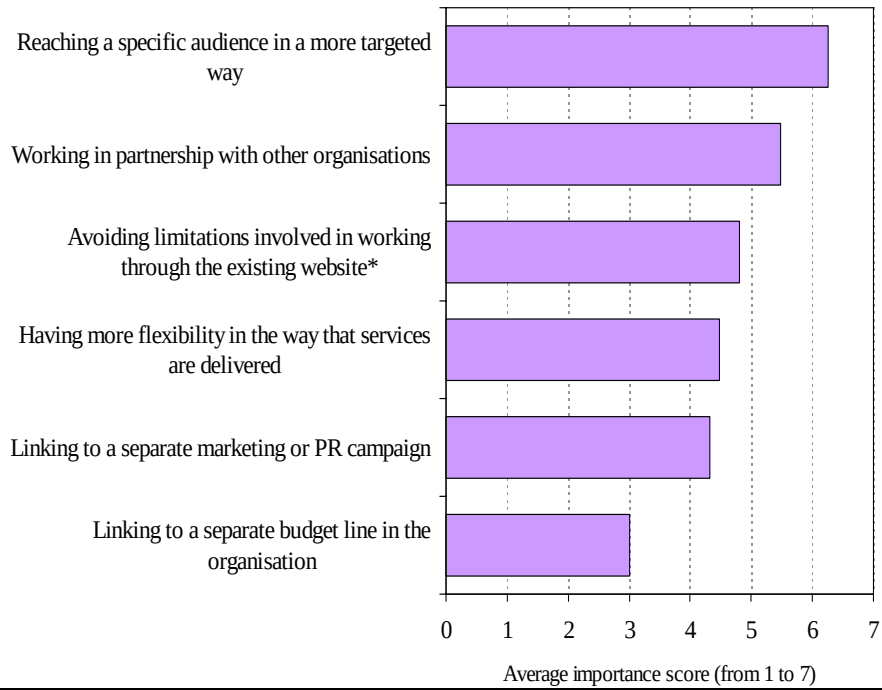
PART 3: FUTURE DEVELOPMENTS AND STRATEGY

Figure 47: From Cabinet Office data published in January 2007, education and health are the main policy areas which have undergone significant reduction in the number of government websites as a result of the Transformational Government strategy. Our own survey data allows us to estimate the number of websites in existence and not currently scheduled for closure*.



(*) Data for websites not currently scheduled for closure is taken from our survey of government agencies and department. The following Departments did not provide data on supplementary websites and therefore figures for these policy areas in the chart above may be underestimated. We have marked those areas with an asterisk. We reviewed the documentation in the 2006 Transformational Government annual report listing websites to be closed as at January 2007. This lists around 551 websites scheduled for closure. We estimate that around 140 of these websites are part of existing domains. The remaining 430 websites scheduled for deletion include 17 corporate websites of organisations not currently scheduled for merger or abolition.

Figure 48: In our survey, teams managing supplementary websites (separate from their organisation's main site) saw their main benefits in being able to reach a specific audience in a more targeted way and avoiding limitations involved in working through existing websites.



We asked organisations to give a score from 1 to 7 to each of the following factors influencing the decision to set up a new website separately from the main corporate website where 1 = Not at all important and 7 = Very important. N = 122 for all factors above apart from 'Another reason' where N= 36.

(*) Limitations of working through existing websites involved both organisational and technology issues. Two examples from the survey returns are 'The XXX is a complex website that could not be supported in-house, in-house expertise are not available' and 'The server on which this website is hosted has PHP installed. Our main website does not use PHP and is installed on a server without dynamic capabilities'.

Figure 49: In our web census we found that just under one third of 300 central government organisations had a link on their main website to Directgov.

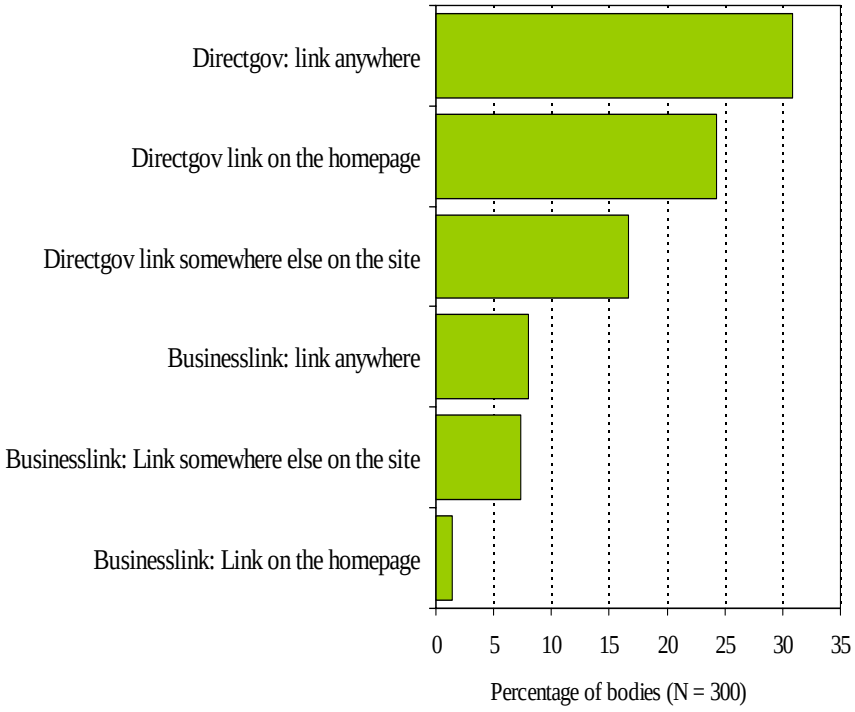
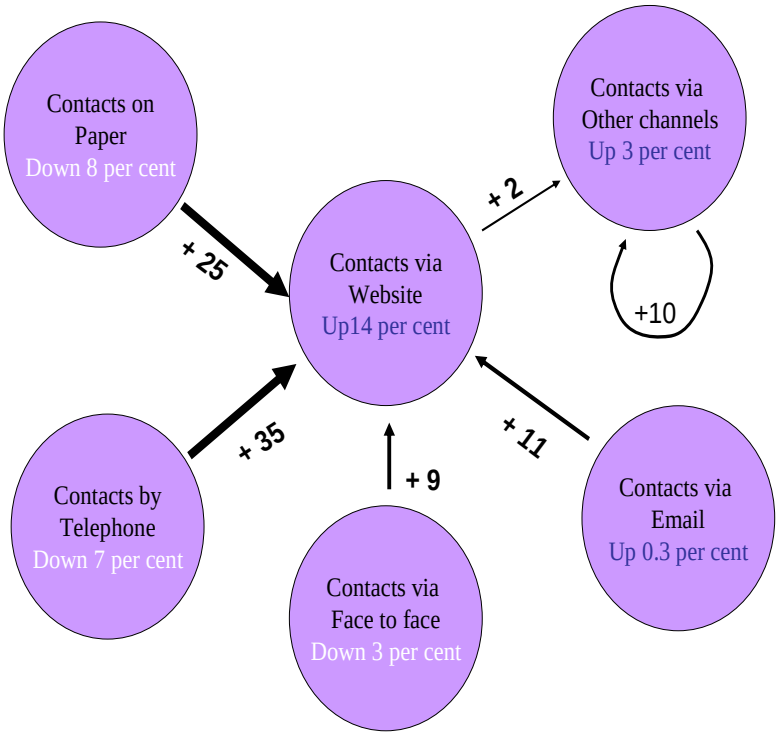


Figure 50: By 2010 central government organisations plan to increase contacts via their website by an average of around 14 per cent of all contacts. Paper and telephone communication will reduce by around 7 or 8 per cent.



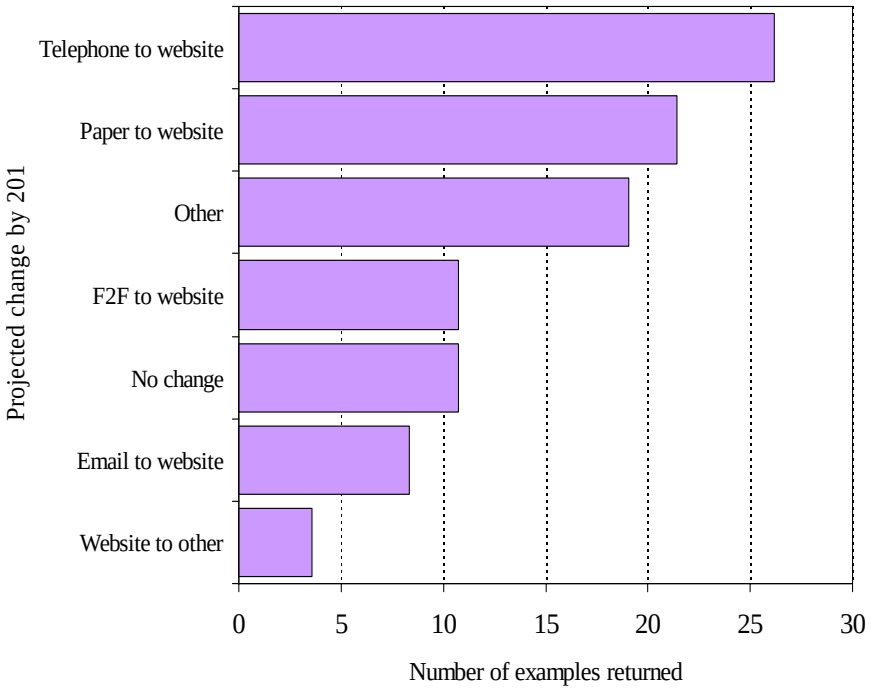
For each of the 158 business areas identified, we asked organisations to estimate the current mix of channels through which all contacts with the organisation take place. We then asked for estimated projected channel mix for delivery of this business area in 2010. Organisations were able to provided current and projected data for 84 of these business areas (54 per cent).

Bold numbers on arrows: For each of the 130 returns we identified the largest positive gain and largest negative reduction. E.g. the largest positive gain is Website +10 and largest negative reduction is Paper -20. This gives a major shift from Paper to Website of magnitude 30. Bold numbers on arrows therefore signify the average of all major shifts across all 158 returns.

Numbers in circles: We also calculated the average +/- net shift between 2006 and 2010 for each channel.

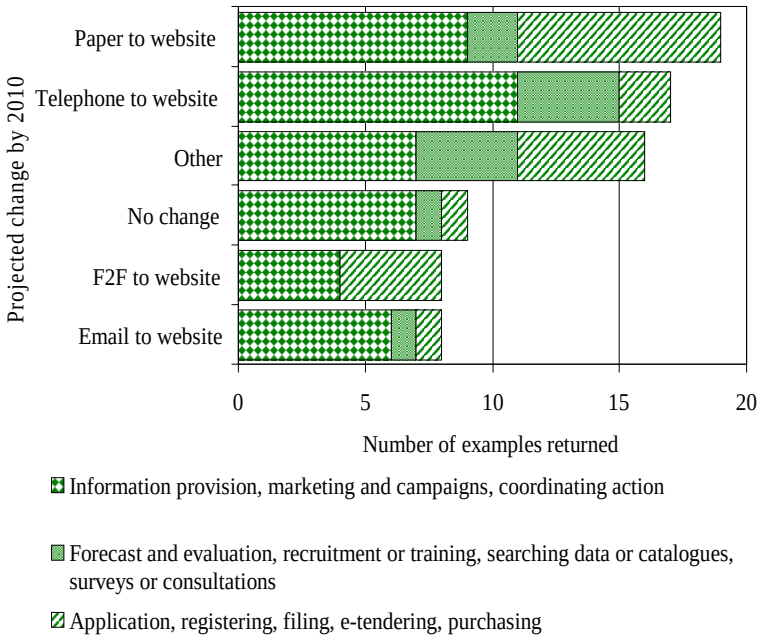
'Other' includes digital television, SMS or text messaging and other new forms of communication technology.

Figure 51: The most commonly cited projected shifts between the current channel mix and 2010 involve moving contacts from telephone and paper onto the website.



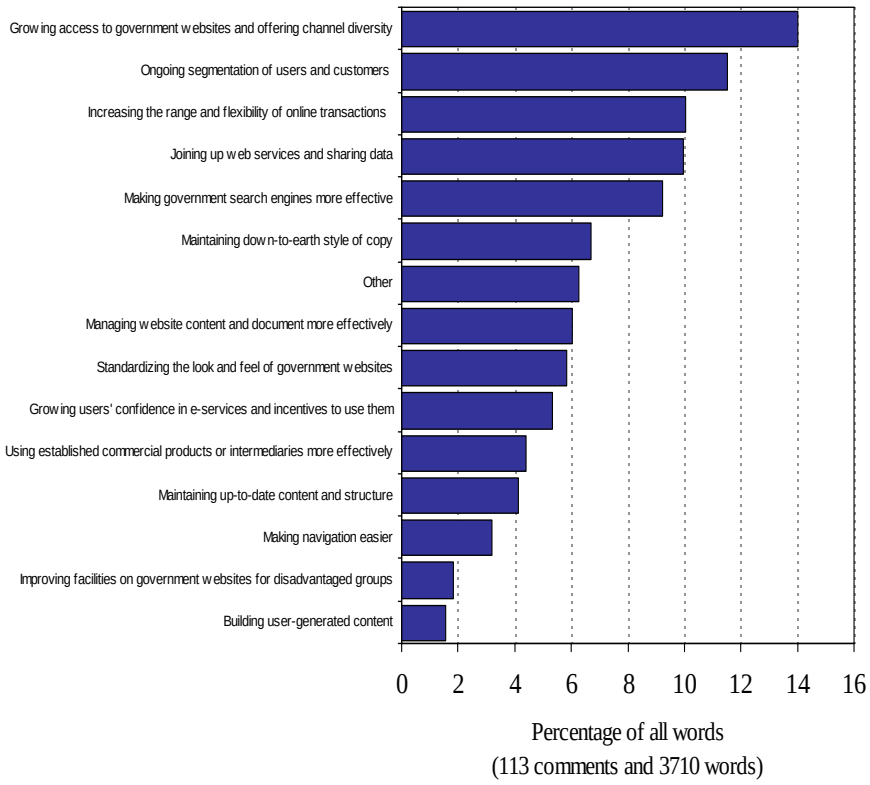
For each of the 158 business areas identified, we asked organisations to estimate the current mix of channels used to deliver this area of business and then give an estimated projected channel mix for delivery of this business area in 2010. Organisations were able to provided current and projected data for 84 of these business areas (54 per cent).
For example, organisation A states that in 2006, 40 per cent of contacts with customers are on paper, 20 per cent on telephone, 20 per cent on email, and 20 per cent through the website. By 2010, organisation A aims to achieve the following: 20 per cent on paper, 30 per cent on the telephone, 10 per cent on email and 40 per cent through the website. This gives a change of Paper -20: Telephone +10: Email -10: Website +20. The major change, as would be coded for the purposes of this graph, is Paper to Website (net change 40). 'Other' includes Paper to email (3), Paper to telephone (4). 'Website to other' includes digital television, SMS or text messaging.

Figure 52: The main shift for transactional services is to move processes from paper to website. While a high proportion of activities involving information provision, marketing and campaigns will shift from telephone to website.



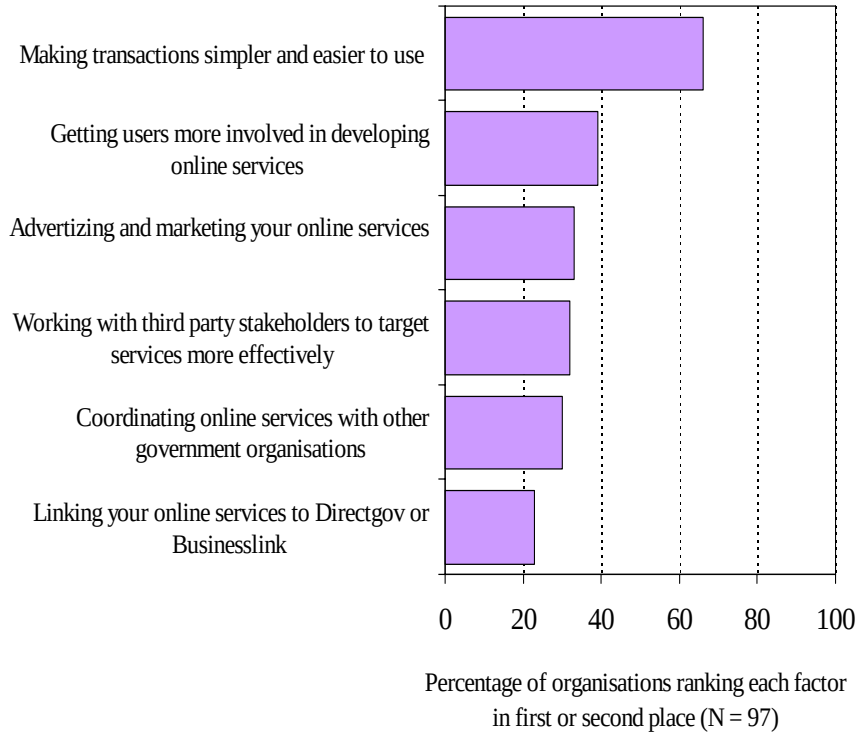
In this Figure we use data from the previous one but identify the type of business activity which was highlighted by the organisation for change. We focus on three different activities here: [1] General information provision, marketing and campaigns; [2] More interactive information provision such as forecasting and evaluations, data searches, surveys or consultations; and [3] Transactional and administrative processes such as filing applications, claims or registrations.

Figure 53: The two ideas for improved governing of websites that were most commonly cited by respondents to our public survey focused on growing access and channel diversity, and improving the segmentation of users and customers.



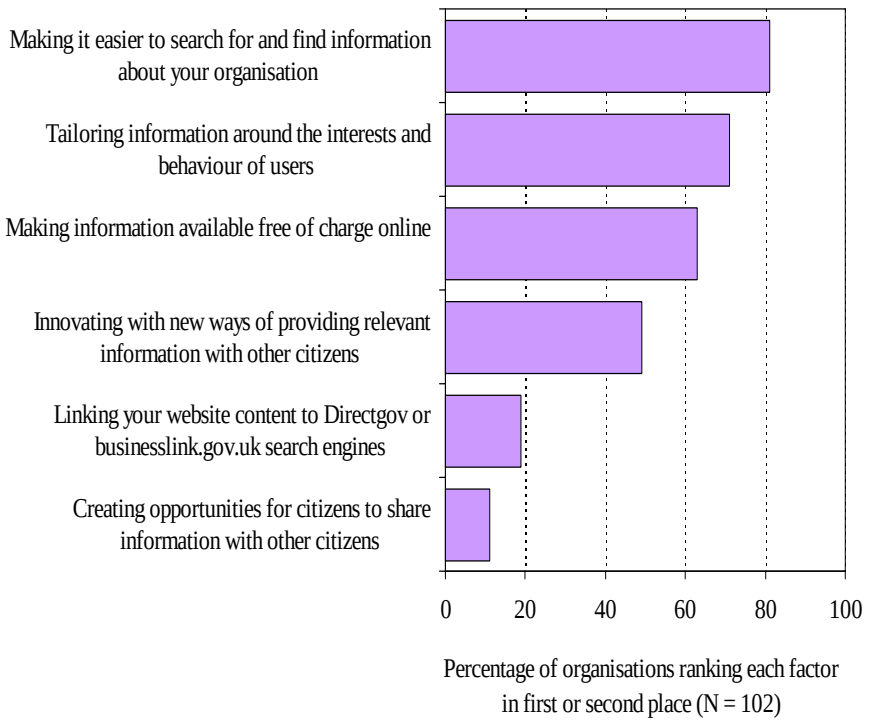
We asked public survey respondents the following question: 'If you have any ideas or views about how government can improve its websites, please write them in here'. We received 153 written responses and a total of 5,210 words. We reviewed all suggestions made and coded them into the following categories for improvement. The Figure shows the proportion of total words in each category. The categories do not necessarily reflect exact comments made by respondents, for example 14 per cent of respondents did not specifically ask for greater 'channel diversity', rather they suggested in general that government organisations could expand the range of options available for contacting the organisation depending on the needs and situation of their customers.

Figure 54: On transactions, the priority for government organisations was making transactions simpler and easier to use.



We asked organisations to rank different factors in terms of how much each one is a priority to their organisation. Respondents ranked factors where 1 = Highest priority and 7 = Lowest priority. This Figure shows the percentage of respondents ranking the factor in first or second place.

Figure 55: On providing information, central government organisations prioritized improving structure and search facilities on their websites, and tailoring information to the interests and behaviour of customers and users.



We asked organisations to rank different factors in terms of how much each one is a priority to their organisation. Respondents ranked factors where 1 = Highest priority and 7 = Lowest priority. This Figure shows the percentage of respondents ranking the factor in first or second place.

Figure 56: The performance of the Directgov website.

QUOTE BOX 6:
The performance of the Directgov website

Really like Directgov, it has an important part to play in future service delivery (Ministerial department)

The fact that [we] have been prepared to site all its information and services on Directgov is evidence of our satisfaction and support (Transport Executive Agency)

While Directgov is considerably well known within government, I am under the impression that a large number of the public are still unaware of its existence (Large NDPB)

The idea behind Directgov is fine in principle, but I don't think it has been promoted enough to encourage use by the general public (Welfare Executive Agency)

Figure 57: The performance of the businesslink.gov.uk website.

QUOTE BOX 7:
The performance of the businesslink.gov.uk website

Businesslink has been very focused on a section of the business and employer market […] and has not yet moved to many of the needs of central government departments (Citizen facing ministerial department)

[Businesslink] makes it very easy for people to get the information they need (Ministerial department)

We have a good relationship with Businesslnk which we are planning to develop further. They have a suite of products with text and links to [our] guides which we comment on regularly. Their site provides very comprehensive information to exporters (Non-ministerial department]

Businesslink has a high profile in the business sector (Executive Agency)

Figure 58: The role of the e-Government Unit

QUOTE BOX 8:
The role of the e-Government Unit

Delivery of Transformational Government is having a high impact on our future e-plans (Welfare Executive Agency)

EGU's lead on the Transformational Government website rationalization process should mean that they are at the heart of setting the agenda for e-communications over the next few years (Ministerial department)

EGU has a large potential part to play, if it has the resources. Transformational Government is focused on how we join up our services as opposed to developing our own sites and applications (Non-ministerial department)

The EGU needs to be more proactive and identify named contacts or posts within each Agency so that they build a relationship for sharing best practice and networking. There is a lot of experience and inexperience across government and the EGU could be providing a forum for working together (Education NDPB)

When this survey was designed and sent out, in November 2006, the e-Government Unit was the relevant unit. However, this is now the Delivery and Transformation Group.

Figure 59: Departments and agencies responding to our survey said that the most important barriers to growing online transactions involved the complexity of existing information systems. Other factors which were viewed as barriers by some organisations included difficulties in orienting culture towards the web and difficulties in coordinating online applications with other organisations.

Percentages (%) Positive net scores = larger barriers	Top scoring %	Bottom scoring %	***Net score %***
Complexity of our existing information systems	42	13	**29**
Another factor	11	4	**7**
Difficulties orienting the culture of our organisation towards web	33	31	**2**
Difficulties coordinating our online applications with other government organisations	20	37	**-17**
Lack of incentives for customers or end users to use online services	15	34	**-19**
Lack of an agreed vision for the development of web services in our organisation	14	41	**-27**
Lack of opportunities to access the Internet amongst our customers or end users	17	57	**-40**

Figures are given in percentages of total organisations responding to this question (N = 97). We calculated the percentage of responses in which each factor came top or bottom, and subtracted Bottom from Top to get a net score of importance. By far the highest net score was the complexity of existing information systems.

Figure 60: In our survey responses, lack of resources in the organisation was clearly the most important factor limiting what organisations could do in terms of providing information to customers or users.

Percentages (%) *Positive net scores = larger barriers*	Top scoring %	Bottom scoring %	***Net score %***
Complexity of our existing information systems	42	13	**29**
Another factor	11	4	**7**
Difficulties orienting the culture of our organisation towards web	33	31	**2**
Difficulties coordinating our online applications with other government organisations	20	37	**-17**
Lack of incentives for customers or end users to use online services	15	34	**-19**
Lack of an agreed vision for the development of web services in our organisation	14	41	**-27**
Lack of opportunities to access the Internet amongst our customers or end users	17	57	**-40**

Figures are given in percentages of total organisations responding to this question (N = 97). We calculated the percentage of responses in which each factor came top or bottom, and subtracted Bottom from Top to get a net score of importance. By far the highest net score was the lack of resources within the organisation to make information available online.

Figure 61: Factors reported by organisations as constraining growth of online services.

QUOTE BOX 9:
Factors constraining growth of online services

Our overall resources are limited and have been cut back in real terms. This means we can only realise a small proportion of our ideas (Large citizen facing NDPB)

Customer inertia and contentment with paper or postal services is a major factor constraining growth of online services (Business Executive Agency)

It is not that there is a lack of incentive for our customers to use online services, but that our target users have difficulty accessing the Internet (Ministerial department)

Proactive content management by business units is still sketchy and requires in-depth education (Ministerial department)

The complexity of our services is such that they can never realistically be done online (Non-ministerial department)

Figure 62: Factors reported by organisations as constraining growth of information provision online.

QUOTE BOX 10:
Factors constraining growth of information provision online

There are many issues surrounding commercial confidentiality about what material we can make available online […] It is technically quite difficult to make on-line tabulation available in a fully flexible way while ensuring that inappropriate information is not disclosed (Regulatory NDPB)

Organisational culture is still rooted in a 'need to know' communication basis as opposed to openness and transparency (Ministerial department)

Lack ownership of content is a big problem (Ministerial department)

Putting information online might mislead customers and create an unrealistic expectation about the services that [we] can provide and at what price (Non-ministerial department)

This isn't as simple as a lack of resources. We are undergoing restructuring, redundancies, and change of focus in locations. It is too early to say if we are under resourced for new ways of working online (Government Office)

Like many organisations we have large stores of historical information (non-digital) that will take some time to become available online (Defence Executive Agency)

We are providing authoritative government information to businesses, so the need for accuracy is exceptionally high (Business NDPB)

Figure 63: Organisations covered in the census, by type.

2006	Number of bodies covered	Percentage of total bodies covered
Ministerial departments	17	6
Non-ministerial departments	33	11
Executive agencies	61	20
Non-departmental public bodies (NDPB)	168	56
Other	21	7
TOTAL organisations	**300**	**100**

Other includes 15 NHS bodies and 6 public corporations.

Figure 64: Organisations covered in the web census, by predominant function or role.

2006	Number of bodies covered	Percentage of total bodies covered
Policy and strategy	21	7
Processing and administrative	46	15
Regulatory, standards and inspection	57	19
Operations and support	53	18
Advocacy, communications and dissemination	123	41
TOTAL organisations	**300**	**100**

See Note 1 below for a comprehensive list of our categorizations.

Figure 65: Organisations covered in the web census, by policy area.

2006	Number of bodies covered	Percentage of total bodies covered
Culture, Media and Sport	47	16
Trade and Industry	41	14
Defence	32	11
Health and social care	31	10
Environment, Food and Rural Affairs	28	9
Home Office	21	7
Education	16	5
Other	15	5
Legal and Constitutional Affairs	13	4
Transport	13	4
Communities and Local Government	12	4
Social welfare and employment	11	4
Treasure	10	3
Foreign and Commonwealth Office	9	3
International Development	1	0
TOTAL organisations	**300**	**99**

Figure 66: We achieved an 85 per cent response rate on our survey of central government organisations.

2006	Number of bodies contacted for a response	Number of bodies completing the survey	Response rate *(%)*
Ministerial departments	16	15	10
Non-ministerial departments	24	22	14
Executive agencies	47	34	22
Non-departmental public bodies (NDPB)	65	59	39
TOTAL	152	130	85

This is a summary Figure of total organisations covered in our survey of government organisations. Four organisations looked at the online survey but did not enter any data. We have not included these organisations in our analysis. Total N therefore in some of these Figures is equal to 124.

Notes

1. For a number of Figures included here, we established 5 categories of organizational definition as follows: [1] Policy and strategy – includes all Ministerial departments and other organisations with strategic responsibilities; [2] Operational and support – organisations providing logistical and support services within the government sector, such as agencies in defence and health providing services within their own sector. No discernible interface with civil society or business; [3] Regulatory, inspection and standards – includes all bodies with responsibilities for regulation, inspection and maintenance of standards; [4] Processing bodies – organisations primarily responsible for carrying out administrative functions such as processing applications, filing, registrations, claims, and other checks: [5] Communications and advocacy – organisations representing specific interests or communicating knowledge, for example museums and galleries.

2. For Figure 45, the categories are as follows:
Detailed category General category; **1. Ordering documents** Buy items / documents / donate money; **2. Buy products** Buy items / documents / donate money; **3. Sample facilities / services** Another service / novelty / game / web log or forum; **4. Subscribe to news services / RSS** Receiving information or data / accessing or searching data systems; **5. Contacting staff in sophisticated online way** Another service / novelty / game / web log or forum; **6. Booking appointments / slots** Submitting or filing data / booking tickets or appointments / reporting problems; **7. Completing an application / registration / claim** Processing applications / claims / registrations or other major administrative processes; **8. Joining or becoming a member** Submitting or filing data / booking tickets or appointments / reporting problems; **9. Booking tickets** Submitting or filing data / booking tickets or appointments / reporting problems; **10. Amending details** Submitting or filing data / booking tickets or appointments / reporting problems; **11. Submitting or filing data** Submitting or filing data / booking tickets or appointments / reporting problems; **12. Donating money** Buy items / documents / donate money; **13. E-tenders or e-procurement** Processing applications / claims / registrations or other major administrative processes; **14. Searching online databases** Receiving information or data / accessing or searching data systems; **15. Accessing dedicated or secure data systems** Receiving information or data / accessing or searching data systems; **16. Reporting a problem / incident** Submitting or filing data / booking tickets or appointments / reporting problems; **17. Taking part in a blog or forum** Another service / novelty / game / web log or forum; **18. Novelties / games** Another service / novelty / game / web log or forum; **19. Other** Another service / novelty / game / web log or forum.

Section B: List of Organisations Completing the Main Survey

Advantage West Midlands
ABRO
Army Recruiting and Training Division
Arts Council
Assets Recovery Agency
Biotechnology and Biological Sciences Research Council
Border and Immigration Agency
British Antarctic Survey
British Council
British Educational Communications and Technology Agency
Cabinet Office
Central Office of Information
Centrex
Charity Commission
Child Support Agency
Commission for Patient and Public Involvement in Health
Commission for Social Care Inspection

Companies House
Competition Commission
ConstructionSkills

Council for the Central Laboratory of the Research Councils
Criminal Records Bureau
Crown Prosecution Service
Defence Analytical Services Agency
Defence Communications Services Agency
Defence Science and Technology Laboratory
Department for Communities and Local Government
Department for Culture, Media and Sport
Department for Education and Skills
Department for Environment, Food and Rural Affairs
Department for International Development
Department for Transport
Department for Work and Pensions
Department of Health
Department of Trade and Industry
Driver and Vehicle Licensing Agency
Driving Standards Agency
East of England Development Agency
Economic and Social Research Council
Engineering and Physical Sciences Research Council
English Heritage
Environment Agency
Equal Opportunities Commission
Export Credits Guarantee Department
Financial Services Authority
Food Standards Agency
HM Prison Service
HM Revenue & Customs
HM Treasury
Home Office
Housing Corporation
Identity and Passport Service

Independent Police Complaints Commission
The Information Centre for health and social care
Insolvency Service
Jobcentre Plus

Land Registry
Learning and Skills Council
Legal Services Commission
Maritime and Coastguard Agency
Meat and Livestock Commission
Medical Research Council

Medicines and Healthcare Products Regulatory Agency
Mental Health Act Commission
Met Office
Ministry of Defence, Financial Management Shared Service Centre
National Archives

National Clinical Assessment Service
National Institute for Health and Clinical Excellence
National Patient Safety Agency
National Savings & Investments
National Statistics
Natural England
Natural Environment Research Council
NHS Blood and Transplant
NHS Purchasing and Supply Agency
North West Development Agency
Office for Standards in Education
Office of Fair Trading
Office of Gas and Electricity Markets
Office of Government Commerce
Office of Rail Regulation
Office of Water Services
One North East
Ordnance Survey
Parole Board for England and Wales
Pension Service
Pensions Regulator
Planning Inspectorate
Public Guardianship Office
Qualifications and Curriculum Authority
Regional Coordination Unit

Foreign and Commonwealth Office
General Social Care Council
Government Actuary's Department
Government office for East Midlands
Government office for East of England
Government office for London
Government office for North East
Government office for North West
Government office for South East
Government office for South West
Government office for West Midlands
Government office for Yorkshire and the Humber
Health and Safety Executive
Health Protection Agency
Healthcare Commission
Higher Education Funding Council for England
Highways Agency
HM Courts Service
Rent Service
Royal Mint
Royal Naval Museum
Rural Payments Agency
Security Industry Authority
Small Business Service
South West of England Regional Development Agency
Student Loans Company
Tate Galleries
Training and Development Agency for Schools
Tribunal Service
UK Atomic Energy Agency
UK Hydrographic Office
UK Intellectual Property Office (formerly Patent Office)
Valuation Office Agency
Veterinary Laboratories Agency
VisitBritain
Yorkshire Forward
Youth Justice Board for England and Wales

Section C: Web Crawling Report

C1. This report details the findings and method of our 'web crawling' exercise, carried out to explore the underlying structure of UK central government's presence on the internet. The aim of this exercise was to identify various characteristics of government websites: their size and nature of content; the ease with which information can be found within sites; their visibility to search engines via patterns of hyperlinks; their deep linking provision and the extent to which they direct users outwards to other information sources.

C2. The data presented here represent a broad overview of a range of metrics, which should be interpreted with caution. There is no standard way to estimate the size of a website, for example; different search engines will give very different estimates of the number of pages contained in any given site. The results provide a picture that is specific to the methods employed and the date when the analysis was carried out. We have been consistent in our methodology, but at each point if we had used one of the many available alternatives we would have obtained different results. Any one measure of the structural properties of a website has limitations[1]. This is why we provide a range of measures, none of which should be interpreted in a normative or prescriptive way. Web crawling is also a laborious process which creates a composite snapshot of a website, each part taken at one point in time. Different websites were crawled at different times which may have affected the results and mean that the data are not comparable in fine detail across sites. We did not crawl all central government sites; we selected the main departmental websites and some other key websites for major agencies, but our analysis omitted the bulk of small and medium sized agencies.

Data collection

C3. Between November 2006 and January 2007 we systematically collected the content and structure of 26 government websites (see Annex C1 below for the full list) with a specialized programme (a 'web crawler') that visits websites and records data in a way that identifies their size, structure and patterns of links between pages. We also used the web crawl to establish other websites that the subject site links out to (external 'outlinks'). In addition we used the application Yahoo 'site explorer' in order to obtain pages that link to the site under consideration (inlinks). We analysed both outgoing and incoming links for their type (for example, commercial or governmental) and country of origin.

Size of government websites

C4. **Figure 1** shows the size of the UK central government websites we crawled and how they are distributed across departments. This Figure includes the websites of all central government departments, the main cross-government sites (such as Directgov and businesslink.gov.uk) and the websites of the Cabinet Office and the Prime Minister. These sites may be broken down into large sites (over 80,000 pages), medium sized sites (between 10,000 and 50,000 pages) and smaller sites (less than 10,000 pages). Of these, over half (54 per

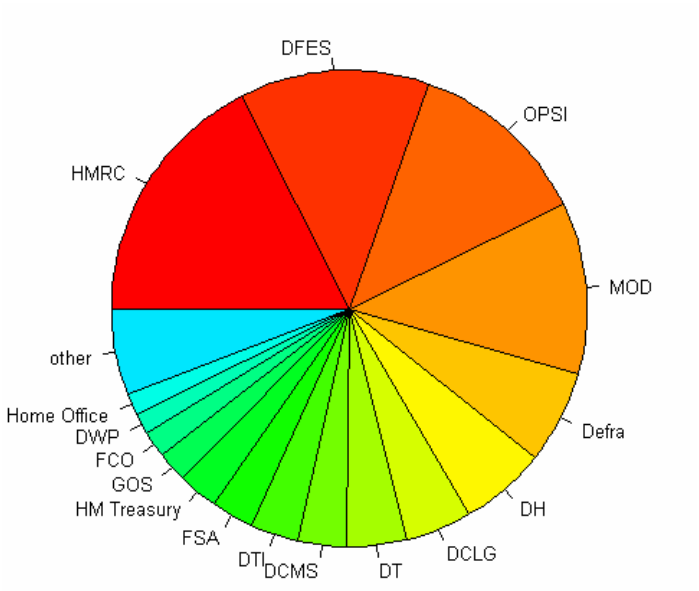
[1] For a full discussion, see Escher, T., Margetts, H., Cox, I.J. and Petricek, V. (2006) 'Governing from the Centre? Comparing the Nodality of Digital Governments'. Paper presented at the Annual Meeting of the American Political Science Association (APSA) in Philadelphia, 31 August-4 September. Available from www.governmentontheweb.org.

cent) belong to four large departmental sites: HM Revenue & Customs, the Department for Education and Skills, the Office of Public Sector Information, and the Ministry of Defence. Although these sites do not compete in size terms with massive media sites such as that of the BBC (14 million pages) they are larger or equivalent to (for example) the sites of larger department stores.

C5. A further 40 per cent is accounted for by the medium sized sites including the Departments of Health; Environment, Food and Rural Affairs; Communities and Local Government; Transport; Culture, Media and Sport; and Trade and Industry. These sites are of an equivalent size to some UK retailer sites, such as Marks and Spencer (44,000 pages). The central government domain consists of a further 13 medium sized sites, including most of the other main departments, the Food Standards Agency and two cross-government sites, the Government Office Network (a central site for the Government Offices of the English Regions) and businesslink.gov.uk.

C6. The remaining five per cent consists of small sites (less than 10,000 pages) including that of the Department for Constitutional Affairs and Directgov, which at 5,000 pages is smaller than any departmental site. With respect to international comparators, it is also far smaller than the Service Canada site (13,700 pages), although considerably larger than the USA.gov portal, which is a finder site with little content.

Figure 1: Share of UK central government websites across departments



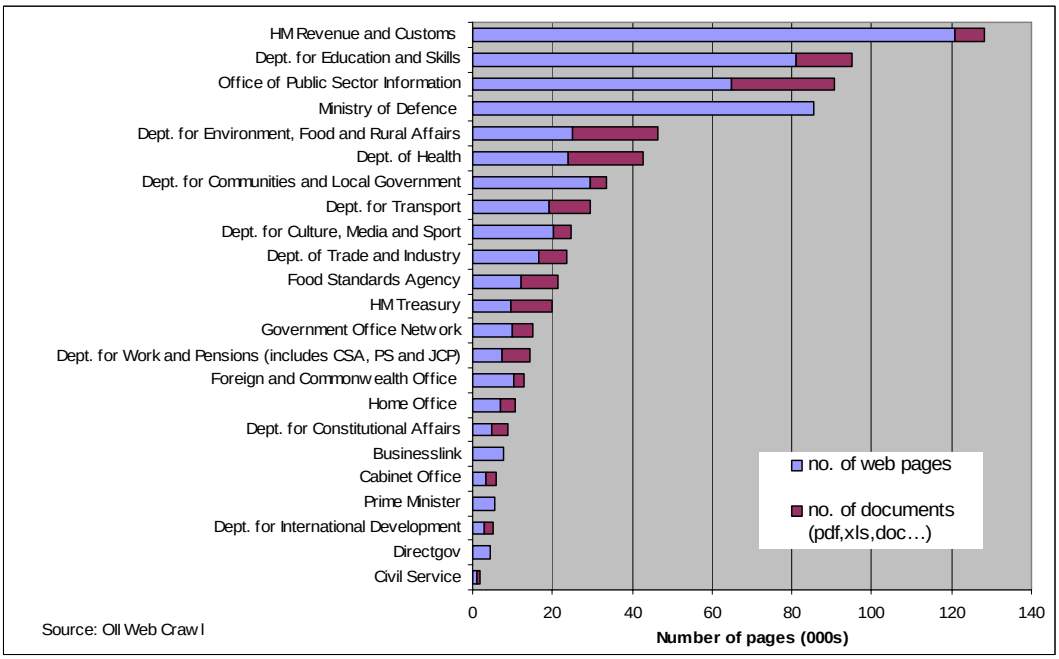
Source: Web crawl of .gov.uk domain.

Note: We did not crawl the NHS sites but only the corporate DH site.

C7. **Figure 2** provides a more detailed overview on size of the individual websites and how many of the pages are documents (such as PDF files, spreadsheets and others). Government sites hold a mixture of information ranging from understandably sizeable documents (often stored in PDF form) reflecting

government's wider responsibility for the stewardship and custody of public records through to information on citizen facing services.

Figure 2: Size and content of government websites

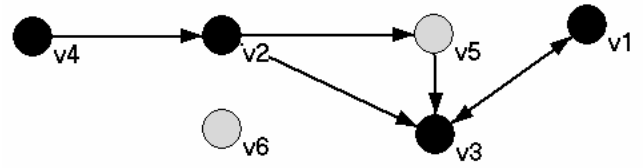


Note: Documents and PDFs count as one page

The navigability of government websites

C8. Mathematical graph theory and social science network analysis have established a range of measures to describe the structural properties of networks which have been applied to websites. These structural metrics provide some indication of how easy a website is likely to be to navigate. That is, it provides information about the likelihood of there being a connection between any two randomly chosen documents on that site in a way that allows navigating from one page to another by following hyperlinks. In other words, is there a path between document A and document B – and how long is it? **Figure 3** illustrates the concept.

Figure 3: Illustration of simple graph with shortest path between v4 and v1. Note that there exists another path from v4 to v1 via v5 which is not the shortest path and that there is no path back from v1 to v4. There are no paths at all for v6.



This leads to two main characteristics that indicate the navigability of websites: (i) is there a path between pages on a site?; and (ii) typically, how long is that path?

C9. **Figure 4** reports the percentage of the government websites we have examined that form a 'strongly connected component', that is, all those pages within a website for which there exists a path. So no matter on which of those pages a user is, they can reach any other page in that component simply by following hyperlinks. In contrast, pages that are not in the strongly connected component are in the OUT component, meaning there is a path from the pages in the strongly connected component – but not back again. This is usually undesirable as this is a dead-end for a user navigating the site – especially if they have arrived on this page from a search engine.

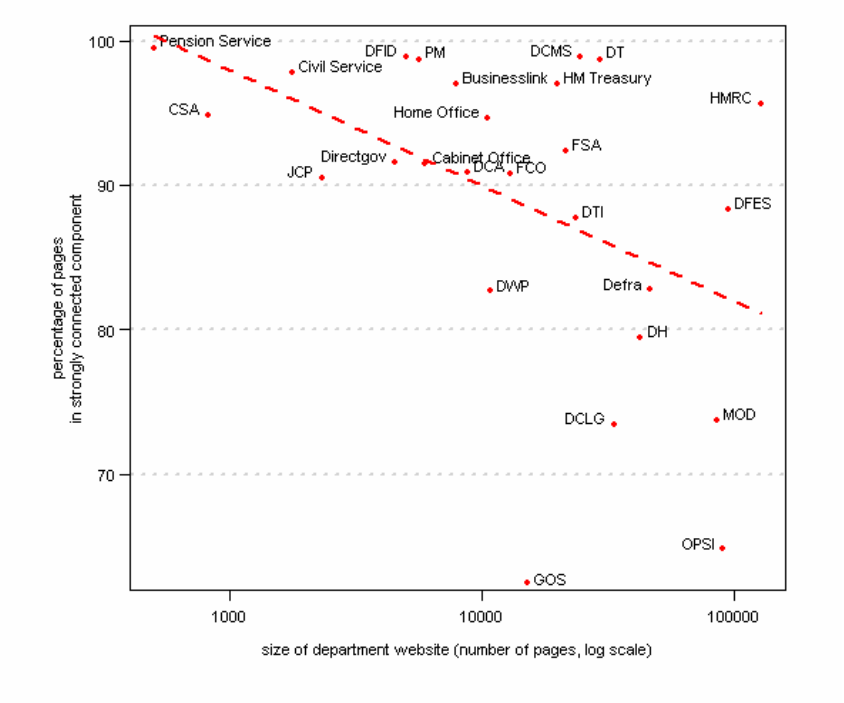
Figure 4: Proportion of UK central government websites represented by 'Strongly Connected Component' (SCC)

Website	per cent
The Pension Service	99.5
Department for Culture, Media and Sport	98.9
Department for International Development	98.9
Department for Transport	98.7
Prime Minister's website	98.7
Civil Service	97.8
businesslink.gov.uk	97.0
HM Treasury	97.0
HM Revenue & Customs	95.6
Child Support Agency	94.8
Home Office	94.7
Food Standards Agency	92.3
Direct.gov.uk website	91.6
Cabinet Office	91.5
Department for Constitutional Affairs	90.9
Foreign and Commonwealth Office	90.8
Jobcentre Plus	90.5
Department for Education and Skills	88.4
Department of Trade and Industry	87.7
Department for Environment, Food and Rural Affairs	82.8
Department for Work and Pensions	82.7
Department of Health	79.5
Ministry of Defence	73.8
Department for Communities and Local Government	73.5
Office of Public Sector Information	64.9
Government Office Network	62.5

Note: This Figure shows the percentage of the navigable part of the site (that is, excluding documents and PDFs) that is represented by the strongly connected component. Documents and PDFs are excluded because they inevitably represent a 'dead-end' and therefore cannot form part of the strongly connected component.

C10. **Figure 5** shows the proportion of the site formed by the strongly connected component plotted against the size of government websites, showing that the larger the site, the smaller the proportion formed by the SCC is likely to be – although this relationship is somewhat weak. One of the largest sites for example, that of HM Revenue & Customs, has an SCC that forms 96 per cent of the site.

Figure 5: Relationship between size of websites and the proportion formed by the strongly connected component



C11. However, while a large SCC in relation to the overall size of the site is good, it does not us tell anything about the distance between pages. **Figure 6** shows the share of the site that is accessible within no more than six clicks starting from the home page.

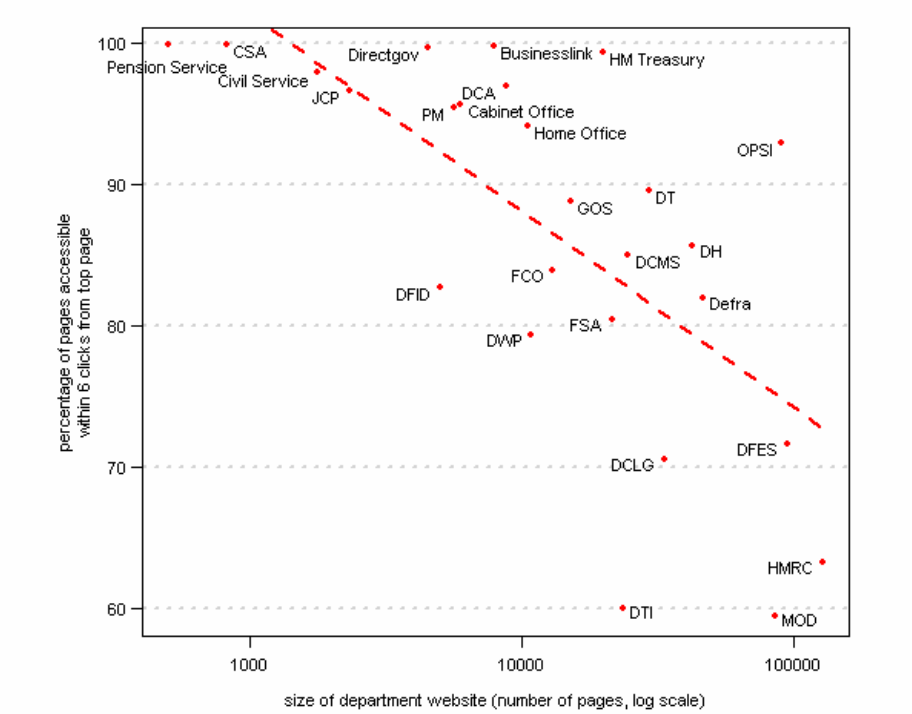
Figure 6: Proportion of website that is within six clicks of home page

Website	per cent
Child Support Agency	99.9
The Pension Service	99.8
businesslink.gov.uk	99.7
Direct.gov.uk website	99.6
HM Treasury	99.4
Civil Service	97.8
Department for Constitutional Affairs	96.9
Jobcentre Plus	96.6
Cabinet Office	95.6
Prime Minister's website	95.4
Home Office	94.1
Office of Public Sector Information	92.9
Department for Transport	89.5
Government Office Network	88.8
Department of Health	85.6
Department for Culture, Media and Sport	84.9
Foreign and Commonwealth Office	83.9
Department for International Development	82.6
Department for Environment, Food and Rural Affairs	81.9
Food Standards Agency	80.4

Department for Work and Pensions	79.3
Department for Education and Skills	71.6
Department for Communities and Local Government	70.5
HM Revenue & Customs	63.2
Department of Trade and Industry	60.0
Ministry of Defence	59.4

As it tends to be more difficult for large websites (that is, those with many pages) to achieve a high score on this six clicks measure, we plot this in relation to the size of the site (shown in **Figure 7**). The Figure shows, however, that even for sites of roughly similar size, the variation in this measure can be large.

Figure 7: Navigability of websites from homepage



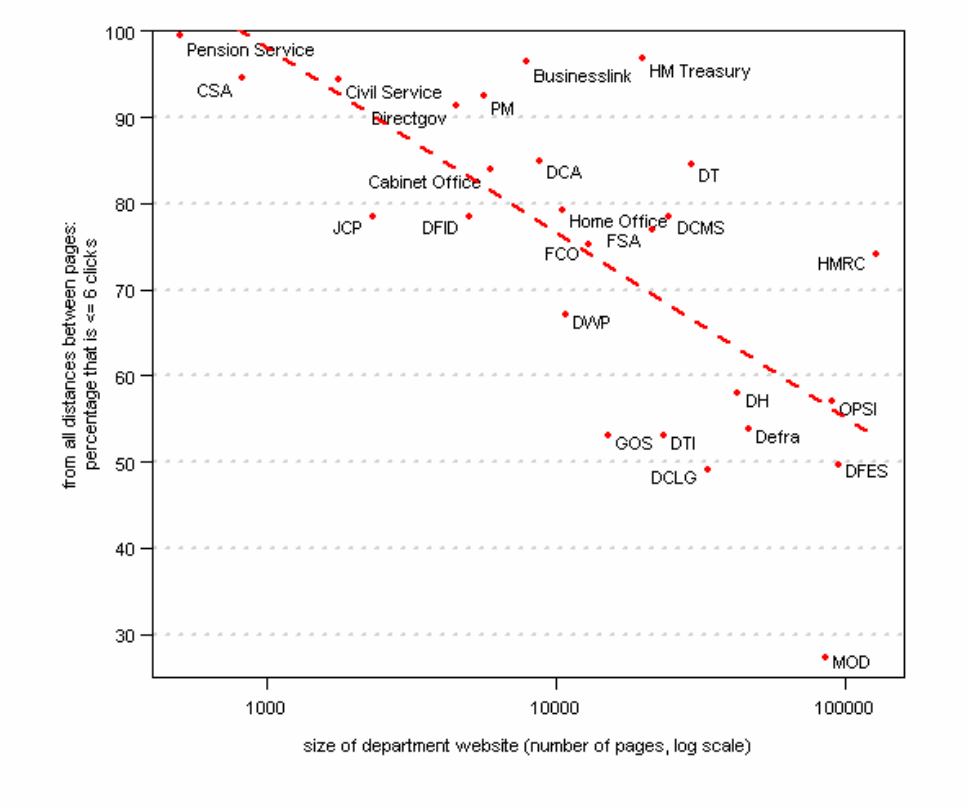
Note:
1. The dotted line of best fit shows that there is a relationship between size of site and navigability: it is more difficult to improve the navigability of a large site. However, the wide variation from the line also shows that there are differences in navigability between similarly-sized sites.
2. The four DWP sites have been separated out (corporate DWP, Jobcentre Plus, The Pension Service and Child Support Agency) because they are available via different domain names and, for the user, constitute four distinct websites.

C12. **Figure 8** shows the general navigability within websites. What is usually of interest to users is that one does not need many clicks to get to another page within the site. The Figure reports on exactly that measure: of all distances between the pages, what percentage is not greater than six clicks? A website should aim for as high a value as possible if using this measure. In **Figure 9** we plot this measure in relation to the total size of the site and again there is considerable variation even among sites of roughly the same size.

Figure 8: Navigability of UK central government websites: the proportion of all distances within pages on the site that are less than six clicks.

Website	per cent
The Pension Service	99.5
HM Treasury	96.9
businesslink.gov.uk	96.0
Child Support Agency	94.6
Civil Service	94.4
Prime Minister's website	92.4
Direct.gov.uk website	91.3
Department for Constitutional Affairs	84.9
Department for Transport	84.5
Cabinet Office	83.9
Home Office	79.2
Department for Culture, Media and Sport	78.5
Jobcentre Plus	78.5
Department for International Development	78.4
Food Standards Agency	76.9
Foreign and Commonwealth Office	75.3
HM Revenue & Customs	74.2
Department for Work and Pensions	67.2
Department of Health	58.0
Office of Public Sector Information	57.1
Department for Environment, Food and Rural Affairs	53.7
Department of Trade and Industry	53.0
Government Office Network	53.0
Department for Education and Skills	49.6
Department for Communities and Local Government	49.0
Ministry of Defence	27.3

Figure 9: The relationship between size and navigability of government websites



Source: Web crawling search of .gov.uk domain.

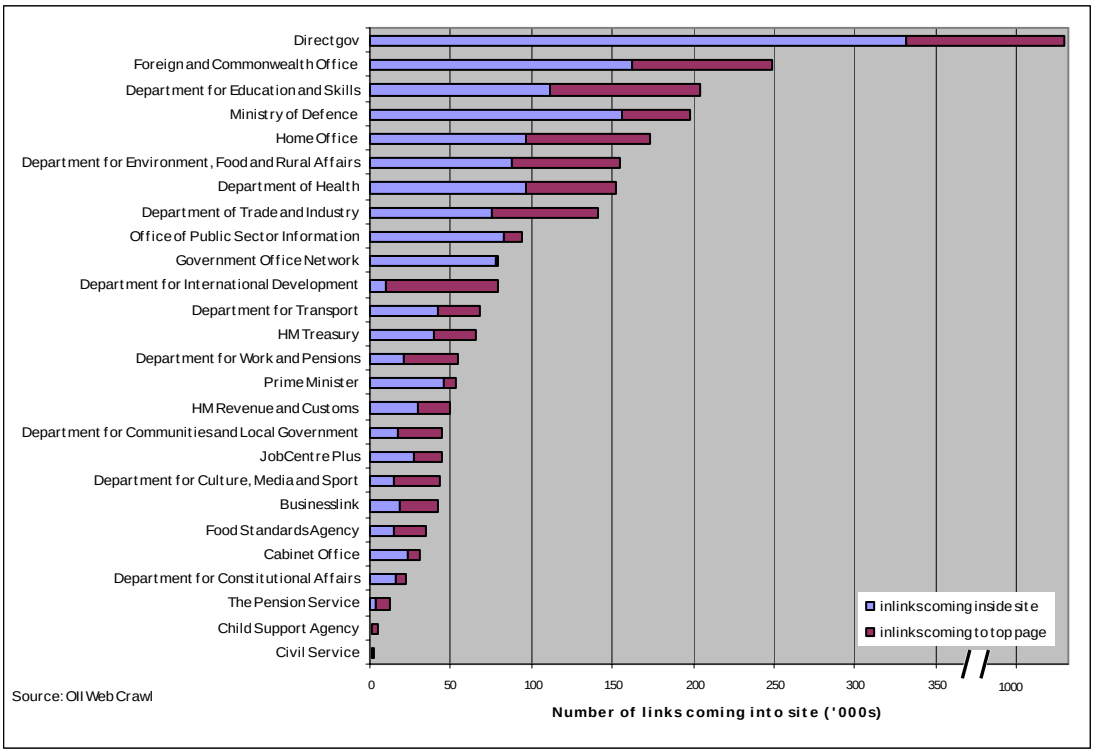
Note: DfT launched a new corporate website at www.dtf.gov.uk on 26 January 2007 featuring a range of improvements for both end users and management of the site.

The visibility and deep linking provision of government websites

C13. The extent to which citizens use government websites will depend on the extent to which they are 'visible' to internet users; that is, well linked into the rest of the internet and appearing high up in search engine listings. Although the algorithms which search engines use to determine which sites appear at the top of their listings are a closely guarded secret, it is known to some extent to depend upon the number of links into a site from other websites. As internet users rarely investigate further than the first 10 or exceptionally 20 search results, whether sites appear within this list will be a crucial factor in whether users go there from search engines. Additionally, citizens 'surfing' the web for information by navigating from one site to another are clearly more likely to arrive at government sites if they are 'referred' or linked through there by other, widely used sites. **Figure 10** shows the number of links from other sites coming in to each of the departmental sites. It shows that the direct.gov.uk website is extremely well linked, with over one million referrals from other sites (over 50 per cent of which are from commercial organisations). The Foreign and Commonwealth Office and the Department for Education and Skills also have over 200,000 inlinks and another five sites have over 100,000. Altogether there are 3.1 million links coming into some aspect of the central government domain (although obviously many of these will be duplicated across sites). The Figure

suggests that the government as a whole is rather less visible than the largest of commercial sites. For example, for the BBC site, this figure is 13.7 million.

Figure 10: The visibility of government websites



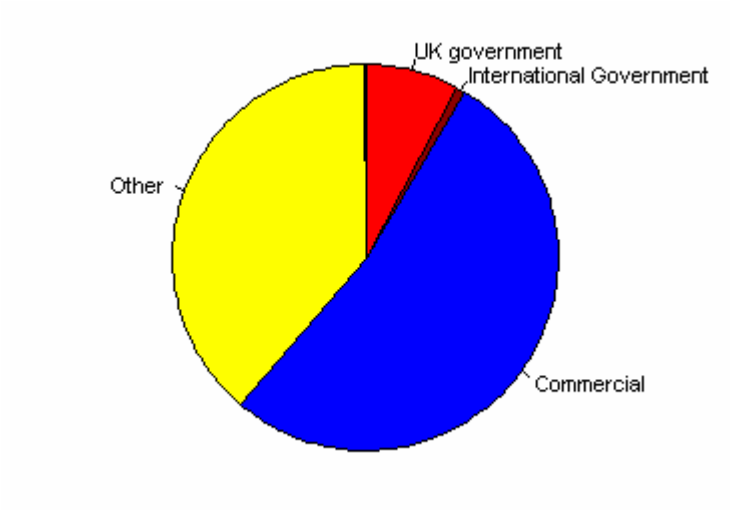
Note: In this Figure, the four DWP sites have been separated out (corporate DWP, Jobcentre Plus, The Pension Service and Child Support Agency) because they are available via different domain names and, for the user, constitute four distinct websites.

C14. Another important metric for websites is the extent to which they provide deep linking provision that when users follow a link through to the site, they do not necessarily arrive at the home page but deeper inside the site, closer to the information they require. This information is also shown in Figure 10; the percentage of links coming into a site which arrive at the home page. For eleven of the sites, over half of links coming into the site will deposit users at the home page, meaning that users may have a long journey to find the information they need.

C15. The following Figure analyses the number and type of websites that link in to UK central government websites (the multiple links from the same website count as one). Overall, we found 125,140 websites linking into UK central government websites. This data was calculated via the Yahoo API which truncates the results at 1,000 links per page. However, we have no reason to suspect that the distribution of website types (for example governmental, commercial etc) is very much biased by that fact. **Figure 11** provides an overview of all websites that link to any of the central government websites, while **Figure 12** shows this data

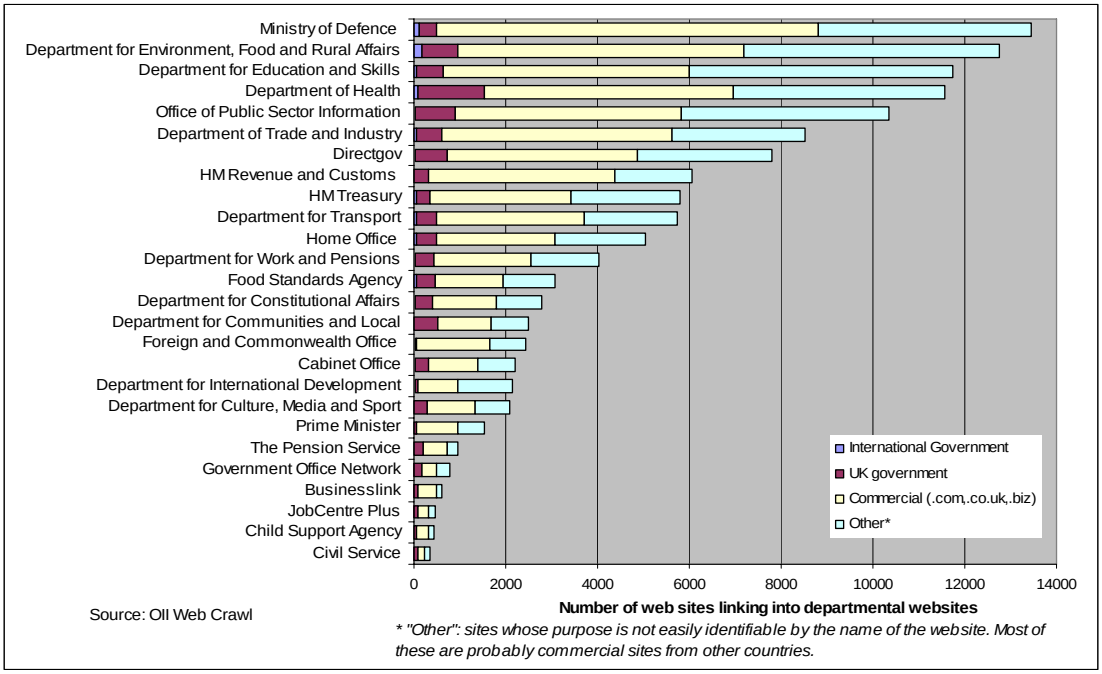
broken down by department and **Figure 13** shows the number of countries linking to each of the departmental websites.

Figure 11: Types of websites linking into UK central government websites



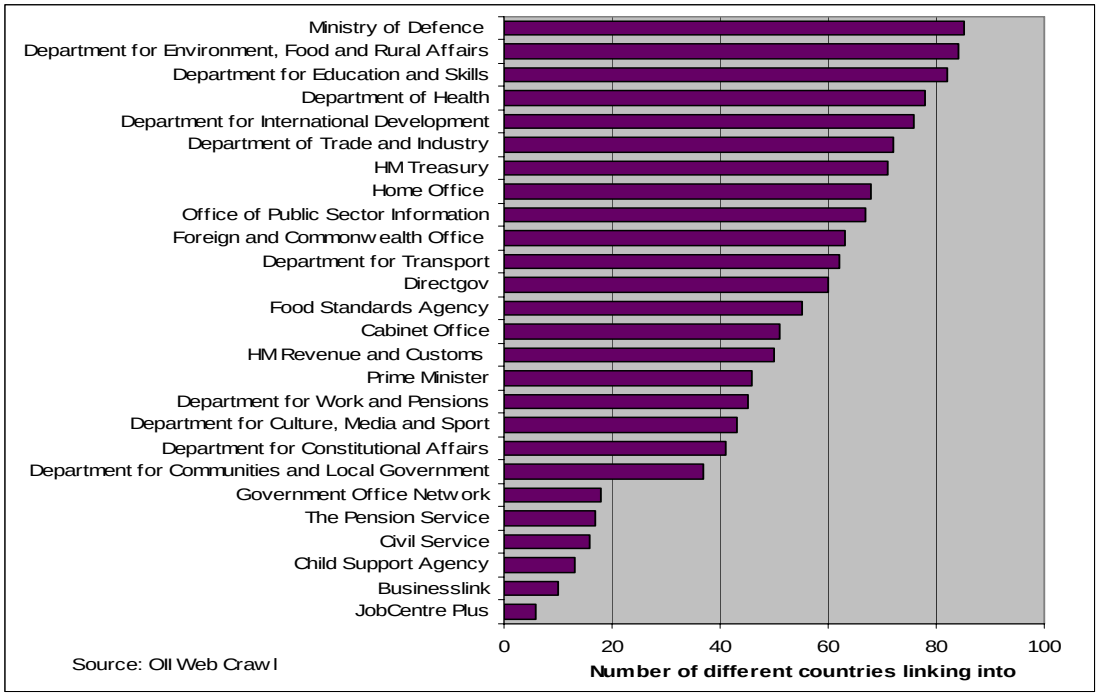
N=125,136 websites

Figure 12: Nature of links coming in to UK central government websites



Note: In this Figure, the four DWP sites have been separated out (corporate DWP, Jobcentre Plus, The Pension Service and Child Support Agency) because they are available via different domain names and, for the user, constitute four distinct websites.

Figure 13: Number of countries linking to UK central government websites

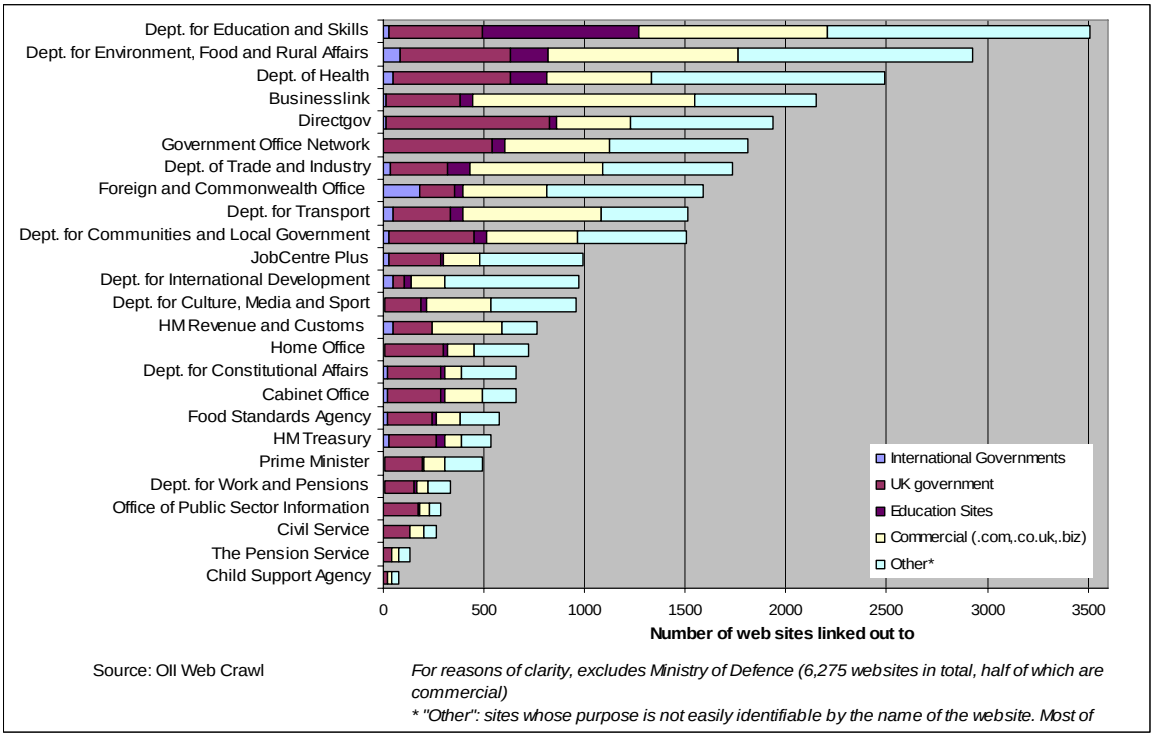


Note: In this Figure, the four DWP sites have been separated out (corporate DWP, Jobcentre Plus, The Pension Service and Child Support Agency) because they are available via different domain names and, for the user, constitute four distinct websites.

The extent to which government websites are outward facing

C16. Government websites vary in the extent to which they face outwards to other websites, referring users to other sources. One way of assessing the 'outward looking' nature of sites is to measure the number of external links out of a website to other sites. Such links mean that a site provides users with other sources of information and refers them to intermediaries, such as advice centres or legal advisors, or to organisations in other countries where appropriate. Overall, the 26 central government websites we crawled point to 35,866 external sites. The following Figure illustrate the great diversity of government sites in the extent to which they point to other sites and where they point. **Figure 14** shows that the Ministry of Defence and the Department for Education and Skills are the most externally facing sites, but the Department for Environment, Food and Rural Affairs, the Department of Health and businesslink.gov.uk also have over 2,000 external references. The Figure also shows that for some of the main departmental and cross-government sites, such as the Department for Work and Pensions, HM Treasury, Directgov and the Home Office, a significant subset of the external links go to other UK government sites, whereas for the Foreign and Commonwealth Office and the Ministry of Defence just over 10 per cent of external links are within the UK government. The Figure also shows the extent to which sites refer users to commercial sources of information, with businesslink.gov.uk, the Ministry of Defence, the Department of Transport and HM Revenue & Customs the most frequent.

Figure 14: The extent to which government websites are outward facing



Source: OII Web Crawl

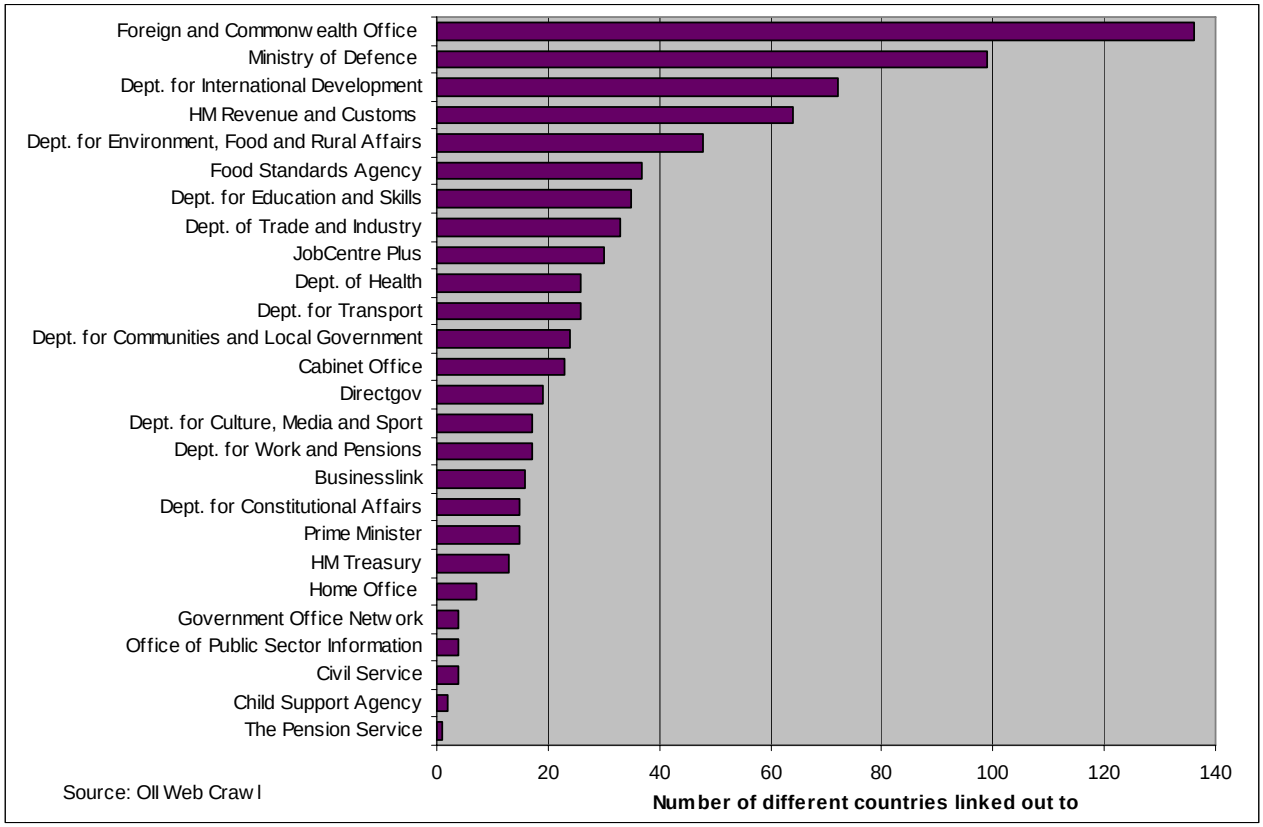
For reasons of clarity, excludes Ministry of Defence (6,275 websites in total, half of which are commercial)

** "Other": sites whose purpose is not easily identifiable by the name of the website. Most of*

Note: In this Figure, the four DWP sites have been separated out (corporate DWP, Jobcentre Plus, The Pension Service and Child Support Agency) because they are available via different domain names and, for the user, constitute four distinct websites.

C17. **Figure 15** shows the countries linked to by government websites. As might be expected, the Foreign and Commonwealth Office, the Department for International Development and the Ministry of Defence are by far the most internationally pointing sites, and the HM Revenue & Customs is also well linked internationally.

Figure 15: The extent to which government websites link to websites in other countries



Note: In this Figure, the four DWP sites have been separated out (corporate DWP, Jobcentre Plus, The Pension Service and Child Support Agency) because they are available via different domain names and, for the user, constitute four distinct websites.

Acknowledgements

We would like to thank Adham Tamer for providing assistance with technical aspects of the crawling.

Annex C1

Figure C1.1: List of websites crawled

businesslink.gov.uk	http://www.businesslink.gov.uk/
Cabinet Office	http://www.cabinetoffice.gov.uk/
Child Support Agency	http://www.csa.gov.uk
Civil Service	http://www.civilservice.gov.uk/
Department for Communities and Local Government	http://www.communities.gov.uk/
Department for Constitutional Affairs	http://www.dca.gov.uk/
Department for Culture, Media and Sport	http://www.culture.gov.uk/
Department for Education and Skills	http://www.dfes.gov.uk/
Department for Environment, Food and Rural Affairs	http://www.defra.gov.uk/
Department for International Development	http://www.dfid.gov.uk/
Department for Transport	http://www.dft.gov.uk/
Department for Work and Pensions	http://www.dwp.gov.uk/
Department of Health	http://www.dh.gov.uk/
Department of Trade and Industry	http://www.dti.gov.uk/
Direct.gov.uk website	http://www.direct.gov.uk/
Food Standards Agency	http://www.food.gov.uk/
Foreign and Commonwealth Office	http://www.fco.gov.uk/
Government Office Network	http://www.gos.gov.uk/
HM Revenue & Customs	http://www.hmrc.gov.uk/
HM Treasury	http://www.hm-treasury.gov.uk/
Jobcentre Plus	http://www.jobcentreplus.gov.uk
Home Office	http://www.homeoffice.gov.uk/
Ministry of Defence	http://www.mod.uk/
Office of Public Sector Information	http://www.opsi.gov.uk/
The Pension Service	http://www.thepensionservice.gov.uk/
Prime Minister's website	http://www.pm.gov.uk/

Technical Information

C1.1 We used the Open Source Crawler Nutch to crawl the websites. It was configured to run with a four seconds delay between successive requests to the same server and to skip images and video content. The collected data was parsed through several Perl scripts to transform it into a Pajek network that was subsequently used to compute structural properties of the websites. Information on links pointing to the websites was obtained by querying the Yahoo Siteexplorer API. For every single page contained in the crawl a query for all external inlinks was made to Yahoo. All data on links pointing into as well as out of the site was stored in a MySQL database and analysed with PHP scripts.

Section D: User Experiments Report

D1. We undertook user experiments with the aim of exploring where and how easily people find government-related information. We created a questionnaire with 15 questions (see Annex D1 below[2]) that asks for information relating to common information needs of citizens and that is provided on UK government websites. We asked our participants to answer these questions with the help of the internet. They had one hour to complete all questions and could decide to skip a question if they felt they would not be able to find the answer or it was taking too long. Subjects were motivated via an initial payment for participating and a small additional payment for each correctly answered question. The experimental setup allowed us to check whether subjects answered a question correctly, where they found the information, how many (and which) pages they visited in order to find it and how long it took them to do so.

D2. We used two treatments:

Treatment 1: Open Search – subjects were presented with a blank browser page and could use any means in order to locate the information necessary to answer the question.

Treatment 2: Cross-Government Website – subjects were asked to locate the relevant information by starting their navigation from the Directgov home page. They were allowed to use the internal search on the site or follow it to other sites, but they were not allowed to use external search engines.

D3. We conducted four sessions over three days: two sessions in London (13 and 18 December 2006) and two sessions in Oxford (22 January 2007). We used two different samples: in London, the sample consisted exclusively of current students of University College London and in Oxford the sample consisted of internet users drawn from the general population of Oxford that were not studying. **Figure 1** shows the number of participants for each treatment:

Figure 1: Participants for the Two Treatments

	Open search	**Cross-government site**	***Total***
General internet users	16	15	*31*
Student group	21	17	*38*
Total	*37*	*32*	*69*[3]

D4. In the Main Report, we quote only the results of the sample of general internet users and exclude the student sample. Throughout this report we provide results from across the two groups, highlighting whether a particular finding was consistent across the general internet users and the student sample or was driven by either one of the two samples.

[2] The analysis is conducted over question 2-15, so 14 questions in total. Question number one was excluded because we assumed this should be a 'practice' question; participants would make themselves familiar with the interface and the process of searching for information, therefore probably taking somewhat longer than for subsequent questions.

[3] We had 70 subjects in total but despite the already high variance in the sample, there was one subject that we decided to filter out as their performance in finding information was way above all other subjects – possible due to a measurement error.

D5. The results reported here should be interpreted with caution. The science of experimentation for internet use is still in its infancy and there are inevitable limitations to the design of such a study. First of all, an experimental setting is always artificial. Furthermore, our sample has a number of limitations. The number of people involved at 70 is small and the participants included are not randomly drawn. Slightly more than half our subjects were students, and the demographic background of the remainder was extremely varied. However, the objective of an experiment like this is to compare the effect of the treatment (i.e. open search or use of the cross-government site in this case) on two similar groups. A statistically significant difference across the two treatments (as we found) highlights that for this particular group of people there is an effect of the treatment.

D6. The selection of questions will also impact on the results and it is difficult to choose a representative selection of questions prior to undertaking research. We tried to choose issues of which we know from previous research that many people are faced with in everyday life and that ranged across the 'basket' of e-government applications specified by the European Union in its main monitoring work on e-government progress[4]. We used a post-experiment questionnaire to ascertain the extent to which subjects viewed our questions as relevant to them (see paragraph D2.1). Subjects felt questions were very relevant: on average 85 per cent said they could imagine looking for this information and of those, all would use the internet to do so. To some extent, the design of our experiment was amenable to the cross-government site because we also ensured that all the information we asked to find could be found on www.direct.gov.uk when we designed the questions.

Key findings

D7. **Subjects found open search to be as fast, easy and as reliable as the cross-government site.**

- Significantly fewer people managed to find answers to our questions (no matter whether right or wrong) with the help of the Directgov website. For the open treatment about 90 per cent of the subjects finished all 14 questions, but this proportion fell to 70 per cent on the cross-government site.
- On average, subjects would answer one question fewer if using the cross-government site.
- The reasons for this effect can be found in the time it took subjects to locate the information. Our subjects would spend on average about 30 seconds more on answering a question in the cross-government site treatment before answering it (or deciding to skip it) than subjects in the open search treatment.

[4] These applications are: 1. Income Tax, 2. Job Search, 3. Social Security Benefits, 4. Personal Documents, 5. Car registration, 6. Building permission, 7. Declaration to the Police, 8. Public libraries, 9. Certificates, 10. Enrolment in Higher Education, 11. Announcement of Moving and 12. Health related services. See European Commission, Directorate General for Information Society and Media: "Online Availability of Public Services: How is Europe Progressing?" Available from: http://ec.europa.eu/information_society/eeurope/2005/doc/all_about/online_5th_measurement_fv4.pdf.

- Subjects in the cross-government site treatment needed on average about one more click to locate the right answer (9.5 clicks versus 11).
- There was no difference in the quality of the answers. In both treatments subjects would on average answer 4 out of 5 questions correctly.
- The main driver for the performance of the cross-government site was the student population in our sample. Students performed significantly worse than general internet users when using Directgov. It took them on average about 50 seconds more to answer a question on this site, resulting in fewer questions being answered correctly. With some variations, our sample of general internet users mainly performed consistently across both treatments.

D8. **Search is important: both external and internal.**

- In the open search treatment, nine out of ten questions were answered correctly with the help of an external search engine (always Google). This is in line with people's responses to our questionnaire in which they indicated they used search engines very often. There is an interesting divide. While a minority of two people would never use search, the rest would use it for almost every question. Both general internet users and the student sample relied equally strongly on the external search engine.
- In the cross-government site treatment, the majority of questions were answered with the help of the internal search function (70 per cent). The student sample relied on the internal search function slightly more (75 per cent of questions) than the sample of general internet users (65 per cent of questions). This underscores the high importance of internal search that our subjects also indicated in our questionnaire.

D9. **Governments face competition from alternative information providers and the cross-government site was not highly visible to subjects in the open search treatment.**

- In the open search treatment only about half of all questions (56 per cent) were answered with information from governmental sources.
- On average, for people in the open search treatment only about one out of seven questions (15 per cent) was answered by accessing information from the Directgov website at some point.
- The information obtained from non-governmental sources is more likely to be incorrect. In our sample information from non-governmental sources yielded correct answers in only 71 per cent of cases, compared to 86 per cent for governmental sources.
- People within the cross-government site treatment answered all questions using government websites.
- The two samples (general internet users and the student group) did not differ significantly in their use of non-governmental sources.

D10. **Difficult questions**

- Some questions were more difficult to answer than others. Questions which took subjects longer than the average time to answer were locating the crime figures for a particular area, how to replace a passport and assessing the risk of flooding in a specified area.

Full analysis

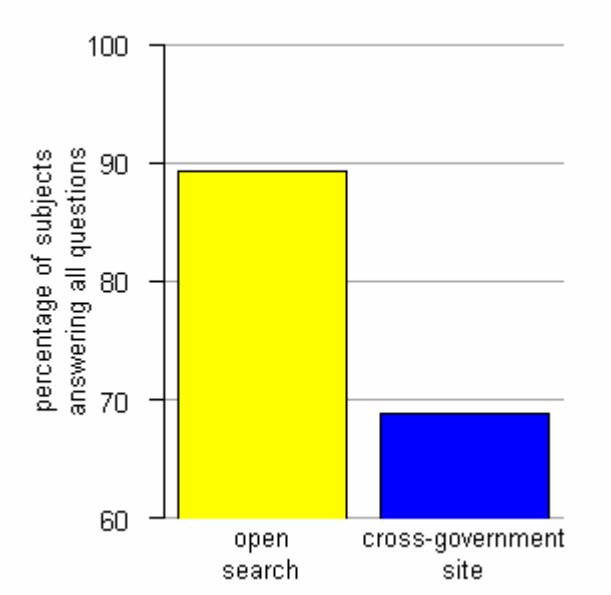
D11. **Comparing the open search and cross-government site treatments.**

There are a number of ways to establish how subjects performed in the different treatments. Measures of interest are:

- Could subjects find an answer to a question?;
- How long did it take to answer?; and
- Was the answer found correct?

Figure 2 reports the percentage of subjects who managed to answer all the 14 questions in the experiment. This does not take into account whether the answer was correct or not but simply whether subjects were convinced that they found the answer.

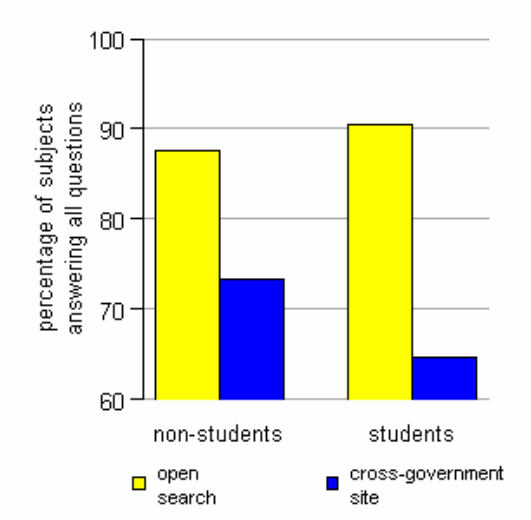
Figure 2: Percentage of subjects that answered all questions across the two treatments



Treatment	Mean percentage	Std. Deviation	N
Open search	89	31.5	37
Cross-government site	69	47.1	32
Total	80	40.5	69

D12. So subjects in the open treatment were more likely to answer all the questions, a difference that is significant (at the 0.95 level). While both groups had more difficulty in answering all questions with the cross-government site, the difference is particularly strong for the student sample. **Figure 3** shows the breakdown between the student and non-student groups of subjects answering all questions.

Figure 3: Percentage of subjects answering all questions by group



D13. On average, subjects in the open treatment would answer one more question than their counterparts, a difference that is again significant (0.95) (see **Figure 4**). This difference was, however, driven by the student sample while the general internet users answered on average the same number of questions across both treatments (about 12).

Figure 4: Number of questions answered

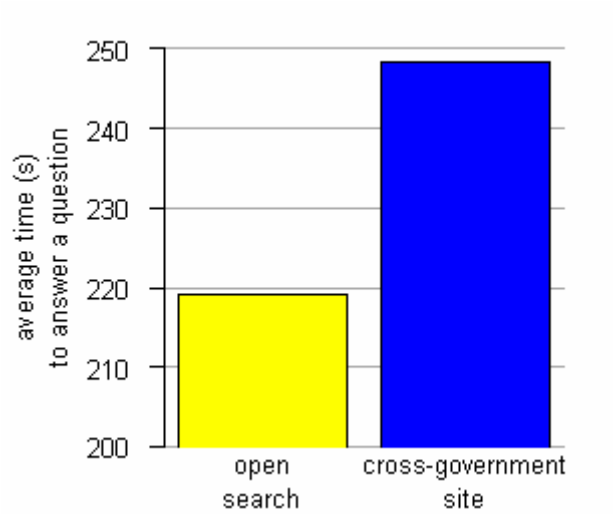
Treatment	Mean	Std. Deviation	N
Open search	12.9	1.3	37
Cross-government site	11.9	2.3	32
Total	12.4	1.9	69

We explored the reason for this difference in the number of questions answered by subjects in the allotted time across the two treatments. Specifically, we analysed the effort that it took our subjects to locate answers to questions, defining 'effort' as:

- number of clicks (i.e. pages visited);
- time spent on answering the question.[5]

D14. **Figure 5** reports the average time it took our subjects to answer a question. We calculate the average time it took over all questions that people accessed during the experiment, including those that they subsequently decided to skip as it is important to take into account how much time is wasted on searching for information that cannot be found.

Figure 5: Average time taken to answer questions across the two treatments



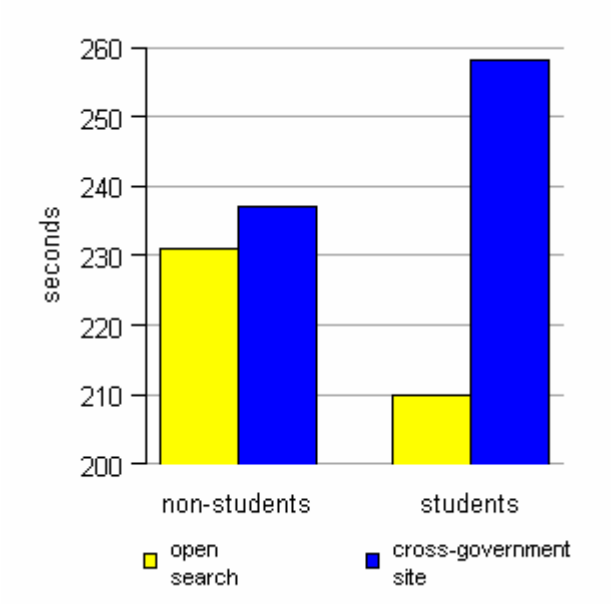
Note: N=69

	Treatment	N	Mean (seconds)	Std. Deviation	Std. Error Mean
Average time taken to answer a question	Open search	37	219	51.4	8.46
	Cross-government site	32	248	68.5	12.11

As noted in the previous paragraph, this difference is driven by the student sample which spent significantly longer answering a question (about 50 seconds more). The general internet users did not respond differently to the treatments. **Figure 6** shows the breakdown between the student and non-student group in terms of the average length of time it took to answer questions.

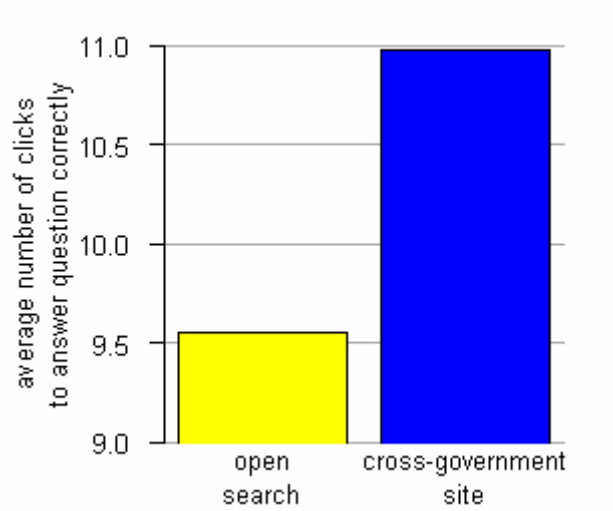
[5] Both measures are highly correlated (0.77**) but still a high number of clicks does not necessarily mean that a lot of time was spent on the site and vice versa – depending on the design of the web pages.

Figure 6: Average time taken to answer questions by group



D15. Subjects spent significantly (0.95) more time in the cross-government treatment before answering a question (or deciding to skip it) than subjects in the open search treatment. Similarly, the average number of clicks required to find a correct answer was significantly (0.95) higher for people using the cross-government site as **Figure 7** shows[6]:

Figure 7: Average number of clicks taken to answer questions correctly



Note: N= 69

[6] We calculate the average number of clicks only on the questions that were answered correctly as this gives a good indicator of how easy it is to locate useful information. Question that were skipped are not included here.

	Treatment	N	Mean	Std. Deviation	Std. Error Mean
Unique path length (number of clicks)	Open search	36	9.6	2.7	.45
	Cross-government site	32	11.0	2.7	.48

This difference is equally significant across both student and general internet user groups.

D16. Also of importance is the quality of the information found, namely whether it leads to a correctly answered question. **Figure 8** shows that in both treatments subjects answered about 80 per cent of their questions correctly, so it appears that the treatment used did not make a difference to the accuracy of the information obtained. The same applies to the nature of the sample as both general internet users and the students performed equally well.

Figure 8: Percentage of questions answered correctly

	Treatment	Mean	Std. Deviation	N
Percentage of questions answered correctly	Open search	79.5	1.2	37
	Cross-government site	78.2	1.6	32
	Total	78.9	1.4	69

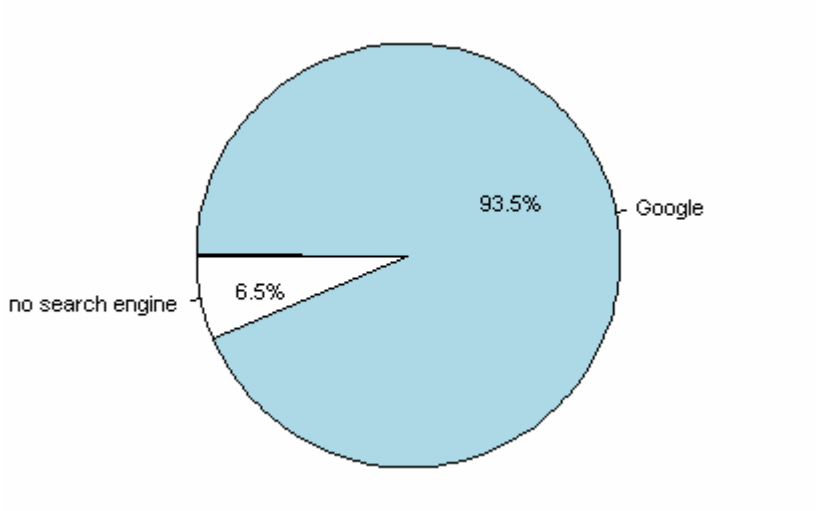
D17. Summarizing on the reported measures, the subjects in the open search treatment answered more questions because it took them less time to find an answer on the internet and fewer clicks to find a correct answer. Both treatments would provide subjects with a comparable quality of information.

D18. Finally, it should be noted that as the Directgov website was moving to a new platform at the same time as our experiments were taking place, we had some difficulties with its availability during our experiments. During the first experiment in London in December it was unavailable for about 20 minutes and caused the termination of the session. During the second experiment in January, it was unavailable for about 5 minutes during the first session. Some features on Directgov site also caused the browsers that we were using to crash. In particular the schoolfinders tool and the internal search on Directgov created problems, especially in London in December 2006 so that subjects in that search treatment encountered extra difficulties.

Importance of search

D19. For people in the open search treatment, use of external search engines was immensely important. Nine out of ten questions were answered with the help of an external search engine and this was always Google (shown in **Figure 9**). In this respect general internet users and students have the same information seeking habits; there was no difference across the two samples. Furthermore, while there were two people out of all our subjects in this treatment that did not use any search, the rest did so for every question.

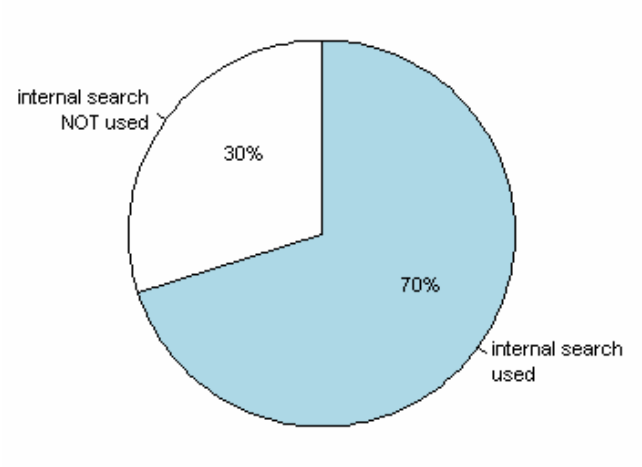
Figure 9: Use of search engines by subjects using open search



Note: N=510 (open search treatment only)

D20. Search is also important once people have arrived at a site. The internal search was a highly used feature of the information seeking behaviour of people in our cross-government site treatment. On average, participants in this group used the internal search function for seven out of 10 questions. Students used internal search slightly more (75 per cent of questions), general internet users slightly less (65 per cent of questions). In contrast to the findings for external search engines, use of the internal search is somewhat more varied with more people using it for just some questions, but not for others, as **Figure 10** below shows.

Figure 10: Use of internal search engines in the cross-government site treatment



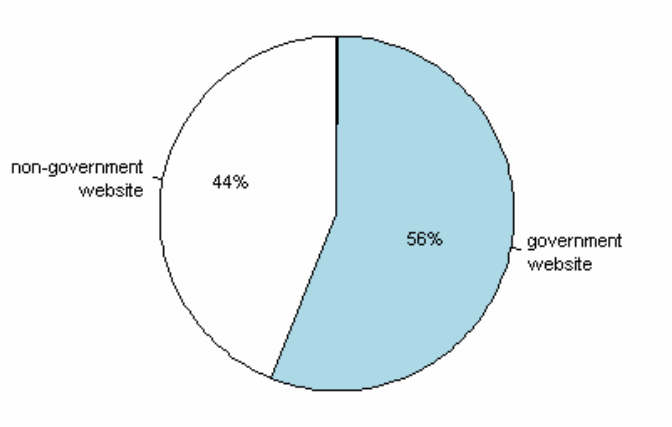
Note: N=418 (cross-government site treatment only)

Relevance of Governmental Information Sources

D21. We now look at where subjects found the information to answer the questions, in particular whether the information they used came from a government website or not and whether it was correct (see **Figure 1**).

D22. We focus here on people in the open search treatment because only they were free to choose their sources. First, the majority of people used a mix of governmental and non-governmental sources. Of all questions in this treatment, almost half (44 per cent) were answered with a non-governmental website. While there is variation amongst individual subjects (unrelated to being a student or not), this gives a good indication of the extent to which non-governmental information sources were used.

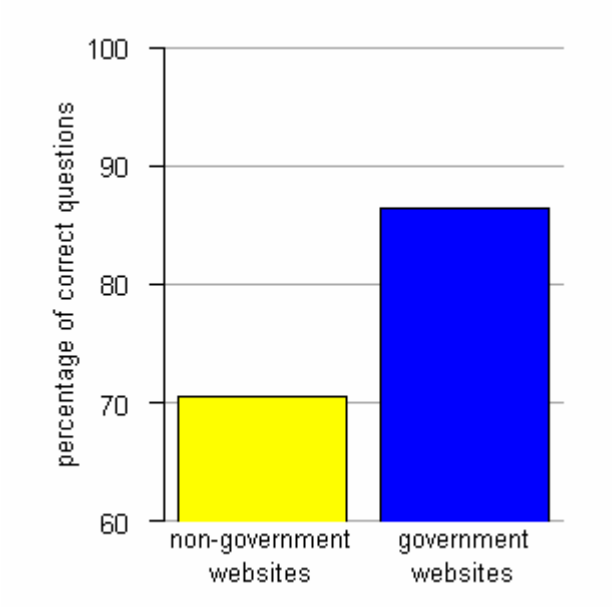
Figure 11: Sources of information used to answer questions



N=510 (open search treatment)

D23. One important finding (shown in **Figure 12**) is that the information obtained from non-governmental source is more likely to be incorrect: in our sample, information from non-governmental sources yielded correct answers in only 71 per cent of cases, compared to 86 per cent for governmental sources. This difference is significant (0.99) both for students and general internet users. It should be noted, however, that non-governmental sources might be slightly disadvantaged in our experiments because the questions were worded so that they could be answered with the help of the cross-government site (that is, we only asked questions for which we knew www.direct.gov.uk contained the answers).

Figure 12: Percentage of questions answered correctly, according to information source



Note: N=510 (open search treatment only)

D24. We examined for what types of information government websites were most likely to be used. **Figure 13** reports the questions for which most people in the open search treatment (that is greater than 70 per cent of subjects) found the correct information on government websites:

Figure 13: Percentage of people who used government sites to answer a question

Question number	Question	Percentage that used government websites to answer
10	*Can you find a site where a person could get information on the amount of state pension he/she can expect?*	92
12	*How can you apply for a replacement passport?*	92
8	*Can you report a theft from your car online?*	88
5	*How much do you have to pay for a European Health Insurance Card?*	86
11	*In which local library in Oxford could you find this book?*	85
15	*How severely is Wolvercote (Oxfordshire) affected by flooding?*	70

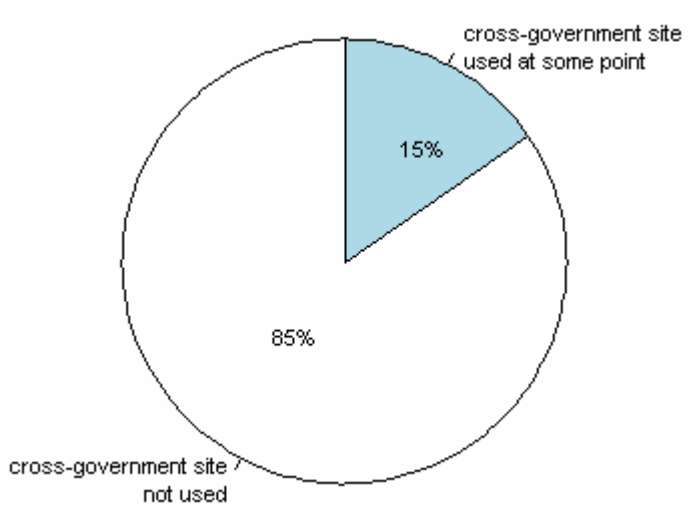
D25. **Figure 14** reports the questions for which many people in the open treatment found the correct information on a non-government website. The types of websites participants used included local and national newspapers; local schools; third sector organisations; interest groups; local businesses; and sites focussing on the local area.

Figure 14: Percentage of people who used non-government information sources to answer questions

Question number	Question	Percentage that used government website to answer
4	*Is the risk to become a victim of crime (of any kind) greater in Oxford than in Britain in general?*	55
14	*Can you find out what the 488 in the tax code stands for?*	54
6	*Does the SCHOOL NAME in Oxford achieve at least above average GCSE results for England?*	27
7	*Are people that require drugs because of diabetes mellitus eligible for free prescriptions?*	23
9	*What kind of NVQ level 3 course in Children's Care is available in Oxford?*	18
13	*Can you find a list of shop assistant positions available in Manchester?*	17

D26. For those people who could choose their sources of information freely (that is in the open search treatment), Directgov was rarely used in answering the questions. On average, about one out of seven questions (15 per cent) in this treatment were answered by accessing information from Directgov at some point. We observed no differences for students and general internet users. Most subjects therefore answered the majority of questions without any information being drawn from the cross-government site (see **Figure 15**).

Figure 15: Use of cross-government site to find information in the open search treatment



N=510 (open search treatment only)

People in the cross-government site treatment obtained their information exclusively from governmental sources.

Difficult Questions

D27. It is also interesting to see which particular questions posed problems to our subjects.

In order to determine which questions were difficult to answer, we can measure difficulty in two dimensions:

a. was it possible to answer a question correctly?;
b. how much effort was involved in answering the question correctly (using time and clicks)?

Correctly Answered Questions

D28. We defined questions that were difficult to answer as those for which less than 80 per cent of the subjects who tried to answer them found the correct answer. (We chose 80 per cent as the threshold as for our experiments this was the overall probability of a question being answered correctly.) According to this definition, questions that were difficult to answer were the following.

Figure 16: Questions that were difficult to answer correctly (less than 80 per cent of people answered correctly)

Question number	Question	on open search percentage of subjects	on cross-government site percentage of subjects
14	Tax code	78	
2	Pet immigration	76	
11	Book from library	73	
12	Passport replacement	72	76
15	Risk of flooding	70	64
4	Crime statistics	59	47
9	NVQ course	46	
7	Free diabetes prescriptions		41
6	School league table		72

D29. Due to the small sample size, not too much attention should be paid to scores nearly reaching the 80 mark. But questions that clearly were difficult for subjects to answer were those in the first four rows of Figure 16. We were somewhat surprised by this result, because for each of these questions there does exist good information sources on government websites. The problem was not necessarily in locating the website, but rather the particular piece of information.

Effort to answer a question correctly

D30. Effort could be measured either by the number of clicks (that is, the number of different pages visited) in order to answer a question correctly or by the time it took to answer a question correctly. Both are highly correlated but there can be differences depending on how quickly people navigate, whether there is a lot of text to read per page, and other factors. Given our data (and assuming that it does not matter too much how often people click as long as they do it quickly), one possible indicator is the average time it took to answer a question correctly as an indicator for difficulty. Overall, we found that subjects needed about 3 to 3.5 minutes to answer a question correctly. Questions that took a particularly long time to answer correctly (more than 250 seconds) on one or both of the treatments were as follows:

Figure 17: Questions that took more than 250 seconds on average to answer

Question Number	Question	on open search average no. of seconds	on cross-government site average no. of seconds
7	Free prescriptions		444
4	Crime statistics	272	439
6	School league table		323
9	NVQ course	358	274

D31. Effort can also be expressed in the number of clicks to answer a question correctly (which we describe as 'path length'). Questions that took a particularly high number of clicks to answer correctly (that is, questions where the total average for correctly answered questions are above the average of 10 clicks) were:

Figure 18: Questions that took more than 10 clicks to answer

Question number	Question	on open search average no. of clicks	on cross-government site average no. of clicks
4	Crime statistics	16	30
7	Free prescriptions		21
15	Risk of flooding		17
6	School league table		15
11	Book from library	16	14.5
9	NVQ course	18	11.5

D32. So as we would expect, many of the questions that took many clicks to answer also took a longer time to answer. However, the questions about library books and flooding both took a high number of clicks, yet subjects were quite fast here, suggesting that time per question rather than clicks per question is the more useful measure.

Annex D1: Questions (correct answers given in bold)

No.	Text	options
1	You want to learn how to drive a car. You have been told that for this you need a provisional driving license. *In which ways can you apply for a provisional driving license?*	online only by post only **online or by post**
2	Some relatives of yours are living in the US and want to come over during Christmas. They also want to bring their dog to the UK. The dog has been micro-chipped and vaccinated against rabies but will that be enough to bring it over? *In order to bring a dog from the US to the UK, is it enough to have it micro-chipped as well as vaccinated against rabies?*	Yes **No**
3	Imagine you just got a new job and you're getting paid 6 Pounds per hour. A friend told you that businesses are required by law to pay at least a certain amount of money per hour to their employees. *Does the money you get paid satisfy legal requirements?*	**Yes** No
4	You are thinking about moving into a new area. You just got a nice offer for a place in Oxford. However, after a friend of you got burgled there you are wondering about the safety in Oxford. *Is the risk to become a victim of crime (any kind) greater in Oxford than in Britain in general?*	**Yes** No
5	You want to go on a winter holiday to France. The travel agent advised you to make sure you got a European Health Insurance Card. *How much do you have to pay for a European Health Insurance Card?*	10 Pounds 5 Pounds **nothing at all**
6	Imagine you have to choose a school for your daughter. A friend is suggesting the SCHOOL NAME in Oxford but you would like to make sure that it is a good school. *Does the SCHOOL NAME in Oxford achieve at least above average GCSE results for England?*	**Yes** No
7	A relative of yours has just been diagnosed with Diabetes Mellitus. For this condition he has to get treated with drugs that can get quite expensive. So far he always had to pay for his drugs but he wants you to find out whether he is now eligible for free prescriptions. *Are people that require drugs because of diabetes mellitus eligible for free prescriptions?*	**Yes** No
8	Imagine you are coming back from a holiday and you find that your car was broken into. Not much has been stolen but you need the crime number for insurance purposes. *Can you report the theft from you car online?*	**Yes** No
9	You want to earn an additional qualification to care for children. After getting some information you decide on a National Vocational Qualification (NVQ), level 3, in Children's Care that you would like to do part time while you are in Oxford. *What kind of NVQ level 3 course in Children's Care is available in Oxford?*	full-time **part-time** no course at all
10	An older relative of yours is interested in how much state pension he will receive once he is 65. *Can you find a site where he could get information on the amount of state pension he can expect?*	**Yes** No
11	During the Christmas break you are staying with a friend of yours in Oxford. Recently you read an article about the computer operating system Linux which recommended Ellen Siever's book "Linux in a nutshell". *In which local library in Oxford could you find this book?*	Abingdon Library **Central Library** Headington Library Summertown Library Woodstock Library

12	You want to go on a holiday but after hours of searching at home you still cannot find your passport. You finally decide you will have to apply for a replacement. *How can you apply for a replacement passport?*	fill in a form online and that is it **fill in a form online but still have to sign a paper copy** not possible to do it online at all
13	You are planning to move to Manchester and are looking to find a job there (as a shop assistant in a supermarket) before you go. *Can you find a list of shop assistant positions available in Manchester?*	**Yes** No
14	You have a tax code 488L on your payslip but you don't really understand what it means. *Can you find out what the 488 in the tax code stands for?*	it does not mean anything it identifies your tax office **you have 4880 Pounds tax free pay** the last digits of your National Insurance number
15	You are thinking of buying a house in Wolvercote in Oxfordshire but you are worried about possible flooding. *How severely is Wolvercote (Oxfordshire) affected by flooding?*	not at all only a bit **very much**

Annex D2: Details of the sample and additional information on responses

Sample

D2.1 Our subjects filled out a post-experiment questionnaire which provided us with some information on the sample. (Not everybody provided all information, so N=65 out of 70 subjects):

Background:

- People came from diverse backgrounds (for example unemployed, ethnic minorities, seniors).

Age:

- The majority of all subjects (80 per cent) were aged 30 or less, but these younger people were evenly distributed in the age span from 18-30. (The bias towards a younger sample came mainly from the student cohort in the London experiments.)
- There were no age differences between treatments.

Usage of the internet:

- Almost everybody reported using the internet on a daily basis (90 per cent).

Internet abilities:

- The majority of subjects (82 per cent) rated their internet skills as either good (57 per cent) or excellent (25 per cent).
- There were no major differences between treatments and no differences between students versus non-students in internet abilities.

Knowledge and usage of government websites:

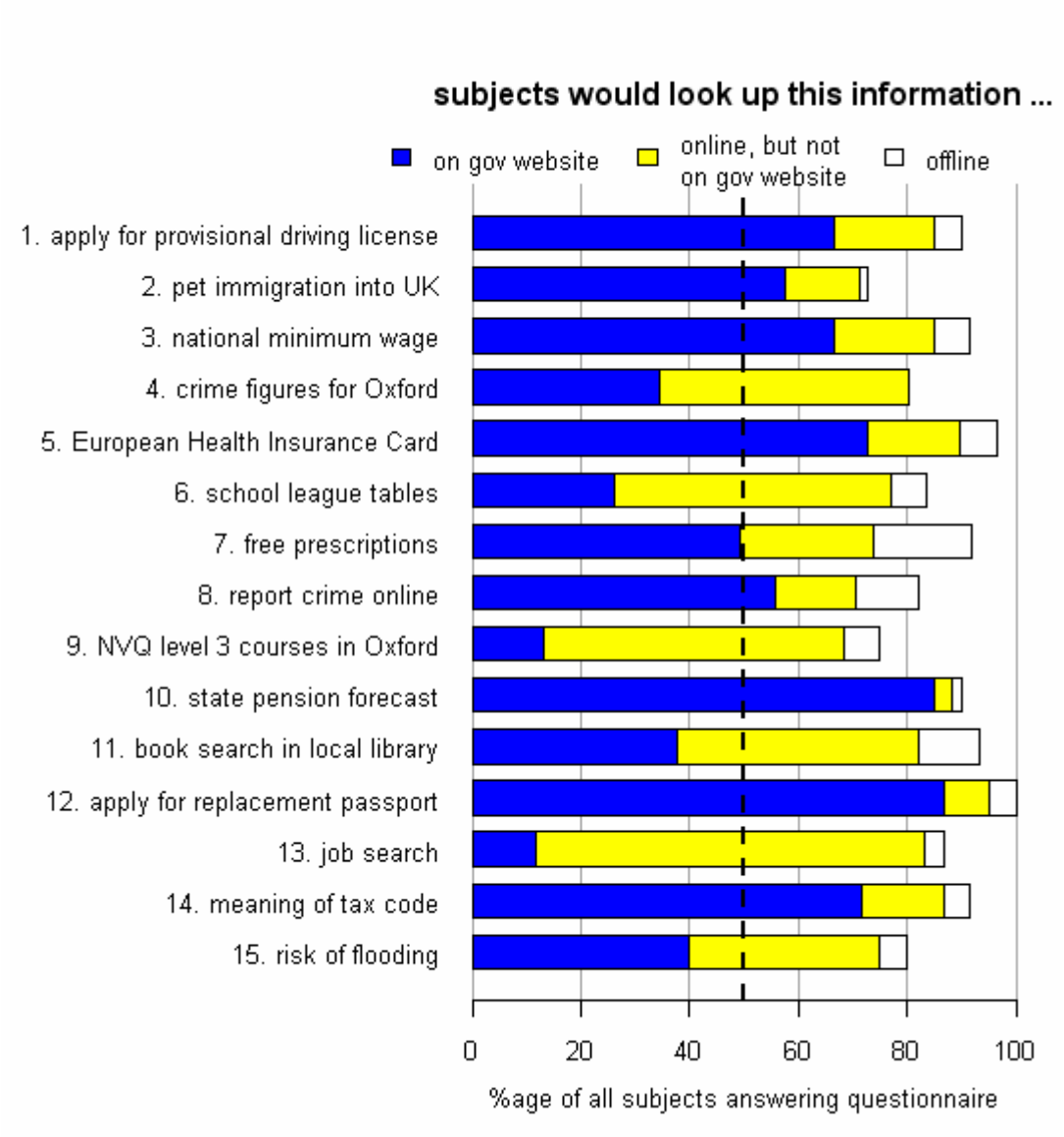
- Around 70 per cent of our participants had used government websites to look up information in the last year.
- There were no differences between students versus non-students in knowledge of government websites.

Search behaviour:

- Everybody usually used a search engine, and the search engine used was almost exclusively Google.
- Reported usage of internal search capabilities was high with two thirds of participants using it quite often (50 per cent) or almost always (15 per cent).
- Only one out of 10 reported using internal search seldom or never.

D2.2 Our participants were also asked for feedback on how likely they would be to use government websites to answer the questions asked during the experiment, reported in the following Figure:

Figure D2.1: Feedback on questions from the user experiments



Note: The response rate was 87 per cent, as some subjects had to leave early.

We asked the following question: Please think about yourself: Do you think it is likely you could be in a situation where you would be interested in that kind of information? And if so, would you look for this information on a government website or rather somewhere else?

Options:

- would look it up online on government website;
- would look it up online, but not on a government website;
- would look it up offline;
- can not imagine being interested in this information at all;
- do not know;
- n/a.

Annex D3: Technical Set-up and Acknowledgements

Technical Setup

D3.1 The subjects used PCs with the Firefox browser (version 1.5 and 2.0) with the Slogger extension (www.kenschutte.com/slogger/) in order to log times and the URLs of pages that were accessed through the browser. Subjects were presented with an online questionnaire that was created and subsequently analyzed via customized Perl scripts. In order to enable blocking of certain sites (for example access to search engines for people in the cross-government site treatment), subjects accessed the internet through a proxy server, blocking was subsequently enforced via Apache's mod_proxy module.

Acknowledgements

D3.2 We are grateful to Tom Rutter and Brian Wallace from the UCL's ELSE laboratory for providing assistance for our London-based experiments. We are also grateful to the Fell fund that supported the setup of an experimental computer lab in Oxford, which we used to conduct our Oxford-based experiments (see http://oxlab.oii.ox.ac.uk).

Section E: Focus Groups Report

The purpose of this report

E1. During January 2007, a team from the LSE Public Policy Group and the Oxford Internet Institute carried out four focus groups as part of the research for the report, *Government on the Internet*. Our aims in conducting the groups were:

(i) to obtain insights into how citizens use and view government websites, their usefulness now and how online services could be improved;

(ii) to understand from deliberative discussions how citizens approach and interpret tasks involving finding government information (also covered in our user experiments, see Section D of this report above); and

(ii) to identify the key questions to be included in our national survey to ensure that these questions could be framed in a way that accurately connects with how citizens view government websites.

How the focus group discussions were conducted

E2. Focus groups offer a way of systematically acquiring qualitative data on specific topics. Each group included between 9 and 11 people. Participants for the groups were recruited by ICM Research. The groups were also balanced in terms of gender, social status and ethnicity. Two groups took place in Birmingham and two groups in Watford. In each location, one group was for people aged under 45 years of age and one group for those over 45 years. We divided groups in this way because our experience of undertaking focus groups on a range of public policy issues suggests that older people are much more knowledgeable about these issues, partly because they have lived in the same place for a much longer period of time and partly because they have more experience of life's problems and contingencies. This greater expertise of older people can lead to younger participants being over-quiet in mixed age focus groups. In order to ensure that participants were relatively web-enabled, we asked two primer questions:

- whether they used the internet once a month or more frequently; and
- whether when planning a journey or a holiday, they used the internet as their first port of call.

Only those who answered Yes to both these filter questions were asked to attend.

E3. Both sets of groups took place in purpose-built focus group accommodation with built-in audio and video facilities. We recorded each group using digital audio and video recorders. Additional members of staff from LSE sat in on the discussions in the background and made detailed notes of what was said and of how discussions developed. All quotes from participants given below are verbatim.

E4. We used the same approach across all four groups. We began with a short practical session of 30 minutes, designed to ensure that respondents had some recent experience of looking for government information. The information was related to questions that citizens may need to find in every day life, as set out in Section D above. We had PCs or laptops available and we asked participants to find pieces of government-related information that might be available on government sites or other sites. We emphasised that this was not a test, but rather intended only as a starting point for the following discussion. (The instructions and questions for the practical session are shown at the end of this Section.) After 30 minutes we then had a short feedback session on the practical part of the group, and collated participants' views of their experiences. The discussion moved on to try to identify how participants themselves currently use government websites and what their views on government online services are. We asked what private sector sites participants used most often and how these compared to the government sites they had used. We also asked participants to point to some government websites that worked well and any that did not. Each group lasted at least one and a half hours in total.

Feedback on the Practical Session

E5. We began each discussion by asking participants to feed back their thoughts on finding the government-related information we had asked for. We asked how they went about finding the information. The majority of the participants used a search engine to do this, and most used Google as their search engine of choice.

- *I go to Google because I automatically do because that's the name that's implanted on my brain.*
- [Q. Did anyone not use a search engine?] *No.*

Even where participants knew the name of the government organisation they thought was relevant, they used a search engine to get to that organisation's homepage.

- *I Google it with the name, for example I know the Environment Agency so I put that into* [the search engine].

E6. We then asked whether the participants found the information we asked them to look for useful when they came across it. Here participants had mixed views, with some feeling that the information was clear and easy to understand on government sites. Others felt that the information was not presented in a way that was understandable or helpful for them.

- *The government one* [Directgov] *was laid out clearly.*
- *Yes, I thought it was easy.*
- *I found the Inland Revenue site easy to understand, there was a page on what I wanted* [which was how to understand a tax code] *and I thought it was quite simple.*
- *They could make it more interesting. I hit a page with reports and documents and I thought, 'close that'.*
- *I did feel that I was digging through a lot of waffle* [on the government sites], *to find what I was going for. I sort of hit a couple of those and then got off them quick.*

E7. We asked participants whether they had heard of the main government website for citizens, Directgov. Many participants had not heard of it, and those that had were not able to explain what its functions are. Some had come across it during the practical session and so were interested to know more about it. Others had seen television adverts for tax credits where mention was made of the web address in relation to that and they were not sure if it had wider relevance.

- *Yes, I have heard of it. But I don't really know what it is.*
- *I've never heard of it.*
- *I didn't know about that - I only found it by chance.*

Some participants who had used Directgov previously to look for information had not found it very useful.

- *Sometimes you have got the front sheet. And then you have to go in, and go in, and go in, to find what you want. A lot if it is wordy stuff. It would be good to have pictures or icons, to show what particular areas are - something that you can relate to.*

Whereas search engines were seen as an easy way to find information on the web, the style of a site showing categories was not seen as helpful by some. However, this view was not supported by everyone across the groups and in fact, later in the session, people in all the groups agreed that both methods of finding information needed to be included.

E8. We next explained about the Directgov website to each group. The idea of having one place where government information and services can be accessed was universally seen as a good idea. Most participants felt that currently Directgov was not well known enough to serve this function. They felt more marketing was needed in order for it to function more effectively.

- *If there was a site where they listed all the government sites, that would be helpful.*
- *It's not championed as a site where you can find lots of information though, is it? As you say, it's been on television in relation to tax credits, but it's not like 'Hey check out this site because it's got all the information you need'.*
- *Why doesn't the Directgov have better branding, like Google or Ask Jeeves?* [Now called Ask.com.]

Participants who had used the site previously for tax credits or paying their car tax remembered it as useful but had no way of re-accessing it, nor were they aware that it could be used more widely than they had done. The site name also added to these problems:

- *The thing is, you are never sure of the name, or if there is a full stop.*

Directgov have not yet run a full public marketing campaign.

Current use of government online services

E9. We next asked participants how they currently used government websites and what online services they had already used. All participants initially said that they never or rarely use government websites. However, during more detailed discussion it sometimes became clear that they had used these services, but they did not

realise they were accessing government-related information. A few participants could highlight government sites that they particularly liked.

- *I've used DVLA - that was easy to use … It was really quick and useful.*
- *One I found very interesting … it was about building restrictions, planning permission. And I found that absolutely excellent.*
- *I've done road tax. That was pretty simple. If I had tried to find it myself I would probably have got lost. But I had the renewal form with the address right there, so I could go straight there, type in a code and it was done in minutes.*
- *I have used the pensions forecast online and that was good.*

E10. Other participants felt that in general they would prefer not to use government websites, because they assumed they would be less convenient for them.

- *You get the impression with a lot of these websites, they put them up to stop you speaking to someone… who really knows the answer.*
- *I do get the feeling that some of these sites are set up to see how long, to see how tolerant you can be! And in the end I just sort of give up.*
- *I would prefer to speak to someone.*

E11. We asked participants what would make them use government websites more, and whether there were any disadvantages that were barriers to their using these sites. The main issue for our participants seemed to be that they did not think they would need to interact with government very often. They therefore felt the costs of working out how to use individual government websites were too high, because this knowledge would not help them with other government websites. The sites would need to be easier to use, more like search engines, before they would think of them as the first method of interacting with government.

- *I found it* [direct.gov.uk] *useful for what I needed it for. But it's maybe not something that I'd go back to and use again.*
- *I just very, very rarely use a government site, unless I have a problem with taxation or whatever.*
- *I think I would use them every week if it was simple to use and that I could navigate myself through it quite easy. Also added information that you would just like to have a look at, what's going on in your environment … so you can be members of things, as well as complaints.*
- *If the government website was as easy and fluid as* [a search engine], *then that would make our life easier.*
- *Can we have confidence, though, that we can just go online and sort our problems out?*

E12. Some participants did see some advantages to accessing government information online, principally around the issue of trust:

- *If I did use them* [government sites], *I would assume that the information there was up to the minute and accurate.*
- *Well, you'd hope you could trust it wouldn't you?*
- *I would trust it on a factual thing, like a tax code.*
- *It's more respected, isn't it?*
- *It's got to be legal, hasn't it?*
- *It's more official.*

E13. We also asked participants if they ever had help using the internet, or if they ever helped others. Most people at some point had either been given help or had helped out members of the family.

- *I do help my mum, she's useless.*
- *My dad is rubbish on computers, so he says 'How do I do this?' and I help him - that sort of thing.*
- *Teenagers, whenever I get stuck I call my son and he says 'Oh God, she's on that computer again'.*
- *My parents, they're old, they don't understand it.*
- *My dad actually helps me.*
- *If I was claiming benefits or that, I would go to the Citizens Advice, because they've got someone there who is genned up on that.*

E14. Many participants did raise concerns that websites should not be the sole method of communication between citizens and government. Many still preferred to use the phone or to speak face to face with government organisations directly. Others wanted to use a combination of the internet to find information and then the phone if there was additional information they needed.

- *I like to go into an office and do it face to face.*
- *I look for the contact numbers online and then use those to phone up . . . I prefer to speak to somebody and for someone to actually explain it to you - that person hopefully has the knowledge to give you all the information you need … rather than reading it all on a screen and thinking 'Hang on. That doesn't answer my other question about this' and then having to ring up anyway.*
- *I find it much easier to use the web. I had to do my* [name of service] *a while back and I thought I'd do it over the phone first and it was a nightmare. It was all automatic, you're not speaking to anyone and you put all your credit card details in and then it comes up that it can't recognise the transaction and that the system has crashed. So then I went to the website and tried to do it again on that, and it came up that it was already confirmed. So I wished I'd just gone to the website in the first place, and I probably will do the next time.*

Desired features of government websites and online services

E15. When we asked participants what basic features would they like to see all government websites have, they gave a range of responses. But these were mainly clustered around two themes, the first of which was that they should be better designed:

- … *usually when you go to the main page you have a search engine on there. But as you scroll down and whatever, you lose the search engine. You need to have that search engine box on* ***every*** *page, top and bottom.*
- *The ones* [government sites] *I've seen, there's loads of information popping out at you, some on the left side, some on the right, links you can click on. They just need to slow it down a little.*
- *If you are on a government site, you aren't doing something you enjoy. You are either trying to get information or you are giving the government money which, at the end of the day, you want to get done as quickly as possible and get out.*
- *I think it should be more just a search … where you can just say what you want.*

The second key theme was information that is clear and easy to understand:

- *I think a lot of people stay away from government websites because they expect them to be really stuffy and complicated, really technical - whereas they want them to be simple.*
- *There's always that section called 'Frequently Asked Questions'. I don't know where they get their information from, because they don't seem like frequently asked questions to me. The one that I would want to ask probably wouldn't be in there.*
- [Government sites] *should be simple, 'cos they should be aimed at all age groups, shouldn't they? Anyone should be able to get the information. … I think if sites were really, really foolproof, like for idiots, then people who are scared of using a computer wouldn't be scared of it, and* [they would] *think 'Yes I will go on there and look for that information'.*

Government sites in comparison

E16. We asked participants about the private sector websites they used most often, and what they liked about them. Simple and easy to use were comments that came up most often, along with being more assured of finding value for money.

- *I find the skiing ones are brilliant, really basic, really simple. I can do it in 10 minutes. Flights – very easy.*
- *I always book my holiday online, I don't know why anyone uses a travel agent.*
- *I mean, eBay, it's a lot of fun, getting a bargain … it's quite addictive.*
- *I use the AA Route Finder, that is very good… .*
- *I use Rightmove as I am looking to buy a house,* [and] *Autotrader to look at the cars.*

E17. We asked more specifically about internet banking, because this is often cited as a good comparator to government. Around half of the participants did use internet banking regularly and they thought it was easy to use:

- *I think they are better* [than government sites].
- *Easy, it's all set up and it just works.*
- *It's something that I do every day. I go on to my bank account and look at what the transactions are. It's something that you need to do regularly, whereas with a government site, it's not something you need to do regularly.*
- *It's just very straightforward. It's got options down the side that you would regularly use. It couldn't be easier.*

E18. We asked whether government could learn from some private sector sites, in order to encourage more people interact with government online. The general feeling of the groups was that they did not want government sites to use gimmicks or cutting edge technology, but they did want simple to use designs to be incorporated.

- *Just to simplify it I think.*
- *I'm not sure that I'd want to make it fun. I just want to get in there, get the information I want and get off.*
- *Make the websites easy to use.*

E19. We wanted to see whether participants felt that government sites could use some user generated content features that are common among private sector sites. We specifically asked about other customers' testimonials, and feedback from other users of the sites to help subsequent users make decisions. Would our participants use comments like these, for example, when choosing a school for their children or a hospital if they had to have an operation? Some people thought that this would be a good idea.

- *It would be useful to have other parents' comments on schools, good and bad.*
- *Yes, especially up to date ones. Because you hear lots of things going on, especially about hygiene and that type of thing, in schools as well as in hospitals, and up to date comments would be really good. Also to have up to date good comments as well as bad comments.*
- *If I was going in for an operation in hospital I would want to know how successful the guy that was operating on me was, so there's that type of information.*
- *I'd want more specific information, rather than just personal remarks.*

E20. However, other participants felt that comments from other citizens might not be trustworthy, or that government organisations would never allow negative comments to be posted on their sites.

- *I would like to see that on the government sites. But they won't do it … They'd have to disclose their performance, their failures.*
- *But they won't put anything negative, will they?*

- *It depends. It depends who's written them* [customer testimonials]. *I take them with a pinch of salt. If it says, 'Mrs Smith from Yorkshire', you wonder who has written it, because it's* [maybe] *not 'Mrs Smith from Yorkshire'.*
- *You get some websites where they get bad comments as well. I trust those more.*

Future improvements to government websites

E21. We asked participants what government could do to improve their online presence. For the groups, their first suggestion was to make the information and services already available online more widely known. Some people were pleasantly surprised during the practical session to see how accessible some of the government-provided information had been. They felt that if more people knew about this, usage would increase:

- *I think there are probably more services on the websites than you realise … It's just that I haven't needed them.*
- *Adverts would appeal to someone at a particular time. Just because it doesn't appeal to us* [referring to the group]*… to a lot of people in the country it could be useful.*
- *It could be advertised on your payslip, or on your P60, the* [web] *address.*
- *Advertise them.*
- *What is there is quite good, really.*
- *When I found them, they were easy to understand.*

E22. Other participants had more general ideas for improving government sites.

- [Include] *things about your local environment.*
- *I think they should change their search programme - so when you type it in, rather than getting lots of documents coming in, you've actually got the specific information you are looking for.*
- *It would be nice to see a lot more positive things as well. Generally, in the media, it doesn't matter who is in charge, everything's a mess … it would be good to get a balance.*

E23. This issue of better marketing was mentioned particularly in relation to the Directgov website. Some thought that all government written communication should include the web address for Directgov, for example.

- *They need to put more adverts on television. I've never seen one on it in my life.*
- *Maybe links from other websites.*
- *Maybe it should just be better advertised - adverts on telly; 'If you are looking for government information go to Directgov', get it into people's heads.*
- *I don't think they do advertise it, do they? How are you supposed to know about it?*

E24. As mentioned previously, the idea of having one central place for government online information was seen as a good idea.

- *If there's one page that you can go straight to what you want, that's good. It is much easier then going from C to B to E. It should be simple, that's the main thing.*

There were some negative observations from participants around the name of Directgov:

- *Directgov. I just think that's a terrible name for people to remember. It should be directgovernment.co.uk, all one word. I bet 98 per cent of people wouldn't think to put a dot between direct and gov.*
- *I went to Directgov and didn't realise I was in a government site. And to search the next question I went out of it and went back into Google, which just shows you that brand means nothing to me.*

Conclusions

E25. Over the four groups, we found a varying picture of how citizens use government information and services online. Often, many people did not realise they were using government sites or they obtained government related information from other sites such as the BBC. Some who did not regularly use government sites were pleasantly surprised by the practical session, because they found the information requested easily and the layout and content of the sites was often easy to understand and helpful.

E26. However, there were a number of concerns for government organisations. First, government sites are clearly seen as text-heavy, characterized by overwhelming lists of documents rather than clear, easy to understand text. The rise of well-known search engines has meant that citizens are now used to typing in an exact question or a precise subject into a site and then being taken to the exact page. Many therefore see sites that use categorisations for users to click through, as unwieldy and unhelpful. The web content on government sites can be seen as written in jargon. However, government websites are seen as accurate, up to date and perhaps most importantly, as a trusted source of information.

E27. Perhaps the concern that can be addressed most easily is to publicise the already available government information and services more widely. Focus group participants liked the idea of having one place to find all government information. They did not feel that at present Directgov was fulfilling this function because it is not well known enough. They also felt that there may be a better brand name for it. Directgov have not yet run a full public marketing campaign.

Annex E1: Focus Group Practical Session Introduction and Questions

PRACTICAL SESSIONS 1 AND 2

This session will last for 30 minutes. It will be followed by a discussion session of one hour.

We are going to ask you to look up some information on the web that you might need to find in every day life. We are not looking to test you on this information. You do not need to work through all the examples below, you are welcome to choose those that interest you most.

The boxes below each question are for you to write in any comments you have as you go along. We would like you to record *how* you went about finding the information, and *where* you found it, what was the name of the website? Other than that, you are welcome to write down any comments on what you thought of the websites you found, for example, was the information well presented? Understandable? Easy to access?

In the discussion group that will follow this session, we will be asking you about the practical session; then about what you use government websites and services for; what you think of government websites; what experiences you have had using them; and whether you found them useful.

PRACTICAL SESSION 1 (Under 45 years group)

	Question
1	You are planning to move to LOCATION and are looking to find a job there (as a shop assistant) before you go. *Can you find a list of available positions in LOCATION?*
	Space for around 6 lines of writing – shown as grey shaded below
2	You have a tax code 488L on your payslip, but you are not sure what that means. *Can you find an explanation of your tax code?*
4	You are trying to find a secondary school for your daughter. You have heard that NAME OF SCHOOL in LOCATION is good but you would like to get more information on this. *Does NAME OF SCHOOL in LOCATION achieve at least above average GCSE results for England?*
5	You want to earn an additional qualification to care for children. After getting some information you decide on a National Vocational Qualification (NVQ), level 3, in Children's Care that you would like to do part time while you work part time. *Can you find any information on what colleges in your local area provide this course?*
6	You have somehow lost your birth certificate and want to get a duplicate. *Can you apply to get a duplicate birth certificate online?*
8	Your child is starting a new school and you would like to avoid using the car to take him there. You would like to see if there is any guidance for people looking for greener, or sustainable, travel options. *Can you find any information on this and how up to date is it?*

PRACTICAL SESSION 2 (Over 45 years group)

	Question
1	You have a tax code 488L on your payslip, but you are not sure what that means. *Can you find an explanation of your tax code?*
2	Your friend is going into hospital in LOCATION to have a minor operation. You would like to find out more about the hospital's record on quality of service. *Can you find any information on the performance on the hospital in LOCATION?*
3	You would like to earn an additional qualification in improving your IT skills. You would need to do any course part-time as you will still be in full-time work. *Can you find any information on what courses your local colleges provide on IT skills?*
6	You are thinking of buying a house in Mill Lane in the village of Islip in Oxfordshire. You are worried about the risk of possible flooding. *Can you find any information on the likelihood of flooding in this area?*
7	You would like to look what kind of state pension you will get when you retire at 65. *Can you find any information on the amount of pension you can expect?*
8	You have decided to go on a cruise which will stop in Turkey and Egypt. You are worried about local safety. *Can you find any information about whether there are risks in travelling to these countries?*

Section F: National Survey Report

F1. In February 2007, we designed and ran a national survey as part of the *Government on the Internet* study. We designed a set of questions, formulated from the experiences of our four focus groups. National surveys are a quick way to provide an indication of the wider distribution of citizen views and experiences in the population as whole, information that can complement other more focused methodologies (such as our user experiments and focus groups). The national omnibus survey was run by ICM Research, with 1,006 adult respondents across the UK interviewed by phone. Respondents are also asked various demographic questions and were thus representative of the UK population as a whole in terms of their spatial locations, age range, gender and other parameters.

F2. The survey began by asking respondents to categorise their level of internet skill using the following question: *Which of these statements best describe you?*

- *I use the internet regularly* (GROUP A).
- *I don't use the internet myself, but I can find someone else to help me to use it when I need to, like friends, family, neighbours or an advice or community centre* (GROUP B).
- *I don't use the internet* (GROUP C).

We used this question to categorise respondents in order to tailor the questions that followed more exactly to their knowledge and experience level. Depending on the answer respondents gave to this first question, they were then asked between seven and nine additional questions. For ease of description here, we will refer to them as Group A, B or C respondents.

F3. Sixty-one per cent of respondents answered that they used the internet regularly, with 12 per cent using an intermediary and 27 per cent not using the internet at all. The largest grouping of those using the internet regularly was between 25 and 44 years of age. In our sample as a whole, two thirds (66 per cent) of those aged 65 and over said they did not use the internet.

Finding government information online

F4. We asked the first two Groups of respondents: *If you want to find some information about government or public services on the internet, would you:*

- *mainly look at specific pages (by using favourites or bookmarks or typing in a web site address);*
- *or mainly use a search engine;*
- *or do a bit of both.*

The majority from each Group said they would either mainly use a search engine (45 per cent from Group A) or they would do a bit of both (again 45 per cent from Group A rising to 50 per cent from Group B). From Group A, only 6 per cent said they would look at specific pages whereas this figure was 10 per cent in Group

B. We found that a majority of Group A respondents had used a government site in the last year, 66 per cent of these to find information, 41 per cent to register for a service or fill out a form and 30 per cent had completed an online transaction like paying a bill. For those who needed help to use the internet, 67 per cent had not used a government website in the last year. Of those who did, 9 per cent had completed an online transaction.

Cross-government sites

F5. We next asked respondents about the main cross-government site for citizens: *The UK government has a main site (a portal) where all government information and services are available online. Can you tell me the name of it?* We did not prompt respondents with the name, and the interviewers recorded whether respondents answered correctly or not, or if they didn't know. Over all our respondents, 81 per cent did not know the name of the website. This dropped slightly to 79 per cent for Group A respondents but rose to 93 per cent for Group B. Two per cent of both Group A and B correctly identified the correct name as direct.gov.uk. For those who had not identified Directgov, they were then given the name and asked: *Have you ever:*

- *heard of it;*
- *used it;*
- *neither.*

When prompted in this way, 57 per cent of regular internet users said they had heard of Directgov and 21 per cent said they had used it. In Group B, 32 per cent said that they had heard of it and 6 per cent had used it.

F6. We also asked about one other cross-government site: *Have you ever heard of or used another government web facility called the Government Gateway?*

- *heard of it?*
- *tried to register and use it but did not succeed?*
- *used it OK.*

Eighty-seven per cent of all respondents had not heard of the Government Gateway. This rose to 92 per cent of those who needed help to access the internet. Of those that had heard of it, from Group A 39 per cent had used it successfully whereas 5 per cent of Group B respondents had done so.

Characteristics of government sites

F7. We asked: *Thinking about government websites, could you give them marks out of 10 on the following (where 10 is excellent, 5 is average and 1 is very poor).* **Figure 1** below shows what these statements were (they were all positive statements) and also shows how many respondents gave high marks to the statement in comparison with those that gave low marks. With many scales there is a tendency for people's responses to bunch around the middle, so that the balance on high relative to low marks is the most important thing to pay attention to. On balance the most respondents agreed with the statement that government websites are up to date. This was also a finding from our focus groups that people believed that the information provided by

government was up to date and accurate. The second most supported statement shows that people see information delivery as a key aspect of government online services. Respondents were least likely to agree with the statement that they had recommended government sites to their friends and family.

Figure 1: How all respondents using the internet rated government websites on ten criteria in our national sample survey

Criterion	Per cent assigning top marks (i.e. 8, 9 or 10)	Per cent assigning low marks (i.e. 1, 2 or 3)	Balance
Up to date	35	6	+29
Designed to help you find out information	30	7	+23
Easy to use and clearly written	25	5	+20
Designed for all kinds of people	24	9	+15
As good as private sector sites	20	12	+8
Designed to help you get things done quickly	18	12	+6
I can trust what they say	24	19	+5
Use icons, video and audio	12	10	+2
Help you find out what other users of government services think	12	15	-3
I have recommended them to friends and family	11	41	-30

F8. We then asked: *To what extent do you agree or disagree with each of the following statements regarding government websites?* Again we gave respondents a scale, but this time with only five points ranging from strongly agree at one end to strongly disagree at the other. **Figure 2** shows the proportion of all respondents that agreed or disagreed with the statements they were given on government websites. Again, we look at the balance between the positive and negative responses to see which statements our respondents feel most strongly about. The statement most people agreed with concerned government organisations providing full information on their websites, and not just press-released information. Respondents also supported the statement that government sites need to be made simpler to use. There was least support for the statement that government sites were easy to search inside. This adds further evidence to the issue (highlighted in the Main Report) that internal search is a vital tool for government sites.

Figure 2: Whether all respondents using the internet agreed with seven statements about government websites in our national sample survey

Criterion	Per cent that Agree	Per cent that Disagree	Balance
They should give you all the facts, not just the good news bits	93	1	+92
They should be made much simpler to use	75	8	+67
They should not try to be flashy or trendy	75	11	+64
Users of government services should be able to post their comments for others to read	71	14	+57
They should have more features of good private sector sites	49	14	+35
There are too many documents and too much text on them	42	18	+24
It is easy to search inside government sites	38	24	+14

Help with accessing government websites

F9. We asked some slightly different questions to those who said they needed help to use the internet (Group B) and those who did not use the internet (Group C). We asked Group B respondents: *Who do you get to help you most often to access the internet?*

- *Friends;*
- *Family;*
- *Neighbours;*
- *People at work/school;*
- *Community centre;*
- *Advice Centre;*
- *Other*.

The largest group was family at 63 per cent followed by friends at 19 per cent.

F10. We then asked both Group B and Group C respondents: *If someone could you show how to access government websites via the internet at the following locations would you use it?* There are a number of locations where citizens can get help with the internet, for example UK online centres. However we wanted to see what other locations respondents would consider useful to have extra help for those users who need additional support. **Figure 3** shows the breakdown for the three locations we specified for Group B. The most strongly supported location was libraries, a finding that we also found with our focus groups. The location that was least supported was internet cafes – perhaps because they are seen as expensive, or because respondents did not feel that support would be obtainable in internet cafes, whereas it might be more readily available in libraries.

Figure 3: How much support Group B and C respondents gave to three specified locations where additional help could be provided to access government websites

Location	I might use it (per cent)	I would never use it (per cent)	Balance
Library	59	39	+20
Citizens Advice Bureau	55	44	+10
Internet café	25	73	-48

The majority of Group C respondents answered that they 'would never use' any of the three locations (72 per cent, 55 per cent and 85 per cent respectively). They were most positive about the Citizens Advice Bureau option with 44 per cent of respondents saying they might use it to access government websites.

People who do not use the internet

F11. For those respondents who do not use the internet, 27 per cent of our sample, we asked: *Here are some common reasons why people don't use the internet. Which, if any applies to you?*

- *Don't know how to use a computer.*
- *Too slow/ can't get broadband.*
- *It's too expensive.*
- *The internet is too difficult to use.*
- *I can do everything I need some other way.*

Seventy one per cent of respondents said they could do everything they needed in some other way. The second most recorded response, at 55 per cent, was *'Don't know how to use a computer'*. The statement with the least support is that the internet is too slow, or that respondents could not get broadband in their area, at 16 per cent.

F12. Given that such a high percentage of non-connected respondents felt that they did not need to use the internet as they were able to do things in another way, we then asked: *How would you typically contact the government to find out about the following?:*

- *about a tax;*
- *a government service like a Passport;*
- *a benefit (like Job Seekers Allowance or Disability Allowance).*

Most Group C respondents felt that the first thing they would do in each of these three situations was to ring up the department or agency involved. As a second choice, for both the tax and the service question, they would visit their local Citizens Advice Bureau. About a benefit, the second most recorded choice was to visit a physical location like a library or government office. Asking friends and relatives was also seen as a good option relating to tax or a government service. However, it was seen as less useful when the question was about a benefit.

Figure 4: What actions respondents who do not use the internet would take to contact government about three situations

Action *All figures percentages*	**About a tax**	**About a government service like a passport**	**About a benefit (like Job Seekers Allowance)**
Ring up	23	32	29
Ask the local Citizens Advice Bureau	22	15	14
Ask a friend or relative	17	14	7
Visit a physical location, like a library, a government office or an advice centre	10	14	18
Ask a local authority or other public sector person to help me	10	7	10
Use a book, such as a directory	5	5	2
Ask someone from a charity or organisation you know	3	2	3

F13. Lastly, we asked those respondents who do not use the internet: *Have you ever had a problem with any government services or finding information because you don't use the internet?* The vast majority, 95 per cent, felt that they had not had a problem with government services because they do not use the internet, compared with only 2-3 per cent who said they had had a problem or difficulty.