

Measuring website quality

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Purpose

The perception of an organisation is influenced by the user experience of its website. Users may have no way to judge the operations of an organisation except through the experience of its public-facing services. Measuring website quality is a crucial step in building a website that is fit for purpose and helps users to achieve their goals.

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Introduction

Purpose

The perception of an organisation is influenced by the user experience of its website. Users may have no way to judge the operations of an organisation except through the experience of its public-facing services. Measuring website quality is a crucial step in building a website that is fit for purpose and helps users to achieve their goals.

Website quality data can also be used in conjunction with costs and usage data to make value-for-money judgements and aid in the planning and strategic development of websites.

Background

The National Audit Office surveyed 153 central government organisations between October and December 2006 for the report [Government on the internet](#)¹. They concluded that the quality of government websites had only improved slightly since 2002.

The Government has agreed to the [Public Accounts Committee \(PAC\) Sixteenth Report](#)² recommendation that a single set of website quality measures needs to be developed. This guidance describes those measures, their rationale and the mechanisms for data capture.

Audience

This guidance is intended for Heads of e-Communications (or equivalent) within central government departments, executive agencies and NDPBs.

¹ Government on the internet: progress in delivering information and services online
http://www.nao.org.uk/publications/0607/government_on_the_internet.aspx

² Public Accounts Committee – Sixteenth Report
<http://www.publications.parliament.uk/pa/cm200708/cmselect/cmpubacc/143/14302.htm>

Core quality measures

1. Central government organisations should measure the following on an ongoing basis:
 - [Delivery of site objectives](#)
 - [User satisfaction](#)
 - [Usability](#)
 - [Standards compliance](#)
 - [Editorial quality](#)
2. In particular, central government organisations must measure user satisfaction via an online survey including, as a minimum, the [core set of questions](#) detailed in this guidance.
3. Central government departments must measure user satisfaction starting in the Financial Year 2009-10 for every website open on 1 April 2010.
4. Executive agencies and NDPBs must measure user satisfaction starting in the Financial Year 2010-11 for every website open on 1 April 2011.
5. At least one online survey per website should be carried out every year with figures reported annually.
6. Data should be provided to COI in the format specified in [the reporting template](#) in Appendix A.

Delivery of site objectives

7. Website managers should be clear what they want from each website. This will reflect the overall strategy of the site-owner and the contribution the website is expected to make towards delivering the strategy. Examples could include:
 - reducing calls to call centres by answering common questions on the website
 - registration for transactional services to follow
 - sign up for health promotional programmes such as Change4Life
 - encourage user participation in consultation or discussion groups to strengthen citizen engagement
8. Site managers should set specific measurable timed objectives for each site which they believe are realistic and achievable. These should cover:
 - operational elements linked to effective running of the site (e.g. site availability)
 - audience reach
 - measures of the user experience (e.g. user success, user satisfaction)
 - delivery of planned end benefits.(e.g. financial, behavioural, environmental, channel optimisation)
9. Site objectives should be translated into a set of key performance indicators (KPIs) which are monitored in a systematic way. There should be
 - a process in place for review of results
 - corrective action prioritised, planned and implemented

Web Performance Management Framework (PMF)

10. Cabinet Office, via the Contact Council, is developing a Web Performance Management Framework (PMF) for government sites. The Web PMF will sit alongside PMFs for other channels, such as the [telephone contact centre PMF](#) and that for face to face (which the Council aims to develop during 2009-10). It is intended to:
 - enable senior management teams to review performance against their peers, and thus encourage continuous improvement within and between web sites;
 - allow for more standardised comparison of service delivery across channels; on the web, face-to-face, and contact centres.

The suite of PMFs is intended to provide an invaluable toolkit for cross channel service delivery managers within Departments, Authorities and the broader public sector.

11. The Web PMF will start with and build upon the core measures proposed in this document.
12. More information on PMFs and the Web PMF in particular can be obtained by contacting the Contact Council at contactcouncil@cabinet-office.x.gsi.gov.uk or by contacting Gerald Power at Gerald.power@cabinet-office.x.gsi.gov.uk (020 7276 3235).

User satisfaction

Introduction

13. Websites set out to provide information and services to users. Strategic customer-oriented reviews will identify what target groups want or require from an organisation, and decide which combination of channels and processes can best deliver against these needs.
14. Users arrive at a website through a variety of routes with differing purposes for their visits. The challenge is to develop content and online processes to provide an experience that the user is satisfied with – even if we have to acknowledge that the outcome may not always be what the user hoped for. For example, completing a tax return may not be *enjoyable*, however the process should be as easy as possible and developed to be highly satisfactory.
15. It is best practice to use a range of different approaches to maximise satisfaction with the experience, such as:
 - stakeholder and audience research to understand the requirements
 - considering the role of digital media within an overall channel strategy
 - developing content that is up to date, easy to understand and accurate
 - customer journey mapping to make the experience as easy, efficient and effective as possible
16. Digital communicators seek to understand the effectiveness of online communications using a range of techniques including:
 - Web traffic measurement (web analytics)
 - Calculating value for money (e.g. cost per Visit)
 - Comparison with peer websites (competitor analysis)
 - Usability testing (e.g. user testing, expert reviews)
 - Eliciting audience and stakeholder opinions (e.g. questionnaires, interviews, focus groups etc.) An inexpensive way to capture user suggestions is to use feedback widgets (e.g. [User Voice](#), [Get Satisfaction](#) etc.)
17. An important test is how users themselves rate the experience. Collected in a consistent way across sites, user satisfaction measures can provide valuable insight to a website's performance, its strengths and weaknesses compared to others and potential areas for improvement.

Measuring user satisfaction in a consistent way and benchmarking

18. User satisfaction is a core measure of website quality. An online survey is considered the most appropriate method for capturing a representative sample of users and to gauge opinions. It is also the only method to collect information such as user profiles and reasons for visiting. User satisfaction must be measured via an online survey for each and every publicly accessible website operated by an organisation.
19. The benefits of running a website user satisfaction survey include:
 - Audience identification (or demographic profiling).
 - Identifying a site's strengths and weaknesses.
 - Suggests actionable recommendations for site improvement.
 - The results can feed into the strategic planning of a website.
 - Better understanding of site performance by benchmarking with other government websites.
20. The results of are particularly powerful when compared with data from peer websites or reviewed against other sectors. This is only possible if a consistent set of questions is used across all websites. This guidance sets the minimum set of questions for measuring and reporting user satisfaction.
21. User satisfaction data, when taken together with the standard measures for website usage and costs, allows assessment of the overall quality and value delivered by government websites.

Core questions

22. A set of core questions must be included in every website satisfaction survey conducted by an organisation. This core questions are detailed below and cover:
 - Overall satisfaction with the visit
 - Extent to which user achieved purpose of visit
 - Rating of the site on key dimensions
 - Likelihood to recommend the site to others
23. The core questions are based on the Directgov Customer Monitor and are designed to be relevant to every website, regardless of size, purpose or type.

A. How satisfied were you with your visit today?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very Dissatisfied
- Don't know

B. Did you get what you wanted from the site?

- Got everything I wanted
- Got most of what I wanted
- Got some of what I wanted
- Got none of what I wanted

C. Please rate the web site on the following aspects:

- Ease of use of the site
- Attractiveness of design/appearance
- Ease of finding information/services
- Information that was clear and easy to understand
- Accurate and up to date information
- Usefulness of site search

- Very good
- Good
- Neither good nor poor
- Poor
- Very poor
- Don't know
- (Add: 'Not used' for search engine question)

D. How likely are you to recommend this web site to a friend, colleague or family member?

- Definitely
- Probably
- Not sure
- Probably not
- Definitely not

24. The wording of these questions and order in which they are asked must be maintained exactly as set out to maximise consistency between surveys.

25. The survey must also collect information on:

- **Purpose of visit:** to clarify what the website is being used for and will also aid interpretation of ratings for user satisfaction and extent to which user achieved purpose of visit.
- **User profile:** including age, gender, disability and frequency of Internet usage. The user profile information generated helps identify a site's audience and whether it is reaching its intended target segment(s). See Appendix A for [standard responses to user profile questions](#).
- **User postcode** (with opt out): to allow assessment of geographic coverage for the site and to facilitate integration with other postcode-based data sources (e.g. MOSAIC).

Survey design

26. Responses to this core question set should be collected either as part of a broader website survey or as a standalone survey.
27. In all cases, the following template must be followed for survey design:

Question flow	Part of broader survey	Stand-alone
1	Screening questions including age	Screening questions including age
2	Standard question A : visit satisfaction	Standard question A : visit satisfaction
3	Purpose of visit	Purpose of visit
4	Standard questions B-D	Standard questions B-D
5	Other site -specific questions	-
6	User profile questions	User profile questions

28. An open ended question may be included directly after question A (user satisfaction with visit). This can provide valuable insight into the main drivers of satisfaction or dissatisfaction.
29. If including the core questions in a broader survey, avoid excessive survey length as it is likely to reduce completion rates, especially by those who are less satisfied with the site.
30. Allow respondents to provide an optional email address for any follow-up communications. This may be helpful to clarify feedback or to gain a deeper understanding of users' motives and opinions.

Sampling and representation

31. Surveys should be designed to provide feedback which is representative of all users. Online survey data may not be completely representative, for example proficient internet users may be over-represented. Supplementation by other methods may be appropriate to ensure a representative sample. This could include weighting data with input from panel-based sources (e.g. Nielsen Online, Comscore) or use of alternative channels (e.g. email, telephone).
32. Surveys should run over a minimum period of one week period in order to capture both weekday and weekend visitors, at anytime of day.
33. Sample size needs to be sufficient to allow analysis of major sub-groups of users. For most sites, it should be possible to achieve a sample of at least 1000 users: on line surveys add little extra cost for increasing survey size.
34. For sites with low levels of traffic, achieving this level may be impractical. A minimum of 250 is recommended.
35. In order to calculate the correct sampling interval, there is a need to obtain up to date traffic figures based on unique visitors. Understanding likely response and completion rates will also need to be factored into this collection. For example, if a site was attracting 100,000 unique visitors per week, a sampling interval of 1 in 18 would need to be set in order to achieve 500 completes over a one week period, assuming a response rate of 15% and a completion rate of 60%.
36. Online surveys must comply with the Market Research Society (MRS) Code of Conduct and the Data Protection Act.
37. Under the MRS Code of Conduct, those under 16 must not be interviewed. A question to establish a user's age must be included at the start of the survey and under 16s screened out. For sites aimed specifically at young people, it may be possible to get special dispensation from the MRS to carry out research with under 16s. Site owners should seek advice before initiating research.

Survey implementation

38. The survey should be completed online by the user at the end of the visit. The recommended approach is to give users a chance to opt out by using an 'interstitial' – a page that appears between two other pages. The interstitial method works as follows:
 - i. The user clicks on a link from the website, but instead of launching a pop-up window, are taken to a new page in the same window en route to the destination page.

- ii. The user is then given the option to take the survey or not, or to do the survey later.
 - iii. For those taking the survey immediately, the survey is launched via a pop-up window (after being informed this would happen).
39. The interstitial method is particularly appropriate for creating surveys which comply with the accessibility requirements for government websites (i.e. Level Double-A of the W3C Web Content Accessibility Guidelines). Further [guidance on accessibility](#)³ is available on the COI website.

³ Delivering inclusive websites (TG102) <http://www.coi.gov.uk/guidance.php?page=129>

Usability

40. The Power of Information Taskforce commissioned work on usability from the agency Bunnyfoot to identify good and bad aspects of government websites. The review found that some government websites are failing to get the basics right, for example:
 - Not helping people to navigate the site easily
 - Not helping search engines to find the site
 - Not speaking the language of the user
41. Cabinet Office asked COI to develop usability guidelines for web developers and web content editors across government covering the basics of usability in a way that is engaging and interactive.
42. Working with the Power of Information Taskforce, COI has published a set of usability criteria for government websites. The [Usability Toolkit](#) aims to train and motivate web professionals to understand good usability practice and learn how to apply it to public sector web provision. It contains advice that will be useful to both new and experienced web content developers, as well as anyone who wants an overview of the usability issues that government websites face.
43. The Toolkit contains:
 - **Online tutorials** that you can dip into, learn and revisit for reference covering: layout and design; navigation; writing content; images and pdfs; forms; search and quality assurance and standards.
 - **Guidance** on basic design and solutions to common design problems and how to write for the web.
 - **Examples** of good and poor practice (including video evidence).
 - **Tools** and **templates** to download and practice with.
 - **Self assessment** to help you absorb and understand the guidance.
44. The Toolkit covers 8 broad themes:
 - [Page Layout](#)
 - [Navigation](#)
 - [Writing Content](#)
 - [Content Elements](#)
 - [Forms](#)
 - [Search](#)
 - [QA & Standards](#)
 - [Common Pages](#)
45. They contain a total of 21 online tutorials ranging from the 'Basic layout of page templates' to 'When and how to use PDFs'. Each tutorial is designed to

be consumed and understood in under ten minutes. All staff developing content for government websites should [register](#) and complete all of the tutorials in the Usability Toolkit.

Usability as part of a process

46. Following guidelines is only part of the picture when it comes to usability. Web usability should be part of a wider process including the following steps:
 - Define the site's objectives: what is it for?
 - Research to understand users and their needs: what are their key tasks and goals?
 - Design a set of pages to meet user needs
 - Test with users
47. It may require several iterations of the above process to refine the design before you start building a website. You can even sketch early designs on paper and test them with colleagues to iron out any obvious problems. This can save a lot of money later on when it might be more difficult to alter the page designs.
48. The process of continuously refining designs to meet the needs of users and testing with users to ensure those needs are adequately met is called User-Centred Design (UCD). Website owners should adopt a UCD approach to Web design to maximise website usability.
49. Testing with users should be prioritised around the key user tasks and goals identified in the research phase.

Links to [further reading on usability](#) in the Usability Toolkit.

Standards compliance

50. Compliance with industry standards is an important measure of website quality. COI has issued a series of [web standards and guidelines](#) that government websites should follow. This section summarises the key requirements.

No new websites

51. No new websites will be permitted for Departments, Executive Agencies and Non-Departmental Public Bodies unless approved by the Cabinet Sub-Committee on Public Engagement and the Delivery of Services (DA(PED)).

Use .gov.uk

52. Central government bodies must use the appropriate name within **.gov.uk** as their primary domain. Use of non-government domains (e.g. .co.uk, .org.uk, .org etc.) must only be for defensive purposes and must be redirected to the primary government domain.

[More information on naming and registering websites](#)⁴

Follow accessibility guidelines

53. The minimum standard of accessibility for all public sector websites is Level Double-A of the [W3C Web Content Accessibility Guidelines](#). All new websites must conform to these guidelines from the point of publication.

54. Public sector website owners must develop an accessibility policy according to section 6 of PAS 78, 'Defining the accessibility policy for the website'.

[More information on delivering inclusive websites](#)⁵

Ensure websites are capable of being archived

55. All Central Government websites and their content must be capable of being archived regularly by The National Archives and, in particular, before any website closure.

[More information on archiving websites](#)⁶

Measure and audit website usage

56. Central government departments must measure Unique User/Browsers, Page Impressions, Visits and Visit Duration starting from 1 April 2009 for every website open on 1 April 2010.

⁴ TG101 Naming and registering websites <http://www.coi.gov.uk/guidance.php?page=191>

⁵ TG102 Delivering inclusive websites <http://www.coi.gov.uk/guidance.php?page=129>

⁶ TG105 Archiving websites <http://www.coi.gov.uk/guidance.php?page=239>

57. Executive agencies and non-departmental public bodies (NDPBs) must measure Unique User/Browsers, Page Impressions, Visits and Visit Duration starting from 1 April 2010 for every website open on 1 April 2011.
58. Unique User/Browsers, Page Impressions, Visits and Visit Duration, must be audited in line with the industry-agreed standards defined by the Joint Industry Committee for Web Standards (JICWEBS).

[More information on measuring website usage](#)⁷

Code to standards, test with browsers

59. You should follow a *progressive enhancement* approach to developing websites to ensure that content is accessible to the widest possible number of browsers. This approach to web development works by building your site in layers:
 - Code semantic, standards-compliant (X)HTML
 - Add a presentation layer using CSS
 - Add rich user interactions with JavaScript
60. Testing with browsers and operating systems used by 2% or more of your users should lead to a reasonable level of browser support. This does not imply that browsers used by less than 2% of your users are unsupported. However, the 2% figure is a useful guide to where to spend time testing and fixing issues.
61. Browsers used by 2% or more of your users must be tested, and any issues resolved.
62. Browsers and operating systems used by less than 2% of your users are not required to be tested. Minority browsers that support standards are assumed to work.

[More information on browser testing](#)⁸

Have an XML Sitemap

63. Every UK public sector website must have one or more XML sitemaps (conforming to the Sitemaps Protocol) which cover all the publicly available content under any relevant domain or sub-domain (possibly including databases). These sitemaps should be exposed through the robots.txt file and submitted to Internet search engines and other approved crawlers.

[More information on exposing your website to search engines](#)⁹

⁷ TG116 Measuring website usage <http://www.coi.gov.uk/guidance.php?page=229>

⁸ TG117 Browser testing <http://www.coi.gov.uk/guidance.php?page=212>

Maintain domain names in perpetuity

64. By taking four actions, almost all broken links on UK central government websites can be removed:
- Maintain all domains
 - URL management
 - Enable The National Archives (TNA) to archive all old content
 - Put in place redirection to content that has been moved or archived
65. Every central government organisation must maintain all their registered web domains in perpetuity. This is essential to ensure that users can be redirected to content if it is moved or archived. Given the benefit of ensuring the long-term findability of the information, the cost of persisting domains is relatively low.

[More information on managing URLs](#)¹⁰

Measure website costs

66. Central government departments must measure costs starting from 1 April 2009 for every website open on 1 April 2010. The first report will cover the Financial Year 2009-10.
67. Executive agencies and NDPBs must measure costs starting from 1 April 2010 for every website open on 1 April 2011. The first report will cover the Financial Year 2010-11.
68. Annual costs must be provided to COI for the preceding financial year. Audited accounts for the department may not be available until later in the year, however this reporting does not require figures from the audited accounts. One report must be submitted for each website operated by the organisation. These reports are to include expenditures and staffing.

[More information on measuring website costs](#)¹¹

Timetable for standards compliance

69. The following timetable is in place for central government departments:

By this date...	...you should have:	Standard
December 2008	XML Sitemaps for all open sites	TG122 Exposing your website to search engines

⁹ TG122 Exposing your website to search engines <http://www.coi.gov.uk/guidance.php?page=246>

¹⁰ TG125 Managing URLs <http://www.coi.gov.uk/guidance.php?page=265>

¹¹ TG128 Measuring website costs <http://www.coi.gov.uk/guidance.php?page=223>

December 2008	accessibility plans for all sites open on 1 Jan 2010	TG102 Delivering inclusive websites
March 2009	redirection component plans in place	TG125 Managing URLs
1 April 2009	started measuring website usage	TG116 Measuring website usage
1 April 2009	started measuring website costs	TG128 Measuring website costs
September 2009	redirection component installed for all sites open on 1 April 2010	TG125 Managing URLs
December 2009	double-A accessibility	TG102 Delivering inclusive websites
March 2010	completed a user satisfaction survey	TG126 Measuring website quality

70. The following timetable is in place for executive agencies and non-departmental executive agencies:

By this date...	...you should have:	Standard
March 2009	XML Sitemaps for all sites open on 1 Oct 2009	TG122 Exposing your website to search engines
March 2010	redirection component plans in place for all sites	TG 125 Managing URLs
March 2010	configured your analytics tool to be able to count unique users, page impressions and visits	TG116 Measuring website usage
1 April 2010	started measuring website usage	TG116 Measuring website usage
1 April 2010	started measuring website costs	TG128 Measuring website costs
September 2010	redirection component installed for all sites open on 1 April 2011	TG 125 Managing URLs
March 2011	double-A accessibility	TG102 Delivering inclusive websites
March 2011	reported audited measurement of site usage for all sites open	TG116 Measuring website usage

Checklist for sites closing

71. Site closure falls broadly into the following four categories:

- Site is totally inactive
- Domain points to corporate or other website
- Retained for archive and FOI reasons only
- Site no longer part of government web estate (i.e. transferred to third parties)

72. For sites due to close:

- i. **Inform COI** of any changes to closure schedules. This is needed for reporting purposes and to ensure that archival snapshots can be taken by The National Archives.
- ii. **Signpost that the site is closed.** Website managers should ensure that a 'closed' site is clearly signposted as such. This should take the form of a message on the home page in a prominent place with

wording such as: 'This website is no longer being updated and the URL is maintained purely for archive purposes....'

- iii. **Maintain domain in perpetuity.** Keep old domains registered with the relevant certifying authority (JANET in the case of .gov.uk domains). In order to either serve content, or redirect users elsewhere (or both), it is necessary to keep the domain active and this means maintaining the appropriate DNS settings, so that users can be directed to the correct IP address for the domain. It is perfectly acceptable to close a site in terms of removing all content, but the domain should be left running to resolve incoming requests.
- iv. **Set up redirection.** This will enable users to be redirected to alternative content on an archived or live site.

Editorial quality

73. Editorial quality or quality of content is a key indicator of website quality. Content should be up to date, easy to understand, appropriate in tone and consistent. There are several methods for measuring and improving content quality, for example:
- User feedback
 - Existence of editorial guidelines
 - Conformance with editorial guidelines (e.g. via automated tool)
 - Monitoring of search terms
74. All websites should have a clear written strategy which includes details on who can contribute and approve content. All content should be monitored and assessed against clear editorial guidelines. This includes checking adherence to Civil Service Code, for example that speeches and blog articles are checked that they are politically non-partisan.
75. Automated tools should be considered to help identify where the site has deviated from the editorial guidelines, for example to check spelling.
76. Monitor the search terms used in the site's internal search engines and referring terms from external search engines to gain insight into the language used by your audience. This information should be used to inform editorial policy; it can help to identify content gaps between the terminology used on the site and your audience's language. It is important to use language that users understand.
77. The following guidelines summarise the basics of writing for the Web:
- Use an 'inverted pyramid' style of writing
 - Put the most important information first in links, titles, and phrases
 - Remove excess words and avoid big words where smaller more everyday words would do the same job
 - Use specialist language and jargon only when it is well known by your audience
 - Use the active rather than the passive voice
 - Use an appropriate style of writing to match the content and the audience
 - Use short sentences and short focused paragraphs:
 - Make liberal use of bullet lists and numbered lists to aid quick visual scanning of content
 - Add relevant tables and diagrams to break up blocks of text
 - Emphasise key words and phrases

The [basics of writing for the Web](#) are covered in the Usability Toolkit.

Survey details

Sample is	1) Weighted	2) Unweighted
Sample size (unweighted)	<i>(Insert number)</i>	
Survey	Date	Duration

User profile

Age		Gender	
16-19	%	Male	%
20-24	%	Female	%
25-34	%	Prefer not to say	%
35-44	%		
45-54	%	How often do you personally use the Internet?	
55-64	%	Everyday	%
65-74	%	Every two or three days	%
75+	%	About once a week	%
Prefer not to say	%	About once a fortnight	%
		About once a month	%
		Less often	%
		Don't know	%