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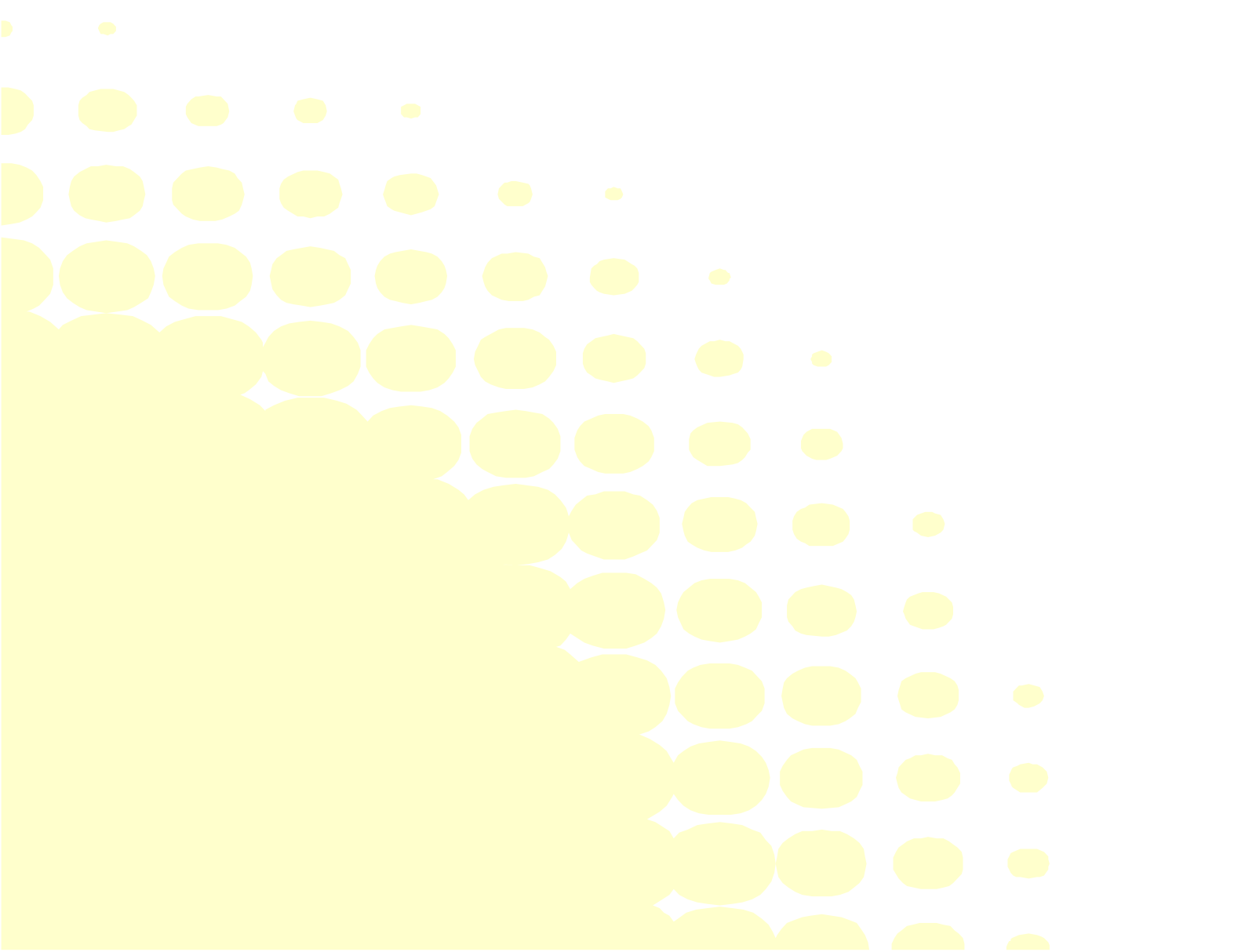
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Quality Framework for UK Government Website Design:

Usability issues for government websites

July 2003



Foreword

As more people access services online, government websites are increasingly becoming a citizen's important point of contact with Government. Having high quality, accessible and easy to use public sector websites is therefore vital if Government is to meet its dual objectives of having all services online and achieving high levels of use for key services.

Indeed wider recognition of the importance of accessible and usable websites across both the private and public sector is leading to an increasing focus on usability issues. This includes specific focus on human centred design, which is supported by the current ISO standards: ISO 13407 and ISO TR 18529.

This document therefore seeks to provide Government web managers with specific guidance around usability issues relevant to public sector websites and in particular awareness of issues that need to be addressed under the relevant human centred design standards. Underpinning the provision of this guidance is while it is possible to have an accessible, legal and reliable website that meets World Wide Web Consortium's (W3C's) Web Accessibility Initiative (WAI) recommendations; it may not necessarily be a good website.

Ensuring that web design companies build in the processes for applying best practice in usability into their website development should help improve not only the quality and inclusiveness, but also the design of government websites.

Contents

Introduction: Usability issues for government websites	4
Human Centred Design (HCD)	5
Quality as a process	5
Who should read this document?	6
1. Incorporating users' needs into the design process	7
Defining objectives and ensuring stakeholders share a common vision	7
Establishing users' needs	8
User testing on a budget	8
How severe is the usability problem?	9
Evaluating existing websites	10
Predicting user satisfaction	10
Tips on user testing	12
2. Human Centred Design (HCD)	14
The benefits of HCD	14
Cost reductions with HCD	14
The principles of HCD	15
HCD as a process	16
Assessing the HCD process	21
3. Working with web designers	22
The brief	22
Navigation	23
Employing a web designer	23
Evaluating web designs	24
The home page	25
Web technologies	26
Prototype testing	26
Accessibility	27
Tips on web design and content	28
4. Getting content right	30
Writing for the Web	30
Search engines	33
5. Getting services right	36
Business process issues	36
IT issues	36
Infrastructure	36
Forms	37
Conclusion: useful, usable, used	38
Appendix A: Committee members	40
Appendix B: Toolkit	41
Appendix C: Sources and resources	46
Appendix D: User satisfaction questionnaires and services	52

Introduction: Usability issues for government websites

1. This document answers the question: "What is a good government website from a usability perspective?"
2. It assumes that most of the technical problems (including issues around website functionality) of getting online and making sure the website is quickly available have been solved. If you are providing online transactions, these should already be reliable and easily used. The website should already fit within your communication strategy and take its place among other channels, both digital and traditional. The website must, by law, be accessible to the disabled and must meet all other legal obligations. It should join up and work with the rest of the UK Online websites and initiatives. You will have considered how to make use of central infrastructure projects such as the Government Gateway.
3. The Office of the e-Envoy provides guidelines and frameworks to help achieve these aims. However, it is quite possible to have an accessible, legal and reliable website that meets government guidelines but that is still not a good website from a usability perspective. Underpinning this is an increasing focus on human centred design issues, supported by the standards ISO12407 and ISO TR 18529.
4. This Framework pulls together advice from a wide range of web publishers, usability experts, web designers, government web managers and academics to clarify what relevant usability and design criteria should be used when planning a government website or judging how good it is. This advice also draws on the current standards for human centred design.
5. This document is concerned exclusively with websites. It does not cover best practice for DiTV, WAP or SMS, though a good website will work within a strategy that includes these channels. The *Quality Framework for UK Government Website Design* is not concerned with special tasks associated with running database-driven or content-managed sites. The document focuses on users and what they see.
6. "Government websites...must raise citizen confidence by enabling a good user experience. Therefore usability must be ensured."
Source: *Usability Guidelines*, Catriona Campbell and Brian Shackel
7. What is a good government website from a usability perspective? **It is a website that meets the goals of stakeholders while meeting the needs of users in the performance of their tasks.** It goes beyond minimum adherence to best practice and policy. In this case, 'stakeholders' is taken to mean those people who have control over the website's budget and purpose.
8. "Many poorly designed and unusable systems exist which users find difficult to learn and complicated to operate. These systems are likely to be under-used, misused or fall into disuse with frustrated users maintaining their current working methods. The outcome is costly for the organisation using the system."
Source: *Methods to Support Human-Centred Design*, Martin Maguire

9. The aim of this document is to provide Government web managers with awareness of issues that need to be addressed in incorporating users' needs into the

design process without government web managers having to be usability experts or having to interpret the ISO standard for web use.

10. Further, the Framework will provide web managers with:

- A process for briefing and working with web designers.
- Research-based recommendations for processes that are likely to result in more effective content and increased user satisfaction.
- A process for applying Human Centred Design (HCD) to online transactions.

Human Centred Design (HCD)

11. Human-Centred Design is an approach that will ensure the aims of the site can be fulfilled for real users. There is no one kind of user and most websites will have more than one target audience. Web managers and stakeholders such as Ministers will need to decide what audiences they most need to attract and which will serve to meet their aims on the site.

12. A good government website can be defined by compliance with the following points:

- It has clear input from stakeholders about what the site's aims and audience are.
- In order to establish this, preliminary research should be carried out into what users need.
- It will conduct tests frequently to determine if:
 - the site is meeting users' needs (especially for usability and accessibility) on an ongoing basis; and
 - the aims of the stakeholders have been achieved.
- The site will then be continually adapted to meet users' needs.
- The site will be accessible and usable.
- The website will effectively achieve its aims.

13. Although each government website will have its own individual goals, this Framework will be relevant to all but to varying degrees of application - depending on the objective and complexity of the website. In addition, sites designed specifically to add value to campaigns (hereafter referred to as 'campaign sites') will differ slightly in the application of human centred design. Where this is the case, attention has been drawn to the differences.

14. Campaign sites have clearly defined audiences that are driven to the site by offline media. Thus, tighter design specifications might be more effective, eg, designs aiming specifically to attract a youth audience may call for the use of animations. Furthermore, they are likely to use slogans and logos and adhere to brand qualities which designs for mainstream government sites may not.

Quality as a process

15. When quality is viewed as a process, two key points are ensured. First is that stakeholders' aims are clear. Second is that users' needs are met and their use of the site fulfils their aims.

16. Quality as process results in the continual improvement of government websites.

17. The main body of this Framework draws on the current standards for human centred design: ISO 13407 - *Human-centred design processes for interactive systems* and ISO TR 18529 – *Ergonomics of human system interaction* (see Appendix C for details). In particular it outlines the relevance of these standards in their application to public sector websites.

18. Section 2 of this document, Human Centred Design, contains a step-by-step guide to HCD for web managers to follow in order to achieve their goals. This information has been collated from several sources (see Appendix C).

Who should read this document?

19. This *Quality Framework for UK Government Website Design* is for government web managers redeveloping their websites or considering new sites and senior managers who are responsible for the success of their work.

1. Incorporating users' needs into the design process

1.1. When considering user-centred design, it is important to remember that there is no single kind of user. Therefore, different levels of Internet experience, interest in the subject matter and individual need for services should be taken into consideration when planning a good government website.

Defining objectives and ensuring stakeholders share a common vision

1.2. The early stages of development in a website – or any system – are crucial to its success. All factors relating to the website's development should be identified before work starts.

1.3. Some government websites are not tied in with departmental objectives or key deliverables. These should be driving the brief.

1.4. It is therefore important to identify all stakeholders who may be affected by the website or who are relevant to or have influence over its development. This will help to ensure that the needs of all those involved are taken into account.

1.5. If all stakeholders are included in this process, the resulting website plan will not just consider user experience but also the needs of the organisation or the campaign. In this way everyone's needs are met.

1.6. User groups may include:

- end users
- supervisors, installers and maintainers
- recipients of output from the system
- marketing staff
- purchasers
- support staff
- other stakeholders (those who influence or are affected by the system)

1.7. Agreement should be reached by all stakeholders relevant to a website's development on a common vision.

1.8. This vision should answer the following questions and answers should be written down and used for guidance throughout the design process:

- Why is the website being developed?
- What are the site's primary and secondary objectives?
- Are there other stakeholders who will be affected by the system?
- Who are the intended users and what are their needs?
- What key information and functionality is needed to support those needs?
- Which of those needs and functions are more easily met by a website?
- How will the website be integrated with other channels, ie counter service, call centres and digital media such as DiTV, SMS or mobile devices?
- What are the technical issues involved in the development of the site?
- What are the budgetary issues involved in the development of the site?
- What types of hardware will be used in what environments?

- How will the system be used? ie how many users will there be?, how long will their task(s) take?, etc.
- What are the usability and accessibility goals? eg minimising user errors?
- How will users obtain assistance in using the website?
- How will the site be maintained?
- How will the site be judged a success?

1.9. As the user experience should be at the heart of any good government website, it is important to agree, plan and budget for user input and testing at an early stage.

Establishing users' needs

1.10. Part of defining the objectives of a good government website will be identifying the target audience and seeking to establish what the needs of that audience will be. This will include anticipating:

- from where users will be accessing the site (work or home);
- the different levels of web experience users will have; and
- other relevant attributes of the audience such as age, professional or non-professional interest in the subject, likely educational levels, etc.

1.11. Effective web development (including design, aesthetics, navigation and content) entails receiving feedback from end users. This can be obtained in a number of ways and at various stages throughout the life of a website. However, feedback should not be seen as the ultimate solution. Only user testing can really determine if users can fulfil stakeholder aims.

1.12. Good government websites should also research users' needs conventionally because carrying out research only with online users does not find out why people aren't using the site. Moreover, the findings from online research may be unrepresentative. Research on users and non-users is important, as is mixing both online and offline methodology.

1.13. A good government website should employ Citizen/Customer Relationship Management (CRM) practices. This will ensure that the web manager knows what different kinds of users want, and ensure that enquiries and feedback are dealt with efficiently. CRM will also form the basis in the future of a new, more individual relationship with citizens.

User testing on a budget

1.14. Section 2 of this document reviews the processes involved with HCD as defined by ISO standards. Ideally, a good government website will have the resources to build in user testing. However, the budgets allocated to government websites vary greatly and there will be some things that smaller sites, ie those run by one person or a small team with limited resources, will find difficult to do on their budgets. This current section aims to aid the web managers of smaller sites by providing tips that will help cut costs without cutting corners.

1.15. No matter how small the budget for user testing, it is important to remember that, for the tests to be effective, any group brought together must be representative of the website's target audiences.

1.16. Objective user testing will help to answer the following questions:

- Do users remember the site's main messages?
- Can users find key information and services?
- Do they find those services easy to use?
- Can users successfully fill in forms for online transactions?
- Can the aims of the site, as defined by stakeholders, be met?

1.17. All websites can be evaluated using the various methods developed by experts in usability and HCD. Even the simplest testing will do more to improve a website than no testing at all.

1.18. A good government website, no matter what its size, will employ the principles of HCD to produce a usable interface.

1.19. Web managers of small sites or teams should be able to develop a list of tasks that users should be able to carry out if the site is to achieve its aims of having a usable interface. These might include finding particular documents, filling in a form or finding a contact address.

1.20. The tests could use paper mock-ups of screen layouts during early phases of a project, or prototype websites. In the latter scenario, users should be given real tasks to accomplish. Their actions should then be monitored, noted and analysed.

1.21. The users who test your site could be students or people from within government departments. Bear in mind that students may be unrepresentative of the skills of your audience and people from your own organisation may be too familiar with your structure and terminology. The users should not be familiar either with the site or the development project. Some internet technology companies have suggested recruiting family members of staff to approximate target audiences.

1.22. Observing users under testing will garner better results than simply looking at answers given on questionnaires. Done carefully, observation will usually reveal many of the problems a site may have.

1.23. Feedback should also be gathered from visitors to the site (see Appendix D for a suggested questionnaire). This feedback should then be analysed and changes made to the site or designs, as appropriate. Feedback collected during the life of the site should be built into the early stages of its redesign.

How severe is the usability problem?

1.24. User testing may uncover parts of web sites that users find difficult to use. Jakob Nielsen, one of the world's foremost usability experts, shows how the severity of a usability problem can be assessed by looking at the following three factors:

- The frequency with which the problem occurs: is it common or rare?
- The impact of the problem if it occurs: will it be easy or difficult for the users to overcome?
- The persistence of the problem: is it a one-time problem that users can overcome once they know about it or will users repeatedly be bothered by the problem?

Evaluating existing websites

1.25. Achieving quality is a process of continual improvement. This Framework can help refresh or improve existing websites, identify problems and capitalise on successes. Ensure that stakeholders are included in the assessment as the aims of the site should evolve over time as well.

1.26. Evaluation of websites should employ user testing as well as design and content criteria, as outlined in the seven steps of the HCD process given in section 2.

1.27. The use of tracking systems or other records of page impressions are useful in evaluating what parts of a site are most popular and how quickly (ie in how many clicks) users are getting there. Is the current site fulfilling users' needs? Other means for evaluating the success of an existing website may come from other sources. For example, if a website recruits staff, are new recruits being referred to that website? Do recruits thus directed perform better?

1.28. It should be established that users are coming to the site for the right reason. Is the site appealing to its target audience? How many visit the home page and leave without exploring the site further? Does the site provide suitable alternatives to the information that users might think they would find there? The *Guidelines for UK Government Websites*, chapter 1, section 4, covers the subject of evaluation as well as the uses and limits of access statistics.

Predicting user satisfaction

1.29. There are five main predictors of user satisfaction as described in the article "Web Site Usability, Design and Performance Metrics" by Professor Jonathan Palmer. These five factors account for roughly 80 per cent of the perception users will have of a website.

1.30. Perception is not the primary consideration. Objective user testing may well show that users are not able to fulfil the aims of the site even if they are "happy" with it. For example, users may not absorb the site's main message or be able to successfully complete online forms. Nevertheless, user satisfaction can be predicted and the site improved by considering the following five factors.

Predictor 1: Download delay

1.31. This predictor covers speed of access and speed of display between pages. Questions to ask of a good government website are:

- Have security issues with the server been taken into account?
- Is the website optimised in terms of size and number of images?
- Can unnecessary animation be eliminated from the site?
- Could the application of a template design decrease download times?
- Might content that is presented in full (eg parliamentary acts, etc) be better as downloadable documents?
- Can all users access the site including those behind firewalls, ethnic minorities and the vision impaired?
- Have all screen-size settings, browsers and computer platforms been taken into consideration?
- Have download speeds been tested objectively?

Predictor 2: Navigation/organisation

1.32. This predictor covers the arrangement of a site's navigation, the sequence of links and how they are laid out. Questions to ask of a good government website are:

- Does the home page include all the primary navigational options?
- Are these navigational options visible without scrolling?
- Is it obvious that the site's navigational options are clickable?
- Do the terms used for navigational options use plain language?
- Is the information hierarchy of the site's navigation logical to users?
- Can users navigate between areas of the site easily and without recourse to the 'Back' button?
- Are users getting lost on the site?
- Is there a search facility on the site?
- Can users find and use the search facility?

Predictor 3: Content

1.33. This predictor covers the amount and variety of a site's content, its word count and overall quality. Questions to ask of a good government website are:

- Should content that has been cut and pasted from existing offline documents be rewritten for the Web?
- Could the use of bold text and bullet points be used to make the content more scannable?
- Can users find what they are looking for?
- Is the existing content relevant to the target audience?
- Does everything the department does have to be represented online?
- Is the content regularly updated?
- Are users made aware of this updated content and is this done in the most effective way?
- Are search results displayed in a useful way?
- Are the most popular pages on the site easily and quickly accessible?
- Are the most popular pages NOT those addressing the core need for the user?
- Does the site have a site map?
- Would the site benefit from a site map? Do users want one?

Predictor 4: Interactivity

1.34. This predictor covers interactivity, ie how well, — if at all — users can perform functions on the site. Questions to ask of a good government website are:

- Can users perform the functions they expect to be able to perform on the site?
- Would users benefit from personalisation?
- Can barriers and unnecessary steps to users' need fulfilment be eliminated?
- Can users achieve their aims more effectively via the website than by other means? If not, why not?

Predictor 5: Responsiveness

1.35. This predictor covers responsiveness, ie if users have a question about the site or the service it offers, how quickly and effectively can they get an answer?

Questions to ask of a good government website are:

- Is there an F A Q list on the site?
- Can users give feedback and ask questions that might not be included in the F A Q, by either an email address or feedback form?
- Are relevant telephone numbers and addresses supplied on the site?

- Is a member of the web team responsible for eCRM?
- Are emails answered promptly? Government guidelines for postal responses (28 days) are not adequate for electronic communication. Bear in mind that the Freedom of Information Act requires responses to be made within certain time limits.

Tips on user testing

What they do, not what they say

1.36. As the users test your site look at what they do, not what they say. There are often differences in what users say they want and what they will actually use.. The only way to differentiate between the two is through user testing.

Websites do things

1.37. The APLAWS Pathfinder Project used a technique called User Stories to find out what users wanted a local government site to do. This meant that the aims of the project could be formulated taking into account users' needs.

You're not testing the users

1.38. When doing usability testing make sure that your volunteers understand that they are testing the site and that they themselves are not being tested. They should know that the testing is being done to assess how easy it is for them to carry out tasks - so you may not always be able to answer their requests for help. Web developers might consider a non-disclosure agreement to ensure that they are protected and that the volunteers understand how any details about them collected during the tests will be used and protected.

Ensuring representative responses

1.39. One technique to ensure that responses are more representative is to target particular bodies, organisations and groups. Tell them that a feedback form is available on the site and ask them to visit the site and respond using the form.

What makes up a user group?

1.40. In addition to visitors to the website, user groups may include supervisors, installers, maintainers and other stakeholders (those who influence or are affected by the system) including recipients of output from the system, marketing staff, purchasers and support staff.

The optimum number of users in one group

1.41. Six to eight users is the optimum number of people to use for user testing. Once groups of more than eight users are used, the law of diminishing returns applies. Other companies prefer to observe one user at a time carrying out tasks and to ask them structured questions about their experience.

Usability testing with children

1.42. When testing with children it is a good idea to have present a police officer, member of social services or representative from Ofsted with a current, clean 'fit persons' police check. This will ensure that claims of impropriety can be refuted, should any arise.

In-depth HCD

1.43. The Usability Professionals Association publishes a human-centred design (HCD) process life cycle, which identifies 39 steps and 10 deliverables. (See: <http://www.upassoc.org>)

Paying for users' time

1.44. It is common practice to pay users for their time when testing. Some usability companies pay some types of user as little as £20; while paying others as much as £200. It depends on the type of user being tested (student or barrister, for example). A cheap alternative would be to use government staff or their families who are not involved in the development of the site.

2. Human Centred Design (HCD)

2.1. Human Centred Design (HCD) processes for interactive systems are defined in International Standards, particularly ISO 13407 and the associated ISO TR 18529. The agreed Human-Centred Design processes identify how user-centred design can effectively be implemented in seven steps. The seven steps can also be used to assess the extent to which a particular development project employs user-centred design.

2.2. “The UK Government now sets targets... and requires demonstration of effectiveness of public IT systems from the citizen’s point of view. The ability to measure the extent to which user needs are being addressed has the potential to deliver a powerful metric at programme level, with overtones of citizenship and accessibility for all, particularly in the domain of e-government.”

The Improvement of Human-Centred Processes – facing the challenge and reaping the benefit of ISO 13407, Jonathan Earthy, Brian Sherwood Jones and Nigel Bevan

2.3. The reason a website is created is so that users can find information or perform a task on that site. Making this as easy for the users as possible should therefore be the primary goal of good web design.

The benefits of HCD

2.4. “Taking a user centred approach to design can reduce development times and rework for new versions, improve the productivity of users, and reduce training, documentation and support costs.”

Source: *Cost benefit analysis. TRUMP deliverable D3.0*, Nigel Bevan

2.5. A website that is designed considering users’ preferred ways of working, will allow them to operate effectively rather than lose time struggling with a complex set of functions and an unhelpful user interface. A system using HCD will allow the user to concentrate on fulfilling their need rather than on working out how they are going to fulfil their need.

2.6. Most users would rather use, and are therefore more likely to trust, a well-designed system. This is because such a system will be, by its definition, easy to use.

2.7. A well-designed website will promote a positive user response and enhance the department or campaign’s reputation.

Cost reductions with HCD

2.8. Human Centred Design has been proven to save money for other kinds of IT projects. The following examples are quoted from *Esprit Project 28015 Trial Usability Maturity Process Cost Benefit Analysis*, Nigel Bevan available at <http://www.usability.serco.com/trump/methods/integration/costbenefits.htm>

- Design changes due to usability work at IBM resulted in an average reduction of 9.6 minutes per task with projected internal savings at IBM of \$6.8 million in 1991 alone. (Karat 1990)
- Design changes due to usability work on one project at IDS/American Express resulted in estimated savings of \$45 million. (Chalupnik and Rhineheart 1992)
- Design changes from one usability study at the Ford Motor Company reduced the number of calls to its helpline from an average of three calls to none, saving the company an estimated \$100,000. (Kituse 1991).

2.9. Certainly savings can be made in terms of the money spent on design and redesign of a website if usability tests are carried out.

2.10. The more that HCD and usability testing are part of the planned development process for a government website, the bigger will be the cost savings.

2.11. Savings can be made using HCD because:

- design changes cost more the later they have to be made during a site's development;
- early and repeated user testing will improve a site in less time;
- fewer changes will be needed at later stages of production to meet user needs;
- there will be cumulative savings made in future redesigns of the website; and
- more users and repeat visits will result from a better user experience. Further, there may be more repeat business or increases in traffic due to word of mouth.

2.12. Another way to look at the issue is to balance the cost of the allocation of resources to HCD against the benefit of a lowered risk of system and/or project failure.

The principles of HCD

2.13. HCD is a complement to software development methods, not a replacement for them.

2.14. The active involvement of users leads to a better understanding of user and task requirements. Involving end users can also enhance the acceptance of and commitment to a website, as people come to feel that it is being designed in consultation with them rather than being imposed upon them.

2.15. HCD will allow government web managers and stakeholders to decide what is appropriate for inclusion on a website and what would be better left to a call centre or other response mechanism.

2.16. By employing user testing, the development process becomes a cycle of testing and improving.

2.17. Tools for testing may range from simple paper mock-ups of screen layouts to complete website prototypes. Feedback from these exercises is then used to develop designs further.

2.18. HCD is a collaborative process. It is important that the development team is made up of experts with technical skills as well as stakeholders in the website. The team might thus include:

- managers
- usability specialists
- end-users
- software engineers
- graphic designers
- writers
- editors
- interaction designers
- training and support staff
- task experts

2.19. When considering user-centred design, it is important to remember that there is no single kind of user. Therefore, different audience profiles should be taken into consideration when planning a good government website. These might include:

- levels of Internet experience
- interest in the subject matter
- demographic characteristics

2.20. A good government website may have to offer alternative navigational systems, including a fast route, streams for different types of user, a search facility and a site map.

HCD as a process

2.21. To achieve quality as a user-centred process, HCD can be divided into seven key steps (summarised in a diagram at the end of Appendix C). These provide guidelines for the creation of systems that have the users' needs at the centre of every stage.

Step 1: Ensuring HCD content in systems strategy

Rough timing: 5 days

2.22. As the user experience should be at the heart of any good government website, it is important to agree, plan and budget for user input and testing at an early stage. To ensure that this step is carried out successfully, there are five key processes to follow:

Representing stakeholders

2.22a. Make sure you have identified all the stakeholders in your project. Here 'stakeholder' is taken to mean those who control the budget, purpose and vision of a website, cascading down from Ministers.

Collecting market intelligence

2.22b. Any research relating to the site or offline processes can be helpful. Remember that there may be good sources referring to your department or campaign needs online for free.

Defining and planning system strategy

2.22c. Ensure that all areas of the development team are aware of the HCD process, and that the project manager has a good understanding of the technical infrastructure of the system involved.

Collecting market feedback

2.22d. Any feedback from the site or system since its inception should be analysed, if possible.

Analysing user trends

2.22e. It is important to understand your audience. The language constraints of an audience or the technological constraints may lead the design.

Step 2: Planning and managing the HCD process

Rough timing: 10 days

2.23. It is important to understand the value of designing a website with the user and stakeholders in mind. To do this, the following should be undertaken:

Consulting stakeholders

2.23a. Remember to consult stakeholders – well before a new design can be created for your site. You must ensure all stakeholders agree with the project and timescales. It is important to identify all stakeholders who might be affected by the website or who are relevant to or have influence over its development. This will help to ensure that the needs of all those involved are taken into account. If all stakeholders are included in this process, the resulting website plan will consider not only user experience but also the stakeholder and departmental and/or campaign requirements of the site. In this way everyone's needs are met.

Planning user involvement

2.23b. At this stage, you must plan how you will source your participants and the logistics of user testing. Users could be selected from the core demographic or a small sample taken from the target participant group.

Selecting human-centred methods

2.23c. Selecting the appropriate methodology is usually left to an expert in Human Computer Interaction (HCI). However, a series of links is listed in the Toolkit for guidance (see Appendix B).

Ensuring a human-centred approach

2.23d. Investment in HCD is worthwhile and web developers should ensure that HCD is considered in the development of every application.

Planning and managing HCD activities

2.23e. It is usual, in a large project using different types of site evaluation, for an external HCI expert to plan and manage the process. Web managers who want to carry out the activities alone are advised to use a project plan.

Championing an HCD approach and supporting HCD

2.23f. Try to communicate your plans each step of the way to the extended team at every stage of the process.

Step 3: Specifying stakeholder and organisational requirements

Rough timing: 10 days

2.24. The early stages of development of a website or any system are crucial to its success. All factors relating to the website's development should be identified before work starts. These are some of the crucial questions to ask:

Clarifying system goals

- 2.24a. • Why is the website being developed?
• What are the site's overall objectives?
• How will the system be used? ie how will the usability goals be measured? how many users will there be? how long will their task(s) take? etc.

Analysing stakeholders

- 2.24b. • Are there other stakeholders who will be affected by the system?

Assessing risks to the project

- 2.24c. • Will the site designs be ready in time?
• Are key personnel away at crucial proposed times such as sign-off dates and launch periods?
• Are there any health and safety issues inherent in any of the project plans?

Defining the system

- 2.24d. • What key functionality is needed to support those needs?
• What are the technical issues involved in the development of the site?
• What are the budgetary issue involved in the development of the site?
• What are the usability goals, eg minimising user errors?

Generate requirements

- 2.24e. • Have all stakeholders specified in writing their requirements from the project?
• Is there compatability between all the specified requirements?

Set quality in use objectives

- 2.24f. • Are there any existing quality controls that should be adhered to?
• Do all stakeholders agree the quality in use objectives?
• How will the site be judged a success? It is important to set down the way the site will be judged once it has been launched.
• How will the analysis occur? Are you using a web analytics package to evaluate the site once it has been launched?

Step 4: Understanding and specifying the context of use

Rough timing: 10 days

2.25. This is the stage in which the usability of your system will be defined. To do this you will need to identify:

- Users' typical tasks on the site
- User attributes, ie who are the intended users and what are their needs?
- The organisational environment

- The technical environment, ie what types of hardware and software will be used and in what environments?
- The physical environment.

Step 5: Producing design solutions

Rough timing: this will depend on the complexity of the site; but the average is 3 months.

2.26. To ensure that your website is produced to the optimum efficiency and that it fulfils your goals, you should:

Allocate functions

2.26a. Who will be responsible for liaising with designers? Who has overall control of the project? Establishing these points is especially important in keeping costs down. It has been the experience of one leading design agency that an intermediate manager might lead the design agency in one direction but when the time comes for sign off, approval has to come from a higher level and the person there does not like what they see.

Produce task model and explore the system design

2.26b. Designers should produce a navigational flowchart, site map and, for transactional sites, a process flowchart. These will be the templates for the site but they will evolve as the consultation process continues until sign off is achieved.

Develop design solutions

2.26c. Once you have met with the designers, they should develop a few 'look-and-feel' aesthetic ideas for you to consider. These may be known as 'wireframes', 'mock-ups' or 'storyboards'.

Specify system and use

2.26d. It will be crucial for the designers to know whether they are integrating the site with legacy systems in your organisation, as well as what server the site will be hosted on when it is live and what format any databases will be in at that stage.

Develop prototypes

2.26e. There is no substitute for seeing a website on a computer screen so agencies should design some form of working template site for you to see. This should be tested by both web managers and designers for hyperlink integrity, coding and scripting errors, etc.

Develop user support

2.26f. You should ensure that users can obtain assistance in using the website through a number of methods, eg email, feedback, help sections, site maps and even telephone numbers, where appropriate.

Step 6: Evaluate designs against requirements

Rough timing: 10 days

2.27. Although the design process and user testing are important, it is of equal importance to ensure that all the stakeholders' and users' needs are met by the web designs themselves. In order to do this, you will need to do the following.

Specify context of evaluation

2.27a. Decide how to evaluate the designs you received from the agency or designer. This may involve user testing and input from stakeholders. Make sure you document how you will do this and inform the agency or designer.

Evaluate for requirements

2.27b. Agree the testing methodology. Carry out tests with or without real users against measurable usability goals. It is important to reiterate that metrics for usability goals must be set in accordance with the expected and specified users of the website. As such metrics must be specific to the website and may well not be amenable to generic specification.

Evaluate to improve design

2.27c. Designs should be altered to reflect the desires of your user groups and requirements of stakeholders.

Evaluate against system requirements

2.27d. Do the designs and proposed software meet the technical requirements for how the site will be hosted and seen? Issues to consider here are compatibility, backwards browser compatibility, users behind firewalls, etc.

Evaluate against required practice

2.27e. The designs that are produced will need to meet the requirements of the *Guidelines for UK Government Websites*.

Evaluate in use

2.27f. Even the simplest testing will lead to a better website than no testing at all. By following HCD principles, usability testing should have been done during development. This needs to be supplemented by final testing in use. Appendix B outlines some tools available for usability testing.

Step 7 Introduce and operate the system

Rough timing: 5 days

2.28. Launching the site is not just a question of pressing a button. A good government website will need to go through a process of sign off to ensure that all bases have been covered. To do this, the following should be considered:

Manage change

2.28a. Each change to the website and its design should be noted so that someone can check that the changes were carried out.

Determine impact

2.28b. Amend the project plan at this stage and decide what other activities need to be carried out.

Customisation and local design

2.28c. The site may benefit from personalisation or similar customisation.

Deliver user training

2.28d. In this case, 'user' is taken to mean those people who will operate the site, ie the government web manager and their team. User training, therefore, refers to content management systems, HTML upload software, etc.

Support users

2.28e The site may need to have sections for help, a site map and a search facility. Users may also need feedback functionality or a support telephone number in case they cannot operate the site or find what they are looking for.

Conformance to ergonomic legislation

2.28f. To ascertain that the site conforms to usability norms, see the Framework Toolkit in Appendix B.

Assessing the HCD process

2.29. Ideally, monitoring should be carried out to ensure that improvements are being made to process capability by the adoption of HCD in the design organisation. ISO 15504 uses six levels to make this assessment:

- 0 no achievement of results from a process or processes
- 1 performance in an ad hoc manner
- 2 monitoring of time and product quality
- 3 use of defined corporate procedures and infrastructure
- 4 use of statistical control
- 5 optimisation of each process to meet current and future business needs

2.30. A process assessment will show stakeholders how and why HCD practices benefit the web development process. However, performance will be judged finally on the degree to which the outcomes are achieved.

3. Working with web designers

3.1. The production of designs for a good government website will take into consideration a wide variety of factors. These will include:

- existing government guidelines on web design
- legal requirements such as accessibility and data protection
- stakeholder goals
- established users' needs
- usability requirements (such as minimising web page size for speed of download, etc)
- technical requirements (such as image optimisation, etc)
- the desired transactions and functions, and the support and processes necessary to build those in.

3.2. Working with web designers can, in itself, be seen as a process. By the time a web manager gets to the design part of the web site process, they will have already defined the site's objectives and ensured that stakeholders have a common vision (see 1.2–1.10). Users should also have been questioned as to their needs.

3.3. It is at this stage that the brief can be given to the selected designer or design agency.

3.4. The *Guidelines for UK Government Websites: an Illustrated Handbook for Web Management Teams* gives advice on procurement in chapter 1, section 12. Purchase of both design and technical provision is covered, as are general questions of management, evaluation and legality in chapter 1.

The brief

3.5. **A good government website has a good brief to give to its designers** (see the Framework Toolkit, Appendix B, for some questions to ask web designers and design agencies).

3.6. Web designers should only be briefed once the objectives of the site have been decided. These should include the business case as well as initial user feedback (see 1.2 to 1.13).

3.7. If web designers are briefed before the site's objectives have been defined, the site delivered may not be what is needed, through no fault of the web design agency. This will mean more time and money will have to be spent on the project to get it right.

3.8. Web designers should be told the aims and objectives of the site and by what criteria they and their designs will be judged.

3.9. The brief to web designers should be a document that includes what the site's objectives and budgetary constraints are. It should also give any user feedback already received.

3.10. The brief should detail what items must be included, eg a site-specific search engine or a site map, a user-testing programme, prototyping, etc; and what aesthetic

considerations there are, eg colours, fonts, logos, etc, that are specific to the department and/or campaign; and what technologies will be used by the department.

Navigation

3.11. The design brief should also include ideas about navigation, ie the hierarchy in which information is to be presented. When naming navigational options, it is important to take into account the users, eg:

- Does everyone who uses the site know what a F A Q is, ie a list of Frequently Asked Questions?
- Does the department use terminology that may not be recognised or understood by users?

3.12. **A good government website orientates its users**, letting them know where the information or service they seek can be found in a straightforward and logical manner.

3.13. Further, a good government website might offer alternative navigational systems, including a fast route, streams for different types of user, a search facility and a site map.

3.14. Local authorities will find the APLAWS Pathfinder project useful in terms of navigation and content management. The overall aim of the APLAWS project was to develop a web content management system that could be freely adopted by any local authority in the UK. The project focuses on web standards relating to navigation, metadata and accessibility.

Employing a web designer

3.15. Where the budget allows, a good government website should employ the services of a professional web design agency.

3.16. Different professional web designers work in different ways but all of them should be capable of:

- delivering a detailed proposal for a website's development, including a breakdown of costs;
- assigning a designer and project manager to the website;
- attending meetings at their offices or the department's offices at mutually convenient times; and
- providing testimonials or references.

3.17. Government websites should also look like they have been designed and built professionally. This assures users of the authority of the site and that the underlying technology will function reliably and securely.

3.18. A good government website will answer a question or fulfil a need with the minimum of user effort and not give the user any unnecessary “web experience”.



Fig. 1: Companies House is a good example of a site that offers users the opportunity to fulfil needs and answer questions.

<http://www.companieshouse.gov.uk>

3.19. If it is not possible to employ a professional agency for budgetary or other reasons, then it is suggested that web managers contact the Office of the e-Envoy e-Communications Group to ask for a consultant to help them achieve the site’s aims and avoid the many pitfalls. In particular, advice should be sought on authoring tools that appear to make designing websites easy. Many WYSIWYG editors do not produce code that can be validated; only those that do should be used by government webmasters.

Evaluating web designs

3.20. When selecting a web design agency or designer, request a full statement of the questions they will ask at the start and the design approach they will adopt. Any proposal that does not contain plans addressing most of the questions raised in steps 1 to 7 (sections 2.22 to 2.28) is unlikely to lead to a good government website.

3.21. The web designer should come back to the web manager with several design concepts before they decide on one specific design. The designer should be provided with as much sample content as possible at this stage. This will ensure that the designs are as close as possible to the real thing when it comes to making a final decision on the most appropriate format for the delivery of that content.

3.22. In order to assess the efficacy of web design, user feedback will be crucial. This feedback should be collected from end users and other representative sources, such as stakeholders. Such feedback should lead to improvement of the chosen design not only in terms of usability but also in achieving departmental and/or campaign goals, by identifying:

- how well the website meets its organisational goals;
- whether a particular design meets the HCD requirements; and
- if the design conforms to existing UK and EU guidelines and/or statutory requirements.

3.23. Some web design practices have become conventions. In assessing web design it should be remembered that no legacy should remain a convention if user testing shows there is a better alternative or that new users don't know about the convention.

3.24. Documents outlining the design process, that will be useful to government web managers in evaluating web designs, designers and their processes, can be found in the Framework Toolkit (see Appendix B). This includes documents from web design agencies and the UK Online design team.

3.25 The site map is a key element in the designing of good information architecture through which the user can easily navigate. Test your site map against user scenarios and revise it where shorter, more logical routes can be found.

3.26. A good government website should never be perceived as 'finished', – except perhaps in the case of campaign sites. Websites are generally never finished because:

- the information they contain needs updating
- users' needs may change
- stakeholders aims may change
- new technology needs to be incorporated
- new laws and regulations are brought in.

The home page

3.27. The key starting point for users is the home page. Therefore, the home page of a good government website should be representative of the site as whole, reflecting and highlighting the breadth of services. Further, it should show the navigational structure and facilities available. In this way, the home page will act as a tool for engagement and orientation.

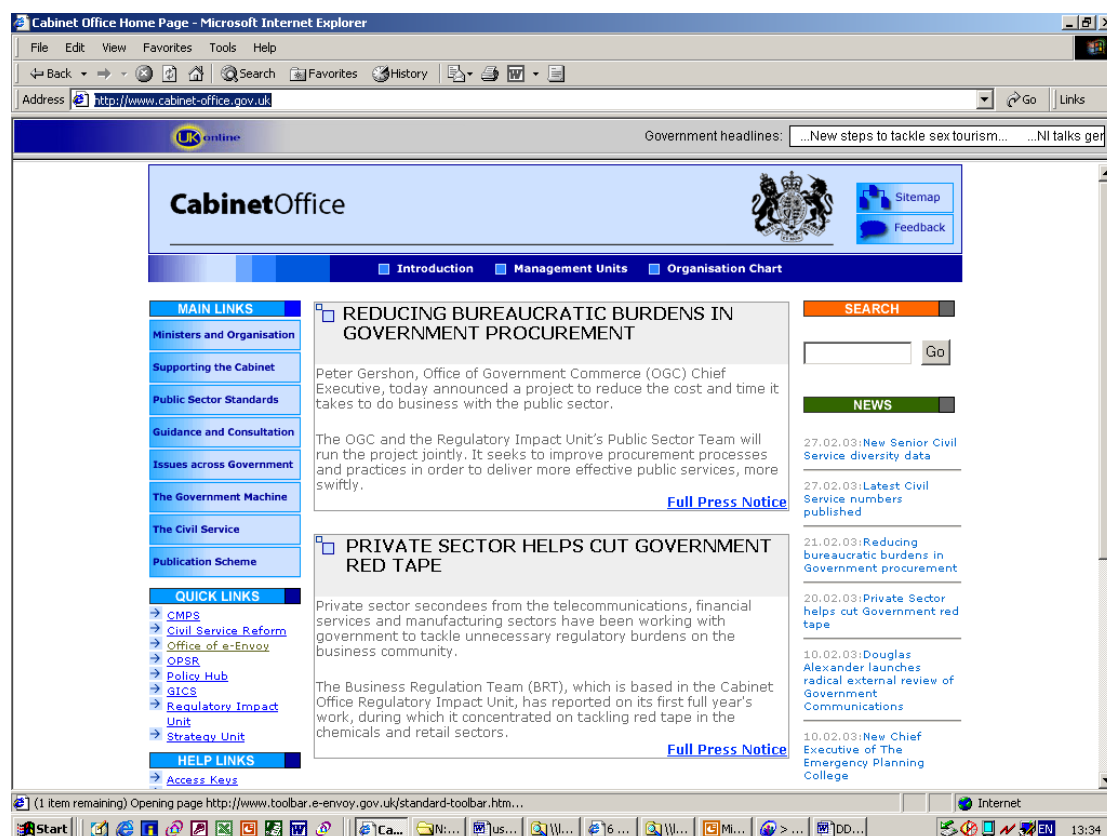


Fig. 2: The Cabinet Office website provides a good example of a home page that both engages users and orientates them to the different needs the site can fulfil.
<http://www.cabinet-office.gov.uk>

Web technologies

3.28. Good government websites will usually find a splash page serves no function. Experts agree that most people will 'skip intro' if animation is used. Campaign sites may be the exception to this rule, in cases where animation has been found to be appreciated by the user, eg in the youth market.

3.29. A good government website can offer the full range of technologies, such as QuickTime VR or video, streamed audio, video content or Flash animations. However, users should be able to choose such content, not have it forced on them.

3.30. In order to ensure quick download and accessibility, these technologies should not be used on the home page but deeper in the site as alternative options. Accessibility must also be considered at all times. Therefore, a good government website provides accessible transcripts of all non-HTML material (JavaScript event handlers, Java applets, audio and video clips, Flash, etc).

Prototype testing

3.31. Once a designer and a design have been chosen, a prototype site should be developed.

3.32. The prototype should be used for user testing to ensure that initial feedback was accurate.

3.33. User testing can be organised and done by departmental staff, if they are able; by the design agency; or, preferably, by an independent qualified contractor. Test results and user reactions, and the resulting changes to the system, should be reported back to stakeholders.

3.34. The web designers should be informed of prototype testing results, allowing them to implement any necessary changes to the site, correct errors discovered and redesign as necessary.

3.35. Once more content has been added and initial errors corrected, some further user testing may be needed. When all improvements have been made and all initial content added, a good government website should be given one final user test before launching.

3.36. For further details of user testing, see sections 1 and 2, and Appendix B.

Accessibility

3.37. The code of practice for Part III of the Disability Discrimination Act 1995 makes it clear that the Act extends to websites. The Act further states unambiguously that private and public sector websites must be accessible. The example given in the code of practice of a service covered by the Act is an online booking form. This means that, for a website to stay within the law, efforts must be made to make online transactions usable by the disabled.

3.38. Further, EU resolution 7087 encourages Member States to implement the World Wide Web Consortium's (W3C's) Web Accessibility Initiative (WAI) guidelines for websites at all levels of government.

3.39. Accordingly, a good government website will follow WAI guidelines.

3.40. In general, it will be more effective in terms of design and cost to build-in WAI compliance when commissioning the redesign of a good government website.

3.41. The subject of universal accessibility is covered in detail in section 2.4 of the *Guidelines for UK Government Websites: An Illustrated Handbook for web management teams*. However, there are certain points that are relevant to making websites user-centred.

3.42. A good government website should be universally accessible, usable and engaging.

3.43. Text-only versions of websites, especially if generated automatically, may not comply with the Web Content Accessibility Guidelines and therefore not meet all the needs, for example, of the visually impaired. The aims of alternative-version sites should be clear and the sites should be tested to make sure they are achieving those aims.

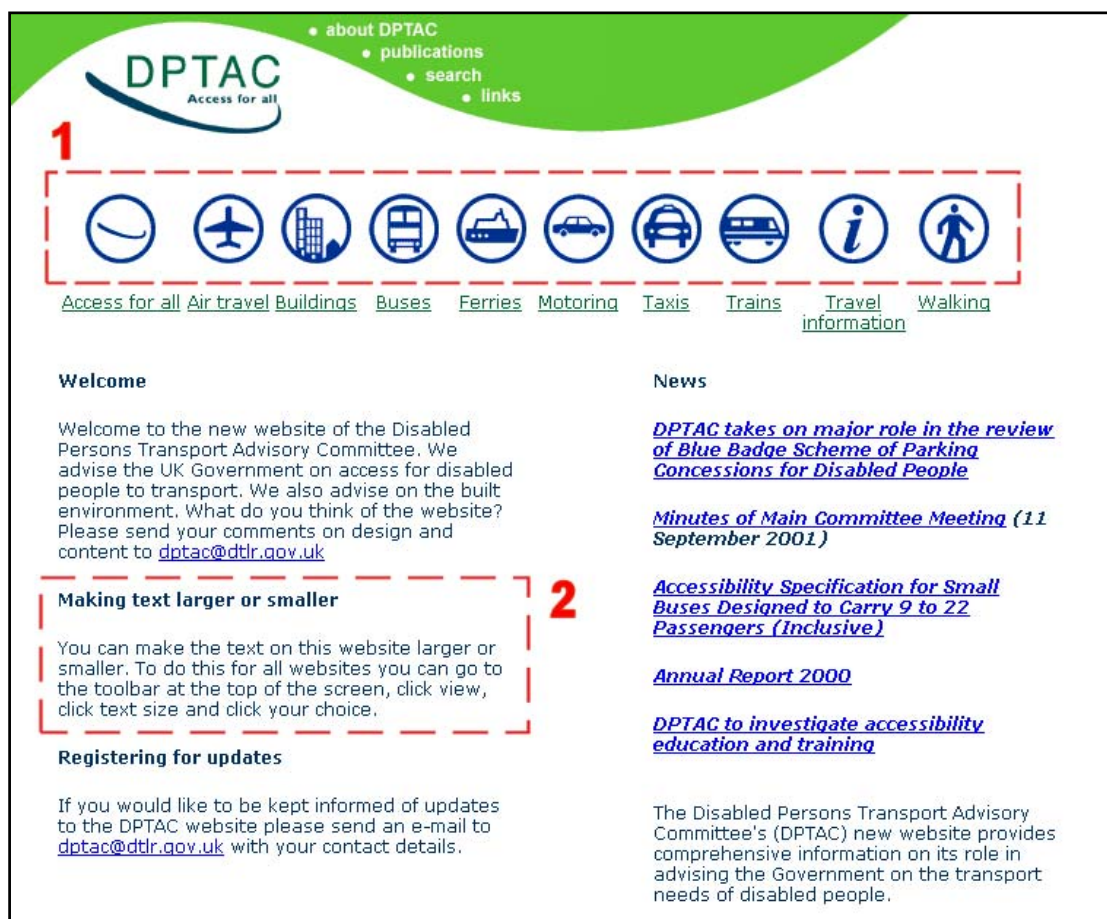


Fig. 3: The Disabled Persons Transport Advisory Committee ensures accessibility for users with reading problems (1) and those with impaired vision (2).
<http://www.dptac.gov.uk>

3.44. RNIB (the Royal National Institute for the Blind) has found that text-only versions of websites are not always kept as up to date as other versions and thus do not contain full and accurate information.

Tips on web design and content

Reassuring users

3.45. In a global survey of government website users, Taylor Nelson Sofres found that two thirds of users felt 'unsafe' about providing personal information to government websites.

Putting aside time to gather content

3.46. Design agencies report that the production of content by clients is usually the single biggest delay in the development and launch of a site.

Selling personalisation

3.47. The BBC has found that only a very small percentage of users want to personalise services, usually the most experienced users. Thus, more explanation may be necessary to make the benefits of personalisation clear to users or to ensure that the benefits are things they want or require. If personalisation is provided, it should always be a choice and never a default requirement.

Duplicating content

3.48. The BBC has also found that duplication of content on different web pages may confuse users, particularly new or inexperienced ones. Duplication may also tax the limited resources of some government websites and so should be avoided.

The importance of search engines

3.49. Research carried out by the Consumers' Association has found that some users do not know that they can type a URL into the browser's address bar. Instead, these users always use search engines to find websites. This is backed up by usability expert Jakob Nielsen, whose own studies indicate that a search engine is the most common way people come to a website. The second most common way is via links within emails.

4. Getting content right

4.1. In the development of content, government web managers should bear in mind the points made in the *Trust Charter for Electronic Services Delivery*.

4.2. Government web managers should also be aware of the laws on the electronic storage and collection of information contained within the Freedom of Information Act 2000.

4.3. Like design, the content of a good government website is user-centred. While the site is being designed, the web manager should be collecting the material that will form the site's content.

4.4. **A good government website should have some content that has been specifically written for the Web** and for audiences with different levels of skill or interest. For example, campaign sites should not simply repeat printed brochures or other offline media, as doing so does not necessarily add value to the campaign.

4.5. Language should be kept as plain as possible. While helping the site maintain its accessibility, plain language also helps users scan for the information they are looking for (see 4.7–4.13 Writing for the Web).

4.6. **A good government website should be supported by an editorial style guide** that helps maintain target tones of voice. It should also enforce uniform language usage to maintain basic editorial quality, for example, stipulating that 'web' is capitalised, and website is one word.

Writing for the Web

4.7. According to research carried out by Jakob Nielsen, people rarely read web pages word by word. Instead, they scan the page, picking out individual words and sentences. In one study carried out by Nielsen's company, it was found that 79 per cent of users always scanned any new page they came across, with only 16 per cent reading word by word.

4.8. Writing for the Web is a specific skill. It is not journalism in the sense of feature writing as the Web is a short-form medium. It is more akin to copywriting or proper news writing.

4.9. The Consumers' Association issues style sheets and guidelines adapted from journalism to its web writers in order to improve writing and control content on its websites.

4.10. Copy should strike a balance between using plain language and being patronising. This is hard to define but a good editor will help, as will user testing.

4.11. Jakob Nielsen has identified four ways in which existing text can be adapted to make a website more usable:

- Using objective language. The usability of the information on a site can be improved by 27 per cent by using neutral language — simply stating facts — rather than boasting or using exaggerated language.
- Making the text scannable. Modifying text to use bullet points, instead of lists within the body copy, improves usability by 47 per cent.
- Making the text concise. If the word count is cut by half, usability will be improved by 58 per cent.
- Combining all three. Using all three techniques together in a fourth, master method of writing for the web leads to an overall improvement of usability of 124 per cent.

4.12. Content should ideally be displayed in three levels: a short, scannable headline; an intermediate précis; and the full document. Nielsen recommends this approach as it orientates users to what is on the site quickly and efficiently. However, the first two levels should not replace whole documents, such as White Papers, no matter how long they might be.

4.13. To achieve scannable text, web pages should employ:

- highlighted keywords using, for example, hypertext links, typeface variations (eg bold text) and colour;
- meaningful sub-headings;
- bulleted lists;
- one idea per paragraph. Users might miss additional ideas if they are not caught by the first few words in a paragraph;
- half the word count (or less) than conventional writing;
- the inverted pyramid style. This means starting with the conclusion and ensuring that the 'Who', 'What', 'Where', 'When', and 'Why' of a piece of copy appears at the beginning with other main points following on. In this way, if a piece of text has to be edited, it can be cut from the bottom without the salient points being lost.

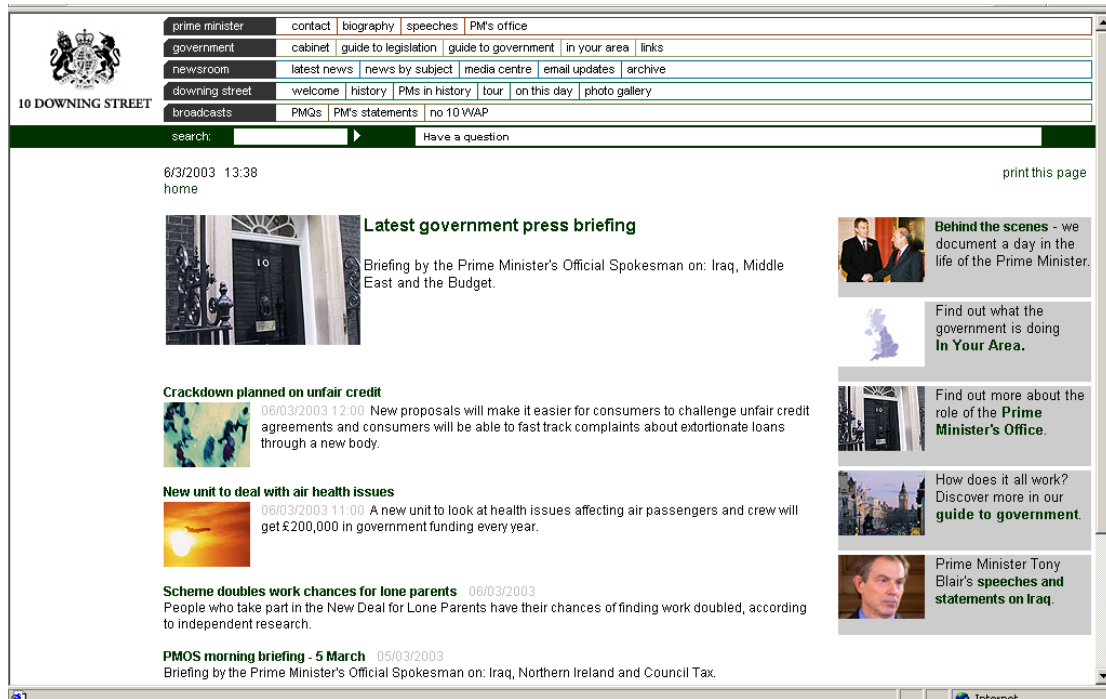


Fig. 4: The Number 10 website makes use of the three levels of content – the short, scannable headline; an intermediate précis; and the full document (in this case a hypertext link).

<http://www.number10.gov.uk>



Fig. 5: The DSA site makes good use of bullet points (1); bold text (2); and different colours (3) to make the site's content more scannable.

<http://www.dsa.gov.uk>

Search engines

4.14. It has been found that 15 to 20 per cent of web users go straight to a site's search facility to find the material they are looking for.

4.15. Accordingly, an effective, site-specific search engine is crucial to most good government websites. Campaign sites and very small sites with little content may be exceptions to this.

4.16. In cases where a search facility is required, there should be a site-specific facility as well as a link to a government-wide search. There should be clear differentiation between the two and ideally the site-specific search should always be placed in the same position.

4.17. There should also be the opportunity for advanced searching, ie not just by keyword but also by relevant criteria, such as date, subject, department, etc.

4.18. Search results on a good government website should be delivered efficiently and be straightforward and easy to understand.

4.19. The maintenance of metadata will help ensure that a site-specific search engine works well. The e-Government Interoperability Framework now incorporates government policy on metadata. See [http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/frameworks-top/\\$file/frameworksindex.htm](http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/frameworks-top/$file/frameworksindex.htm)

4.20. Some good sites, such as the BBC and Google, use "editorial intervention" to produce more meaningful results (see Fig. 6).

4.21. Editorial intervention can be as simple as using a spellchecker or as complex as using a content management system to bring up results that the site team believes to be relevant.

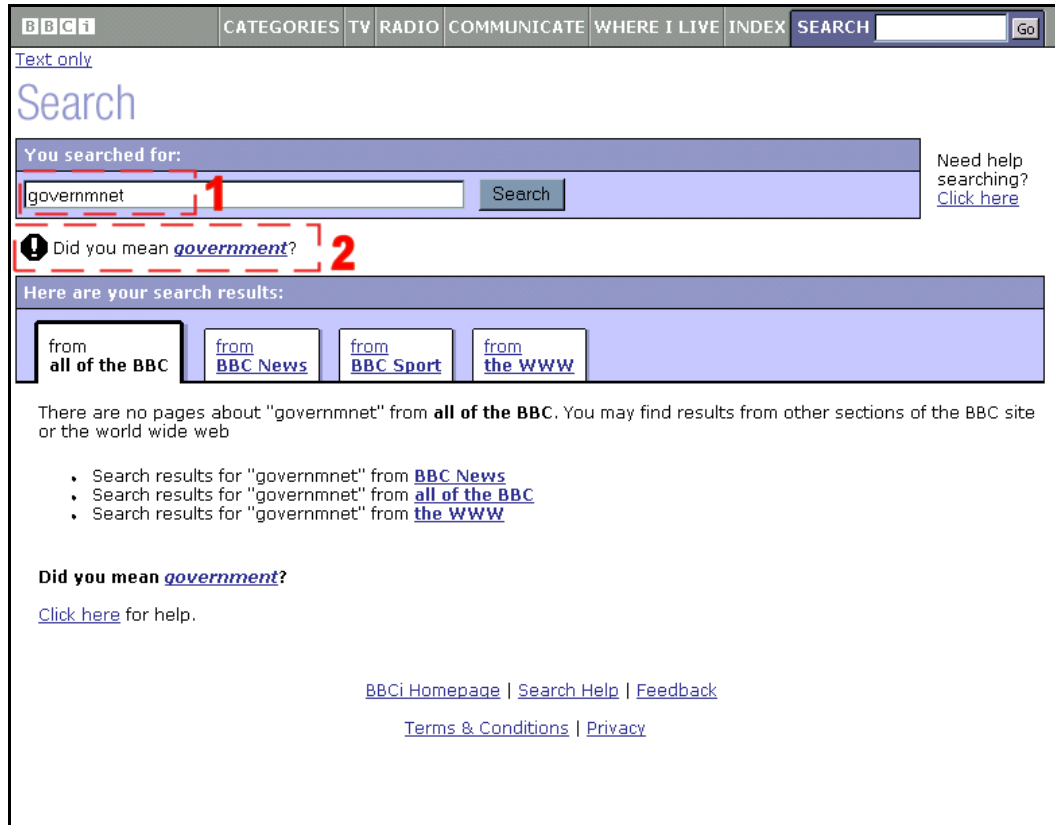


Fig. 6: The BBC uses editorial intervention in the form of identifying a misspelling and suggesting the correct spelling
<http://www.bbc.co.uk>

4.23. In the case of misspelling, it is useful for the web manager to keep a record of the frequently misspelled search items input by users.

4.24. During the foot-and-mouth outbreak, the BBC ensured that results for the search “foot and mouth” placed information relevant to the outbreak first, before including more generic material. This was achieved using editorial intervention.

4.25. If possible, search facilities on a good government website should employ a ‘natural language interface’. A natural language interface is one that allows users to use normal syntax in search boxes, for example, asking questions like ‘How can I file my accounts online’ rather than typing a word or phrase, such as ‘online account filing’.

4.26. Ideally, a site map should be provided as well as a search facility on good government websites.

4.27. When considering how fast a search facility should be (or indeed any action on a website), Jakob Nielsen advises the following:

- 0.1 of a second is about the limit for having the user feel that the system is reacting instantaneously, meaning that no special feedback is necessary except to display the result.

- 1.0 second is about the limit for the user's flow of thought to stay uninterrupted, even though the user will notice the delay. Normally, no special feedback is necessary during delays of more than 0.1 but less than 1.0 second, but the user does lose the feeling of operating directly on the data.
- 10 seconds is about the limit for keeping the user's attention focused on the dialogue. For longer delays, users will want to perform other tasks while waiting for the computer to finish so they should be given feedback indicating when the computer expects to be done. Feedback during the delay is especially important if the response time is likely to be highly variable, since users will not know what to expect.

5. Getting services right

5.1. The issue of getting services right is very similar to that of getting the other factors of a good government website right. It is a case of considering the users' needs and the stakeholders' requirements, and establishing the business processes necessary to ensure that both are met. Other key foundations of good online transactions are:

- security
- technical reliability
- conformance with laws on such issues as data protection

Business process issues

5.2. When considering services on a government website, a business process, ie the way in which a desired transaction is completed, should not be developed to the detriment of the user process. A design agency found that in its redesign of theTrainline.com, it was possible to augment the existing business process by examining how the user approached the site's forms.

5.3. To set up valuable business processes, the seven-stage HCD process can be examined and a similar process extrapolated. See sections 2.21 –2.28.

IT issues

5.4. Online services on good government websites should be secure and, as such, will conform to existing procedures outlined in the *Guidelines for UK Government Websites: Framework for Senior Managers*.

5.5. A good government website will take into account issues of security and authentication of online services. For further details, see the consultation version of the *Security Framework v2.0* at [http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/consultations-security/\\$file/security.pdf](http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/consultations-security/$file/security.pdf)

5.6. Government websites should be hosted in a suitable environment, using approved hardware, as well as software and operating systems that are compatible with the website's operation and accessibility laws.

5.7. Databases should be formatted in such a way that the website will be able to use them, and held in a secure environment adhering to the Data Protection Act.

Infrastructure

5.8. Government webmasters should be aware of the technical infrastructure options available to them in implementing online services. These include Galaxy, XML schema, etc. Government web managers must consider using the Government Gateway to provide secure transactions and authentication, as well as to join up services across departments. The govtalk website provides information about the gateway at

http://www.govtalk.gov.uk/gateway_partnerlink

Forms

5.9. Good government websites will ensure that their forms fulfil the needs of the stakeholders (a good example of this is the online tax return) and that they are usable. If forms do not fulfil both criteria, then the site will have failed in its objectives.

5.10. User testing on government forms will help identify what – if any – problems users have with them. Common mistakes or glitches in forms vary but useful categories are provided by the website *Forms That Work*:

<http://www.formsthatwork.com>

- typing errors (wrong key used or word misspelled)
- transcription errors (when copying information such as a credit card number)
- category errors (the categories on offer do not include or match the answer the user wants to give)
- send errors or design faults (eg the user hits “submit” by mistake or expects to be able to hit the return key to submit the form but is in fact taken elsewhere)
- privacy errors (whereby the user deems the information asked for to be too private)

5.11. Other errors to be taken into consideration are session timeouts, use of the back button (where such use deletes the information already added), etc.

5.12. Website statistics can be used to identify the stage or even the field at which users give up on a form and are, therefore, useful in deciding how non-use of forms might be rectified.

5.13. Government web managers should look at the *e-Services Development Framework* is available from this menu:

http://www.govtalk.gov.uk/interoperability/eservices_document2.asp?docnum=515

5.14. When collecting personal information for the purpose of registration, customisation or transactions, government websites must work within the Data Protection Act. Web managers should look at the *Guidelines for UK Government Websites*, chapter 1, section 10, which reviews data protection, as well as the *Trust Charter for Electronic Service Delivery* both available from:

[http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/resources-top/\\$file/resources.htm](http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/resources-top/$file/resources.htm)

5.15. Government web managers should also be aware of the laws governing the electronic storage and collection of information contained within the Freedom of Information Act 2002.), which can be found at

<http://www.legislation.hmso.gov.uk/acts/acts2000.htm>

Conclusion: useful, usable, used

6.1. It cannot be said often enough that if users can't find what they are looking for or can't use what they find, your website is less likely to achieve its aims. User testing provides an objective balance to the subjective preferences of stakeholders, designers and web managers.

6.2. User testing can measure whether a website is achieving its aims as set by stakeholders. For example, online forms must be easy to use and must, in fact, be used if cost savings or other benefits are to be realised. It is worth noting that what users say they want and like may not be what they use in practice. User testing can reveal the difference.

6.3. This Framework is less concerned with technical issues than, for example, the *Guidelines for UK Government Websites*. So it is worth emphasising now that if your website is slow, not secure, or in other ways unreliable technically, it will not be a good website.

6.4. Websites deliver much of their information in the form of text. Good government websites are **likely to have some material written especially for the Web**. This means that some text will be designed for being scanned, to orientate readers quickly. Other text will go on to communicate with impact, summarising main messages. Longer documents will be provided for download. Like any other text medium, the Web will communicate more effectively if text is:

- written for the target audiences; and
- written to fit the needs of the particular medium.

6.5. Websites that have a variety of audiences should consider how to stream users to different parts of the site, with various kinds of navigation and content for the different audiences. Site-specific search engines and site maps are likely to help some audiences find what they are looking for.

6.6. The Web can go far beyond the text and graphics that leaflets or downloads provide. It can provide a richness of other media and features, eg audio, video and discussion groups. A good government website will explore how this richness of media can improve communication and service. These features should not be forced on users but offered to them, probably a few levels into the site. Such features should be user tested and alternatives provided to comply with accessibility demands.

6.7. Websites need to operate in the context of the whole organisation. This means that they should:

- complement the organisation's communication strategy and individual information campaigns;
- work within a strategy that takes account of other media and facilities, such as DiTV, SMS or telephone call centres, planning ahead to take advantage of broadband to meet user needs; and
- offer transactions that work with the IT and business systems of the organisation and the rest of government.

6.8. A good website does something. This is the question to answer when setting the aims of a website. A website doesn't simply say or tell or show. It provides a chance to carry out a campaign's call to action. It registers users in the first step of a

recruitment process or makes appointments for interview. It allows people to apply for grants or other services online. It helps build user communities or pulls together information across regions, audiences or organisations.

6.9. The touchstone for all of this will be the reaction of the users. User testing and evaluation is the only way to confirm that you have achieved a good government website. Your information and service offering must be:

- useful: meeting user need or answering a preference;
- usable: designed, written or encoded so that it is easily accessed and used by the target audience; and
- used: there is no point putting anything online that the audience cannot find, that they do not want or that is unreliable or difficult to use.

Appendix A: Committee members

In the process of discussing the topics contained in this document, the Office of the e-Envoy assembled a committee of Internet experts. These experts were drawn from the design and usability industries, the senior management of websites in the public domain, academia and within government itself.

This is the complete list of those who attended the committee meetings:

Government

Geoff Ryman (Sponsor)	Deputy Director	Office of the e-Envoy
Tom Adams	Digital Media Consultant	Office of the e-Envoy
John Hawkins	Security & Technical Authority	Office of the e-Envoy
Martin Gelder	Head of Digital Media	COI Communications
David Gilbert	Webmaster	Prime Minister's Office
Rupert Marsh	Head of Internet	Department of Trade and Industry
Caron Roshler	Website Team	Foreign and Commonwealth Office
Dr Paul Hurren	Head of e-Government	London Borough of Waltham Forest
Dane Wright	Webmaster	Brent Council
Andres Crespo	Corporate Web Manager	Brent Council

Web design and usability

Richard Dinnick (Chair and author)	Managing Director	Corvine Consulting
Margaret Manning	Chief Executive	Reading Room
Nick Cristea	Design Director	Digit
Daniel Bonner	Design Director	AKQA
Catriona Campbell	CEO	The Usability Company
Andrew Staring	Freelance Consultant	
Julie Howell	Campaigns Officer	RNIB

Website managers

Katharine Everett	Controller (New Media)	BBC Online
Jonathan Kingsbury	Head of Internet	BBC Online
Alan Stevens	Head of Digital Services	<i>Which?</i>
Roger Green	Head of Development	EMAP Digital

Academia

Professor Brian Shackel	Founder Director	Loughborough University
	HUSAT Research Institute	
Alan Cooper	Web Manager	The Library Association

Appendix B: Toolkit

Usability testing

All websites can be evaluated using various methods produced by experts in usability and human-centred design. Even the simplest testing will lead to a better website than no testing at all.

Examples of different testing options (and depth of testing) available include:

- Asking several senior members of the Department or Agency, and later groups of typical users, to become familiar with the website and then to assess how well it compares with the goals specified in the answers to requirements in section 2.24.
- Commissioning experts in human-centred design and accessibility to conduct an expert evaluation.
- Running user trials. For example this could involve:
 - getting a number of department/agency staff who have not been involved in designing or using the site to act as test users
 - devising a series of questions typical of those for which the site has been designed to help the public answer, and then
 - observing each of the test users learn the site and try to answer the questions
- Conducting formal user testing. Here users from the public are selected to be typical of those targeted, including disabled people. The tasks to be carried out are planned more carefully, and the performance of the test users is more accurately recorded and analysed.

Tools for usability testing

To help you plan Human-Centred Design, we have listed below some research that should be useful for each step in the process:

Sourcing users

For sourcing users, see the information contained under codes and guidelines at:

- <http://www.mrs.org.uk>

Choosing a methodology

This is a list of links to information about commonly used research methodologies. Not all of them will be suitable for your project.

- <http://jthom.best.vwh.net/usability/>
- <http://www.infodesign.com.au/usability/toolkit.html>
- <http://www.usableweb.com/topics/000862-0-0.html>

Inquiry

Contextual inquiry – see

<http://jthom.best.vwh.net/usability/context.htm>

Ethnographic study/Field observation (fieldwork paper by Jakob Nielsen) –

see <http://jthom.best.vwh.net/usability/fieldobs.htm>

Interviews and focus groups – see

<http://jthom.best.vwh.net/usability/interview.htm>

Surveys – see

<http://jthom.best.vwh.net/usability/surveys.htm>

Questionnaires – see

<http://jthom.best.vwh.net/usability/question.htm>

Journalled sessions – see

<http://jthom.best.vwh.net/usability/journals.htm>

Self-reporting logs – see

<http://jthom.best.vwh.net/usability/selfrept.htm>

Screen snapshots – see

<http://jthom.best.vwh.net/usability/snapshot.htm>

Inspection

Heuristic evaluation – see

<http://jthom.best.vwh.net/usability/heuristic.htm>

Cognitive walkthroughs – see

<http://jthom.best.vwh.net/usability/cognitiv.htm>

Formal usability inspections – see

<http://jthom.best.vwh.net/usability/frmlinsp.htm>

Pluralistic walkthroughs – see

<http://jthom.best.vwh.net/usability/plural.htm>

Feature inspection – see

<http://jthom.best.vwh.net/usability/ftrinsp.htm>

Consistency inspection – see

<http://jthom.best.vwh.net/usability/consist.htm>

Standards inspection – see

<http://jthom.best.vwh.net/usability/stdinsp.htm>

Guideline checklists – see

<http://jthom.best.vwh.net/usability/guidline.htm>

Testing

General concepts (usability evaluation) – see

<http://jthom.best.vwh.net/usability/general.htm>

Thinking aloud protocol – see

<http://jthom.best.vwh.net/usability/thnkalod.htm>

Co-discovery method – see

<http://jthom.best.vwh.net/usability/codiscvr.htm>

Question asking protocol – see

<http://jthom.best.vwh.net/usability/questest.htm>

Performance measurement – see

<http://jthom.best.vwh.net/usability/perfmeas.htm>

Eye-tracking – see

<http://jthom.best.vwh.net/usability/eyetrack.htm>

Prototypes/iterations: these may range from simple paper mock-ups of screen layouts to prototype websites. In this latter scenario, users should be given real tasks to accomplish; their actions monitored and noted.

For more details on conformance to ergonomic legislation, see
<http://www.ergonomics.org.uk>

Related Techniques

Prototyping – see

<http://jthom.best.vwh.net/usability/prototyp.htm>

Low-fidelity – see

<http://jthom.best.vwh.net/usability/lofiprto.htm>

High-fidelity – see

<http://jthom.best.vwh.net/usability/hifiprto.htm>

Horizontal – see

<http://jthom.best.vwh.net/usability/horizon.htm>

Vertical – see

<http://jthom.best.vwh.net/usability/vertical.htm>

Affinity diagrams – see

<http://jthom.best.vwh.net/usability/affinity.htm>

Blind voting – see

<http://jthom.best.vwh.net/usability/blndvote.htm>

Card-sorting – see

<http://jthom.best.vwh.net/usability/cardsort.htm>

Education evaluation – see

<http://jthom.best.vwh.net/usability/edueval.htm>

Other related techniques you may wish to investigate

Archetype research

Stake model

Stufflebeam (CIPP) model

Scriven model

Action research

Tools for web design

Questions to ask web designers

Once the web managers have produced a brief that has been signed off by stakeholders, the next stage might be to call in a web design agency – or, more accurately, at least three web design agencies – to pitch for the contract. Make sure the World Trade Organization obligations are fulfilled (ie does the opportunity need to be advertised in the Official Journal of the EC (OJEC)?).

Try to avoid asking direct questions with yes/no answers. If you ask designers “Do you design sites that meet W3C WAI recommendations?” or “Do you provide full documentation of the site so that another company can take over design or running of the site?” an answer of yes is too obvious.

When web managers meet with designers or design agencies, the following list of questions should prove useful:

Does the design agency have a portfolio of work that you can see?

This question should weed out designers or design agencies that have picked up a book on HTML and fancy a life in the new media industry. A professional web designer or agency should have at least three **recent** clients to give testimonials or references and/or three pieces of work they can show. Always take up references.

Look at the coding of the sites you are shown as a mark of the quality of mark-up or output you will be purchasing. Does it validate to a standard of HTML? Does it meet the Priority 1 recommendations of the WAI for web accessibility? If not, why not?

The portfolio should also lead to other questions such as: does the company or individual only work with one kind of database/CMS tool? Do they, in effect sell the same site over and over?

What can be provided for different budgets?

Give the designers three prices and ask what you can get for each. Preferably all three prices should be within your budget. In this way the designers' reply may well come in considerably under budget for what is required. If you simply give the designers a budget some will simply expand costs just to account for your maximum budget.

How soon can the project be delivered?

Do not necessarily tell the designers when the proposed launch date is for the site. If possible, you want to avoid "just in time" development. If they say they can launch it before you need it launched, this will allow for extra testing and evaluation or simply give you a website ahead of time!

What will the design agency expect from you?

A web designer should make it clear from the start what they will need you to do to quickly and effectively build your web site. Content will be the major requirement. Indeed, it is often this aspect of putting together a website that takes the greatest amount of time as the content must be collated and optimised for the web. Ensure you have your content completed to the deadline you have agreed. This will ensure the designer/agency has no excuse concerning the completion of the project on time.

What processes will the design agency follow in delivering the project? Can they show you a typical project plan?

This will highlight if the designer or design agency is committed to user testing and quality processes. It will show if they combine good project management with creative skills.

Can the design agency give you a detailed picture of how designs will be tested technically?

This will provide a good idea of the range of platforms, operating systems, browsers and configurations for which the designers are skilled in providing usable solutions. The *Guidelines for UK Government Websites*, chapter 2, section 5, gives further advice on the kinds of tests that should be carried out under this heading.

Sample high-level project plans

Digit design process © 2001 Digit

Web development agency, Digit, has been kind enough to allow reproduction of its design process document.

STAGE	INITIAL REQUIREMENTS	AS REQUIRED	SECONDARY REQUIREMENTS	RESULT
1) Understanding the brief	Initial briefing: Understand project outline, assets and resources needed. Establish working methods, deadlines and delivery dates. Understand technological issues.			Proposal and costs
2) Our client and their markets	Understand target audience.	>>>>	Research	Research findings
	Understand client brand.	>>>>	Brand development phase	Brand bible
3.1) Designing and building prototype	Create initial design concepts.	>>>>	Client approval	Design concepts
	Create prototypes.	>>>>	Client approval	Site prototypes
	Testing.			
3.2) Designing and building site	Asset gathering.			
	Template development.	>>>>	Client approval	Templates
	Content development and build.			Elements
	Build and integrate with back-end technologies.	>>>>	Client approval	Working "Beta" site
3.3) Testing and evaluation	Usability testing.			
	Technical testing.	>>>>	Client approval	
3.4) Launch	Maintenance and long-term evaluation.			Live site
3.5) growth, evolution and development	Client briefing.			Proposal
	Interrogating project			

Appendix C: Sources and resources

This Framework was put together after consultation with committee members (see Appendix A), as well as desk research using as many relevant sources as possible. Other than evidence presented at those meetings, the desk research breaks down into two key areas: websites and published works (ie academic papers, books and government documents, and international standards).

Usability and design

Published works

Designing Web Usability: The Practice of Simplicity

Jakob Nielsen

1st edition (December 1999); ISBN: 156205810X

Web Pages That Suck: Learn Good Design by Looking at Bad Design

Vincent Flanders and Michael Willis

1st edition (March 1998); ISBN: 078212187X

Futurize Your Business

David Siegel

1st edition (1999); ISBN 0471-35763-4

The Internet Atlas

Richard Dinnick

1st edition (October 2000); ISBN: 078581180X

'Methods to Support Human-Centred Design'

Martin Maguire

International Journal of Human-Computer Studies 2001, 55.4, 587-634.

'The Improvement of Human-Centred Processes – facing the challenge and reaping the benefit of ISO 13407'

Jonathan Earthy, Brian Sherwood Jones and Nigel Bevan.

International Journal of Human-Computer Studies 2001, 55.4, 553-585.

'New Product Development by Eliciting User Experience and Aspirations'

Anne Bruseberg and Deana McDonagh-Philp.

International Journal of Human-Computer Studies 2001, 55.4, 435-452.

'Web Site Usability, Design and Performance Metrics'

Jonathan W. Palmer

Information Systems Research, 2002, vol.12 no.1.

Usability Guidelines

Professor Brian Shackel and Catriona Campbell

(produced specifically for this Framework by members of the advisory committee)

Guidelines for UK Government Websites: Framework for Senior Managers
Crown copyright 2001 <http://www.e-envoy.gov.uk/webguidelines.htm>

Guidelines for UK Government Websites: Illustrated handbook for web management teams. ISBN 0 11 430179 4, TSO, London
<http://www.e-envoy.gov.uk/webguidelines.htm>

Websites

Esprit Project 28015 Trial Usability Maturity Process Cost Benefit Analysis, Nigel Bevan
<http://www.usability.serco.com/trump/methods/integration/costbenefits.htm>

Trust Charter for Electronic Services Delivery
[http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/resources-top/\\$file/resources.htm](http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/resources-top/$file/resources.htm)

Security Framework V.20
[http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/index/\\$file/index.htm](http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/index/$file/index.htm)

Guidelines for UK Government Websites
<http://www.e-envoy.gov.uk/webguidelines.htm>

Web developers' journal section on usability
<http://www-106.ibm.com/developerworks/usability/>

Jakob Nielsen's web site
<http://www.useit.com>

IBM's web design guidelines
http://www-3.ibm.com/ibm/easy/eou_ext.nsf/Publish/572

About.com's section on usability
<http://webdesign.about.com/library/weekly/aa010500a.htm>

US government web design guidelines
<http://www.usability.gov/guidelines>

The RNIB's guide to accessible web design
<http://www.rnib.org.uk/digital/hints.htm>

W3C's *Web Accessibility Initiative (WAI)*
<http://www.w3.org/WAI>

W3C's *Web Content Accessibility Guidelines 1.0*
<http://www.w3.org/TR/WAI-WEBCONTENT>

Web pages that suck
<http://www.webpagesthatsuck.com>

Internet Magazine's web design index

<http://www.internet-magazine.com/design/index.asp>

CIO's interview with Jakob Nielsen and Vincent Flanders

<http://www.cio.com/archive/120101/online.html>

Content and content management systems

Websites

e-Government Interoperability Framework

[http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/frameworks-top/\\$file/frameworksindex.htm](http://www.e-envoy.gov.uk/oeo/oeo.nsf/sections/frameworks-top/$file/frameworksindex.htm)

Freedom of Information Act 2000

<http://www.dataprotection.gov.uk/dpr/foi.nsf>

Freedom of Information Act 2002

<http://www.legislation.hmso.gov.uk/acts/acts2000.htm>

Principles of the Data Protection Act

<http://www.dataprotection.gov.uk/principl.htm>

e-Services Development Framework

http://www.govtalk.gov.uk/interoperability/eservices_document2.asp?docnum=515

Techwatch's overview of content management systems:

<http://www.jisc.ac.uk/techwatch/reports/>

Forms that Work, information on good web-based forms

<http://www.formsthatwork.com>

Jakob Nielsen's guide to writing for the web

<http://www.useit.com/papers/webwriting>

Jakob Nielsen's study of users' reading behaviour

<http://www.useit.com/alertbox/9710a.html>

Plain English web site

<http://www.plainenglishonline.com>

Wired magazine's guide to writing for the web

<http://hotwired.lycos.com/hardwired/wiredstyle>

Search engines

Published works

Search Engine Stuff

Margaret Manning and Alan Cooper

(produced specifically for this Framework by members of the advisory committee)

Websites

Web Servers: Add search to your site

<http://builder.cnet.com/webbuilding/pages/Servers/AddSearch/>

Web Admin's Guide to Site Search Tools: How to Choose, Implement and Maintain your Website Search Tools

<http://www.searchtools.com/guide/index.html>

WebWatch: UK University Search Engines, Ariadne, Issue 21

<http://www.ariadne.ac.uk/issue21/webwatch/>

"User Interfaces and Visualization", chapter 10, *Modern Information Retrieval*, Marti Hearst

<http://www.sims.berkeley.edu/%7Ehearst/irbook/10/chap10.html>

FLAMENCO Project (Flexible information Access using Metadata in Novel Combinations):

<http://bailando.sims.berkeley.edu/flamenco.html>

Cha-Cha: A System for Organizing Intranet Search Results:

<http://cha-cha.berkeley.edu/papers/usits99/index.html>

ISOs

Published works

ISO 13407: Human-centred design processes for interactive systems (1999)

ISO TR 18529: Ergonomics of human system interaction – Human-centred lifecycle process descriptions (2000)

Inclusive Design Guidelines for HCI

edited by Colette Nicole and Julio Abascal

1st edition (2001); published by Taylor & Francis

International Journal of Human Computer Studies

IJHSC Academic Press ISSN 1071-5819

<http://www.academicpress.com/ijhcs>

All International Standards are available from the British Standards Institute, 389 Chiswick High Road, London W4 4AL. Tel: +44 (0)20 8996 9000

<http://www.bsi-global.com>

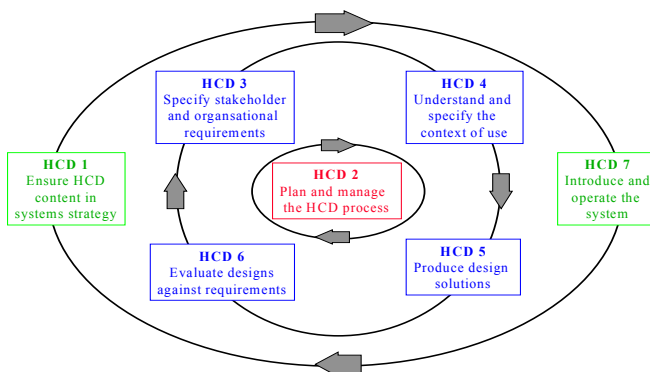
Notes

ISO 13407 states that the user- or human-centred design process should include:

- the active involvement of users
- a clear understanding of user and task requirements
- an appropriate allocation of function between users and technology
- the reproduction or repetition of design solutions (for familiarisation)
- multi-disciplinary design

To achieve these goals, ISO 13407 specifies the:

- planning of the human-centred design process
- specification of the user and organisational requirements
- understanding and specification of the context of use
- production of design solutions
- evaluation of designs against requirements.



Linking Human-Centred Processes

HCD Processes: The Seven Steps of the Human Centred Design Process

Human-centred system development						
HCD 1	HCD 2	HCD 3	HCD 4	HCD 5	HCD 6	HCD 7
Ensure HCD content in systems strategy	Plan and manage the HCD process	Specify stakeholder and organisational requirements	Understand and specify the context of use	Produce design solutions	Evaluate designs against requirements	Introduce and operate the system
<ul style="list-style-type: none"> —represent stakeholders —collect market intelligence —define and plan system strategy —collect market feedback —analyse user trends 	<ul style="list-style-type: none"> —consult stakeholders —plan user involvement —select human-centred methods —ensure a human-centred approach —plan HCD activities manage HC activities —champion HC approach.htm —support HCD 	<ul style="list-style-type: none"> —clarify system goals —analyse stakeholders —assess H&S risk —define system —generate requirements —set quality in use objectives 	<ul style="list-style-type: none"> —identify user's tasks —identify user attributes —identify organisational environment —identify technical environment —identify physical environment 	<ul style="list-style-type: none"> —allocate functions —produce task model —explore system design —develop design solutions —specify system and use —develop prototypes —develop user training —develop user support 	<ul style="list-style-type: none"> —specify context of evaluation —evaluate for requirements —evaluate to improve design —evaluate against system requirements —evaluate against required practice —evaluate in use 	<ul style="list-style-type: none"> —manage change —determine impact —customisation and local design —deliver user training —support users —conformance to ergonomic legislation

Appendix D: User satisfaction questionnaires and services

Reproduced here are two user questionnaires that web managers may find useful as points of reference. Please bear in mind copyright when using or repeating them.

Professor Palmer's web site survey

This is a sample user-satisfaction questionnaire. It has been produced by Professor Jonathan W. Palmer of the University of Maryland, who has kindly give permission for it to be repeated here.

It must be stressed that this questionnaire has not been tested in the UK and should therefore not be viewed as completely suitable for use by UK government web managers.

URL: _____

Please rate the site on the following criteria using a 1 to 7 scale
(1 = poor on this dimension, 7 = terrific on the dimension)

a) Effective organization.

Poor on this 1 2 3 4 5 6 7 Terrific on this

b) Provides good product information.

Poor on this 1 2 3 4 5 6 7 Terrific on this

c) Presents a variety of products.

Poor on this 1 2 3 4 5 6 7 Terrific on this

d) Provides information such as FAQs.

Poor on this 1 2 3 4 5 6 7 Terrific on this

e) Provides feedback mechanisms.

Poor on this 1 2 3 4 5 6 7 Terrific on this

f) Offers customisation.

Poor on this 1 2 3 4 5 6 7 Terrific on this

g) Provides significant user interaction

Poor on this 1 2 3 4 5 6 7 Terrific on this

Please circle the response that best reflects your opinion of the Website you just used.

1. I find it easy to get this Website to do what I want it to do.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

2. I intend to browse this Website again this semester.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

3. I intend to browse this Website frequently in the future.

Strongly Agree 1 2 3 4 5 6 7 Strongly Disagree

4. The amount of information displayed on the screen was:

Inadequate 1 2 3 4 5 6 7 Adequate

5. The sequence of obtaining information was:

Confusing 1 2 3 4 5 6 7 Clear

6. The information on succeeding links from the initial page was:

Predictable 1 2 3 4 5 6 7 Unpredictable

7. The Website was:

Frustrating 1 2 3 4 5 6 7 Satisfying

8. The layout of pages made tasks easier:

Never 1 2 3 4 5 6 7 Always

9. The speed in which the computer provided information was:

Fast Enough 1 2 3 4 5 6 7 Too slow

10. The rate at which the information was displayed was:

Fast Enough 1 2 3 4 5 6 7 Too slow

11. If you had a future need for information/service presented in this Website, how likely is it that you would consider returning/using this site?

Very Unlikely 1 2 3 4 5 6 7 Very Likely

Alexa Ratings:

Traffic: _____

Speed (1-5): _____

Quality (1-5): _____

Freshness (1-5): _____

©2001 Jonathan Palmer

Website analysis and measurement inventory (WAMMI)

© 2001 Jurek Kirakowski & Nigel Claridge

WAMMI is an evaluation tool for websites developed jointly by HFRG (University College Cork, Ireland) and Nomos during 1996 to 1998. It is based on a questionnaire that is filled out by users.

The questions contained in the WAMMI questionnaire have been carefully selected and refined to ascertain users' subjective rating of the ease of use of a website – iteratively improved and tested on numerous web sites.

WAMMI produce a number of questions for web managers to choose from: "Fixed response" questions (referenced by a number) and "Open response" questions (referenced by a letter).

WAMMI can be used in three basic modes, depending on where you are in the product lifecycle of your website:

- **Prediction:** Before launching a website, a test run of users with WAMMI will tell you something about how WWW visitors will react;
- **Monitoring:** Have you wondered why you get repeat custom or why some people never come back? Or why some clients are constantly complaining about seemingly trivial aspects? Encouraging visitors to fill out a WAMMI questionnaire gives you the keys to unlocking the real reasons behind their behaviour.
- **Benchmarking:** What users think of your site relative to other sites, for a series of different design aspects.

WAMMI is designed to be a test that website managers pay for, using up to six questions in total. It is possible to negotiate more, but WAMMI recommend not exceeding this number as long questionnaires tend to suffer significantly from reduced user response rate. To order a WAMMI test email: nigel_claridge@hotmail.com

However, government web managers – especially those in charge of sites at the smaller end of the scale – may find the questions a good point from which to produce their own questionnaire. For this purpose, the questions are given below:

Fixed response questions

- 1) Your age?
- 2) Your gender?
- 3) Your marital status?
- 4) Your highest education level?
- 5) How many people in your household use websites regularly?
- 6) For how long have you been using the Internet?
- 7) How often do you use websites?
- 8) How long do you typically spend on a website each time you visit?
- 9) What do you mainly use websites for?
- 10) When did you first use this website?

- 11) How often do you use this website?
- 12) How long do you typically spend on this website each time you use it?
- 13) What type of connection do you usually use to connect to the Internet?
- 14) Which country do you live in?
- 15) In which part of the country do you live?
- 16) Your employment?
- 17) What is your type of profession?
- 18) How did you first find this website?
- 19) From where do you most often access the Internet?
- 20) From where do you most often access this website?

Open response questions

- a) What were your main reasons for using this website?
- b) Do you have any additional comments about the website's ease of use?
- c) Is there anything you think is missing from this website?
- d) Approximately how much is your yearly income?
- e) What help/support have you needed in using this website?
- f) What part of this website do you find most interesting/useful?
- g) Which language(s) do you feel comfortable with on websites?
- h) If you are interested in helping us further with improving this web site then please enter your email address:

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