

Information Architecture Development

Why and when

Many websites have an information architecture (IA) based on an 'organisational' view of the site's content that does not reflect how users go about achieving their goals. Having a user-centred structure for a site IA (i.e. how user goals are chunked into a hierarchy), and having labels that are understood by users, is key to getting users to their goals quickly and providing a good user experience. The best way to develop a usable IA is to involve users in its development.

IA research is ideally done at an early stage of website development, after the user goals the site is to support have been established but before any work on site design and layout; however, existing sites with a poor IA also benefit from this type of research.

Our approach

WUP adopts both qualitative and quantitative approaches to IA development and testing. During development, we use quantitative research to understand the closeness of the relationship between user goals, and qualitative research to gain insights into user behaviour and the language used. During testing, we undertake remote testing with larger numbers of testers, and one-to-one qualitative testing, to assess the effectiveness of the IA.

How we do it

IA development has two elements:

- **Developing a prototype** – this involves understanding how users 'chunk' tasks and the labels users give to these chunks, so that a prototype IA can be drawn up
- **Testing a prototype** – testing the prototype with users: we undertake both qualitative face-to-face research and remote testing

Developing an IA prototype

In order to develop the prototype it is necessary to understand how users group

tasks i.e. how they 'chunk' them and what labels they give to these groups. This research is undertaken by writing all the various user goals that the site is to support onto individual cards and getting potential site users to sort these into groups. This clearly requires the user goals the site is to support to be identified in detail; often there are 50-100 or more supported user goals. This may require user research to identify these goals if they are not well understood. It also requires a clear site strategy so the user goals that are to be supported (and not supported) are clear.

We tend to use open rather than closed card sorting (i.e. with open card sorting users choose the labels for categories rather than putting them under predefined headings) as this does not prejudice the language they will use.

This work can be conducted in two ways:

- Qualitatively
- Quantitatively

Qualitative Prototype IA Development

The process adopted in qualitative IA development augments some existing understanding of how users chunk and label their goals. It is a relatively low cost way to gain some additional insight into users' behaviours and uses a limited number of respondents (e.g. 6). The client is, necessarily, an active participant in the IA development process. The research is conducted as follows:

- The research is typically conducted at our premises and takes place over one day. The session is attended by 2-3 client personnel.
- Prior to the test day, WUP would agree a set of user goals with the client to be used in the research. Sets of cards listing the user goals would be prepared
- WUP recruits the respondents – profiles of which would be agreed with the client

- The research is split into two parts: user research in the morning and consideration of the results in the afternoon to draw up the draft IA
- Each respondent participates in the research session for c. 50 minutes individually
- Respondents sort the goals into groups that make sense to them. During this sorting process, a WUP moderator probes to understand why the respondent is sorting the tasks in a particular way, and what labels they would attach to the various groups. An initial top level sort may be followed by sorting each group in turn into sub groups. The moderator also explores respondents' confidence of the 'fit' of goals under these headings
- In the afternoon of the research day, the results of card sorting are reviewed and WUP facilitates and contributes to a discussion to produce a draft IA
- Subsequently, a detailed first draft information architecture is produced in HTML or paper format for further testing
- A report is produced that summarises the research, analysis and detailing the prototype IA

Quantitative IA Prototype Development

A more comprehensive approach to IA prototype development involves larger numbers of respondents so that the outputs of a card sorting exercise (as described above) can be subject to cluster analysis to identify the closeness of the relationships of the groups into which respondents sort the goals. The research is conducted as for the qualitative IA prototype development but:

- Typically 12-15 people are used in the research (or possibly more) depending on the number of target users for the site
- Following the user research, WUP analyses the results. This includes cluster analysis to determine the closeness of fit of the user goals as chunked by the different users.
- The results of the research are presented at a workshop of client stakeholders and

a discussion facilitated to produce a draft IA

- A report is produced that summarises the research and analysis and details the prototype IA

Testing the Prototype

The prototype is ideally tested and refined through a series of research sessions with representative target users.

WUP tests the prototype IA using a remote online IA testing tool: this enables a group of 20 to 30 representative users to test the prototype IA at a time and place to suit them:

- Testers are recruited to match the required tester profile, and are approved by the client
- They are then provided with a web link and login details to enable them to access the prototype under test
- When they access the prototype on the remote tool, the testers are asked to achieve a series of tasks by clicking through the IA links on the prototype; they are also asked to indicate their level of confidence when clicking that they had selected the 'right' link
- Testers are typically asked to undertake 25 to 30 tasks, agreed in advance with the client and reflecting the goals as used for the prototype development, and the tool takes about 30 to 40 minutes to complete
- The remote tool captures the paths followed by the testers and records the success rate, (defined as reaching the right destination after the first or second attempt) and identifies any 'problem' areas, and the alternative paths that testers took
- A report is produced summarising the research, analysis and detailing the revised prototype IA

In addition, or alternatively, to the remote testing, WUP undertakes qualitative testing – usually two or three iterations. The research is conducted as follows:

- Each research session is typically conducted at our premises and takes

place over one day. The session is attended by 2-3 client personnel.

- The research is split into two parts: user testing in the morning and consideration of the results in the afternoon to refine the prototype IA
- Prior to the test day, WUP agrees a set of user goals with the client to be used in the research – normally the same goals as used for the prototype development
- WUP recruits the testers – profiles of which are agreed with the client
- WUP prepares a simple HTML representation of the prototype IA to be used in the research session based on the outcomes of the prototype development research
- Each tester tests the prototype for c.40 minutes individually.
- The testers are asked 'Where would they click' to achieve each goal through as many levels as there are in the prototype IA. The results are recorded on a template.
- On the same day, following the user testing, WUP facilitates and contributes to a discussion to produce a revised prototype information architecture for the next round of testing
- A report is produced summarising the research, analysis and detailing the revised prototype IA

While we are happy to undertake as many iterations of testing of the prototype IA as may be required, we also offer a training service so that clients can undertake some of this research themselves. Typically, we run a single iteration and, during this, train a member of the client's staff in the required facilitation skills and other techniques so they can undertake any additional research sessions.

Outputs

The output of the research is an information architecture for the site, which is detailed in a series of reports:

- Following the development of the prototype – including videos of the card sorting exercise

- Following remote testing, a detailed analysis of the testing analysis
- Following each iteration of qualitative prototype testing – including videos of each of the test sessions showing the screen being viewed, tester head shot, and the audio of the session

Client examples

Examples of IA research we have undertaken include:

Client	Project	Date
Cancer Research UK	Developed and tested a prototype information architecture for their main website. The rigorous testing process included qualitative observed testing as well as two rounds of remote testing with over 100 users.	March 2011
Hampshire Fire & Rescue	Ran a workshop to agree user goals then developed and tested an Information architecture using remote testing tool with 20 users including businesses, general public and at risk users, followed by two rounds of qualitative testing	July 2010
National Audit office	Tested a prototype Information Architecture using remote testing tool with 30 users including MPs	March 2010
LA Fitness	Following user research, a prototype information architecture (IA) was developed. These were then tested through two iterations with 12 testers.	Sept 2009
Bible Society	Developed and tested a new IA through user research and one round of testing with 5 respondents.	Dec 2008
Age Concern	Developed and tested a new IA through User research and two rounds of testing with 6 respondents.	March 2008

Fees

Most of our work is tailored to individual client's requirements and we quote an inclusive price for each piece of work. However, the following gives an illustration of typical costs:

- Qualitative Prototype IA Development (6 testers) - £4,950
- Quantitative IA Prototype Development Card sorting (12 testers) - £7,950
- Quantitative IA Prototype Development remote testing tool (30 testers) - £4,950
- Prototype testing (each session with 6 testers) - £4,950

Terms & Conditions

- VAT will be added to all charges at the currently prevailing rate. Payment will be within 30 days on the presentation of our invoice.
- Additional work not identified above would be charged at WUP's standard rates (£1000/day for directors, £800 for consultants, £350/day for support staff) Additional expenses not shown above would be charged at cost
- Cancellation of booked sessions will incur cancellation fees as follows: cancellation within 4 weeks of the session, 50% of the fee payable; cancellation within 2 weeks of the session, 100% of fee is payable
- The rates quoted assume tester remuneration of £40 plus travel expenses up to a maximum of £10. If tester remuneration needs to be greater than this for any reason (e.g. securing individuals with high time value or on short lead times) then any costs above the basic charge will be invoiced at cost.
- It is assumed that the client will invite the observers to research sessions