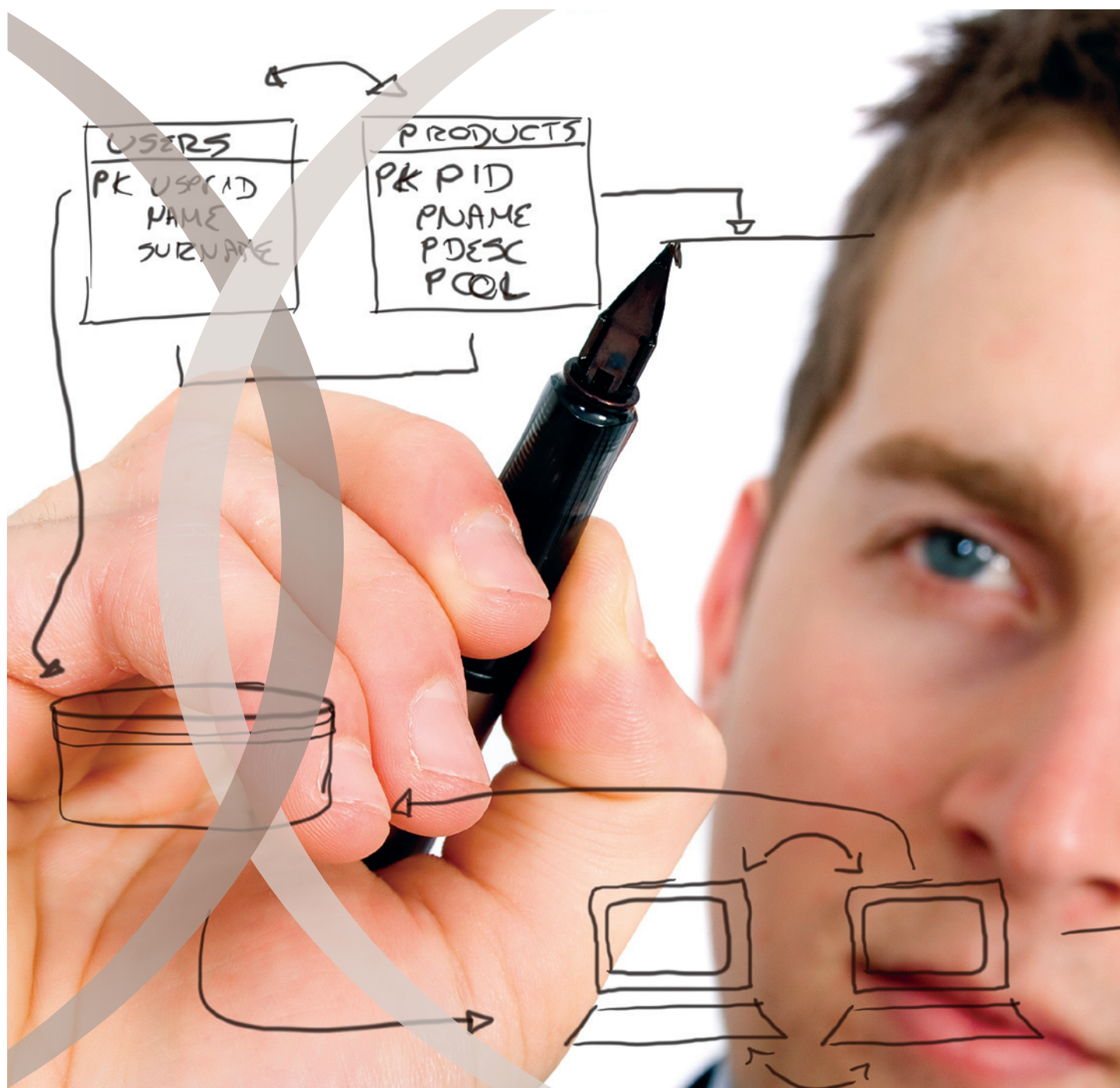


# The Guide to Researching Audiences

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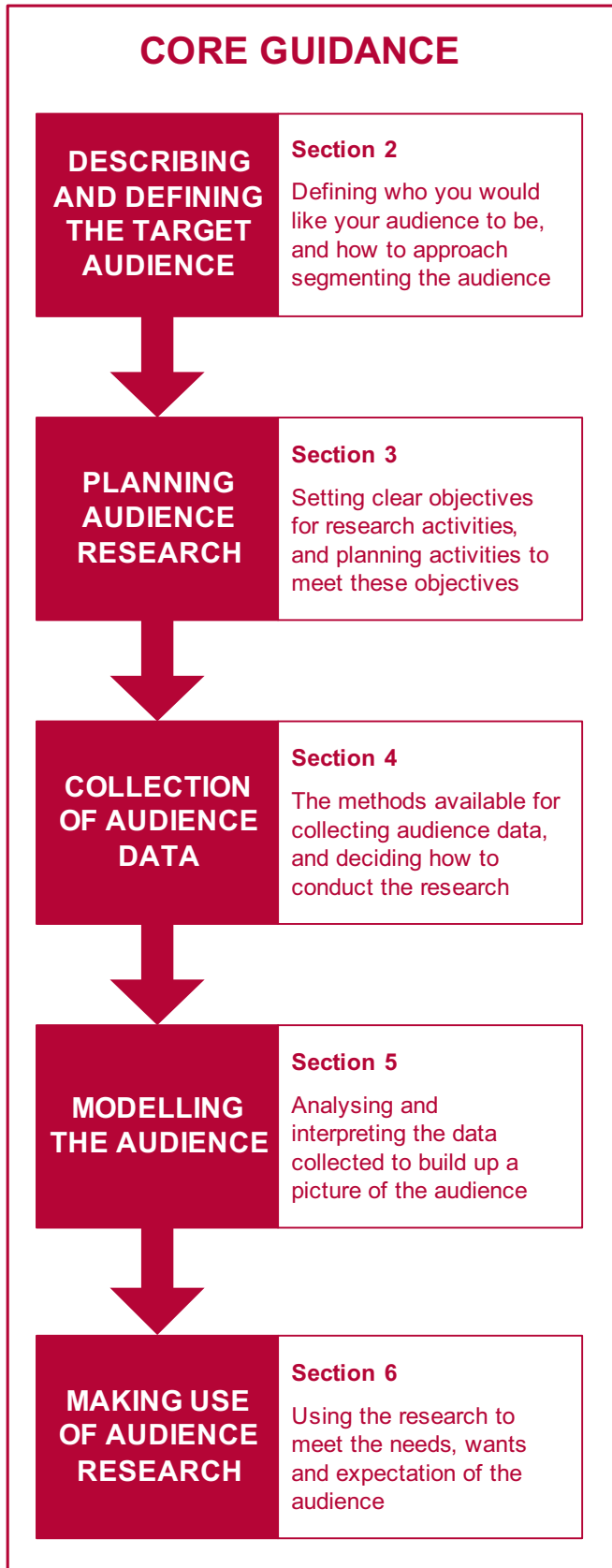
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## Overview of this Guide



# 1. Introduction

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## 1.1 Why, what, who...?

### Why do audience research?

1.1.1 It is increasingly important for public sector services and resources to be able to demonstrate that they are *used* and *valued* by an appropriate audience. The uses of audience research are discussed in detail at **Annex B**, and extend far beyond simply demonstrating a certain number of visitors or website hits to tick a box on a service level agreement. In summary, audience research can be used to:

- develop a product or service;
- evaluate the service (eg audience satisfaction);
- demonstrate accountability to funders (eg value for money, highly valued by a niche audience);
- inform long-term planning;
- attract sponsorship and marketing;
- inform business planning (eg to feed into a business case);
- inform the management of contractual relationships;
- support professional development.

Audience research does not need to be perfect to be useful

1.1.2 Audience research should be seen as an ongoing process, rather than an occasional, one-off event. Even a small audience research project is worthwhile. Many techniques can be implemented quite cheaply or adapted to a shoestring budget. Some insight into your audience is vastly better than none at all.

1.1.3 This guide has been produced by Curtis+Cartwright Consulting Ltd on behalf of the Strategic Content Alliance.

1.1.4 A glossary of the key terms used in the guide is provided at **Annex A**.



## Who is this guide for?

- 1.1.5 This guide has been written for people in the UK public sector delivering online digital services who wish to research their audiences.<sup>1</sup>
- 1.1.6 It is primarily aimed at non-experts who do not have market research skills themselves, and who do not have access to dedicated market research teams. It is therefore likely to be most useful for people in small organisations/services, or those conducting small projects in larger organisations. It may also be useful for people procuring services who want to know what guidelines to provide, and for those setting policies.

## What is in this guide?

- 1.1.7 This guide sets out the basic principles of audience research. These can be followed regardless of the type of service or audience, and will help you to conduct audience research more effectively (better results) and efficiently (lower effort), with fewer problems and unforeseen complications. They provide the building blocks to enable you to design, conduct and apply your own audience analysis research. What this guide will not provide you with is a ready-made audience analysis programme specifically designed for your service.
- 1.1.8 This is a guide to current good practice and a starting point for further reading. There is nothing very radical in this guide – there are many other resources available on audience analysis and modelling, some of which are referenced in this guide (see the bibliography at **Annex D**).
- 1.1.9 The guide has a specific focus on online digital services. The digital revolution has resulted in an explosion of possibilities: new and innovative services; a deluge of content; availability of additional research techniques (eg web statistics); and potentially new audiences. Relationships between digital content and non-digital content, between digital services and non-digital services and between a 'digital audience' and a 'non-digital audience' are a new and interesting consideration for service providers and are discussed in **Annex C**.

## 1.2 Using the guide

- 1.2.1 The basic principles are structured as step-by-step activities in the lifecycle of audience research (also represented in Figure 1-1):<sup>2</sup>
- **Describing and defining the target audience (Section 2):** if you wish to delve straight into the practical guidance, this is the place to start. It discusses the importance of knowing who you would like your audience to be, and provides guidance about how to describe and segment your target audience. This section will be especially relevant if you are currently designing a new service. However, it will also be relevant if you would like to start from the basics when planning research activities for services that are already in production and that have an established audience.

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1 Although it is focused on online digital services (ie those accessed via the Internet), it will also be useful for researching audiences reached via other channels.

2 Note that although these activities are presented as separate activities in a linear process, in practice this is not likely to be the case – it is likely to be an iterative process.



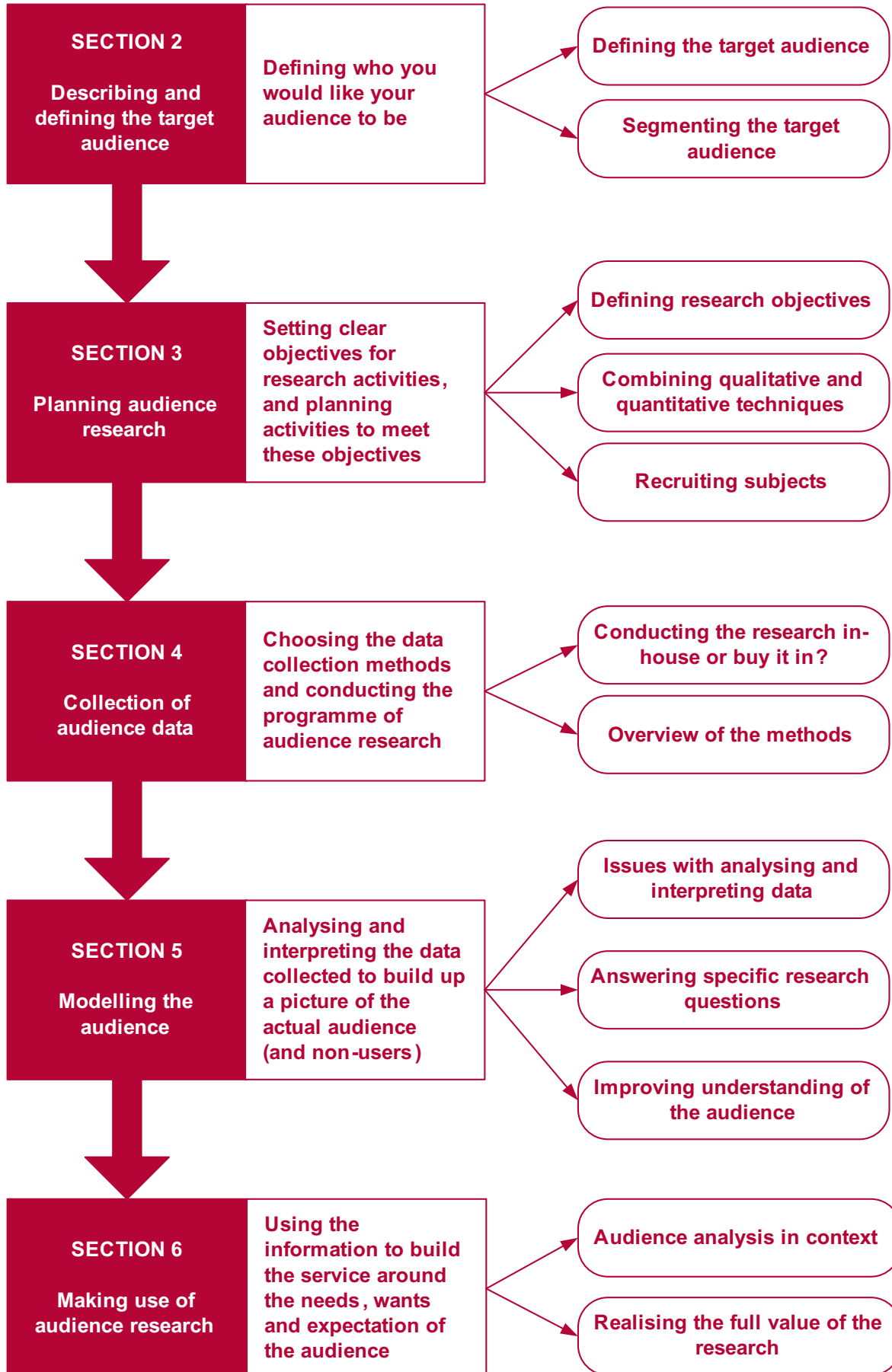
- **Planning audience research (Section 3):** this section is the place to start if you have already defined your target audience and wish to start planning your audience research. It addresses the importance of setting clear objectives for audience research activities, and things to consider when planning activities to meet these objectives. It also sets out example questions about the audience which can drive your research.
- **Collecting audience data (Section 4):** this section provides an overview of the various audience analysis methods available (eg focus groups, web analytics). It also provides some information about the pros and cons of conducting the research in-house and contracting the work out to a market research company to help you decide the best route for your organisation/service.
- **Modelling the audience (Section 5):** this section focuses on how to analyse and interpret the data that has been collected to address the specific research questions and build up a better understanding of the audience and their interactions with the service.
- **Applying the information (Section 6):** this section briefly discusses using the information to build the service around the needs, wants and expectations of the audience.

1.2.2 How you choose to use the guidance to plan and conduct a programme of audience research will be influenced by many factors including: the maturity of the service, the budget available, the amount of digital content held and the breadth of the target audience.



Figure 1-1

an outline of the step-by-step activities, and structure and content of the guide





## 1.3 Supporting documents

- 1.3.1 This guide is supported by a separate document which provides **real-world case studies** demonstrating good practice in audience research.<sup>3</sup> The case studies are from both the public and private sectors, and both the UK and abroad and are useful to gain a practical understanding of what can be achieved when audience analysis is done well.
- 1.3.2 An **illustrative case study** presenting a hypothetical programme of audience research to put this guide in context is available as a separate document.<sup>4</sup>

## 1.4 Senior management commitment

- 1.4.1 Audience analysis research should be done with commitment and support from senior management – without it, the full benefits of the research are less likely to be realised.
- 1.4.2 Should it be required, this guide provides you with some of the basic information needed to write an informal business case for audience research to facilitate buy-in from senior management.

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<sup>3</sup> *The Guide to Researching Audiences: case studies*, Curtis+Cartwright Consulting Ltd. v1.0.5 December 2008.

<sup>4</sup> *The Guide to Researching Audiences: illustrative case study*. Curtis+Cartwright Consulting Ltd. v1.0.5 December 2008.

# 2. Describing and Defining the Target Audience

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**This chapter discusses the importance of the target audiences and looks at ways of defining the target audiences, and approaches to audience segmentation**

**Knowing who you would like your audience to be and what service you intend to offer is a vital part of business planning and service development.**

Both formal and informal approaches to defining the target audience are possible.

Audience segmentation can be helpful when describing the target audience. Different ways of segmenting the audience which are discussed in this chapter include:

- Demographic segmentation.
- Segmentation for accountability to funders.
- Functional or task-oriented segmentation.
- Objective oriented segmentation.

## 2.1 The importance of the target audience

- 2.1.1 Knowing who you would like your audience to be and what services you intend to offer is vital for any service. It should be part of business planning as there are implications for methods of funding and potential routes to sustainability for a digital service.
- 2.1.2 The characteristics of the target audience should influence the delivery of a service, the functionality provided, means of access etc. It is important to recognise that a service may have more than one distinct audience. Needs and expectations of the different audiences are likely to be only partly overlapping and the implications this has for service delivery should be considered.
- 2.1.3 Understanding the audience can be vital to give a sense of focus and identity to a service. Trying to be all things to all potential users is difficult. Different groups of users may have incompatible needs (eg experienced academic researchers will prioritise heavyweight search and analysis tools when using an archive; leisure users will expect a very user-friendly interface that lets them quickly explore the archive and get a flavour of the contents). This doesn't mean that a digitised archive shouldn't aim to appeal to both audiences, but understanding that these are distinct audiences with different needs should inform the design and development of the service.



## 2.2 The concept of the target audience in service development

- 2.2.1 Service development may be either resource-driven or audience-driven. Both approaches are valid, but detailed service development should take into account the intended audience for the service. The service must appeal to them, so their habits, needs and expectations will have an impact on the nature of the service and the ways in which it is promoted.
- 2.2.2 **Resource-driven service development** might occur because someone has a great idea, or sees the potential for increasing the availability and uptake of a resource through digitisation. This approach is entirely legitimate, but the development work should still be dependent on identifying a potential target audience who will be served by the new resource and consider the likely requirements of this target audience.

### Consider this example....

If an archive is to be digitised, the design of the service will be influenced by the nature of the target audience and the way(s) in which it is envisaged this audience will use the resource. For example, the target audience will influence:

- the design of the interface;
- the types of searches enabled;
- availability of material for downloading and re-use;
- choice and positioning of metadata.

Audience analysis work during development of the digitised archive should probably include some audience engagement work as part of user needs assessment. Design of the service should also ideally include usability studies with potential users to ensure that the service works as intended in the hands of real world users and meets their expectations.

- 2.2.3 **Audience-driven service development** takes a target audience as the starting point for service development. An organisation might want to extend its offering to attract an audience for whom their traditional non-digital offerings are known to have limited appeal; alternatively an organisation might want to build on the good relationship it has with a particular audience by introducing new digital resources tailored to their wishes and expectations.
- 2.2.4 Again, understanding the target audience will be critical to the success of the service. Audience research will focus on finding out the sorts of resources and services that appeal to the target audience, how they would prefer to access the service, the technologies they use. Background knowledge about attitudes, lifestyle, social interactions etc. is also likely to be useful if the resource is to be primarily for leisure use rather than formal learning.

## 2.3 Defining the target audience

- 2.3.1 Defining your target audience doesn't need to be a difficult technical exercise. A good starting point may be to picture an ideal audience member – or a typical, actual audience member. How would you describe this person? The descriptors you use are good starting points for thinking about categories for audience segmentation.



- 2.3.2 A more formal approach to defining the target audience would be to develop a series of user profiles or fully worked personas as an aid to service design and development. Negative user descriptions, profiles or personas can also be helpful: the kind(s) of people your service is not intended for.
- 2.3.3 Guidance on developing user profiles and personas can be found in Section 5.

## 2.4 Describing the target audience

- 2.4.1 The characteristics of the target audience should influence the delivery of a service, the functionality provided, means of access etc. The features included in a description of the target audience will vary according to the service but may include residential address, occupation, gender, interests, technological expertise etc. A target audience may be very inclusive (eg all the people in Manchester) or highly specific (eg qualified medical professionals with a research interest in Osgood-Schlatter's disease).

### Audience segmentation

- 2.4.2 Audiences are often *segmented* into different categories. Published data (eg television viewing figures, newspaper readership) often segments the audience on the basis of demographic categories. Academic libraries are more likely to categorise users according to their role within academia. The most appropriate way to define a target audience and segment the actual audience will depend on the service and the objectives of the audience analysis work and several different approaches to segmentation are possible. The more personal data you try to collect about users the more likely users are to refuse information or fail to complete your survey, so prioritising information needs is important.

### Demographic segmentation

- 2.4.3 This is a very common way of segmenting audiences which is used in population surveys. In considering the categories to be used you may want to bear in mind that some of the audience may be reluctant to use certain categories and fail to supply category data, refuse to provide data altogether or provide incorrect data. Demographic segmentation might include segmentation on the basis of gender, age, educational level, income, postcode, occupation etc.

### Segmentation for accountability to funders

- 2.4.4 If a service level agreement specifies a particular priority audience (eg parents with pre-school children) then segmentation should include this as a category. Further segmentation may or may not be useful eg fathers, mothers, other carers for pre-school children, responsible for male, female or both sexes of children. This additional segmentation might be beneficial if the service provider suspected or knew that the needs or expectations of these sub-segments were different, or thought that the service was underused by a sub-segment.



### Functional or task-oriented segmentation

- 2.4.5 This may often be more useful than demographic segmentation but it can be difficult to define non-overlapping categories, or to define categories clearly and ensure that respondents categorise themselves as you anticipate. Ideally audience segments should be defined unambiguously; descriptions of categories which seem long, complex or overly technical to respondents will be off-putting.

#### Consider this example....

Digital academic services might choose a functional scheme based on the role of the user. For example, an **academic researcher**:

- formal learner, ie a student enrolled on a course leading to a recognised national HE qualification;
- independent learner;
- leisure user.

But this scheme doesn't capture what may be important distinctions, for example:

- mature students vs. other students;
- graduate researchers vs. experienced researchers;
- casual leisure users vs. committed, knowledgeable leisure users.

- 2.4.6 Segmentation should capture the most relevant differences between users. For example if a the service is interested in comparisons between mature students and other students because it is believed (or there is audience research to show) that mature students tend to have lower confidence or skill levels when using IT, it might be more appropriate to categorise users in terms of self-rated IT skills. The service should also consider whether it matters that different users will have a different idea of what constitutes proficiency in IT skills.

### Objective-oriented segmentation

- 2.4.7 Under some circumstances segmentation on the basis of users' goal(s) or objective(s) may be most appropriate. If you are interested in learning about audience needs and expectations, and how effective your service is in meeting those needs, it will be important to know why your audience used the service, what their objective was and how successful they were in achieving it.

#### Consider this example....

Object-oriented segmentation for the audience of a museum – *who is your museum website for? and what goals will your users have?*

- users planning a visit to the museum – seeking basic information about opening hours and travel;
- users who have visited the museum – wanting to learn more about museum exhibits following their visit;
- researchers – with a professional interest in the collections.



## Understanding non-users

- 2.4.8 Understanding non-use of a service is important: publicly funded services may have a responsibility to service a particular audience (eg senior citizens, ethnic minority communities). Where digital services are an alternative or complementary service it may be desirable to ensure that they reach a segment of the audience who fail to use the pre-existing non-digital service.
- 2.4.9 High numbers of satisfied users may not tell the whole story about a service – parts of the target audience may have been unable to access the digital service. Their views are unrepresented in user surveys and the digital service is not meeting their needs; this may be an important failing.
- 2.4.10 Segmenting non-users can be useful. An important distinction can be drawn between non-users who aren't aware of the service and non-users who are aware of the service but have chosen not to use it. Non-users who are aware of the service could be further divided into ex-users (those who have sampled the service at least once) and 'never users' (those who have not sampled the service). What is the reason for non-usage (eg too expensive, too difficult to access, happy with an alternative, not interested etc.).
- 2.4.11 Drawing distinctions between non-users immediately raises further questions which can be a useful starting point for addressing the problem of non-usage:
- why ex-users no longer use the service;
  - whether low levels of awareness indicate a problem with discoverability;
  - how accurate non-users' perceptions of the service offering are etc.

# 3. Planning Audience Research

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**This chapter looks at defining research objectives, selecting and combining appropriate methods, researching non-usage and recruiting subjects**

**Research need not be perfect to be useful – the key to good audience analysis is setting out clear objectives and planning appropriate research to achieve the objectives. Engaging non-users is important but presents special problems.**

Objectives can be broadly divided into two categories: assessment of reach and uptake, and assessment of quality and impact.

Starting points for planning research include:

- Defining service development objectives.
- Defining questions about the nature and behaviour of the audience and non-users.

Different audience research techniques are suited to different objectives and methods can be combined.

## 3.1 Introduction

- 3.1.1 Planning audience research should start with the basic question: *what do you want to know about your audience?* Considering *why the knowledge is needed* and *how it will be put to use* is also important. Understanding the audience is not an end in itself, but an integral part of developing and maintaining a successful and sustainable service. Understanding the drivers for and uses of audience analysis work will help to ensure that it is aligned with wider service vision and objectives and may help to obtain buy-in from senior management.

## 3.2 Objectives of audience analysis

- 3.2.1 The key to good audience analysis is setting out clear objectives and planning appropriate research activities to meet these objectives. There is little point in spending time, money and staff effort collecting data unless it is going to be useful.
- 3.2.2 Audience analysis can be divided into two broad, interdependent categories:
- assessment of reach and uptake;



- assessment of quality and impact.
- 3.2.3 In planning audience research it is helpful to decide how important each aspect of the analysis is.
- 3.2.4 Analysis of reach and uptake should be a priority if the size and/or composition of the audience is important. For example, a recently introduced service needs to demonstrate a minimum audience in order to receive further funding. Clearly, if a segment of the target audience is under-represented or audience size is smaller than expected questions about the quality of the service will form part of the future investigations of non-usage.
- 3.2.5 Analysis of audience satisfaction measures will be a priority if maintaining or enhancing the service is important and there are few concerns about the size and composition of the audience, eg services for a clearly defined, specialist audience where there is no direct competition.

### 3.3 Starting points for defining audience research objectives

- 3.3.1 It is beyond the scope of this guide, or any other, to provide a ready-made list of research objectives as these must be set according to individual service priorities and context. This section provides some starting points for identifying broad aims and defining more specific objectives.

#### **Service development objectives can drive audience analysis**

- 3.3.2 Often the service development context provides a good starting point for framing questions:
- How can we extend the reach of our service?
  - How can we enhance the service for existing users?
  - How can we encourage regular users of our service to become registered users?
  - How can we appeal to a larger audience?
  - What additional content/features/services would our audience appreciate?
  - What does our audience expect from our service?
  - Does audience perception of the service match what we are attempting to provide?
  - Is any part of our service obsolete or redundant?
  - Is our redesigned service a success ie have the objectives of the redesign been met?



### Consider this example....

Broad service development objectives such as 'how can we enhance the service for existing users?' can be used to define specific audience research questions which will provide the evidence relevant to the broader questions.

Specific research questions to help answer 'how can we enhance the service for existing users?' include:

- How do users rate the existing service?
- Are they aware of all the features of the service?
- What do they think is best about the service?
- What do they think could be improved?
- What additional content or functionality would they use?
- Which aspect of the service is most important to them? etc.

## Questions about the audience can drive audience analysis

3.3.3 All audience analysis aims to improve understanding of the audience, both service users and non-users. Thinking about your audience and what you need to know about them provides an alternative starting point. These questions (see also Figure 3-1) are not intended as a definitive or prescriptive set, but as a stimulus for discussion.

### Who are our audience?

- demographics, eg age, gender, socioeconomic categories, geographical location, level of education etc.;
- functional, eg professional/researcher/other specialist, formal learner, independent learner, leisure user, accidental/impulse user, mature learner etc.;
- goal orientation eg defined objective, browser, systematic explorer, impulse/accidental use etc.;
- preferred platform etc.;
- domain expertise eg for users of Electronic Beowulf, how much they know about Beowulf, linguistics and Anglo-Saxon literature;
- platform or technological expertise ie expertise, confidence and familiarity with the platforms and technology from which a service or resource can be accessed.

### How do they use our service?

- means of access;
- frequency of usage eg regular, repeated, occasional, one-off;
- what they use it for;
- are any alternative services used for the similar purposes?

### Why do they use our service?

- in preference to a non-digital service?



- is there an alternative?
- quality; authority; comprehensiveness; convenience (speed and ease of access); social cache.

#### Does the service meet their needs and expectations?

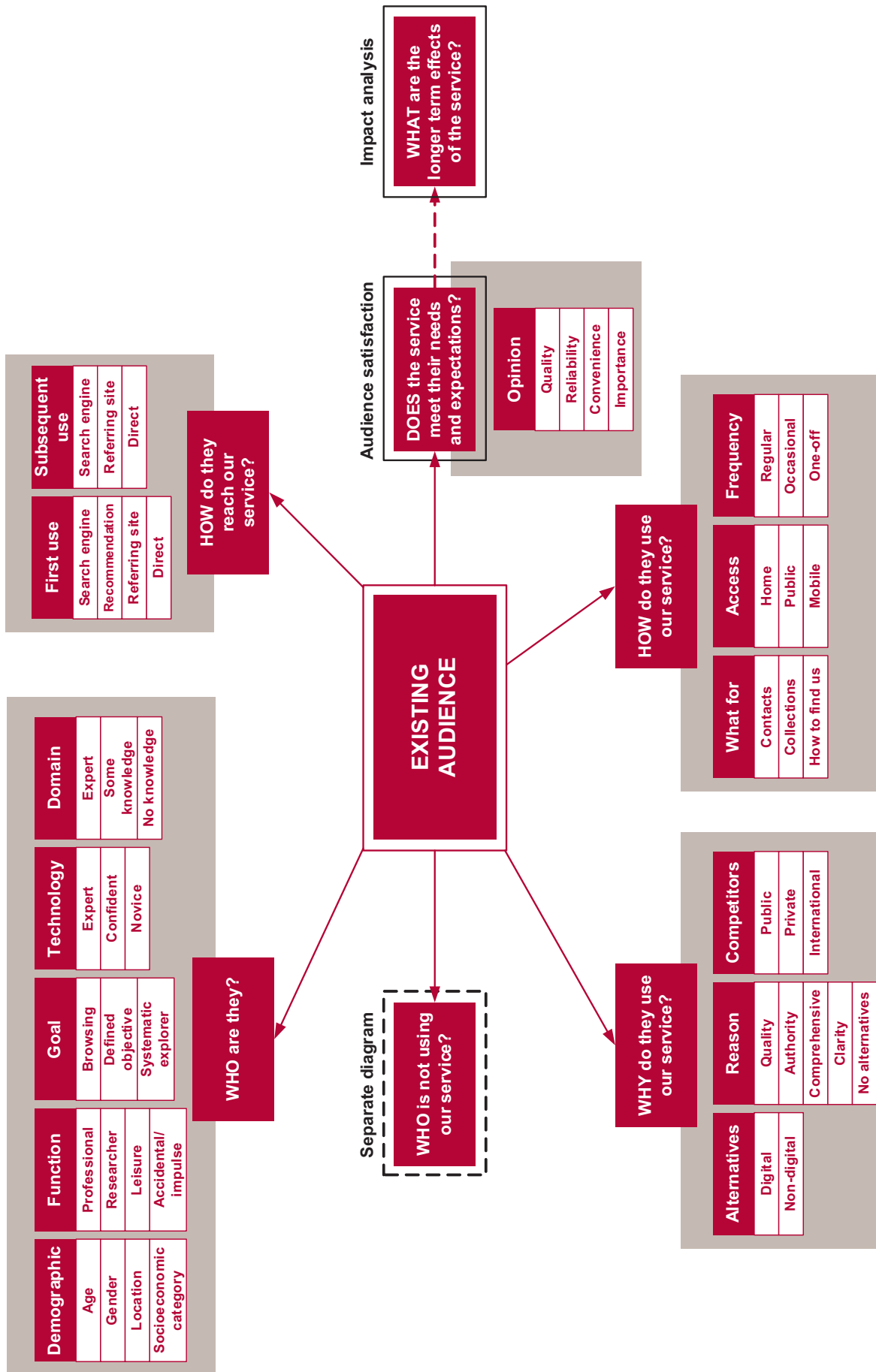
- expectations – including expectations of extensions and enhancement;
- needs;
- importance;
- quality: strengths, weaknesses, suggested improvements;
- reliability;
- authority;
- comprehensiveness;
- convenience.

#### How do users discover/reach our services?

- how originally discovered eg search engine, referring site, offline referral, recommendation (who?), other media (advertisement?), event;
- how reached in subsequent usage.



Figure 3-1  
questions about the audience





- 3.3.4 Many of the questions about users are also relevant to non-users, but some issues are particularly relevant when considering non-users (see also Figure 3-2).

**Who are they?**

- which segments of target audience are under-represented?
- which segments of the general potential audience are under-represented? (and does this matter?)

**Why don't they use our service?**

- awareness:
  - do they know it exists?
  - were they able to discover it?
  - were they able to access it?
  - have they tried our service?
- Perceptions:
  - what do they think the service offers and how do they rate it for quality, value for money etc.?
  - who do they think uses the service?
  - how could they be persuaded to use the service?

**What alternatives to our service do they use?**

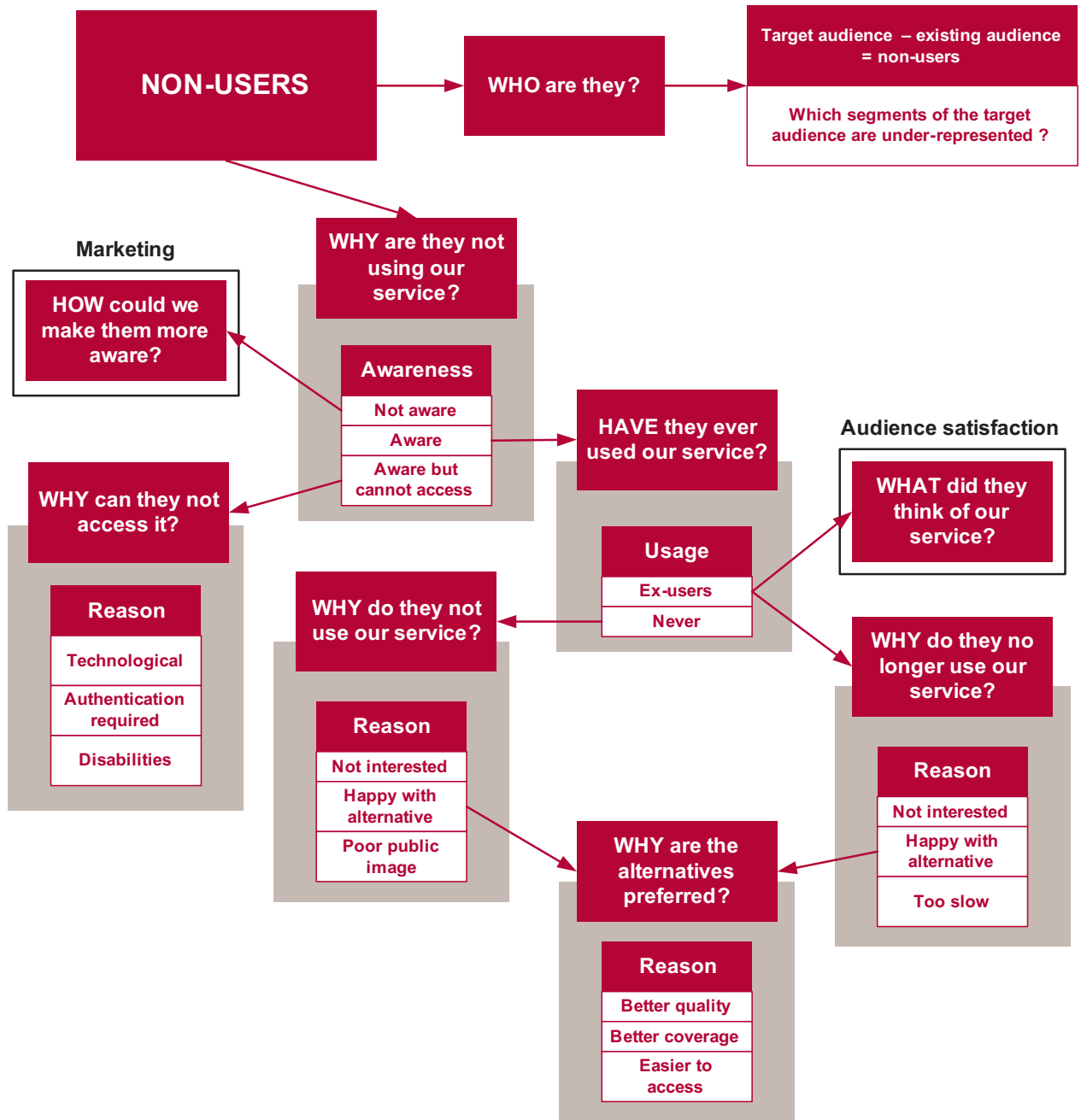
**Why are these alternative services preferred?**

- speed, ease of access, quality, authority, comprehensive coverage etc.

**How well do these alternative services meet their needs and expectations?**



Figure 3-2  
understanding non-users





## 3.4 Choosing the methodology

### Different approaches to audience analysis

- 3.4.1 Audience analysis methods can be categorised in different ways, but the distinction between quantitative and qualitative methods is an important one. Quantitative methods are usually more appropriate when statistically valid conclusions need to be drawn about the size, composition and other properties of an audience. Qualitative techniques may be more appropriate for exploring attitudes and motivations in depth, discovering patterns of user behaviour and developing a relationship with audience members.

### Qualitative data

- 3.4.2 Small samples tend to be used and findings cannot be treated as a statistically reliable measure of the audience as a whole. However qualitative research can be invaluable in exploring the complexities underlying audience behaviour, helping to explain why audience members behave in the way that they do.

- 3.4.3 Examples of methods producing qualitative data include:

- focus groups;
- one-to-one, in-depth interviews.

- 3.4.4 In certain circumstances, information collected via a quantitative survey can be qualitative in nature, eg free text responses to open questions.

### Ethnographic or observational data

- 3.4.5 A wide variety of direct and indirect observational techniques are increasingly used for studying usability and patterns of service use. Ethnographic data is often very detailed and may include computer collected data which is amenable to statistical analysis as well as a qualitative record of user behaviour.

- 3.4.6 Examples of methods producing ethnographic data include:

- diary studies;
- user generating scenarios;
- task-focused scenarios;
- accompanied browsing.



### Quantitative data

- 3.4.7 Quantitative data provides information about quantities and frequencies. Non-numerical data can be coded or categorised to render it amenable to quantitative analytical techniques. Quantitative data is generally collected from a sample large enough to permit statistical analysis. Conclusions from statistical analysis will usually be stated with a degree of confidence.<sup>5</sup>
- 3.4.8 Examples of methods producing quantitative data:
- telephone and face-to-face surveys;
  - postal surveys;
  - email surveys;
  - online surveys;
  - web analytics.

### Representative data

- 3.4.9 Samples are said to be *representative* when the composition of the sample audience – with respect to all relevant attributes – is the same as that of the audience as a whole. In some instances it is important to obtain data from a representative sample of the audience eg to assess the level of uptake, to provide evidence for attainment of key performance indicators (but see also sub-section 6.8.4).
- 3.4.10 Using representative samples demands a knowledge of the frequency of different segments in the target or actual audience. Assessing the representativeness of a sample requires information about the segment to which subjects belong. It is sometimes *assumed* that a sample is representative if there is no obvious evidence of bias, or if the sample size is large. Unexpectedly low response rates are a potential indication of sample bias and should generally be investigated.

### Selecting appropriate methods

- 3.4.11 The kind of information you want about the audience should help to determine the methods you use but pragmatic considerations (eg time, money, difficulty of recruiting subjects, staff availability and expertise required) will inevitably play a part.
- 3.4.12 Table 3-1 provides a guide to the methods most likely to be useful in researching different aspects of the audience.

5 For example: based on this sample, 95% of the audience as a whole will fall between these limits; or, as a probability value expressing the likelihood of obtaining the same result by chance.



Table 3-1

Selecting appropriate methods (Key: – unlikely to be suitable; \* may be suitable, but of limited use; \*\* often suitable)

Aspect of audience	Quantitative-survey	Web statistics	Ethnographic studies	Focus groups	Individual interview	Informal	Other approaches
Size	**	**	-	-	-	-	-
Composition	**	* more detailed data about registered users	-	-	-	*	-
Motivations	**	*	-	**	**	*	-
Attitudes	**	*	-	**	**	-	-
Satisfaction	**	*	-	**	**	-	-
Prevalence of non-usage	**	-	-	*	-	-	-
Reasons for non-usage	-	-	-	**	**	-	-
Patterns of usage	-	**	**	*	*	-	-
Tasks service is used for	**	**	** user tracking	**	**	-	-
Lifestyle	*	-	**	*	**	-	-
Service usability	*	*	**	*	*	-	Heuristic evaluation <sup>6</sup>
User requirements	-	-	**	**	**	*	-

### Combining methods in audience analysis

3.4.13 It is common to use a combination of methods in audience analysis projects: this makes sense for a number of reasons:

- different segments of the audience may be recruited with different methods;
- different methods have different advantages and disadvantages;
- different methods provide data on different aspects of the audience and their behaviour.

3.4.14 In planning an audience analysis project bear in mind how data collected early on in the project can be used to adjust and improve plans for the later research. It is common to combine quantitative surveys with focus group or interview work. Which should come first? Responses to a survey may raise issues that hadn't been anticipated and suggest appropriate questions and themes for more detailed exploration in focus groups.

6 See Section 4.4



Alternatively, you may prefer to carry out a small number of interviews or a focus group and distil key findings so that validity can be tested with a representative quantitative survey. Talking to audience members individually or in groups might suggest topics for inclusion in a survey.

- 3.4.15 If ethnographic work is to be combined with an interview or short survey questionnaire the same subjects could be used for both elements of the research. It might be helpful to follow an observation session with an interview so that you can discuss what was observed and ask about good and bad aspects of the user experience. On the other hand it may be harder to recruit users for a study requiring a longer time commitment. You could ask interviewees or survey respondents if they would be willing to participate in further research. Then the order in which users complete the different elements of the study may be critical as your questions might influence the user's behaviour during the ethnographic study or the user's experience of the service during the ethnographic session may affect their attitude and rating of the service when they're answering survey questions or being interviewed. These are issues which need to be considered in planning the research.
- 3.4.16 Another consideration is the duration of the research:
- **one-off projects** to provide a snapshot of an audience at a single point in time;
  - **repeated surveys** ie undertaking similar surveys on a regular basis to monitor trends or assess the impact of change;
  - **longitudinal research** ie the same sample of audience members is tracked over a period of time (eg to monitor the impact of development activities); a variety of measures may be used.

## 3.5 Researching non-usage

### The importance of research on non-users

- 3.5.1 Engaging with non-users may be difficult, time-consuming and potentially expensive, but it should be viewed as a necessary part of audience development work. Building up relationships with non-users will pay dividends:
- non-users can provide valuable insights for service development;
  - engaging non-users can help demonstrate a commitment to that audience segment and increase knowledge about marketing and communication strategies that will be effective for that segment.

### Identifying non-users

- 3.5.2 Reliable data about actual usage of a service can be compared with an accurate description of the target audience to derive a picture of non-usage, but this picture of non-usage will only be as reliable as the data about users and target audience from which it is derived.



- 3.5.3 Descriptions of the target audience will often be insufficiently detailed eg no information available about the frequency or proportion of the target segment either because functional segmentation has been chosen, or because appropriate demographic data is not available. Even if a good description of the target audience is available, obtaining a good estimate of the number and nature of users may be difficult, particularly for digital services (multiple users for one IP address, the same user logging on at work, at home, in a public setting etc.). Professional expertise and informal audience research may be the best clues to patterns of non-usage: these can be tested and followed up with more formal research.

## Investigating non-usage

### Reasons for non-usage

- 3.5.4 Responses to a survey may not provide very much information. Engaging more deeply with non-users through focus groups, discussion fora and interviewing will be necessary to build up a richer, more meaningful understanding of non-usage.

### Recruiting non-users

- 3.5.5 Reaching non-users can be problematic – their opinions, attitudes and habits are not represented in service usage statistics or surveys. People are less likely to be willing to spend time answering questions about a service or resource that they don't use than one they value highly.
- 3.5.6 One way of gaining an insight into how widely your service is used is to question the whole of your target audience through a widely distributed survey. Depending on the size of your target audience and how easily you are able to contact them this may be difficult and expensive. Possible strategies include:
- Adding your questions to a survey being distributed to, or carried out on, the general population – market research services carry out broad surveys and local governments may also attempt to survey their electorate. So-called Omnibus surveys can be a very cheap way of surveying large populations. They are accessed on a pay-per-question basis so a couple of well constructed and clearly focused questions can be answered relatively cheaply (for instance, relating to awareness of a service and key barriers to use).
  - Carrying out a more general survey yourself or paying a market research company to do so on your behalf.
  - Targeting audience segments you suspect are under-represented by choosing methods known to be effective in reaching that segment eg choice of a particular medium, buying a contact list from a relevant organisation, enlisting the help of an organisation which represents or works with the segment of interest.
- 3.5.7 It may be helpful to enlist the help of organisations who have the trust and confidence of your non-users. Non-users are likely to be more willing to engage if you are able to convince them that their participation may have a pay-off, that their voice will be listened to and their comments may influence service provision in the future. Direct incentives for participation are usually offered as well.



## 3.6 Recruiting subjects for audience research

- 3.6.1 Recruiting subjects is a perennial problem and the easiest technique may not always be the best. Recruiting committed members of the audience to take part in research tends to be easiest and this is one potential cause of an unrepresentative, biased sample. Recruitment will be more difficult if a big time commitment is required or the research is going to be inconvenient for subjects. Incentives can be used to aid recruitment, but care needs to be taken to ensure that the incentive is appropriate to the audience you seek to recruit.

### Recruiting for quantitative research

- 3.6.2 Surveys can be distributed in a number of ways and it is possible to combine methods to improve response rate. Each method has advantages and disadvantages. Surveys can be:
- placed on a website;
  - emailed to known users, the whole target audience or a sample of the target audience;
  - posted;
  - administered by an interviewer by telephone or in person.
- 3.6.3 Placing a questionnaire on a website requires minimal administrative effort, does not require contact details and is cheap, but combining the response data with web statistics is necessary to obtain an estimate of response rate. Response rates tend to be low and there is no way of controlling response bias in the sample; some types of user are more likely to respond than others.
- 3.6.4 If the composition of the audience sample is important then surveys administered by interviewer may be most appropriate as it is possible to set quotas for particular audience segments.
- 3.6.5 Information about response bias – systematic differences between respondents and non-respondents – may be obtained if an attempt is made to contact non-respondents via an alternative method and discover their reasons for not responding. This may be attempted if it is particularly important to have a representative sample or where the aim was to survey the complete audience.
- 3.6.6 Survey design can be an important factor in response rate and drop-out rate (the proportion of respondents who cease responding part of the way through the survey). Higher response rates and lower drop-out are more likely if:
- surveys are short;
  - questions and possible responses are easy to understand;
  - it is possible to save a partially completed survey and return later;
  - survey navigation is easy and the survey is very usable;
  - questions are varied in their style, format and subject (for example, avoid repeated usage of banks of similarly worded and visually undifferentiated attitude statements).



#### Recruiting for qualitative and ethnographic research

- 3.6.7 Recruiting subjects for qualitative research presents slightly different problems. The time commitment required is typically greater and if participation in the research is limited to members of the audience who are available during working hours it will be difficult to obtain a representative audience sample. Recruitment is likely to be more successful if potential subjects are contacted in person.

#### Recruiting registered users

- 3.6.8 Digital services may offer users incentives to register; building a relationship with at least part of the audience in this way can pay dividends for audience research. Registered users may be more frequent, more loyal or more committed to the service and therefore more willing to participate in research. Of course the implications of differences between registered users and the rest of the current and potential audience should be borne in mind, but at a time when more and more organisations and audience research professionals are reporting 'survey fatigue' amongst audiences the value of having an easy to recruit audience sample for audience analysis work should not be underestimated.
- 3.6.9 An extension of this idea is to set up research panels. These consist of a sample of audience members who have been recruited specifically for the purpose of regularly (ie on an ongoing basis) responding to surveys – qualitative and/or quantitative. The advantage of this approach is that research can be organised relatively quickly and inexpensively since the sample is already in place. In some instances, prior knowledge of and involvement in previous audience research projects can be advantageous – although there are also potential dangers relating to lack of objectivity. Familiarity with issues can help to 'fast-track' panel members to a level of thinking about a service which ultimately results in added insight. In the public sector, Citizens Panels have become popular with local authorities and health care trusts in particular but also to an extent with a variety of community planning organisations. These are, in effect, large scale research panels.

## 3.7 Other sources of audience data

#### Using other people's data

- 3.7.1 Don't neglect the possibility of increasing your understanding of *your* audience by looking at research done by other service providers on *their* audience or by using data from population surveys carried out by market research organisations, government agencies or academic bodies eg the Oxford Internet Institute biannual survey of internet usage.<sup>7</sup>
- 3.7.2 If you know – or even if you just suspect – that your audience is similar to that of another service you could use information about that audience's attitudes and preferences to inform your own service development. If you know the composition of your audience then population surveys with the required segmentation can provide a useful guide to aspects

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<sup>7</sup> Oxford Internet Institute surveys [www.oii.ox.ac.uk/microsites/oxis](http://www.oii.ox.ac.uk/microsites/oxis)



of your audience eg data on media consumption could be used for marketing purposes, lifestyle-related questions might provide suggestions for service enhancement. Personas or user profiles from a similar service might be useful in service development work.

- 3.7.3 A related point is that the audience for the non-digital version of a service, whether or not they overlap with the actual or target audience for the digital service, may be a good source of data and this audience may be easier to recruit for audience research: alternative survey methods can be used, interviewers can approach visitors face-to-face etc.

### Informal sources of audience data

- 3.7.4 Exploiting informal knowledge about your audience is a smart thing to do and can be particularly valuable if resources for audience analysis are limited. These sources might include:

- calls to a helpdesk;
- emails to digital service technical support;
- observations by staff who interact directly with the audience;
- unsolicited comments or suggestions from your audience.

- 3.7.5 The main problem is finding a way to record and collate these data so that they can be used in planning formal research.

## 3.8 Audience research does not need to be perfect to be useful

- 3.8.1 A frequently expressed concern is that a piece of audience research won't be any use because it isn't good enough. Some knowledge about the audience is very much better than none at all and these concerns should not deter you from doing audience analysis.

### Representative data are not always vital

- 3.8.2 A common concern in planning audience research is that an audience sample will be too small and not necessarily representative of the audience as a whole or the target audience as a whole, but this may not always matter.

- 3.8.3 It is **more important** to ensure that your audience sample is complete or representative when:

- reach and uptake are being assessed relative to a specific target audience;
- big decisions about commitment of resources are dependent on the findings;
- the service should be universal *ie* reach 100% of targeted audience segments;
- findings will be used as evidence for accountability purposes eg attainment of key performance indicators.

- 3.8.4 It is **less important** that the sample is representative when:



- research is preliminary and exploratory;
- the audience is homogeneous;
- variability in the audience characteristics or behaviour under investigation is low;
- research will inform service development for a subset of the general audience;
- satisfying a committed audience is more important than keeping or recruiting a large audience;
- a lightweight, short analysis of a more representative sample can be carried out as a follow-up (eg self-completion survey rather than one-to-one interviews; web statistics provide evidence on usage of a new feature; a shorter survey for wider distribution follows up important or contentious issues raised by a detailed survey of small sample).

# 4. Collecting Audience Data

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**This chapter provides an overview of different methods for collecting audience data and considers outsourcing audience research**

The pros and cons of conducting research in-house and commissioning an independent market research agency to undertake it on your behalf are discussed.

Data collection methods covered include:

- Quantitative surveys.
- Interviews.
- Focus groups.
- Web statistics.
- Ethnographic (observational) techniques.

Other approaches to building understanding of the audience are briefly discussed.

## 4.1 Undertaking research: in-house or third party?

- 4.1.1 Technological advances make it increasingly tempting to conduct research on a 'DIY' basis, rather than commissioning an independent market research agency to undertake it on your behalf. However, it is worth considering a number of factors before deciding if the in-house or commissioned research route is most appropriate:



Table 4-1  
*In-house research*

Approach	Pros	Cons
<b>In-house research</b>	<ul style="list-style-type: none"> <li>■ Can often be the least expensive option – especially if expert in-house resources are available.</li> <li>■ Knowledge of the audience: expert knowledge and/or experience can help in planning and conducting research.</li> <li>■ Greater level of control: a market research agency might have different ideas about how to research an audience.</li> </ul>	<ul style="list-style-type: none"> <li>■ Lack of experience in conducting research can lead to poor research design and other problems that an experienced research agency would have anticipated and planned for.</li> <li>■ Questionnaire design is surprisingly difficult to get right. Poorly designed questions result in ambiguous or misleading data. Experience of questionnaire design is important.</li> <li>■ Similarly, unless knowledge of statistical and sampling techniques is available in-house, mistakes are likely to be made – both at the planning and at the analysis stages.</li> </ul>

Table 4-2  
*Commissioned research*

Approach	Pros	Cons
<b>Commission market research company</b>	<ul style="list-style-type: none"> <li>■ If carefully selected, a research agency will bring expertise and experience to bear, resulting in a more efficient (possibly even more cost-effective) survey and greater clarity of understanding.</li> <li>■ The involvement of a respected, independent third-party brings credibility to the research. This can help in achieving senior management buy-in to the findings; in some circumstances funding bodies might look more favourably on a case founded on independently-conducted audience research.</li> <li>■ Respondents are generally more likely to respond openly and honestly to a third-party than they would if the service-provider asks the questions directly – especially if they are critical of aspects of the service but prefer not to damage the relationship.</li> <li>■ Market research agencies have access to specialist resources required to conduct research. These include: <ul style="list-style-type: none"> <li>■ Interviewers and focus group recruiters in all areas of the UK.</li> <li>■ Specialist questionnaire design and survey analysis software.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>■ Commissioned research can be expensive.</li> <li>■ The process of identifying potential research agencies, writing a research brief and briefing the selected agency takes time.</li> <li>■ Even market research agencies experienced in your sector will lack your detailed knowledge. Be prepared to spend time ensuring that the agency understands the nature of your audience and what you are trying to find out about it.</li> </ul>



## How do you decide which market research company to use?

- 4.1.2 'The Research Buyer's Guide',<sup>8</sup> published by the Market Research Society, has some useful information, both on the type of market research company to choose from and on the questions to bear in mind when selecting a company.
- 4.1.3 It includes advice on whether to sub-contract some elements of a research project to consultants (eg quantitative interviewing or recruitment of focus groups), or buy-in the full service (where professionals will help to design the research and collect, analyse and evaluate data). Other options are to hire agencies to do fieldwork (the interviewing process) and tabulation (producing data tables from a survey) – these types of agencies typically have a team of face-to-face interviewers and/or a telephone interviewing centre, together with data coding and processing resources. There are also data processing agencies which do not undertake interviewing but can provide computer data processing and analysis resources and expertise.
- 4.1.4 When selecting an agency, it would be useful to consider the following questions:
- Which company best understands your needs and project background?
  - Which company has added to your thinking about how research should be planned?
  - Has the company challenged suggested approaches, highlighting possible difficulties and solutions?
  - Does the company have relevant experience, in terms of industry, sector, audience, subject-matter and methodology?
  - Does the approach suggested by the company offer value for money?
  - Would the company be credible presenting to senior management and other internal and external stakeholders?
  - Will experienced staff be allocated to the project (and not just appear at the beginning and end of a project)?
  - Can you form a productive working relationship with the research company's team?

## 4.2 Overview of data collection methods

- 4.2.1 Information on different methods of collecting audience data is summarised in the following tables, providing practical guidance for using these methods. The set of methods covered is not intended to be definitive and detailed information on how to implement each method is not provided.
- 4.2.2 Most audience analysis methods can be used or adapted successfully by non-specialists; however, there are some circumstances under which it may be appropriate to consider outsourcing one or more elements of an audience analysis project.

<sup>8</sup> *Research Buyer's Guide, UK and Ireland (2007)*; London: Market Research Society.



## Web statistics

- 4.2.3 Providing resources online brings new opportunities to measure their usage, and to understand the ways that users interact with them. In this document, we have divided this into two methods – ‘traditional’ web statistics and web analytics. This is a somewhat artificial boundary, but one that is necessary to consider the full range of opportunities. Traditional web statistics considers bulk information on a resource (ie looks at usage from the service’s perspective), whereas web analytics considers the actions and pathways chosen by individual users (so looks at usage from a user’s perspective).
- 4.2.4 Both these methods are quantitative, but the numbers generated must be treated with care: a vast range of statistics is available, but to understand which are meaningful requires a combination of technical and business understanding. For commercial sites, there is often a clear goal for users – a concluded sale. A key measure for many commercial sites is the conversion rate – the proportion of visitors who make a purchase. There is no direct equivalent for a resource which is free at the point of use, and drawing insight from the numbers requires creative analytical thinking and careful validation.

## Registered users

- 4.2.5 Increasingly both digital and non-digital services may require or permit users to ‘register’ in some way. This allows the service to collect information about users – subject to the provisions of the data protection legislation. User registration can be exploited easily by digital services for audience analysis: requiring users to authenticate allows user characteristics to be associated with user behaviour. Although this can be a powerful analytical technique there are potential drawbacks:
- unless users are authenticated by a trusted authority the data they provide about themselves may not be accurate;
  - it is unlikely that registered users are representative of the audience as a whole eg they may make more frequent or more in-depth use of the service, they may be more committed to the service, they may be more likely to be experts in the domain;
  - requiring registration may deter some of the potential audience.



## Data collection methods

Table 4-3

*Focus groups*

Focus groups	
<b>Description</b>	Focus groups can be organised in many ways and in many formats. However, all formats are based on the premise of a small group of respondents discussing issues guided by an experienced facilitator (sometimes called a moderator).
<b>Uses</b>	Useful for exploring attitudes and motivations and for generating new ideas. Focus groups are often used as the precursor to some form of quantitative survey research.
<b>Outline of format</b>	<ul style="list-style-type: none"> <li>■ 'Standard' focus groups typically contain 6-10 respondents and each session lasts up to 1½ hours.</li> <li>■ A 'topic guide' – essentially an agenda detailing issues to be covered – is used by the facilitator to guide discussions.</li> <li>■ A suitable venue is chosen. This can be a meeting room or, if observers wish to view focus groups, a dedicated viewing facility can be hired (and there are many of these across the UK).</li> </ul>
<b>Resources and timescales</b>	<ul style="list-style-type: none"> <li>■ Relatively short timescales: for example, a programme of four focus groups might take around 4 weeks to complete from inception to delivery of findings.</li> </ul>
<b>Other details and considerations</b>	<ul style="list-style-type: none"> <li>■ Initial recruitment questionnaires are a useful way of ensuring that you obtain the desired homogeneity/heterogeneity of groups.</li> <li>■ Facilitating focus groups is a skilled task. It is the facilitator's role not only to ensure that discussions are kept on subject, but also to control the dynamics of the group – for example ensuring that stronger characters do not dominate discussions and unduly influence the views of others.</li> <li>■ Extended focus groups often lasting 2½ to 3 hours can be useful for exploring more complex and/or more diverse issues. However, in sessions of this duration it is important to include numerous breaks and other ways of dividing discussions into more manageable sections.</li> <li>■ Variations on focus groups can be useful for some audiences. For example, an approach often used for interviewing young people is to use friendship pairs, triads or mini-groups to overcome lack of confidence.</li> <li>■ Focus groups rely on a sufficient number of audience members being located in close proximity to one another. If an audience is widely dispersed, focus groups cannot be considered.</li> <li>■ Online focus groups are a relatively recent development. They have several benefits – not least cost – but lack many of the key benefits of traditional focus groups such as the ability to observe interaction and body language.</li> <li>■ Projective techniques – which have developed out of techniques used in psychoanalysis – are sometimes effective in helping to uncover unconscious attitudes and motivations.</li> <li>■ Because of the level of commitment demanded of respondents, it is typical to offer 'incentives' which can be in the form of cash, vouchers, donations to a nominated charity etc.</li> </ul>



Table 4-4

*One-to-one in-depth interviews*

One-to-one, in-depth interviews	
<b>Description</b>	In-depth interviews conducted on a one-to-one basis, by telephone or in person.
<b>Uses</b>	In common with focus groups, one-to-one interviews are useful in understanding the range of attitudes and motivations which might exist within an audience.
<b>Outline of format</b>	<ul style="list-style-type: none"> <li>■ One-to-one in-depth interviews can be conducted by telephone or face-to-face.</li> <li>■ Both approaches can be used to obtain qualitative data – although generally face-to-face interviews are more effective in delivering a greater depth of information and understanding.</li> <li>■ Face-to-face interviews typically last for up to 1 hour. Telephone interviews are usually no longer than 30-45 minutes.</li> <li>■ A ‘discussion guide’ or semi-structured questionnaire is used as the basis for interviews.</li> <li>■ In most cases respondents would be interviewed in their own environment (place of work/study or home as relevant).</li> </ul>
<b>Resources and timescales</b>	<ul style="list-style-type: none"> <li>■ One-to-one interviews, especially if conducted in person, tend to require significantly longer timescales than, for example, focus groups. Geographically dispersed audiences can mean that only 2 or 3 interviews might be possible per day. Consequently, a project involving 30 interviews might take 6 weeks or more to complete.</li> </ul>
<b>Other details and considerations</b>	<ul style="list-style-type: none"> <li>■ One-to-one interviews are especially appropriate for small, geographically dispersed audiences (eg university librarians).</li> <li>■ They are also useful if the subject matter is sensitive – in which case respondents might not want to disclose information to their peers which would be the case in focus groups.</li> <li>■ Although telephone interviews are easier and cheaper to arrange, the quality and depth of information obtained from face-to-face interviews is usually superior.</li> <li>■ It is also worth remembering that a face-to-face format allows ‘stimulus material’ to be used. This is more difficult to organise for telephone interviews, although materials can be faxed, emailed or posted ahead of the interview.</li> </ul>



Table 4-5  
Quantitative surveys

Quantitative surveys	
<b>Description</b>	Quantitative surveys involve using a sample of an audience/population as the basis for producing a statistically reliable picture of the whole.
<b>Uses</b>	Providing quantifiable information about an audience, for example, its profile and its patterns of usage and behaviour.
<b>Outline of format</b>	<p>There are many ways of collecting quantitative data including:</p> <ul style="list-style-type: none"> <li>■ Postal surveys: Audience and/or prospective audience members are sent a questionnaire which they are invited to complete and return (usually in a reply-paid envelope).</li> <li>■ Email surveys: Audience and/or prospective audience members are emailed a survey (or emailed a URL link) which they are invited to complete online. Contact email addresses are needed for this option.</li> <li>■ Web-based online surveys: A website or resource extensively used by the target audience is used to promote the survey and to host a link for respondents to follow. This option does not require that email addresses are known but is an inexact means of targeting an entire audience.</li> <li>■ Telephone surveys: Audience and/or prospective audience members are contacted by telephone, using a short, structured questionnaire (generally lasting no longer than 10-15 minutes). Depending on the composition of the audience it is sometimes sensible to set 'quotas' to ensure that different segments are represented in the sample.</li> <li>■ Face-to-face surveys: For very large consumer audiences, on-street and in-home face-to-face interviews are often appropriate. The fewer contacts that need to be made to find each qualifying audience member, the more cost-effective this approach becomes. For example, for non-digital services face-to-face exit interviews (eg with library users) offer a cost-effective means of surveying an audience but exclude or under-represent infrequent and non-users of a service.</li> </ul>
<b>Resources and timescales</b>	<ul style="list-style-type: none"> <li>■ Telephone and face-to-face interviewers require a team of (ideally) experienced, professionally-trained interviewers.</li> <li>■ Independent full-service research agencies have access to interviewers in all areas of the UK.</li> <li>■ The ability of an organisation to develop and host online surveys depends on its access to appropriate technical resources.</li> <li>■ Additionally, a means of analysing survey data is required. Most independent research agencies will use specialist survey analysis software which facilitates and integrates all stages of the project; sample and questionnaire design; hosting of online surveys; data capture and statistical analysis.</li> </ul>



## Quantitative surveys

### Other details and considerations

Sub-sections 5.2 and 5.4 provide an overview of how to analyse quantitative data, including looking at the potential problems with data interpretation, sampling (including sample bias), the importance of questionnaire design and weighting responses. There is a large amount of information available in books and on the internet to help you understand these topics in more detail, including:

- A questionnaire design advice sheet from Loughborough University: [www.lboro.ac.uk/library/skills/Advice/QuestionnaireDesign.pdf](http://www.lboro.ac.uk/library/skills/Advice/QuestionnaireDesign.pdf)
- A comprehensive book on marketing research including useful sections on questionnaire design, sampling, analysis and weighting: *Marketing Research*, Aaker, Kumar and Day; John Wiley & Sons, Inc.; 8<sup>th</sup> ed. (2004)
- Various research tips, white papers and studies by academics and practitioners: [www.sysurvey.com/tips/whitepapers.asp](http://www.sysurvey.com/tips/whitepapers.asp)

Other considerations:

- 'Self-completion' formats – such as postal and online surveys – are attractive since they allow a large audience to be sampled relatively easily and inexpensively. However, the resulting sample is self-selecting (ie respondents make a conscious choice to be part of the sample). An effect often observed in self-selecting samples is that the propensity to respond is not consistent across all audience member types. In audience research, more frequent, committed service-users tend to be more likely to respond than sporadic and infrequent users. If therefore the service provider is aiming to develop a strategy to increase usage among infrequent users (and therefore needs to learn more of their attitudes and motivations), self-selecting survey formats are not usually appropriate.
- Interviewer-led formats (eg telephone surveys) are more expensive to undertake but have the advantage of being more 'random' (ie theoretically at least, each audience member has a more equal chance of being selected for the survey). Quotas can also be set to ensure coverage of all segments within an audience.
- It is important to distinguish between accuracy and precision – you may well get 1000 responses to your survey giving statistically precise data, but it could be entirely inaccurate if you have missed some key segments of your target audience.



Table 4-6

## 'Traditional' web statistics

'Traditional' web statistics	
<b>Description</b>	<p>Web servers generate log files when they serve a request, which is typically directly from a 'user agent' – usually a browser such as Internet Explorer or Firefox. These log files record the request which was made, the status of the response (success, failure etc.) and some basic information about the user agent.</p> <p>This method considers relatively simple ways in which these log files can be processed to generate quantitative information (web statistics) regarding the use of the service.</p>
<b>Uses</b>	<p>Web statistics can help to understand, on aggregate, the ways in which an online resource (or collection of resources) is used. For example, it can identify which sections of the site are most used, where users have come from (eg from a search engine or a link from a related site), the network from which they are accessing the site, the type of user agent they are using etc.</p> <p>In the context of audience analysis, web statistics help to understand the relative usage of different parts of a site, and how the usage varies over time.</p>
<b>Outline of format</b>	<p>Web servers generate log files which are periodically analysed to generate statistics. A wide range of tools are available to undertake this analysis, many of which are free and open source.</p> <p>Different tools will be able to undertake analysis with different levels of complexity. For example, a basic tool will be able to tell which resources received the most accesses, or the proportion of users which came from .ac.uk networks. More complex tools allow cross-tabulation: do those users at .ac.uk use different resources from those at .edu? Which resources are discovered through search engines, and which are found by navigating through the site?</p>
<b>Resources and timescales</b>	<ul style="list-style-type: none"> <li>■ Data is collected continuously during server operation. Typically, statistics generation is undertaken on a periodic basis, often daily.</li> <li>■ Generation of statistics is fully automated, and common tools handle archiving of past information and generation of useful reports.</li> <li>■ A wide range of tools are available for undertaking the log processing, including simple free and open source tools such as Analog, AWstats or Webalizer. Commercial packages typically offer greater functionality, and are better classed as web analytics tools.</li> <li>■ Most sites experience hourly, daily, weekly and seasonal variations in usage. This will only be captured with time.</li> </ul>
<b>Other details and considerations</b>	<ul style="list-style-type: none"> <li>■ Web statistics record usage of the web server – they do not follow the activities of individual users. Each request to a resource is essentially independent of all other actions of that user.</li> <li>■ It is exceedingly difficult to estimate the number of unique users of a site from the web statistics. Some proxy measures are possible (for example the number of unique IP addresses), but these have very low reliability.</li> <li>■ It is usually necessary to explicitly filter search engine indexers from the results.</li> <li>■ Relating the network location of a visitor to the country they are located in is possible to a reasonable level of accuracy, but only through commercial services.</li> <li>■ For dynamic websites, understanding resource usage using basic web statistics packages depends on the site design using persistent and unique URLs.</li> </ul>



Table 4-7  
Web analytics

Web analytics	
<b>Description</b>	<p>Web statistics can provide useful bulk information on the utilisation of resources, but have significant limitations when attempting to understand the users of a resource. Web analytics is a more advanced method for investigating the actions of users. Web analytics will include the information available from traditional web statistics, so these uses are not repeated here.</p> <p>Whereas web statistics is focused on the resource, web analytics is focused on individual users. The actions of these users can be combined to provide bulk information on a service, but at a far higher level of detail than that available from traditional web statistics.</p> <p>Web analytics can be particularly helpful to support site design decisions, by understanding the decisions that users take when using a resource.</p>
<b>Uses</b>	<p>Web analytics can be used to understand in detail the behaviour of users of a site. It can segment users more clearly than traditional web statistics, and can identify unique users with far greater certainty. It can provide measures of visit frequency and duration, and an understanding of ‘clickstreams’ which record the paths that users take through the site.</p> <p>This information can lead to a better understanding of the use of resources. For example, it may be possible to segment users along lines such as one-off visitors who ‘land’ on a particular resource from a search engine, and never visit the rest of the site, or occasional in-depth browsers who arrive at a site, and then spend some time navigating and using resources or users who return often but who use a limited set of resources.</p> <p>This kind of segmentation can lead to making better decisions about site design, structure and content.</p>
<b>Outline of format</b>	<p>A range of methods can be employed to track the behaviour of individual users. The key options are:</p> <ul style="list-style-type: none"> <li>■ Enhanced log analysis, whereby the standard web server logs are analysed to attempt to elucidate ‘sessions’ which identify individual users;</li> <li>■ Server-side user tracking, where the web server is adapted to identify individual sessions within its log files. This is often combined with leaving ‘cookies’ to track returning users;</li> <li>■ A range of web analytics services can be used in an ‘out-sourced’ manner, where the service provider embeds code within each page of the resource, which is loaded directly from the analytics provider. This allows the analytics service to collate data without access to the service provider’s web server logs;</li> <li>■ Most content management systems which provide ‘library’ resources online will incorporate some usage monitoring functionality within the application itself. This should include tracking any search terms used within the site.</li> </ul> <p>Following data collection, the data must be analysed. Initially, this is often by an iterative, investigative process rather than by listing individual metrics. As services become more established, it may be possible to elucidate quantitative Key Performance Indicators (KPIs) from the web analytics data.</p>
<b>Resources and timescales</b>	<ul style="list-style-type: none"> <li>■ As for web statistics, data is collected online and on an ongoing basis.</li> <li>■ Tools can be obtained for no cost (eg Google Analytics), on a service basis (eg Web Trends On Demand) or for a purchase price (eg Sawmill, Click Tracks).</li> <li>■ The effort required to begin collecting data is typically low and embedding the tools within the server workflow is relatively easy, especially for simple hosting arrangements.</li> <li>■ Setting up reports to analyse the data collected is often time-consuming, requiring detailed consideration of the site structure, the behaviour of users, and a good understanding of the nature of the resources. Once these have been set up, ongoing monitoring should be routine.</li> </ul>



Web analytics	
<b>Other details and considerations</b>	<ul style="list-style-type: none"> <li>■ Recording extensive information about the behaviour of individual users raises privacy concerns. Even if the service does not explicitly identify users, this information may well be personal data (or even sensitive personal data) within the meaning of the Data Protection Act 1998.</li> <li>■ Web analytics helps to understand the behaviour of users of a site, but it is necessary to validate findings. For example, if a high proportion of visitors only view one page, does this mean that they found what they were looking for, or that they didn't and they don't have the patience to investigate the site more deeply?</li> <li>■ It should be noted web analytics is also known by other names. For example, 'Deep Log Analysis' (DLA) is a 'brand name' for research undertaken by the CIBER team at University College London (UCL). DLA refers to the analysis of raw server logs, and is often conducted in conjunction with other audience research techniques (eg questionnaires and interviews), to develop an understanding of user behaviour. Although a potentially powerful technique, analysing web logs in this depth is unlikely to be achievable within the limited budgets of many public sector organisations, and nor is it always necessary or appropriate.</li> </ul>

Table 4-8

*User observation techniques (ethnography)*

User observation techniques (ethnography)	
<b>Description</b>	<p>Ethnography is a term used to encompass a wide range of techniques and approaches. At its core is a desire to understand human culture by observing behaviour but this broad principle is increasingly used in commercial, public and social research contexts. [Ethnography is] 'anything from hanging around a skateboard park, interviewing teenagers in their bedrooms, asking respondents to make video diaries, to interviewing their friends and families, or videoing them going shopping – it's all ethnography.'<sup>9</sup></p> <p>It is broadly accepted by academics and research practitioners alike that ethnography in today's world is about different types of observation.</p>
<b>Uses</b>	<p>Ethnography is said to minimise 'research effect' by observing subjects in their 'natural' context (which might for example mean at their desk at work, in front of a computer screen, in a gallery or museum or at home) and by removing bias introduced by framing structured questions. In the context of audience research ethnography and observational techniques can offer an insight into how audiences use and interact with services and resources. For digital services very detailed data about usage can often be captured unobtrusively by computer logging techniques.</p>

9 *Viewpoint – Ethnography and market research*, Philly Desai; International Journal of Market Research volume 49 (6); Market Research Society.



## User observation techniques (ethnography)

### Outline of format

The range of formats is too broad to cover in detail but possible approaches include:

**User tracking studies:** the aim is to capture service usage behaviour in a real world context:

- subjects might be asked to keep a photo, audio or video diary or weblog recording their day-to-day interaction with the service over a particular time period;
- subjects are 'shadowed' and behaviour recorded by an observer, or using specialised equipment in a 'viewing lab'.

These methods can be combined with interviewing to allow an interviewer to probe reasons for decisions and actions. Interviewing may take place after the user-tracking activity or at the same time eg accompanied internet browsing.

**Use testing:** a service is tested by users and the fine detail of usage behaviour is captured by computer or recorded by other means:

- user-generated scenarios: users are allowed to explore a service or resource freely, their activity and perhaps their comments on the user experience are recorded for subsequent analysis. Provides a naturalistic picture of how the audience respond to the service;
- task-focused scenarios: users are asked to carry out a pre-defined set of tasks using the service, the extent to which their path through the service is dictated is variable; an interactive format is possible ie the user responds to instructions from an 'observer' who can adapt the protocol in real time. The observer may be with the user or following their activity remotely.

Again the detailed user activity is recorded and analysed to allow assessment of how usable the service is and how well it fulfils its function.

### Resources and timescales

- Methods can be customised for smaller budgets.
- Use of specialised 'viewing labs' equipped with eye-tracking and audiovisual recording is expensive.
- For a computer-based service detailed activity data can be captured quickly and cheaply with appropriate programming.
- Use testing can be very time consuming but variability across subjects is low so small samples can be used.
- Analysing activity and observational data requires some expertise.

### Other details and considerations

- Digital services can be tested by users at a location and perhaps time of their own choosing which may make recruitment easier.
- Service evaluation in a naturalistic setting may produce different results from testing in a lab.
- Ethnographic methods can be adapted to different circumstances, valuable data can still be obtained if cheaper 'observational' techniques are used.



## 4.3 Pros and cons of the methods

4.3.1 A critique of each of the methods is provided in the following tables to help you decide which techniques are appropriate for your research.

Table 4-9

*Pros and cons of quantitative methods*

QUANTITATIVE METHODS		
Method	Pros	Cons
<b>Face-to-face interviews</b>	<ul style="list-style-type: none"> <li>■ Good quality data.</li> <li>■ Limit variations in question interpretation.</li> <li>■ Enable more complex questions to be asked.</li> <li>■ Experienced interviewers are able to probe responses to provide fuller understanding of issues.</li> <li>■ Stimulus material can be shown (eg service outlines; information leaflets etc.).</li> </ul>	<ul style="list-style-type: none"> <li>■ Relatively expensive.</li> <li>■ Require a high level of respondent cooperation and commitment (might need to be incentivised).</li> </ul>
<b>Postal questionnaires</b>	<ul style="list-style-type: none"> <li>■ Relatively inexpensive.</li> <li>■ Offer a large proportion of relevant audience a chance to respond – if they choose to.</li> <li>■ Demand low level of commitment from respondents.</li> </ul>	<ul style="list-style-type: none"> <li>■ Sample is self-selecting (and therefore not necessarily representative).</li> <li>■ No guarantees of response rates.</li> <li>■ Timings are more difficult to control and predict.</li> <li>■ Response rates tend to be low.</li> <li>■ Questionnaire length and complexity is limited.</li> <li>■ Question interpretation can be subjective.</li> </ul>
<b>Internet/ email surveys</b>	<ul style="list-style-type: none"> <li>■ Cost-effective.</li> <li>■ Offer a large proportion of relevant audience a chance to respond – if they choose to.</li> <li>■ Demand low level of commitment from respondents.</li> <li>■ Can provide very immediate feedback.</li> </ul>	<ul style="list-style-type: none"> <li>■ Sample is self-selecting (and therefore not necessarily representative).</li> <li>■ No guarantees of response rates.</li> <li>■ Not all potential respondents will have internet access or will be comfortable using it.</li> <li>■ Timings are more difficult to control and predict.</li> <li>■ Questionnaire length and complexity is limited.</li> <li>■ Question interpretation can be subjective.</li> </ul>
<b>Telephone interviews</b>	<ul style="list-style-type: none"> <li>■ Good balance of quality data and cost-effectiveness.</li> <li>■ Limit variations in question interpretation.</li> <li>■ Enable more complex questions to be asked.</li> <li>■ Experienced interviewers are able to probe responses to provide fuller understanding of issues.</li> </ul>	<ul style="list-style-type: none"> <li>■ Stimulus material cannot be shown.</li> <li>■ Some audiences are becoming over-researched – particularly by telephone surveys.</li> </ul>



Table 4-10

*Pros and cons of qualitative methods*

QUALITATIVE METHODS		
Method	Pros	Cons
<b>Focus groups</b>	<ul style="list-style-type: none"> <li>■ Useful for stimulating discussion and new ideas.</li> <li>■ Consequently focus groups can be a very creative approach.</li> <li>■ The focus group format is well-suited to introducing and gaining reactions to stimulus materials (eg ideas for service frameworks; promotional and information literature etc.).</li> <li>■ Relatively short timescales.</li> </ul>	<ul style="list-style-type: none"> <li>■ Relies on sufficient numbers of audience being clustered in a geographical area – or at least within a radius that respondents might be prepared to travel.</li> <li>■ Respondents might not be prepared to discuss personally, commercially or academically sensitive subjects with others.</li> <li>■ Require experienced facilitators.</li> <li>■ Some group members can be unduly influenced by the views of others.</li> </ul>
<b>One-to-one in-depth interviews</b>	<ul style="list-style-type: none"> <li>■ Easier to arrange than focus groups.</li> <li>■ Interviewer can visit interviewee.</li> <li>■ Geographically diverse audiences can be researched.</li> <li>■ Respondents are not under pressure from others to respond in a particular way.</li> <li>■ A rapport can be built between interviewer and interviewee; this in turn can lead to disclosure of information which otherwise might not have been divulged.</li> </ul>	<ul style="list-style-type: none"> <li>■ Format tends to be less dynamic and creative than focus groups.</li> <li>■ Timescales are usually longer (focus groups can provide access to 40 individuals within a couple of days; the same numbers in a one-to-one format would take several weeks).</li> </ul>

Table 4-11

*Pros and cons of web statistics*

WEB STATISTICS		
Method	Pros	Cons
<b>'Traditional' web statistics</b>	<ul style="list-style-type: none"> <li>■ Low cost in time and effort.</li> <li>■ Information can be available immediately.</li> <li>■ Provides an 'at-a-glance' view of how busy a site is, and which sections of the site are most used.</li> </ul>	<ul style="list-style-type: none"> <li>■ Limited insight to user behaviour.</li> <li>■ Very crude measures of demographic of audience.</li> <li>■ It is tempting to infer too much from the information which is available.</li> <li>■ Basic packages do not handle library-type dynamic sites well.</li> </ul>
<b>Web analytics</b>	<ul style="list-style-type: none"> <li>■ Information can be available immediately.</li> <li>■ Provides extensive information on user behaviour.</li> <li>■ Can be used to segment users based on a range of behaviours, and possibly on demographics.</li> </ul>	<ul style="list-style-type: none"> <li>■ Commercial web analytics packages are expensive.</li> <li>■ Setting up reporting is time-consuming, and demands good business and technical knowledge.</li> <li>■ Insight into user behaviour from web statistics must be validated.</li> </ul>



Table 4-12

*Pros and cons of ethnographic methods*

ETHNOGRAPHIC RESEARCH		
Method	Pros	Cons
<b>user tracking: diary studies, shadowing and contextualised interviews</b>	<ul style="list-style-type: none"> <li>■ Useful for building up a picture of service usage in a broad context.</li> <li>■ Ability to question users about behaviour allows elucidation of unexpected usage patterns.</li> <li>■ Participation in the research should have only minimal effect on the subjects' normal routine.</li> <li>■ A low cost, low effort way of investigating the fine detail of usage behaviour.</li> </ul>	<ul style="list-style-type: none"> <li>■ Methods of recording usage may interfere with normal user behaviour.</li> <li>■ Diary studies: quality of data collected depends on the skill and commitment of the participant.</li> <li>■ Shadowing: data collection may be intrusive and resource intensive.</li> </ul>
<b>use testing: user-generated activity sessions and task- focused activity sessions</b>	<ul style="list-style-type: none"> <li>■ Very helpful in identifying unspoken user requirements.</li> <li>■ Excellent way of identifying problems with usability.</li> <li>■ Audience behaviour may be observed and measured directly, eliminating inaccuracies that occur in self-reports.</li> <li>■ Captures the fine detail of user behaviour.</li> <li>■ Can provide a naturalistic picture of usage behaviour.</li> <li>■ Variability between subjects tends to be low so small sample sizes can be used successfully.</li> </ul>	<ul style="list-style-type: none"> <li>■ Analysing user activity data requires considerable expertise.</li> <li>■ Testing can be very time consuming.</li> <li>■ Some sophisticated data capture techniques require specialised equipment so subject must attend a testing facility.</li> <li>■ To derive maximum benefit there must be good communication with technical support team.</li> </ul>

## 4.4 Indirect approaches to audience behaviour

4.4.1 Audience analysis has an important role in service development and various ethnographic techniques are increasingly used to support user-centred design and many of these techniques can be adapted to suit smaller budgets. User-centred service development may also incorporate methods which do not involve the audience directly. These methods fall outside the scope of this guide but are described briefly below because of their utility in the early stages of service development and as a quick and dirty alternative to user testing if resources are severely limited or user recruitment is problematic.

### Heuristic evaluation

4.4.2 Expert evaluators assess the service's user interface against recognised usability criteria. The exact criteria used should reflect the needs of the target audience, the platform and type of service offered.

4.4.3 This method of assessing usability is cheap and does not require a large or representative sample of potential users from the target audience. The method can be used even at a very early stage in development if evaluators are able to work with mock-ups.



### Cognitive walkthrough

- 4.4.4 Expert evaluators play the role of a typical user (user profiles or personas may be helpful here) and attempt to perform the tasks the service is designed for. Analysis of the service is an important prerequisite: user objectives are specified and broken down to show the sub-goals that must be achieved in order to attain the objective.
  
- 4.4.5 This method provides an idea of how well the service functions from the user perspective, but relies on the role-playing skills and judgements of the evaluators rather than involving the target audience directly. As with heuristic evaluation, the main advantages are the low cost, the avoidance of recruitment problems and the potential to carry out evaluations at an earlier stage in service development.

# 5. Modelling the Audience

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**This chapter deals with analysis and interpretation of audience data to address specific objectives and improve understanding of the audience**

Data from an audience analysis project should improve understanding of the audience in several ways, by providing:

- Answers to specific research questions – or further evidence.
- New knowledge about the audience and their interactions with the service.
- Objectives for future audience research.

Topics covered in this chapter include:

- Approaches to analysing quantitative and qualitative data.
- Potential problems with data interpretation.
- Gap analysis of audience satisfaction.
- Developing personas or user profiles for service development.

## 5.1 Introduction

- 5.1.1 This section deals with the issues involved in analysing and interpreting the data to address the specific research questions and build up a better understanding of the audience and their interactions with the service.
- 5.1.2 Audience analysis projects should start with the recognition that further knowledge about the audience would be helpful eg for planning future service development or optimising marketing strategy. This leads to framing the broad objectives for the audience analysis and setting out specific questions the research should address. Methods for collecting relevant data should be selected and the details of the methodology established. Data collection can then be carried out.
- 5.1.3 The audience data must be analysed appropriately: the techniques used will depend on the type of data and the aims of the research. The data should provide evidence that can be interpreted to draw conclusions relevant to the specific objectives of the research. It is important to be sure that the data really *do* provide evidence for any statements you make



eg and that you have considered all the possible interpretations of the data. Full analysis and interpretation of the data should also provide wider insights into the audience, their behaviour and their relationship with the service.

- 5.1.4 Analysing the data from audience research will be easier if the research was well planned and carried out properly. Many problems in analysis and interpretation can be avoided if data collection procedures are selected and implemented with the analysis in mind. Sometimes a trade-off needs to be made between simplicity, convenience and reliability of recording and convenience and power for analysis. Paper-based data collection might be easiest to administer, but data will have to be coded and entered onto a computer before analysis.
- 5.1.5 Analysis of the data from an audience research project should improve understanding of the audience in several ways, providing:
- answers to the specific research questions – or at least relevant evidence;
  - new knowledge about the audience more generally;
  - further questions about the audience to be addressed in future work.

## 5.2 Analysing quantitative data

- 5.2.1 Quantitative data can be analysed statistically. Detailed exploration of the methods is beyond the scope of this guide and it is recommended that readers consult a statistical handbook for psychology or the social sciences eg *Statistical Methods in Psychology* David Howell (2006). The user guides for statistical software packages eg SPSS are often helpful.
- 5.2.2 Statistical techniques can be used to explore relationships between variables. For example, to answer questions such as ‘are registered users more likely to download files from a service?’ and to uncover homogeneous subsets or segments within an audience.
- 5.2.3 Quantitative surveys may include questions inviting or requiring free text comments or simply a catch-all invitation at the end, for example, ‘Please use this space to make any other comments about our service’. Data from these items will need to be coded for quantitative analysis and might be more appropriately treated as qualitative data. This may mean making the qualitative comments available in a different format to facilitate collation and analysis.

### Regression and correlation

- 5.2.4 Regression and correlation analysis are methods for defining relationships between variables.
- **Correlation analysis** looks at the strength and nature of the relationship between variables eg does access to broadband influence downloading behaviour, does good access to broadband increase or decrease the frequency with which content is downloaded, does it increase or decrease the average size of file downloaded etc.
  - **Regression analysis** is used to derive predictions about the value of one variable, based on another; multiple regression analysis considers several variables: however one – a dependent variable – is generally predicted or explained by means of the other independent variable(s) and covariates.



## Factor and cluster analysis

- 5.2.5 Both these techniques look at relationships among variables. They are not generally used in prediction. The researcher must interpret the output of the analysis to derive a model of the audience which best fits the data.
- 5.2.6 In very simple terms, **cluster analysis** aims to find relatively homogeneous groups or clusters, the members of which tend to behave and think in similar ways. Different mathematical techniques can be used to identify clusters within multi-dimensional data.
- 5.2.7 **Factor analysis** is a statistical technique used to analyse relationships between a large number of variables and to explain these variables in terms of common underlying factors. In audience research it is used to simplify the number of factors or categories needed to explain or model the audience (eg from a large series of statements about satisfaction with a service the following factors might emerge: ease of access, quality of content, value for money). It is up to the researcher to inspect the way in which variables are grouped and assign useful names to the factors. Factor analysis can be used to discover a scheme for segmenting an audience. Rather than deciding in advance what the defining characteristics of each segment are, factor analysis lets segments emerge from the data.

## Potential problems with interpretation of quantitative data

### Instructions and/ or responses are misunderstood

- 5.2.8 Most of the problems arise because the audience sample didn't react to the research instrument – usually a survey questionnaire – as the audience researcher intended:
- some or all of the respondents didn't interpret the questions in the way that the audience researcher intended;
  - some or all of the respondents didn't use the response options as the researcher intended eg scales used the wrong way round, ticks used instead of numerical preference ratings, multiple response categories selected where only one was permitted etc.;
  - researcher finds the responses unexpectedly ambiguous;
  - large numbers of respondents fail to complete all the questions.

Some of these problems can be avoided by piloting a questionnaire on a small sample or using interviewers to collect survey data.

### Questionnaire design is important

- 5.2.9 Surveys often ask respondents to rate aspects of the service. Sometimes numerical scales are used, sometimes verbal or pictorial scales are used; some scales have a neutral midpoint, some questions will allow 'not applicable' or 'don't know' as options. These decisions about questionnaire design can have implications for the interpretation of the results.



- The exact wording of statements about satisfaction with the service could affect the proportion of the sample who appear to be content with the service. Respondents may use 'good' to mean 'acceptable, meeting the required standard' or 'better than acceptable, exceeding the required standard'. Do you know what respondents meant when they completed your questionnaire?
- Respondents tend to avoid using the end points of any scale, so that very few respondents will appear 'extremely dissatisfied' or 'extremely satisfied' with whatever is being rated.
- Respondents will tend to respond relative to what they think the default or average is eg if asked to rate accessibility on a one to five scale they might actually be comparing your service to what they perceive to be the average for whatever they consider to be similar services.

#### The sample of respondents is unrepresentative

- 5.2.10 Obtaining a representative sample is particularly difficult when surveys are placed online or distributed to an unknown set of potential respondents eg to an email address list including a lot of invalid addresses.
- 5.2.11 Sometimes it is easy to detect a bias in the sample eg only 10% of respondents are students but you already have reliable information that at least 40% of your audience are students, but if little is known about the composition of the audience this is more difficult.
- 5.2.12 The sample may be biased by a number of factors:
- the type of incentive used;
  - the time period over which research was carried out;
  - the method of distribution and publicity/promotion;
  - the kinds of questions asked.
- 5.2.13 If the sample is likely to be unrepresentative it is important to consider the implications for interpretation of the data and make clear the caveats which apply to the conclusions. If there is no reason to believe that a different sample would have responded differently this can be stated. If you are aware of important differences in the characteristics of different audience segments which could affect the findings this should be explained.

#### Consider this example....

**Results from a survey suggest users would prefer money to be spent on making more programmes available to download rather than increasing the number of programmes available with subtitles.**

This may be because the survey was mentioned by a presenter on 'Living with hearing impairment' and over half the respondents said they considered themselves hearing impaired.

It would be useful to state the results for non-hearing impaired respondents separately.

It is important to detect the bias in this sample because relevant demographic data were collected, but it is often not so obvious.



## 5.3 Making use of qualitative data

- 5.3.1 Interpreting qualitative data is necessarily a subjective process, so if resources permit it may be worth involving more than one person in analysis and presentation of the data.
- 5.3.2 It is possible to code or categorise qualitative data so that quantitative techniques can be applied eg assigning statements of attitude towards the service made during focus group discussions to categories: very positive, positive, neutral, somewhat negative, very negative. However doing this results in loss of the rich detail which makes qualitative data so valuable.
- 5.3.3 Presentations of qualitative data will usually attempt to summarise the content and import of the material. For a group discussion this would usually include a judgement about variations of opinion between group members and comments on possible reasons for differences of opinion. A brief summary of the flow of discussion can be helpful to elucidate the context for the views and attitudes expressed by group members.
- 5.3.4 Presentations of qualitative data will also typically include quotations from the material. If quotations are to be used it is important to ensure that they are accurate, so interviews or discussions need to be recorded in full.
- 5.3.5 Coded qualitative data can be presented in tabular or graphical format as a supplement to textual digests of the material. Quantitative analyses of qualitative data from a small sample might be worthwhile if you believe your sample to be representative of the audience as a whole, but it will never be a substitute for a robust, statistically sound analysis of a larger, more representative sample.
- 5.3.6 Perhaps a more interesting application of quantitative techniques to qualitative data uses the individual as the unit of analysis and looks at distribution of behaviours or comments for a single individual. For example browsing behaviour could be assigned to categories eg searching a site, reading, downloading, use of search engine, entering data etc. The percentage of time spent on each activity can then be calculated. Similarly statements made during interview could be coded and the frequency with which a particular aspect of the site or resource was mentioned could be calculated. Statements could also be coded by strength of feeling to assess which aspect of the service provoked most satisfaction or frustration.
- 5.3.7 The important point in this type of analysis is that statements are made about an individual, rather than the group eg '90% of subject A's references to site content were to stories about sport'. If all the interviewees referred to sport more than other content it might be also be true that the audience as a whole would refer most to content about sport, but unless the sample size is large enough to permit statistical analyses such a conclusion would be unreliable. An alternative possibility is that whilst not all the audience would refer most to sports stories, they might all tend to have a favourite type of content. You might like to consider how qualitative findings like these could be followed up with quantitative research.



## 5.4 Analysing audience satisfaction for service development

5.4.1 **Weighted gap analysis** is a technique for comparing audience satisfaction with each aspect of a service, taking into account the importance attached to each aspect, in order to derive priorities for service improvement. In outline, the technique is used as follows:

- respondents are presented with a list of factors eg cost, value for money, ease of access, breadth of coverage etc.;
- respondents give a satisfaction rating and an importance rating for each factor, usually according to a numerical scale;
- for each respondent, the importance score for each factor is subtracted from the satisfaction score for that factor: this is the *gap*;
- the gap is weighted according to the relative importance of each factor.

5.4.2 The following table illustrates the process.

Table 5-1  
*weighted gap analysis*

Factor	Importance rating(1-10)	Satisfaction rating(1-10)	Gap	Importance co-efficient	Weighted gap	Priority
Cost	9	6	3	90%	2.7	3
Value for money	10	8	2	100%	2	5
Ease of access	8	3	5	80%	4	1
24/7 access	5	7	-2 (effectively, 0)	50%	0	8
Online access	9	8	1	90%	0.9	6
Ease of website navigation	8	4	4	80%	3.2	2
Help and advice	7	4	3	70%	2.1	4
Innovative use of technology	6	5	1	40%	0.4	7

## 5.5 Personas and user profiles

### Personas

5.5.1 Personas are essentially an aid to service development. It is easier to design a service to meet the needs and expectations of one specific user than trying to design to abstract criteria. Personas can help to provide focus for service development work that has fairly high level, generic objectives eg to make the site easier to use or 'make the site more appealing to school age children'.



### Consider this example....

#### The scenario

A newspaper is redeveloping its website and needs to know who will use it and what they will want from it. The team employed to develop personas look at research on users of other online newspapers, demographic data about the newspaper's readership and people in the region. They also carry out lengthy interviews with people in towns and villages in the region, asking about their lifestyle, their work, how much they use computers, where they get their news and entertainment from, pet gripes with technology etc. As a result of this process they develop four distinct personas: one is an 'uncommitted information snacker' called Dan.

#### Persona #1: the uncommitted information snacker

Dan is in his mid-30s and is Manager of Human Resources at Gobble and Gook in Littleborough. Dan is unmarried, but usually spend 3 or 4 nights a week at his girlfriend's place. They go out for dinner a couple of times a month and their favourite thing to do on Sunday evening is get a DVD and phone for pizza. These days Dan doesn't buy a newspaper – he sometimes looks at newspapers online but he often uses the BBC site as he thinks the coverage is less likely to be biased. He likes being able to get sports results online and likes how quickly the website can be updated. He communicates with his mates by text message and emails his brother about once a week. He has a work email address and a personal email account, he's not that bothered about spam or address spoofing – he doesn't do much shopping online and reckons the risks are exaggerated. He uses the internet at home to check film times and find new restaurants. He occasionally buys books from Amazon. He's a Radiohead fan and thought being able to pay what he liked to download the new album was cool. Dan rates himself as pretty good with computers, but is definitely not a geek. He enjoys playing football with friends and his goals in life are to save enough to buy a house and travel to South America.

#### Service redevelopment to appeal to Persona #1

The design team will develop the website to appeal to Dan:

- the home page of the website will feature more sports stories;
- the home page will feature a 'breaking news' tickertape – clicking on this will take the user to the specific newsflash;
- reviews for films released on DVD in the last 6 months will be posted online and this page will be linked from both the Film page and the TV listings;
- it will be possible to view film reviews according to local availability and see screening times at local cinemas;
- some news stories will be treated in the round with different 'perspective pieces' to show what the story will mean for different people and coverage from other media sources to provide the 'balanced coverage' Dan values;
- the website will include a 'today's news in pictures' page, with quirky photographs to illustrate stories – clicking the image will link to further coverage.

5.5.2 A persona is an archetype, with the personal traits, lifestyle, aspirations, beliefs, needs and goals etc. typical of a segment of the audience. The key to successful use of personas is developing richly detailed personas that:

- accurately reflect different audiences;
- act as a believable, realistic stand-in for a real user so that the design team develop a strong sense of what will be appealing and usable for the real audience.



- 5.5.3 The process of developing a persona is often quite involved, including detailed interviews with potential users, ethnographic studies, novel activities – anything which will help to foster a good understanding of the audience. Interviewing for persona research is a skilled and lengthy process; the interviewer needs to build a good rapport with the interviewee in order to elicit very detailed and personal information. Constructing a persona from all the information that has been gathered is often done as a workshop activity.
- 5.5.4 Different personas can be developed to represent the audience segments with different relationships to a service. There should usually be a primary persona, representing the high priority audience for the development activity being undertaken. Sometimes it is helpful to include a ‘negative persona’, an archetype for whom the service is not intended.

### User profiles

- 5.5.5 If resources do not permit the creation of fully fledged personas it may be possible to achieve some of the same benefits by developing *user profiles* – descriptions of typical users, oriented to the service under consideration and focusing on interactions with the service, needs, expectations and attitudes towards the service.

#### Consider this example....

A large teaching hospital is evaluating its library services and develops a series of user profiles to ensure that the services meet the needs of the different users.

One of the profiles is for a ‘medical specialist in training’:

- needs access to specialist journal articles and textbooks;
- prefers electronic resources to paper-based resources;
- will want access to content offsite (for home study and revision);
- needs access to resources and services outside normal working hours;
- busy schedule and changing work patterns make flexibility, remote and mobile access a key requirement.



# 6. Making Use of Audience Research

**This chapter reinforces the message that audience analysis should be seen in the context of the service as a whole**

Audience analysis can provide many benefits, but any decisions on use of the data will depend on the wider service context and priorities.

A strategy for realising the full value of audience analysis work is discussed.

## 6.1 Introduction

- 6.1.1 Audience research is a tool for service development and can be used to provide the benefits discussed in Section 3, however audience research is an aid to decision making and not a substitute for it. Evidence from audience research can help service providers to make informed decisions about spending on digitisation, new services, support for different platforms, promoting the service to new audiences etc. but it is not a substitute for business planning or the political decisions that need to be made about priorities for publicly funded services.
- 6.1.2 Because distinct audience segments have different requirements it is important to understand the relationship between them and prioritise allocation of resources appropriately. Audience analysis can provide information about audience segments, their relative size and how they use, value and access a service, but decisions about resource allocation still depend on service priorities.
- 6.1.3 Decisions about how to develop and promote the website are still business decisions, not least because use of the website will depend on the quality of the resource, and the success of the marketing strategy. Of course audience analysis should inform both these activities.



### Consider this example....

A museum has developed a website which provides detailed information about items in the collections, regularly updated interactive online exhibitions, a blog aimed at those with a professional interest in the museums sector and digitised images of their most renowned exhibits. Audience research shows that 98% of visitors to the site only view pages with travel information and opening times.

Were the resources used to develop the website wasted? Should the existing website be maintained?

The answers to these questions depend partly on who the target audience for the website is and this is a political and business decision. Perhaps the museum recognised that most visitors to the website would only want basic information, yet still sought to attract a small audience of academics and professionals who would make more extensive use of the site.

Follow up research or further analysis of the existing data might address these additional questions:

- Has the site been successful in attracting this niche audience?
- Does the site serve the needs of this audience?

Alterations to the service or a change in communications strategy might be needed.

Other questions cannot be answered solely on the basis of audience research:

- Should the site be promoted to visitors to the physical museum as a post-visit resource?
- Can the museum use the website to develop an ongoing relationship with its audience eg allowing them to vote for items to go on display, post comments about exhibitions etc.?

## 6.2 Audience research in context

6.2.1 At the conclusion of an audience research project, when the data has been collected, analysed and interpreted and conclusions drawn it is important to make sure that the full value of the research is realised. For example:

- The results of the research should be disseminated to stakeholders and other interested parties. This may involve preparing several different presentations of the work for different audiences, eg senior management, funders, general staff, communications team etc. It may be appropriate to prepare a summary of the findings and follow-up for participants; people are more willing to take part in research if they feel their contribution is appropriate and the research is likely to have an impact on the service.
- Everyone who helped with the project should be thanked; this includes staff who helped to carry out the research, participants and anyone else who contributed. This will pay dividends when further audience analysis work is undertaken and contributes to obtaining buy-in for audience analysis throughout a service.
- Consider the implications of the findings for service development and audience development.
- Look at the conclusions of the research – were the specific objectives met? What lessons can be learned for future work?
- Plan follow-up and future research.
- Assess the wider implications of the work:



- is the service being provided aligned with the stated service mission, values and remit?
  - are there any implications for long-term strategy?
  - is the business plan or sustainability strategy for the service appropriate?
- 6.2.2 It may be appropriate to share some of your findings with partners in the same sector, other public sector organisations serving a similar audience etc.
- 6.2.3 It should also be noted that audience research projects will often result in change – whether it be directly to the service offered, or to the organisation itself (eg as a result of a change in company strategy). Change must be carefully managed, and will entail thoughtful planning and sometimes sensitive implementation, and above all engagement with the people affected by these changes. Useful further reading on the management of change in a programmatic context is *Managing Successful Programmes (MSP)*, Office of Government Commerce (OGC), 2007 edition.

# Appendix A

## Glossary

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**Audience development** Activities carried out to increase the audience for a service or resource.

**Audience satisfaction** Establishing if the audience is happy with the service that is being provided. For example, is it happy with the quality/content/accessibility/comprehensiveness of the service? Interrogation of audience satisfaction is often done in tandem with audience analysis.

**Digital service and digital audience** In this guide *digital* is used to refer to resources and/or services exploiting digitised content or delivered via a digital channel. In most instances this means a service which is available online but it also includes digitised resources distributed on CD and could include digital television services which share some of the characteristics of online digital services. *Digital audience* refers to the audience for a digital service or resource.

**Ethnographic research** Research based on observations of human behaviour, carried out in a 'naturalistic' setting. This can include 'observation' via automated recording devices and is sometimes extended to include observations of subjects made in a laboratory – the crucial point is that behaviour in response to the relevant stimuli should be normal and that the presence of the researcher or the observational equipment should not interfere with or affect the subject's behaviour.

**Focus group** A group of individuals selected and assembled by the researcher to discuss and comment on the topic under consideration. Subjects' personal experience of the topic and interactions amongst group members are the distinguishing features of the technique.

**Formative research** In the context of service development and delivery this term covers research carried out during service development work, as part of the development process, to provide feedback on the work.

**Front end research** In the context of service development and delivery this term covers research carried out in the planning and preparation of a service.

**Impact analysis** Analysis of the longer-term effects of a service (or group of services) on its audience. Longer-term evaluation methods are required to determine if the impact of a service is lasting.



**Reach** In this guide *reach* is used to refer to the number of people to whom a service or resource is available. Different from *uptake* which refers to usage of the service or resource.

**Segmentation** The process of dividing an audience into different categories or *segments* on the basis of criteria relevant to the service or resource under consideration. Segments are relatively homogeneous and distinct from other segments with respect to the chosen characteristics.

**Summative research** In the context of service development this refers to evaluative research assessing the extent to which a service has met specific criteria for success.

**Target audience** The intended audience for a service or resource.

**Usability** A measure of the quality of the user experience of a service or resource. It generally encompasses factors such as ease of learning, efficiency of use, memorability, error frequency and severity and subjective satisfaction with the interface.

**User-centred design** A design philosophy which places the goals, expectations and skills of users at the centre of the design process: the service or product is designed to fit the user. Typically users are involved throughout the design and development process, including user testing of the service or product whilst it is in development.

# Appendix B

## Reasons to do Audience Research

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**This chapter sets out the reasons for doing audience analysis and some of the uses of the research**

**Experience and instinct are not a substitute for the information that systematic research can provide.**

The uses of audience analysis include:

- Service development.
- Service evaluation.
- Accountability to funders.
- Long-term planning.
- Sponsorship and marketing.
- Business planning.
- Management of contractual relationships.
- Professional development.

### B.1 Why do audience research?

- B.1.1** It is increasingly important for public sector services and resources to be able to demonstrate that they are *used* and *valued* by an appropriate audience. Professionals often feel they know 'their' audience and are confident that the service they provide is meeting that audience's needs. Experience and instinct are often a source of detailed knowledge and valuable insights into user needs, values and behaviour, however they are not a substitute for the more complete picture that systematic audience research provides.
- B.1.2** It is important to remain open-minded about what audience research reveals, and alert to changes in the nature and expectations of the audience. The rapid pace of technological change means that the audiences for digital services and content, and the expectations of these audiences, is also evolving rapidly.



- B.1.3 It seems self-evident, but it's worth stating unambiguously that *the more you understand about your audience, the better you will be able to meet their needs – and demonstrate that you are meeting their needs.*
- B.1.4 A satisfied user will spread the word about a good service and promote audience development. Satisfied and engaged users can be a valuable resource: they may be more willing to share information about their attitudes and habits as well as their experience of your service. This feedback can be valuable in developing and enhancing your service in the future.
- B.1.5 Even a small audience research project is worthwhile. Smaller services operating on a restricted budget should not be intimidated by the concept of audience analysis. Many techniques can be implemented quite cheaply or adapted to a shoestring budget. Some insight into your audience is vastly better than none at all.

## B.2 The uses of audience research

- B.2.1 The uses of audience research extend beyond simply demonstrating a certain number of visitors or website hits to tick a box on a service level agreement. Some of the areas where you may expect to realise benefits are set out below.

### Product and service development

- B.2.2 This is perhaps the area of audience research which appeals most to professionals and staff who engage directly with the audience.
- B.2.3 In planning a new service it is important to investigate who is likely to use the service, what they expect, their preferred means of access etc.
- B.2.4 Involving the audience in service development – including the *user-centred design* processes – is increasingly viewed as an important way of ensuring that a service or resource is usable and useful for the target audience: direct involvement of potential users makes it easier to ensure that the service will meet expectations and that users will be able to accomplish their goal when they use the service.
- B.2.5 Involving users in iterative testing of prototypes or pilot services will often uncover new and unexpected information about user behaviour and user requirements, or problems with usability and accessibility that had not been anticipated. Getting this information whilst a service is being developed allows problems to be rectified and important new functionality to be added. It potentially helps to avoid launching a service which is an expensive failure because it fails to meet audience needs.



## Service evaluation

- B.2.6** Satisfied users are more likely to return to a website, recommend a service or seek out other services and resources from the same provider. Only if evaluative research is carried out will information about the size, nature and satisfaction of the audience be obtained. Audience research on satisfaction with the service, perceptions of the service and attitudes towards it are an important component of evaluating the 'success' of a service. Audience analysis should also form part of an analysis of the longer term or broader 'impact' of the service. The results of evaluative research can be fed back into the next iteration of service development.
- B.2.7** Collecting and analysing data on who is actually using the service, whether users find it appealing, informative, valuable etc. is a critical part of the service development cycle. For example, it should pick up any remaining technical problems or concerns about usability that need to be addressed, or it might reveal that the audience are finding novel ways to use the service that could be further exploited. Evaluative audience research will provide evidence on how successful your service development project has been and how appropriate and effective any related communications and marketing effort was.

## Accountability to funders

- B.2.8** Publicly funded services are increasingly expected to show that they are delivering 'value for money'. Audience research should provide important evidence: number of users, frequency of use, quality of the user experience, value or 'impact' of the service etc. Audience research should be tailored to show that a particular service is meeting its own specific objectives.
- B.2.9** If your audience is small, you may nonetheless be able to show that your service is worthwhile eg if audience research demonstrates that it is:
- used by a hard-to-reach segment;
  - highly valued by a niche audience or by particularly influential users.
- B.2.10** Knowledge of these audiences can be used more widely eg to improve service delivery for the hard-to-reach segment or extending service provision for niche audiences through better understanding of their special content and/or technical requirements.
- B.2.11** Achieving good reach and uptake may be important for publicly funded services. Information about who non-users are and why they are not using your service provides useful evidence on which to base a strategy to increase the reach of the service and can help to make any request for additional funding more persuasive.

## Long-term planning

- B.2.12** A wide range of audience research may be relevant, including data on demographic and social trends. Longitudinal survey data, ie the same or very similar information collected at several time points, is often publicly available. This kind of 'audience analysis' can be useful for long-term planning. It can help services anticipate changes in audience profile, lifestyle, habits and preferred platforms (eg increasing use of mobile technologies) and adjust accordingly.



- B.2.13** A service's own longitudinal data are even more useful for spotting and tracking emerging trends. If a decline in use by a particular audience segment is spotted at an early stage there is much greater scope for investigating and potentially reversing the decline by adjusting the service. Similarly, longitudinal data revealing the emergence of a new audience can be used to plan service development tailored to their needs if appropriate. Audience suggestions and responses to queries about potential service enhancement can be followed up.

### **Sponsorship and marketing**

- B.2.14** Good evidence about your audience is very valuable when it comes to attracting sponsorship or marketing your service. A potential sponsor is more likely to commit if you are able to show that your audience profile is aligned with the sponsor's client base and values. An effective marketing and communications strategy will draw on information about existing and target audiences to make sure messages are appealing and presented via appropriate media and platforms.

### **Business planning**

- B.2.15** Audience research (eg based on surveys of a target audience in combination with engaging the existing audience and stakeholders) is of great assistance in assessing the feasibility of a planned new service or service enhancement. Information about the level of interest amongst the target audience, likely audience levels and audience expectations should form a part of the business case as well as informing service design and marketing.

### **Management of contractual relationships**

- B.2.16** Where some aspect of service provision is outsourced (eg redesign of a website) it may be helpful to specify that a certain size of audience, or level of audience satisfaction or impact, is achieved. It will be important to set out clearly how audience size and experience are to be measured and what the criteria for success are.
- B.2.17** The same principle can be applied internally. Defining objectives for a project in terms of the audience or including audience-related measures of success in evaluations may be useful ways of implementing the service-oriented values of a publicly funded organisation.

### **Professional development**

- B.2.18** Professionals' rich and detailed knowledge about service users is valuable and can often be the inspiration for new initiatives and play a vital part in service development. Formal audience research should be seen as a way of supplementing and enlarging professional knowledge. Involving staff in audience research may help to focus research and can be empowering for staff.

# Appendix C

## Digital Audiences and Digital Services

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**This chapter sets out some of the differences between digital and non-digital services and audiences, and discusses the implications for audience analysis**

**The size, composition, attitudes and behaviour of the audience may be different in a digital environment.**

- Digital content is different from non-digital content and this has implications for types of service that can be offered.
- The relationship between digital and non-digital worlds is evolving and services should be aware of the implications.
- Adoption of new technologies should be driven by audience and service needs and expectations.
- Different techniques may be used for analysis of digital audiences.

### C.1 The digital revolution

- c.1.1 The digital revolution has resulted in an explosion of possibilities: new and innovative services, a deluge of content, and potentially new audiences and new uses for old content made more widely available through digitisation. Content and service providers are only beginning to explore and understand the scope and constraints of the digital environment. The approach to digital resources varies across sectors and services and is subject to revision in response to technical developments and changing patterns of user behaviour. Relationships between digital content and non-digital content, between digital services and non-digital services and between a 'digital audience' and a 'non-digital audience' are a new and interesting consideration for service providers.



## C.2 Audiences in the digital environment

- C.2.1 The target audience (see Section 2) for a digital service need not be the same as the audience for a non-digital equivalent. A digital service provides an opportunity to recruit a new audience as well as encouraging some or all of the existing audience to convert or extend their usage. The digital environment changes both the demographic composition of the audience and the ways in which they interact with a service or resource. Users behave differently in a digital environment and have different expectations:
- Acceptance and familiarity with digital services is not universal and this affects the effective availability of digital services eg elderly people may be uncomfortable using a computer to access services.
  - Access to the platforms used to deliver digital services is variable and therefore access to digital services is also variable eg fewer low income families have access to broadband internet at home, or laptops for mobile access.
  - Access to physical services is unevenly distributed across the population.
  - The audience can access digital services in multiple contexts eg laptop, mobile telephone, computer at home, computer at work, computer in a public library.
  - Communicating with the audience is generally easier and cheaper.
  - Social norms and attitudes to privacy are different.
  - Users are often less 'committed' to a resource they choose to view – perhaps because access is rapid, or because multiple, apparently very similar resources relevant to the user's objective are available.
  - Resource discovery strategies for digital content are less sophisticated amongst certain users. This is not well understood, but studies have found that students tend to rely on resources that can be discovered quickly through Google,<sup>10</sup> whilst more expert, experienced researchers have higher expectations of resource quality, which they pursue through more sophisticated, multi-layered discovery strategies.
  - The audience for a digital service is often operating in an environment which means that support is less readily available eg at home, outside office hours, where no helpdesk is immediately available to provide advice and guidance.
  - Concentration span tends to be shorter in a digital context<sup>11</sup>.
  - Competition for the attention of the user is greater in an online environment eg instead of being focused solely on selecting, finding and using articles in a physical library, the user is searching online and can be distracted by events, or may be actively attempting to multi-task.
  - Physical constraints on audience size no longer apply eg users can access an online digitised resource at any time, from any location.
  - New constraints on resources eg limitations on bandwidth may affect quality of service.
  - It is easier to serve niche audiences.

10 *Information behaviour of the researcher of the future*, CIBER briefing paper; Jan 2008

11 *What the Internet is doing to our brains – is Google making us stupid?* Nicholas Carr, Atlantic Monthly Jul/Aug 2008



- c.2.2** Some users of digital services will embrace the full panoply of so-called 'Web 2.0' functionality:<sup>12</sup> they will read and perhaps even contribute to blogs, share personal photographs online, use social networking sites, subscribe to RSS feeds for favourite sites and use and create tags as they browse digital content. However, most of the audience will exploit only a tiny fraction of this functionality and some will be actively uncomfortable in an environment which seems to expect these behaviours: they will not feel part of the intended audience for the service.
- c.2.3** It is possible to tailor a digital service or resource to meet the varying needs of different audience segments (see sub-section 5.4). Although tailoring the service might require the user to self-identify as a particular class of user, it can sometimes be based on information about the user obtained from a third party.<sup>13</sup>

## C.3 Digital content is different

- c.3.1** Digitising content presents an opportunity to develop and extend functionality to provide a much richer resource, but there may also be penalties.
- Digital resources present new resource discovery problems eg placing metadata above the authentication level is important; search engine optimisation can have a big impact on the visibility of a resource.
  - Digital resources can be more flexible: powerful searching, filtering and ordering functionality can be provided.
  - Digitising resources facilitates comparisons between data sets.
  - Although more powerful searching tools are available for digital resources it is arguably easier to browse non-digital content. This leads to the slightly counterintuitive possibility that serendipitous discovery of interesting content may be more likely when using non-digital content.<sup>14</sup>
  - Digital content may be platform and/or software dependent.
  - Digital content can usually be accessed any time, anywhere.
  - It is easier to update a digital resource.
  - Digital resources are more amenable to interactive functionality eg wikis, novel combinations of resources to provide added functionality (ie mash-ups).
  - Under certain circumstances the digital environment can be treated as an experimental laboratory: small adjustments to resources or services can be made and data on the effect collected easily and rapidly. This has led to the notion that web services can be in 'perpetual beta' ie a digital resource can undergo continual evolution.
  - It is possible to create certain classes of digital resources very cheaply: when resource commitment to an idea for service development or enhancement is lower, the penalty for failure is lower and a more experimental approach is possible.

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<sup>12</sup> *What is Web 2.0? Ideas, technologies and implications for education* Paul Anderson, JISC Technology and Standards Watch Feb. 2007

<sup>13</sup> *Developing personalisation for the information environment 2*; JISC; 2008.

<sup>14</sup> *Great minds think (too much) alike?* The Economist (17th July 2008).



- Licensing and copyright may be different for electronic versions of a resource (eg access to electronic journal articles may be restricted to authenticated members of an HE institution, although access to the paper version of the journal is possible for any visitor to a library where it is held).

## C.4 The relationship between digital and non-digital worlds

- C.4.1 The differences in context mean that attempting to replicate a non-digital resource or service in the digital environment may not be appropriate or effective. Simply replicating the existing resource also neglects possibilities unique to the digital environment.
- C.4.2 Digital audiences do not necessarily overlap completely with non-digital audiences, even for an ostensibly similar resource. In the digital environment the audience has different expectations about resources and will expect to interact with resources in different ways.

### Consider this example....

Members of a library who access the same paper text may have very different expectations. For example they may be: looking up a specific reference, borrowing for repeated reference or extended reading, skim reading, searching for content on a particular topic, reading from cover to cover, checking publication data, examining illustrations, browsing whilst waiting, comparing with alternative editions etc. The paper text is not the optimal format for all these tasks, but the user must adapt to the format; in the digital world the resource can also be adapted.

A digital resource based on the text could be created taking as the starting point the range of tasks the target audience would want to carry out. The more flexible digital resource can be presented in different ways and the functionality extended to facilitate the uses to which the audience would like to put the resource.

- C.4.3 Audience research can provide evidence of the functionality that users would appreciate. Consulting the target audience may uncover unanticipated requirements, or conversely may indicate that features the service provider is considering introducing would not be used, or would not be valued enough to justify the costs.
- C.4.4 Digital resources are still in their infancy and it is also common to discover that a resource is being used in ways or for purposes not anticipated by the content or service provider. Monitoring use of a digital resource using different audience analysis techniques allows service providers to uncover unexpected patterns of usage and take advantage of any opportunities for service development and audience development.

## C.5 Technology should serve the audience

- C.5.1 Content and service providers often feel an obligation to exploit the new possibilities of the digital world but are unsure how to do so effectively. Technology should be used where it can enhance the service and improve the audience experience. Rather than asking how to incorporate emerging digital technologies, applications etc, service providers should ask which benefits of the new tools their audience might appreciate. Digital service development



should be driven by the mission of the service, rather than by an obligation to incorporate emerging applications and formats (eg if your audience want information and a forum for discussion on hot topics of the day blogging might be the right solution).

- c.5.2 Obviously this doesn't mean service providers shouldn't experiment with new possibilities (see sub-section C.4: experimentation may be cheaper and easier in the digital environment) but the business case should state clearly when extension to a service is offered on a more speculative basis and audience research would be critical to determine whether and how to pursue the idea.
- c.5.3 There is currently a lot of talk about 'Web 2.0', with service providers keen to know how to respond. Rather than seeing Web 2.0 as a set of technologies, it could be viewed as an approach to service provision in the digital world: users can be collaborators in resource creation; use of a service generates data that can be mined for service development; users participate in designing their experience of a service.

## C.6 Relationship between digital and non-digital services

- c.6.1 Digital services can be an alternative to, complementary to or supplementary to a non-digital equivalent. Many services and content providers now have a website in addition to the original physical resource and understanding the relationship between the audiences for these different services is useful. It has sometimes been assumed that an online site will attract an audience for whom the physical resource is relatively inaccessible, but audience research has shown that this is not necessarily the case.

### Consider this example....

Some services have found that most visitors to their website use it to obtain simple information about opening hours and travel to assist in planning a visit. This suggests that the website is simply an alternative means of accessing information also available on paper or by telephone. But the website may still be attracting unique visitors to the museum ie visitors who would not have discovered the museum if the website were not available or would not have chosen to visit without having accessed the website, even if they make little use of the website. Uncovering this kind of information would require an integrated audience analysis strategy, including asking the audience for the physical museum about their use of the digital museum resource.

- c.6.2 Services may want to use audience research to explore the relationship between their various audiences and tailor their audience development and service development work accordingly:
  - The audience for a physical resource could be encouraged to become part of the audience for a related digital service (eg by offering further information about exhibits online, offering access to more material online, offering the chance to influence the physical resource etc.).
  - The digital service could be used to promote related non-digital services (eg an event organiser uses websites, perhaps including social networking sites, to provide information about an event and attract a wider audience).
  - It is recognised that the digital service serves a largely unique audience and the service is tailored specifically to their needs, particularly those that cannot be met through a non-digital service.



## C.7 Digital audiences may be analysed differently

### Methods of audience analysis are discussed in more detail below

- c.7.1 Audience analysis should follow the same basic principles regardless of the type of service or audience, however additional audience research techniques have become available with the advent of digital services: web statistics, online surveys and a much wider range of ethnographic techniques. Web statistics are a valuable new tool for audience analysis as data is potentially available on all users of a resource rather than just a small sample.
- c.7.2 In the physical world ethnographic research involves direct observation of an audience walking through a museum; asking the individual to keep a diary of usage to be used as a prompt in an interview or carrying out a contextualised interview. Data capture is indirect: a human being, either the researcher or audience member, would have to observe, code or categorise and perhaps also recall at a later date the usage behaviour of interest. This means that the fine detail of usage behaviour is missed, misremembered or forgotten altogether. Additionally, the more intrusive the researcher recording behaviour the more likely it is that his or her presence will influence the audience.
- c.7.3 In the era of digital services web analytics capture user behaviour directly and user observation studies have also changed. Studies may be carried out in a special 'viewing lab' or remotely with the users in a location of their own choosing. Users can be asked to carry out a particular task with a resource – either according to a given protocol or as they prefer – or simply invited to explore the resource freely. Users' behaviour as they navigate a website or use another digital resource can be captured automatically, accurately and to a much greater level of detail by specially written computer programs. Navigation paths through a resource, searching behaviours and their success or failure, downloading, viewing times for files and pages etc. can be captured for later analysis in conjunction with user comments and knowledge of their objectives or the tasks attempted.
- c.7.4 Web analytical methods are of only limited use in determining the size and composition of an audience. They provide, at best, only an approximate identification of users: detailed demographic information is not available and any other segmentation has to be based on inference.
- c.7.5 The value of web analytical methods is that they capture data about how a site is accessed and used which allows an audience analyst to make *inferences* about audience behaviour. It must of course be remembered that these are only inferences and in order fully to understand what navigation paths, page view times etc. really mean in terms of user experience it is still important to talk to users about their experience. Web statistics cannot tell you a user's motivations or attitude to a resource. For example:
- A repeat visit could be used to infer satisfaction with the service, but might instead reflect frustration at a failure to fulfil the original objective.
  - Search behaviours which terminate in a download or print request could be used to infer success, but the user may still be frustrated that the search took too long; some users may prefer to read the material of interest directly rather than downloading or printing it.
  - Long page view times might indicate interest in a resource or simply be an artefact of tabbed browsing. Viewing only one or two pages on a site is similarly subject to multiple interpretations: the site was unappealing; the nature of the resource wasn't what the user expected; the user was called away; the site wasn't accessible for the user etc.

# Appendix D

## Bibliography

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### D.1 Introduction

- D.1.1 There is a large volume of publications on audience research. Here we have highlighted those we have used as a source of information for the development of this guide, and some which are useful for further reading. We also include references to areas not covered in this guide, such as impact analysis.

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## The Guide to Researching Audiences

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