

**BS 8878:2010**



**BSI Standards Publication**

# **Web accessibility – Code of practice**

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ISBN 978 0 580 62654 8

ICS 35.240.30

The following BSI references relate to the work on this standard:

Committee reference IST/45

Draft for comment 08/30180387 DC; 10/30218774 DC

**Publication history**

First published November 2010

**Amendments issued since publication**

| Date | Text affected |
|------|---------------|
|------|---------------|

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### Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 82, an inside back cover and a back cover.

## Foreword

### Publishing information

This British Standard is published by BSI and came into effect on 30 November 2010. It was prepared by Technical Committee IST/45, Web accessibility. A list of organizations represented on this committee can be obtained on request to its secretary.

### Relationship with other publications

This British Standard is based on PAS 78:2006, which will be withdrawn.

### Information about this document

The content of PAS 78:2006 has been fully revised and updated to reflect current good practice in the building and maintenance of accessible web products.

### Use of this document

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

NOTE 1 See also 4.1.

### Presentational conventions

The recommendations in this standard are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller, indented type, and does not constitute a normative element.

The word "should" is used to express recommendations of this standard. The word "may" is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the Clause. The word "can" is used to express possibility, e.g. a consequence of an action or an event.

Notes and commentaries are provided throughout the text of this standard. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

NOTE 2 Annex A contains a list of documents referenced normatively; Annex B contains a list of terms and definitions. Annex C to Annex O are informative annexes providing information and guidance; they are intended to be read in conjunction with Clause 1 to Clause 8 of this British Standard.

Additional material supporting the case for BS 8878 is indicated by numbers in square brackets, which cross reference to a list in the Bibliography.

### Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

### Compliance with a British Standard cannot confer immunity from legal obligations.

In particular, attention is drawn to the Equality Act 2010 [1] and the Disability Discrimination Act 1995 (DDA) [2]. References to the law in this British Standard are intended as general information only. Any opinions expressed are those of the committee responsible for this British Standard and do not constitute legal advice.



## Introduction

A web product in this British Standard:

- is defined as any website, web-service, or web-based workplace application (e.g. web-based email interface) which is delivered to users via Internet Protocol, through a web browser;
- includes: web-based virtual learning environments, Rich Internet Applications (RIA), "Software as a Service"/Cloud computing services provided through a browser; and internet-enabled "widgets" that can be run inside and outside the browser using desktop runtimes such as Java or Adobe Air;
- could be viewed on different internet-enabled platforms, including computers, mobile phones and other internet-enabled devices such as eBook readers, tablets and televisions.

NOTE 1 A web-service in this standard is defined as a set of web products that are made available for use by audiences (the general public, or the more limited and controlled audiences of intranets or extranets) via IP and HyperText Transfer Protocol (HTTP).

NOTE 2 While this standard does not go into detail on how to make internet-enabled applications which run outside the browser (e.g. Apple iPhone apps or Nokia Ovi apps) accessible, most of the guidance in this standard can be used to inform their design and development (see also 7.3.1).

NOTE 3 This standard does NOT cover the general accessibility of desktop software, as other standards (such as BS EN ISO 9241-171) already address this.

Many web products unnecessarily exclude disabled or others with accessibility requirements, for example older people aged 60 or over, which may leave organizations subject to legal challenge. However, by following good practice in creating, updating or procuring web products, this exclusion generally can be prevented.

This British Standard sets a process rather than technical specifications. It brings together and summarizes important information needed to enable organizations that create web products to understand:

- how to create organizational policies to embed accessibility concerns into their business as usual; and
- how to ensure they consider the needs of disabled and older people at all stages of the web production process.

There are three main drivers for organizations to take steps to make their web products more accessible and usable.

Legal reasons (see Annex C):

- If an organization's web product is not accessible to a disabled person, that person might have grounds for making a claim against the organization under the Equality Act 2010 [1] or the Disability Discrimination Act 1995 (DDA) [2].

Commercial reasons (see Annex D):

- Accessible web products can be used by a much wider audience than inaccessible web products, opening products up to the widest pool of potential users/customers.
- The numbers of people who could benefit from more accessible web products, or could be excluded from products which are not accessible, are significant.
  - There are more than 11 million disabled people in the UK [3].
  - There are nearly 12 million people of state pension age [4] who, while they may not be legally considered disabled, could experience difficulties using technology caused by the effects of age-related capability change. The number of people aged 60 or over is projected to rise by over 50 per cent in the next 25 years [5].

- There are also many other non-disabled people who could benefit from more accessible web products [6]. These people include, for example: the 7 million adults in England with a reading age of less than an 11 year-old [7]; and people who temporarily do not have use of one of their senses due to illness or because they need that sense to do something else at the same time.
- Moreover, web products which include content with accessibility features such as text alternatives to images and captions for videos are more highly visible to search engines. These features can lead to improved Search Engine Optimization resulting in increased audience numbers.

Ethical reasons:

- The Digital Britain report [8] details the many benefits that modern digital technologies can bring, and has developed into the UK Government's active eAccessibility Action Plan [9]. Many organizations want to ensure that disabled and older people are not excluded from these benefits [10] and are able to use new technologies to increase their ability to live independently and to be fully engaged members of society.
- This is reinforced by the United Nations Convention on the Rights of Persons with Disabilities [11] which includes obligations for countries (including the UK) to promote "universal design" of products which are "usable by all people, to the greatest extent possible".

There are also cases which bring together all three of these drivers. These include the importance of ensuring all workplace web products are accessible, as they ensure employment opportunities and employment retention is maximized for the widest possible range of ages and abilities, which benefits society, employers and employees.

## 1 Scope

This British Standard gives recommendations for building and maintaining web products that are accessible to, usable by and satisfying for disabled and older people.

It gives recommendations for:

- how organizations should ensure accessibility is considered in their web strategy by creating an organizational web accessibility policy (see 4.2 and 4.3). Organizations should also assign a role to be responsible for ensuring that all web products and services produced or procured are in accordance with this policy;
- how to embed the consideration of accessibility decisions through the entire process of producing web products, and document and justify these choices in the product's accessibility policy (see 4.4 and 4.5);
- how to consider the impact of the purpose of the product, its target audience and their needs, the product's choice of platform and technology, and whether to adopt an inclusive design approach or one which also includes an element of user-personalization;
- how to best use existing web accessibility guidelines (or accessible web production tools) in the process of producing accessible web products;
- how to ensure that web products being procured rather than created are selected or specified in such a way as to assure their accessibility; and
- how to assure web accessibility throughout a web product's lifecycle, by considered use of various research and testing methodologies (including the involvement of disabled people) at key points in the production process; and
- how to communicate the web product's accessibility decisions to its users at launch, through creating and publishing its accessibility statement (see 4.4 and 4.6).

BS 8878 is applicable to all types of organization. These include: public and private companies, non-profit organizations, government departments, local councils, public sector organizations and academic institutions.

The audience for this document includes:

- whoever is ultimately responsible for the policies covering web product creation within an organization and governance against those policies (e.g. Chief Executive Officers, Managing Directors, Headteachers, Information and Communication Technologies (ICT) managers);
- people responsible for promoting and supporting equality and inclusion initiatives within an organization (e.g. Human Resource (HR) managers or those responsible for Corporate Social Responsibility);
- procurement managers (e.g. those responsible for procuring web products or the tools to create them such as content production systems or virtual learning environments);
- web production teams (e.g. product owners, project managers, technical architects and web developers, designers, usability and accessibility engineers, test engineers);
- people with responsibility for creating or shaping online content (e.g. website editors, marketing managers, web content authors);
- people who create web production, testing or validation tools; and
- people who write and deliver training courses in web production, design or coding.

Other audiences that might also be interested in this British Standard include:

- assistive technology creators, vendors and trainers who need insights into how their technologies impact on the production of accessible web products; and
- those disabled and older people whose web accessibility needs the Standard aims to support and present.

## 2 Normative references

The documents listed in Annex A are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

## 3 Terms, definitions and abbreviations

The terms, definitions and abbreviations used in this British Standard are given in Annex B.

## 4 Embedding web accessibility within an organization – Responsibilities and documentation

### COMMENTARY ON CLAUSE 4

This clause is split into subclauses, by audience.

- Subclause 4.1 is intended to be used by the person in charge of standards compliance in the organization.
- Subclauses 4.2 and 4.3 is intended to be used by the person in charge of policy in the organization.
- Subclauses 4.4, 4.5 and 4.6 are intended to be used by staff involved in the production of web products in the organization (especially web product or project managers).

## 4.1 Claims of conformity with BS 8878

### COMMENTARY ON 4.1

As a code of practice, this British Standard takes the form of guidance and recommendations. It is not to be quoted as if it were a specification and particular care is to be taken to ensure that claims of conformity are not misleading.

This British Standard sets a standard for the quality of the process of creating accessible web products, rather than a standard for the quality of accessibility of web products resulting from it.

Organizations wishing to claim conformity with BS 8878 should:

- address all of the recommendations of this British Standard;
- be able to justify any course of action that deviates from this British Standard's recommendations; and
- document their decision processes (in hard copy or electronic media) to provide evidence of following the recommendations and guidance in this British Standard.

In making such a claim, an organization should be specific about the basis on which it is made and should have evidence to support the claim. The claim may be based on self-assessment, or by an assessment carried out by another party.

## 4.2 Setting web accessibility responsibility and policy for the organization

As part of an organization's strategy for dealing with accessibility and eAccessibility in general, the organization should ensure that a department or specified role is responsible for the organization's compliance with BS 8878.

NOTE 1 This specified role might be, for example, the Chief Technology Officer, User Experience Director, Web Development Director, Public Relations Director, Communications Director or Marketing Director depending on the size and structure of the organization.

Through this department or role, the organization should:

- analyse the organization's business to consider how web accessibility will affect what it does, including:
  - the organization's legal duties under the Equality Act/DDA (see Annex C for information);
  - (for public bodies only) the organization's duties under the Public Sector Equality Duty;
  - the potential business benefits of web accessibility (for example, those outlined in Annex D);
  - the steps that can be taken to create or procure web products which give disabled and older people a user experience that is as close to the standard enjoyed by non-disabled people as can be reasonably achieved (see Clause 6).
- prepare a web accessibility policy for the organization (see 4.3). This could form part of the organization's suite of accessibility policies covering accessibility of buildings or software, or could stand alone;
- delegate web accessibility responsibilities across the different departments/functions of the organization (as suggested in Annex F) and ensure those people are adequately trained to be able to fulfil these responsibilities; and
- take responsibility for ensuring that the organization implements and maintains the web accessibility policy.

NOTE 2 The Employers' Forum on Disability has an Accessibility Maturity Model which is a very useful reference in enabling organizations to see the levels of maturity in web accessibility they could aim to achieve. A summary "dashboard" of the model is available from: <http://www.onevoiceict.org/tools/tr-tools.asp>.

### 4.3 Definition of an organizational web accessibility policy

NOTE An example organizational web accessibility policy can be found in E.1.

An organizational web accessibility policy should explain an organization's commitment to web accessibility and summarize its approach. This may include: where accessibility considerations have been included in the organization's wider web policies and standards, for example:

- the organization's web procurement policy (see 6.11);
- the organization's web technology policy (see 6.12);
- any policies or standards the organization has which should hold (at least as the default position) for all of its web products, for example:
  - on compliance with web accessibility standards such as those provided by W3C-WAI (see 6.13);
  - on the degree of user-experience the organization usually aims to meet in its web products (see 6.7); and
  - on support of browsers, operating systems and assistive technologies (see 6.10).

### 4.4 Creating accessibility policies and statements for each web product

Each of the organization's web products should have its own web product accessibility policy (see 4.5).

A web product's accessibility policy should be based on the broad strategic aims set out in the organization's web accessibility policy (see 4.3), but tailored to the specifics of the web product in question.

The product's accessibility policy should be created at the initial conception of a web product and be an active document into which each accessibility decision made over the product's lifecycle (after launch as well as before launch – see the steps in Clause 6) is documented.

NOTE For the purposes of this documentation, it is up to the organization to define what it regards as an individual web product.

- The organization might consider a web product to be the result of any web project it embarks upon (so every update to a large website might be considered a new web product). Alternatively it might take a lifecycle view of a product, where a web product is created, and new projects to update or augment the project are written into that web product's policy, rather than prompting a new policy document.
- Where a complete transaction requires the use of a set of web products (e.g. if different steps of the transaction were developed or procured at different times or from different suppliers) it is important to consider the accessibility of each web product. The overall degree of user experience for the transaction will necessarily be determined by the weakest web product in the set.

The product's accessibility policy should be accompanied by an accessibility statement, created and published on the web product when it launches (see 6.15). The accessibility statement summarizes the policy for users (see 4.6) and should always reflect the current state of accessibility of the web product.

The organization should ensure that a person in the product's production team takes responsibility for keeping the product's accessibility policy and statement up-to-date throughout the product's lifecycle.

#### 4.5 Definition of a web product's accessibility policy

NOTE An example web product accessibility policy can be found in E.2.

A complete accessibility policy for a web product should:

- be used to store the accessibility requirements and aims that have been decided on for the product in the initial requirements analysis for the product. This will include:
  - the purpose of the product (see 6.1);
  - the target audiences for the product (see 6.2);
  - research on the target audiences' needs (see 6.3);
  - the platform and technology preferences and restrictions of the product's target audiences (see 6.4);
  - a decision on the relationship the product should have with its target audiences (see 6.5);
  - the user goals and tasks the product needs to provide (see 6.6);
  - degree of user-experience the product will aim to provide for each combination of user group and user goal (see 6.7);
  - the accessibility production approach to be used (see 6.8);
  - the delivery platforms the product will support (see 6.9); and
  - the target browsers, operating systems (OS) and assistive technologies the product will support (see 6.10).
- be referenced during the procurement process in invitations to tender and contract documents. It should contain accessibility requirements for contractors (i.e. web development agencies) undertaking the development and maintenance of the web product (see 6.11);
- be used to store the rationale behind the choice of the web technologies used in the web product's creation, and any alternative versions that might need to be created if non-accessible technologies are to be used (see 6.12);
- be referenced during the production process for all decisions on how web guidelines should direct production (see 6.13);
- be used to store the accessibility test plan for the product (see 6.14) and all findings and decisions made as a result of implementing that test plan;
- be used to keep an ongoing register of the cumulative level of accessibility risk (the accessibility limitations resulting from the decision, and whether these are likely to result in the exclusion of any potential users) and the financial or other costs of all decisions made throughout the product's lifecycle (see Clause 5), including:
  - any decision to aim below a usable degree of user-experience for all user groups across all core user goals (see 6.7); and
  - any decision to downgrade the product's degree of user-experience from the degree defined in the accessibility policy to a lesser degree in order to meet launch deadlines (see 6.14), including documentation of the accessibility limitations accepted in this downgrade.
- be used as the source for information in the product's accessibility statement (see 6.15) on the product's launch; and
- include the date it was last updated, and be maintained post-launch in the light of any post-launch updates to the product or complaints from users (see 6.16).

## 4.6 Definition of a web product's accessibility statement

NOTE 1 An example web product accessibility statement can be found in E.3.

The role of the web product's accessibility statement is to inform disabled and older people about:

- how they can get the most accessible experience when using the web product by customizing the experience to suit their individual needs (see Annex H), either through:
  - using the accessibility customization controls in their browser or operating system; or

NOTE 2 The statement needs to include information on where these customization controls can be found in all of the web product's target web browsers (see 6.10). As these controls are often in a different place in the menus of different browsers, and this placement can change between different versions of the same browser, organizations may consider providing this information by linking to a third-party repository or repositories of this information, for example the BBC My Web My Way website (<http://www.bbc.co.uk/accessibility>) or W3C's "Better Web Browsing: Tips for Customizing Your Computer" (<http://www.w3.org/WAI/users/browsing>). These include up-to-date libraries of browser customization information for all popular web browsers and operating systems in the UK.

- using the preference setting, adaptation or version selection tools the web product provides or responds to, where a user-personalized approach to accessibility has been chosen (see 6.8).
- any accessibility limitations the web product has, any plans to fix these limitations, and any alternative accessible means which have been provided to get around these limitations (see 6.14); and
- contact mechanisms for disabled and older people who wish to request further information about the web product's more detailed accessibility policy, or to lodge accessibility suggestions, comments and complaints with the organization.

NOTE 3 These contact mechanisms need to be sufficient to ensure that all disabled and older people have at least one mechanism they find accessible to provide this feedback. In practice, an email address or contact form is usually sufficient as a contact mechanism. Organizations wishing to provide other mechanisms could also include details for: telephone, textphone or typetalk.

NOTE 4 To advise disabled and older people on how to most effectively provide this feedback, the accessibility statement could include a note recommending they read World Wide Web Consortium (W3C) Web Accessibility Initiative's (WAI) guide for "Contacting Organizations about Inaccessible Websites" (<http://www.w3.org/WAI/users/inaccessible>) before contacting the organization.

After this information, the accessibility statement may include a summary of the product's accessibility policy to show how accessibility has been catered for in its production. This may include a reference to the W3C guidelines and specifications that the web product upholds.

NOTE 5 If the statement claims conformance with WCAG (see 7.1.1.1), it should be in line with W3C requirements for conformance statements available from: <http://www.w3.org/WAI/WCAG20/quickref/#conformance-reqs>.

However, the organization should avoid the inclusion of technical terms and jargon in the accessibility statement. It should not assume a knowledge of the relative roles of a browser, a search tool and a web page, as many less experienced web users may have difficulty understanding this. It should communicate using clear and easy language so that as many of the web product's users can understand the accessibility statement as reasonably possible.

The accessibility statement should also include the date when it was last updated and the date by which it will be reviewed/revised.

## 5 How to make justifiable decisions on accessibility options at each step

Many of the steps in the process for creating accessible web products (see Clause 6) include a number of options that the organization could take for dealing with accessibility at that step of the process.

At each step, the organization should carefully consider which of the options it will choose, be able to justify its choice based on reasoned evidence, and detail it in the web product's accessibility policy.

The organization generally should choose the option that maximizes accessibility. Where that option is not selected, the organization should be able to justify its decision. Its reasons for that decision should be recorded in the web product's accessibility policy.

Factors relevant to such a decision may include:

- the extent to which it is practicable for the organization to choose more accessible options;

**NOTE 1** A more accessible option would be one that provides a greater degree of user-experience for a particular audience, or provides the same target degree of user-experience to a wider range of users;

- the financial and other costs of choosing more accessible options, considering the financial and other resources of the organization, and the amount of any resources already spent on making adjustments for accessibility;

**NOTE 2** While most aspects of delivering accessibility do not necessarily cost much time or money, especially if addressed at the outset of the web production process, some aspects (notably user-testing, and provision of subtitles, signing or audio description for video content) can be costly. Thus accessibility costs need to be factored into budgeting from the start of the process, so that decisions which have a financial implication at later steps of the process can be properly considered rather than discounted because no budget has previously been set aside.

**NOTE 3** Organizations will get better at estimating the potential costs of making different types of web product accessible with experience, but the process has been designed to ensure that all of the relevant information and choices which can fundamentally impact accessibility costs are captured in the first ten steps of the process, before the creation or procurement of the web product is undertaken.

- the extent of any disruption the work would cause; and
- the nature of the benefit, including the number of disabled and older users who would benefit from more accessible options, and the impact on each of these users if the web product excludes them.

**NOTE 4** Audiences that organizations might need to justify their decisions to include:

- any (internal) stakeholders who want to assess the level of accessibility risk in decisions made on the web product, both in the requirements stages (steps 1–10), and in any decisions around how much risk is advisable when making launch decisions (step 13);
- their disabled and older users – through the summary of these decisions in their web product's accessibility statement (see 4.6); and
- any party who is assessing their claims of conformity with BS 8878 (see 4.1).

**NOTE 5** UK law does not expect organizations that provide web products to the public to anticipate the needs of every user. However, organizations are required to think about and take reasonable steps to overcome barriers that may impede people with different kinds of disability. Statutory guidance on the Equality Act [1] provides that once an organization has become aware of the

requirements of a particular disabled person who uses or seeks to use its services, it might then be reasonable for the service provider to take a particular step to meet these requirements. "This is especially so where a disabled person has pointed out the difficulty that they face in accessing services, or has suggested a reasonable solution to that difficulty," it says. The guidance lists factors that help to determine whether any adjustment is reasonable. These factors do not include the number of people affected by an accessibility barrier. Reasonable adjustments are addressed at C.3.1.

## 6 The process for creating accessible web products

### COMMENTARY ON CLAUSE 6

The organization needs to ensure that accessibility is taken into account at all points of a web product's lifecycle – every decision will affect whether the resulting product will include or exclude disabled and older people.

- Ensuring you have the right research and understanding in the initial conception and requirements analysis for the web product: see steps 1 to 6 (6.1 to 6.6).
- Making strategic choices based on that research: see steps 7 to 11 (6.7 to 6.11).
- The decision whether to create or procure the web product in-house or contract out externally: see step 11 (6.11).
- The production of the web product: see steps 12 and 13 (6.12 and 6.13).
- The evaluation of the product: see step 14 (6.14).
- The launch of the web product: see step 15 (6.15).
- Post-launch maintenance: see step 16 (6.16).

Iteration should be used to progressively eliminate uncertainty during the development of web products (especially during steps 13 and 14). Iteration implies that descriptions, specifications and prototypes are revised and refined when new information is obtained in order to minimize the risk of the system under development failing to meet user requirements.

This process is very similar to the user-centred or human-centred design process detailed in BS EN ISO 9241-210 that many organizations may already follow.

Where the limited resources of the organization or the small size of the web product make the costs of following every step of the process prohibitive, organizations are advised to consider choosing the cheaper or quicker options at each step, rather than omitting steps.

### 6.1 Step 1: define the purpose of the web product

#### COMMENTARY ON 6.1

The purpose of the web product can have a huge impact on how it could be made accessible. See Annex G for examples of aspects of common Web 2.0 products such as social-networking sites, video-based sites, online games, "Software as a Service" sites and web products that create web products (content management systems, site builders and blog sites) which make them particular accessibility challenges.

If the purpose of the web product is to replace a non-digital service (for example, a phone helpline), and that existing service will be discontinued when the product is launched, disabled and older people are likely to expect the web product to be at least as accessible as the existing service.

The main purpose of the product (what users will expect to achieve when using the product) should be defined, and documented in the product's accessibility policy.

**NOTE** The more detailed user goals that the target audiences will come to the web product to achieve will be defined in Step 6 (see 6.6).

## 6.2 Step 2: define the target audiences for the web product

The target audiences for the web product should be defined, depending on:

- whether the organization is in any way able to predict or control the audience of the web product. For example: is it designed to be an internal (intranet) or organization-to-organization (extranet) web product?

NOTE 1 It is harder for an organization to predict the audiences for its internet sites (who could be any member of the public, worldwide) than the audiences for its intranet or extranet sites (as these audiences will be its staff, and the staff of its partner organizations, all of whom will have a login that the organization controls).

- whether the purpose of the web product is designed to appeal to a particular audience. For example, an educational site might be specifically targeted at students of a particular age. A site to help older users get started on the internet might be specifically targeted at those older users, and anyone helping them.

NOTE 2 Where a web product is targeted at a particular audience, care ought to be taken to not unreasonably exclude potential secondary audiences from being able to use the web product. For example, educational sites might be used by a secondary audience of parents wishing to check out the appropriateness of the site for their children.

NOTE 3 While it might be reasonable to include or exclude user groups from the web product's target audiences based on age, disabled users should not be excluded from the product's target audiences on the basis of their disability.

NOTE 4 However, where a web product is targeted at a particular disabled audience, it may be reasonable to exclude other disabled audiences from being able to use the web product if the needs of the targeted audience and other disabled audiences clash. For example, an online audiogame created specifically for blind people might reasonably exclude people with hearing impairments.

- whether the organization wishes the web product to be used by the widest range of audiences.

This definition of the web product's target audiences may be useful later in the process in any situations where it is not possible to satisfy the needs of all potential audiences as they diverge or contradict each other. Where this occurs the needs of target audiences ought to take precedence over the needs of other audiences.

NOTE 5 Defining a number of target audiences does not mean that everyone else is excluded; it just means that the requirements, design and testing activities will focus on these user groups as the most likely users of the web product.

## 6.3 Step 3: analyse the needs of the target audiences for the web product

The needs of disabled and older target audiences for the web product should be considered alongside the needs of non-disabled target audiences in the requirements analysis phase of the web production project.

The organization should research its target audience's needs by doing desk research into the general needs of the product's target audiences, taking special note of the general needs of disabled and older people (see Annex H which provides a summary of these needs for many different groups of disabled and older people, and links to other useful sources of information).

The organization could go further and do ethnographic research into the context, preferences and specific needs of the product from a representative sample of the target audiences. (See 8.2 for details on possible research methods.)

To help communicate these needs throughout the web production project, the production team might decide to generate “personas” for the different target audiences for the product. These personas are precise descriptions of a model user from each target audience and what they wish to accomplish with the web product. Personas can serve as an aid to summarizing and communicating an audience’s defining characteristics and needs across the production team. If this is done, these personas should be based on the best, most up-to-date research the organization can find.

All work done in researching the needs of the product’s disabled and older target audiences should feed specific accessibility requirements into the requirements specification of the web product. They should be used to inform all accessibility decisions made from this point onwards in the web production project, and be documented in the product’s accessibility policy.

#### 6.4 Step 4: note any platform or technology preferences and restrictions of the web product’s target audiences

Any information found about the platform or technology preferences and restrictions of the web product’s target audiences should be specifically noted in the product’s accessibility policy.

##### EXAMPLES

- Some office workers or school or university students might be restricted by using a “standard desktop” or organization-issued mobile device, which may dictate the operating system, browser, the preferences they can set in their browsers, or the assistive technologies they can install.
- Some disabled people might be restricted in their choice of assistive technology by cost. For example, a blind person may have a costly screenreader provided for them at work, but only be able to afford a free screenreader at home.
- Some disabled people who use the accessibility features present in most browsers may be resistant to updating their browser as the menu locations of the control panels to turn on these features can vary quite considerably between versions of a browser which can prevent them being found.
- Some older people might be using older browsers, and have difficulty in understanding how to update their browsers or install plug-ins. They might therefore need web products to be delivered solely using technologies supported “out of the box” in older browsers.
- Some older people might have a preference for viewing web products on IPTV (IP television) platforms. These are simpler than computers and consequently are less vulnerable to threats that cause concern about safety (for example: viruses or phishing emails).

This information will be of use when making decisions between inclusive design and user-personalized approaches to accessibility (see 6.8), and the browsers and assistive technologies that the web product will support (see 6.4).

#### 6.5 Step 5: define the relationship the product will have with its target audiences

The organization should choose whether the audiences for its product will be considered to be:

- individuals, each of whom can get a personalized experience, usually via a login or cookie; or
- more general groups of users, where a group is defined as all users with a common set of needs

## EXAMPLES

- Educational establishments, eLearning websites, staff intranets, and any website where users become a member by creating a login (such as social networking sites) are more likely to regard their users as individuals with whom they have entered a relationship. This might set up an expectation of an individualized user experience in the mind of their users. These user expectations, once set up, might extend beyond general personalization facilities like rating or the creation of member pages, to include an individualized approach to dealing with their accessibility needs.
- More traditional public internet sites are more likely to consider their users as user groups, and not raise user expectations beyond this lower level.

This choice, which should be documented in the product's accessibility policy, will fundamentally impact whether a personalized accessibility approach may be possible and suitable for the web product (see 6.8).

## 6.6 Step 6: define the user goals and tasks the web product needs to provide

The user goals and tasks (e.g. buy a book) that need to be supported on the web product should be defined.

**NOTE 1** Goals are what users come to a site to achieve. Tasks are how they achieve these goals. It is these tasks that are validated during requirements gathering sessions and tested during user evaluations. See Annex I for examples of product purposes, audiences, goals and tasks.

At this point of the production process the organization might do further research into the specific product goals that are most important to the web product's different target audiences. This would be to understand and define the core user goals that the target audiences will come to the web product to achieve, so the product can be designed to best enable those audiences to achieve those goals (prioritized over other less important goals). These insights could be added to the personas being used to model the audiences, if these are being used.

The success criteria should also be defined, for use in assessing whether the product, once created, enables its target audiences to achieve those goals.

**NOTE 2** Examples of success criteria can be found in Annex J.

The user goals and tasks, their prioritization, and success criteria, should be documented in the product's accessibility policy.

## 6.7 Step 7: consider the degree of user-experience the web product will aim to provide

### COMMENTARY ON 6.7

The organization may decide to create standards which prescribe a general degree of user-experience (e.g. usable) that it will aim for in all of its web products (see 4.3).

However, the degrees of user-experience the organization aims to implement for each user group and goal for a web product might differ from that standard. They will very much depend on the type of web product and the amount of challenge (including cost) in enabling the different degree of support for each user goal.

See 1.3 for examples of degrees of user-experience for common user goals on different Web 2.0 web products.

Consideration should be given to three potential degrees of user-experience for enabling the product's users to achieve their goals through the web product.

- **Technically accessible:** For example, is it technically possible for users to access the information or perform the steps needed to accomplish the task?

- Usable: For example, are users able to effectively and efficiently complete tasks?
- Satisfying/enjoyable: For example, are users satisfied with the experience; is the experience enjoyable, if it is supposed to be?

NOTE The terms effective, efficient and satisfying here are derived from BS EN ISO 9241-12. Satisfying has been separated from effective and efficient in this Standard as it can be a more challenging aim to achieve for disabled and older users than effectiveness and efficiency.

The organization should define the degree of user-experience it will aim to implement for each combination of user group and user goal, and document the reasons for choosing that degree in the product's accessibility policy.

Technical accessibility does not guarantee people with disabilities equivalent access to people without disabilities. Therefore, organizations should be able to justify any decision which does not aim to provide a usable degree of user-experience for all user groups across all core user goals. Such a decision will increase the level of accessibility risk in the product and should be noted as an accessibility limitation in the product's accessibility policy (see 4.5).

## 6.8 Step 8: consider inclusive design and user-personalized approaches to accessibility

The organization should define the production approach it will use to build accessibility into the web product for its target audiences.

Two useful approaches are:

- An inclusive design approach (see BS 7000-6). When applied to the design of web products, this aims to ensure accessibility via following recognized guidelines or techniques known to assure accessibility (such as WCAG; see 7.1.1.1) to a wide-range of audiences without the need for special adaptation, other than the use of assistive technologies. It also relies on user-testing the web product with a representative range of users from the product's target audiences for verification.

NOTE 1 Inclusive design, as used here, is similar to Universal Design, as defined in the United Nations Convention on the Rights of Persons with Disabilities [11]. The difference is that Universal Design requires products to be usable by all people to the greatest extent possible, whereas Inclusive Design requires products to be usable by as many people as reasonable or possible, conceding that often in practice trade-offs have to be made between the conflicting needs of different user groups. Where such trade-offs need to be made, the organizations should justify the reasonableness of its decision in the product's accessibility policy.

- A user-personalized approach. This could be provided by a system which enables users to specify their accessibility preferences, and then adapts products automatically to suit those preferences, and/or finds a suitable product from a number of alternative versions. Alternatively, a similar level of adaptation to individual needs might be provided manually or with the provision of services or content generated for that user. Systems that incorporate explicit accessibility preferences are the preferred option (see Annex K for more information on this approach).

NOTE 2 The most common example of the product adaptation approach is the inclusion of "additional accessibility provisions" such as text-resizing controls or "speak this page" functionality in web products. This is usually done where research into the needs, preferences and restrictions of the product's target audiences (see 6.2) suggests that a reasonable number of the product's users might be unable to use the accessibility features in their browser or operating system (for example, if local administration policies disallow this), where assistive technologies do not yet exist, or where the product's users are unlikely to be

able to install or use the assistive technologies needed to make a site based on WCAG accessible.

**NOTE 3** An example of the alternative versions approach is the creation or procurement of multiple alternative versions of an eLearning product/resource where research into the needs of the product's target audiences (see 6.2) suggests that different users would be better supported by learning through different learning styles and modalities – for example, graphs will make mathematical equations more easy to understand for most students, but will not make equations easier for blind students, who might prefer an alternative using audio or even touch.

**NOTE 4** When using a user-personalized approach, the organization will need to draw boundaries around what needs it will and will not respond to, based on the reasonableness of the costs of responding to those needs (see Clause 5).

This decision should be based on:

- an analysis of the needs of the product's target audiences (see 6.3). In practice, the inclusive design approach often needs to be enhanced by the user-personalized approach where it becomes obvious that the difference between the needs of individuals or groups of users will prevent a "one size fits all" approach giving an experience which works for all;
- any platform or technology preferences or restrictions they have (see 6.4). For example, the provision of "HTML alternatives" to rich-media content, which would require a plug-in to work, for users who cannot install plug-ins in their browser for some reason (even though rich-media technologies such as Flash can now produce accessible web products directly); and
- whether the organization wants to regard users as individuals or user groups (see 6.5). Individualized user-personalized approaches allow users to be treated as individuals.

The reasons for choosing one, or a combination of each, should be documented in the product's accessibility policy.

User-personalized approaches should complement but not be used as a replacement for inclusive design approaches, unless the organization is able to justify the reasonableness of any decision taken to replace upholding a particular WCAG guideline or technique with user-personalized approaches or additional accessibility provisions.

## 6.9 Step 9: choose the delivery platforms to support

An ever increasing range of devices can be used to access the internet, from traditional computers to internet-enabled TVs, set-top-boxes, mobile phones, and tablets. The organization should be aware that its web products might be accessed by users through web browsers on any of these devices.

**NOTE 1** For convenience this standard groups these devices into four platforms, where each platform has a sufficiently different screen size, expectation of the user's proximity to the screen, base input mechanism, and common usage context, to be considered as a candidate for the creation of a different version of a web product.

- Computer (e.g. desktop, laptop, netbook). For example, 1024 × 768 average screen resolution on a 17 inches monitor, 30 cm proximity of viewing, keyboard & mouse input mechanism; primarily solitary usage context.
- Mobile (e.g. mobile phones, internet tablets). For example, screen resolutions of between 94 × 64 and 320 × 480 on screens of 3.5 inches or less; 10 cm proximity of viewing; touch-screen or multi-directional user navigation (e.g. D-Pad or optical trackpad) input mechanism; mobile, totally personal usage context (see also <http://www.w3.org/WAI/mobile/>).

- Games Consoles (e.g. Sony Playstation, Microsoft Xbox, Nintendo Wii). For example, screen resolutions of standard-definition (SD: 800 × 600) or high-definition (HD: 1900 × 1030) on screens of anywhere from 24 inches to 52 inches; 6 feet or more proximity of viewing; gamepad input mechanism; primarily lounge-based solitary or group usage context.
- IPTV (e.g. web-enabled TVs, web-enabled set-top-boxes) – e.g. screen resolutions of SD (800 × 600) or HD (1900 × 1030) on screens of anywhere from 24 inches to 52 inches; 6 feet or more proximity of viewing; remote-control input mechanism; primarily lounge-based solitary or group usage context.

The organization should therefore make a conscious, reasoned decision regarding the degree of support for accessibility it will aim to achieve for users accessing its web product across different platforms, from these three increasing degrees of support.

- 1) Creation of one accessible web product which is optimized for computers only, and expecting that following accessibility guidelines for the creation of that web product will in some way facilitate its usability and accessibility on other platforms (see <http://www.w3.org/WAI/mobile/>).
- 2) Creation of one accessible web product which is optimized for computers, with some added support and testing (usually via device detection and adaptations of the user interface) for ensuring that it gives a usable and accessible experience on a wider set of supported platforms.
- 3) Creation of a set of connected and optimized versions of the web product, one for each supported platform; each version targeted, designed and tested to give an accessible, usable and context-optimized user experience on that platform, including:
  - an appropriate user interface for the device. For example, IPTV products should be designed with a user interface optimized for user input by a remote control, and a display which is designed to be viewed at least six to ten feet away from the big screen. Mobile products should be designed for touch-screen or multi-directional user navigation user input, and a small display which is designed to be viewed in the user's hand, probably on the move; and
  - an appropriate set of functionality for the device in context. For example, IPTV and mobile products will probably include a subset of the functionality of online products due to their smaller screens and slower user input mechanisms. Mobile functionality might also include location-awareness to optimize efficiency of interaction.

NOTE 2 These platform-optimized versions of the web product might be delivered via a "web apps" structure rather than through the browser.

These decisions should be documented in the web product's accessibility policy.

NOTE 3 See C.3.3 for a discussion on how the requirements of UK law impact on decisions of accessibility support across platforms, and Clause 7 for guidelines for development of web products on computer (see 7.1 and 7.2), mobile (see 7.3.1) and IPTV (see 7.3.2) platforms.

NOTE 4 The degree of accessibility that it is possible to aim for will be constrained by whether the platform's infrastructure has the attributes necessary to support the creation of accessible web products (either the combination of WCAG (see 7.1.1.1), ATAG (see 7.1.1.2) and UAAG (see 7.1.1.3) exists for the platform, or a similar combination of guidelines exists for the platform).

Organizations should check:

- Whether its accessibility infrastructure allows for the installation of, and interfacing with, assistive technologies.
- Whether its web browser and/or web apps infrastructure exposes content, structure and functionality to those assistive technologies.

- Whether its web browser and/or web apps include common accessibility settings such as font resizing.

NOTE 5 See also W3C-WAI's useful concept of "accessibility supported" technologies (<http://www.w3.org/TR/UNDERSTANDING-WCAG20/conformance.html#uc-accessibility-support-head>) which is a similar idea for web technologies (rather than platforms).

NOTE 6 While many mobile phone platforms (e.g. Android, Symbian, iPhone, Windows) do include the necessary infrastructure, most IPTV platforms (e.g. Sky, FreeView, FreeSat, Virgin Media) currently do not.

## 6.10 Step 10: choose the target browsers, operating systems and assistive technologies to support

The accessibility of the web product will be affected by the browsers, operating systems and assistive technologies its target audiences use. Therefore, the organization should choose a set of target web browsers, operating systems and assistive technologies to test the product with, to ensure the product provides the degree of user-experience for which it is aiming.

This choice will be affected by:

- the browsers, operating systems and assistive technologies which are available on the delivery platforms its web product will support (see 6.9);
- whether the organization has any control over the browser, operating system and assistive technologies the web product's target audiences will use. For example, if the product is an Intranet which will only be used by staff members who have been provided with their computers pre-loaded with company-approved browsers, operating systems and assistive technologies (see 6.2), support for those approved browsers, operating systems and assistive technologies will be sufficient; and
- the platform and technology preferences and restrictions of the product's target audiences (see 6.4), depending on the approach to accessibility chosen:
  - Where the organization has chosen an inclusive design approach to accessibility (see 6.8), it should be able to justify the choice of a reasonable subset of the browsers, operating systems, and assistive technologies which are used by the product's target audiences (see 6.4) that it will aim to support.
  - Where the organization has chosen a user-personalized approach to accessibility (see 6.8) it should be able to justify the choice of a reasonable subset of the browsers, operating systems, and assistive technologies which are used by the product's target audiences that it will aim to support, as well as the precise range of individual preferences the product will support through additional accessibility provisions or alternatives.

In practice, the organization might quickly define the product's target web browsers, operating systems and assistive technologies for the web product, by taking it from an organizational-level standard to be used for all its web products (see 4.3), as long as it reviews the appropriateness of this list against the target audiences for the individual web product.

These decisions should be documented in the web product's accessibility policy.

NOTE 1 Categories of assistive technology to consider supporting include: screenreaders, screen magnifiers, voice-recognition systems, and switches.

NOTE 2 Information about which screenreaders are widely used can be found in surveys by WebAIM (<http://www.webaim.org/projects/screenreadersurvey/>) and in the BBC's regularly updated Screen-Reader Testing Guidelines (<http://www.bbc.co.uk/guidelines/futuremedia/accessibility/screenreader.shtml>).

NOTE 3 Information about which browsers are widely used can be found in the BBC's regularly updated Browser Support Standards ([http://www.bbc.co.uk/guidelines/futuremedia/technical/browser\\_support.shtml](http://www.bbc.co.uk/guidelines/futuremedia/technical/browser_support.shtml)).

NOTE 4 As accessibility features in browsers themselves can be great enablers of accessibility, the organization needs to consider supporting any browsers which have accessibility features over and above the common set, even if the browser is not widely used. The common set of features are: the ability to zoom a page, zoom just the text on the page, and the ability to override the page colours specified by the designer by allowing the use of a custom cascading stylesheet (CSS).

NOTE 5 In practice, different versions of the same web browser or assistive technology can have hugely different levels of support for accessibility features. Therefore target web browsers and assistive technologies need to include version numbers.

## 6.11 Step 11: choose whether to create or procure the web product in-house or contract out externally

While it used to be the case that most web products were created "in-house from scratch" the organization now has many more options:

- whether it is going to create the web product in-house; or contract out its creation to an external supplier; and
- whether it (or its external supplier) is going to create the web product from scratch; or create it by selecting and integrating a combination of web-authoring tools, 3rd party software, components or web-services

Each of these two decisions will impact on every step that follows in the process, and so they should be documented in the web product's accessibility policy.

Where the organization contracts out the web product's creation to an external supplier it should assure itself that the supplier is able to deliver the accessibility requirements and aims specified in the product's accessibility policy. The policy should be referenced in all procurement invitations to tender and contract documents (see Annex L) as specified in the organization's web procurement policy (see 4.3).

NOTE Useful questions which the organization is recommended to add to its invitations to tender are detailed in L.3.

## 6.12 Step 12: define the web technologies to be used in the web product

The underlying web technologies used in the web product can have a huge impact on the ability of the product's developers to produce an accessible web product.

As such, the organization's web technology policy should include requirements that any web technologies used in the production of its web products should support the production of accessible web products.

If the web product is going to be created from scratch, the organization will have the most ability to control the choice of web technologies used in its production. In this case, each technology that it, or its external supplier, proposes to use should be checked to confirm:

- whether the technology has the attributes necessary to create accessible web products. This includes whether the supplier of the technology (e.g. W3C, Adobe, Microsoft) also supplies techniques for developers to use in assuring their web products conform to WCAG (see 7.1.1.1); and
- whether the technology exposes content, structure and functionality to assistive technologies used by disabled and older people. (See the technology sections of Annex H for information on the assistive technologies commonly used by different disabled user groups and older people.)

NOTE 1 See also W3C-WAI's useful document on "accessibility supported" technologies (<http://www.w3.org/TR/UNDERSTANDING-WCAG20/conformance.html#uc-accessibility-support-head>), which is a more complete discussion of this idea.

NOTE 2 There may be circumstances where no accessible technology exists to create a particular type of web product. Possible examples might be: the provision of immersive 3D environments; or mapping and navigation technologies. In these circumstances, non-accessible technologies could be used if alternative solutions and technologies are identified as a route to accessibility for people not able to use the non-accessible technology. This would be an example of the alternative versions approach from 6.8.

If the web product is going to be created by selecting and integrating a combination of web-authoring tools, 3rd party software, components or web-services, the organization will have less control over the technologies used. In this case, the selection process for each tool, software, component or web-service should assure:

- that the tool, software, component or web-service is able to deliver the accessibility requirements and aims specified in the product's accessibility policy (either inherently, or after customization for its use in the web product), which should be referenced in all procurement invitations to tender and contract documents (see Annex L);

NOTE 3 Useful questions which the organization is recommended to incorporate in its selection process are detailed in L.3.

- that where an web-authoring tool is procured to aid in the creation and maintenance of the web product, that authoring tool either satisfies all the checkpoints of ATAG (see 7.1.1.2), or justifies and documents any deviations from ATAG. Wherever possible, the web-authoring tool itself should also be accessible to disabled web content authors.

NOTE 4 At the time of publication, no single web-authoring tool that supports all ATAG Priority 1 checkpoints is known.

These decisions should be documented in the web product's accessibility policy.

### 6.13 Step 13: use web guidelines to direct accessible web production

The organization should create its web product, or require the external supplier it has contracted to create the product, to conform with the best accessibility guidelines for the platform and technology they are using, as detailed in Clause 7.

NOTE 1 Most web accessibility guidelines include guidelines which will impact on each member of a web production team, including:

- guidelines on visual design for visual designers;
- guidelines on interaction design for interaction designers;
- guidelines on content authoring for content authors and editors; and
- guidelines on coding for web developers.

Where guidelines include a number of levels of conformity (for example, the A, double-A, and triple-A conformity levels of WCAG), the organization should choose the conformity level which will provide the degree of user-experience defined in the web product's accessibility policy for each combination of user group and user goal (see 6.7).

NOTE 2 The level of conformity chosen will have an impact on cost and timescales. The organization should be able to justify its decision, based on the balance between this cost and the benefits to the product's users.

NOTE 3 The organization may decide to create standards which prescribe a specific level of compliance (e.g. WCAG 2.0 level AA) for all of its web products (see 4.3), or it may have such standards set for by its regulators (e.g. local government having to comply with central government standards).

These decisions should be documented in the web product's accessibility policy.

In the event that it becomes clear during production that it is not possible or reasonable (usually, in terms of costs) to provide the degree of user-experience defined in the web product's accessibility policy for each combination of user group and user goal, the policy should be updated with the justification for lowering the degree of user-experience.

#### 6.14 Step 14: assure the web product's accessibility through production

The organization should integrate accessibility assurance into the web product's production process by:

- (if it is creating the product in-house) creating an accessibility test plan for the product (see 8.3) and ensuring the plan is adhered to through the design, prototyping and build of the product; or
- (if it has contracted out the product's creation to a supplier) requiring their suppliers to create an accessibility test plan for the product (see 8.3) and requiring them to provide evidence that they have adhered to the plan through the design, prototyping and build of the product.

**NOTE 1** Organizations regularly contract (or sub-contract) out accessibility testing to external usability or accessibility testing suppliers who are specialists in this field. Useful questions which organizations are recommended to incorporate in their process to select these usability or accessibility testing suppliers are detailed in L.4.

**NOTE 2** A crucial aspect of this accessibility assurance work is the decision of how much accessibility risk the organization feels comfortable with when making launch decisions for the web product.

When making decisions about whether the product is ready to launch, organizations should do all they reasonably can to ensure that they have enough evidence from this testing that their product meets the degree of user-experience it decided to aim for (see 6.7).

There may be situations where an organization considers that the benefits of getting their web product first to market (or launched to a particular deadline) outweigh the accessibility risk in launching a product which does not yet meet the degree of user-experience it decided to aim for. In such situations, the organization should:

- carefully consider whether they can achieve an acceptable lesser degree of user-experience while still meeting their launch deadlines; and

**NOTE 3** This will introduce accessibility limitations into the product and thus increase its level of accessibility risk.

- attempt to mitigate any remaining accessibility limitations by:
  - making plans for repairs to be made to fix these accessibility limitations, including a reasonable estimate of when the repairs will be made; or
  - providing an accessible alternative means for disabled people to get around the elements of the web product which have these accessibility limitations so they can still achieve their user goals.

**NOTE 4** A common example of an accessible alternative means is the provision of a phone helpline for people who are not able to read "captchas" and could thus be prevented from registering for logins on many social networking sites.

The organization should carefully document all such decisions and mitigating factors in the section of the product's accessibility policy on the product's accessibility limitations.

**NOTE 5** If the organization cannot mitigate for the product's accessibility limitations it should document an explanation of why it considers it reasonable for the element to remain inaccessible.

## 6.15 Step 15: communicate the web product's accessibility decisions at launch

The organization should create and publish the web product's accessibility statement (see 4.6) on the web product, at launch, ensuring that the accessibility statement itself is fully accessible to and usable by disabled people, even when other content on the site is not.

**NOTE** It is recommended that organizations link to this accessibility statement from all pages of the web product (usually by putting the link in the web product's common page header or footer) and should name the link "Accessibility".

## 6.16 Step 16: plan to assure accessibility in all post-launch updates to the product

Once the web product is launched the organization should:

- ensure that any accessibility limitations that were identified but not fixed pre-launch are addressed within the estimated timescales;
- take care in planning the frequency of any updates to its web products which substantially change the way the product looks or works

**NOTE 1** One of the most important usability challenges to the users of a web product over time is how often that website is redesigned. While each of a web product's audiences may experience frustration or difficulty in re-learning how the web product works when the way it looks and works has been updated, disabled and older audiences may be particularly sensitive to this "having to learn it all over again" as they may have greater difficulties in learning how to use new/updated sites quickly and so may give up.

- develop and implement a regular programme of post-launch accessibility testing (see 6.5) to ensure that all updates to the product (whether as minor as an update to a page, or as major as a new release of the product) do not compromise its accessibility;
- regularly review the web product's accessibility in light of new developments in technology

**NOTE 2** The Equality Act and the DDA require organizations to anticipate the needs of disabled users and to make reasonable adjustments. Statutory guidance on the legislation states: "a step that might previously have been an unreasonable one for a service provider to take could subsequently become a reasonable step in light of changed circumstances. For example, technological developments may provide new or better solutions to the problems of inaccessible services." It also advises that organizations should: "Review regularly the effectiveness of reasonable adjustments and act on the findings of those reviews." (see Annex C).

- ensure that all feedback about the web product, coming through the accessibility contact mechanisms noted in its accessibility statement, is reviewed; and all correspondence which complains about any aspect of the web product's accessibility is answered in a timely manner; and

**NOTE 3** Where complaints include any reference to the law or use the language of litigation the organization is advised to take legal advice on the complaint, before replying.

**NOTE 4** A guide to dealing with accessibility complaints can be found in Annex M.

- ensure that the web product's accessibility policy and statement is updated in the light of any post-launch updates to the product or complaints from users.

## 7 Using web accessibility guidelines to direct the production of accessible web products

NOTE This clause is intended to be read by members of a web product's production team.

### 7.1 Inclusive design guidelines

#### 7.1.1 Core web accessibility guidelines from W3C WAI

NOTE 1 The World Wide Web Consortium's (W3C) Web Accessibility Initiative (WAI) publishes three sets of guidelines which, when harmonized, increase the likelihood that web products (termed web content by W3C) will be accessible to and usable by disabled people.

- Web Content Accessibility Guidelines (WCAG):  
<http://www.w3.org/TR/WCAG20/>.
- Authoring Tool Accessibility Guidelines (ATAG):  
<http://www.w3.org/WAI/intro/atag.php>.
- User Agent Accessibility Guidelines (UAAG):  
<http://www.w3.org/WAI/intro/uaag.php>.

NOTE 2 The ideal situation for assuring accessible experiences is that organizations produce web products which conform to WCAG, using content production tools which conform to ATAG, and users consume them through user agents (browsers and assistive technologies) which conform to UAAG.

##### 7.1.1.1 Web Content Accessibility Guidelines (WCAG)

###### COMMENTARY ON 7.1.1.1

WCAG are important accessibility guidelines for all members of an organization's web production team to be familiar with, as they are considered to be the de facto standard for accessible web design world wide. See "Web Content Accessibility Guidelines (WCAG) Overview" at <http://www.w3.org/WAI/intro/wcag> for an introduction and links to WCAG technical and educational material.

WCAG 2.0 introduces a set of principles which are technology agnostic – they can be applied to W3C technologies and non-W3C technologies alike.

To make best use of WCAG the organization might need to create internal documents to provide guidance on interpreting WCAG in the context of the organization. All such documents need to refer back to WCAG to ensure readers are aware of the wider scope of where the guidelines come from, and why they are needed.

Organizations should produce their web products in accordance with the latest, finalized version of WCAG.

NOTE 1 While previous versions of WCAG are useful, organizations should consider updating any web products which conform to previous versions of WCAG to conform to the latest finalized version at the next reasonable maintenance point in their lifecycle (see: <http://www.w3.org/WAI/intro/wcag.php#version> for help in doing this).

Organizations should:

- choose which level of conformity they believe will achieve the degree of user-experience they aim to reach (see 6.7);

NOTE 2 WCAG include testable success criteria at three levels: A, AA, and AAA (see <http://www.w3.org/TR/WCAG20/#conformance> for further information).

- document this aim in the web product's accessibility policy;