



**BS 8878:2010 - A Summary**

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## Introduction

This guide is a brief introduction to BS 8878:2010 which will walk you through the key concepts and content of the new web accessibility code of practice.

## Background

BS 8878 has been over three years in development and came into force 30 November 2010. It was created by BSI technical committee IST 45 web accessibility; which is chaired by Jonathan Hassell of the BBC. It replaces PAS78 which came out in 1996 and has now been withdrawn by BSi.

The main reasons why the guidance has been updated are:

- The Web has moved on since 2006
- Websites and web services are more diverse
- A greater need to consider other platforms because of the increasing number of devices that websites can be viewed on such as mobile phones, tablets and Internet Protocol television (IPTV)
- Updates to guidelines and the Law - In December 2008 the W3C's Web Content Accessibility Guidelines (WCAG) 2.0 was released and in the UK (Except Northern Ireland) the DDA has been replaced by the Equality Act 2010.

## What is BS 8878?

This British Standard is about putting policies and procedures in place within an organisation that provides a framework to make websites or more specifically 'web products' accessible by considering accessibility at all stages of the development process. It is not another WCAG, it rather recommends WCAG 2.0 is used in the creation of a website or 'Web product'.

BS 8878 is very much about putting the user centred approach at the heart of accessibility and as an update from the previous PAS 78 it not only covers the 11 million people with disabilities in the UK, but it also makes explicit reference to older people over 60 as a group that need accessible websites because of age related conditions.

## **BS 8878 and the law**

Because the code of practice is a UK standard it references the Equality Act 2010 and the DDA (Northern Ireland only), but it makes it clear that compliance with a British Standard does not mean you automatically meet your legal obligations. However if you do follow the best practice guidance in BS 8878 the likelihood of prosecution is very small. It is hard to be definitive as no organisation has been taken to court and successfully prosecuted under the DDA or Equality Act - until that happens there will be a lack of clarity as to what is understood by legal compliance in this area.

The key point under the law is whether you are a service provider or an employer you are required to take reasonable steps to ensure your services and internal web systems are accessible to disabled people. What BS 8878 does is give you a framework that if followed should ensure you create accessible web products and systems.

## **Third parties not based in the UK**

There is a difference between the DDA and the Equality Act that is important to highlight. If a person complained about a third party plugin or service on your website because it made it difficult or impossible for them to use your website. Then under the DDA both you and the provider of the third party web plugin or service were jointly liable under the law; even if the provider was based in a different country. Under the Equality Act if the provider of the web plugin/service is based outside of the UK they cannot be prosecuted, only you can. This therefore makes it critically important that when you do decide to add third party plugins or services from suppliers not established in the UK to your site, you must check them for accessibility because only you can be prosecuted under the Act. BS 8878 has a section on contracts with third parties which provide some guidance on this issue.

The standard also contains a detailed Annex (C) on Disability and the law which goes into the detail of how the law relates to web products.

## Who is BS 8878 for?

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

And within each organization the standard is particularly relevant for:

- The senior manager who is ultimately responsible for web policies within an organization
- Procurement managers who purchase web products or the tools to build them such as CMS.
- Web production teams - specifically the project owner and project manager who will need to practically implement and document the 16 core steps recommended in the standard
- Those with responsibility for creating or shaping online content such as website editors, content authors and marketing managers
- people responsible for promoting and supporting equality and inclusion initiatives within an organization

## Key concepts

Much of the terminology used in BS 8878 will be familiar to those who understand the principles of accessibility but there are a few key concepts that are important to understand.

## Web products

The standard uses the term 'Web product' to cover a wider range than just websites. For example it covers web-services, or web-based workplace application such as web-based email, virtual learning environments (training and education) and Rich Internet Applications (RIA) such as Flash and Silverlight. It also covers different platforms, not only computer but mobile as well as tablets and televisions.

Although not explicitly covered it could also be used to apply to phone applications such as iPhone and android apps.

There is however an exception; the Standard does not cover software accessibility a separate standard ([BS EN ISO 9241-171](#)) already covers this.

## Degree of user-experience

As the Code of practice is based on a user centred approach to accessibility it differentiates between three different degrees of user experience

Which are:

- **Technically accessible** - basic level of accessible - meets the requirements of WCAG 2.0 but no more
- **Usable** - it meet the needs of the user allowing them to effectively access information and functionality
- **Satisfying/enjoyable** - the user has an enjoyable experience with the website or web product

The Code of practice does leave it up to you to choose which level you want to meet, but it does point out that just making your web product technically accessible carries risks that need to be documented - it recommends you should go for the 'usable' level of user experience for core user goals you would expect all people to achieve with your web product.

## User personalized approach to accessibility

The standard talks both about an inclusive design and a user-personalized approach to accessibility. Inclusive design is the more familiar approach of following recognised guidelines such as WCAG 2.0 to meet the needs of wide ranging audiences.

User personalised is an alternative approach to accessibility which is based on the idea that the only way to be sure that a web product is accessible to, and optimal for someone with specific needs is to enable them to modify what is presented to them - for example offering them colour, text and page layout options. This approach is more relevant for the types of web product that are aimed at individuals such as an e-learning courses but can also be used to enhance a website built using inclusive design by for example adding a text resize widget, alternative colour schemes or a text to speech option.

An example of a User personalized approach to accessibility is Mydisplay by the BBC - <http://www.bbc.co.uk/accessibility/mydisplay/> as shown in the screenshot below.

## What is MyDisplay?

Have you ever:

Used one of these?

Change font size & colours on this site **A A A C C C**

**T** change text size

**T** change colours

Wanted to change the colours on a web page?



Then MyDisplay may be for you

[Start MyDisplay](#)

[More MyDisplay information](#)

[Watch MyDisplay demo video](#)

MyDisplay allows you to change the way BBC Online looks, and store your theme in your device or in your BBC ID. For more information, please see the FAQs.

Figure 1 Screenshot of the options available in MyDisplay

## BS 8878 Code of practice and compliance

BS 8878 is a code of practice not a specification which means it gives guidance and recommendations rather than detailed technical specifications.

However it is still possible to comply with the BS 8878 by implementing all of the recommendations in the standard and documenting the decision making process. If there are any recommendations that cannot be met this needs to be documented and justified.

An organisation can claim compliance based on 'self assessment' or can have an assessment carried out an independent organisation such as AbilityNet.

## Structure of BS 8878

The standard is split into eight Clauses or sections and 15 Annexes (A to O) which provided detailed supplementary information to the main body of the standard such as an overview of disability and the law, the business case for accessibility and numerous illustrative examples for guidance in the clauses.

Below is a brief overview of the main sections to help you understand what the standard contains:

### Clauses

1. **Scope** - overviews the key recommendations in the standard and explains the audience for the standard.
2. **Normative references** - refers to important documents listed in Annex A.
3. **Terms, definitions and abbreviations**- refers to a glossary of key terms in Annex B
4. **Embedding accessibility within an organisation - responsibilities and documentation** - explains how to claim conformity with BS 8878. It also discusses organisational accessibility strategy including identifying who is responsible for the strategy and the steps they need to take to analyse how web accessibility will impact on the business.

It also goes into detail on creating an organisational web accessibility policy that explains an organisation's commitment to web accessibility as well as creating a separate accessibility policy for each web product. The content of the policy for each product is based on the 16 steps of creating accessible web products (as detailed in section 6) documenting the key decisions at each stage. It also talks about creating a web product accessibility statement - focusing on informing disabled and older people about accessibility considerations and features in a non technical way.

5. **How to make justifiable decisions on accessibility options at each step** - a core principle of BS 8878 is documenting your decision making process. This section explains the factors you should consider when making decisions about accessibility at each stage in the lifecycle of a web product.
6. **The process for creating accessible web products** - this is the core of the standard and gives 16 steps you should follow in the creation of an accessible web product. It is also important to know that these steps are the framework of your web product accessibility policy as discussed in clause 4. These 16 steps are explained in more detail in the next section – **'The Core of BS 8878'**.

7. **Using web accessibility guidelines to direct the production of accessible web products** - this section overviews the relevant technical guidance that should be followed when developing a web product - for example using the World Wide Web Consortiums(W3C) guidelines such as WCAG for web content and W3C mobile best practice for mobile. It also briefly discusses what guidelines to follow if you are adopting a user-personalized approach, Internet Protocol TV (IPTV) and guidelines for accessible web design for older people.
8. **Assuring accessibility throughout a web products lifecycle** - this section overviews the recommended testing methods - key points are that you have considered the needs of disabled and older people and created a test plan to ensure these are tested at each key development stage. It gives a detailed run through of recognised testing methods including automated testing and validation, testing with assistive technologies and user testing with disabled people. It also talks about testing after the launch of the web product to ensure accessibility is maintained.

## Annexes

The standard contains a large number of Annexes which provide more detailed information and examples to supplement the clauses.

- **Annex A** - lists the key documents referenced in the standard
- **Annex B** - a glossary of key terms used in the document ranging from 'accessibility' through to 'web product' as well as a list of technical abbreviations.
- **Annex C** - gives an overview of the relevant law in the UK , The Equality Act 2010 and the Disability Discrimination Act 1995 (DDA) and explains how they relate to Web products
- **Annex D** - is the business case for making web products accessible and recommends the publication [One Voice "Accessible Information and Communication Technologies: Benefits to Business and Society"](#)
- **Annex E** - gives useful examples of a web accessibility policy and web accessibility statement which you can use as templates for the creation of your own policy documents.
- **Annex F** - gives examples of roles and responsibilities for each area of an organisation related to the creation of an accessible web product such as web production teams, training and procurement.
- **Annex G** - overviews the accessibility challenges of social networking sites, video based sites, software as a service/Cloud Computing, Gaming and learning sites.
- **Annex H** - explains how older people and disabled people with different needs and technologies access the web
- **Annex I** - gives example web product purposes and user tasks and discusses three levels of user experience - Technically accessible, Usable and Satisfying.

- **Annex J** - discusses measuring user success - key performance indicators and criteria for measuring success.
- **Annex K** - discusses the user personalised approach to accessibility which is based on the idea that the only way to be sure that a web product is accessible to, and optimal for someone with specific needs is to enable them to modify what is presented to them - for example offering them colour, text and page layout options . Examples include Mydisplay by the BBC  
<http://www.bbc.co.uk/accessibility/mydisplay/>
- **Annex L** - is about procurement and explains how to ensure you consider accessibility when buying software such as CMS, choosing third party plugins, selecting design and development services and accessibility testing and auditing services.
- **Annex M** - explains how to deal with accessibility related complaint about your web product or service.
- **Annex N** - gives suggested user profiles for disabled and older people for covering, vision, mobility, cognitive and learning disabilities, Deaf and hard of hearing and users with more than one need. These profiles are given to help in considering the requirements of disabled and older users in the development of web products.
- **Annex O** – provides recommendations for user testing with disabled and older people

## The Core of BS 8878

### The process for creating accessible web products

Clause 6 as briefly overviewed in the previous section is the core of the standard and gives 16 steps you should follow in the creation of an accessible web product. In the section each step is explained in more detail to help you understand what is required to implement them.

The 16 steps can be divided into a number of stages:

- Requirements gathering
- Strategic decisions
- Production
- Accessibility assurance (Testing plan)
- Communication
- Maintenance and review

### Requirements gathering

This stage is about doing the right research and thinking before you launch into developing the product.

#### Step1: define the purpose

This step discusses the challenges and costs of making web products with different purposes accessible; for example a site with lots of video content is going to be more expensive than an information based site with little or no multimedia to make accessible. So depending on the type of site or product, what can be achieved will vary depending on budget and other resources.

#### Step 2: define the target audiences

This section explains the need to identify who the audience will be for the product. For example if it is for an intranet or extranet you have more knowledge of who will use the product and can have a better idea of what browsers and assistive technology you need to support compared to a web based product. Clarifying the target audiences will help you to make better informed decisions later in the process.

### **Step 3: analyse audiences needs**

This step is about considering both the needs of disabled and non disabled people within your target audiences. For example what consideration has there been of disabled people using the site? Such as providing accessibility features (text size, colour, audio etc). This can be done by desk research or more detailed commissioned research if budget allows. It also recommends the use of personas for both disabled and non disabled people to help distil audience needs into a clear summary form than can be used throughout the development process to help with the decision making.

### **Step 4: note platform or technology preferences or restrictions**

This step is about capturing any preferences or restrictions of the target audience that need to be considered. For example lack of ability to download & install plug-ins or browser updates, or IT policy restrictions in offices, colleges preventing use of browser preferences and installation of assistive technologies. This knowledge will be helpful when deciding on whether to include user-personalized approaches to address these issues above and beyond the more standard inclusive design approach.

### **Step 5: define relationship of product to audience**

The purpose of this step is to identify if the web product is for individuals who need a customisable experience or more general groups of users with a common set of needs. Individual examples would be e-learning sites, intranets and member based social networking sites. This feeds into the decision if it makes sense to consider a personalised accessibility approach.

### **Step 6: define the user goals and tasks**

Here you need to list what are the key customer goals for the web product. The purpose of capturing details of the core tasks is to feed it into the testing process and will also help you identify how usable the product is for the target audiences by creating success criteria for achieving the goals.

## Strategic decisions

This second stage is about making strategic choices based on the findings in the requirements gathering stage of the process.

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

As discussed in the key concepts section BS 8878 talks about three degrees of user experience: technically accessible, usable and satisfying/enjoyable. This step is about deciding which degree of user experience is achievable for each combination of user group and user goal and document these decisions. The standard recommends the 'usable' level as the benchmark and states if you can only achieve the 'technically accessible' level you need to note this and put it as an accessibility limitation in your accessibility policy for the product.

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

This step is about deciding on the accessibility approach you will use - inclusive design (following recognised guidelines such as WCAG 2.0) or user-personalized or a combination of both. It will depend a lot on the audience you have and the type of web product you will be building. As an example a corporate informational site would be built using inclusive design but could be enhanced with specific user-personalized features such as text resizing options or a style switcher giving people to choice to view the site in different colour combinations such as high contrast white text on a black background. An e-learning course for example might be built with the user-personalized approach so a different version of the course could be provided for blind learners using audio to replace a standard version that uses visual graphs and charts to convey important information.

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

There is an ever increasing range of devices that can view websites beyond standard computers such as mobiles, internet-enabled TVs and games Consoles. This step requires you to consider how much you will support accessibility across this range of devices. By creating different versions or at least testing the product across a range of devices and through devices detection techniques modifying the interface to improve accessibility.

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

This step requires you to decide upon a set of browsers, operating systems and assistive technologies that your web product will work with. This is something you might already have standardised at an organisation level but might differ from product to product depending on the platform you want to support. For example if you are producing a mobile website you need to consider the specific access technologies on the mobile platform across different operating systems such as Apple iOS, Android, Symbian and Windows.

## **Step 11: choose whether to create in-house or outsource development**

In this step the options of building in-house or outsourcing the development of your web product are discussed. Either choice will have an impact on the following steps in the process. For example if you choose an external supplier you need to ensure that your procurement process details your accessibility requirements and the standard provides some key questions you should ask potential suppliers.

## **Production**

This is about choosing the technologies you will use to build your web product and selecting and using the most appropriate accessibility guidelines.

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

This step discusses how the web technologies you choose can have a major impact on how accessible the developers can make the web product. It recommends that you should have a web technology policy that includes requirements that any technology you approve should support the production of accessible web products. For example creating an accessible Web product in Adobe Flash/Flex is often more complex than creating in HTML and is greatly influenced by the knowledge and skills of the developers.

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

This step explains the need to use the best accessibility guidelines for the platform and technology being used, covering guidelines for visual designer, interaction designers, content authors and for web developers. It also discusses the need to choose the conformity level of the guidelines -for example WCAG 2.0 A or AA.

## **Accessibility assurance**

This stage is about creating and implementing an accessibility test plan.

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

This section covers the development of a test plan where you identify when and how testing takes place in the development process and considers the risks of not testing sufficiently due to pressure of deadlines - documenting your decisions and mitigating factors. This step is covered in more detail in Clause 8 of the standards

## Communication

When you launch your site or product you need to communicate what you have done around accessibility.

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

This step requires you to publish an accessibility statement, at launch of your web product, which states in an easy to understand and non technical way the accessibility features of the site and any known accessibility limitations.

## Maintenance

Once launched you need to maintain and improve accessibility based on feedback and technology changes.

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

This final step is not just about regularly testing the website to ensure its accessibility is maintained; you also longer term need to address any accessibility limitations identified earlier in the process and regularly review the web product's accessibility in light of technology developments. It also explains you need to access feedback on the accessibility of the product and make changes as required.

## What next?

The purpose of this guide is to help you understand what BS 8878: 2010 Web accessibility – Code of practice is all about and give you a firm foundation to take the next step and think about how your organization could implement it.

You can purchase a copy of BS 8878 from the [BSi shop](#) - the cost is £50 for BSi members and £100 for non-members.

AbilityNet are currently producing a companion workbook to BS 8878 that will support organisations wanting to adopt the standard for publication early next year. If you would be interested in knowing more about the guide or would like to talk to us about how we can help you implement the standard through our strategic consultancy please let us know at [accessibility@abilitynet.org.uk](mailto:accessibility@abilitynet.org.uk)