



# Accessible Website

Understanding and Implementing WCAG 2.0 Accessibility

Achieving compliance through Certification

Website Quality Certification

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## Executive Summary

The World Wide Web Consortium (W3C) has published a set of Web Content Accessibility Guidelines (WCAG 2.0), within the framework of Web Accessibility Initiative (WAI), on December 11, 2008. *The new guidelines will help Web designers and developers create websites that better meet the needs of users with disabilities and older users. Drawing on extensive experience and community feedback, the Web Content Accessibility Guidelines (WCAG) 2.0 improve upon W3C's groundbreaking initial standard for accessible Web content.* The WCAG guidelines are widely regarded as the voluntary international standard for web accessibility.

WCAG 2.0 establishes a first level of accessibility, and helps promote awareness of the barriers that information may present for people with disabilities. As we know, these barriers are also present for ordinary users in extraordinary situations, or not so extraordinary situations like searching for information via mobile devices, small screens or badly lit environments, amongst others. Accessible documents would be more *usable* for users in general.

In totality, the WCAG 2.0 standard talks about four principles of web accessibility and twelve guidelines which contain sixty one *testable* success criteria. One of the most important changes that the new standard makes is its application on all types of web content, not only HTML documents. More than ever, the new accessibility guidelines for web content make all web documents on the internet susceptible for evaluation in terms of accessibility. Adobe PDF files, Microsoft Power Point presentations and Microsoft Word documents, the most common formats for Internet documents, must comply with the four accessibility principles: *perceivable, operable, understandable and robust*. For more details please visit ``http://www.w3.org/WAI/intro/wcag.php``. A summarised checklist is provided in this document.

As always, guidelines cannot guarantee accessibility unless they are understood and applied correctly, but they can go a long way towards helping developers and content editors get things right. A document giving insight of the principles and requirements was thus prepared. This ``Accessible Website – Understanding and Implementing WCAG 2.0 Accessibility`` elucidates the WCAG 2.0 suite of documents, principles, guidelines, success criteria, conformance requirements, implementation steps and checklist for level A, AA and AAA.

Accessibility is one of the core requirements of STQC ``Website Quality Certification Scheme`` (visit ``www.stqc.nic.in``) and ``Guidelines for Indian Government Websites`` (visit `http://web.guidelines.gov.in/``).

The guidance may help in demonstrating compliance with the STQC ``Website Quality Certification Scheme`` and ``national requirements``.

# 1. Introduction

**Websites are often designed and developed without careful consideration of the potential impacts on people with disabilities.**

In the information society, access to information is a right and a need. If we rely on the internet to learn, work and deal with the government, to buy and sell, to listen to music, to play games or to contact with our loved ones, it is only natural that the Government regulates the right of everybody, without exclusions, to access web content.

At an international level, the World Wide Web Consortium (W3C) has been working to establish accessibility criteria for web content, authoring tools or user agents (mainly web browsers), publishing a set of guidelines within the framework of Web Accessibility Initiative (WAI). From all these documents, the Web Content Accessibility Guidelines (WCAG), relating to web content, have been the most widespread, since many countries have adopted them as legal rules for public websites

Website Accessibility refers to the degree a website is designed to make it easy for people with disabilities to access the online information and services. A disability does not only refer to a physical disability but also includes vision impairment, learning disabilities and low literacy. Designing and building a Local Government website, which provides information and services to the citizens, means addressing the current Web Content Accessibility Guidelines (WCAG2.0).

WCAG 2.0 standard has been developed by W3C for web accessibility for people with disabilities. It addresses barriers to accessing the Web experienced by people with visual, auditory, physical, cognitive and neurological disabilities, and by older Web users with accessibility needs. The standard also makes Web content more usable by older individuals with changing abilities due to aging and often improve usability for users in general.

This new standard from the W3C's Web Accessibility Initiative (WAI) will advance accessibility across the full range of Web content (such as text, images, audio, and video) and Web applications. WCAG 2.0 can be more precisely tested, yet it allows Web developers more flexibility and potential for innovation.

## 2. WCAG Versions: 1.0 and 2.0

Web Content Accessibility Guidelines (WCAG 2.0) succeeds Web Content Accessibility Guidelines 1.0 (WCAG1.0).

WCAG 1.0	WCAG 2.0
<ul style="list-style-type: none"><li>• Published in May 1999</li><li>• It is organized around <i>guidelines</i> that have <i>checkpoints</i>, which are <i>priority 1, 2, or 3</i>.</li><li>• The basis for determining conformance to the WCAG 1.0 is the checkpoints.</li></ul>	<ul style="list-style-type: none"><li>• Published on 11 December 2008</li><li>• It is organized around four design principles of Web accessibility.</li><li>• Each principle has guidelines and each guideline has testable success criteria at level A, AA, or AAA.</li><li>• The basis for determining conformance to the WCAG 2.0 is the success criteria.</li></ul>

Accessibility requirements are more logically grouped in WCAG 2.0; they meet the needs of disabled people better, and improve the experience for other audiences. W3C WAI recommends using WCAG 2.0, instead of WCAG 1.0.

Unlike WCAG 1.0, WCAG 2.0 has been developed so that it can apply to current web technologies and to future web technologies irrespective of whether they are W3C technologies or have been developed outside the W3C, e.g. *JavaScript*, *Flash*, *PDF* etc.

One of the most important changes that the new standard makes is its application on all types of web content, not only HTML documents. More than ever, the new accessibility guidelines for web content make all web documents on the internet susceptible for evaluation in terms of accessibility. Adobe PDF files, Microsoft Power Point presentations and Microsoft Word documents, the most common formats for Internet documents, must comply with the four accessibility principles: *perceivable*, *operable*, *understandable* and *robust*.

WCAG 2.0 explains how to make content:

- *Perceivable* (for instance by addressing text alternatives for images, captions for audio, adaptability of presentation, and color contrast);
- *Operable* (by addressing keyboard access, color contrast, timing of input, seizure avoidance, and navigability);
- *Understandable* (by addressing readability, predictability, and input assistance); and
- *Robust* (for instance by addressing compatibility with assistive technologies).

### 3. WCAG 2.0 Suite of Documents

WCAG 2.0 technical documents to help you know where to go for which type of information.

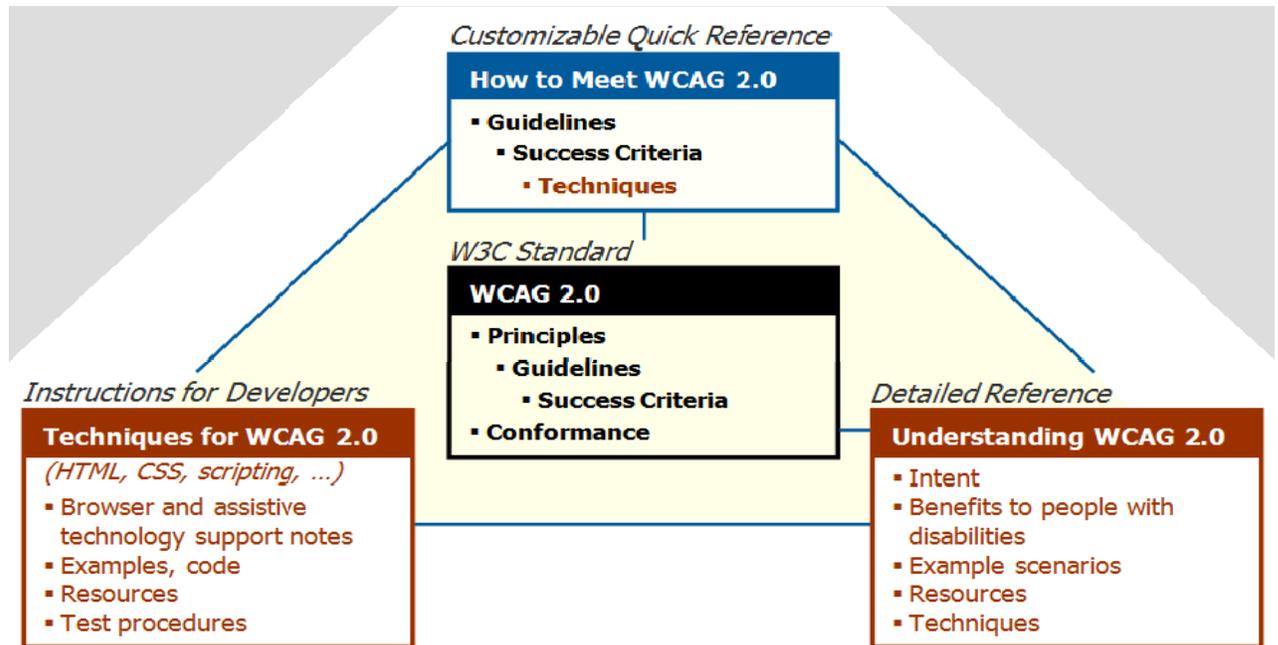


Figure 1: WCAG 2.0 documents

**How to Meet WCAG 2.0 (informative):** A customizable quick reference to WCAG 2.0 requirements (i.e. success criteria) and techniques is a key resource for designers and developers using WCAG 2.0. It includes all the WCAG 2.0 guidelines and success criteria.

The *success criteria* are the `testable` statements that define how Web content conforms to WCAG 2.0. Under each success criteria are a list of sufficient techniques; that is, if you implement those techniques you meet the success criteria.

You can customize `How to Meet WCAG 2.0` based on whether you are using CSS, JavaScript, multimedia, or other Web technologies. You can also select to show Level A, AA, or AAA success criteria.

**Understanding WCAG 2.0 (informative):** A guide to understanding and implementing Web Content Accessibility Guidelines 2.0 has additional details for people who want to understand the guidelines and success criteria more thoroughly. (<http://www.w3.org/TR/UNDERSTANDING-WCAG20/>)

**Techniques for WCAG 2.0 (informative):** Techniques and Failures for Web Content Accessibility Guidelines 2.0 give specific guidance for developers on how to develop accessible Web content. (<http://www.w3.org/TR/WCAG20-TECHS/>)

First, to learn about WCAG 2.0, start with the Overview document. And for using WCAG 2.0, you'll probably want to start with 'How to Meet WCAG 2.0'.

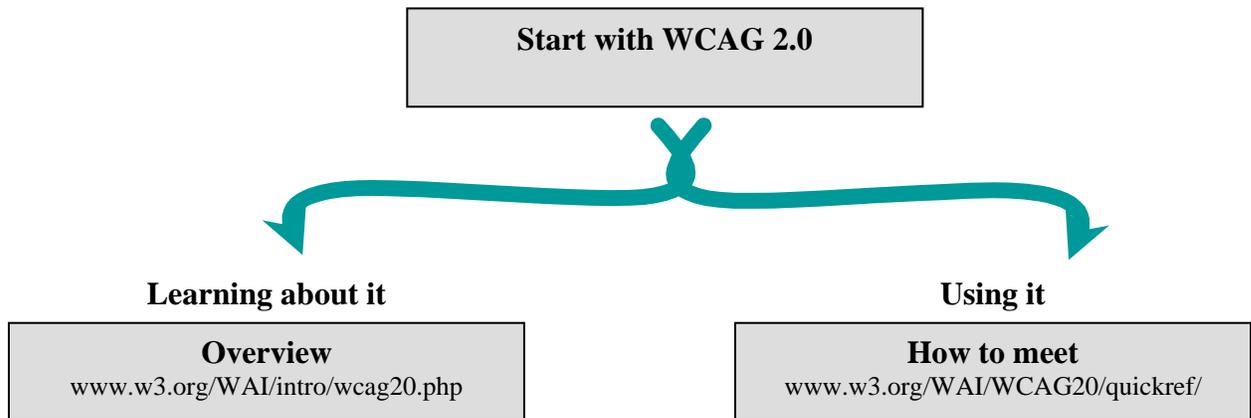


Figure 2: Links between documents

The WCAG 2.0 documents are interlinked. For example:

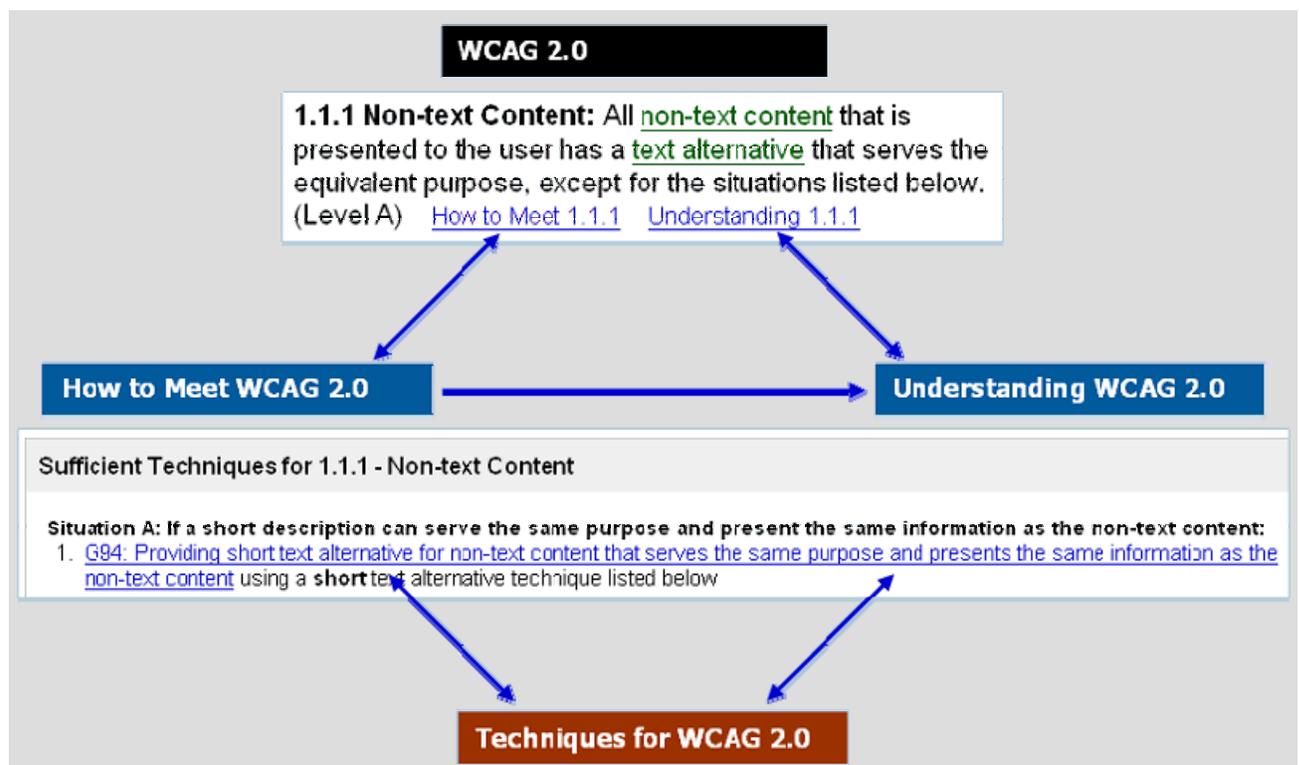


Figure 3: Example of links between documents

## 4. WCAG 2.0 Layers of Guidance

WCAG 2.0 has a layered structure. The first layer consists of four design principles: perceivable, operable, understandable, and robust. The second layer is a set of 12 guidelines with basic goal to work towards. Next layer is a set of success criteria, nearly equivalent to user requirements. The fourth layer is techniques, i.e. ways of meeting the success criteria. A technique should be seen as one way of meeting a criterion. There may be others. Techniques evolve with time and can be developed inside as well as outside W3C.

- **Principles** - At the top are four principles that provide the foundation for Web accessibility: *perceivable, operable, understandable, and robust*. See also Understanding the Four Principles of Accessibility.
- **Guidelines** - Under the principles are guidelines. The 12 guidelines provide the basic goals that authors should work toward in order to make content more accessible to users with different disabilities. The guidelines are not testable, but provide the framework and overall objectives to help authors understand the success criteria and better implement the techniques.
- **Success Criteria** - For each guideline, testable success criteria are provided to allow WCAG 2.0 to be used where requirements and conformance testing are necessary such as in design specification, purchasing, regulation, and contractual agreements. In order to meet the needs of different groups and different situations, three levels of conformance are defined: A (lowest), AA, and AAA (highest). Additional information on WCAG levels can be found in Understanding Levels of Conformance.
- **Sufficient and Advisory Techniques** - For each of the *guidelines* and *success criteria* in the WCAG 2.0 document itself, the working group has also documented a wide variety of *techniques*. The techniques are informative and fall into two categories: those that are *sufficient* for meeting the success criteria and those that are *advisory*. The advisory techniques go beyond what is required by the individual success criteria and allow authors to better address the guidelines. Some advisory techniques address accessibility barriers that are not covered by the testable success criteria. Where common failures are known, these are also documented.

All of these layers of guidance (principles, guidelines, success criteria, and sufficient and advisory techniques) work together to provide guidance on how to make content more accessible.

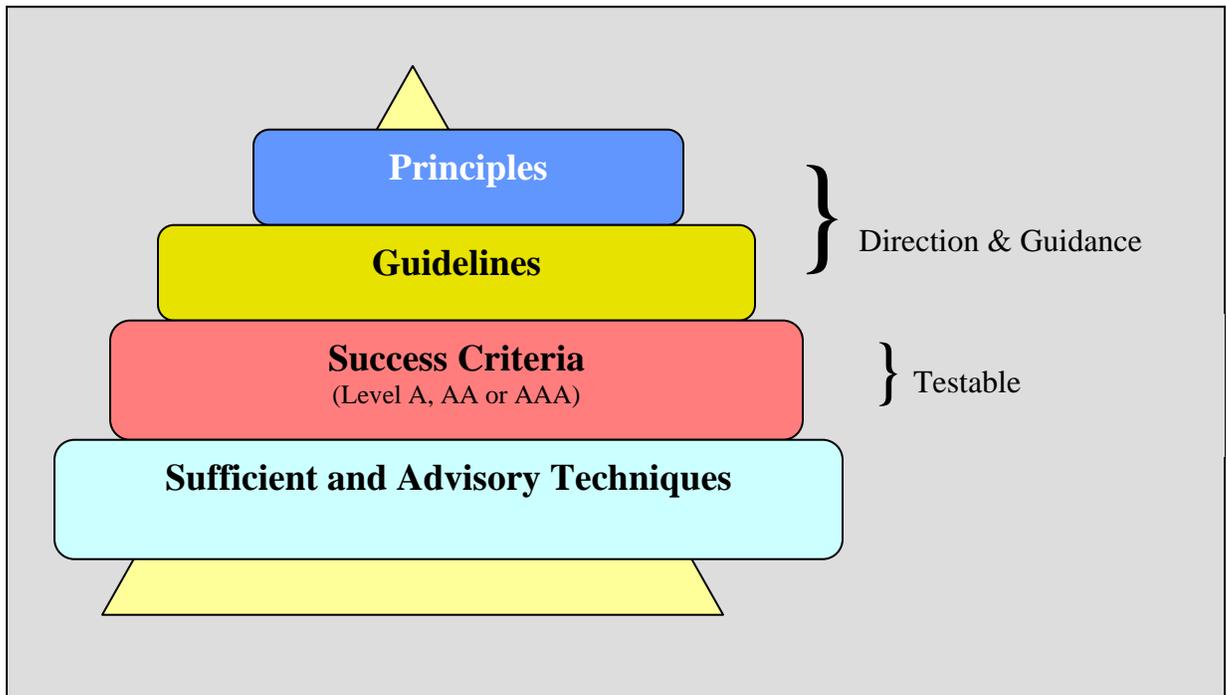


Figure 4: Layers of Guidance

WCAG 2.0 is part of a suite of guidelines. Others are Authoring Tools Accessibility Guidelines (ATAG) and User Agent Accessibility Guidelines (UAAG).

Each principle contains a number of Guidelines and for each Guideline there are Success Criteria, which are basically testable statements. Advice about how to satisfy the Success Criteria is provided in a Techniques document. For each Success Criteria the document outlines `Sufficient Techniques` for meeting the Criteria and `Advisory Techniques`, which go beyond what is required, but provide suggestions about how to better address the guidelines. Known common failures to comply with a Success Criteria are also documented.

Each layer is defined on subsequent pages separately for clear understanding.

## 4.1 The Four Accessibility Principles

The WCAG 2.0 is organized around four principles that aim to guarantee content access.

Every Web content must be:

1. Perceivable
2. Operable
3. Understandable
4. Robust

These principles are the **four pillars of Web accessibility** and describe at a high level what can be done to assist users with varying needs to successfully access your content.

### Principles

#### 1. Perceivable

#### 2. Operable

#### 3. Understandable

#### 4. Robust

The four principles of web accessibility: perceivable, operable, understandable, and robust.

## 4.1.1 Understanding the Four Principles of Accessibility

The guidelines and Success Criteria are organized around the following four principles, which lay the foundation necessary for anyone to access and use Web content. Anyone who wants to use the Web must have content that is:

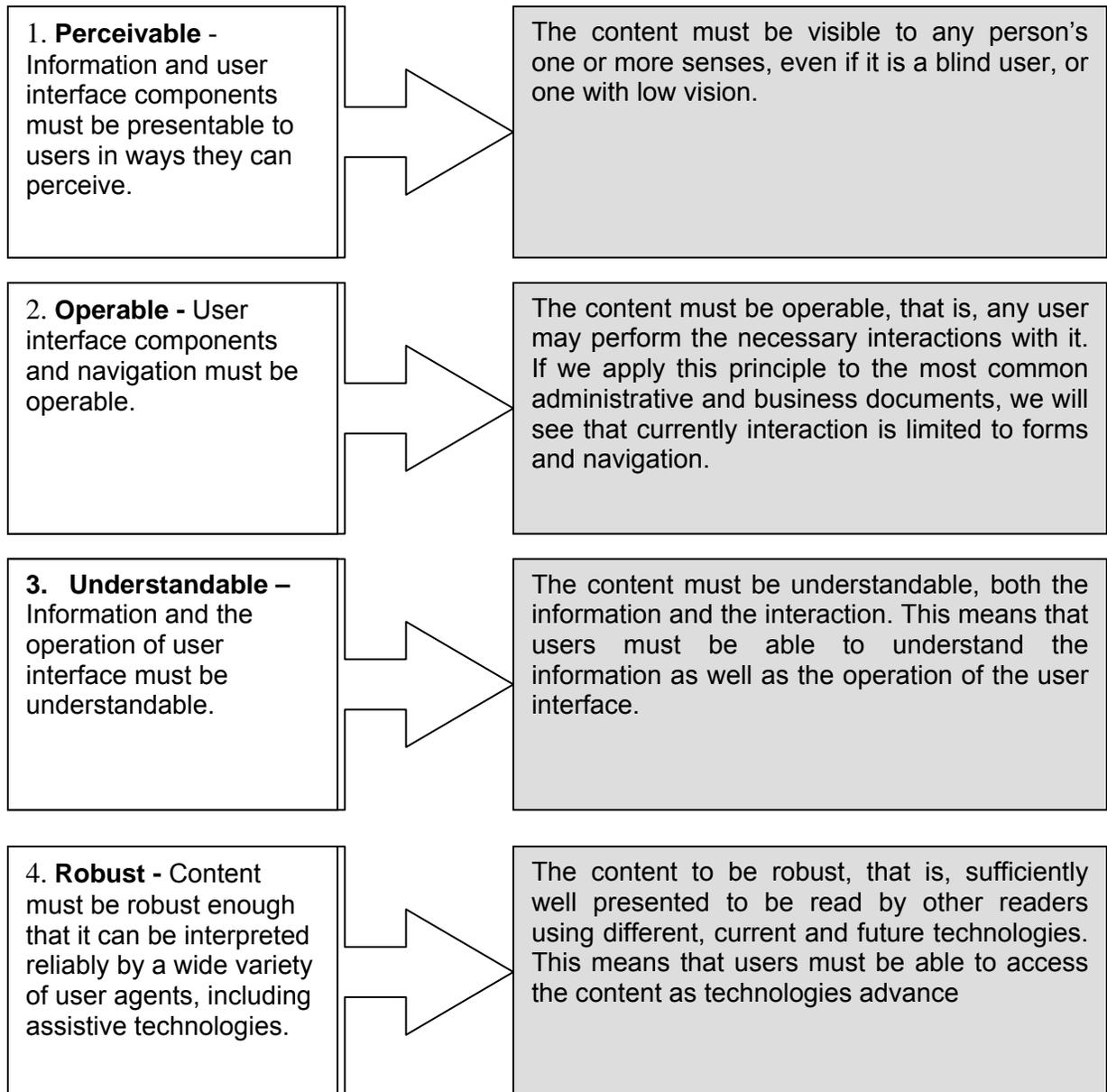


Figure 5: Principles of accessibility - Meaning

If any of these are not true, users with disabilities will not be able to use the Web.

## 4.2 Guidelines

The 12 guidelines are basic goals that authors of Web content should work toward in order to create accessible content. None of them are testable and are only meant as a framework of overall objectives.

The guidelines are:

- 1.1 Provide **text alternatives** for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.
- 1.2 Provide alternatives for **time-based media**.
- 1.3 Create content that can be presented in **different ways** (for example simpler layout) without losing information or structure.
- 1.4 Make it easier for users to see and hear content including **separating foreground from background**.
- 2.1 Make all functionality available from a **keyboard**.
- 2.2 Provide users **enough time** to read and use content.
- 2.3 Do not design content in a way that is known to cause **seizures**.
- 2.4 Provide ways to help users **navigate**, find content, and determine where they are.
- 3.1 Make text content **readable** and understandable.
- 3.2 Make Web pages appear and operate in **predictable** ways.
- 3.3 Help users avoid and correct mistakes.
  
- 4.1 Maximize **compatibility** with current and future user agents, including assistive technologies.

### Guidelines

1.1 Text Alternatives

1.2 Time based Media

1.3 Adaptable

1.4 Distinguishable

2.1 Keyboard Accessibility

2.2 Enough Time

2.3 Seizures

2.4 Navigable

3.1 Readable

3.2 Predictable

3.3 Input Assistance

4.1 Compatible

The 12 WCAG 2.0 Guidelines provide basic goals for creating accessible content.

## 4.3 Success Criteria

Now, the success criteria are where the meat is. For each Guideline, testable success criteria are provided. Every Web content or series of Web content (complete web page or series of connected pages) can be tested and evaluated against these sixty one criteria and further assigned a true/false (equals pass or fail) value.

These success criteria are further divided into **three levels of conformance**, meaning satisfying all the requirements of a given standard, guideline or specification:

- Level A (lowest; minimum level of conformance)
- Level AA
- Level AAA (highest)

**Level A:** For Level A conformance (the minimum level of conformance), the Web page satisfies all the Level A Success Criteria, or a conforming alternate version is provided.

**Level AA:** For Level AA conformance, the Web page satisfies all the Level A and Level AA Success Criteria, or a Level AA conforming alternate version is provided.

**Level AAA:** For Level AAA conformance, the Web page satisfies all the Level A, Level AA and Level AAA Success Criteria, or a Level AAA conforming alternate version is provided.

### Success Criteria

A	AA	AAA
1.1.1		
1.2.1-1.2.3	1.2.4 - 1.2.5	1.2.6 – 1.2.9
1.3.1-1.3.3		
1.4.1-1.4.2	1.4.3 - 1.4.5	1.4.6 – 1.4.9
2.1.1-2.1.2		2.1.3
2.2.1-2.2.2		2.2.3 – 2.2.5
2.3.1		2.3.2
2.4.1-2.4.4	2.4.5 – 2.4.7	2.4.8 – 2.4.10
3.1.1	3.1.2	3.1.3 – 3.1.6
3.2.1-3.2.2	3.2.3 - 3.2.4	3.2.5
3.3.1-3.3.2	3.3.3 – 3.3.4	3.3.5 – 3.3.6
4.1.1-4.1.2		

**WCAG 2.0 Success criteria**

## 4.4 Sufficient and Advisory Techniques

Up until now all the principles, guidelines, and success criteria are written in a technology neutral fashion. That's great but what now? The Working Group has identified and published examples for HTML implementations that should serve as examples and tutorials and are kept in the living document called Techniques for WCAG 2.0. This document explains a variety of techniques on how to implement the given guideline for each success criteria. The list is not complete and will be expanded as new techniques are discovered.

The techniques fall into two categories:

- **Sufficient techniques:** considered to be sufficient to meet a success criteria.
- **Advisory techniques:** enhance accessibility, but did not qualify as sufficient techniques.

Most Success Criteria have multiple sufficient techniques listed. Any of the listed sufficient techniques can be used to meet the Success Criterion. Also there may be other techniques which are not documented by the working group that could also meet the Success Criterion. This is especially true for content that is not HTML.

## 4.5 Conformance Requirements

In order for a Web page to conform to WCAG 2.0, all of the following conformance requirements must be satisfied:

Conformance	Requirements
<b>1. Conformance Level</b>	One of the following levels of conformance is met in full.
	<b>Level A:</b> For Level A conformance (the minimum level of conformance), the Web page satisfies all the Level A Success Criteria, or a conforming alternate version is provided.
	<b>Level AA:</b> For Level AA conformance, the Web page satisfies all the Level A and Level AA Success Criteria, or a Level AA conforming alternate version is provided.
	<b>Level AAA:</b> For Level AAA conformance, the Web page satisfies all the Level A, Level AA and Level AAA Success Criteria, or a Level AAA conforming alternate version is provided.
<b>2. Full pages</b>	Conformance (and conformance level) is for full Web page(s) only, and cannot be achieved if part of a Web page is excluded.
<b>3. Complete processes</b>	When a Web page is one of a series of Web pages presenting a process (i.e., a sequence of steps that need to be completed in order to accomplish an activity), all Web pages in the process conform at the specified level or better. (Conformance is not possible at a particular level if any page in the process does not conform at that level or better.)
<b>4. Only Accessibility-Supported Ways of Using Technologies</b>	Only accessibility-supported ways of using technologies are relied upon to satisfy the success criteria. Any information or functionality that is provided in a way that is not accessibility supported is also available in a way that is accessibility supported.
<b>5. Non-Interference</b>	<p>If technologies are used in a way that is not accessibility supported, or if they are used in a non-conforming way, then they do not block the ability of users to access the rest of the page. In addition, the Web page as a whole continues to meet the conformance requirements under each of the following conditions:</p> <ol style="list-style-type: none"> <li>1. when any technology that is not relied upon is turned on in a user agent,</li> <li>2. when any technology that is not relied upon is turned off in a user agent, and</li> <li>3. when any technology that is not relied upon is not supported by a user agent</li> </ol> <p>In addition, the following success criteria apply to all content on the page, including content that is not otherwise relied upon to meet conformance, because failure to meet them could interfere with any use of the page:</p> <ul style="list-style-type: none"> <li>• 1.4.2 - Audio Control,</li> <li>• 2.1.2 - No Keyboard Trap,</li> <li>• 2.3.1 - Three Flashes or Below Threshold, <b>and</b></li> </ul> <p style="margin-left: 40px;">2.2.2 - Pause, Stop, Hide.</p>

## 5. Transition form WCAG 1.0 to WCAG 2.0

- **Needs** of users with disabilities hasn't changed
- **Technology** that they use has
- If your site accessible under WCAG 1.0, shouldn't be too far off WCAG 2.0

- **Evaluate** your site based on WCAG 2.0 success criteria
- Many **1.0 checkpoints map to 2.0** success criteria
- Test more **specific 2.0** success criteria

## 6. Implementation Plan for Web Accessibility

The steps are indicated below –

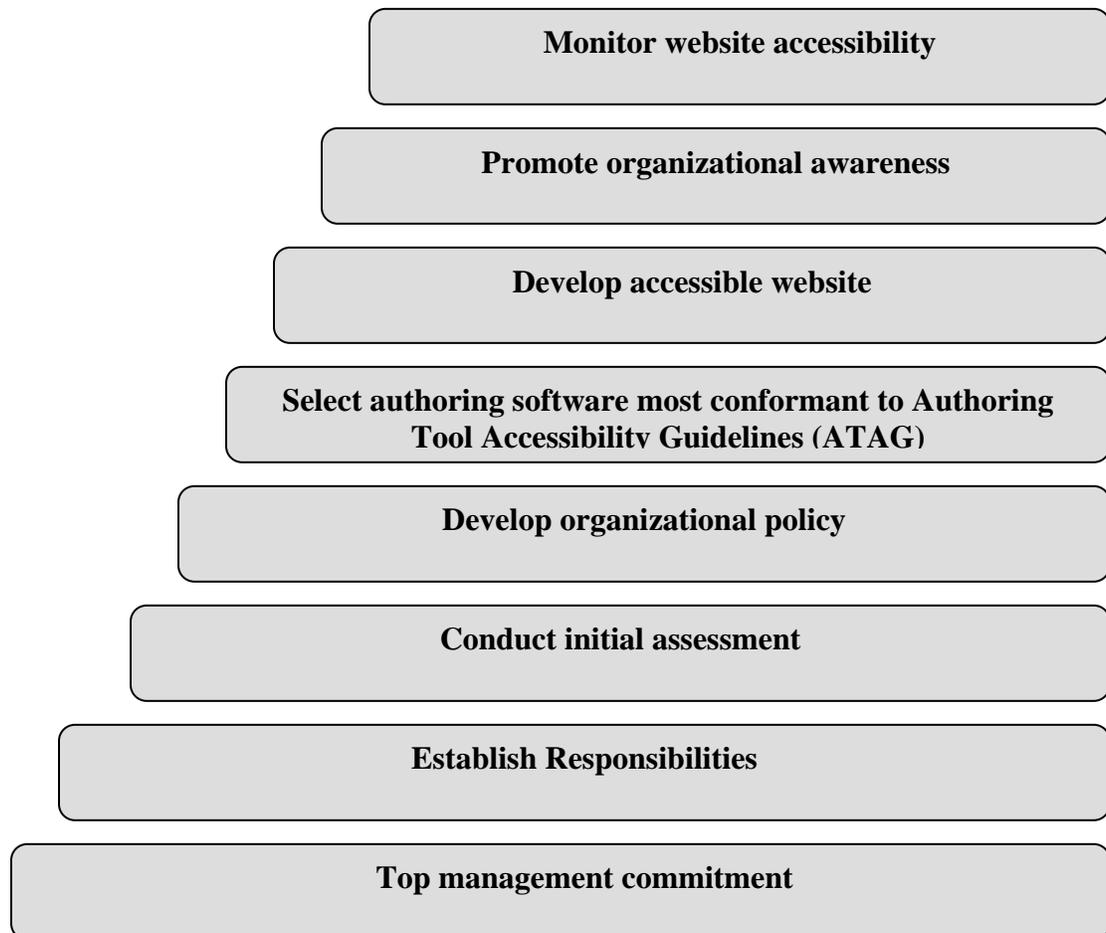


Figure 6: Steps for Implementation

## 7. WCAG 2.0 – An Overview

WCAG 2.0 has 12 guidelines that are organized under 4 principles: perceivable, operable, understandable, and robust. For each guideline, there are testable *success criteria*, which are at three levels: A (lowest), AA, and AAA (highest). In total there are sixty one "testable" Success Criteria.

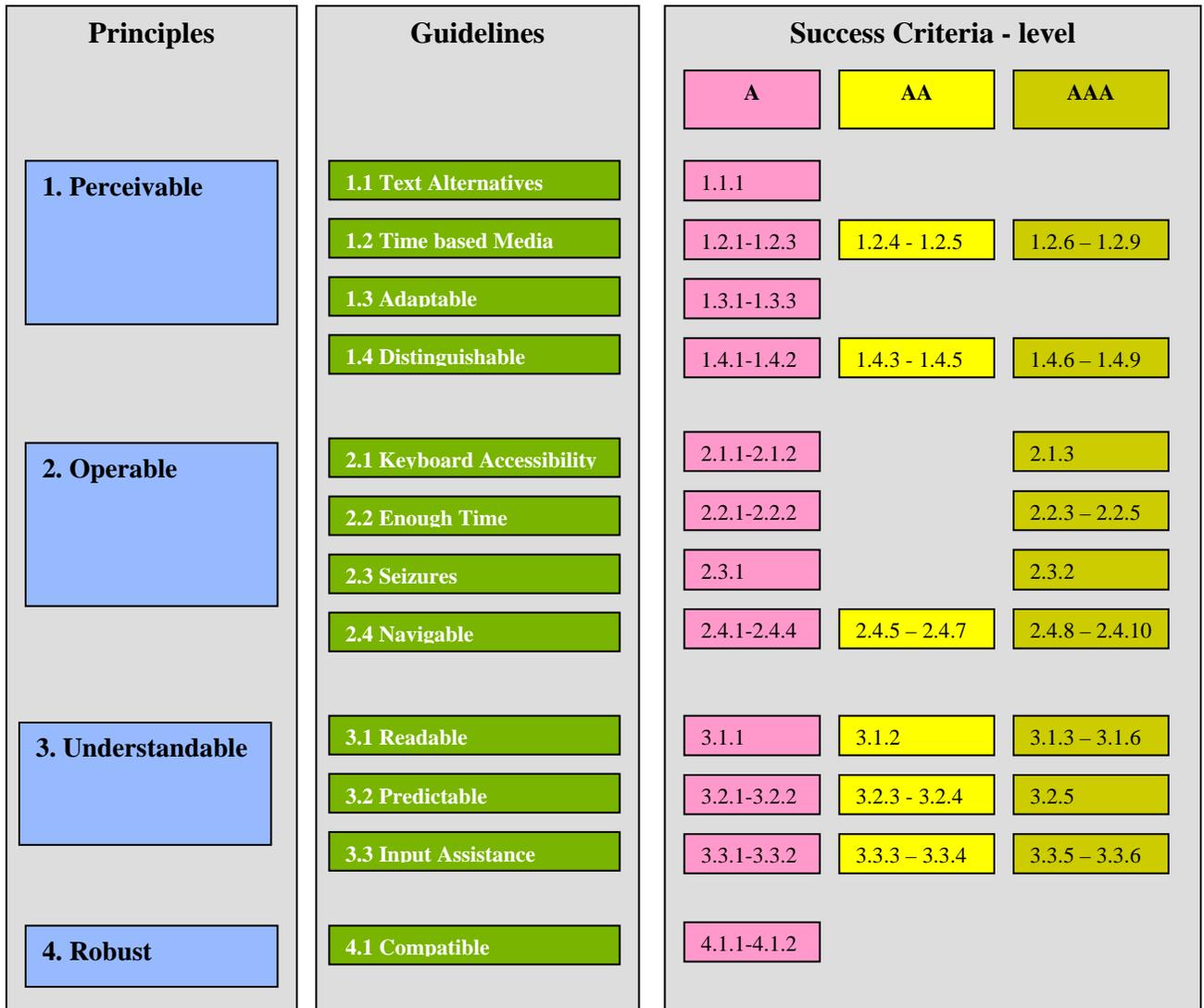


Figure 7: Principles, Guidelines, and Success Criteria (Level A, Level AA, Level AAA)

## 8. WCAG 2.0 - At a Glance

A summary of Web Content Accessibility Guidelines WCAG 2.0 is given below -

### Perceivable

- Provide text alternatives for non-text content.
- Provide captions and alternatives for audio and video content.
- Make content adaptable; and make it available to assistive technologies.
- Use sufficient contrast to make things easy to see and hear.

### Operable

- Make all functionality keyboards accessible.
- Give users enough time to read and use content.
- Do not use content that causes seizures.
- Help users navigate and find content.

### Understandable

- Make text readable and understandable.
- Make content appear and operate in predictable ways.
- Help users avoid and correct mistakes.

### Robust

- Maximize compatibility with current and future technologies.

### Recap on WCAG 2.0

- **Technology-agnostic** – applicable to more present and future technologies
- **Clearly testable** Success Criteria
- Focused on **outcome for users**, not techniques
- Removes **outdated** requirements from 1.0
- Overall allows authors **more freedom**

## **9. WCAG 2.0 Checklist**

### **Purpose**

The self-assessment accessibility requirements act as a reference for website owners and website developers to check compliance with W3C and certification scheme.

The purpose of the requirements is

- to act as a tool for developing and assessing public web services
- to improve the accessibility of public websites for both users and producers

## 9.1 WCAG 2.0 Checklist (For Level A)

### Perceivable

Web content is made available to the senses - sight, hearing, and/or touch

#### Guideline 1.1 Text Alternatives: Provide text alternatives for any non-text content

Success Criteria	Recommendations
<b>1.1.1 Non - text Content</b>	All images, form image buttons, and image map hot spots have appropriate, equivalent alternative text.
	Images that do not convey content, are decorative, or with content that is already conveyed in text are given null alt text (alt="") or implemented as CSS backgrounds. All linked images have descriptive alternative text. .
	Equivalent alternatives to complex images are provided in context or on a separate (linked and/or referenced via longdesc) page.
	Form buttons have a descriptive value.
	Form inputs have associated text labels, or if labels cannot be used, a descriptive title attribute.
	Embedded multimedia is identified via accessible text.
	Frames are appropriately titled.

#### Guideline 1.2 Time-based Media: Provide alternatives for time-based media

NOTE: If the audio or video is designated as an alternative to web content (e.g., an audio or sign language version of a web page, for example), then the web content itself serves as the alternative.

Success Criteria	Recommendations
<b>1.2.1 Prerecorded Audio-only and Video-only</b>	A descriptive text transcript (including all relevant visual and auditory clues and indicators) is provided for non-live, web-based audio (audio podcasts, MP3 files, etc.).
	A text or audio description is provided for non-live, web-based video-only (e.g., video that has no audio track).
<b>1.2.2 Captions (Prerecorded)</b>	Synchronized captions are provided for non-live, web-based video (YouTube videos, etc.)
<b>1.2.3 Audio Description or Media Alternative</b>	A descriptive text transcript OR audio description audio track is provided for non-live, web-based video

#### Guideline 1.3 Adaptable: Create content that can be presented in different ways (for example simpler layout) without losing information or structure

Success Criteria	Recommendations
<b>1.3.1 Info and Relationships</b>	Semantic markup is used to designate headings (<h1>), lists (<ul>, <ol>, and <dl>), emphasized or special text (<strong>, <code>, <abbr>, <blockquote>, for example), etc. Semantic markup is used appropriately.
	Tables are used to markup tabular data. Where necessary, data cells are associated with their headers. Data table captions and summaries are used where appropriate.
	Text labels are associated with form input elements. Related form elements are grouped with fieldset / legend.

<b>1.3.2 Meaningful Sequence</b>	The reading and navigation order (determined by code order) is logical and intuitive.
<b>1.3.3 Sensory Characteristics</b>	Instructions do not rely upon shape, size, or visual location (e.g., "Click the square icon to continue" or "Instructions are in the right-hand column").
	Instructions do not rely upon sound (e.g., "A beeping sound indicates you may continue.").

**Guideline 1.4 Distinguishable: Make it easier for users to see and hear content including separating foreground from background**

<b>Success Criteria</b>	<b>Recommendations</b>
<b>1.4.1 Use of Color</b>	Color is not used as the sole method of conveying content or distinguishing visual elements.
	Color alone is not used to distinguish links from surrounding text unless the luminance contrast between the link and the surrounding text is at least 3:1 and an additional differentiation (e.g., it becomes underlined) is provided when the link is hovered over or receives focus.
<b>1.4.2 Audio Control</b>	A mechanism is provided to stop, pause, mute, or adjust volume for audio that automatically plays on a page for more than 3 seconds.

**Operable**  
Interface forms, controls, and navigation are operable

**Guideline 2.1 Keyboard Accessible: Make all functionality available from a keyboard**

<b>Success Criteria</b>	<b>Recommendations</b>
<b>2.1.1 Keyboard)</b>	All page functionality is available using the keyboard, unless the functionality cannot be accomplished in any known way using a keyboard (e.g., free hand drawing).
	Page-specified shortcut keys and access keys (access key should typically be avoided) do not conflict with existing browser and screen reader shortcuts.
<b>2.1.2 No Keyboard Trap</b>	Keyboard focus is never locked or trapped at one particular page element. The user can navigate to and from all navigable page elements using only a keyboard.

**Guideline 2.2 Enough Time: Provide users enough time to read and use content**

<b>Success Criteria</b>	<b>Recommendations</b>
<b>2.2.1 Timing Adjustable</b>	If a page or application has a time limit, the user is given options to turn off, adjust, or extend that time limit. This is not a requirement for real-time events (e.g., an auction), where the time limit is absolutely required, or if the time limit is longer than 20 hours.
<b>2.2.2 Pause, Stop, Hide</b>	Automatically moving, blinking, or scrolling content that lasts longer than 3 seconds can be paused, stopped, or hidden by the user. Moving, blinking, or scrolling can be used to draw attention to or highlight content as long as it lasts less than 3 seconds.
	Automatically updating content (e.g., automatically redirecting or refreshing a page, a news ticker, AJAX updated field, a notification alert, etc.) can be paused, stopped, or hidden by the user or the user can manually control the timing of the updates.

### Guideline 2.3 Seizures: Do not design content in a way that is known to cause seizures

Success Criteria	Recommendations
<b>2.3.1 Three Flashes or Below Threshold</b>	No page content flashes more than 3 times per second unless that flashing content is sufficiently small and the flashes are of low contrast and do not contain too much red.

### Guideline 2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are

Success Criteria	Recommendations
<b>2.4.1 Bypass Blocks</b>	A link is provided to skip navigation and other page elements that are repeated across web pages.
	If a page has a proper heading structure, this may be considered a sufficient technique instead of a "Skip to main content" link. Note that navigating by headings is not yet supported in all browsers.
	If a page uses frames and the frames are appropriately titled, this is a sufficient technique for bypassing individual frames.
<b>2.4.2 Page Titled</b>	The web page has a descriptive and informative page title.
<b>2.4.3 Focus Order</b>	The navigation order of links, form elements, etc. is logical and intuitive.
<b>2.4.4 Link Purpose (In Context)</b>	The purpose of each link (or form image button or image map hotspot) can be determined from the link text alone, or from the link text and its context (e.g., surrounding paragraph, list item, table cell, or table headers).
	Links (or form image buttons) with the same text that go to different locations are readily distinguishable.

## Understandable Content and interface are understandable

### Guideline 3.1 Readable: Make text content readable and understandable

Success Criteria	Recommendations
<b>3.1.1 Language of Page</b>	The language of the page is identified using the HTML lang attribute (<html lang="en">, for example).

### Guideline 3.2 Predictable: Make Web pages appear and operate in predictable ways

Success Criteria	Recommendations
<b>3.2.1 On Focus (Level A)</b>	When a page element receives focus, it does not result in a substantial change to the page, the spawning of a pop-up window, an additional change of keyboard focus, or any other change that could confuse or disorient the user.
<b>3.2.2 On Input (Level A)</b>	When a user inputs information or interacts with a control, it does not result in a substantial change to the page, the spawning of a pop-up window, an additional change of keyboard focus, or any other change that could confuse or disorient the user unless the user is informed of the change ahead of time.

### Guideline 3.3 Input Assistance: Help users avoid and correct mistakes

Success Criteria	Recommendations
<b>3.3.1 Error Identification</b>	Required form elements or form elements that require a specific format, value, or length provide this information within the element's label (or if a label is not provided, within the element's title attribute).
	If utilized, form validation cues and errors (client-side or server-side) alert users to errors in an efficient, intuitive, and accessible manner. The error is clearly identified, quick access to the problematic element is provided, and user is allowed to easily fix the error and resubmit the form.
<b>3.3.2 Labels or Instructions</b>	Sufficient labels, cues, and instructions for required interactive elements are provided via instructions, examples, properly positioned form labels, and/or fieldsets / legends.

#### Robust

Content can be used reliably by a wide variety of user agents, including assistive technologies

### Guideline 4.1 Compatible: Maximize compatibility with current and future user agents, including assistive technologies

Success Criteria	Recommendations
<b>4.1.1 Parsing</b> (Level A)	Significant HTML/XHTML validation/parsing errors are avoided. Check at <a href="http://validator.w3.org/">http://validator.w3.org/</a>
<b>4.1.2 Name, Role, Value</b> (Level A)	Markup is used in a way that facilitates accessibility. This includes following the HTML/XHTML specifications and using forms, form labels, frame titles, etc. appropriately.

## 9.2 WCAG 2.0 Checklist (For Level AA)

Consider all elements of Level A also.

### Perceivable

Web content is made available to the senses - sight, hearing, and/or touch

#### Guideline 1.2 Time-based Media: Provide alternatives for time-based media

NOTE: If the audio or video is designated as an alternative to web content (e.g., an audio or sign language version of a web page, for example), then the web content itself serves as the alternative.

Success Criteria	Recommendations
<b>1.2.4 Captions (Live)</b>	Synchronized captions are provided for all live multimedia that contains audio (audio-only broadcasts, web casts, video conferences, Flash animations, etc.)
<b>1.2.5 Audio Description (Prerecorded)</b>	Audio descriptions are provided for all video content NOTE: Only required if the video conveys content visually that is not available in the default audio track.

#### Guideline 1.4 Distinguishable: Make it easier for users to see and hear content including separating foreground from background

Success Criteria	Recommendations
<b>1.4.3 Contrast (Minimum)</b>	Text and images of text have a contrast ratio of at least 4.5:1. Large text (over 18 point or 14 point bold) has a contrast ratio of at least 3:1
<b>1.4.4 Resize text</b>	The page is readable and functional when the text size is doubled.
<b>1.4.5 Images of Text</b>	If the same visual presentation can be made using text alone, an image is not used to present that text.

### Operable

Interface forms, controls, and navigation are operable

#### Guideline 2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are

Success Criteria	Recommendations
<b>2.4.5 Multiple Ways</b>	Multiple ways are available to find other web pages on the site - at least two of: a list of related pages, table of contents, site map, site search, or list of all available web pages.
<b>2.4.6 Headings and Labels</b>	Page headings and labels for form and interactive controls are informative. Avoid duplicating heading (e.g., "More Details") or label text (e.g., "First Name") unless the structure provides adequate differentiation between them.
<b>2.4.7 Focus Visible</b>	It is visually apparent which page element has the current keyboard focus (i.e., as you tab through the page, you can see where you are).

## Understandable Content and interface are understandable

### Guideline 3.1 Readable: Make text content readable and understandable

Success Criteria	Recommendations
3.1.2 Language of Parts	When appropriate, the language of sections of content that are a different language are identified, for example, by using the lang attribute (<blockquote lang="es">

### Guideline 3.2 Predictable: Make Web pages appear and operate in predictable ways

Success Criteria	Recommendations
3.2.3 Consistent Navigation	Navigation links that are repeated on web pages do not change order when navigating through the site.
3.2.4 Consistent Identification	Elements that have the same functionality across multiple web pages are consistently identified. For example, a search box at the top of the site should always be labeled the same way.

### Guideline 3.3 Input Assistance: Help users avoid and correct mistakes

Success Criteria	Recommendations
3.3.3 Error Suggestion	If an input error is detected (via client-side or server-side validation), provide suggestions for fixing the input in a timely and accessible manner.
3.3.4 Error Prevention (Legal, Financial, Data)	If the user can change or delete legal, financial, or test data, the changes/deletions are reversible, verified, or confirmed.

## 9.3 WCAG 2.0 Checklist (For Level AAA)

Consider all elements of Level A and Level AA also.

### Perceivable

Web content is made available to the senses - sight, hearing, and/or touch

#### Guideline 1.2 Time-based Media: Provide alternatives for time-based media

NOTE: If the audio or video is designated as an alternative to web content (e.g., an audio or sign language version of a web page, for example), then the web content itself serves as the alternative.

Success Criteria	Recommendations
<b>1.2.6 Sign Language (Prerecorded)</b>	A sign language video is provided for all media content that contains audio.
<b>1.2.7 Extended Audio Description (Prerecorded)</b>	When an audio description track cannot be added to video due to audio timing (e.g., no pauses in the audio), an alternative version of the video with pauses that allow audio descriptions is provided.
<b>1.2.8 Media Alternative (Prerecorded)</b>	A descriptive text transcript is provided for all pre-recorded media that has a video track.
<b>1.2.9 Audio-only (Live)</b>	A descriptive text transcript (e.g., the script of the live audio) is provided for all live content that has audio.

#### Guideline 1.4 Distinguishable: Make it easier for users to see and hear content including separating foreground from background

Success Criteria	Recommendations
<b>1.4.6 Contrast (Enhanced)</b>	Text and images of text have a contrast ratio of at least 7:1.
	Large text (over 18 point or 14 point bold) has a contrast ratio of at least 4.5:1
<b>1.4.7 Low or No Background Audio</b>	Audio of speech has no or very low background noise so the speech is easily distinguished.
<b>1.4.8 Visual Presentation</b>	Blocks of text over one sentence in length: <ul style="list-style-type: none"> <li>-Are no more than 80 characters wide.</li> <li>- Are NOT fully justified (aligned to both the left and the right margins).</li> <li>- Have adequate line spacing (at least 1/2 the height of the text) and paragraph spacing (1.5 times line spacing).</li> <li>- Have a specified foreground and background color. These can be applied to specific elements or to the page as a whole using CSS (and thus inherited by all other elements).</li> <li>- Do NOT require horizontal scrolling when the text size is doubled.</li> </ul>
<b>1.4.9 Images of Text (No Exception)</b>	Text is used within an image only for decoration (image does not convey content) OR when the information cannot be presented with text alone.

## Operable

### Interface forms, controls, and navigation are operable

#### Guideline 2.1 Keyboard Accessible: Make all functionality available from a keyboard

Success Criteria	Recommendations
2.1.3 Keyboard (No Exception)	All page functionality is available using the keyboard.

#### Guideline 2.2 Enough Time: Provide users enough time to read and use content

Success Criteria	Recommendations
2.2.3 No Timing	The content and functionality has no time limits or constraints.
2.2.4 Interruptions	Interruptions (alerts, page updates, etc.) can be postponed or suppressed by the user.
2.2.5 Re-authenticating	If an authentication session expires, the user can re-authenticate and continue the activity without losing any data from the current page.

#### Guideline 2.3 Seizures: Do not design content in a way that is known to cause seizures

Success Criteria	Recommendations
2.3.2 Three Flashes	No page content flashes more than 3 times per second.

#### Guideline 2.4 Navigable: Provide ways to help users navigate, find content, and determine where they are

Success Criteria	Recommendations
2.4.8 Location	If a web page is part of a sequence of pages or within a complex site structure, an indication of the current page location is provided, for example, through breadcrumbs or specifying the current step in a sequence (e.g., "Step 2 of 5 - Shipping Address").
2.4.9 Link Purpose (Link Only)	The purpose of each link (or form image button or image map hotspot) can be determined from the link text alone. There are no links (or form image buttons) with the same text that go to different locations.
2.4.10 Section Headings	Beyond providing an overall document structure, individual sections of content are designated using headings, where appropriate.

## Understandable Content and interface are understandable

### Guideline 3.1 Readable: Make text content readable and understandable

Success Criteria	Recommendations
<b>3.1.3 Unusual Words</b>	Words that may be ambiguous, unknown, or used in a very specific way are defined through adjacent text, a definition list, a glossary, or other suitable method.
<b>3.1.4 Abbreviations</b>	Expansions for abbreviations are provided by expanding or explaining the definition the first time it is used, using the <abbr> element, or linking to a definition or glossary. NOTE: WCAG 2.0 gives no exception for regularly understood abbreviations (e.g., HTML on a web design web site must always be expanded).
<b>3.1.5 Reading Level</b>	A more understandable alternative is provided for content that is more advanced than can be reasonably read by a person with roughly 9 years of primary education.
<b>3.1.6 Pronunciation</b>	If the pronunciation of a word is vital to understanding that word, its pronunciation is provided immediately following the word or via a link or glossary.

### Guideline 3.2 Predictable: Make Web pages appear and operate in predictable ways

Success Criteria	Recommendations
<b>3.2.5 Change on Request</b>	Substantial changes to the page, the spawning of pop-up windows, uncontrolled changes of keyboard focus, or any other change that could confuse or disorient the user must be initiated by the user. Alternatively, the user is provided an option to disable such changes.

### Guideline 3.3 Input Assistance: Help users avoid and correct mistakes

Success Criteria	Recommendations
<b>3.3.5 Help</b>	If the user can submit, change, or delete information, the information is reversible, verified, or confirmed.
<b>3.3.6 Error Prevention (All)</b>	If the user can submit information, the submission is reversible, verified, or confirmed.

## 10. Further Reading

1. Full W3C Press Release (<http://www.w3.org/2008/12/wcag20-pressrelease.html>)
2. WCAG 2.0 at a Glance (<http://www.w3.org/WAI/WCAG20/glance/Overview.html>)
3. The WCAG 2.0 Documents (<http://www.w3.org/WAI/intro/wcag20.php>)
4. WCAG 2.0 Guidelines (<http://www.w3.org/TR/2008/REC-WCAG20-20081211/>)
5. How to Meet WCAG 2.0: Customizable Quick Reference  
(<http://www.w3.org/WAI/WCAG20/quickref/>)
6. Understanding WCAG 2.0 (<http://www.w3.org/TR/UNDERSTANDING-WCAG20/>)
7. Techniques for WCAG 2.0 (<http://www.w3.org/TR/WCAG20-TECHS/>)
8. How to Update Your Web Site from WCAG 1.0 to WCAG 2.0  
(<http://www.w3.org/WAI/WCAG20/from10/websites.html>)
9. WCAG 2.0 Resources - The Web Standards Project  
(<http://www.webstandards.org/2008/11/06/wcag-20-resources/>)
10. WCAG 2.0 FAQs (<http://www.w3.org/WAI/WCAG20/wcag2faq.html>)
11. WebAim checklist (<http://webaim.org/standards/wcag/checklist>)

## About STQC .....

STQC is an independent testing and certification organisation of the Department of Information Technology, Government of India. STQC has vast experience in operating certification schemes with international recognitions.

### Website Quality certification

A recognition that the organisation has adequate procedures and processes in place to provide reliable and dependable information and services through its website.

Will help in...

- Hardening of website from wide range of security threats
- Increasing accessibility and usability
- Reducing legal liabilities
- Assuring commitment to services
- Bench marking as per International Standards

### Applicability

Any organisation government or public sector organizations regardless of its location, size or sector, can apply for certification of its website.

### Training Program for You

#### Website Quality

- International Scenario
  - Web-Accessibility, Usability and Performance
  - Website Security
  - CMS and Work Flow Management
  - Recommended Practices for Well Engineered Website
  - National Guidelines
  - Developing Website Quality Manual
  - Website Quality Certification
- (Two days)**

#### Capability Approval

- International Scenario
  - Web-Accessibility, Usability and Performance
  - Website Security
  - CMS and Work Flow Management
  - Recommended Practices for Well Engineered Website
  - National Guidelines
  - Developing Capability Manual
  - Website Quality Certification
- (Two days)**

#### Web Accessibility

- Introduction to Website Accessibility Requirements
- Web Site Accessibility : Design Principles
- W3C Web Accessibility Initiative (WAI)
- Web Content Accessibility Guideline (WCAG 2.0) –
- Guidelines & Check Points
- Testing & Evaluation of Website Accessibility

**(One day)**



#### Contact and Training:

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