Accessibility Compliance Project & Web Accessibility Overview

IT Accessibility – Enterprise Operations

IITB, February 2022

Agenda

- Team Introduction and Background
- Accessibility Compliance Project (ACP)
- Accessibility Coaching & Courses
- ITAO Accessibility Audit & Training
- Web Accessibility Overview
- ESDC Target Conformance Level
- References

ACP Team Introduction

- Manager: Asha Natraj
- Team leader: Omar Touma
- Accessibility Coaches:
  - Michael Chan
  - Mohammed Qadeer
  - Jeff Orchard

Background

- The *Accessible Canada Act* (ACA) came into force on July 11, 2019.
- This Act will help make Government of Canada (GoC) accessible, inclusive, and barrier-free.
- As Employment and Social Development Canada (ESDC) has an obligation to align to this act, the ESDC Accessibility Compliance Project (ACP) was put into place to achieve full ACA compliance.
- Environmental scan revealed majority of in-scope and internally used software and products are not compliant with accessibility standards

Accessibility Compliance Project 1 of 2

- ACP has identified 162 internally developed solutions and 336 Commercial-of-the-Shelf (COTS) and Free open-source software (FOSS) that need to achieve compliance in 5 years (2021-2026).
- The identified software and products by ACP will need to sustain or achieve compliance.
- This project was approved in Gate 0 MPIB.

Accessibility Compliance Project 2 of 2

Current Analysis:

- Purchased Products - 270 products
- Free open-source software - 66 products
- Internally developed solutions – 162 solutions

Accessibility Coaching Mandate

- Educate Application Development teams on accessibility, provide timely guidance, mentoring and coaching
- Meet legislative mandate (Accessible Canada Act)
- Initiate culture change for accessible coding
- Build expertise for developers – Mobilize and Empower employees

Accessibility Coaching Services 1 of 2

- Coaching services are available for developers on web and non-web application accessibility
- Coaches are accessibility specialists with over 15 years of experience implementing digital accessibility in large org (private and public)
- Coaches have expert knowledge of the Web Content Accessibility Guidelines (WCAG) and Accessible Rich Internet Applications (ARIA)

Accessibility Coaching Services 2 of 2

- Support Application Development teams with accessibility design, development techniques and compliance testing
- Provide pre-audit guidance to reduce issues prior to formal audit
- Support managers and non-dev teams on general accessibility
- Friendly and knowledgeable. No questions too big or small.

Self-Paced Online Web Accessibility Course

This self-paced, text-based course covers a wide range of web accessibility topics. This course will be published on ITAO Github website for public sharing. Concepts & techniques are thoroughly explained with relevant examples and sample code.

Number of modules: 12

Duration: 1 hour reading per module

Audience: Technical staff - developers, programmers, QA analysts, testers, content authors

Available: Feb 2022

Web Accessibility Course - Modules

Modules:

1. Accessibility Fundamentals: Disabilities, Guidelines & Laws
2. Page Structure and Semantics
3. Links and Navigation
4. Tables
5. Images
6. Forms
7. Visual Design and Colours
8. Responsive Design and Zoom
9. Audio, Video, Animations, and Motion
10. Input Modalities
11. ARIA Live and Time Limits
12. ARIA Widgets

ITAO Accessibility Audit & Strategy (ICTAAS) - 1 of 2

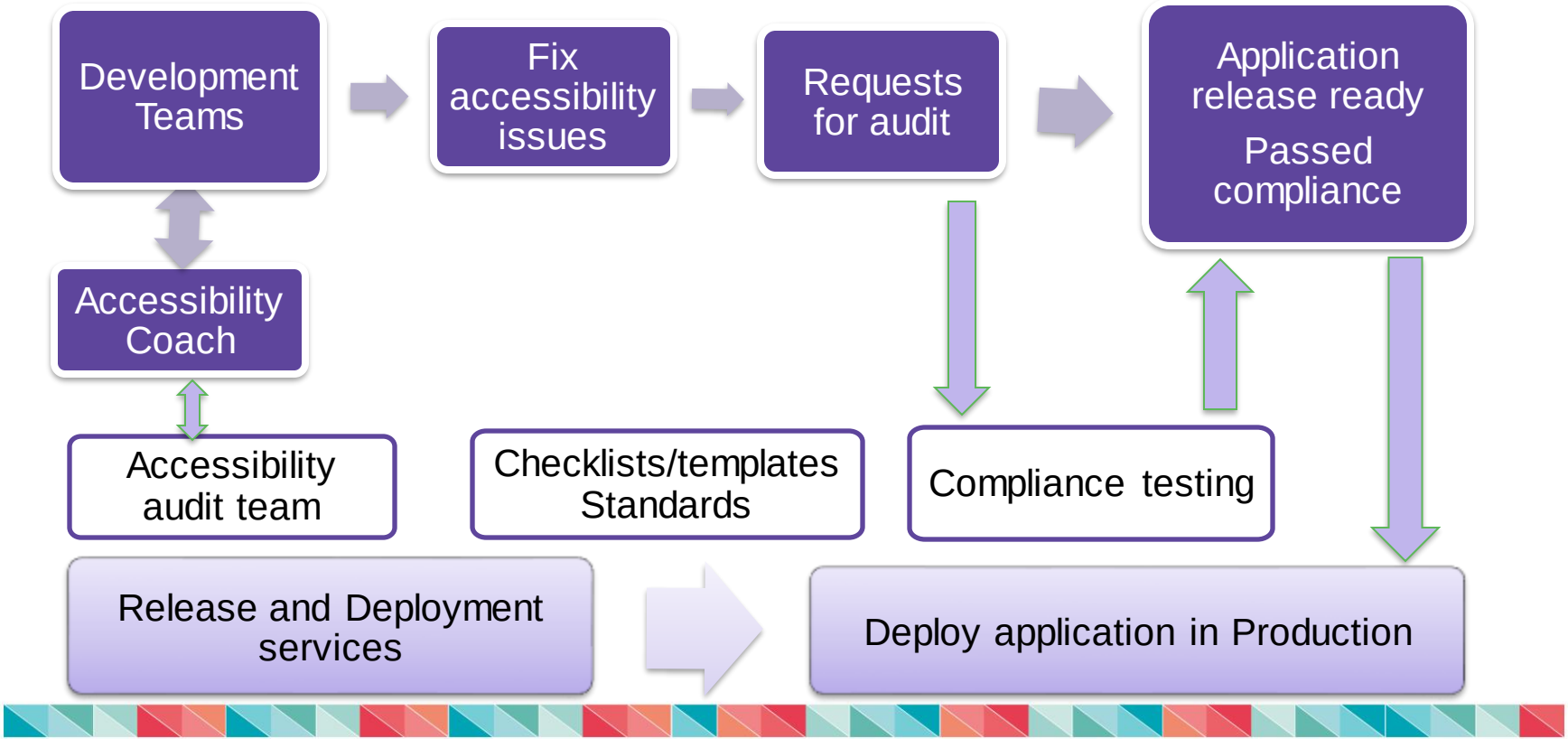
- The ICTAAS team provides compliance audit services as well as strategic advice to both IITB clients and ESDC wide.
- Anybody in ESDC can request ICT accessibility help through our single intake process in the Request Management Tool.
- Accessibility compliance audits can be performed on any ICT solution such as websites, web applications, mobile applications, documents (Word, PowerPoint, Excel, Emails), PDF documents and software.
  - Accessibility compliance audits are based on WCAG 2.1 at the AA level (more on that later). We review all success criteria in scope as well as other standards such as Web Renewal initiative, GC Web Search, Canada .ca Content and Information Architecture (C&IA) requirements and the Standard on Web Interoperability.
  - Audits are done using a combination of automated accessibility tools as well as manual auditor review.
  - An audit can take anywhere between 1 to 15 business days depending on multiple factors such as solution type, amount of pages, complexity, platform, credentials, etc…
- The compliance audit or strategy service can be requested for any ICT solution regardless of scope. It can be on prototypes, screenshots, full solutions and demos. We can also participate on scrums and sprints to help advise on ICT accessibility at all stages of an ICT solution lifecycle.

ITAO Accessibility Audit & Strategy (ICTAAS) – 2 of 2

The ICTAAS team also currently provides three courses in collaboration with the College@ESDC:

1. Course on document and email accessibility (course 0000102948 in SABA). Learn practical tips and best practices to use MS Office 2016 to create accessible content with Outlook, Word and PowerPoint.
2. Course on PDF accessibility (course 0000119088 in SABA). Learn the basics on how to remediate PDF documents using Foxit PDF Editor.
3. Course (available for everyone in January 2022) for developers to learn the basics on how to create accessible Information and Communication Technologies (ICT) using the Web Content Accessibility Guidelines (WCAG) 2.1. Knowledge of HTML programming and functionalities is highly recommended. No previous accessibility knowledge required.

Coaching – Approach and Key Players



Long description is available in speaker notes.

What is Web Accessibility?

- Web accessibility is about making websites, applications and content accessible to people of all abilities and disabilities
- It means that people can perceive, understand, navigate and interact with content
- It ensures access to the widest possible audience on as many technological platforms as possible
- It benefits the general population, including people using mobile devices, people with temporary disabilities and older people.

What is WCAG?

- The Web Content Accessibility Guidelines (WCAG) is a technical standard document that explains how to make web content more accessible to people of all abilities and disabilities
- Web content refers to information in web page or web application, e.g. text, images, sounds and code that defines structure and presentation
- It addresses accessibility of web content on desktops, laptops, tablets and mobile devices
- WCAG also makes content more usable to all users in general

WCAG versions

- WCAG 1.0 published 1999
- WCAG 2.0 published 2008
- WCAG 2.1 published 2018
  - **(current standard recommendation)**
- WCAG 2.2 to be published 2022
- WCAG 3.0 working draft (new conformance model)

WCAG 2.1 Layers of Guidance

- **Principles** - At the top are 4 principles that provide the foundation for Web accessibility: perceivable, operable, understandable, and robust.

- **Guidelines** - Under the principles are guidelines. The 13 guidelines provide the basic goals to make content more accessible.

- **Success Criteria** - For each guideline, testable success criteria provide the basis for conformance. Each criterion is assigned a conformance level A (lowest), AA, AAA (highest). There are 50 Success Criteria in Level A and AA.

- **Techniques –** Each criterion lists one or more implementation techniques.

WCAG 2.1 Documents

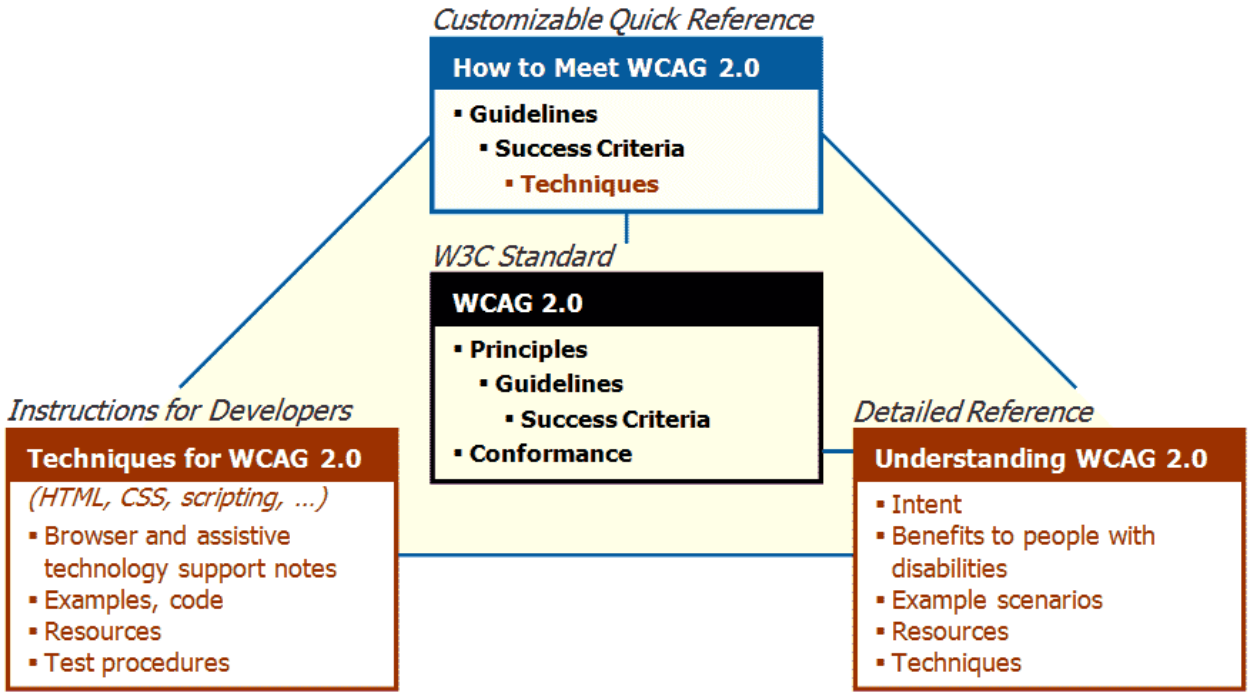


Figure: WCAG 2.1 documents (same as WCAG 2.0 documents)

Long description is available in speaker notes. Source: https://www.w3.org/WAI/standards-guidelines/wcag/docs/

Links between WCAG documents

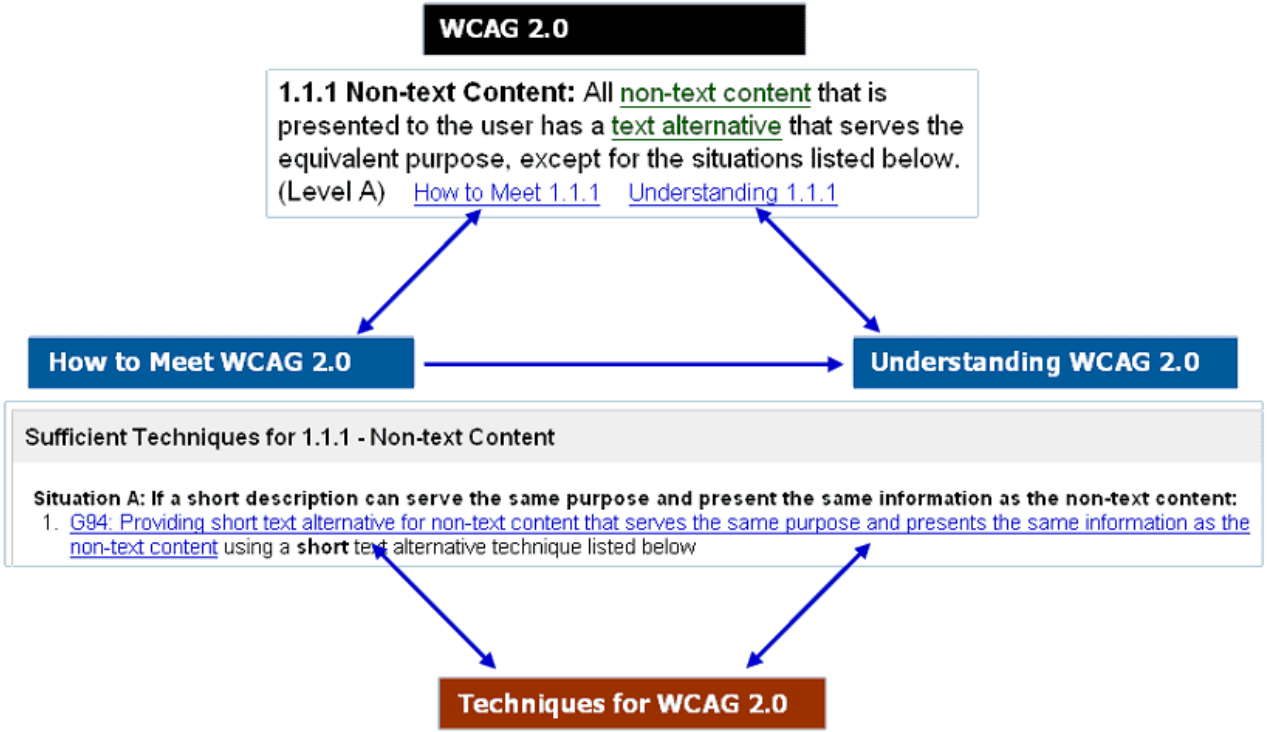
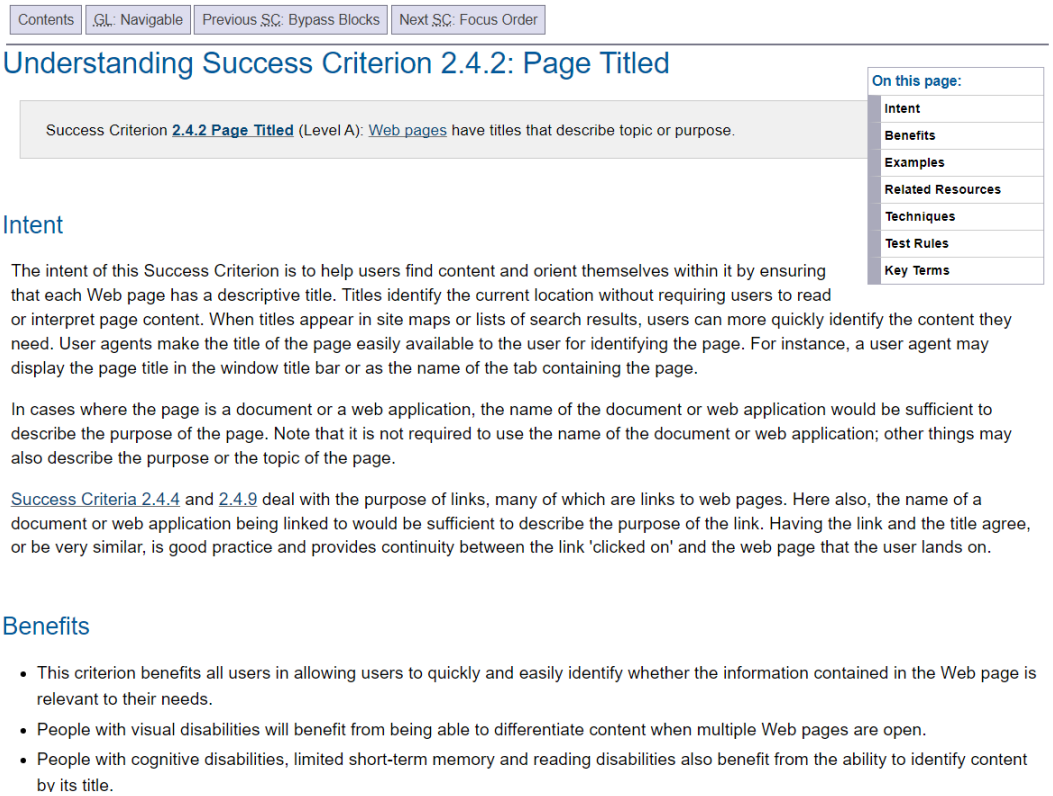


Figure: Example of links between documents

Long description is available in speaker notes.

Source: https://www.w3.org/WAI/standards-guidelines/wcag/docs/

Understanding WCAG Document – 1 of 3



Contents | GL: Navigable | Previous SC: Bypass Blocks | Next SC: Focus Order

Understanding Success Criterion 2.4.2: Page Titled

On this page:
- Intent
- Benefits
- Examples
- Related Resources
- Techniques
- Test Rules
- Key Terms

Success Criterion **2.4.2 Page Titled** (Level A): Web pages have titles that describe topic or purpose.

Intent

The intent of this Success Criterion is to help users find content and orient themselves within it by ensuring that each Web page has a descriptive title. Titles identify the current location without requiring users to read or interpret page content. When titles appear in site maps or lists of search results, users can more quickly identify the content they need. User agents make the title of the page easily available to the user for identifying the page. For instance, a user agent may display the page title in the window title bar or as the name of the tab containing the page.

In cases where the page is a document or a web application, the name of the document or web application would be sufficient to describe the purpose of the page. Note that it is not required to use the name of the document or web application; other things may also describe the purpose or the topic of the page.

Success Criteria 2.4.4 and 2.4.9 deal with the purpose of links, many of which are links to web pages. Here also, the name of a document or web application being linked to would be sufficient to describe the purpose of the link. Having the link and the title agree, or be very similar, is good practice and provides continuity between the link 'clicked on' and the web page that the user lands on.

Benefits

- This criterion benefits all users in allowing users to quickly and easily identify whether the information contained in the Web page is relevant to their needs.
- People with visual disabilities will benefit from being able to differentiate content when multiple Web pages are open.
- People with cognitive disabilities, limited short-term memory and reading disabilities also benefit from the ability to identify content by its title.

Figure: Screenshot of Understanding WCAG document – page 1

Long description is available in speaker notes.

Source: https://www.w3.org/WAI/WCAG21/Understanding/page-titled.html

Understanding WCAG Document – 2 of 3

Examples

- **An HTML Web page**
  The descriptive title of an HTML Web page is marked up with the <title> element so that it will be displayed in the title bar of the user agent.
- **A document collection.**
  The title of Understanding WCAG 2.1 is "Understanding WCAG 2.1."
  - The introduction page has the title "Introduction to Understanding WCAG 2.0."
  - Major sections of the document are pages titled "Understanding Guideline X" and "Understanding Success Criterion X."
  - Appendix A has the title "Glossary."
  - Appendix B has the title "Acknowledgements."
  - Appendix C has the title "References."
- **A Web application.**
  A banking application lets a user inspect his bank accounts, view past statements, and perform transactions. The Web application dynamically generates titles for each Web page, e.g., "Bank XYZ, accounts for John Smith" "Bank XYZ, December 2005 statement for Account 1234-5678".

Related Resources

Resources are for information purposes only, no endorsement implied.

- Writing Better Web Page Titles How to write titles for Web pages that will enhance search engine effectiveness.
- Guidelines for Accessible and Usable Web Sites: Observing Users Who Work With Screen Readers . Theofanos, M.F., and Redish, J. (2003). Interactions, Volume X, Issue 6, November-December 2003, pages 38-51, http://dl.acm.org/citation.cfm?doid=947226.947227

Figure: Screenshot of Understanding WCAG document – page 1

Long description is available in speaker notes.

Source: https://www.w3.org/WAI/WCAG21/Understanding/page-titled.html

Understanding WCAG Document – 3 of 3

Techniques

Each numbered item in this section represents a technique or combination of techniques that the WCAG Working Group deems sufficient for meeting this Success Criterion. However, it is not necessary to use these particular techniques. For information on using other techniques, see Understanding Techniques for WCAG Success Criteria, particularly the "Other Techniques" section.

Sufficient Techniques

1. G88: Providing descriptive titles for Web pages **AND** associating a title with a Web page using one of the following techniques:
   - H25: Providing a title using the title element
   - PDF18: Specifying the document title using the Title entry in the document information dictionary of a PDF document

Advisory Techniques

Although not required for conformance, the following additional techniques should be considered in order to make content more accessible. Not all techniques can be used or would be effective in all situations.

- G127: Identifying a Web page's relationship to a larger collection of Web pages

Failures

The following are common mistakes that are considered failures of this Success Criterion by the WCAG Working Group.

- F25: Failure of Success Criterion 2.4.2 due to the title of a Web page not identifying the contents

Figure: Screenshot of Understanding WCAG document – page 1

Long description is available in speaker notes.

Source: https://www.w3.org/WAI/WCAG21/Understanding/page-titled.html

WCAG 2.1 at a Glance - Perceivable

Perceivable
Users must be able to perceive the information

- Provide text alternatives for non-text content.
- Provide captions and transcripts for multimedia.
- Create content that can be presented in different ways, including by assistive technologies
- Make it easier for users to see and hear content.

WCAG 2.1 at a Glance – Operable

Operable
Users must be able to operate the interface

- Make all functionality available from a keyboard.
- Give users enough time to read and use content.
- Do not use content that causes seizures or physical reactions.
- Help users navigate and find content.
- Make it easier to use inputs other than keyboard.

WCAG 2.1 at a Glance – Understandable

Understandable
Users must be able to understand the information & operation

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

WCAG 2.1 at a Glance - Robust

Robust
Users must be able to access content as technologies advance

- Maximize compatibility with current and future user tools.

ESDC Target WCAG Conformance Level

- ESDC is aiming to achieve **WCAG 2.1 level AA** conformance for internally used websites, web applications, applications and COTS products
- There are 50 level A and level AA success criteria in WCAG 2.1
- Success criteria are written as testable statements (true or false) that are technology neutral.
- All success criteria are important issues for people of all abilities and disabilities

Common Issues

According to Deque, 95% of all accessibility issues found impact only these 15 WCAG success criteria:

#	WCAG Success Criteria	% of all issues
1	1.4.3: Contrast (Minimum)	30%
2	4.1.2: Name, Role, Value	16%
3	1.3.1: Info and Relationships	12%
4	4.1.1: Parsing	12%
5	1.1.1: Non-text Content	8%
6	2.4.3: Focus Order	3%
7	2.1.1: Keyboard	3%
8	2.4.7: Focus Visible	2%

#	WCAG Success Criteria	% of all issues
9	1.4.11: Non-text Contrast	2%
10	1.4.1: Use of Color	1%
11	1.3.2: Meaningful Sequence	1%
12	2.4.1: Bypass Blocks	1%
13	3.3.2: Labels or Instructions	1%
14	2.4.2: Page Titled	1%
15	3.1.1: Language of Page	1%
16	Rest of WCAG 2.1 A/AA SC	5%

References

- WCAG 2.1
- W3C Web Accessibility Initiative (WAI)
- WAI ARIA Authoring Practices
- Accessible Canada Act
- IT Accessibility Office (ITAO) Github website
- ITAO Web Accessibility Checklist for ESDC development teams
- ITAO iService website
- Canada.ca Content Style Guide
- Web Experience Toolkit

Questions?

For ACP project related questions:

ACP GD mailbox

For pre-audit / coaching guidance:

RMT Intake form

Select Accessibility coaching -> ACP Application development coaching

IT Accessibility Office iService page

ITAO Github website