Introduction to digital accessibility

CarSales

Acknowledgement of Country

I'd like to acknowledge the Traditional Owners of the lands on which we meet today, the Cammeraygal people of the Eora.
We pay our respects to Elders past and present, and extend that respect to all First Nations people present today.

My name is Russ Weakley:

- 1995: Web Design and HTML
- 2002: CSS
- 2003: Accessibility
- 2012: Component libraries and Design systems

Ask questions any time!

Feel free to ask questions any time in chat or via the QA feature of Zoom. I'll try to answer asap.

What will we cover?

Part 1

- Why should you care about accessibility?
- What is WCAG?
- Let's meet some people
- Accessibility user profiles

- 5 min break

Part 2

- Some demonstrations
  - Scenario 1: Judith, a keyboard-only user
  - Scenario 2: Andrew, a screen-reader user
  - Scenario 3: Mary, a screen magnification user
  - Scenario 4: Joe, a user with short-term memory issues
- Accessibility maturity

Why should you care about accessibility?

Key reasons to care:

1. Legal responsibilities
2. Reputation
3. User Experience
4. Commercial incentives

Legal responsibilities

All public-facing digital products in Australia:

- Are required to comply with the Disability Discrimination Act 1992.
- Must conform to WCAG 2.0 AA via the Australian Human Rights Commission.

Reputation

Some recent examples

- 2019, USA: Guillermo Robles v. Domino's Pizza
- 2015, Australia: Gisele Mesnage v. Coles
- 2000, Australia: Bruce Maguire v. SOCOG

While there are financial risks associated with legal actions, the possible **damage to an organisation's reputation** is far more significant.

Domino's will likely forever be remembered as the brand that argued against the basic rights of a blind man - and lost.
Source

User Experience

Features intended for people with disabilities often **improve the user experience for many other groups**.

Commercial incentives

What does the term **"disability"** mean in Australia?

Persons are considered to have a disability if they have a limitation, restriction or impairment, which has lasted, or is likely to last, for at least six months and restricts everyday activities.
Source

Do you know the **percentage of people** who have some form of disability in Australia?

Some stats

- Australia: 17.7% of the population
- New Zealand: 24.3% of the population
- USA: 26% of the population

These estimates are known to be low, as many people **don't identify as having some form of disability**.

Can any organisation afford to **alienate potential customers**?

So, why should you care?

Accessible digital services will:

- Reduce the risk of legal or reputational damage
- Improve customer experience for everyone
- Have the potential to attract a larger audience
- Position your organisation as an inclusive and caring brand

What is WCAG?

We just saw that all Australian digital products **must conform to "WCAG 2.0 AA"** - but what does this mean?

One of the standards produced by the World Wide Web Consortium is the **Web Content Accessibility Guidelines** - often referred to as “WCAG”.

The **Web Content Accessibility Guidelines (WCAG)** explain how to make web content more accessible to people with disabilities.

- **WCAG 2.0**: Released in December 2008
- **WCAG 2.1**: Released June 2018
- **WCAG 2.2**: Due some time in 2023
- **WCAG 3.0**: Due some time 2024

How WCAG 2.1 is structured:

- 4 Principles
  - 13 Guidelines
    - 78 Success Criteria
      - Sufficient Techniques
      - Advisory Techniques
      - Failures

The most important part of WCAG 2.1 is the **78 Success criteria**.

They are a series of **testable success criteria** that help determine if your website or web application can be considered “accessible”.

Each Success Criteria has a compliance level of either: **“A”, “AA”, or “AAA”**.

WCAG 2.1

- **30 level “A”** (minimum level of conformance).
- **20 level “AA”**.
- **28 level “AAA”** (maximum level of conformance).

Sites **must meet all “A” and “AA”** Success Criteria to be “AA” compliant.

This means websites and web apps **must comply with all 50 Success Criteria**.

Three important WCAG documents

The official WCAG document is Web Content Accessibility Guidelines (WCAG) 2.1.

Understanding documents provide **detailed explanations** for WCAG guidelines and success criteria.

How to Meet WCAG provides **a quick reference guide** for WCAG success criteria and techniques.

Let’s look at an example

Success Criterion 2.1.1 Keyboard (Level A)

- Success Criterion 2.1.1 Keyboard
- Understanding SC 2.1.1 Keyboard (Level A)
- How to meet SC 2.1.1 Keyboard Level A

But who are the **Web Content Accessibility Guidelines (WCAG)** trying to help?

Let’s meet some people

We're going to look at how a range different people **interact with the digital world**.

1. People with no vision
2. People with low vision
3. People with reduced colour vision
4. People with limited movement
5. People with different learning or cognition
6. People with reduced or no hearing

1. People with no vision

Characteristics:

- Blindness
- Legally blind

May use:

- A keyboard - without a mouse
- Screen reader software (e.g. JAWS, NVDA, VoiceOver, Narrator)
- Refreshable braille devices (e.g. Stand-alone, Notetakers, Smart displays)

May need:

- The ability to navigate using the keyboard-only
- Well structured content
- Alternatives for visual content
- Clearly labelled interactive components

2. People with low vision

Characteristics:

- Low visual clarity
- Light and glare sensitivity
- Contrast sensitivity
- Limited field of vision

May use:

- Screen magnifier software (e.g. ZoomText)
- Specific computer settings (e.g. Enlarge text sizes, magnify the display)
- Screen reader software (e.g. JAWS, NVDA, VoiceOver, Narrator)

May need:

- Good colour contrast
- Readable fonts
- The ability to magnify or zoom content
- The ability to customise the display

3. People with reduced colour vision

Characteristics:

- Typical *(Trichromacy)*
- Green-deficient *(Deuteranomaly)* and Green-Blind *(Deuteranopia)*
- Red-deficient *(Protanomaly)* and Red-Blind *(Protanopia)*
- Blue-deficient *(Tritanomaly)* and Blue-Blind *(Tritanopia)*

- Blue Cone Monochromacy *(Achromatomaly)*
- Monochromacy *(Achromatopsia)*

May need:

- Good colour contrast
- Information that is conveyed using methods other than colour-alone

4. People with limited movement

Characteristics:

- Limited strength
- Limited reach or range
- Limited dexterity

May use:

- Voice recognition software (e.g. Dragon NaturallySpeaking)
- Eye or head tracking software (e.g. Dynavox, Apple iOS)
- Head pointer
- Sip and puff
- Head switches
- Mouth stick

May need:

- The ability to navigate using the keyboard-only
- Efficient methods of navigating content
- Enough time to complete tasks

5. People with different learning or cognition

Characteristics:

- Limited or no literacy/numeracy
- Limited understanding of complex language
- Limited focus and/or memory
- Limited planning and execution
- Limited emotional control
- Debilitating mental health conditions

May use:

- Spelling and grammar software (e.g. Grammarly, MS Word)
- Screen masking software (e.g. Read&Write)
- Text to speech (e.g. Speechify)
- Screen reader software (e.g. JAWS, NVDA, VoiceOver, Talkback, Narrator)

May need:

- Content that is clearly written and presented
- Navigation that is easy to understand
- Help to avoid mistakes
- Limited distractions
- Processes that do not rely on memory

6. People with reduced or no hearing

Characteristics:

- Muffling of speech and other sounds
- Difficulty understanding words, especially in crowds
- Total inability to hear

May need:

- Captions and transcripts
- Sign language translations

- A choice of communication methods

Disabilities and barriers

Disabilities may vary

- Disabilities are often spectrums
- Some people have multiple disabilities
- Some disabilities change over time
- Some disabilities change from day to day

Any of these people **could be your customers** today or tomorrow!

Accessibility user profiles

How can we plan, design and build for **all these different types of disabilities**?

One solution is to create a set of **user profiles** that follow the broad categories we just reviewed.

1. A person with no vision
2. A person with low vision
3. A person with reduced colour vision
4. A person with limited movement
5. A person with different learning or cognition
6. A person with reduced or no hearing

Accessibility user profiles **do not replace** accessibility training, testing or auditing.

However, they help teams to focus on **different types of people and their individual needs**.

For example, how would each of these user profiles **engage and interact with the following scenarios**?

- A user-journey (e.g. Finding and purchasing a car)
- A process (e.g. Completing a filtering process)
- A component (e.g. Choosing a date from a date picker)

These profiles have the greatest impact when used during the **early stages** of design, development and testing processes.

As a starting point, you could review the Gov.UK accessibility user profiles.

Let's take a 5 min break

Some demonstrations

We're now going to try to **imagine how some different users** may interact with the CarSales website.

Scenario 1: Judith, a keyboard-only user

- Can she navigate through the site using a keyboard?
- Can she see every link, button or form control when they are in focus?
- Can she bypass menus to get to important content more easily??

Scenario 2: Andrew, a screen-reader user

- Can he perform all key tasks on the site?
- Can he navigate via headings easily and intuitively?
- Are all interacting components clearly labelled?

Scenario 3: Mary, a screen magnification user

- Can she magnify the overall layout without losing functionality?
- Can she magnify the text-only without losing functionality?
- Is any critical information displayed off-screen?

Scenario 4: Joe, a user with short-term memory issues

- Can he log into the site without issues?

Accessibility maturity

An **accessibility-mature team** would include some or all of the following:

1. All team members have a **clear understanding of the importance of accessibility**, including managers, product owners and business analysts.

2. **Inclusive user research and testing** conducted at key stages when planning and designing.

3. **Accessibility training** across all key roles - including POs, IMs, BAs, designers, engineers, QAs/testers.

4. A **robust design system** with accessible components and clear documentation.

5. Regular **accessibility design reviews** as part of the design process.

6. Accessibility as part of design file annotations - for clear communication between design to development.

7. Rigorous **accessibility testing** across processes, features and screens before launch.

8. A range of **accessibility testing tools** in use as part of design, development and testing processes.

9. Regular **accessibility audits** of products before and after launch.

10. Accessibility and inclusion are considered as part of all **procurement and hiring processes**.

Questions/discussion?