

# 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
- 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?](#)
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## Part 2

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- [Scenario 1: Judith, a keyboard-only user](#)
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# Why should you care about accessibility?

## Key reasons to care:

1. Legal responsibilities
2. Reputation
3. Improved user experience
4. Commercial incentives
5. Ethical responsibilities

## 1. 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](#).

## 2. 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](#)

### 3. Improved user experience

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

### 4. 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**?

## 5. Ethical responsibilities

People with disabilities often have to fight for the fundamental right to access information and services - **while facing ignorance from others**.

Accessible digital products allow people with disabilities to be **independent, active participants** in our society.

## 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?

The World Wide Web Consortium (W3C) develops **international standards for the World Wide Web**.

One of these standards is the **Web Content Accessibility Guidelines** - often referred to as “WCAG”.

These guidelines explain how to make web content **more accessible to people with disabilities**.

The current standard is **WCAG 2.1**, but WCAG 2.2 will become a "Proposed Recommendation" soon.

## How WCAG 2.1 is structured:

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

The most important part of these guidelines 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 of the 78 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).

In order to be “AA” compliant, sites **must meet all “A” and “AA”** Success Criteria - 50 criteria in total.

### 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 of 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 may be complex

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

## Are these people likely to use your site?

At this point, some of you **may be thinking:**

***“Some of these groups of people would never use our website!”***

A person who is blind may **make the key financial decisions** for their family and may access your site.

Many people with **mobility issues** [drive modified vehicles](#). These people may access your site.

## **Accessible digital products help everyone**

A **site built to be keyboard-accessible** could also help someone with a stroke, a broken arm or even someone holding a baby.

A site that uses **well-structured headings** could also help people with reading difficulties or who have English as a second language.

A site with **good colour contrast** could also help people who view your site in adverse lighting conditions.

A site **built to allow for zoom and magnification** could also help people using devices of different screen sizes.

A site that uses **captions for audio and videos** could also help people watching your videos in a loud environment.

A site that uses **simple, easy-to-understand processes** could also help people who are technically challenged.

A site that uses **plain language** could help lots of groups of people!

So, we should aim to make all our products accessible as they are **more likely to help everyone**.

## 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.

The aim is **not to shame anyone** about the current website. The object is to show you some different experiences.

## Scenario 1: Judith, a keyboard-only user

Judith has **Cerebral Palsy** and has no use of her hands.

As we saw earlier, Judith uses a head-pointer and is a **keyboard-only user**.

Judith also uses [Sticky Keys](#) when she has to press **multiple keystrokes at once**.

### Some tests to simulate Judith's experience:

- 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

Andrew is blind and uses **various screen readers** to interact with digital products.

As discussed earlier, just because Andrew is blind does not mean he may not need to **interact with your products**.

### Some tests to simulate Andrew's experience:

- 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

Mary has **low vision** and uses ZoomText to magnify the layout to navigate and read content.

### Some tests to simulate Mary's experience:

- 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: Matt, a user with short-term memory issues

Matt is a person who **experienced a traumatic brain injury** - which affects his short-term memory, especially performing complex tasks.

### Some tests to simulate Matt's experience:

- Are there persistent labels to aid those with memory issues?
- Are all processes clear and easy to understand?

## What next?

So, how do organisations move towards delivering **accessible products and services**?

Here are **10 things** that can help move your teams towards accessibility. (You don't have to do all of these at once!)

1. Make sure all team members have a **clear understanding of the importance of inclusion and accessibility**.

2. Add **inclusive user research and testing** at key stages when planning and designing.  
(Conduct testing with people with disabilities)

3. Conduct **accessibility training** for all key roles - including POs, IMs, BAs, designers, engineers, QAs/testers.

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

5. Conduct regular **accessibility design reviews** as part of the design process.

6. Make sure accessibility is included as part of **design file annotations** - for clear communication between design to development.

7. Conduct **accessibility testing** during development and before products are released.

8. Introduce **accessibility testing tools** to the design, development and testing processes.

9. Conduct regular **accessibility audits** of products before and after



launch.

10. Ensure that accessibility and inclusion are part of all **procurement and hiring processes**.

## Questions/discussion?