Introduction to digital accessibility

The Salvation Army

Introduction

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.

Add some quick intros in chat

- What's your current role?
- How long have you been with the Salvation Army?

My name is Russ Weakley

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

This is quite informal, so feel free to **interrupt and ask questions or comment at any time**.

Resources provided?

A version of the slides will be provided after this session.

What will we cover?

- Why should you care about accessibility?
- The term “disability”
- Let’s meet some people
- Accessibility user profiles
- Accessibility roles and responsibilities

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 2.1 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

Ultimately, accessibility is **about user experience**.

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

Commercial incentives

Do you know the **percentage of people** who have some form of disability in Australia, New Zealand or USA?

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**?

Any **questions or comments**?

The term “disability”

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

Should we use the term **“disabled”** or is it better to use **“differently-abled”**?

Emily Ladau

A passionate disability rights activist, writer, speaker, and digital communications consultant who educates people about her life with a physical disability.

A great book on this topic: “Demystifying Disability - What to Know, What to Say, and How to Be an Ally” (15:40 - 17:52) by Emily Ladau.

Always ask

- People may have their own preferences regarding identity.
- Some people may not identify as having a disability at all.
- Always ask people for their preferences.

Things to avoid

- Avoid negative phrases
- Avoid sensationalisation
- Only mention when relevant
- Avoid terms like “normal”

Any **questions or comments**?

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
- Accessible forms

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 - part 1:

- Typical *(Trichromacy)*
- Green-deficient *(Deuteranomaly)*
- Green-Blind *(Deuteranopia)*
- Red-deficient *(Protanomaly)*
- Red-Blind *(Protanopia)*

Characteristics - part 2:

- Blue-deficient *(Tritanomaly)*
- 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 - part 1:

- Limited or no literacy
- Limited or no numeracy
- Limited understanding of complex language
- Limited co-ordinational skill

Characteristics - part 2:

- Limited focus and/or memory
- Limited planning and execution
- Limited emotional control or judgement

- 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

People may experience temporary barriers

- A broken arm
- Temporary hearing loss
- Concussion
- Stroke

People may experience situational barriers

- Unable to see a screen due to sunlight
- Unable to hear audio due to a local noise
- Unable to use a mouse while holding a baby

Regardless, any of these people **could be your customers** today or tomorrow!

Any **questions or comments**?

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

A user profile example

Simone - Dyslexic

Simone is a 41-year-old office manager who lives with her husband and their 2 sons. She was diagnosed with dyslexia 2 years ago.

Simone uses *Read&Write* software which reads content aloud for her. It helps her read, spell and helps her feel more confident about her writing.

- She struggles to fill in forms.
- She relies on search engines for spelling suggestions.
- She struggles to concentrate when thing move on a page..
- She struggles with long paragraphs and complex language.

How do accessibility user profiles help?

- Focus on people rather than concepts
- Focus on individual experiences
- Less likely to forget some experiences
- Can be used to review any digital product

How would each of these user profiles **engage and interact with the following scenarios**?

- A user-journey (e.g. Getting an insurance quote)
- A process (e.g. Making a payment)
- A page (e.g. Filling in a form)
- A component (e.g. Choosing a date from a date picker)
- A social media post (e.g. A LinkedIn post)

User profiles and different roles

Designers

- When journey mapping (Highlighting how each user profile might experience the journey)
- When planning interviews, surveys, user testing, split testing and card sorting (Are all your user profiles included, and at which times?)
- Throughout the UX and UI design processes

POs, IMs, BAs

- When defining requirements?
- When sprint planning?
- As part of user stories?
- To help determine “Definition of done”?
- To help estimate effort?

Engineers and testers

Throughout the development and testing processes.

Design systems

- When designing and building new components (How would each user profile interact with the component)
- When documenting the accessibility requirements for using components
- When reviewing existing components

Content creators

- When deciding on reading levels
- When checking for complex language, acronyms

Advertising and marketing

- When planning and designing advertising campaigns and material
- When reviewing individual marketing items

Social media

- When planning and designing social media campaigns
- When reviewing individual posts

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

Accessibility roles and responsibilities

Everyone:

- Plain and inclusive language
- Alt text and the four types of images
- Good use of headings and heading structure
- Good colour contrast
- Captions and transcripts for audio and video

Content creators:

- All responsibilities from “Everyone”
- Write to reading levels
- Accessible link text
- Avoid abbreviations and acronyms
- Avoid complex language and jargon
- Good use of text alignment, caps, italics and bold

Social media creators:

- All responsibilities from “Everyone” and “Content creators”
- Avoid colour-alone for important information
- CamelCase hashtags

Designers:

- All responsibilities from “Everyone” and “Content creators”
- Avoid colour-alone for important information
- Good use of landmarks
- Visible states
- Intuitive focus order
- Good focus management

Engineers:

- All responsibilities from “Everyone” and “Content creators”
- Well-structured content
- Good use of landmarks
- Accessible keyboard navigation
- Name, role states and values for important components
- Accessible tables, forms, notifications

Questions/discussion?