

GIS Presentation

18.02.2021

Megan Davidson

Location Data Analyst

Land Information New Zealand

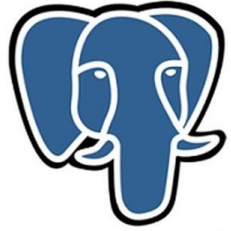
Developer in the 'topographic
data engineering' team writing
lots of code

The image features a repeating pattern of brown building outlines on a light beige background. The pattern is dense and covers the entire area. The building outlines are in various shapes and sizes, some with multiple levels, and are oriented in different directions. The title "NZ Building Outlines" is centered in the upper half of the image, set against a white rectangular background.

NZ Building Outlines

Historical Imagery





PostgreSQL



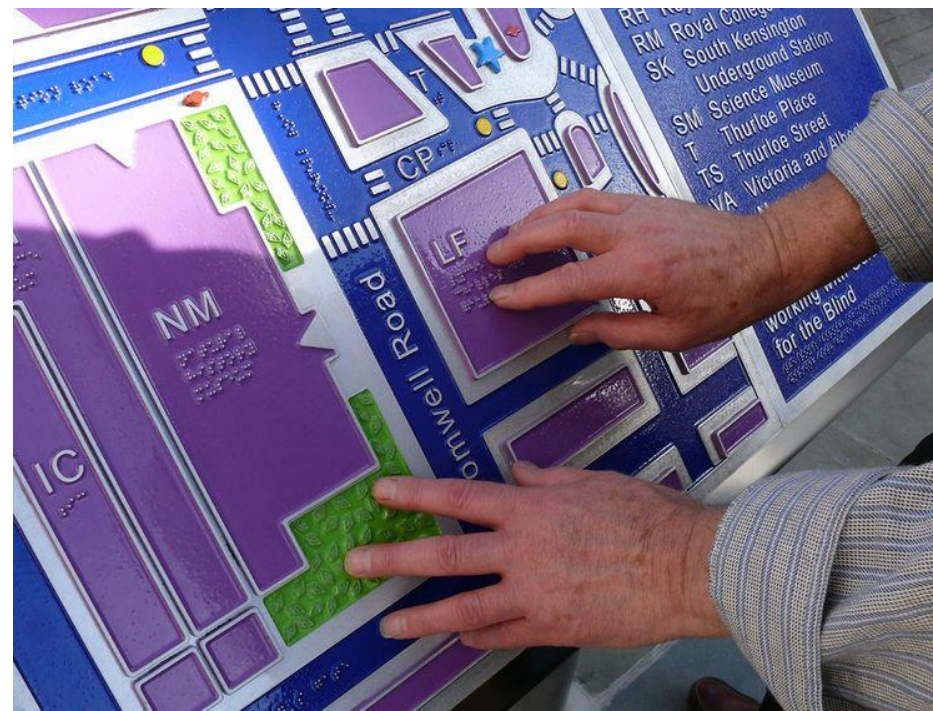
Masters Project

**"The map is
from the
perspective
of the
creator."**

**"Everyone
shares the
same
reality."**

**You are
not
your user**

What I plan to do...



Inclusive design

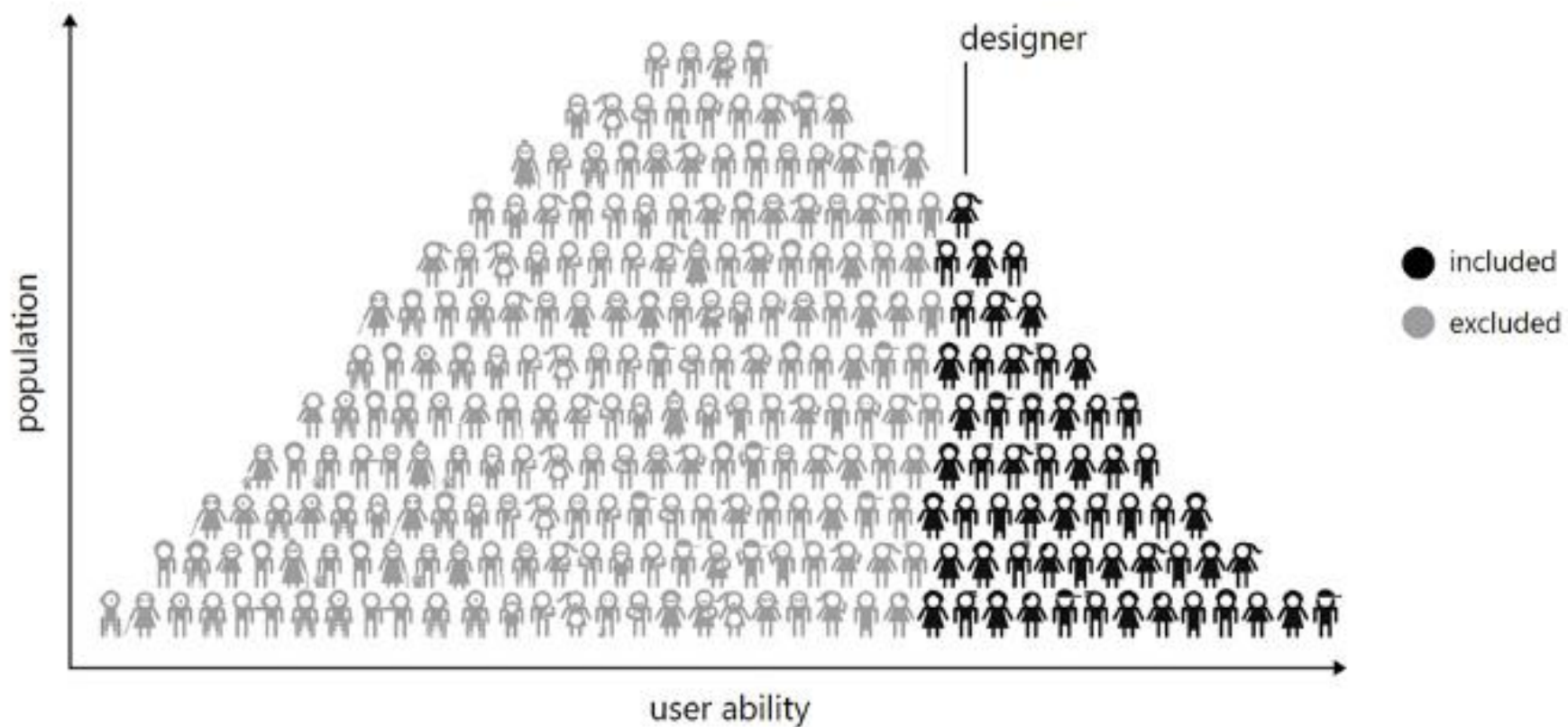
Three inclusive design principles:













- Recognize exclusion
- Learn from human diversity
- Solve for one, extend to many



"Solve for one, extend to many"

- Microsoft



	Permanent	Temporary	Situational
Touch	 One arm	 Arm injury	 New parent
See	 Blind	 Cataract	 Distracted driver
Hear	 Deaf	 Ear infection	 Bartender
Speak	 Non-verbal	 Laryngitis	 Heavy accent

“

For better or worse, the people who design the touchpoints of society determine who can participate and who's left out. Often unwittingly.

“

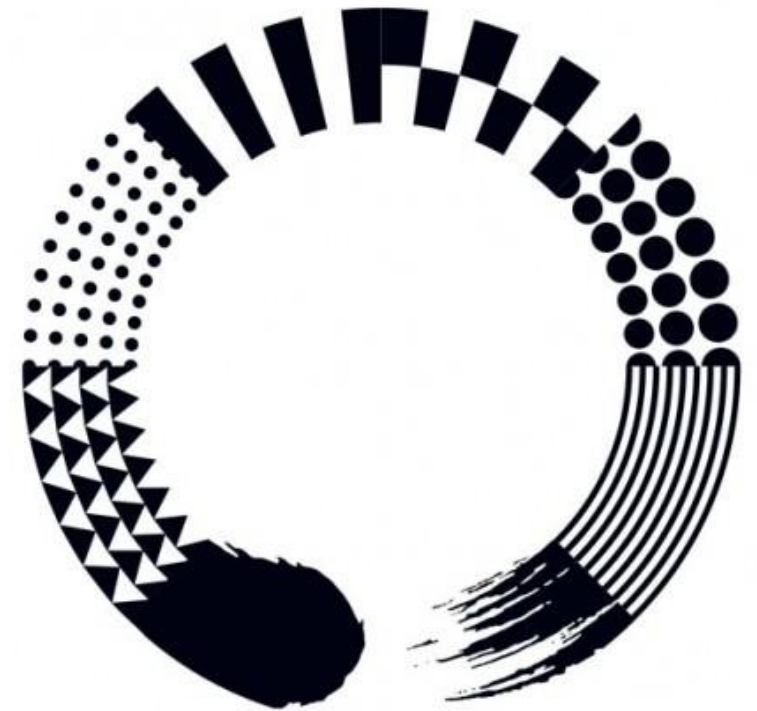
Designing for, not with people can lead to exclusion

Mismatch

How Inclusion Shapes Design

Kat Holmes

foreword by John Maeda



UK Gov Design Principles

“

If you don't know what the user needs are, you won't build the right thing. Do research, analyse data, talk to users. Don't make assumptions.

Start

**with
user
needs**

www.gov.uk/design-principles

Government Design Principles

- | | |
|--------------------------------------|---|
| 1 Start with user needs | 6 This is for everyone |
| 2 Do less | 7 Understand context |
| 3 Design with data | 8 Build digital services, not websites |
| 4 Do the hard work to make it simple | 9 Be consistent, not uniform |
| 5 Iterate. Then iterate again | 10 Make things open: it makes things better |

1

Some Tools...

Web Content Accessibility Guidelines 2.1

(WCAG 2.1)

A Set of Guidelines Created to Make web products:

- Perceivable
- Operable
- Robust
- Understandable

All non-text content needs a **text equivalent**



The Blind and Low Vision NZ #alttextforall movement

Colour usage should have **sufficient contrast**

Blue on black is bad

Yellow on black is good

Green on orange is bad

Black on orange is good

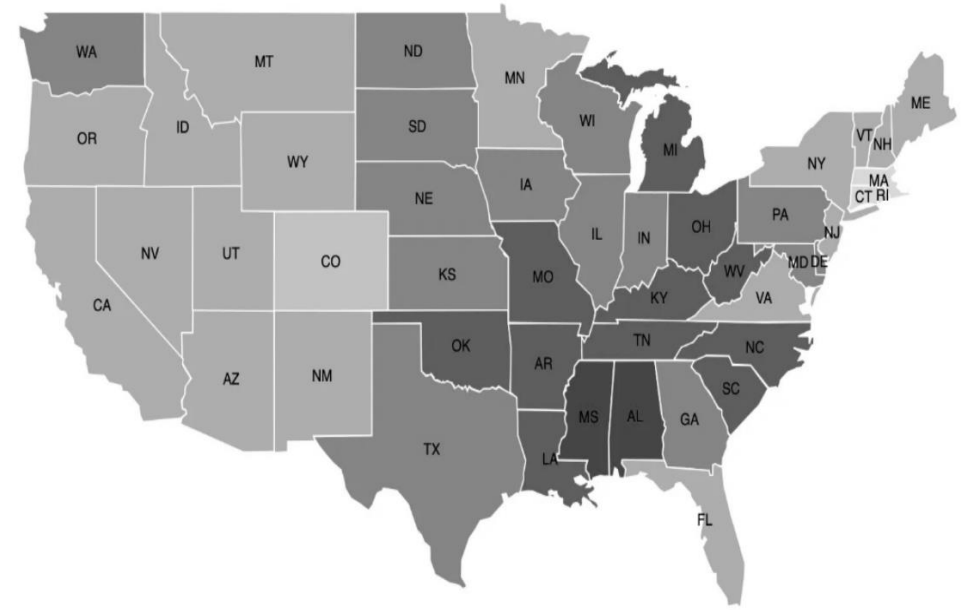
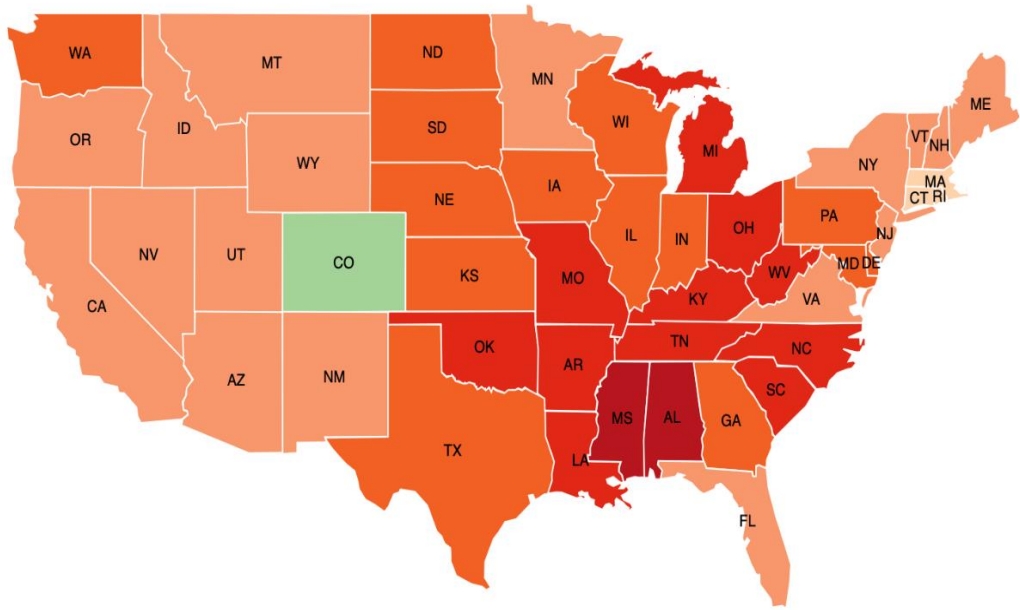
Red on green is bad

Black on green is good

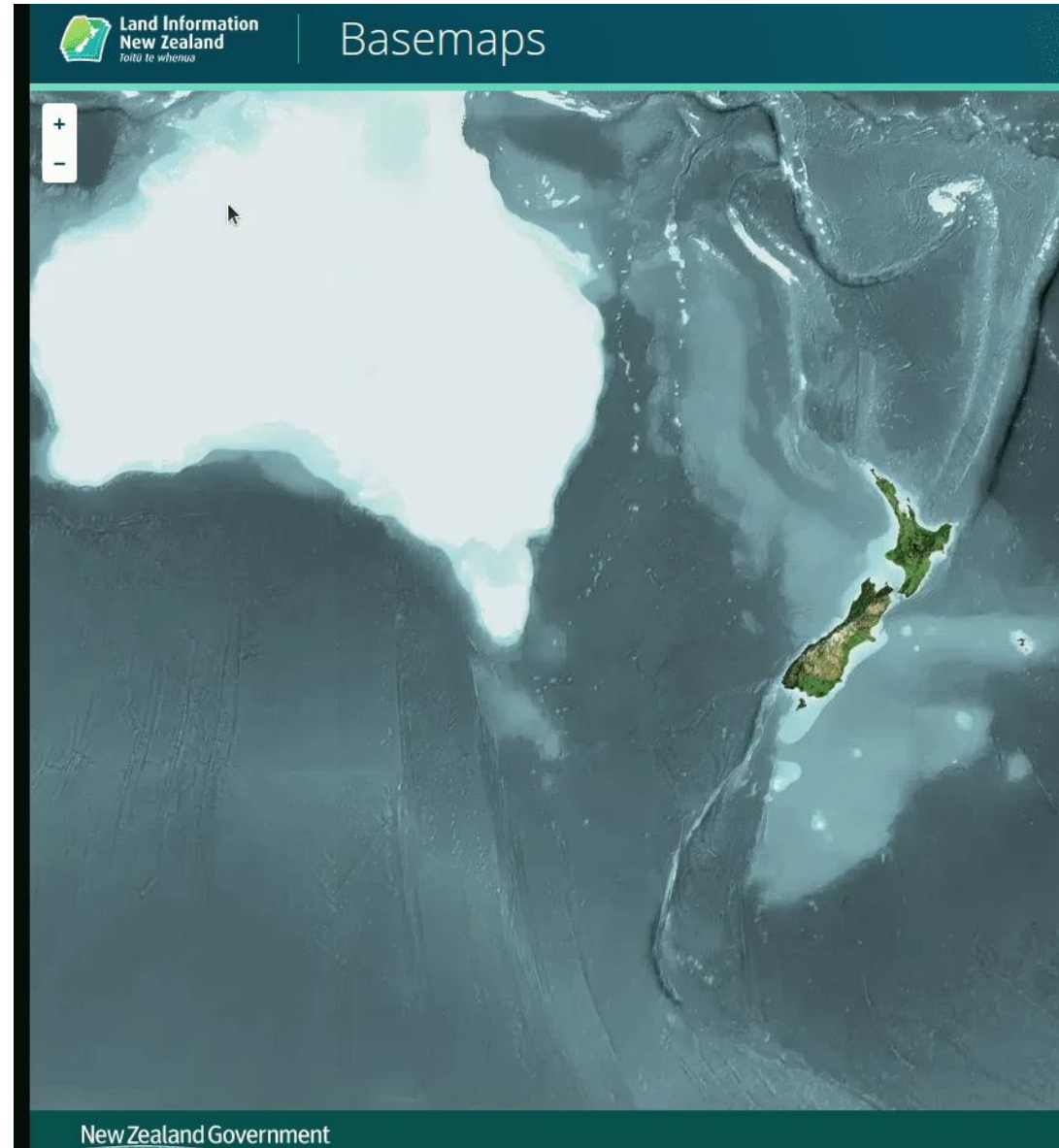
Grey on purple is bad

White on purple is good

Colour should **not be the sole method** for conveying information



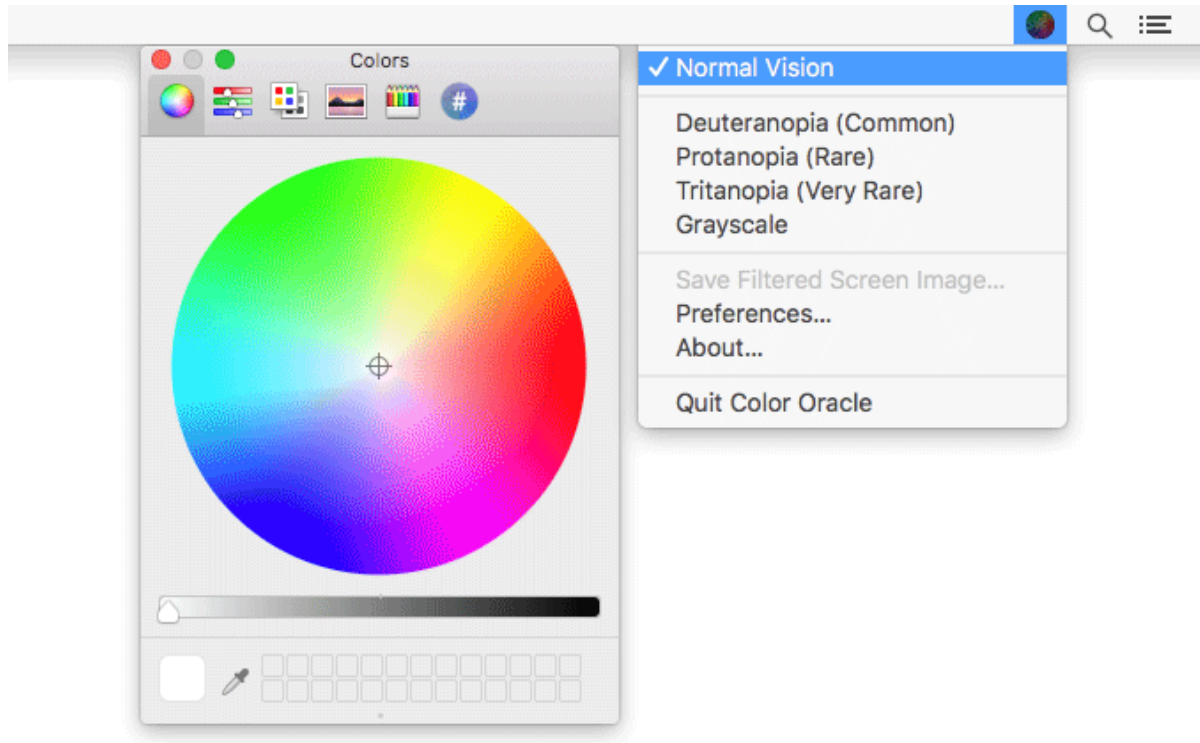
Functionality should be available using the **keyboard**



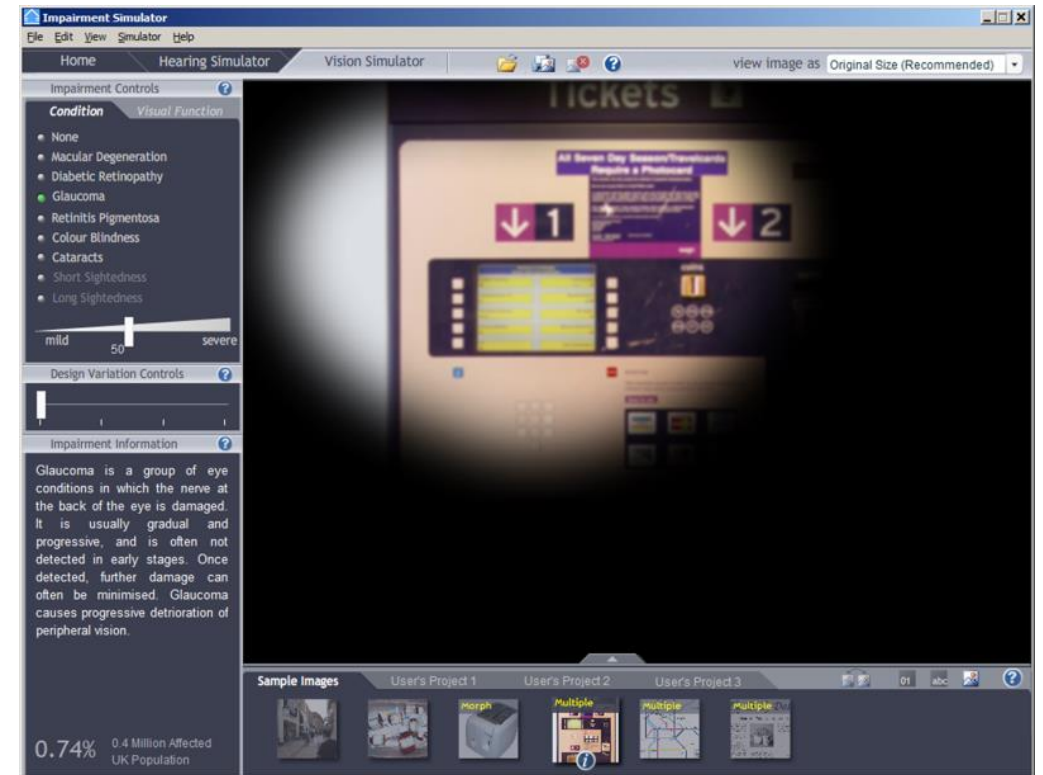
Google Lighthouse



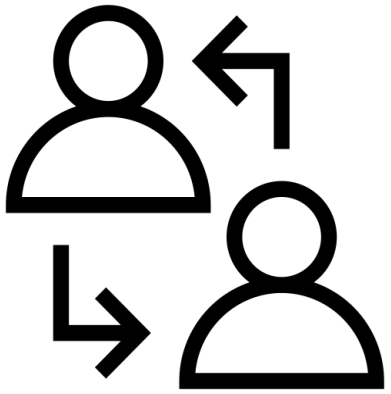
Color Oracle



Impairment simulator software



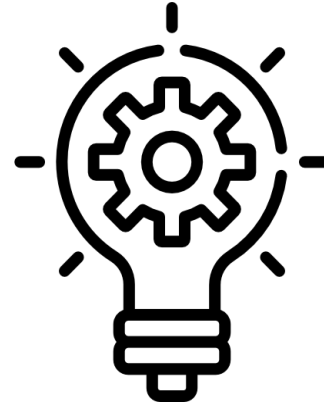
Business Justifications



Customer engagement



Grow customer base



Innovation and differentiation



Avoid the high cost of retrofitting inclusion

What are **some first steps**
to get started supporting
inclusive design and
accessibility in GIS?

1:

Learn and read about
accessibility

2:

Use Testing Tools

3:

User testing is the best
testing

4:

Share what you learn

5:
Repeat

Make Maps for all people not just those who...

- ... Navigate using vision
- ... Use the stairs
- ... Are the same as you

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Questions or Comments?