

# Inclusive Design

Thinking beyond accessibility

[drupalcampnj.org/node/57](http://drupalcampnj.org/node/57)

@DrupalCampNJ

# Mike Miles

Genuine ([wearegenuine.com](http://wearegenuine.com))

Dev(up); ([developingup.com](http://developingup.com))

All the internet places: [mikemiles86](#)



**We all have one thing in common**

**We want to make a positive impact on as many  
people as possible**

## Inclusive Design is...

Planning considerations to ensure that a product, service and/or environment is usable by everyone to the greatest extent possible.

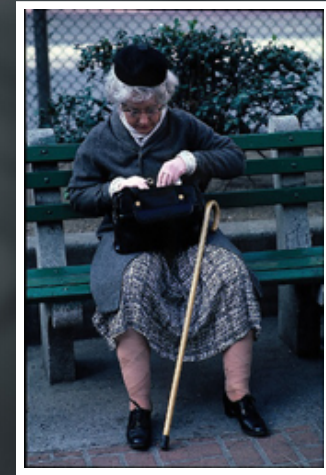
# Based on Universal Design



Ronald L. Mace



Slewyn Goldsmith



Patricia Moore

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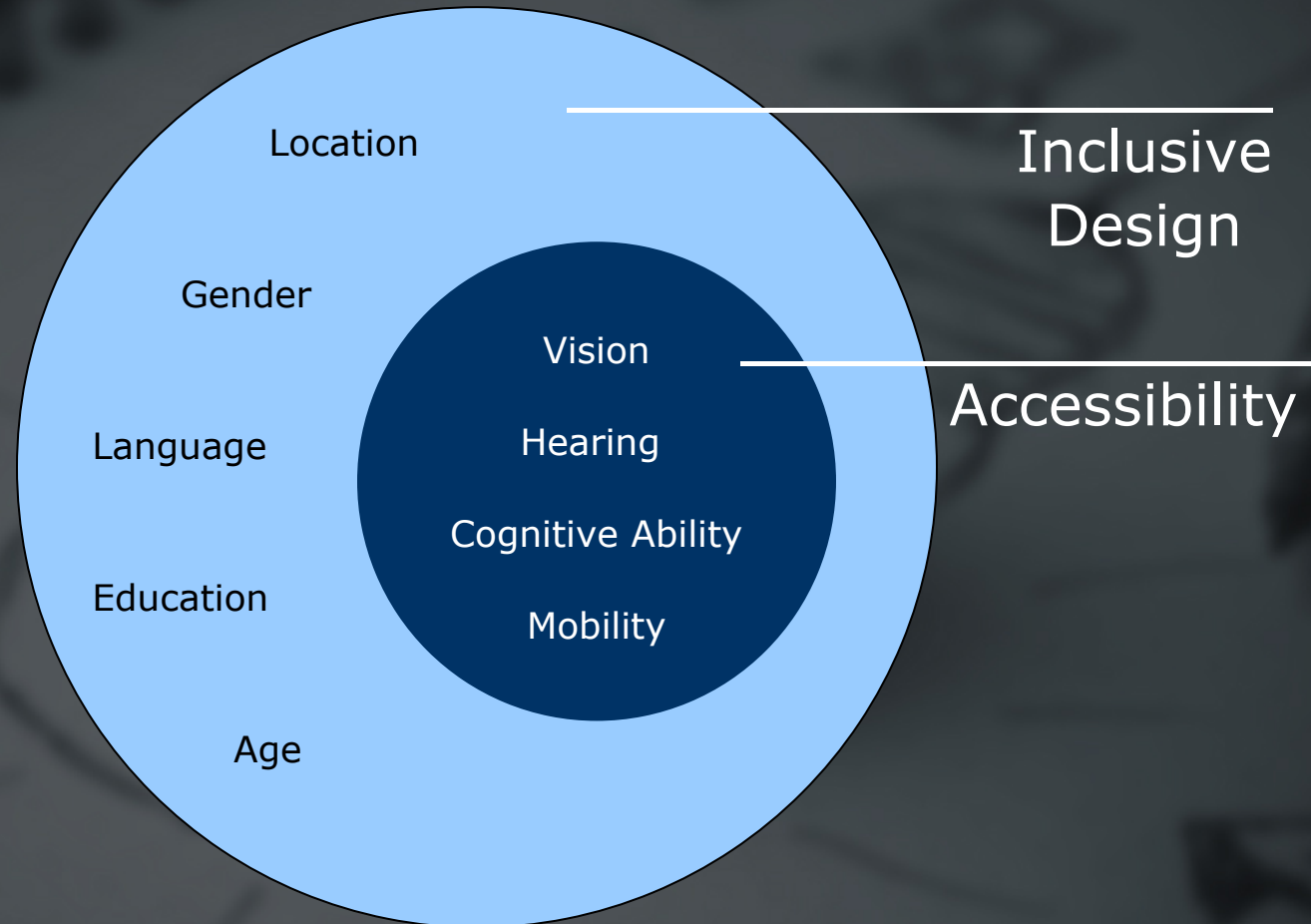
*Founded and pushed the idea of universal design in the architecture and design of public spaces.  
Lowering barriers to make those spaces as usable by as many people as possible.*



*The sloped curb is a result of barrier free/universal design. It helps those with accessibility issues, but also beyond. Parents with strollers, delivery people, even people distracted by a text on their cellphone.*

# Thinking beyond accessibility

*Inclusive Design encompasses accessibility issues, as well as, the wider range of human differences.*







# 10 Principles of Inclusive Design

1. Be Equitable
2. Be Flexible
3. Be Straightfoward
4. Be Perceptible
5. Be Informative
6. Be Preventative
7. Be Tolerant
8. Be Effortless
9. Be Accomidating
10. Be Consistent

© 05/2011 *Sandi Wassmer*

[bit.ly/IDXPrinciples](http://bit.ly/IDXPrinciples)

# Four Pillars of Inclusive Design

- I. No user is average
- II. Every user deserves equal access
- III. Provide understandable content for every user
- IV. Every user deserves our trust and respect

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An aerial photograph of a winter forest. The ground is covered in a thick layer of snow, with dark, shadowed areas suggesting a path or a stream. The trees are mostly bare, with some evergreens visible. The overall tone is cold and monochromatic, with a mix of white, grey, and dark blue/black.

**I. No user is average**



*In 1952 the Air force had a problem, their new jets were not performing well. The issue? The cockpit was designed for the "average" pilot, for someone who did not exist. It was not until they designed to accomidate the actual differences of pilots did performance improve.*

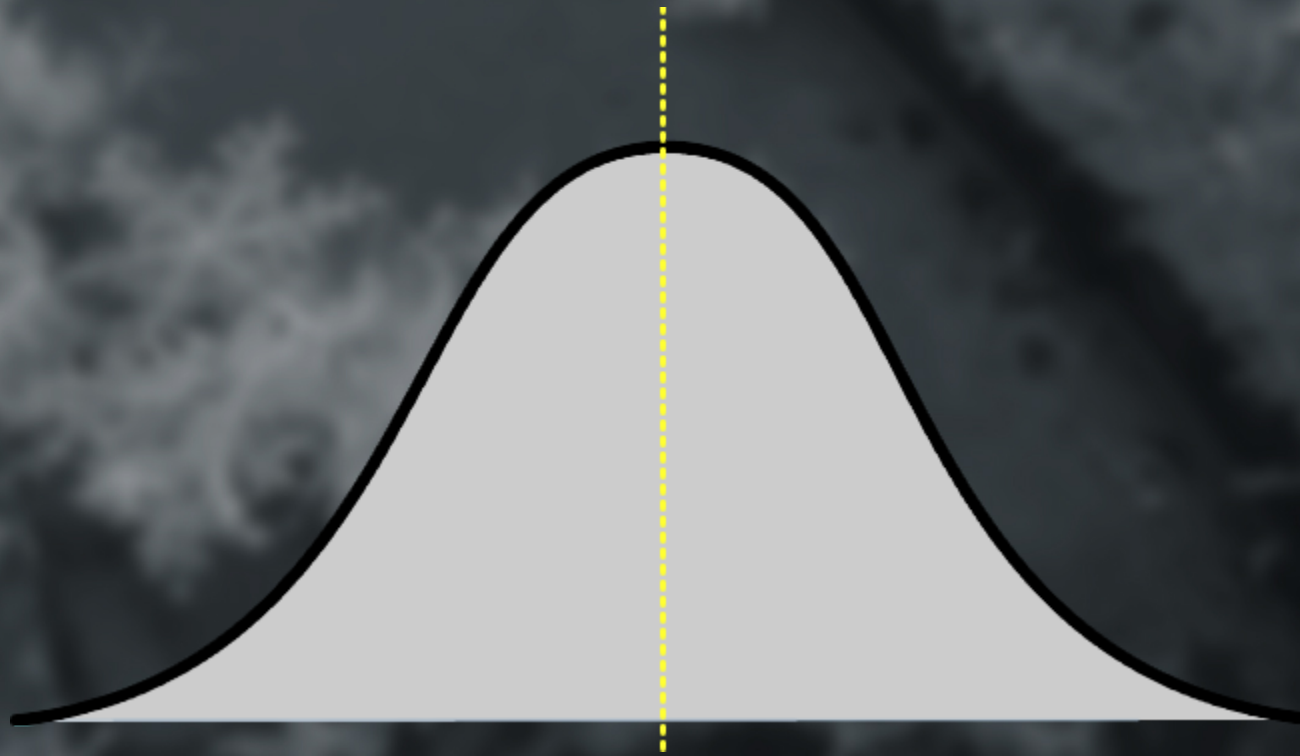
# The Myth of Average

*"If you design for the average, you are literally designing for nobody."*

- *Todd Rose*

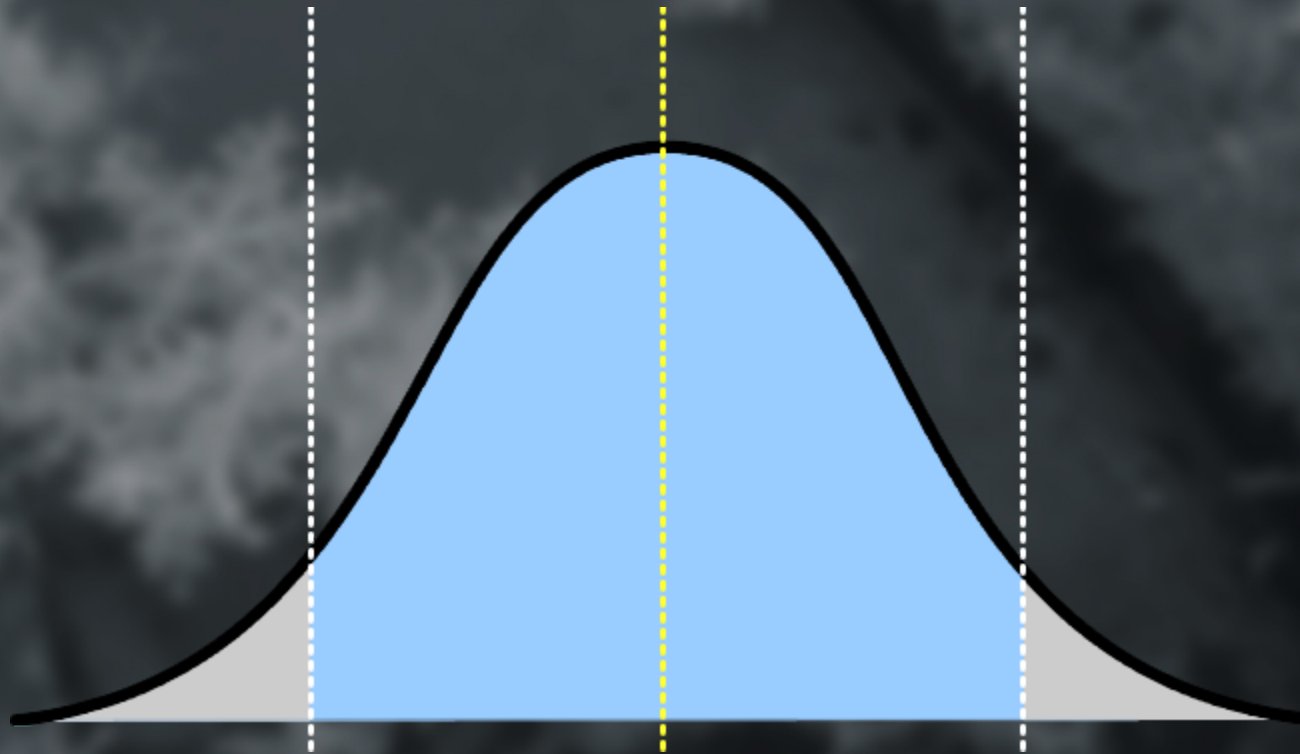
[bit.ly/IDXAvgMyth](http://bit.ly/IDXAvgMyth)

# The average user does not exist



*Building for the "average user" is the same as building for no user. Every user has a unique difference*

# Plan beyond the average user



*Planning for unique users (outliers) and their differences, means capturing everyone in between.*

# Create personas with limitations

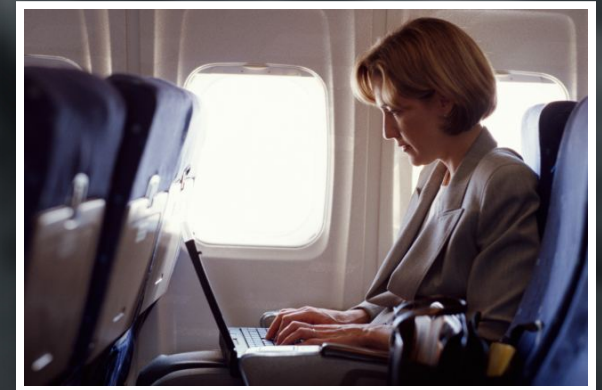


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"Has red-green colorblindness"



"Has a broken wrist due to a skiing accident"



"Does most work while traveling"





**II. Every user deserves equal access**

# 45% of internet browsing is from desktop



Data Source: [gs.statcounter.com/platform-market-share/desktop-mobile-tablet](https://gs.statcounter.com/platform-market-share/desktop-mobile-tablet)

*Only a few years ago we were asking clients if they wanted a mobile site. Now we tell them they need a responsive site. The market changed. The same thing is happening for accessibility, we need to tell clients they have to plan this way.*

## Structure in a way that makes sense

- Use semantic markup, [bit.ly/IDXSemBBC](http://bit.ly/IDXSemBBC)
- Use progressive design to deliver experience
- Prioritize what needs to be loaded

Gmail Images



Sign in

# Google



Google Search

I'm Feeling Lucky

Queen's Bohemian Rhapsody comes to VR on [Android](#) and [iOS](#)

*Google does not care about how your website looks. They care about the markup and being able to read your content in the correct order. As do people with screen readers. If you plan for them, then you plan for better SEO*

# Average global internet speed: 6.3Mbps



Republic of Mali

0.5 Mbps



South Korea


26.3 Mbps

Data Source: [www.fastmetrics.com/internet-connection-speed-by-country.php#top-10-comparison](http://www.fastmetrics.com/internet-connection-speed-by-country.php#top-10-comparison)

*If you just build for South Korea, people in Mali are going to have a poor experience. However, if you plan and build for people in Mali then everyone is going to have a positive experience.*

## Artificially limit yourself

- Use tools to throttle connection
- Disable JavaScript
- Can you navigate without a mouse?



**III. Provide understandable content to every user**



## SUNDAY, SEPTEMBER 25



### STREET CLEANING

No day-time street cleaning on Sundays. Overnight street cleaning is on a normal schedule.



### BUILDING CLOSURES

Some community centers are open and only the Central Library is open 1 p.m. - 5 p.m. All other municipal buildings are closed.



### TRASH AND RECYCLING

There is no residential trash and recycling pickup on Sundays.



### PARKING METERS

Parking meters are free with no time limit on Sundays.



### TOW LOTS

The tow lot is closed today. Automated kiosks are available 24 hours a day, seven days a week for vehicle releases.

## COMMON TRANSACTIONS



Pay a parking ticket

**BOS  
:311**

Report an issue on 311



Get a resident parking



Vote early in the

*The boston.gov website was redesigned and the content was reorganized with real users in mind.*



*"The website should act like a helpful human. This is one of the big differences between the old site and the new site... on the old site, it would feel like you were interacting with some sort of lawyer-robot that was speaking to you in government-speak"*

*Jascha Franklin-Hodge, the city's chief of information technology*

Source: [The Boston Globe](#)

## Be clear and direct

- Use simple phrasing and avoid jargon
- Pay attention to font, spacing, line length
- Be meaningful, tools to check readability

The screenshot shows the Hemingway Editor web application. At the top, there is a browser address bar with the URL [www.hemingwayapp.com](http://www.hemingwayapp.com). Below the address bar is a toolbar with icons for Bold (B), Italic (I), Bulleted List, Numbered List, Undo, Redo, Link, Paragraph (P), H1, H2, and H3. The main content area contains a paragraph of text with various highlights: yellow for long/complex sentences, red for dense/complicated sentences, purple for words with hints, blue for adverbs, green for passive voice, and light blue for simpler alternatives. On the right side, the Hemingway Editor logo is visible, along with buttons for Write, Edit, and Help. Below the logo, the Readability score is shown as a bar chart with 10 bars, 6 of which are filled, indicating a Grade 6 (Good) score. The word count is 130, with a 'More' dropdown menu. Below the readability score, there are five colored boxes providing feedback: 1 of 11 sentences is hard to read (yellow), 1 of 11 sentences is very hard to read (red), 1 phrase has a simpler alternative (purple), 1 adverb. Remove it. (light blue), and 1 use of passive voice. Aim for 2 or fewer (green).

**Hemingway App makes your writing bold and clear.**

The app highlights long, complex sentences and common errors; if you see a yellow sentence, shorten or split it. If you see a red highlight, your sentence is so dense and complicated that your readers will get lost trying to follow its meandering, splitting logic — try editing this sentence to remove the red.

You can utilize a shorter word in place of a purple one. Mouse over it for hints.

Adverbs are helpfully shown in blue. Get rid of them and pick verbs with force instead.

Phrases in green have been marked to show passive voice.

You can format your text with the toolbar.

Paste in something you're working on and edit away. Or, click the Write button to compose something new.

**Hemingway Editor**

Write Edit Help

Readability

Grade 6 (Good)

Words: 130 More

1 of 11 sentences is hard to read.

1 of 11 sentences is very hard to read.

1 phrase has a simpler alternative.

1 adverb. Remove it.

1 use of passive voice. Aim for 2 or fewer.

Tools like [hemingwayapp.com](http://hemingwayapp.com) can help you write clear, direct and meaningful content. A readability score of "Grade 6" means the content is engaging enough for advanced users, but clear and inviting enough for new users.

## Inform and guide

- Display useful error messaging
- Plan a user's journey
- Provide contextual relations



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## COMMON TRANSACTIONS



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BOS : 311

Report an issue on 311




Get a resident parking



Vote early in the

The boston.gov website feature contextually linked sections such as street cleaning and tow lots.



**IV. Provide every user with trust and respect**

# Inclusive Design: Excluding no gender

*"The easiest way to do inclusive design? Stop asking about gender!"*

*- Sarah Leren*

[bit.ly/IDXGender](https://bit.ly/IDXGender)

Personal information

Drupal

Work

First or given name

Michael

Last name or surname

Miles

Country

United States

Save my location

Your location will be saved and may be shared.

Languages spoken

- None -  
Abkhazian  
Afar  
Afrikaans

Select one or more languages you speak.

Gender

- Prefer not to share
- male
- female
- transgender
- other

Bio

I am passionate about development and working with the latest open source technology experience in an agency setting. I have been working with Drupal for the past 7 years community and project. I contribute to code sprints, IRC support and give sessions at

Acquia MVP 2014. Acquia Grand Master.

*Drupal.org give users multiple options on how to identify their gender, or not select an option at all.*



## Collect only the information you need

- Ask "Why do we need this data?"
- Ask "What options can we give users?"
- Ask "Why should users give this to us?"



Log in

# He used Pinterest to redo his floors

Welcome to Pinterest, the world's catalog of ideas

mikemiles86@gmail.com

Username

Age

Male  Female ⓘ

## Tell us a little about you

Knowing your gender helps us show you better search results and recommendations. Choose male or female, or customize your gender:

Custom Gender

Save

Continue as a business

*Pinterest not only gives users options, but also explains to the user why they collect gender information.*

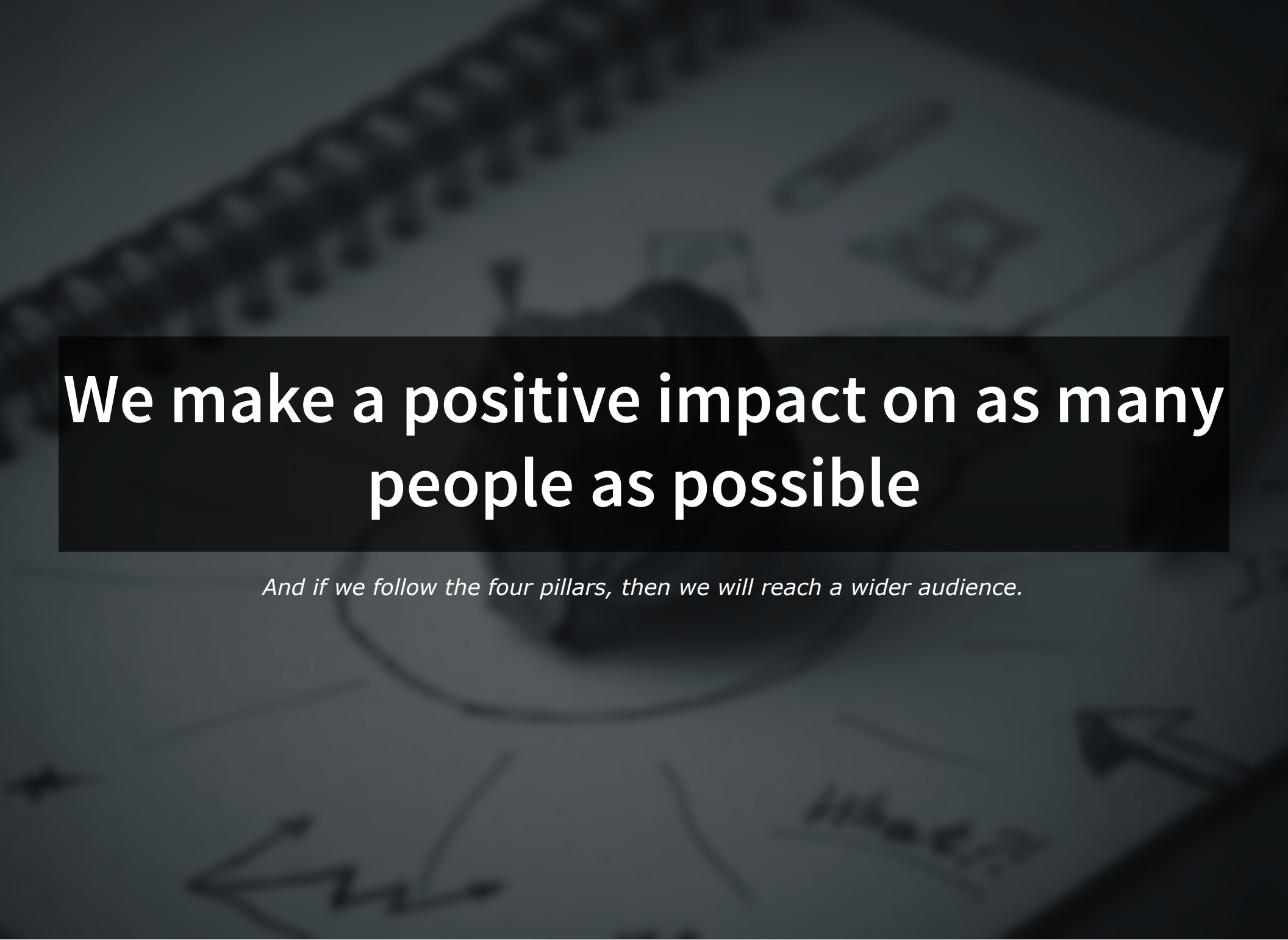
## Be responsible with data

- Explain how the data is used
- Explain how the data is protected
- Give users control of their data

# Four Pillars of Inclusive Design

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*If we agree to these four pillars when building our applications, then we have to think differently.*



**We make a positive impact on as many  
people as possible**

*And if we follow the four pillars, then we will reach a wider audience.*

# Resources

[bit.ly/NJCampIDX](http://bit.ly/NJCampIDX)

*This presentation*

[bit.ly/NJCampIDXSlides](http://bit.ly/NJCampIDXSlides)

*Presentation Slides*

[bit.ly/IDXPrinciples](http://bit.ly/IDXPrinciples)

*10 Principles of Inclusive Design*

[bit.ly/IDXAvgMyth](http://bit.ly/IDXAvgMyth)

*The Myth of Average*

[bit.ly/IDXSemBBC](http://bit.ly/IDXSemBBC)

*BBC Semantic guidelines*

[bit.ly/IDXGender](http://bit.ly/IDXGender)

*Inclusive Design: Excluding No Gender*

# Thank You!

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@DrupalCampNJ



#InventTogether

Inclusive Design / Michael Miles