



A is for Agile, A is for Accessibility

Sustaining accessible software development

A light blue icon consisting of a semi-circle with a smaller semi-circle inside it, resembling a stylized "C" or a partial circle.

WCAG

A light blue circle containing the text "ARIA" in white, uppercase letters.

ARIA

A light blue circle containing the text "ADA" in white, uppercase letters.

ADA

A light blue circle containing the text "508" in white, uppercase letters.

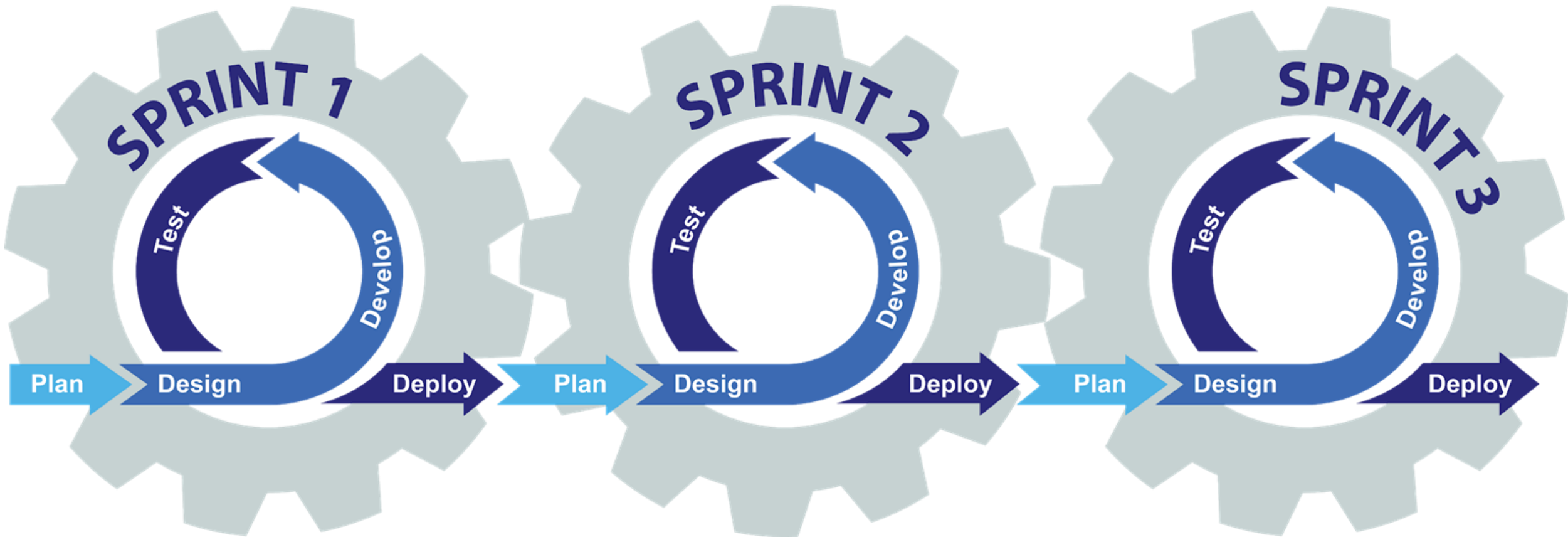
508

A light blue circle containing the text "AUDIT" in white, uppercase letters.

AUDIT



AGILE TRANSFORMATION



the ability to customise
the space for the need
of Scrum Team

supporting verbal
communication

cellular office
arrangements

neighbourhood window
or artificial window

support collective mind

SOCIAL

support informal
information exchange

CHILL OUT

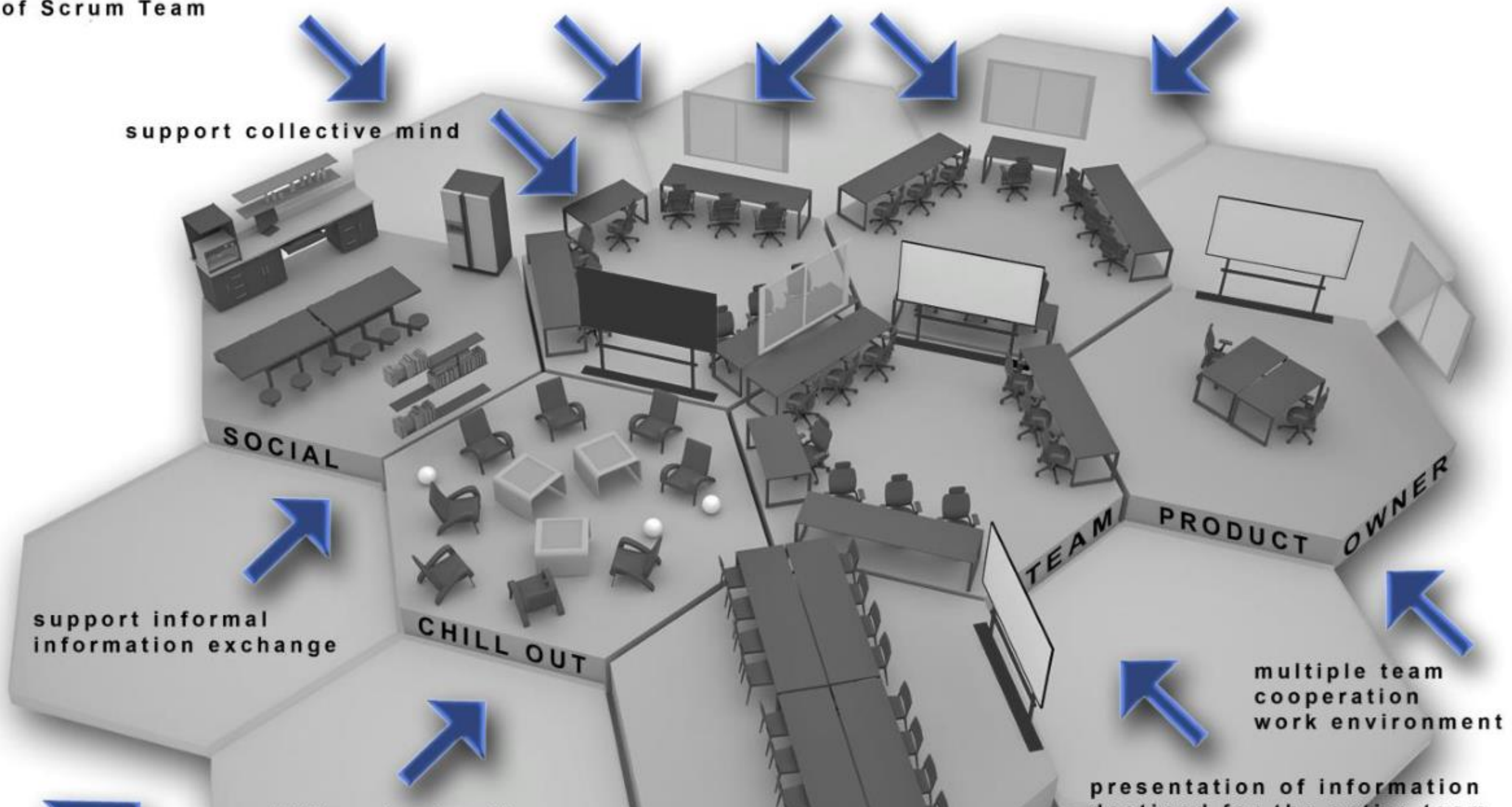
TEAM

PRODUCT

OWNER

multiple team
cooperation
work environment

presentation of information



Sustainable
Development



AGILE

Work
together daily

WELCOME CHANGING
REQUIREMENTS

WEL







WHO WANTS CHANGE?



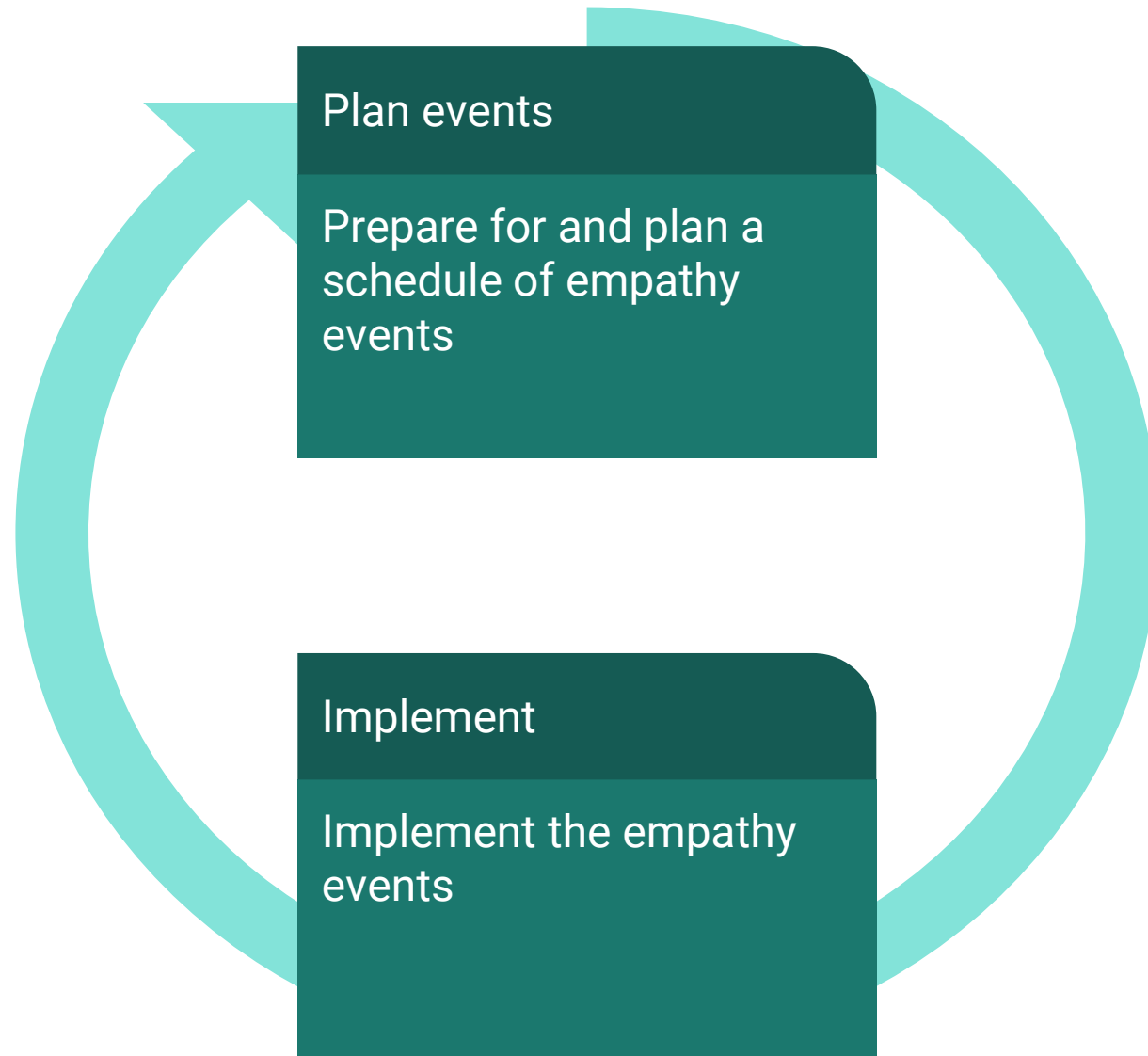
WHO WANTS TO CHANGE?













Accessibility Coaches

1. Work with the team on achievable improvement milestones
 - a. milestone 1: all new UI code will be axe clean before merge
 - b. milestone 2: all new UI code will also have automated tests for keyboard
 - c. ...
2. Help team create a dashboard to measure progress
3. Perform spot checks on new work
4. Attend sprint retrospectives
5. Identify and execute on skills improvement opportunities

Transformation Practices

1. Create a central team to manage the transformation.
2. Execute an empathy program to drive motivation.
3. Make high-quality learning resources available and integrate these into onboarding.
4. Form a team of accessibility coaches to coach agile teams.
5. Create an accessibility dashboard to measure progress.



Age
33

Occupation
Event organizer

Family
Long-term relationship
(no kids)

Location
Chicago, IL

Meet Lucy (as an inclusive persona)

Goals

- Figure out what her ideal steps-per-day goal should be
- Find more ways to be motivated to be healthy, using the tracker
- ① Find a tracker that has really good audio and haptic feedback

Frustrations

- Sometimes too busy to remember to charge it and loses steps
- The wristbands come loose over time and don't feel as nice
- ① When she wants to see her tracker data, she HAS to use the app

"I want to still be able to access my tracker data when I don't have my phone on me."

Particularity

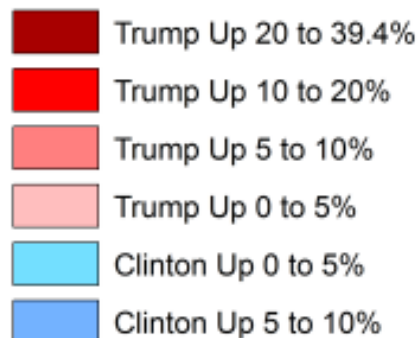
Lucy was born blind and relies on screen readers and haptic and audio feedback.



New
Congressional
Lines

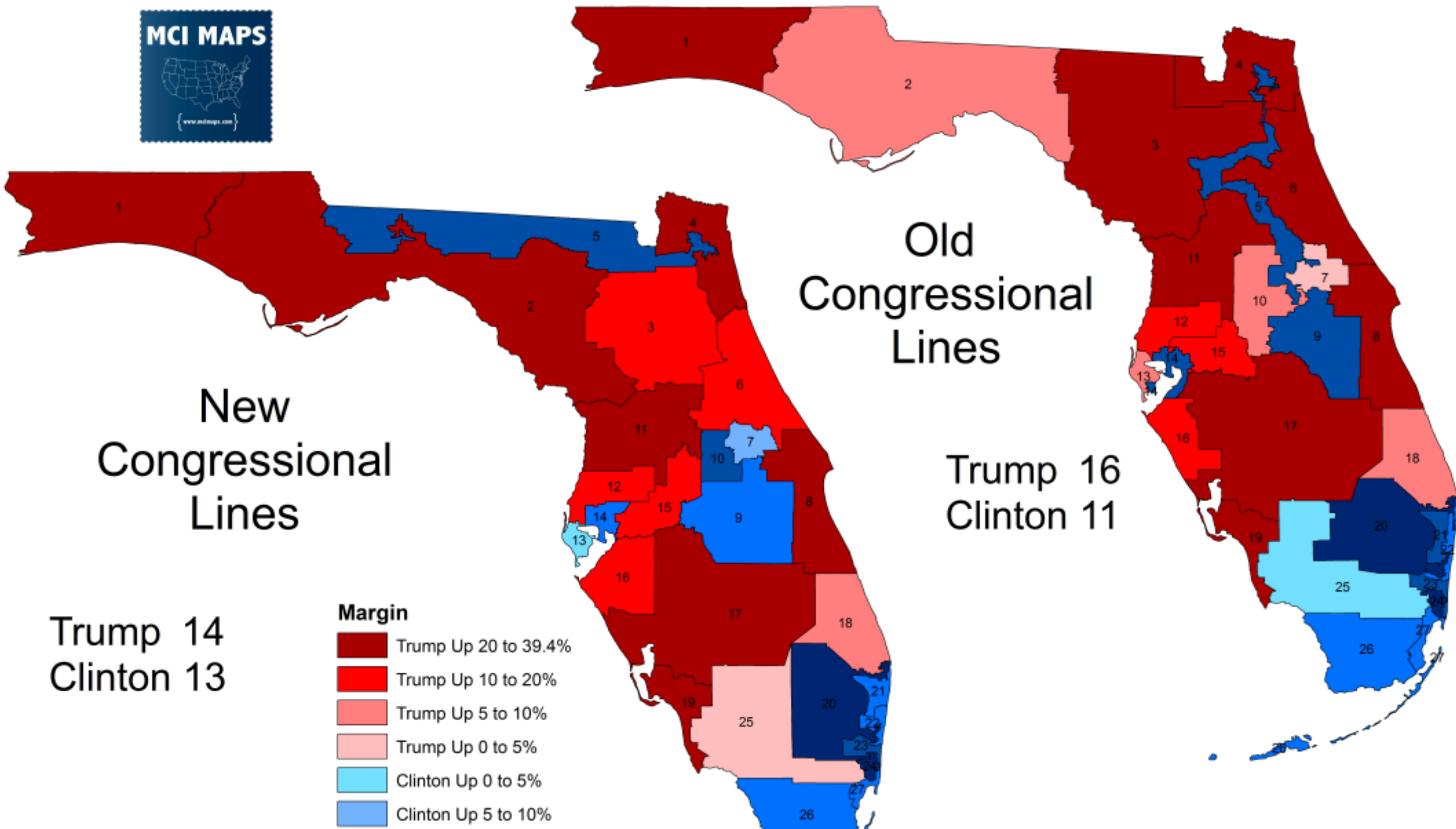
Trump 14
Clinton 13

Margin



Old
Congressional
Lines

Trump 16
Clinton 11

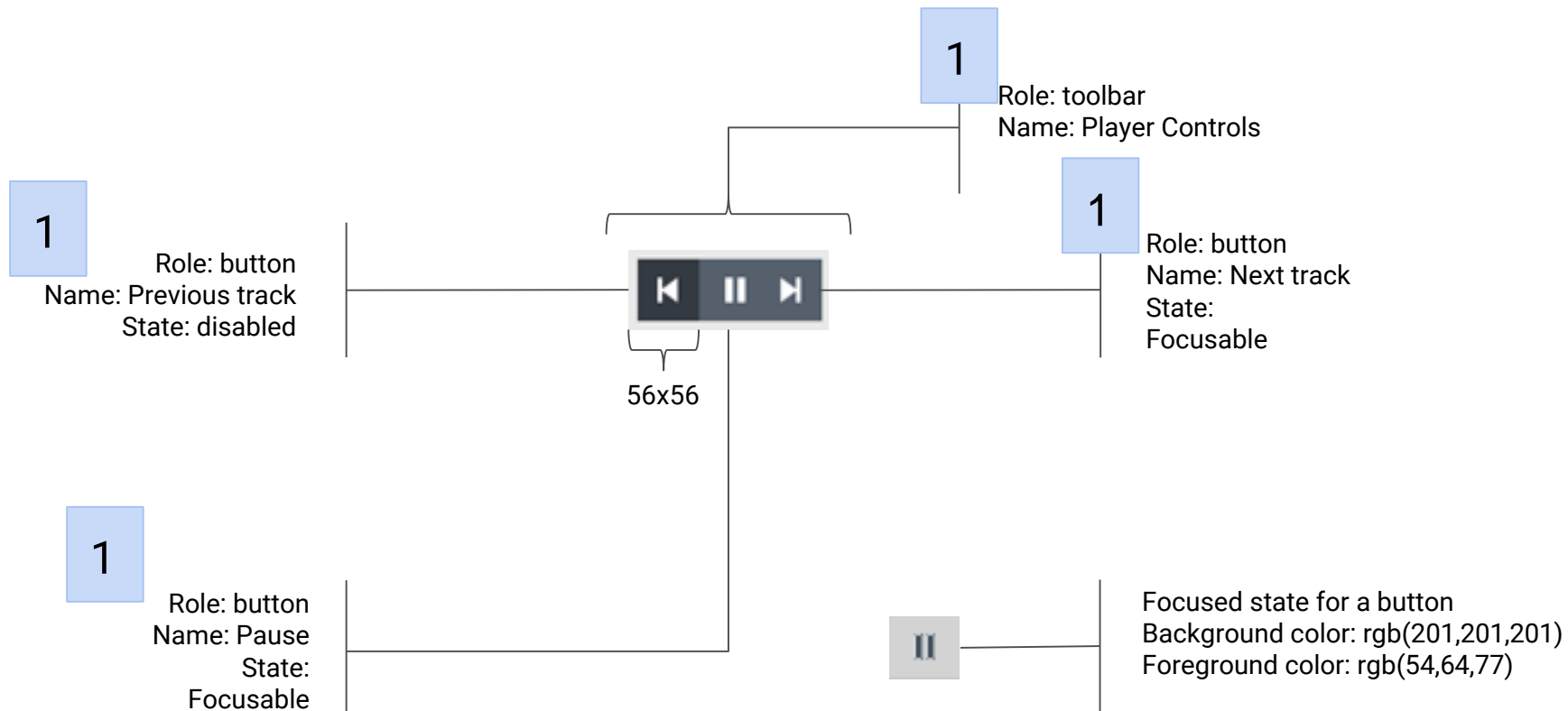


Design Communication



Design Communication

1: widget annotations



Interaction for role=button

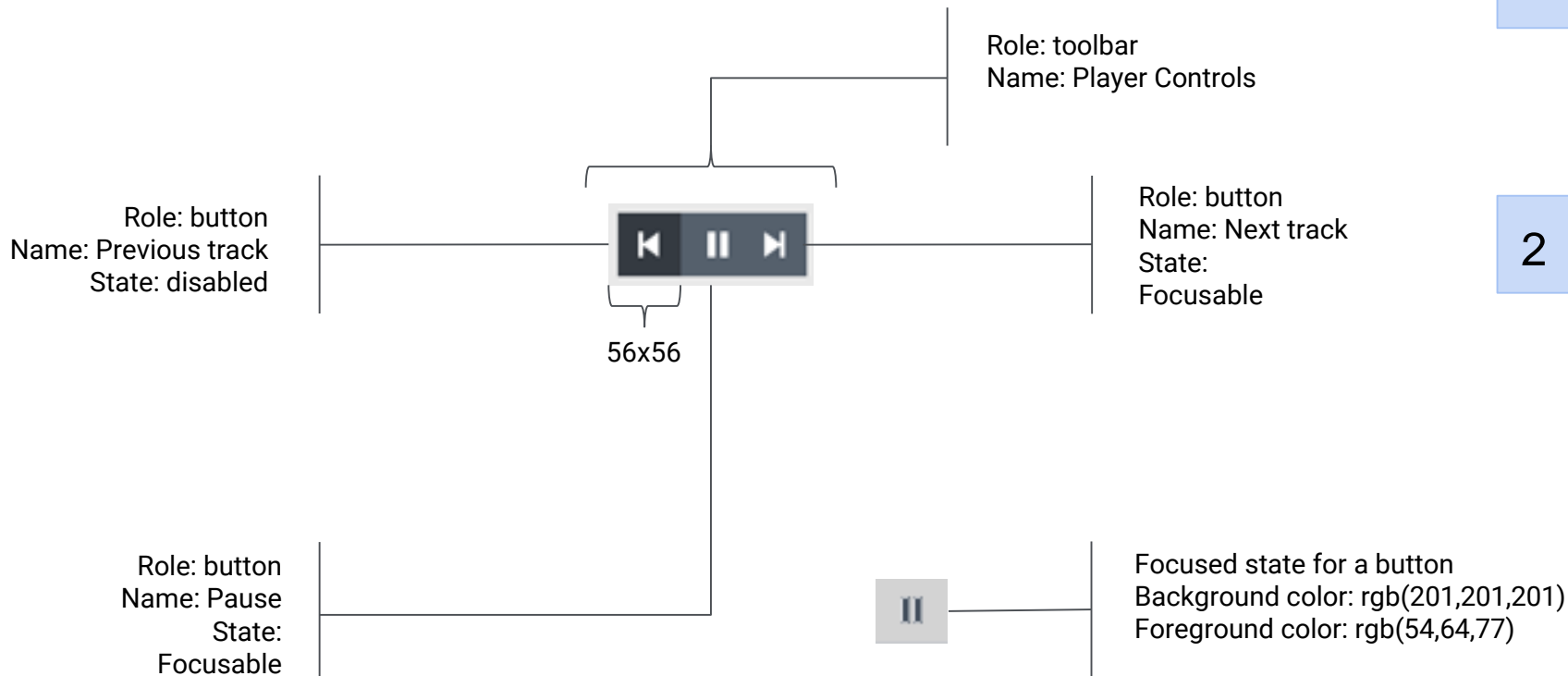
Keyboard: SPACE or ENTER equals click
Disabled buttons cannot receive focus
Disabled buttons do not respond to a click/touch

Interaction for the entire component

When on first track: disable "previous track" button
When on last track: disable "next track" button
When playing, display the "pause" button and hide the "play" button
When not playing: display the "play" button and hide the "pause" button
After clicking "play", place focus on the "pause" button
After clicking "pause" place focus on the "play" button

Design Communication

2: interaction annotations



2

Interaction for role=button

Keyboard: SPACE or ENTER equals click
Disabled buttons cannot receive focus
Disabled buttons do not respond to a click/touch

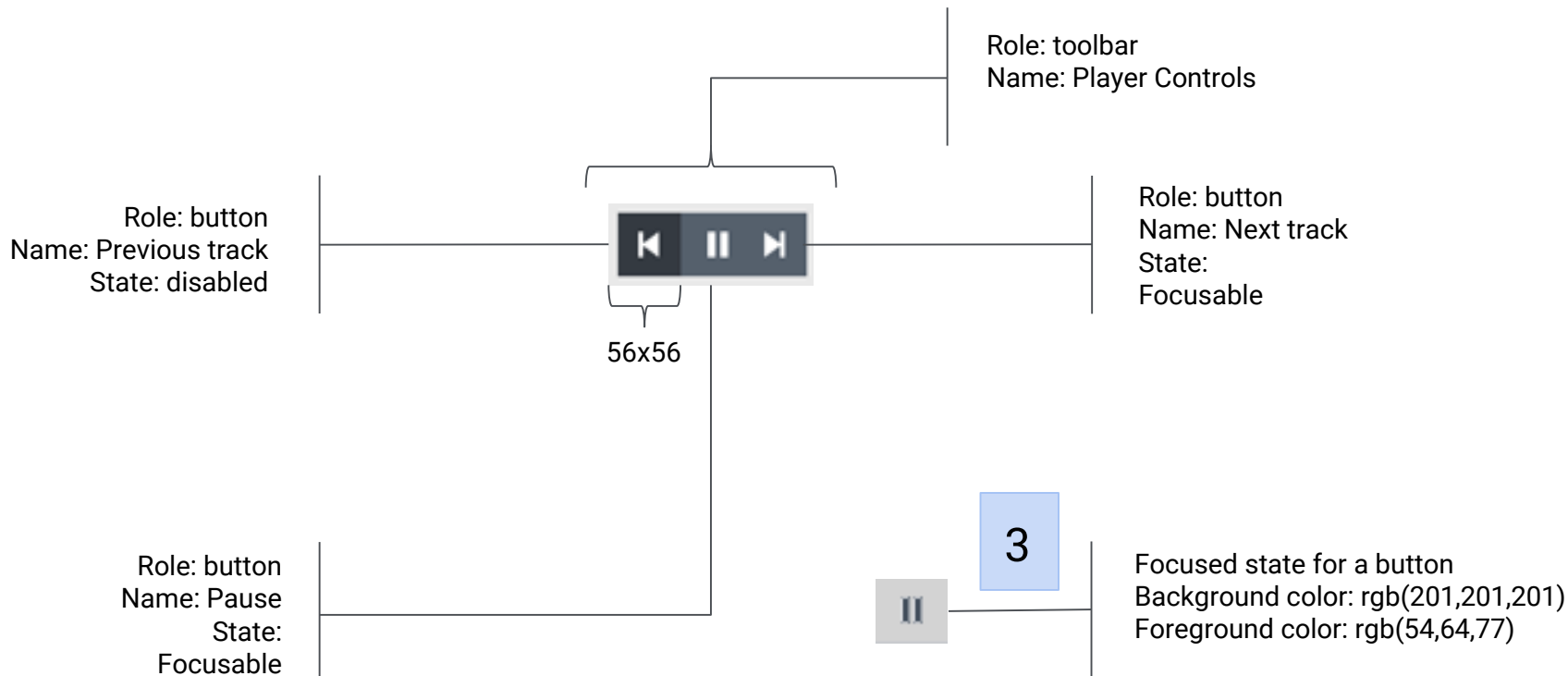
2

Interaction for the entire component

When on first track: disable "previous track" button
When on last track: disable "next track" button
When playing, display the "pause" button and hide the "play" button
When not playing: display the "play" button and hide the "pause" button
After clicking "play", place focus on the "pause" button
After clicking "pause" place focus on the "play" button

Design Communication

3: alternative state annotations



Interaction for role=button

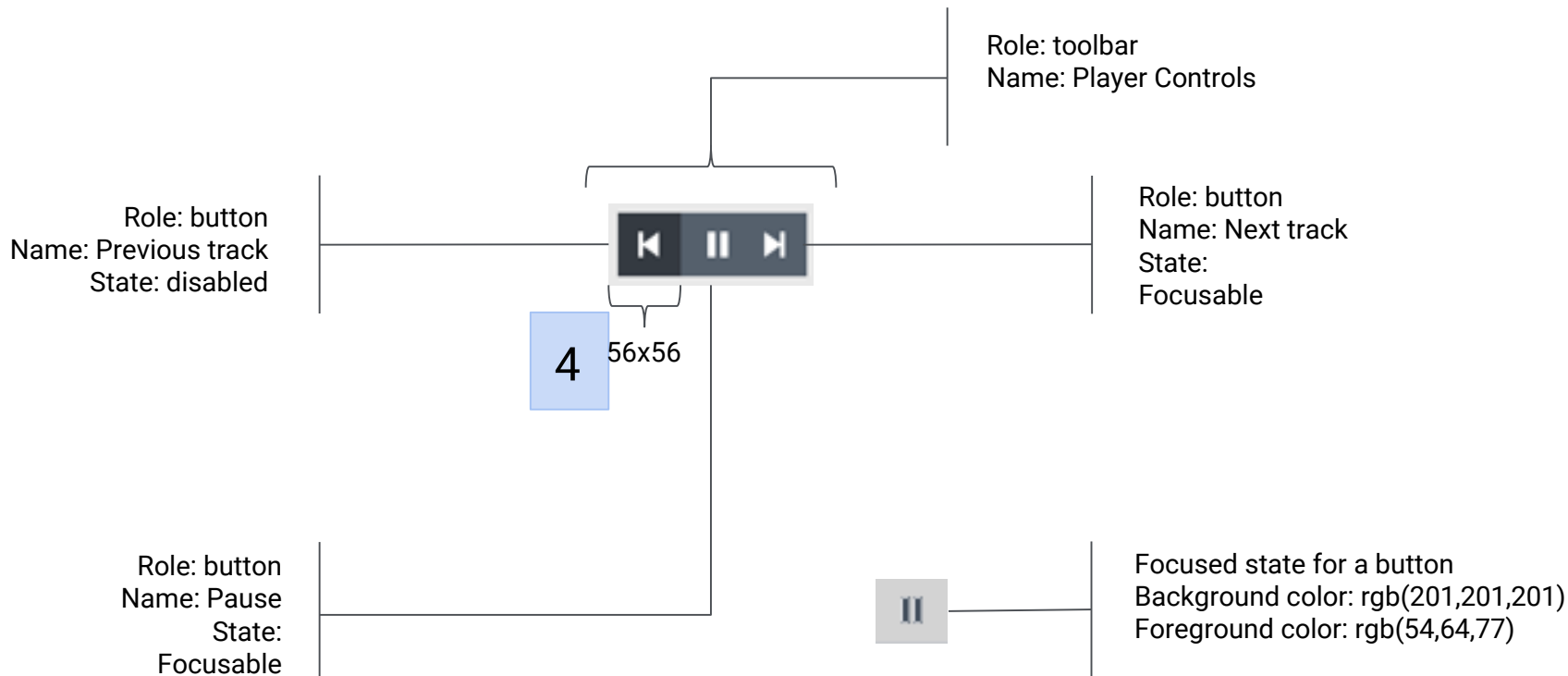
Keyboard: SPACE or ENTER equals click
Disabled buttons cannot receive focus
Disabled buttons do not respond to a click/touch

Interaction for the entire component

When on first track: disable "previous track" button
When on last track: disable "next track" button
When playing, display the "pause" button and hide the "play" button
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After clicking "play", place focus on the "pause" button
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Design Communication

4: minimum control size annotations



Interaction for role=button

Keyboard: SPACE or ENTER equals click
Disabled buttons cannot receive focus
Disabled buttons do not respond to a click/touch

Interaction for the entire component

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When on last track: disable "next track" button
When playing, display the "pause" button and hide the "play" button
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After clicking "play", place focus on the "pause" button
After clicking "pause" place focus on the "play" button







Other Myths

- Accessibility testing cannot be automated
- Accessibility testing is usability testing



Generic accessibility automation



powered by Deque

No code merges until #axeClean!



```
// Test wraparound on menu bar
jQuery(document.activeElement).simulate("keydown", {keyCode: 37}); // LEFT
equal(jQuery(document.activeElement).attr("id"), "test2-15", "wrap around at beginning goes to the end");
jQuery(document.activeElement).simulate("keydown", {keyCode: 39}); // RIGHT
equal(jQuery(document.activeElement).attr("id"), "test2-0", "wrap around at the end goes to the beginning");
```

```
...  
// Check the Deque Logo  
ok(img.src.indexOf('logo.png' !== -1, 'image is the Deque logo image'));  
equal(img.getAttribute('alt'), 'Deque Logo');  
...
```

Or using axe-core

```
...  
equal(  
    axe.commons.text.accessibleText(document.querySelector('svg')),  
    'Deque Logo'  
);  
...
```

Team Practices

- Include Users with Disabilities in Research
- Communicate Design Intent
- Leverage a pattern library
- Leverage automated testing library
- Automate accessibility testing
- Measure progress
- Accessibility in retrospectives

Learn More

Supporting the Design Phase with Accessibility Heuristic Evaluations

Denis Boudreau and Arpana Pasi

Today at 3:20pm in this room

Learn More

Annotating Design Comps to Address Accessibility

John Foliot

Friday at 10:00am in this room

Learn More

Building and Testing a Reusable Accessible Widget

Harris Schneidermann

Thursday at 9:00am in this room

Learn More

Accessibility as a Lifestyle Change - A Program Office Approach

Greg Williams, Ben Allen and surprise guest

Thursday at 1:20pm in this room

An abstract graphic in the top left corner of the slide. It features three white circles of equal size. Two circles are connected by a horizontal line segment. A third circle is positioned further to the right, connected to the second circle by a diagonal line segment. Several long, thin, white curved lines sweep across the upper portion of the slide, creating a sense of motion or flow.

Questions