

Building Accessible Design Systems

Try, Try, Try again

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Accessibility Designers!?



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40+ of us and growing

Our Design Accessibility team is embedded into the greater CVS Health design organization. We work within the UX, UI, Content Strategy and UX Research teams.

We collaborate closely with our partner program, Accessibility Engineering, that is embedded within the development teams across CVS Health.

So accessibility is built in on both sides of house

We may be a large team, and a huge organization – however everything we say today is still relevant to a team of one.

Today's Topics

Define component scope before
moving forward

Platform parity doesn't exist!

Integrate clear processes for
accessibility and don't be afraid to
share them proudly across the org 🍕

Accessibility One-Pagers: Defining
requirements to design for real people

What's in a component name?



What's in a name?

Scope creeeeppp begins

- We know designers need an "element" to hold grouped content, actions, related images, etc.

Hmmm.... ok... 

- Should this solution encompass all three platforms?
- What is the user experience we want to create?
- What is the design need?
- Is there a common structure within the organization already?
- What can we find through competitive analysis?
- Do these elements ever carry semantic meaning?



Hold on a minute

Some of these questions can be thrown out since it seems like we can identify a pattern within CVS. **HOORAY!**

- Now that we can tell that while there have been requests for different components like cards, tiles, containers, etc., these aren't in use right now
- So with this pattern in play, we can start to build our accessibility guidance
 - Includes human impact, recommended experience, WCAG criteria and other considerations as needed



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Collaboration is key

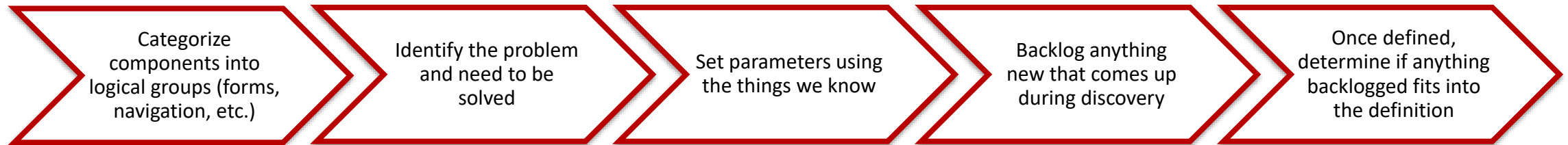
- We defined what this element isn't which helped us narrow scope and build a good experience for our users
- We can always build on this component later if a need arises
- Not creating something completely net new keeps consistency in our designs and reduces accessibility issues
- An accessible iteration helps to build a stronger component both now and in the future!



No matter which direction we land on, we need to consider how the name of a component will be interpreted by all stakeholders.

What means something to a Designer could mean something entirely different for a Developer.

To keep things from getting spooky



What is consistency?

Identify the platform



Checkbox label

?



Checkbox label

?



Checkbox text

?

Identify the platform – Reveal!



Checkbox label

Web



Checkbox label

Android



Checkbox text

iOS

iOS “Checkboxes” don’t exist



ios checkbox



All

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About 287,000,000 results (0.57 seconds)

[https://developer.apple.com › design › macos › buttons](https://developer.apple.com/design/macos/buttons)

Checkboxes - Buttons - macOS - Human Interface Guidelines

A **checkbox** is a type of button that lets the user choose between two opposite states, actions, or values. A selected **checkbox** is considered on when it contains ...

[Radio Buttons](#) · [Pop-Up Buttons](#) · [Push Buttons](#) · [Help Buttons](#)

[https://medium.com › swift-india › simple-checkbox-co...](https://medium.com/swift-india/simple-checkbox-co...)

Simple Checkbox Component in iOS - Medium

Apr 21, 2019 — I wanted to create some UIComponent like **checkbox**, but so far I used UIButton with ... Add one more custom UIComponent in your **iOS** Arsenal.

[https://stackoverflow.com › questions › how-to-create-a...](https://stackoverflow.com/questions/how-to-create-a...)

How to create a simple checkbox in iOS? [duplicate] - Stack ...

Mar 20, 2011 — On **iOS** there is the switch UI component instead of a **checkbox**, look into the UISwitch class. The property on (boolean) can be used to determine ...

[2 answers](#) · Top answer: Yeah, no checkbox for you in iOS (-: Here, this is what I did to create a ...

[How to create radio buttons and checkbox in swift ...](#) 19 answers Mar 28, 2016



iOS “Checkboxes” don’t exist (2)



ios checkbox

[All](#) [Images](#) [News](#) [Videos](#) [Shopping](#) [More](#)

About 287,000,000 results (0.57 seconds)

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[2 answers](#) · Top answer: Yeah, no checkbox for you in iOS (-: Here, this is what you need

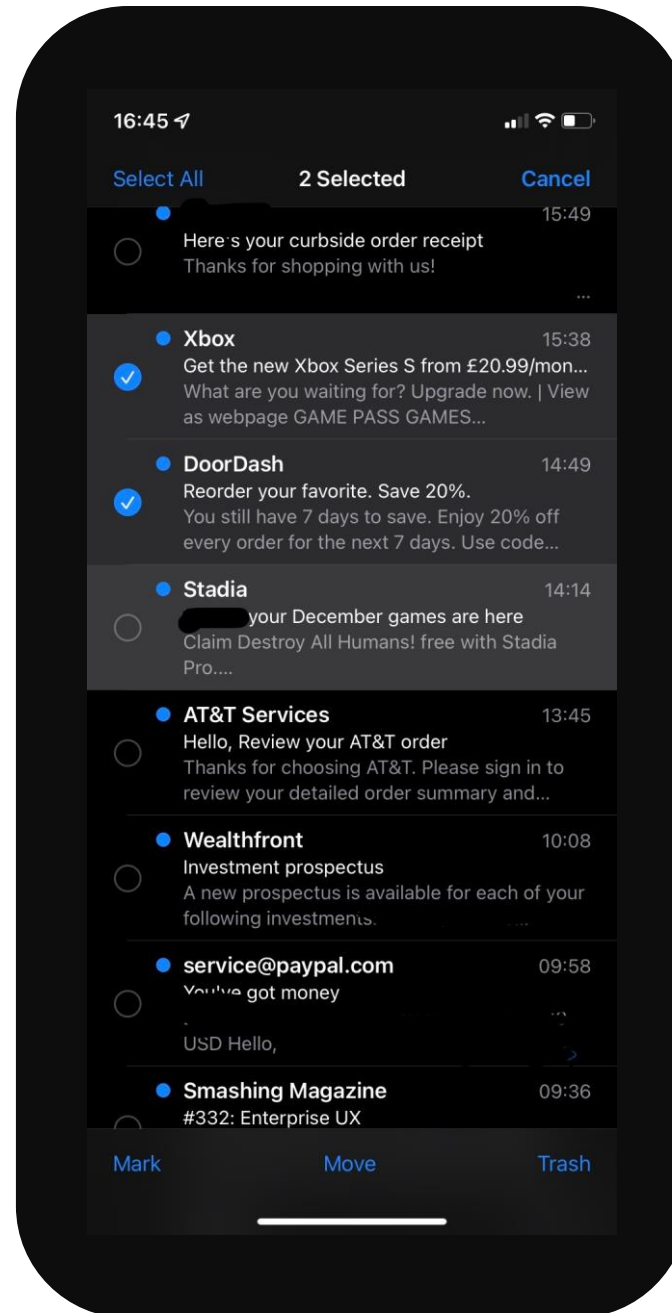
[How to create radio buttons and checkbox in swift ...](#) 19 answers Mar 28, 2018



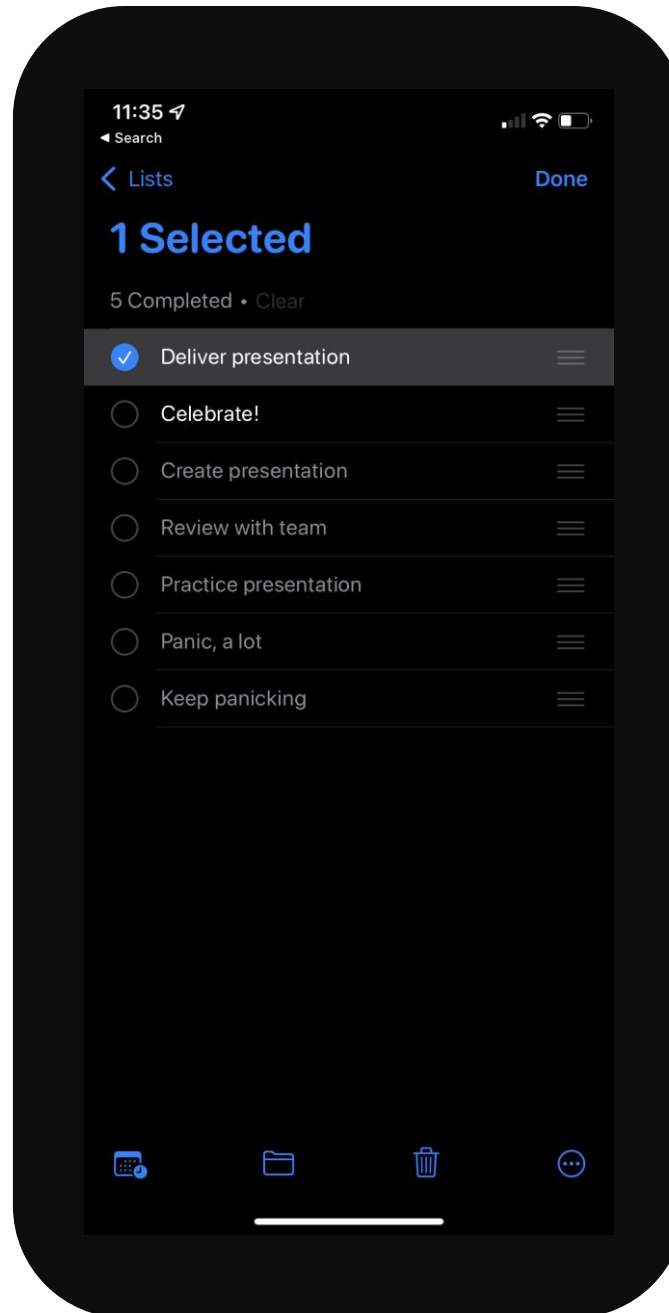


We are pioneers and so are the first company to need checkboxes in their iOS app...

Mail Apple



Reminders Apple



Consistently identify components across the user's ecosystem, not your design system.

Aim for parity between your app and the user's device.

Parity between platforms does not exist.

Really, even for Buttons?

Android

Enabled

Filled

Enabled

Outlined

Enabled

Text

Enabled

Elevated

Enabled

Tonal

iOS

Filled

▶ Play

Tinted

▶ Play

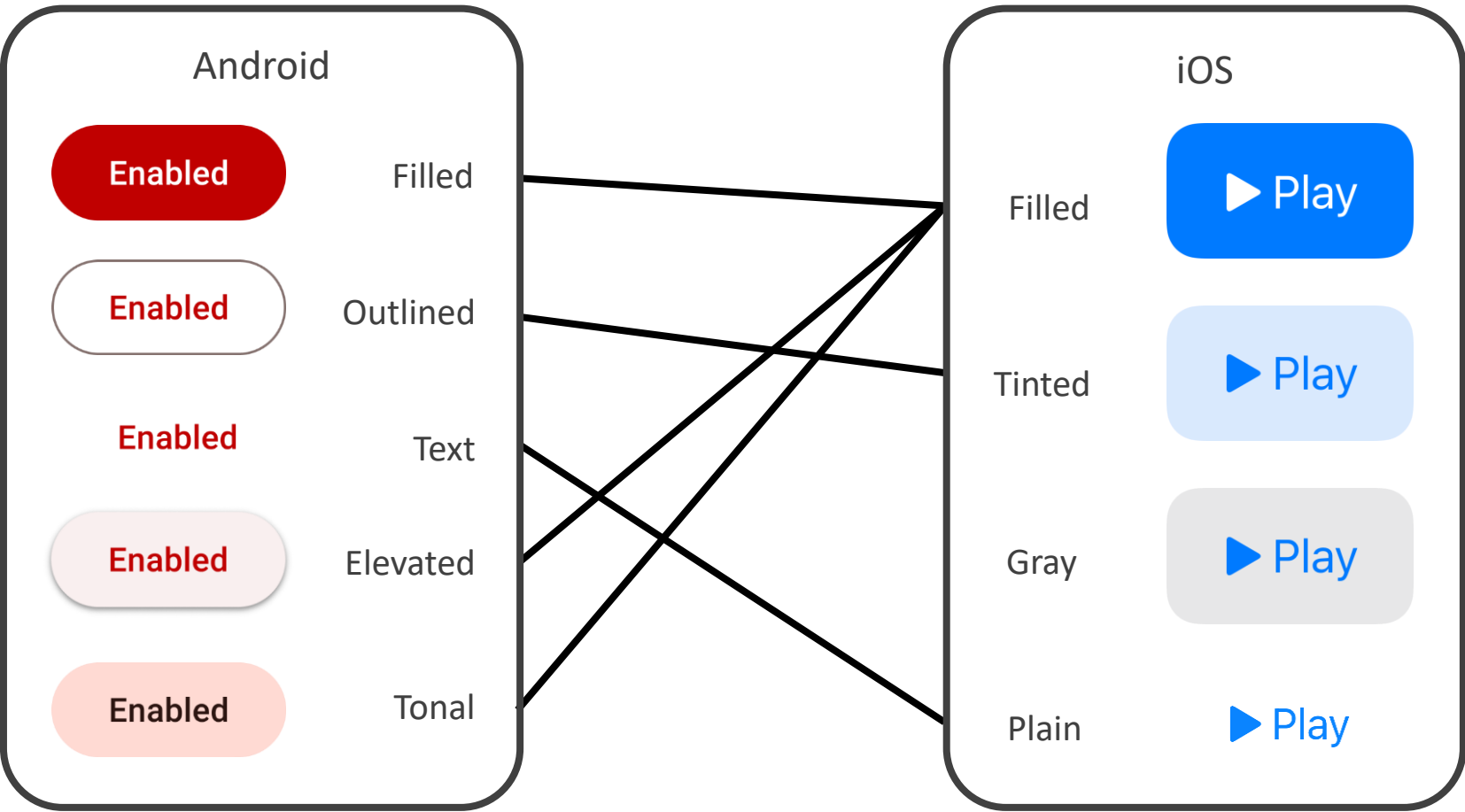
Gray

▶ Play

Plain

▶ Play

There is not a 1:1 map of purpose



Consistency within the platform is the aim

Android

Enabled

Enabled

Enabled

Enabled

Enabled

Filled

Outlined

Text

Elevated

Tonal

iOS

Filled

Tinted

Gray

Plain

Play

Play

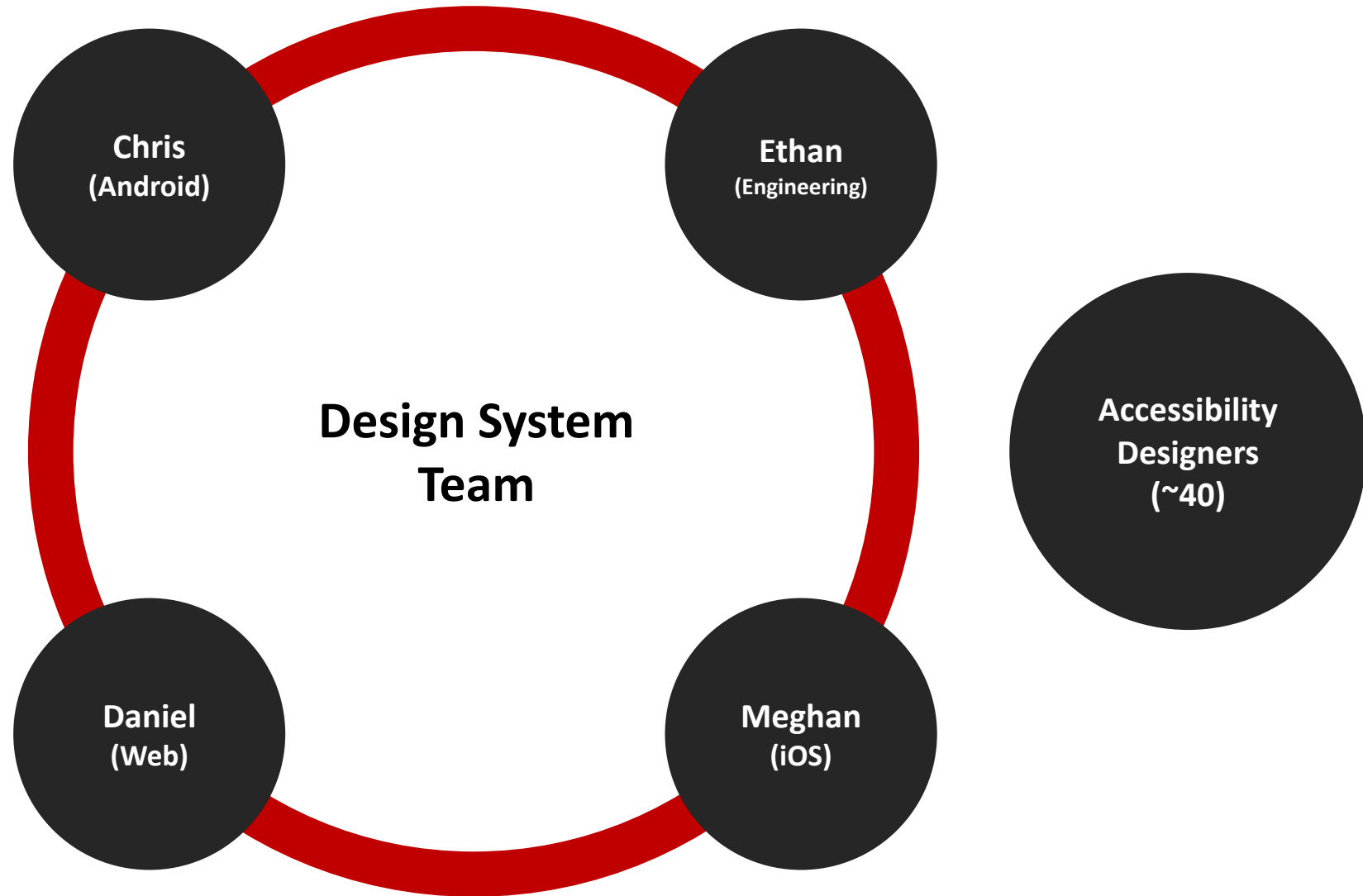
Play

Play

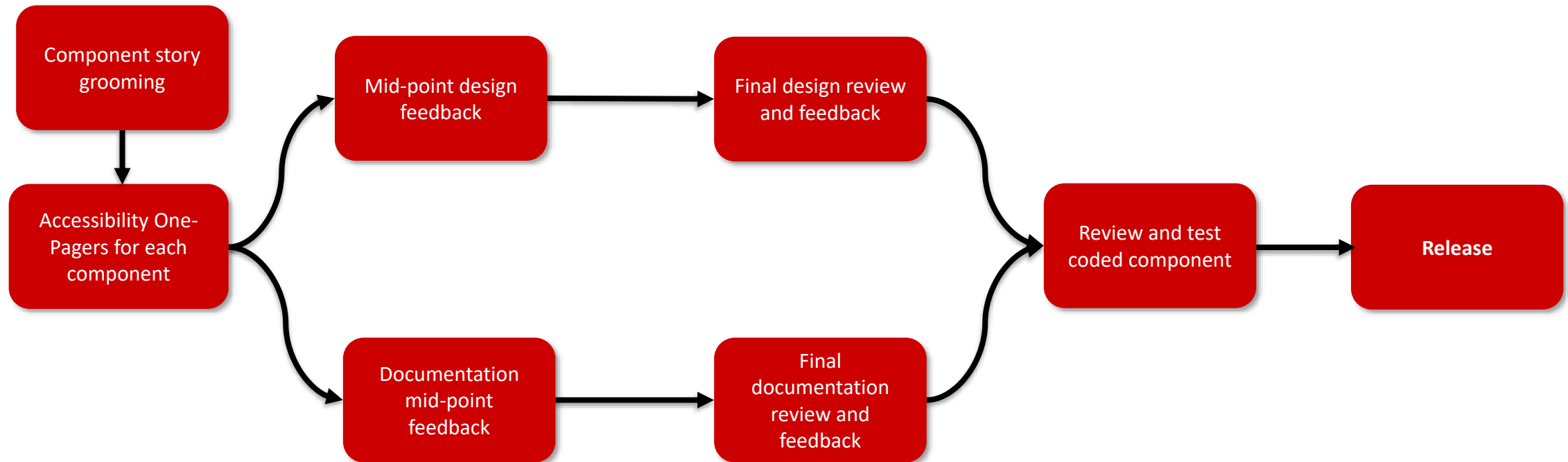
Are the components accessible?

Our Team

4 dedicated accessibility
folks



We have a continuously improved process



What's in our One-Pager?

It is for the design system team and is intended to be used throughout the creation of each component.

- Component use-cases
- Human impact overview
- Expected user experience
- WCAG 2.1 - Level A & AA requirements
- Recommendations:
 - WCAG 2.1 – AAA
 - WCAG 2.2
 - WCAG 3.0
 - Research (primary and secondary)
- Component states

Accessibility Built In

Our recommendations are simpler to integrate at the system level.

Target Size (Level AAA)

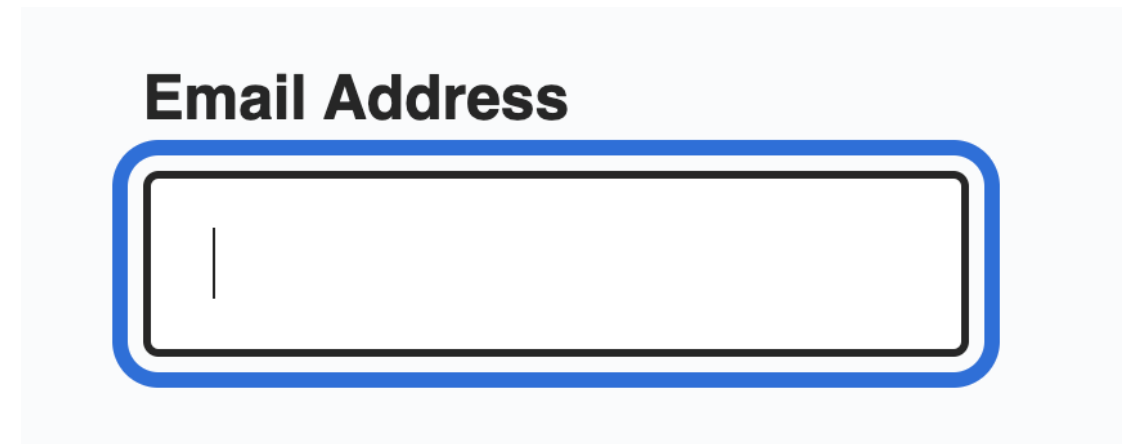
The size of the target for pointer inputs is at least 44 by 44 CSS pixels



Focus Visible - Minimum (WCAG 2.2)

When user interface components receive keyboard focus, an area of the focus indicator meets the following:

- Minimum area,
- Contrast,
- Adjacent contrast



Oh, one more thing!

We always peer review with other Accessibility Designers outside of the Design System to get feedback from folks with a fresh perspective.

“Pooling the results of two independent experienced evaluators would be the best option, capturing at most 76% of the true problems and producing only 24% of false positives”

- Challenges with Accessibility Guidelines Conformance and Testing, and Approaches for Mitigating Them

W3C Working Draft 19 June 2020

Design System Launch v1:

“We can’t use this because it is not accessible” - Fellow UX Designers

**Erm,
Whaaaaaaaaaaaaaaaaaaaaaat?**



**Erm,
Whaaaaaaaaaaaaaaaaaaaaaa**

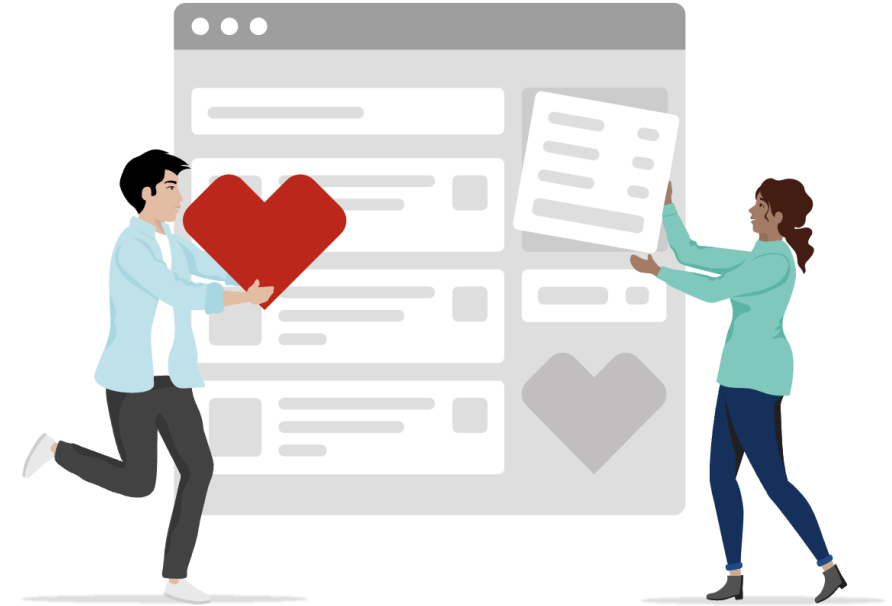




**In all fairness, we did not actually tell anyone
it was accessible.**

A Scalable, Stable and Unified Design System.

Bringing together a shared visual language, code base,
and customer voice.

[Start Designing](#)[Start Developing](#)

Our Design System is...



Accessible

Created to help our products remove
informational, technical, and cognitive barriers



Growing

New and constantly growing in its endeavour to
support the whole enterprise



Themeable

Supports both Aetna and CVS brand identities,
with white labeling on the way



Clearly, something was not right

- We never told the enterprise we had several dedicated Accessibility Designers.
- No clear process to build trust.
- Accessibility is not binary; it is a scale.
- No way to contact accessibility folks to ask questions.



Take aways

What we've learned so far

Keep scope in check by grouping components, considering user need, setting parameters, backlogging unknowns, and setting a clear definition before moving forward

Platform parity doesn't exist! Design components that are expected within each platform

Integrate clear processes for accessibility and don't be afraid to share them proudly across the org 🍕

Accessibility One-Pagers set clear requirements and recommendations, they can also inform the why behind our reasoning, we're trying to make things work for real people!

Some of our favorite resources

These resources are something we value, and validate, however we do not directly use the materials as to customize them for our own use cases.

- [Aviva Standards Design System](#)
- [Gov.UK Design System](#)
- [Inclusive Components](#)
- [Readability Guidelines - Writing about people](#)
- [Android Developer Docs - Building accessibility into apps](#)
- [Orange A11y Guidelines - iOS development](#)

Questions?