

The Importance of Accessible Design Systems

Sheri Byrne-Haber

Staff II, Accessibility Architect

Agenda

- Introduction
- What is a design system?
- How design systems fit into DesignOps?
- What is accessibility?
- How does accessibility fit into design systems (which fits into DesignOps)?
- Accessible open-source design system review

Disclaimer

I am a nerd

I can't draw a straight line with a ruler

Most of you will be exposed to at least one completely new concept in this presentation, in a fair amount of detail

Who needs accessibility? You do (or will).

Permanent



Limb
Difference

Temporary



Shoulder
Injury

Situational



Holding
Something

[From the Microsoft Inclusive Design Toolkit Accessibility Persona Spectrum](#)

How do people with disabilities use the internet?

Through Assistive Technology



What is a design system?

A set of repeatable components

Standards guiding the use of those components

- Documentation
- Videos
- Blogs
- Discussion channels
- Office Hours

Design Systems



UX Guidelines
Best Practices



Design
Resources



Components /
Code



Icon Library
Fonts

Primary Design Systems' Goals

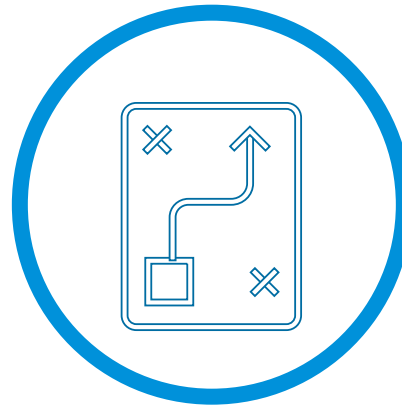
EFFICIENCY



Reduce duplicate efforts across teams

Code - once
Reuse - infinite

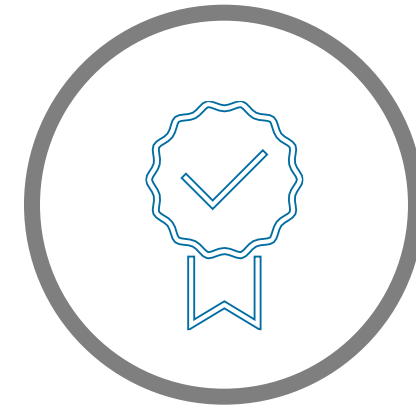
CONSISTENCY



Standardize common design patterns

Decisions made once

BETTER UX



Improve usability and user experience

Consistency makes a better UX

How do design systems fit into DesignOps?

One definition of DesignOps is:

The intentional operationalization and optimization of design.

DesignOps focuses on designing the design practice and building a systematic framework that allows design to succeed at scale.

In a Design System:

1. The design system itself is a framework
2. Design System efficiency helps scale
3. Design System consistency helps scale
4. Improved UX helps scale

What makes software more accessible?

- Captions
- Color
- Magnification
- Language Settings
- Dyslexia-specific needs
- Alternatives to visuals that convey information
- Good link text
- Headings

Eight of 50 [current](#) international accessibility guidelines - WCAG 2.1 Level AA

Captions

See How Autocraptions Earned Their Name



I call them autocraptions because they're riddled with mistakes.

a possum or a question because the River was mistakes

Color Contrast

Example 1

Product List
Printers
Laser
Model 1 - 4 ppm - 2 bin
Model 2 - 10 ppm - 3 bin
Ink Jet
Scanners

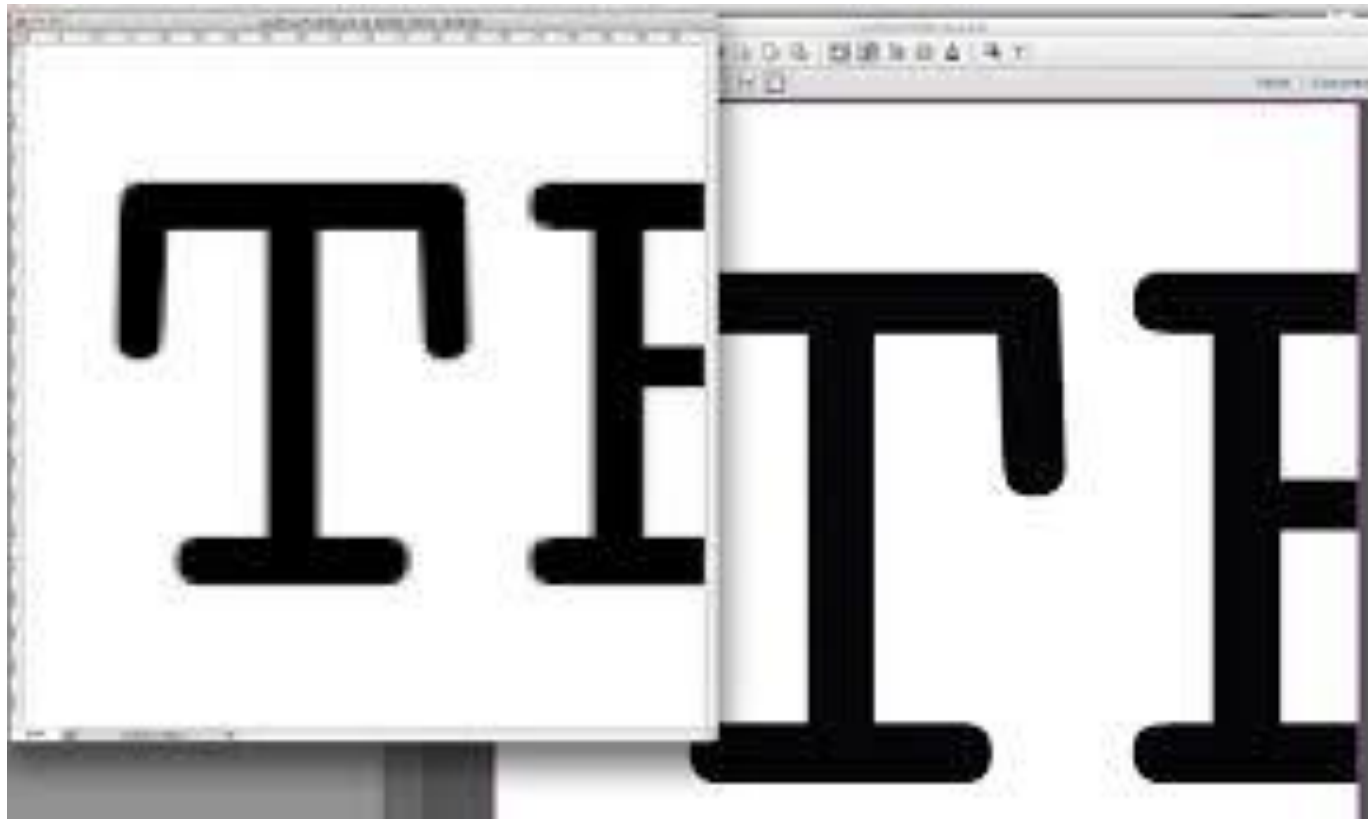
Example 2

Product List
Printers
Laser
Model 1 - 4 ppm - 2 bin
Model 2 - 10 ppm - 3 bin
Ink Jet
Scanners

Color Blindness



Magnification



Example from Adobe Community

Dyslexia-specific Needs

preferences regarding all readers, dyslexics in particular, centred can be used for headings or titles. Aligned right and justified causes problems, aligned right causes confusion with flowing to the next line. Justified text creates non-consistency of word spacing, and this can lead to the river-effect distortion. Very important is the strong advice against hyphenation, the words split and therefore causes difficulty in comprehension. As an overall remark I'd like to emphasise not to provide a 'learning-how-to-read' visual, but to focus on clarity, consistency and space, used in its

Example from Trinity College, Ireland

Text Alternatives to Visuals AKA “Alt-text”



How would you describe this picture?

It all depends on context!

- Dog on beach
- Dog wearing sunglasses on beach
- Dog wearing sunglasses in hammock on beach
- Jack Russell terrier wearing sunglasses in hammock on beach
- Nothing, it's just there to be pretty

Use the shortest amount of text possible to convey the appropriate level of information for the context

Why should design systems care about accessibility?

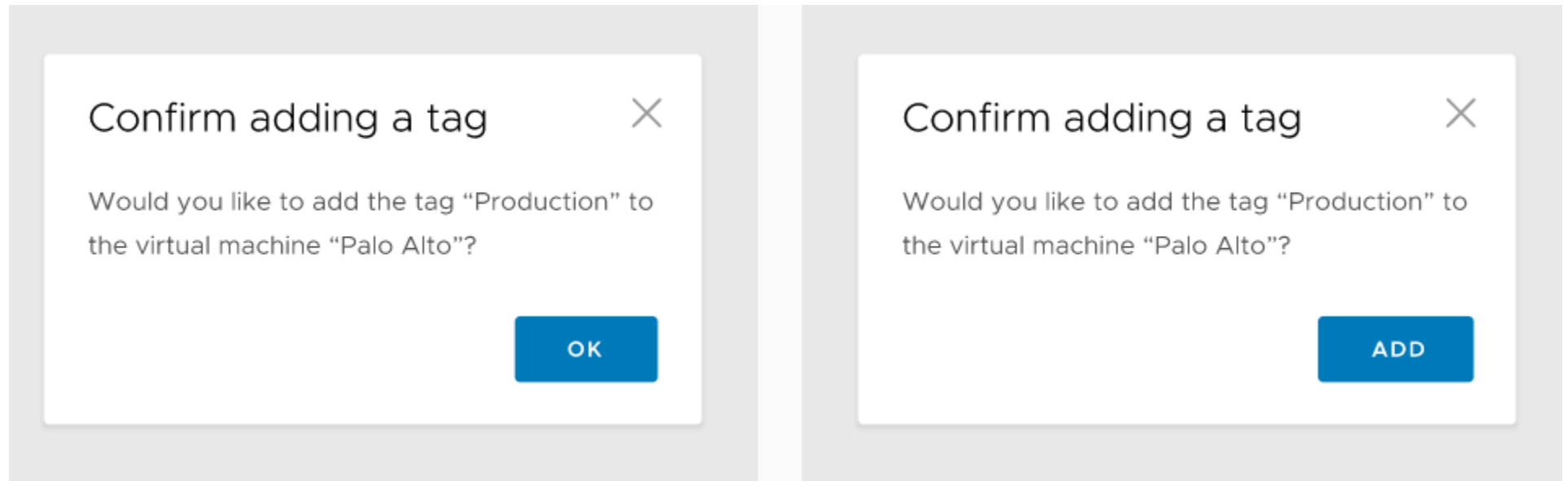
One design system accessibility bug can show up in thousands of pages

BUT

The design system has limited knowledge of how the component will be used

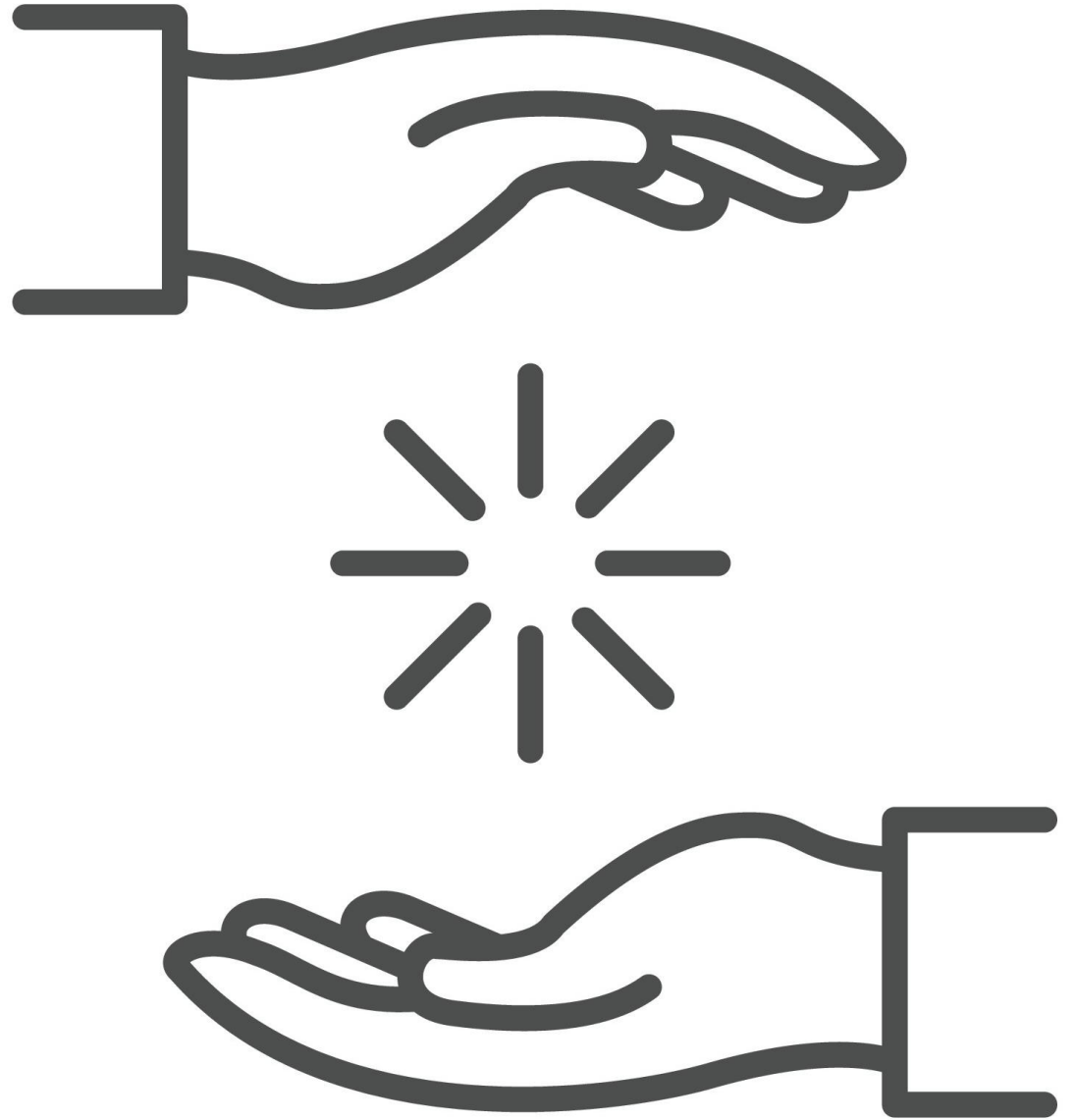
Developers must:

- Configure
- Compose
- Customize



Design Systems “Buy” or build?

Threshold question: Are you going to be an open source contributor or an open source user?



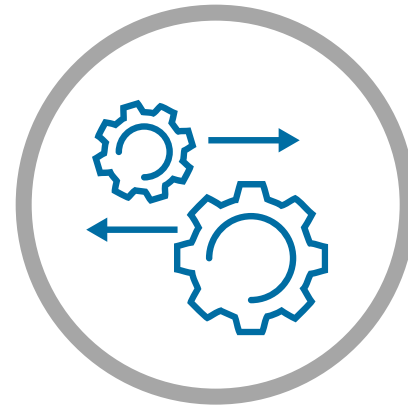
Open source or Private?



Legally supported way to share with third parties



Manage and create out in the open



Leverage existing tools and services



Greater reach and awareness

Accessible Open Source Design Systems

General

- [Clarity](#) (VMware)
- [Carbon](#) (IBM)
- [Material](#) (Google)
- [Lightning](#) (SalesForce)
- [Spectrum](#) (Adobe)
- [Fluent](#) (Microsoft)

Topic Specific

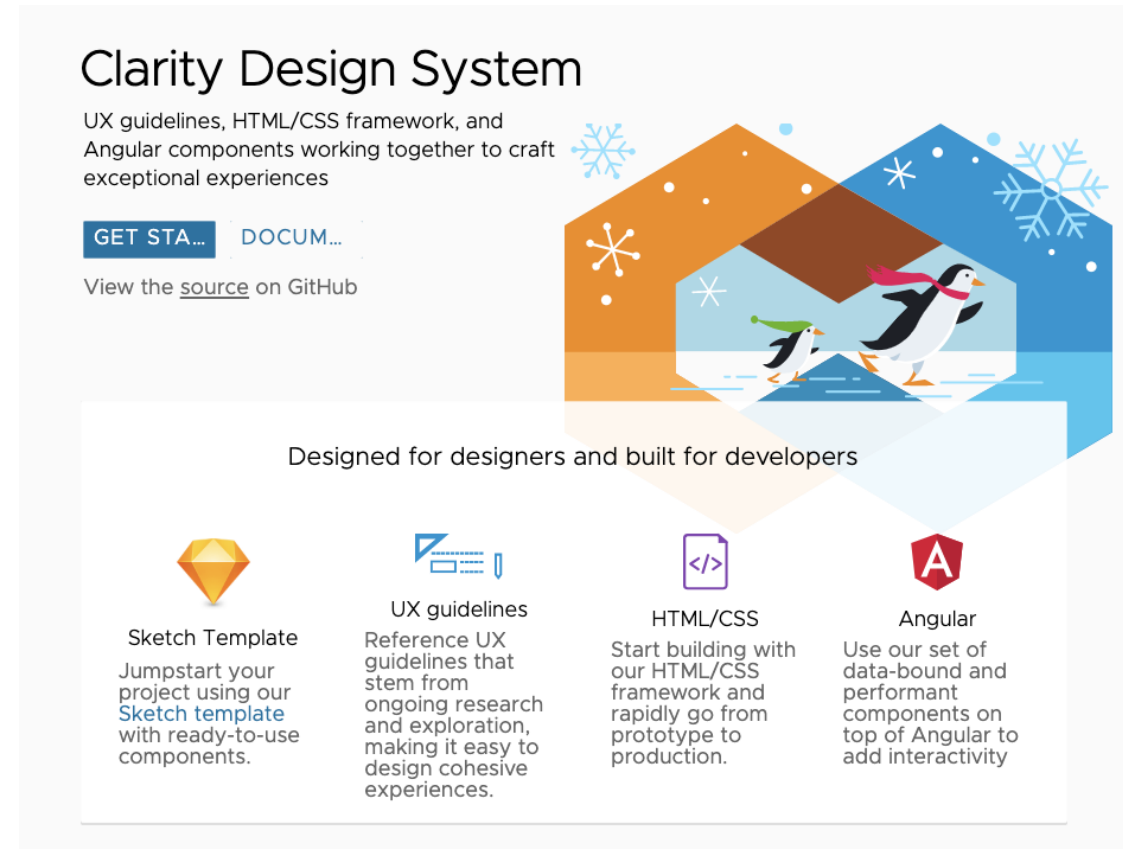
- [Bold](#) (Bridge Labs)
- [Spark](#) (FinTech)
- [Quickbooks](#) (Intuit)
- [Polaris](#) (Shopify)
- Government design systems [USWDS](#) (United States) [GOV.UK](#)

How do you know a design system is accessible?

1. They advertise it
2. They have an Accessibility Conformance Report/Voluntary Product Accessibility Template (ACR/VPAT) – here is [Clarity's](#)
3. Look for the word “ARIA” in the component code
4. It is a government design system from a country that takes accessibility seriously
 - US, Canada, EU, UK, Australia, China, Israel, UAE

Clarity Design System

- UX guidelines, HTML/CSS framework, and Angular components working together to craft exceptional experiences. Clarity v4.0.2 was released on 9/17.
- <http://clarity.design>
- <https://github.com/vmware/clarity>
- <https://clarity.design/news>







Clarity Design System

UX guidelines, HTML/CSS framework, and Angular components working together to craft exceptional experiences

[GET STA...](#) [DOCUM...](#)

View the [source](#) on GitHub

Designed for designers and built for developers

 <p>Sketch Template Jumpstart your project using our Sketch template with ready-to-use components.</p>	 <p>UX guidelines Reference UX guidelines that stem from ongoing research and exploration, making it easy to design cohesive experiences.</p>	 <p>HTML/CSS Start building with our HTML/CSS framework and rapidly go from prototype to production.</p>	 <p>Angular Use our set of data-bound and performant components on top of Angular to add interactivity</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

How the accessibility team helped Clarity with this work

- Translated WCAG 2.1 Level AA into English for designers
- Documentation
 - Wrote accessibility “best practices”
 - Developed accessibility guardrails
- Made tactical recommendations specific to VMware products
- Tested the heck out of it
- Authored multiple ACR/VPATs
- Accessibility clarity-based hackathon

TL; DR

If you care about:

- Sales
- Not getting sued
- Being a good corporate citizen

And, you are trying to run a strong DesignOps program:

1. Choose (or build) an accessible design system
2. Work with developers to ensure they implement your design in an accessible manner.
3. Make sure you do user research with users with disabilities

Thank You

Sheri Byrne-Haber
Accessibility Architect



<https://www.linkedin.com/in/sheribyrnehaber/>



<https://medium.com/@sheribyrnehaber>