Creating and Managing Accessible Design Systems

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Meet Karen Hawkins

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Today's Goals

1. Demystify who is responsible for which accessibility requirements in a design system.

2. When and how to incorporate these accessibility considerations in creating and maintaining a design system, with a focus on design team responsibilities.

3. How to practically apply accessible design in organizations of varying sizes and / or with varying levels of design system maturity.

SECTION 1

Level Setting on Design Systems

"

A **design system** is a complete set of standards intended to manage design at scale using reusable components and patterns.

—

NN/g Niesen Norman Group

> " A **design system** is a complete set of standards intended to manage design at scale using reusable components and patterns. "

NN/g Niesen Norman Group

Design System ≠ **Style Guide**

Component Library

Pattern Library

Style Guide Examples

Colours

Primary Colours

#003865	#000000	#006341	#63666A	#007599	#B0008E	#FFFFFF

Secondary Colours

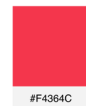|					
#B9D9EB	#FFD700	#FF8F1C	#F4...		
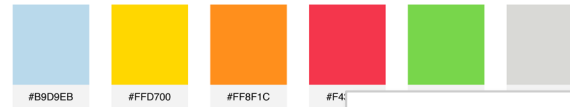
Conformant Colours on a White Background

The following colours were identified in our in our contrast audit a...
(#FFFFFF) for normal text, large text, graphical objects and user...

#000000	#003865	#006341	#...

The following colour was identified in our in our contrast audit as...
(#FFFFFF) for large text, graphical objects and user interface co...

#F4364C

Conformant Colours on a Black Background

The following colours were identified in our in our contrast audit a...
(#000000) for normal text, large text, graphical objects and user i...

#FFFFFF	#B9D9EB	#FFD700	#...

The following colours are at least WCAG 2.1 AA conformant with...
interface components.

#63666A	#007599	#B0008E

Conformant Colours on both a White and a Black Backgroun...

The following colours were identified in our in our contrast audit a...
(#FFFFFF) and black (#000000) for large text, graphical objects a...

Typography

Desktop   **Mobile**

Headline One Large

Helvetica / black / bold / 100px / 105 line height

Headline One Large Mobile

Helvetica / black / bold / 50px / 52 line height

Headline On

Helvetica / black / bold / 80px / 85 line height

Headline Two

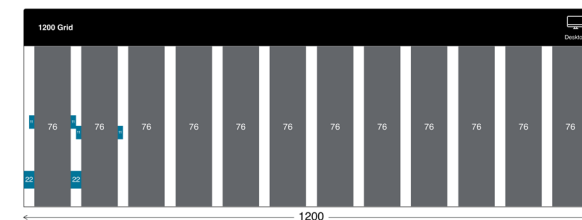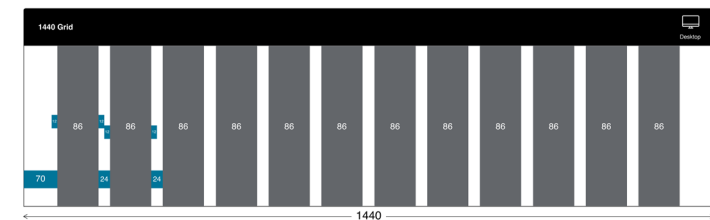Helvetica / black / bold / 60px / 64 line height

Headline Three

Helvetica / black / bold / 38px / 42 line height

Grid

1440 Grid   Desktop

1440

1200 Grid   Desktop

1200

Component Library Examples

This link is an [inline link](#) in the middle of some text.

Button

Button

🐞 Button

Checkbox group *

Instructions

- [ ] Select all
- [ ] Label
- [x] Selected label
- [ ] Label
- [x] Selected label
- [ ] Label
- [x] Selected label
- [ ] Label
- [x] Selected label

Radio button group *

Instructions

- ◯ Label
- ⦿ Selected label
- ◯ Label
- ⦿ Selected label
- ⦿ Selected label
- ◯ Label

Select label *

Instructions

Select an option ⌄

Label *

Instructions   0/###

Text

Pattern Library Examples

Title

⬆ Export ⌄

Lorem ipsum dolor sit amet consectetur. Sagittis congue nec aenean purus diam sagittis non ipsum volutpat. Viverra nulla interdum id id vestibulum etiam id. Senectus ac ornare.

Search by lorem

[   ] Search

+ More ⌄   ⚙ Action   **Primary action**

\# items   ⇄ Filters

Launcher   ✕ Close

💼 Workspaces   ›

⎍ Tenant dashboard

♿ Accessibility evaluations

🔧 Tools and integration

🗗 Administration

⚖ For internal use only

📄 Documents

🎓 Academy

❓ Help   ›

🔔 Notifications 20

👤 Profile   ›

[Slide out title]   ✕

Subtitle
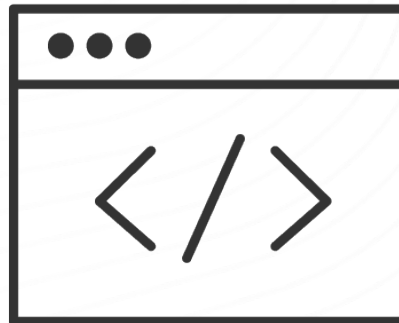
⚙ Action   ⚙ Action   **Primary action**

Primary action   Secondary action

Design System Composition

A design system is comprised of reusable design elements, reusable coded elements, and their documentation.
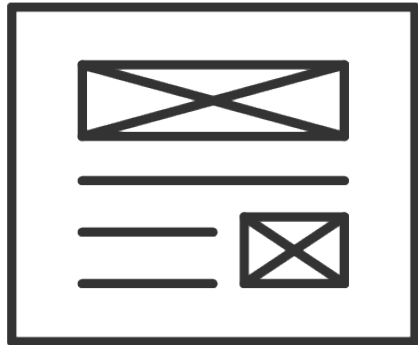
Design   **Code**   **Documentation**

Design Systems are like Lego Kits

- Reusable components that meet clear standards and can be assembled in a variety of ways
- Accompanying instructions

Image reference: <u>eBay</u>

Efficiency

Consistency

Scale

Design Systems Map Well to our Mental Model of Componentization

Overdue findings by severity ⋮

Critical 🐞   High 🐞   Low 🐞

2323   **2323**   **2323**

Open for more than 44 days   Open for more than 44 days   Open for more than 44 days

Findings that have been open for longer than the thresholds defined in the accessibility policy.

⬇ Download .png

Button

This button is inactive.
To activate it, you should do this or that.

🐞 Button

This link is an inline link in the middle of some text.

Checkbox group *
Instructions

☐ Select all

☐ Label

☑ Selected label

☐ Label

☑ Selected label

☐ Label

☑ Selected label

☐ Label

☑ Selected label

Label *
Instructions   0/###

Text

Launcher   ✕ Close

🗄 Workspaces ›

∿ Tenant dashboard

♿ Accessibility evaluations

🔧 Tools and integration

🖥 Administration

🔨 For internal use only

🗐 Documents

🎓 Academy

❓ Help ›

🔔 Notifications 20

👤 Profile ›

Atomic Design

Atomic design is a methodology for creating design systems. It is a framework to break interfaces down into fundamental reusable building blocks and build them back up in potentially infinite variations.

Atoms → **Molecules** → **Organisms** → **Templates** → **Pages**

Concept reference: Brad Frost
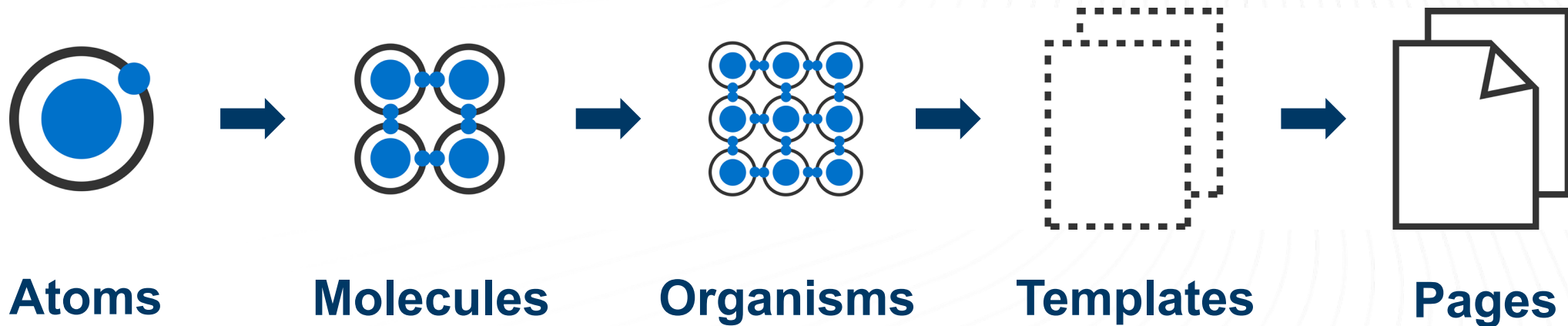
Atomic Design Example

Atoms

Postal Code

( )

Select an option

Radio Buttons Group Label

⌄

Molecules

Postal Code

Dropdown Label

Select an option ⌄

( ) First choice

Organism

First Name

Last Name

City

Select an option ⌄

Email Address

Phone Number

How would you like to be contacted?

( ) Email

( ) Phone

Sidenote: The Design System is a Set of Mini-Templates

Lorem ipsum

Lorem Ipsum

Lorem Isum

Lorem ipsum

LOREM IPSUM

FPO

Lorem Ipsum Dolor Sit

X
Close

Suspendisse non convallis eros. Morbi porttitor blandit pharetra. Suspendisse potenti.

Lorem Ipsum

Dolor Sit

LOREM IPSUM

Lorem Ipsum Dolor

Lorem Ipsum

$XX.xx

Lorem Ipsum

$YY.yy

Lorem Ipsum

# Atomic Breakdown of a Button

Atoms

Button

Molecule

Button

Atomic Breakdown of a Button: Further Analysis

Atoms

Properties

Molecule

Button

Font Type

Font Size

Text Color

Padding

Button

Border Color

Border Size

Border Corners
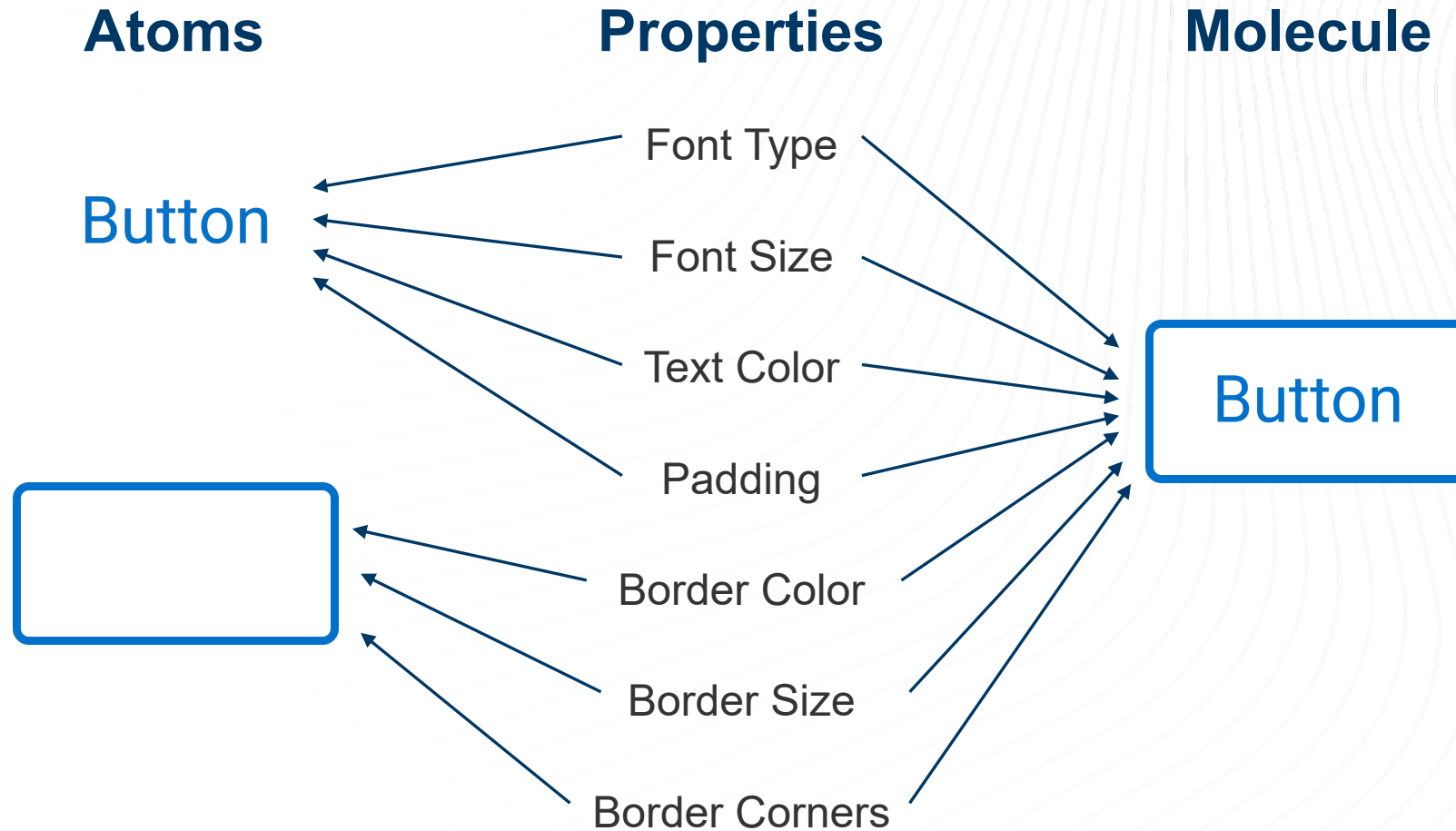
Subatomic Design

Design tokens are small, repeatable design decisions, that store a design system's visual attributes. They ensure the same style values are used across design files and code.
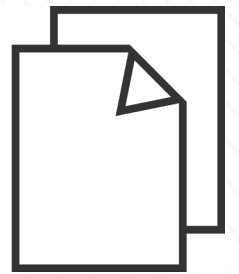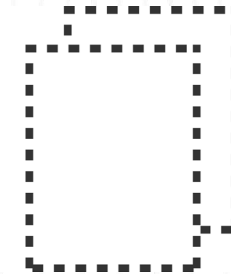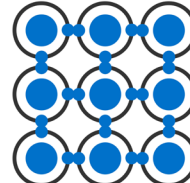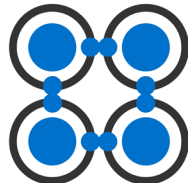
Subatomic Particles → **Atoms** → **Molecules** → **Organisms** → **Templates** → **Pages**
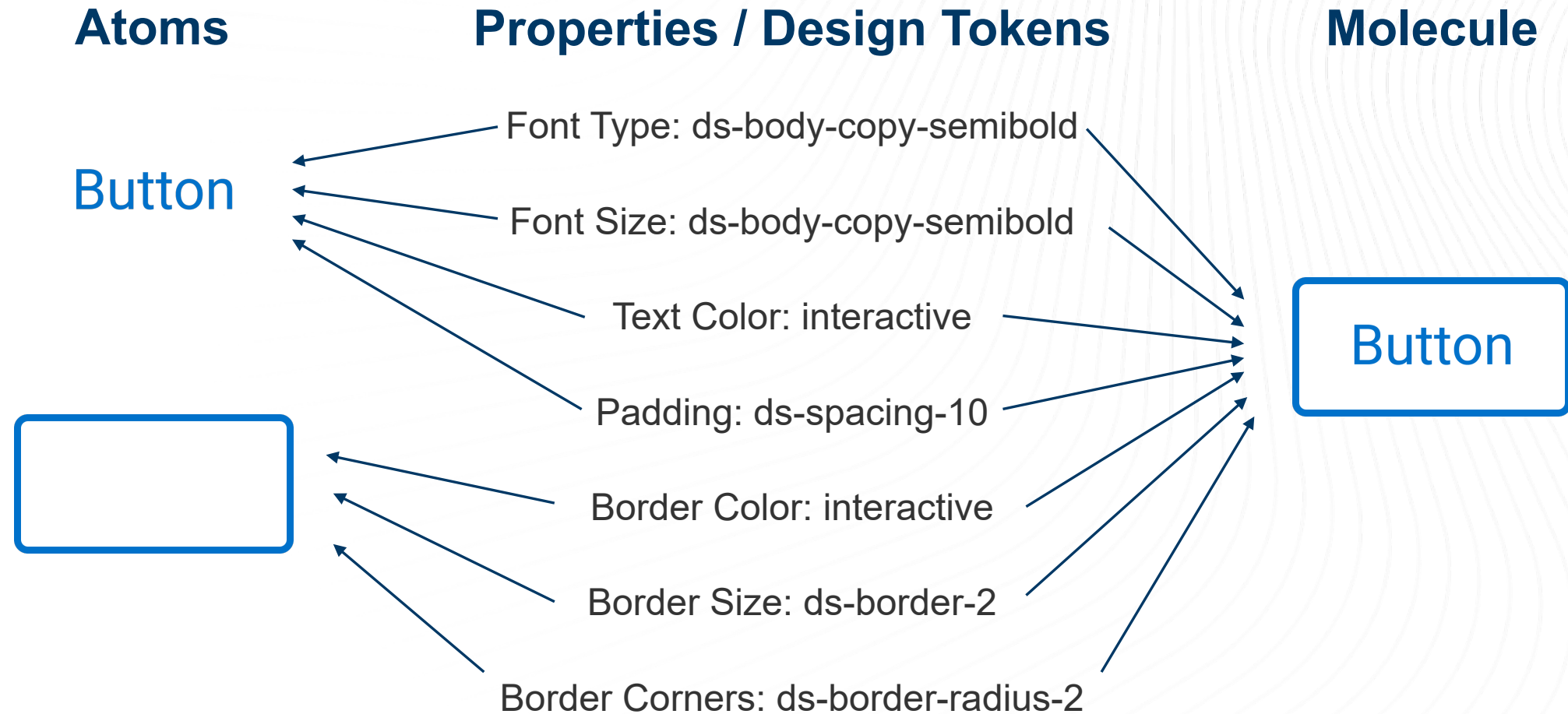
Example Design Tokens

Level's Design Token Categories

- Typography
- Colors
- Icons
- Spacing
- Border thickness
- Border radius
- Grid
- Focus indicator
- Shadow
- Animation

Border Thickness Token Example

Variable Name	Visual	Value in pixels	Value in REM
ds-border-0		0	0
ds-border-1		1	0.0625
ds-border-2		2	0.125
ds-border-3		3	0.1875
ds-border-4		4	0.25

Subatomic Breakdown of a Button

Atoms

Button

Properties / Design Tokens

Font Type: ds-body-copy-semibold

Font Size: ds-body-copy-semibold

Text Color: interactive

Padding: ds-spacing-10

Border Color: interactive

Border Size: ds-border-2

Border Corners: ds-border-radius-2

Molecule

Button

Design Tokens Store the System's Properties

Design Tokens

Atoms

Molecules

Organisms

Concept reference: Chris Cid

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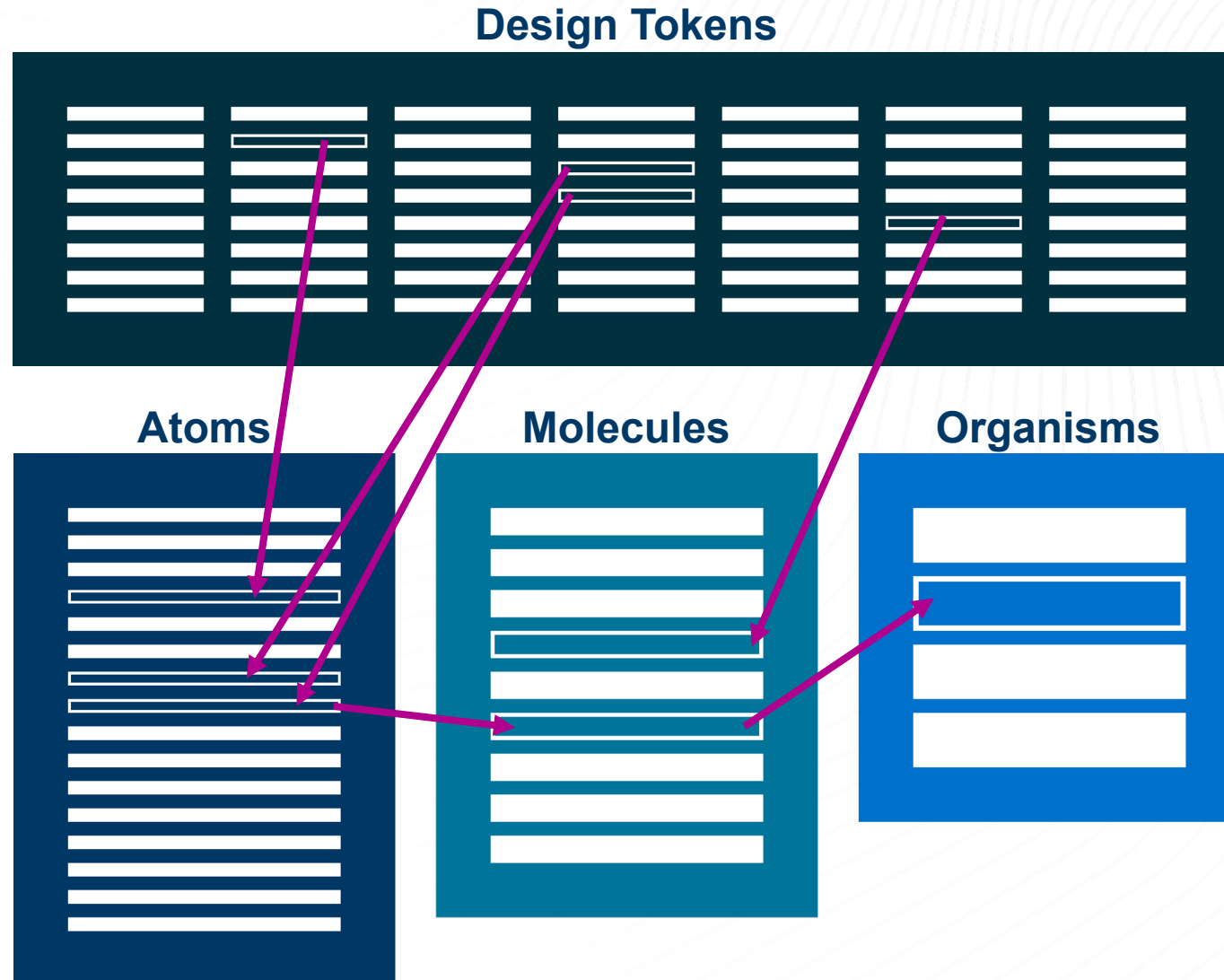
Design Systems Tend to be Incomplete

Molecular Variations and States

Molecule

Postal Code

Default / Unpopulated

Postal Code

Focused / Typing

Postal Code

A1A |

Optional Field

Postal Code (Optional)

A1A 2B2

Focused / Typing / Formatted

Phone Number

(55|_)-___-____

Instructional Text / Unpopulated

Date

DD / MM / YYY

Error

Postal Code

A1A

❗ Postal code is too short

Design Tokens Fill Much of the Gap

Design Tokens

Border Color: ds-color-text-dark

Border Size: ds-border-1

Molecule

Postal Code

Border Color: ds-color-focus

Border Size: ds-border-3

Border Color: ds-color-error

Border Size: ds-border-3

Molecular States

Focused / Typing

Postal Code

A1A|

Focused / Typing / Formatted

Phone Number

(55|_)-___-____

Error

Postal Code

A1A

⊘ Postal code is too short

25
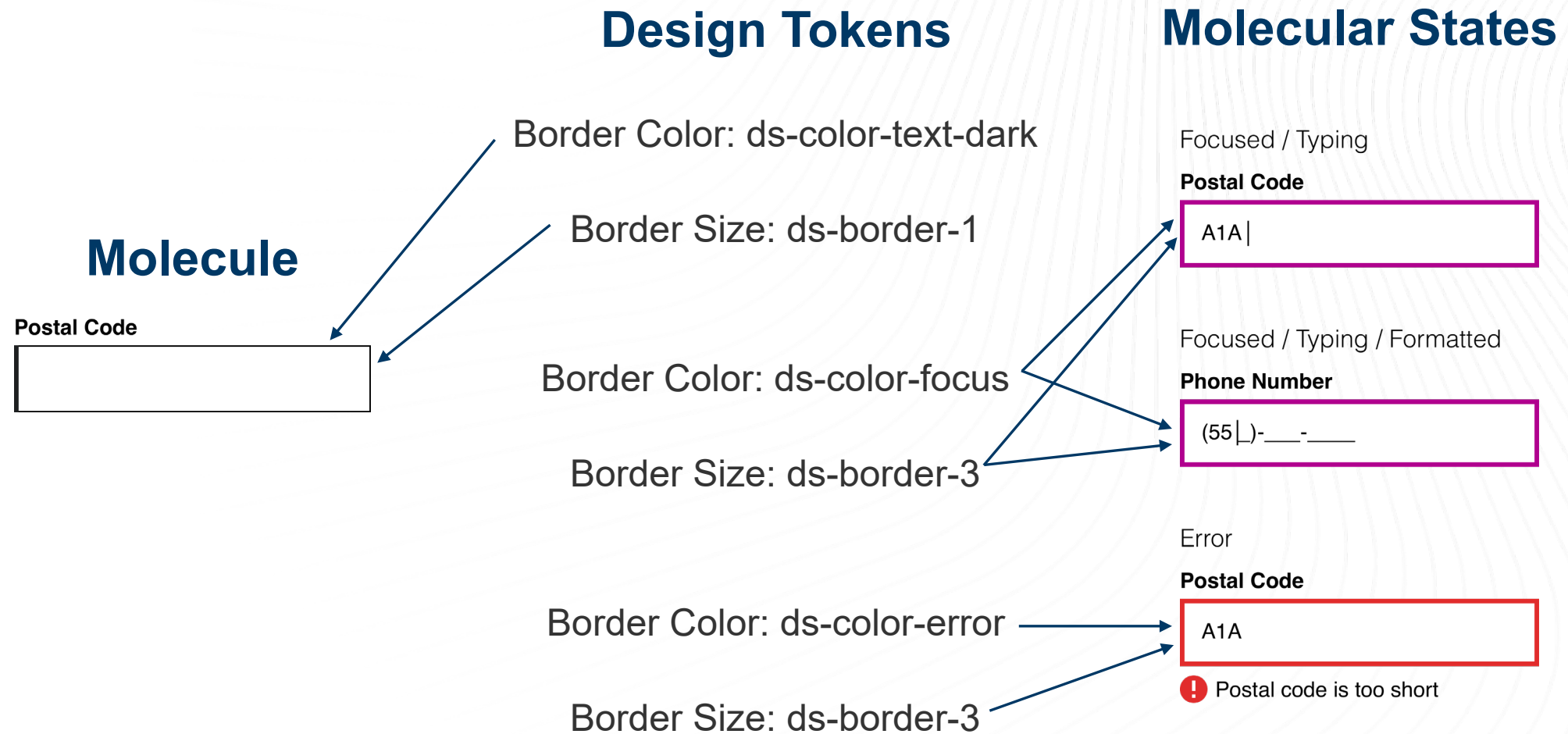
Remaining Gaps are Filled with Other Aspects of Design and Documentation

Other Elements

Molecular States

Focused / Typing
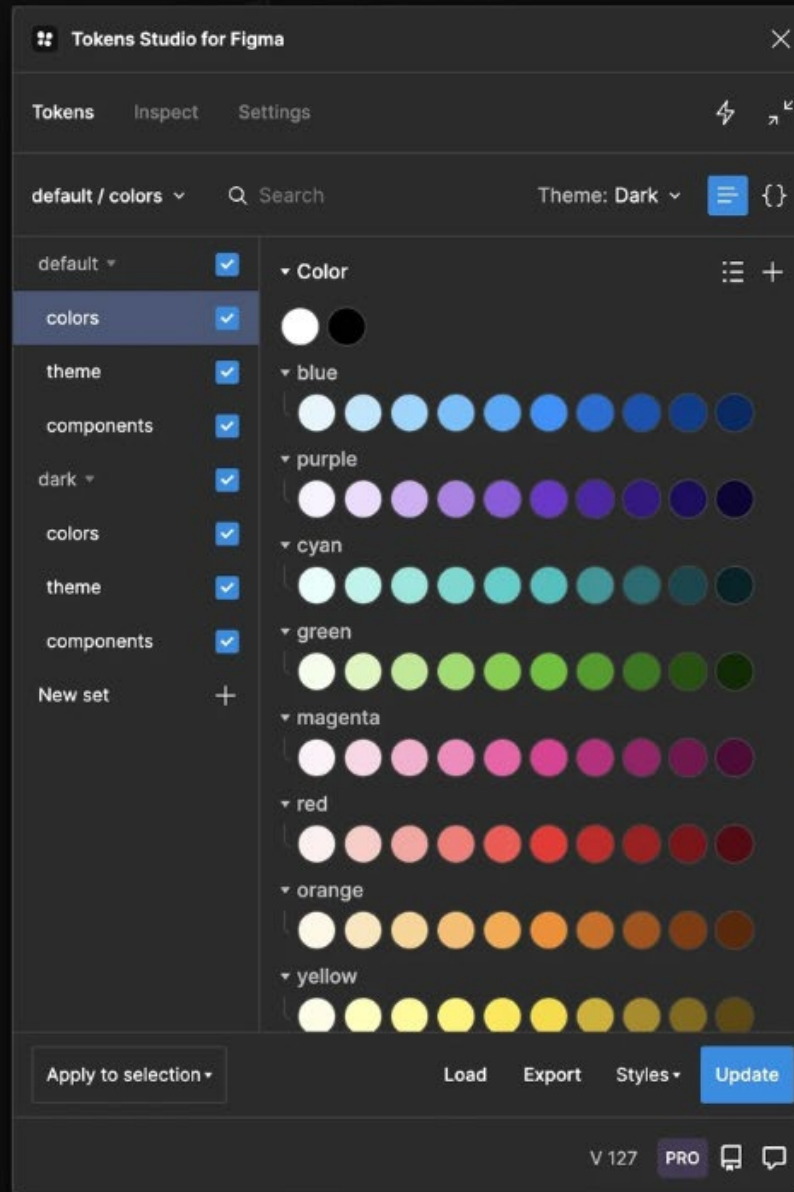
Postal Code
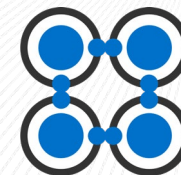
A1A|

Focused / Typing / Formatted

Phone Number

(55|_)-___-____

Error

Postal Code

A1A

Error message with icon ⟶ ❗ Postal code is too short

Molecule

Postal Code

Handy Tool for Organizing Design Tokens: Tokens Studio

Source: Tokens Studio
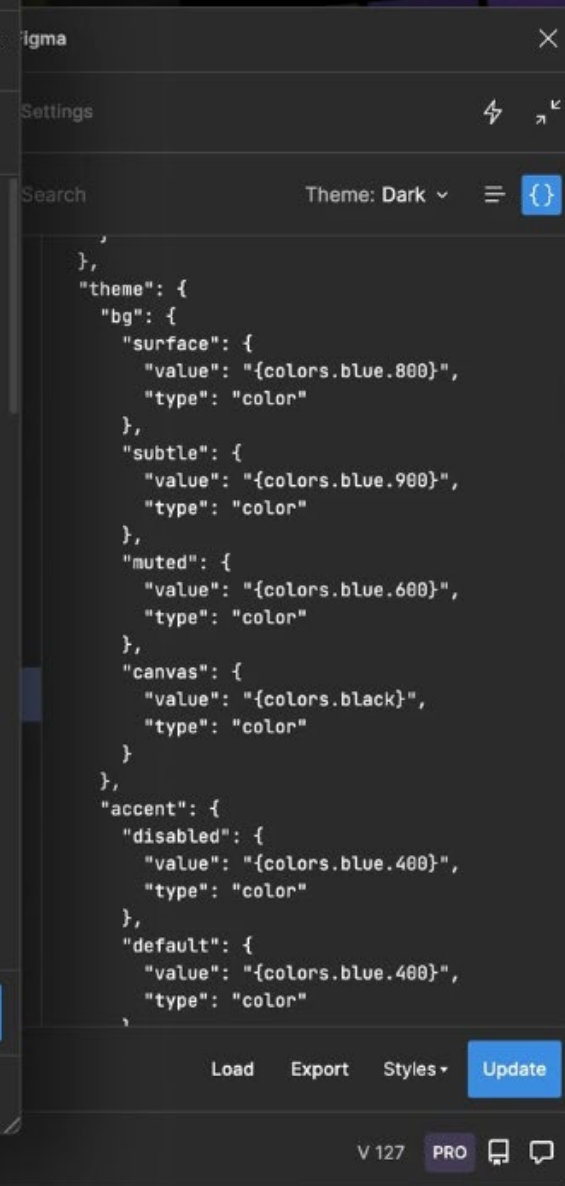
Components Map to Molecules

This link is an inline link in the middle of some text.

Button

Button

🐞 Button

Checkbox group *

Instructions

☐ Select all

☐ Label

☑ Selected label

☐ <u>Label</u>

☑ <u>Selected label</u>

☐ <u>Label</u>

☑ <u>Selected label</u>

☐ Label

☑ Selected label

Radio button group *

Instructions

◯ Label

⦿ Selected label

◯ <u>Label</u>

⦿ <u>Selected label</u>

⦿ <u>Selected label</u>

◯ Label

Select label *

Instructions

| Select an option ⌄ |

Label *

Instructions   0/###

| Text |

Patterns Map to Organisms

Title

Lorem ipsum dolor sit amet consectetur. Sagittis congue nec aenean purus diam sagittis non ipsum volutpat. Viverra nulla interdum id id vestibulum etiam id. Senectus ac ornare.

Search by lorem

Search

items

↥ Export ⌄

More ⌄   ⚙ Action   **Primary action**

⇅ Filters

Launcher

✕ Close

💼 Workspaces ›

〰 Tenant dashboard

♿ Accessibility evaluations

🔧 Tools and integration

⚙ Administration

⚖ For internal use only

📄 Documents

🎓 Academy

❓ Help ›

🔔 Notifications 20

👤 Profile ›

[Slide out title]

✕

Subtitle

⚙ Action   ⚙ Action   **Primary action**

Primary action   Secondary action

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Digital Accessible Design Roles and Responsibilities

Digital Design Roles

User Experience (UX) Designer

User Interface (UI) Designer

Content Designer

Synonyms and Responsibilities: User Experience Designer

User Experience (UX) Designer

Synonyms

- Information Architect

- Interaction Designer

- Experience Designer

- UX Strategist

- UX Architect

- Product Designer

- Service Designer

Responsibilities

- Architecture

- Structure

- Logic

- Flow

- Navigation

- Wayfinding

- Interaction

- Behavior

Synonyms and Responsibilities: User Interface Designer

User Interface (UI) Designer

Synonyms

- Art Director

- Visual Designer

- Graphic Designer

- Graphic Artist

- UI Artist

- Interaction Designer

- Product Designer

- Digital Designer

Responsibilities

- Brand

- Styling

- Look and feel

- Color

- Typography

- Imagery and illustrations

- Layout and grid

- Motion and animation

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Synonyms and Responsibilities: Content Designer

Content Designer

Synonyms

- Content Strategist

- Copywriter

- UX Writer

- Content Writer

- Technical Writer

- Marketing Technologist

- Content Marketing Manager

- Digital Brand Manager

- Digital Marketing Manager

- Social Media Coordinator

- Community Manager

Responsibilities

- Content strategy

- Content audit

- Content governance

- Tone, style and voice

- Writing copy

- Editing copy

Not Discussed

Researcher

Product Manager

Developer

Quality Assurance

Design System Responsibilities: User Experience Designer

User Experience (UX) Designer

Design

- Required structural elements

- Multitude of navigational strategies

- Orientation cues

- Consistent designs and locations

- Content flow and hierarchy

- Error prevention, support, and remediation

- Alternative interactions and experiences

- Redundant coding

Documentation

- Keyboard interactions

- Pointer interactions

- Templated screen reader experiences

- Roles

- Error prevention, support, and remediation

- Rules for optional design elements

- Rules for structural elements

Design System Responsibilities: User Interface Designer

User Interface (UI) Designer

Design

- Color, typography, spacing, imagery, illustrations, layout, grid, motion, animation

- Component variations

- Component states
    - Focus on focus states

- Target sizes

- Visual hierarchy and relationships

- Viewports

Documentation

- Rules for color usage

- Rules for spacing

- Rules for images and illustrations

- Rules for motion and animation

- Rules for how elements respond

- Breakpoints

Design System Responsibilities: Content Designer

Content Designer

Design

N/A

Documentation

- Digital property language

- Digital property glossary / definition list, etc.

- Rules regarding abbreviations and pronunciations

- Rules regarding plain language and minimal grade reading level

- Standardized messages (alert, toast, error, etc.)

- Alternative text rules or best practices

- Content hierarchy

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Content Designer

Instance

- Alternative Text:

  - Write alt text following the design system rules.

  - Ensure alt text is meaningful to the context of use.

- Consistency:

  - Icons used in different contexts have consistent / similar alternative text.

  - Links having the same destination have consistent / similar text.

- Differentiated:

  - The purpose of each link is determinable from the link text alone.

  - Each link's text is differentiated.

  - Each page title is differentiated.

  - Table column headers are visually differentiated from the table data cells.

  - Table row headers are visually differentiated from the table data cells.

Responsibilities per Instance: Content Designer Example (2 / 2)

Content Designer

Instance

- Understandability:

    - Each link's text is descriptive.

    - Each heading is clear.

    - Each heading is descriptive.

    - Each label is clear.

    - Each label is descriptive.

    - Each page title clearly describes its topic / purpose.

    - Each page's language is defined.

    - For each page or section of a page that should read in a language that is different than the default language, the different language and the section(s) to which it applies are defined.

    - Words or phrases that are ambiguous or unfamiliar are defined through adjacent text, a definition list, or a glossary, etc.

    - Abbreviations have a mechanism for identifying their expanded form.

    - Words that are ambiguous or unfamiliar have their pronunciation immediately following the word, or via a link or glossary, etc.

    - Error messages are specific, descriptive and helpful.

Example: Buttons

Example Button Types

Primary

Secondary

Tertiary

Button

Button

🐞 Button

Example Primary Button Versions

Text Only

Button

Text and Icon

Button ↗

Icon Only

↗

Example Primary Button States

Default	Hover	Focus	Inactive	Clicked / Pressed
Button	Button	Button	Button	Button

Accessibility Responsibilities: Text Only Primary Button Default State

Button

Function	Accessible Design Responsibilities	Accessible Documentation Responsibilities

User Experience Designer	• Has a visible label	• Role
		• Keyboard interactions
		• Templated screen reader experience
		• Abort activation:
		   ○ With a keyboard
		   ○ With a pointer device

User Interface Designer	• Minimum contrast:
	   ○ Text color to button color
	   ○ Button color (or border color) to background color
	• Font type not likely to cause readability issues
	• Letter spacing not likely to cause readability issues
	• Word spacing not likely to cause readability issues
	• Line spacing not likely to cause readability issues
	• Minimum font size
	• Minimum target size
		• Colors included in button design and their contrast ratios
		• Font type, size, and spacing rules
		• Character count
		• How the button grows with text
		• Target size

Content Designer	N/A	N/A

Primary Button Variations and States: Interface Designer Example

Default State Variations to Design

- Mobile / 400% zoom / 1 column of content
- Lengthy text
- Text at 200%
- Lengthy text at 200%
- Large text

Other States to Design

- Hover
- Focus
- Inactive
- Clicked / Pressed

User Interface (UI) Designer

Example: Product Card

Sidenote: Product Card Design

Molecular Design and Documentation: Image and Title

CARDIGANS AND SWEATERS

Playtime Sweater

Function	Accessible Design Responsibilities	Accessible Documentation Responsibilities

User Experience Designer	• Reading order	• Reading order
		• 1 clickable element functioning as a link
		• Keyboard interaction:
		  o Selecting the link
		• Pointer device interaction:
		  o Cancelling / aborting activation
		• Screen reader experience:
		  o Announcing all the content

User Interface Designer	• Hover state and focus state	N/A
Content Designer	N/A	N/A

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Molecular Design and Documentation: Swatches

Colors

Selected Color: Mint

Function	Accessible Design Responsibilities	Accessible Documentation Responsibilities

User Experience Designer	• Reading order and focus order
	• Accessible design decisions:
	  o Group label
	  o Visible text of selected swatch
	  o Visible text of hovered swatch
	  o Visible text of focused swatch
		• Reading order and focus order
		• Keyboard interactions:
		  o Selecting a swatch
		  o Moving between swatches
		• Pointer device interaction:
		  o Cancelling / aborting activation
		• Screen reader experience:
		  o How each swatch will be announced
		  o Selecting a swatch
		  o Moving between swatches

User Interface Designer	• Hover state and focus state of unselected swatches
	• Hover state and focus state of selected swatch
	• Accessible design decisions:
	  o 3:1 contrast ratio of swatch border to background color
	  o Selected and unselected swatches are differentiated
		N/A

Content Designer	N/A	N/A

Molecular Design and Documentation: Sizes

Sizes

| S | M | L |

Selected Size: Medium

Function	Accessible Design Responsibilities	Accessible Documentation Responsibilities

User Experience Designer	• Reading order and focus order
	• Accessible design decisions:
	    o Group label
	    o Visible text of selected swatch
	    o Visible text of hovered swatch
	    o Visible text of focused swatch
		• Reading order and focus order
		• Keyboard interactions:
		    o Selecting a size
		    o Moving between sizes
		• Pointer device interaction:
		    o Cancelling / aborting activation
		• Screen reader experience:
		    o How each size will be announced
		    o Selecting a size
		    o Moving between sizes

User Interface Designer	• Hover state and focus state of unselected sizes • Hover state and focus state of selected size • Accessible design decision: o Selected and unselected sizes are differentiated	N/A
Content Designer	N/A	N/A

Molecular Design and Documentation: Prices

Sale Price
$12.99

You Save
$1.00

Function	Accessible Design Responsibilities	Accessible Documentation Responsibilities

User Experience Designer	• Reading order
	• Accessible design decisions:
	   o Not using red to denote original price
	   o Not using strikethroughs on original price
		• Reading order
		• Screen reader experience:
		   o How the price will be announced

User Interface Designer	N/A	N/A
Content Designer	N/A	N/A
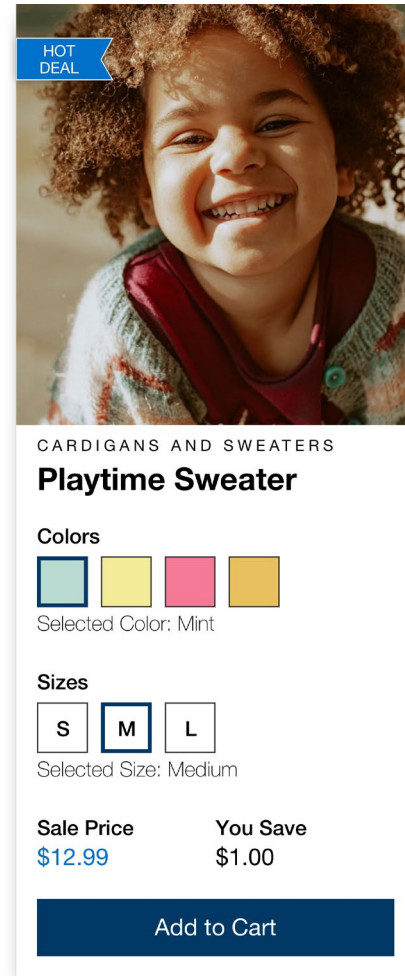
Molecular Design and Documentation: "Add to Cart" Button
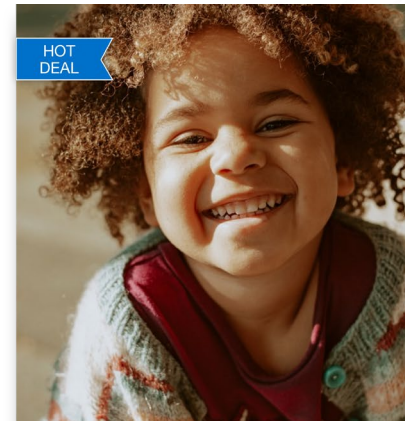
Add to Cart

Function	Accessible Design Responsibilities	Accessible Documentation Responsibilities

User Experience Designer	• Usability design decisions:
	  o When an item is added to the cart, what feedback does the visual design provide confirming it was successfully added to the cart? Is there any additional information the visual design provides an update on (i.e. Total items in cart? Total price of cart?)?
		• Screen reader experience:
		  o Add what to cart?
		  o When an item is added to the cart, what feedback does the screen reader provide confirming it was successfully added to the cart? Is there any additional information the screen reader provides an update on (i.e. Total items in cart? Total price of cart?)?
		• Keyboard experience:
		  o When an item is added to the cart, where does the focus go?
		• Pointer device interaction:
		  o Cancelling / aborting activation

User Interface Designer	N/A	N/A
Content Designer	N/A	N/A

Sidenote: Organisms and Molecules Included in the Overall Experience

Organisms

Molecules

Organism Design and Documentation

HOT DEAL

CARDIGANS AND SWEATERS
Playtime Sweater

Colors
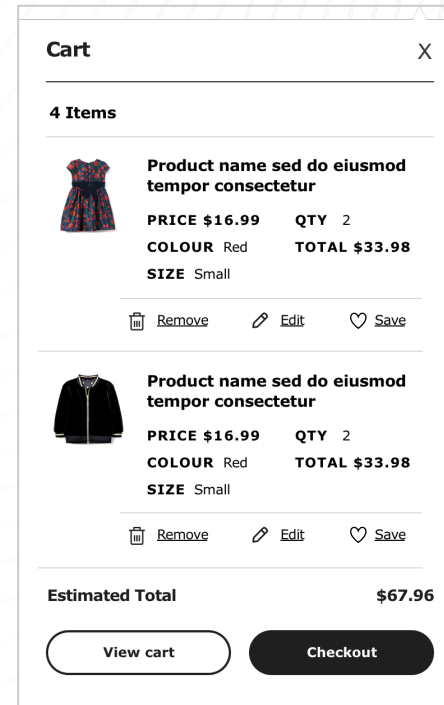
Selected Color: Mint

Sizes

S M L

Selected Size: Medium

Sale Price   **You Save**
$12.99 $1.00

Add to Cart

Function	Accessible Design Responsibilities	Accessible Documentation Responsibilities

User Experience Designer	• Reading order and focus order:
	  o Every organism has a story to tell
	  o What is the relative placement of swatches to product image?
	• Implications of interactivity of one molecule on another molecule:
	  o Selection of a swatch changes the image.
	  o What happens when a selection causes another element to be inactive?
	  o Does the "add to cart" button start out as inactive and only become active after selections have been made?
		• Reading order and focus order:
		  o How much is documented at the molecule level vs. the organism level?
		• Implications of interactivity of one molecule on another molecule:
		  o If a selection causes other options to become inactive, how do you inform a screen reader user?

User Interface Designer	N/A	N/A
Content Designer	N/A	N/A

Product Card Variations and Versions: Interface Designer Example

Portrait Variations to Design

- Mobile / 400% zoom / 1 column of content
- Lengthy text
- Text at 200%
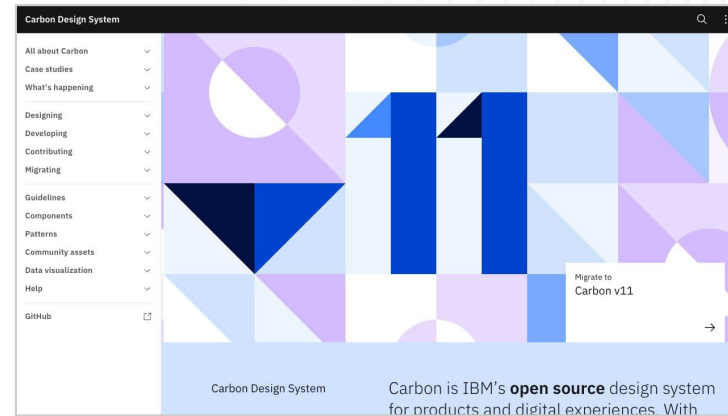- Lengthy text at 200%
- Large text

Other Versions to Design
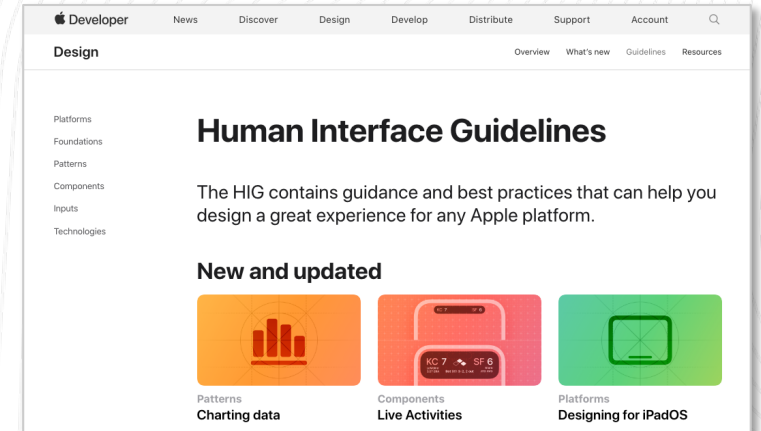
- Landscape
- Cart
- Minicart
- Checkout

User Interface (UI) Designer

SECTION 3

Practically Embedding Accessibility in Design Systems

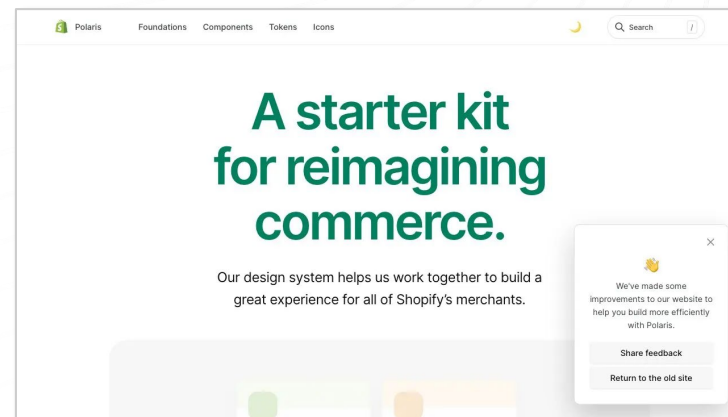# Famous Design Systems Known for Incorporating Accessibility
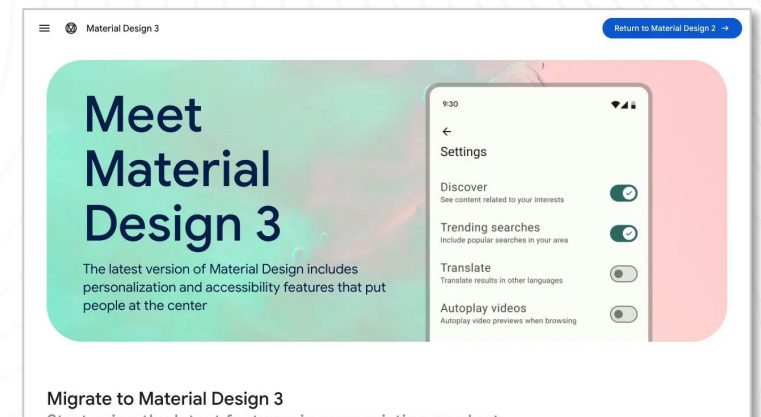
Carbon - IBM

Human Interface Guidelines - Apple

Polaris - Shopify

Material Design 3 - Google

All about Carbon

Case studies

What's happening

Designing

Developing

Contributing

Migrating

Guidelines

Components

Overview

Accordion

Breadcrumb

Button

Checkbox

Code snippet

Contained list

Content switcher

Data table

Date picker

Dropdown

File uploader

Form

Inline loading

Link

List

Button

Usage   Style   Code   **Accessibility**

Design annotations are needed for specific instances shown below, but for the standard button component, Carbon already incorporates accessibility.

↳ What Carbon provides

↳ Design recommendations

↳ Development considerations

What Carbon provides

Carbon bakes keyboard operation into its components, improving the experience of blind users and others who operate via the keyboard. Carbon incorporates many other accessibility considerations, some of which are described below.

Platforms

Foundations

▦ Overview

⊙ **Accessibility**

🅰 App icons

📢 Branding

🎨 Color

◑ Dark Mode

⌘ Icons

🖼 Images

👥 Inclusion

▭ Layout

▣ Materials

《◈ Motion

▤ Right to left

🆂 SF Symbols

ᴀᴀ Typography

☑ Writing

Patterns

Components

Buttons and controls

Give all touchscreen controls and interactive elements a hit target that measures at least 44x44 pt. People with limited mobility need larger hit targets to help them interact with your app. It can be frustrating to interact with too-small controls in any platform, even when people use a pointer.

Characterize the accessibility of custom elements. You can use system APIs to tell assistive technologies how a component behaves. For example, using button or NSAccessibilityButton to characterize a view as a button means that VoiceOver speaks the view's description followed by the word *button*, which tells people that the view behaves like a button.

Use a consistent style hierarchy to communicate the relative importance of buttons. When you use a consistent hierarchy of button styles, people can grasp the importance of buttons based on their appearance. In iOS, iPadOS, and tvOS, for example, you can use the visually prominent filled style for the button that performs the most likely action in a view, using less prominent styles — such as gray or plain — for buttons that enable less important actions. (For developer guidance, see UIButton.Configuration.) People can also turn on Button Shapes to make it easier to distinguish active buttons from surrounding content.

Prefer the system-provided switch component. SwiftUI provides a switch that indicates its state by the position of its knob and its fill color. For some people, however, the addition of labels makes it easier to perceive whether a switch is on or off. When you use system-provided switches, iOS, iPadOS, tvOS, and watchOS automatically displays on/off glyphs within them when people turn on On/Off Labels.

Accessibility

Best practices

Interactions

VoiceOver

Text display

Color and effects

Platform considerations

Resources

Polaris

What's new
Getting started +

Foundations +
Design +
Content +

Patterns New +
Components –
  Actions
    Account connection
    Button
    Button group
    Page actions

  Layout and structure
    Alpha card Alpha
    Alpha stack Alpha
    Bleed Alpha
    Box Alpha
    Callout card
    Columns Alpha
    Divider Alpha
    Empty state
    Form layout
    Inline Alpha
    Layout
    Legacy card Legacy
    Legacy stack Legacy
    Media card
    Page

Q Search /

Accessibility

Buttons can have different states that are visually and programmatically conveyed to merchants.

- Use the ariaControls prop to add an aria-controls attribute to the button. Use the attribute to point to the unique id of the content that the button manages.

- If a button expands or collapses adjacent content, then use the ariaExpanded prop to add the aria-expanded attribute to the button. Set the value to convey the current expanded (true) or collapsed (false) state of the content.

- Use the disabled prop to set the disabled state of the button. This prevents merchants from being able to interact with the button, and conveys its inactive state to assistive technologies.

- Use the pressed prop to add an aria-pressed attribute to the button.

Navigation

Merchants generally expect buttons to submit data or take action, and for links to navigate. If navigation is required for the button component, use the `url` prop. The control will output an anchor styled as a button, instead of a button in HTML, to help convey this difference.

For more information on making accessible links, see the link component.

Labeling

The `accessibilityLabel` prop adds an `aria-label` attribute to the button, which can be accessed by assistive technologies like screen readers. Typically, this label text replaces the visible text on the button for merchants who use assistive technology.

Use `accessibilityLabel` for a button if:

- The button's visible text doesn't adequately convey the purpose of the button to non-visual merchants

- The button has no text and relies on an icon alone to convey its purpose

To help support merchants who use speech activation software as well as sighted screen reader users, make sure that the `aria-label` text includes any button text that's visible. Mismatches between visible and programmatic labeling can cause confusion, and might prevent voice recognition commands from working.

When possible, give the button visible text that clearly conveys its purpose without the use of `accessibilityLabel`. When no additional content is needed, duplicating the button text with `accessibilityLabel` isn't necessary.

Props
Best practices
  Buttons versus links
Content guidelines
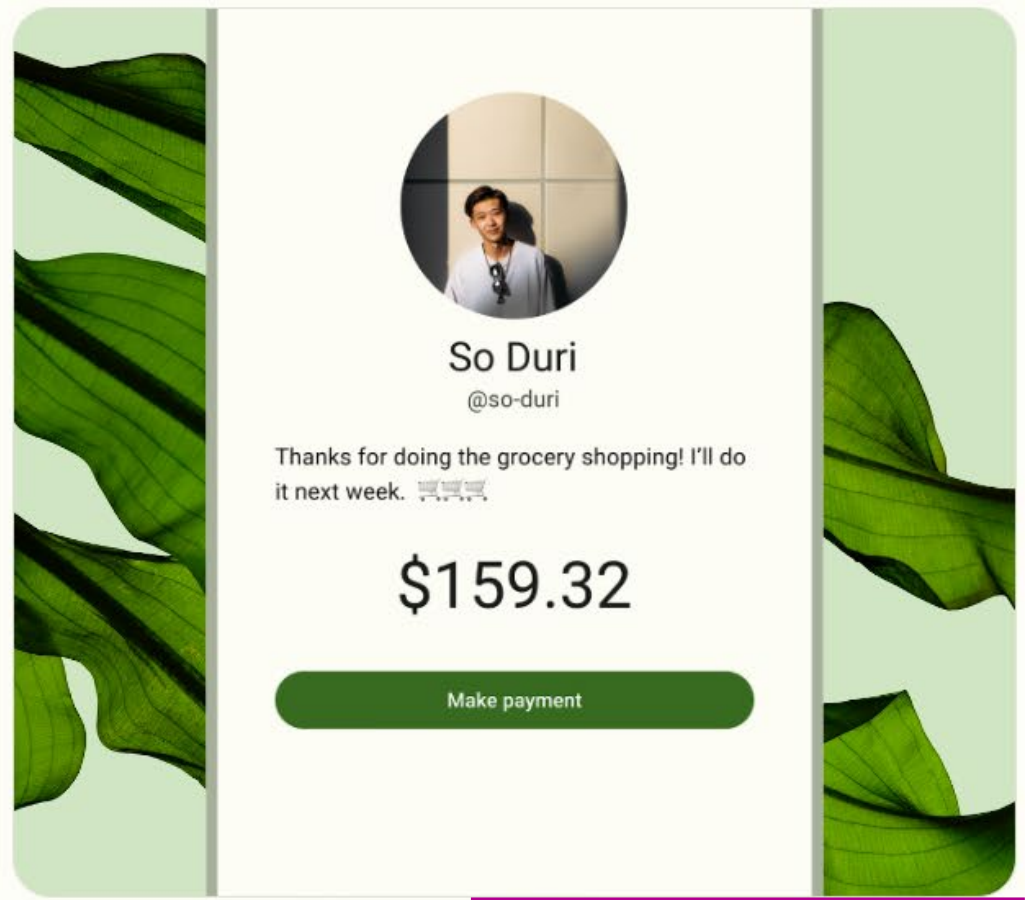Related components
Accessibility
  Labeling
  Keyboard support

Home

Get started

Develop

Foundations

Styles

Components

Blog

Components overview

Badges

Bottom app bar

Bottom sheets

Buttons ▲

    All buttons

    Common buttons

    FAB

    Extended FAB

    Icon buttons

    Segmented buttons

Cards

Checkbox

Chips

Date pickers

Dialogs

Divider

Lists

Buttons

Buttons help people take action, such as sending an email, sharing a document, or liking a comment

So Duri
@so-duri

Thanks for doing the grocery shopping! I'll do it next week. 🛒🛒🛒

$159.32

Make payment

ⓘ Overview | 🃏 Specs | �烁 Guidelines | ♿ **Accessibility**

Use cases

Users should be able to:

On this page

Buttons

Use cases

Interaction & style

LEVEL access

"

Accessibility is more like the flour. It envelops all aspects of the muffin, any type of muffin. And you can't take a bite without tasing the flour mixed in with all the other ingredients.

___

Karen Hawkins

"

Accessibility Annotations

4.1. General remark

- The search bar is a **landmark**.

4.2. Reading and focus order

On desktop, tablet, and mobile, the reading and focus order should follow this order:

1. Search bar label (read only)
2. Instructions (if applicable) (read only)
3. Search field
4. Clear button
5. Search button

Reading and focus order on desktop and tablet
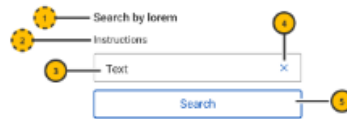
Reading and focus order on mobile

4.3. Target areas

The search bar contains 3 distinctive target areas, following the respective focus states:

Desktop and tablet	Mobile
Search by lorem	Search by lorem

4.5. Visible states

State	Desktop and tablet visual	Mobile visual	Characteristics
Default			Refer to default state for Text input + Refer to default state for Secondary button + **Clear icon color**: $ds-color-interactive
Hover on Search input			Refer to hover state for Text input
Hover on Clear button			**Icon style**: solid **Clear button color**: $ds-color-interactive-hover
Hover on Search button			Refer to hover state for Secondary button
Focus on Search input			Refer to focus state for Text input

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Figma Dominates

Most Popular UI Design Tools
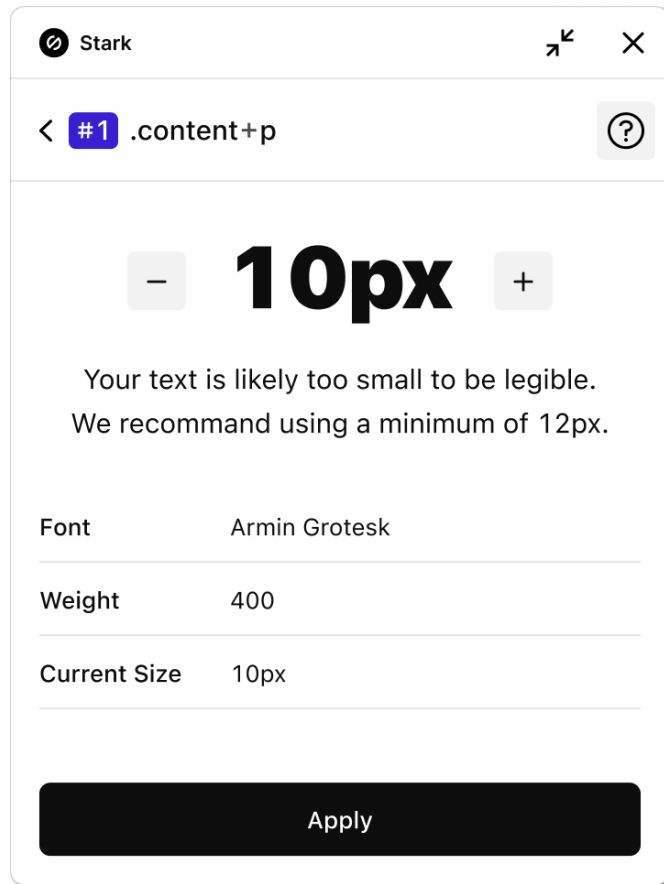
Which software do you primarily use for UI design?

Legend: Used as primary tool | Used as secondary tool

Tools listed (top to bottom): Figma, Adobe XD, Sketch, Adobe Illustrator, Adobe Photoshop, Lunacy, Axure, Framer, Affinity Designer, Antetype, UXPin, Balsamiq, Penpot, Uizard, Proto.io, Other

Source: UX Tools Survey 2022
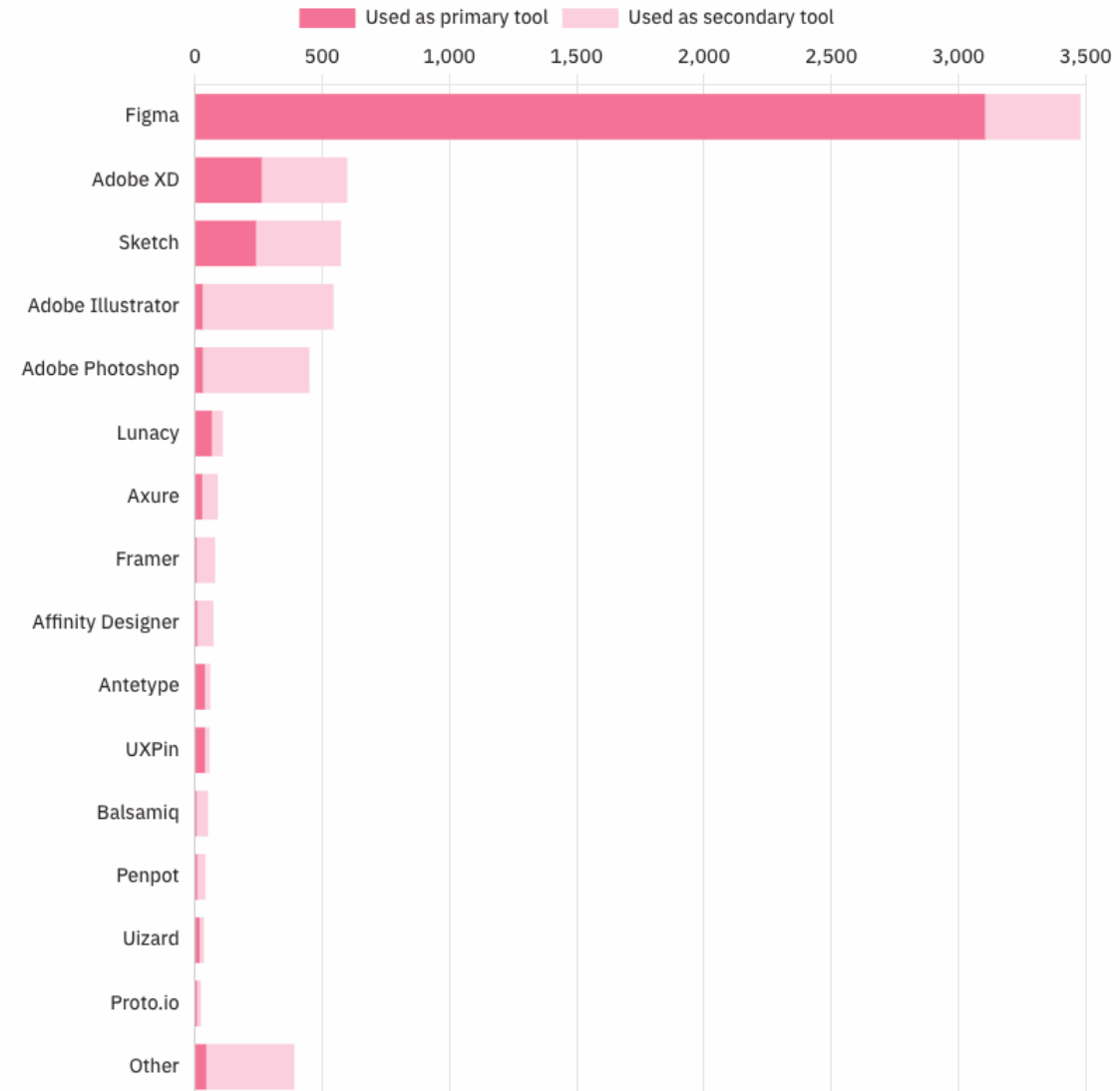
A11y Annotation Kit Figma Plugin
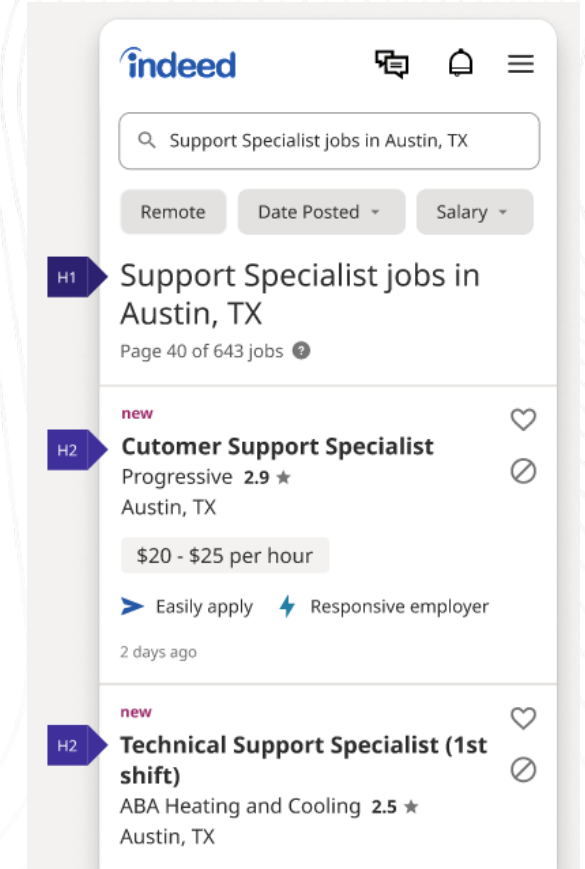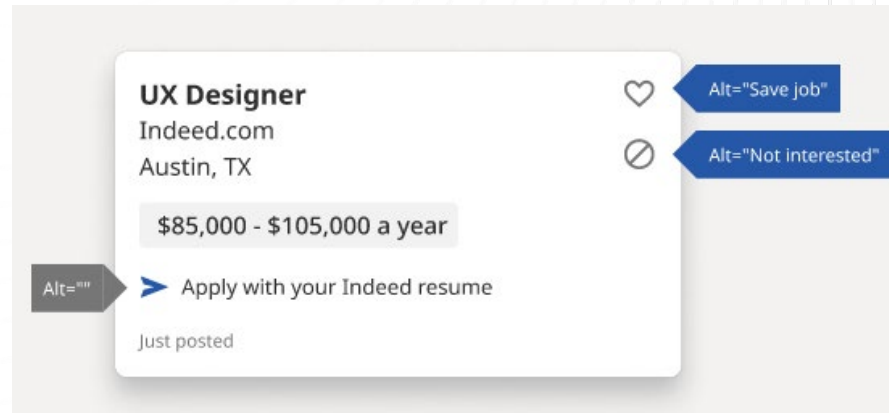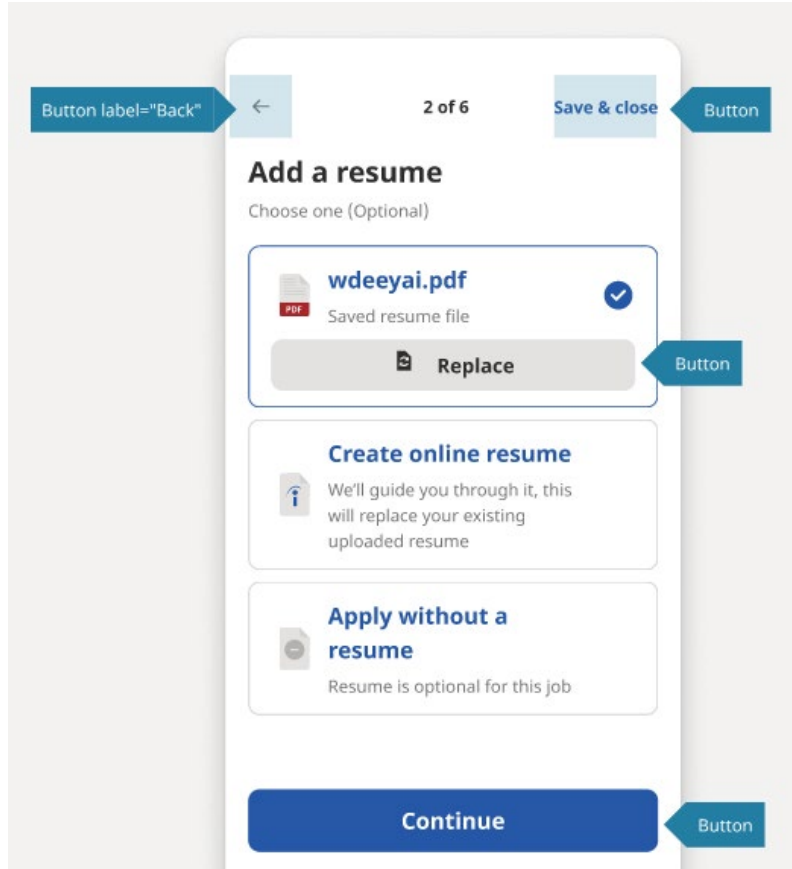
Stark Figma Plugin
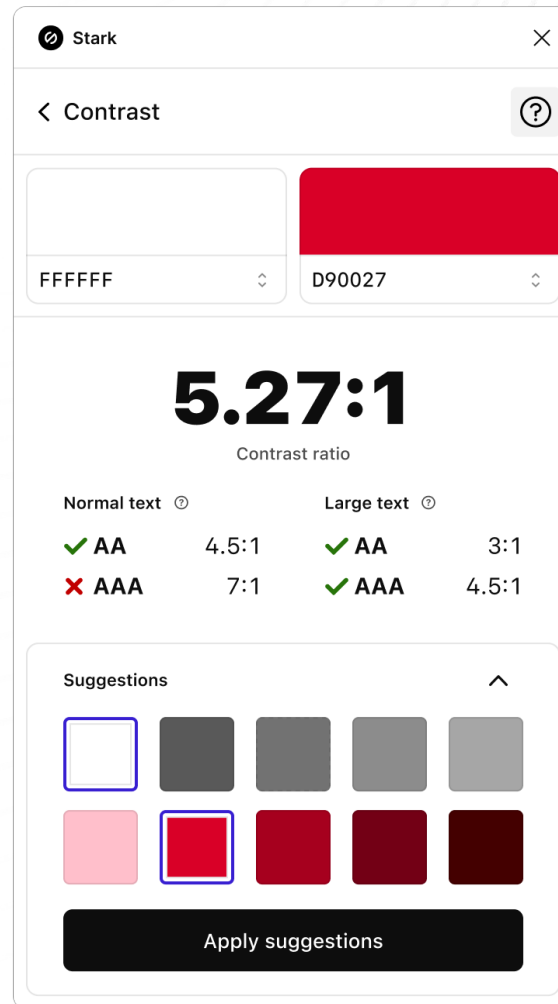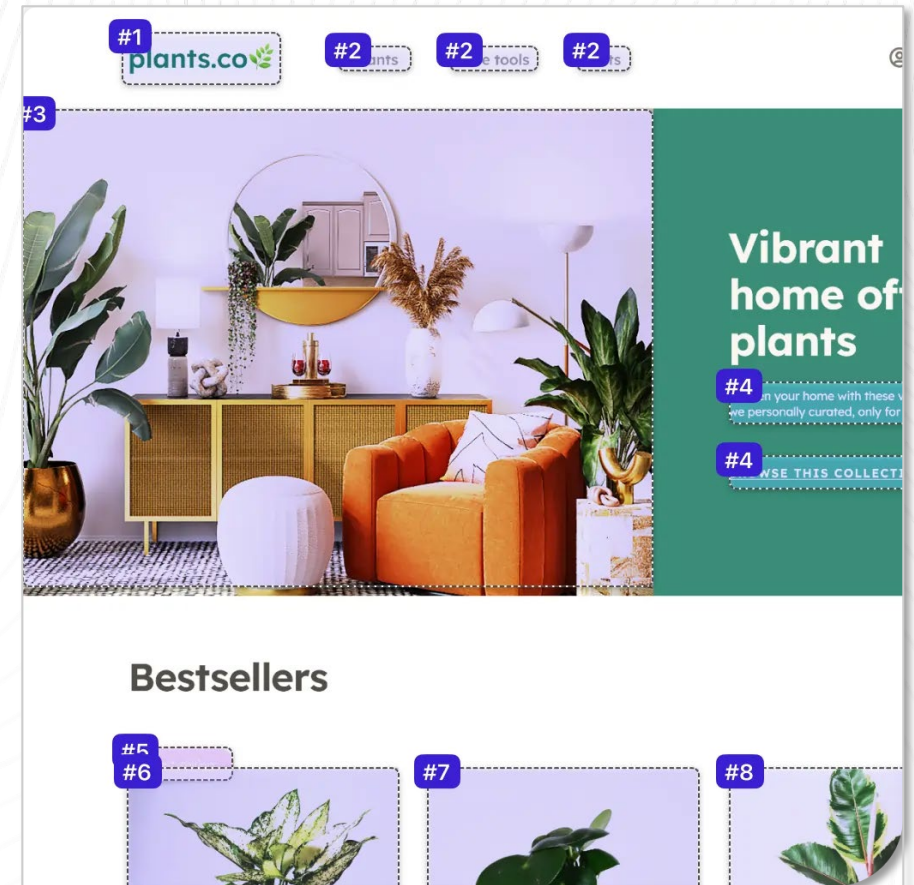
Include Figma Plugin
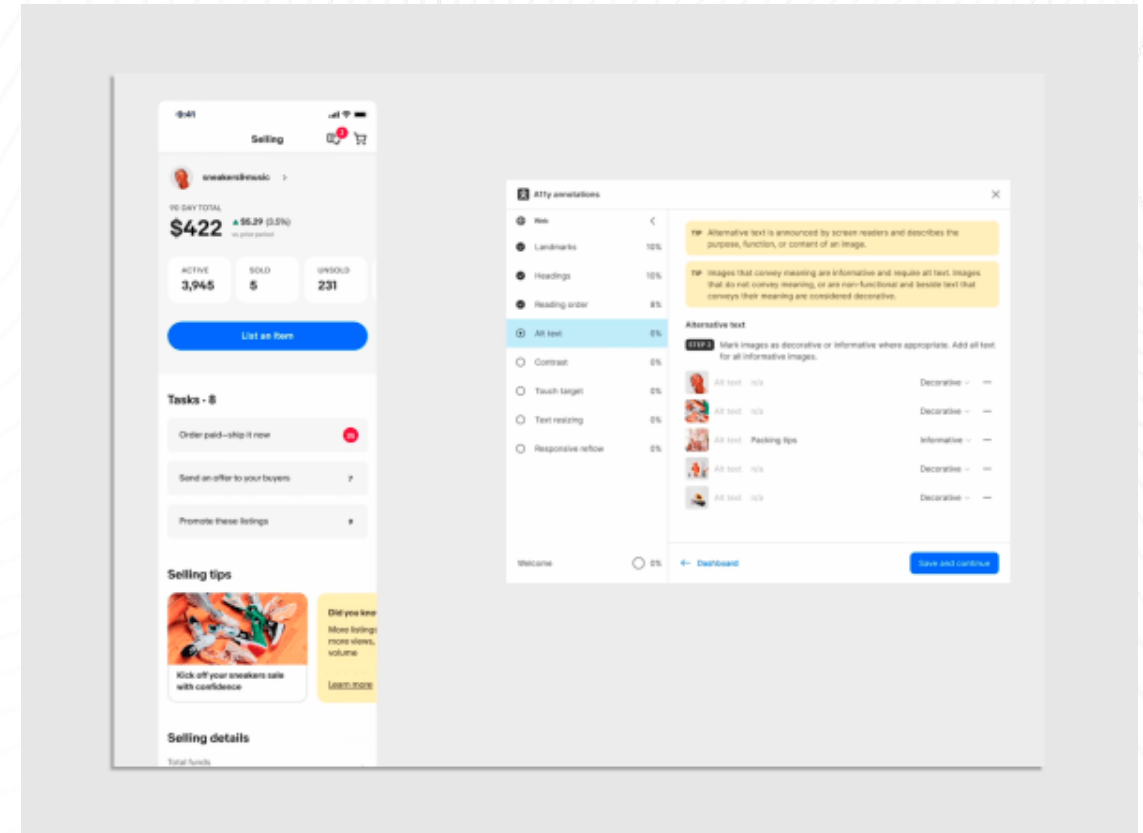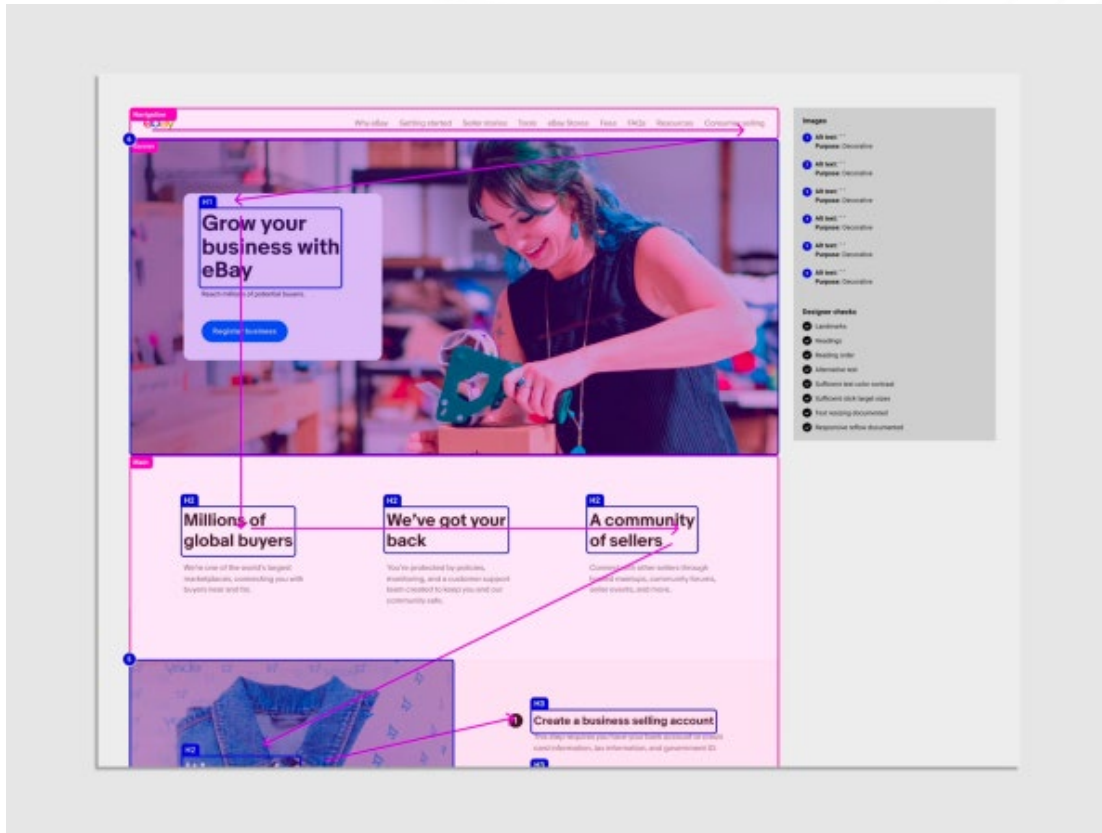
Popular Design System Programs

Zeroheight
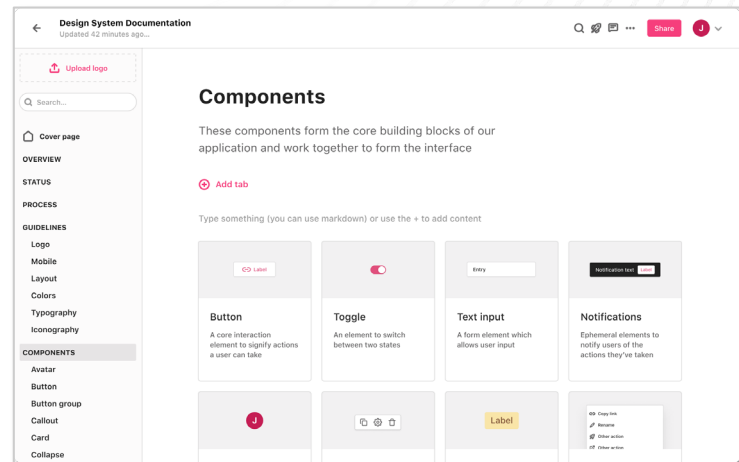
Knapsack
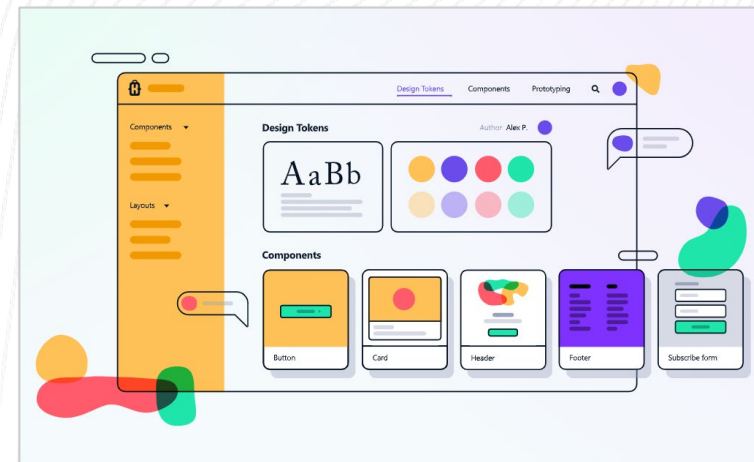
InVision DSM
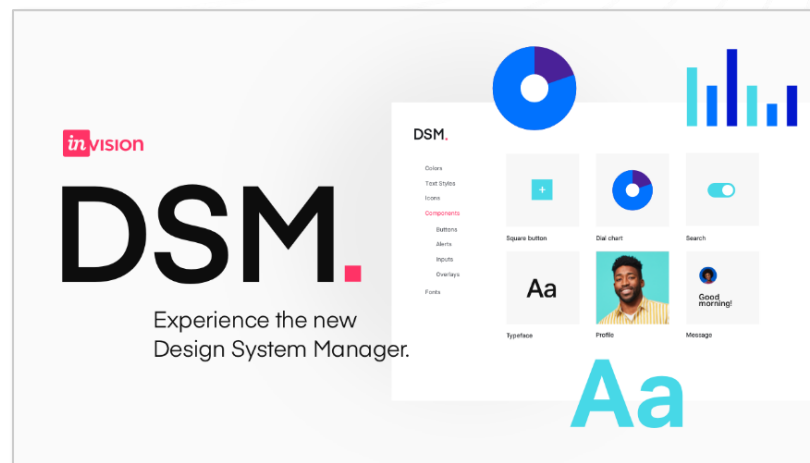
Supernova

Simplified Workflow

Atom

Molecule

Organism

Designer Track

Designs

Design Documentation

Developer Track

Code

Development Documentation

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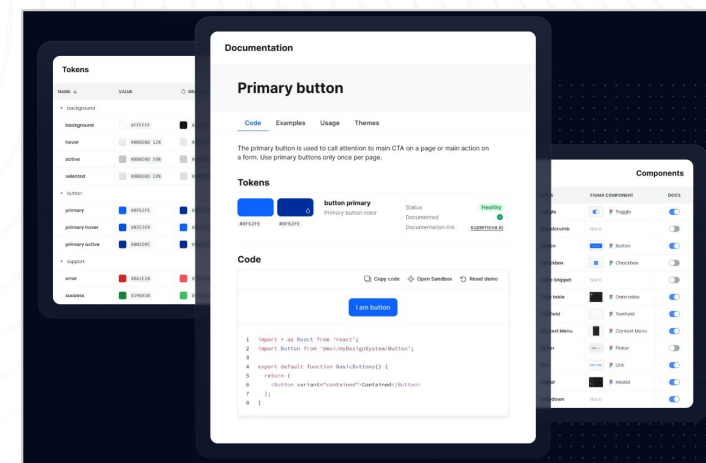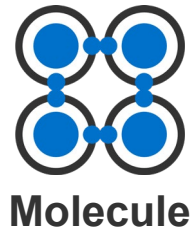
Simplified Workflow: Designer Track
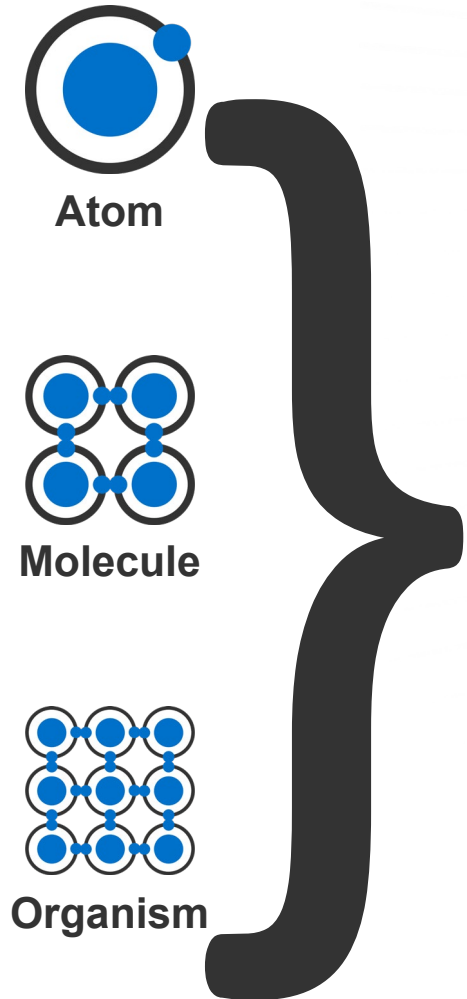
LEVEL access

Designer Track

Designs

All permutations as to what it looks like

Design Documentation

All expectations about how it works and how it behaves

Atom

Molecule

Organism

Developer Track

Code

Development Documentation

Designer Track

Designs

Design Documentation

Atom

Molecule

Organism

Developer Track

Code

Development Documentation

Simplified Workflow: Improve Communication
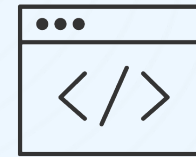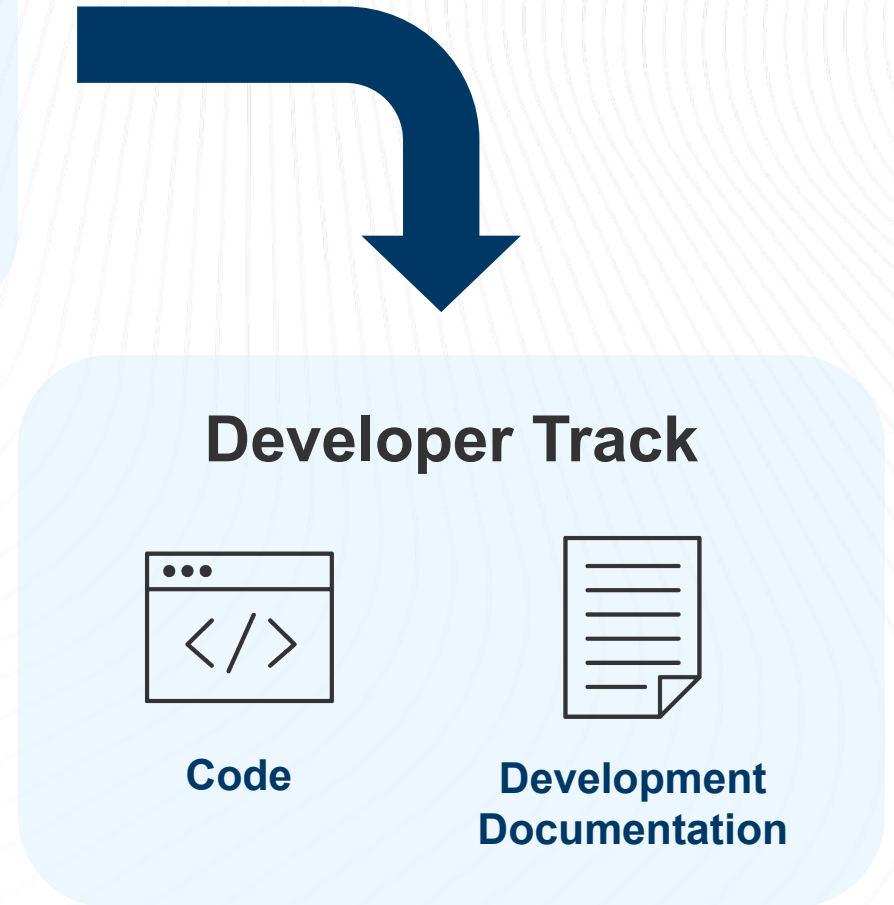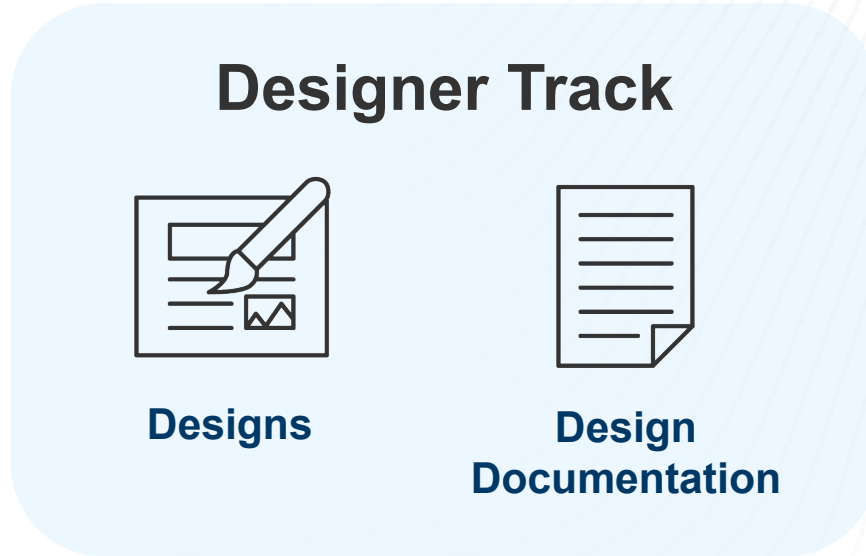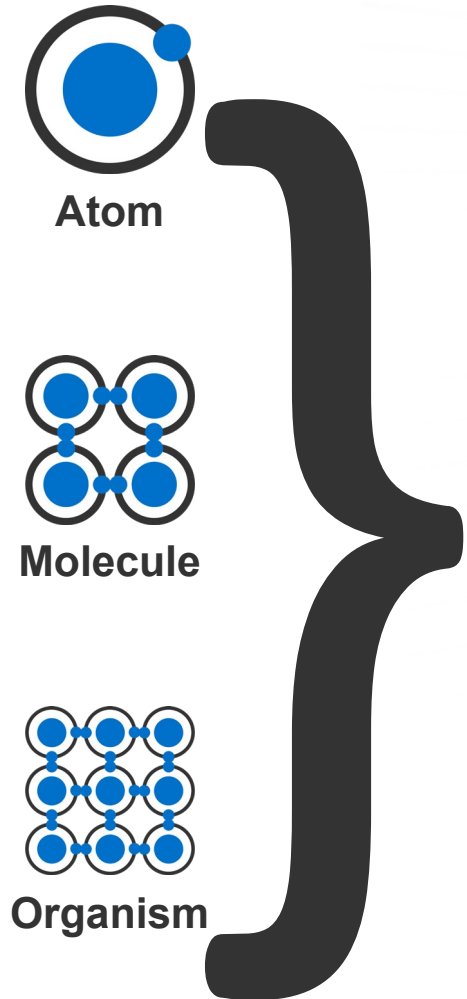

Atom

Molecule

Organism

Designer Track

Designs

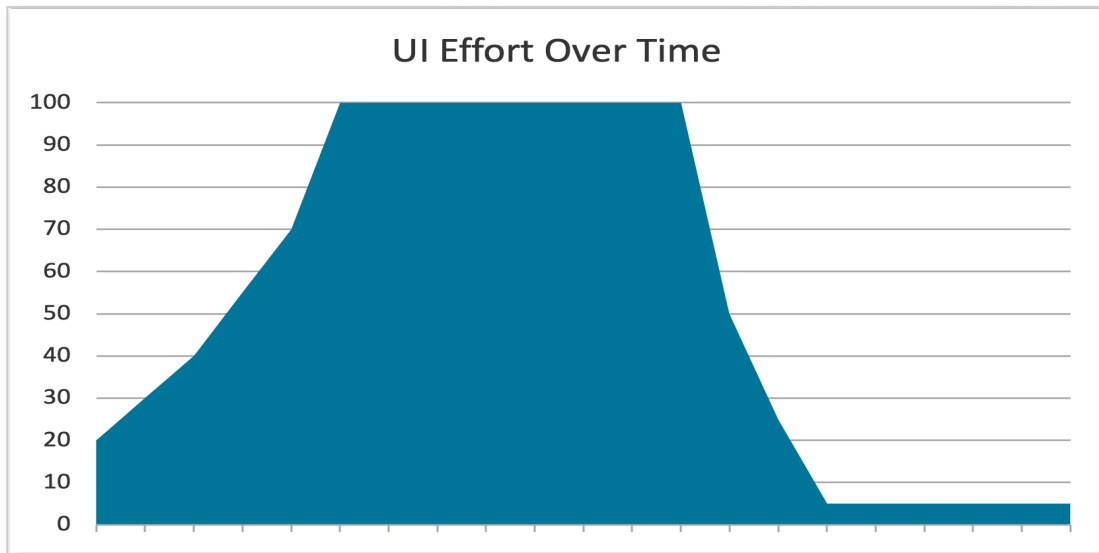Design Documentation

Developer Track

Code

Development Documentation

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Spectrum of Effort Over Time

UX Effort Over Time

Content Effort Over Time

UI Effort Over Time

Dev Effort Over Time

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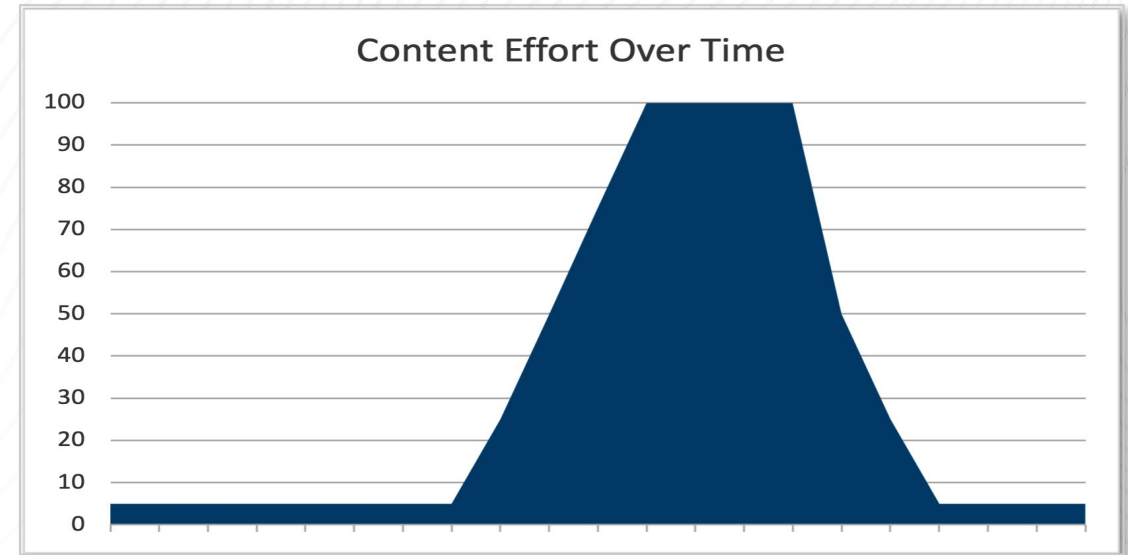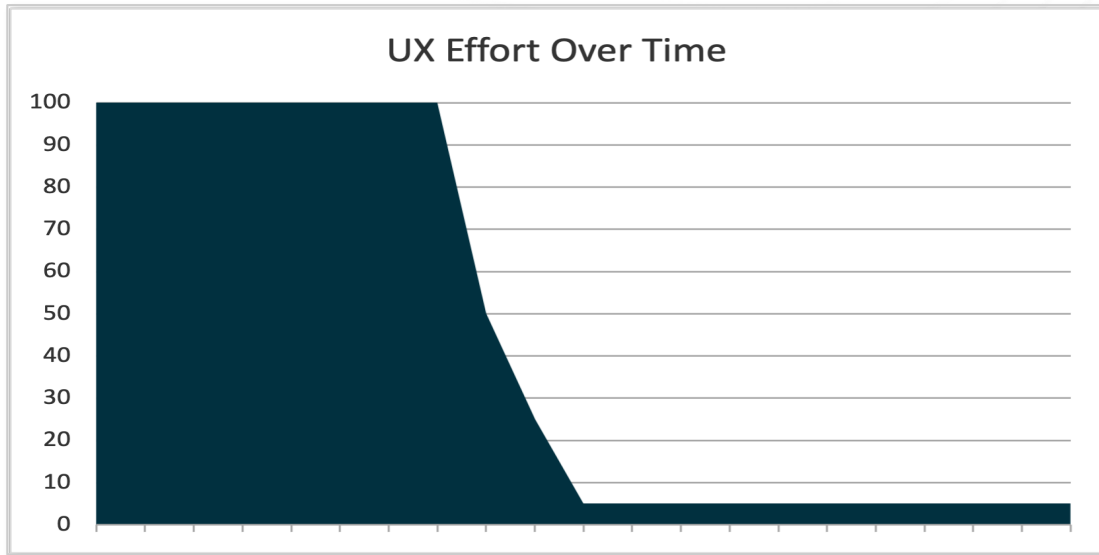
# " Progress over perfection

___

Meryl Evans

Individual Activities to Improve Accessibility Output

- Understand the details of your accessibility responsibilities

- Apply relevant accessibility considerations to your designs

- Share your designs with teammates (UX, UI, content, dev) / collaborate with teammates to problem solve together

- Test your designs for accessibility
  - Tools
  - Experts
  - Etc.

- Get good at documenting accessibility requirements

- Apply accessible design thinking to other collateral
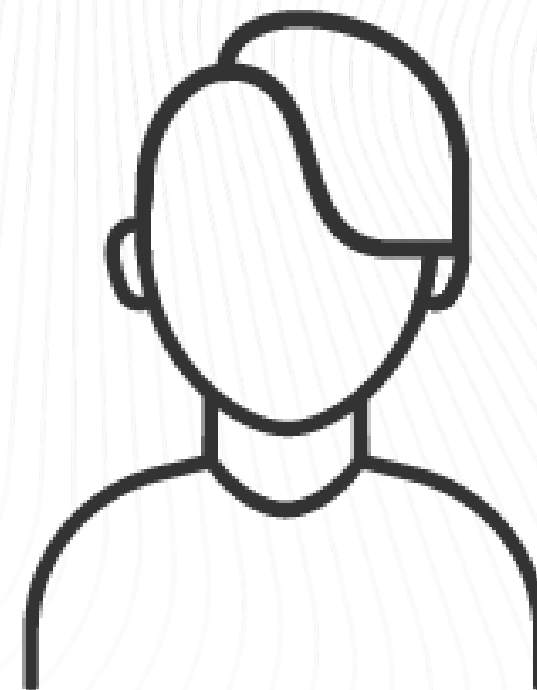
Team Activities to Improve Accessibility Output

- Timelines should allow for:
  - Education
  - Collaboration
  - Accessibility documentation

- Update processes:
  - To allow for collaboration and early feedback
  - To review the accessibility of components that are slated to be added to the design system, ensuring minimally acceptable accessibility adherence is met

- Set policies:
  - Who can update which accessibility considerations for which atoms / molecules / organisms / pages / copy, etc.
  - When and how to engage the right individual / team to update / create a new version of an atom / molecule / organism / page / copy, etc.

- Track progress:
  - Accessibility metrics and KPIs in place and consistently tracked and analyzed
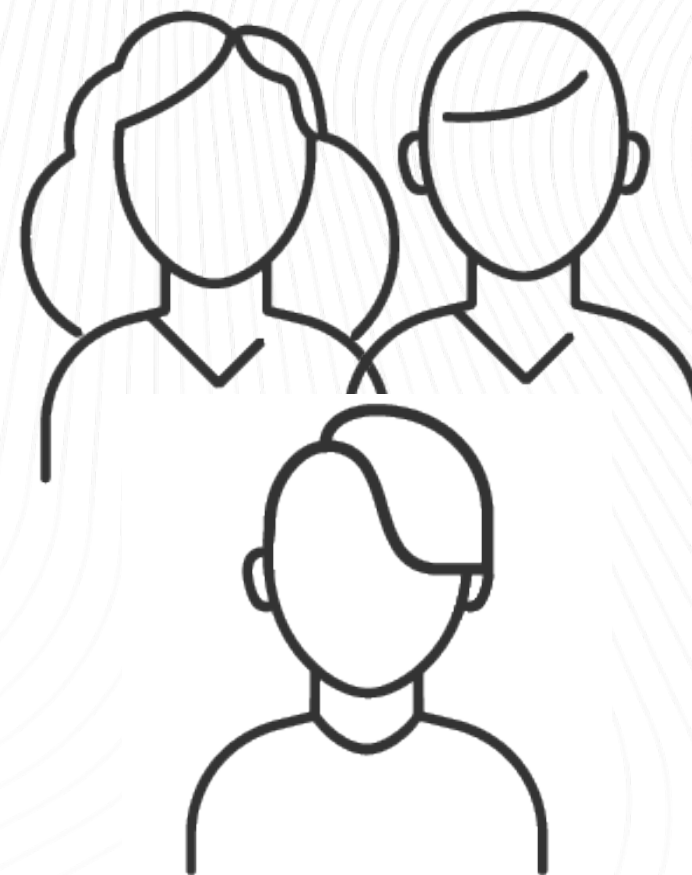
Organizational Activities to Improve Accessibility Output

- Accessibility included in your mission statement and core values

- Have an accessibility champion, coordinator, or team

- Policies are set for adherence to WCAG and / or other technical standards / local laws

- Accessibility measures taken for both digital and physical spaces

- Accessibility incorporated internally, in HR, in procurement, etc.

- Accessibility metrics and KPIs in place and consistently tracked and analyzed

- Accessibility training is provided to all employees

- Collaboration with disability advocacy groups or experts
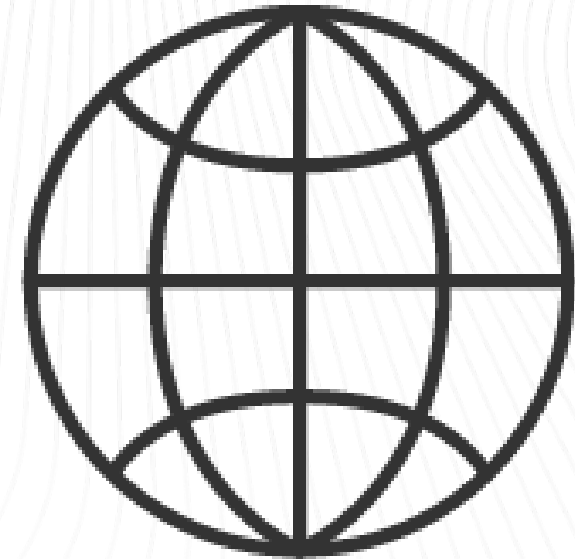
Aim to have a comprehensive and integrated approach to accessibility across all aspects of your business.

Design System Inheritance
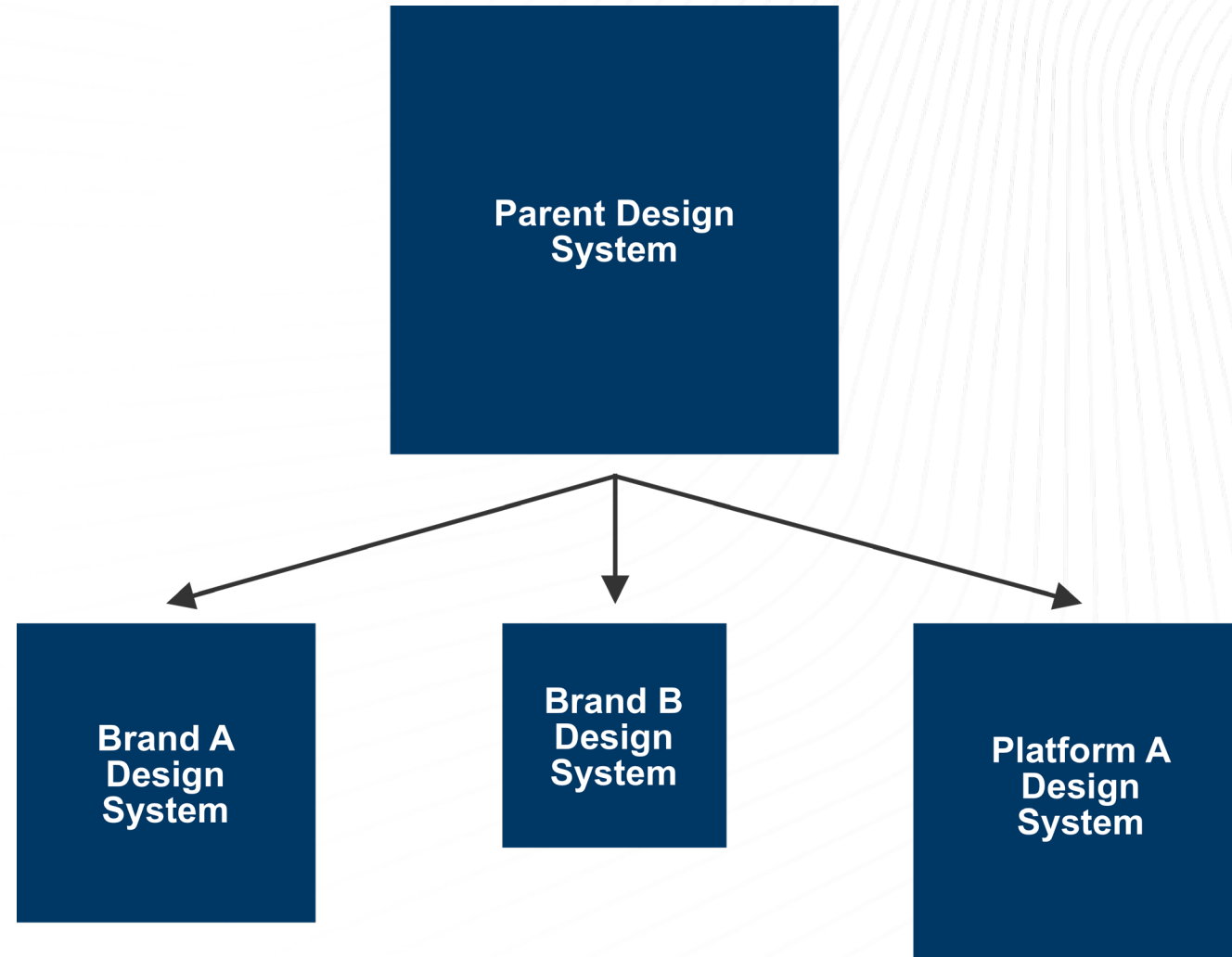
SECTION 4

# Wrap Up

Recap: Level Setting on Design Systems

- A design system is a complete set of standards intended to manage design at scale using reusable components and patterns. It is comprised of reusable design elements, reusable coded elements, and their documentation.

- The power of design systems is that they afford organizations the opportunity to create digital solutions efficiently, consistently, and at scale.

- Design systems map well to our mental models of componentization and / or atomic design.

- Spend quality time designing all permutations of an element. Thinking in terms of design tokens and their variability can greatly help.

Recap: Digital Accessible Design Roles and Responsibilities
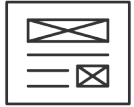
User Experience Designer Responsibilities

- Architecture
- Structure
- Logic
- Flow
- Navigation
- Wayfinding
- Interaction
- Behavior

User Interface Designer Responsibilities

- Brand
- Styling
- Look and feel
- Color
- Typography
- Imagery and illustrations
- Layout and grid
- Motion and animation

Content Designer Responsibilities

- Content strategy
- Content audit
- Content governance
- Tone, style and voice
- Writing copy
- Editing copy

Each role has design responsibilities and documentation responsibilities.

Recap: Practically Embedding Accessibility in Design Systems

- Accessibility should be considered like the flour in a muffin, as opposed to like the blueberries.

- For every atom, molecule, and organism, designers need to:

  - Design for all visual permutations

  - Document all expectations about how each element works and how it behaves

- Design documentation under-communicates. To remedy this, increase communication and feedback.

Questions?

Thank you

Karen Hawkins

karen.hawkins@levelaccess.com

levelaccess.com