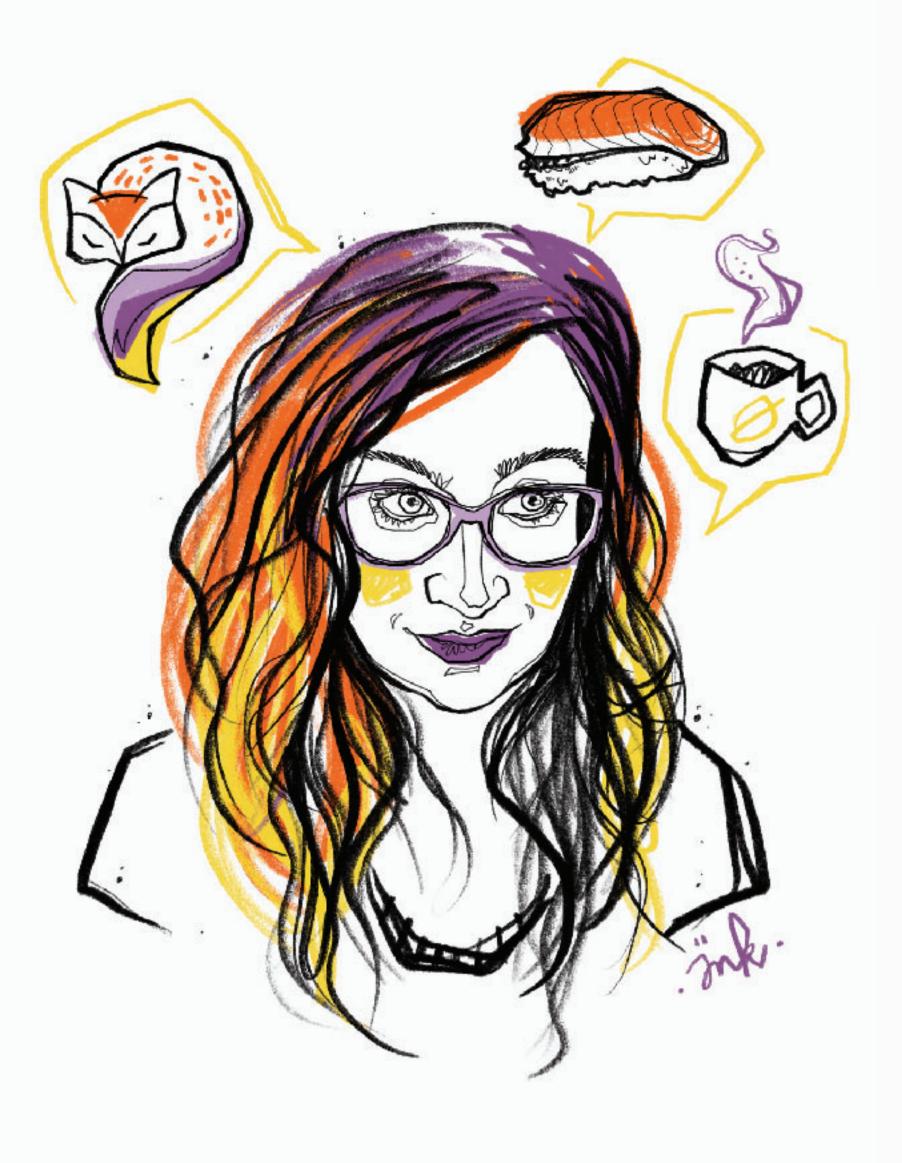


+A Designer's Guide to Documenting Accessibility & User Interactions





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@WalterStephanie

User Researcher & UX Designer

Mobile expert. Pixel & CSS Lover



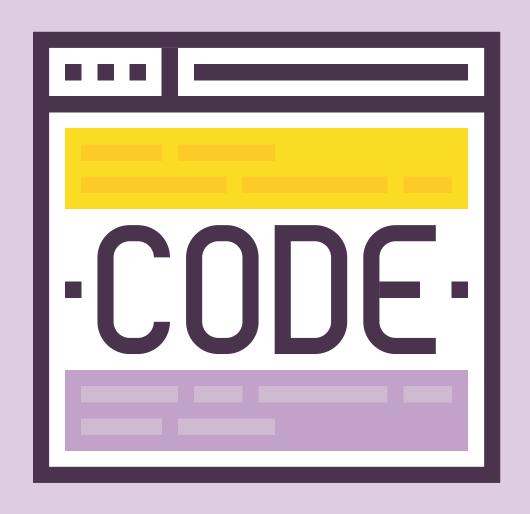


Who should document accessibility?



Project Managers:

Define accessibility requirements at project level (AA, AAA, etc.)



Developers & Accessibility experts

Document technical implementation (correct markup, ARIA roles, landmarks, etc.)



Testers / QA Team

Define and document accessibility test cases.



Designers

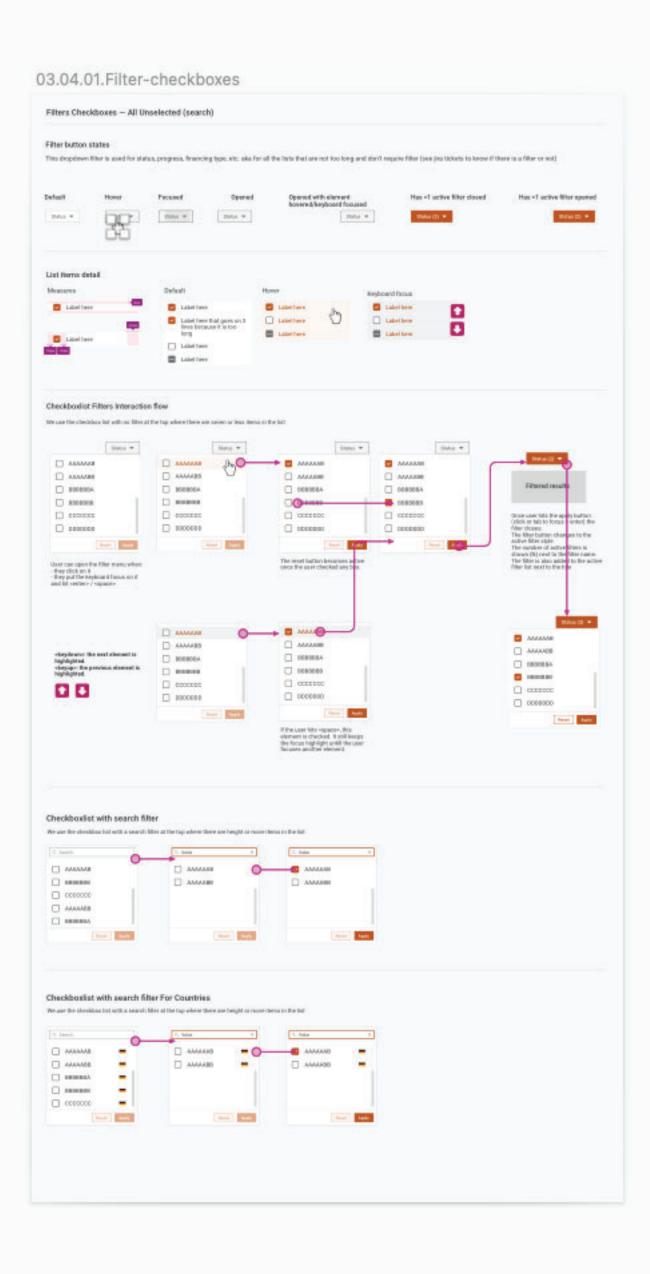
Design and document how it works, what it looks like, but also navigation, the "hidden" interactions and what assistive technologies should announce

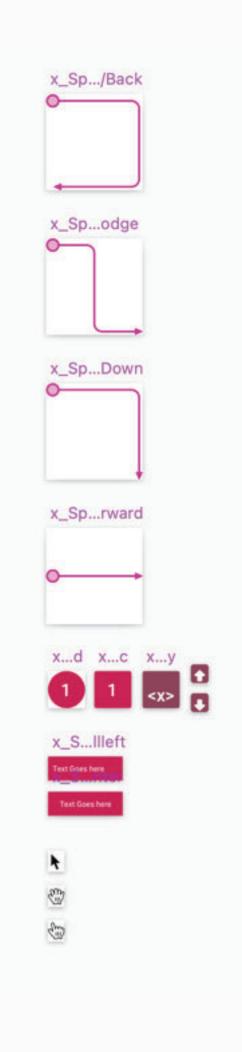


How and Where should I document?



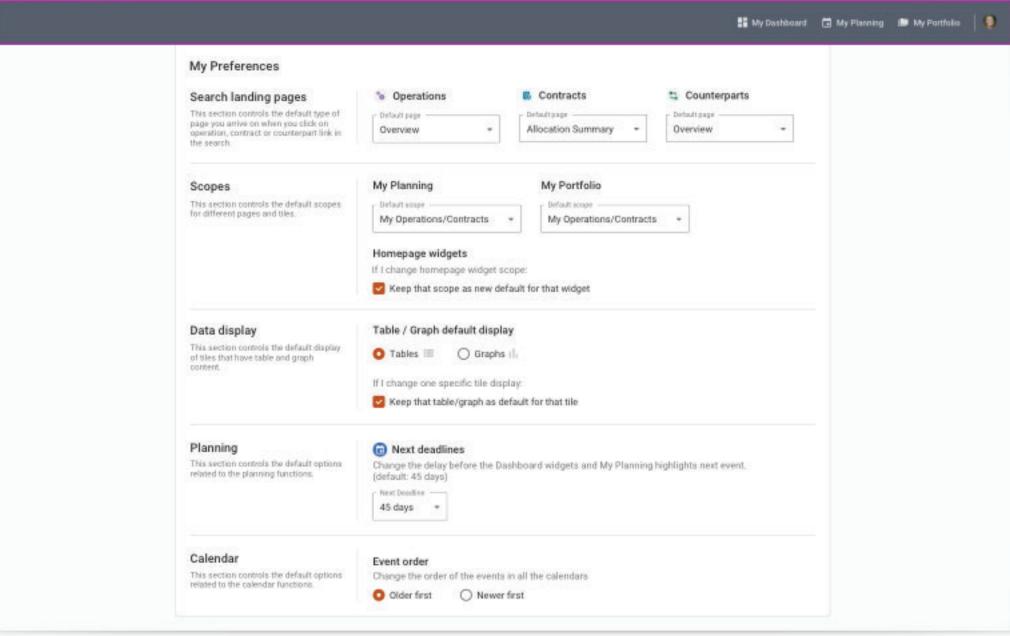
Determine the best format with the team



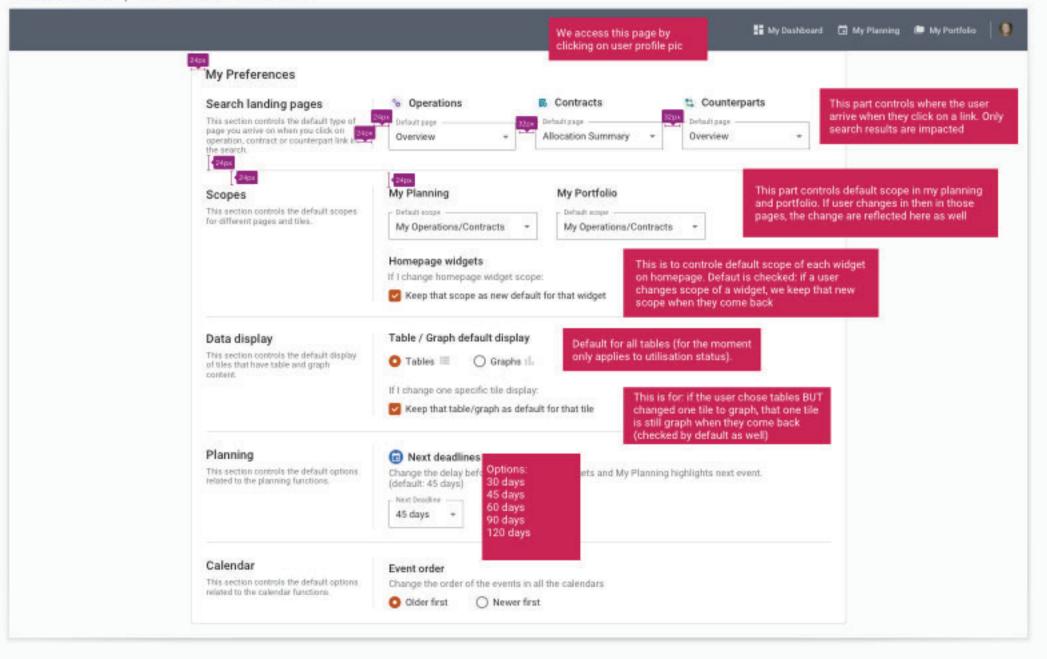


Annotations and detailed specs in separate design system Sketch pages

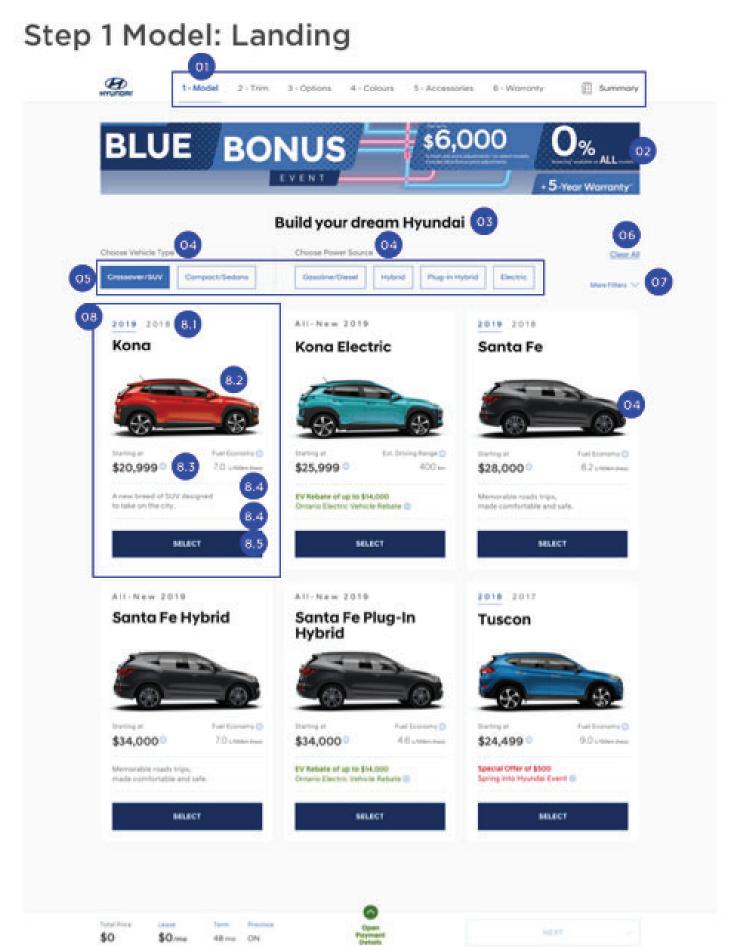
09.01.00.0ser-pret--detault



09.01.00.User-pref--default--annotation



Annotations directly on a second mockup



NOTE: (AR) = Accessibility Requirement

Stepped Navigation

- This element will display the user's current step in the process as active (in blue) and all other states as either inactive or active (depending on what step they are at).
- Note: The user must select a model before they can
 move onto the next step. Hence initially, all other steps
 following step 1 are disabled as shown in this example. But
 if the user has advanced past step 2 wherein all steps are
 enabled, and they come back to this first step, the steps
 will all remain enabled unless the user selects a new model
 which would be like starting all over again.
- (AR) For screen reader users, the screen reader should say something like "[Link] Step 1 of 6 Model".
- 02 Banner

This space is reserved for a banner.

3 Heading

(AR) This is the <h1>.

- Heading
 - (AR) This is an <h3>.
 - (AR) The screen reader should say something like "filter by {text}" (i.e. "filter by vehicle type").
- os Filters
 - (AR) Please make the filter area a landmark, and maybe call it something like "filters". Thus it should have a hidden heading level 2, something like "filters".
 - On click of a filter, the contents of the page update, such that the only content that will display is that which contains the selected filter.
 - Selected state: blue with white text.
 - Unselected state: white / light grey with blue outline.
 - (AR) For screen reader users, the screen reader should say something like "[Button] filter by {filter name}".
 - (AR) For screen reader users, once a filter is selected or unselected, we will provide an update as to how many cards are now being displayed. Thus the user will hear something like "now showing x cards" where "x" is the number of cards showing (i.e. that pertain to the selected filter).
- 06 Clear A
 - On click of this link, all selected filters will be removed and the page will be reset to its default state.
 - If no filters have been selected, then this button is disabled. Once one filter has been selected, it becomes enabled.
- (AR) For screen reader users, the screen reader should say something like "[Button] Clear All Filters".

More Filters

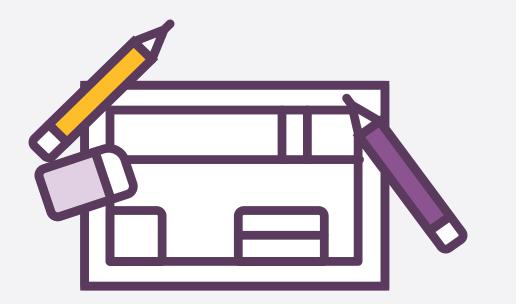
- On click of this element, the page will display additional filters and the field of automotive tiles will be pushed down to accommodate the additional space needed.
- (AR) For screen reader users, the screen reader should

Detailed annotations using numbers and margin comments

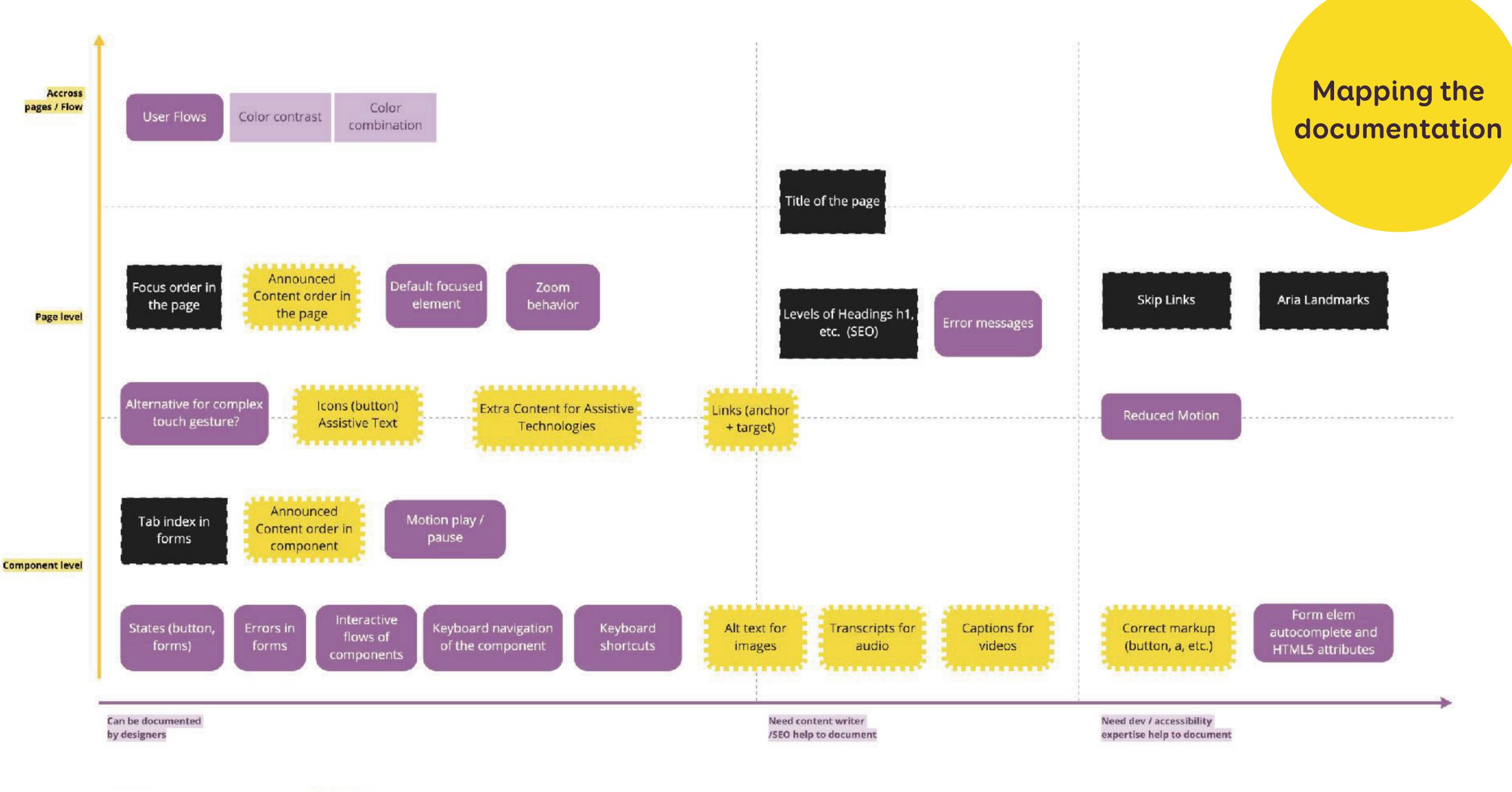
Image from Karen Hawkins



This is NOT a substitute for communicating with people!



What exactly can or should designers document?





Colors, borders and textures Primary Secondary Dark grays Light grays AAA AA AA big text AAA AAA AA AAA AA AA AAA AA AA #024f60 #303030 #f2f2f2 #0f7e96 #747474 #2ca3bc #631737 #a5275c #bc537c #lalala #cbcaca #e4e4e3 #df3603 #747474 #024f60 #0f7e96 #lalala #bc537c Colour Contrast Analyser (CCA) Lorem kitten Foreground colour texte color. #762447 HEX v 11 珠 🗸 🗿 Background colour #FEFFFE HEX v Dark text #222222 # 2 0 ▼ Sample preview Text #727272 border #dfdfdf example text showing contrast WCAG 2.1 results 9.9:1 Pass (large text) Pass (regular text) ► 1.4.6 Contrast (Enhanced) (AAA) Color Palette & Pass (regular text) Pass (large text) ► 1.4.11 Non-text Contrast (AA) Pass (UI components and graphical objects) Contrast

Visual Design



Test many foreground and background color combos for compliance with WCAG 2.0 minimum contrast.

Include one color per line, with an optional comma-separated label.

Rows

#FFFFFF, White #FEDC2A, Yellow #5A3B5D, Dark Purple #8B538F, Light Purple #C3A3C9, Lightst purple #777777, Gray #555555, Darker Gray

Columns

#FFFFF, White
#FEDC2A, Yellow
#5A3B5D, Dark Purple
#8B538F, Light Purple
#C3A3C9, Lightst purple
#777777, Gray
#555555, Darker Gray
#444444, Darker Darker Gray
#333333, Fifty Shades of darker

Use the same rows & columns values

Tile Size

S	M	L
(80×80)	(100×100)	(150×150)

Show

AAA	AA	AA18	DNP
-----	----	------	-----

Text Background	White #FFFFFF	Yellow #FEDC2A	Dark Purp #5A3B5D	e Light Purple #8B538F	Lightst purple #C3A3C9	Gray #777777	Darker Gray #555555	Darker Darker Gray #444444	Fifty Shades of darker gray #333333	Dorian Gray? #222222
White #FFFFFF		Text DNP 1.3	Text AAA 9.	Text 4 AA 5.6	Text DNP 2.2	Text AA18 4.4	Text AAA 7.4	Text 9.7	Text AAA 12.6	Text
Yellow #FEDC2A	Text DNP 1.3		Text AA 6.	Text 9 AA18 4.1	DNP 1.6	Text AA18 3.3	Text AA 5.5	Text AAA 7.1	Text AAA 9.3	Text
Dark Purple #5A3B5D	Text	Text AA 6.9		Text DNP 1.6	Text AA18 4.2	Text DNP 2.1	DNP 1.2	DNP 1	Text DNP 1.3	Text DNP 1.6
Light Purple #8B538F	Text AA 5.6	Text AA18 4.1	Text DNP 1	6	Text DNP 2.5	DNP 1.2	Text DNP 1.3	Text DNP 1.7	Text DNP 2.2	Text DNP 2.6
Lightst purple #C3A3C9	Text DNP 2.2	Text DNP 1.6	Text AA18 4	Text 2 DNP 2.5		Text DNP 2	Text AA18 3.3	Text AA18 4.3	Text 5.6	Text
Gray #777777	Text AA18 4.4	Text AA18 3.3	Text DNP 2	1 DNP 1.2	Text DNP 2		Text DNP 1.6	Text DNP 2.1	Text	Text
Darker Gray #555555	Text	Text 5.5	Text	Text	Text	Text		Text	Text	

AAA Pass, AAA (7+)

AA Pass, AA (4.5+)

AA18 Pass, Large Text Only (3+)

DNP Does Not Pass

A contrast grid matrix to help me compare ratios



HOME

ABOUT M

WOR

WCAG for designers

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Here's a checklist I'm working on to help ensure the products I design comply with the Web Content Accessibility Guidelines (WCAG).

I appreciate accessibility is more than just a checklist of WCAG criteria but it's a useful place to start! I'm always learning so if you spot any obvious errors or omissions get in touch and help me out.

### Colour

### Use of Colour (A)

**~~~** 

Don't rely on colour alone to communicate meaning or to distinguish visual elements. People see colours differently, are colour blind or have difficulty telling different colours apart.

### How can I use colour thoughtfully?

- Provide an additional indicator to colour a visible border, label, underline or icon.
- If charts and graphics rely on colour then add distinctive, non-colour differences like hatching patterns or directly applied labels.
- Learn about colour blindness
- Install this colour blindness simulator to check your designs.

WCAG guidelines 1.4.1

### Contrast minimum (AA)

~~~

Giving text a strong contrast colour against the background makes it easier for

Don't forget to explain the ratios (3:1, 4:), what AA, AAA, large and small text mean to the design team somewhere!

Value 🗌

Default

palette.primary.main rgba(199,83,15,1);

The default state of the button when there's no current user action.



Checkboxes

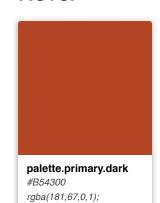
Default

Use checkboxes when users can select multiple options in a list

The checkbox icon is 20x20 px

Use checkboxes when there's a on/off state

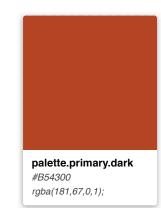




The state when the user's mouse hovers the element







The state when the button gets the focus state (for example via keyboard navigation) Default browser outline focus (design depends on the browser)



Active



Disable



The state when the user presses the button



→ → Action Verb → Action Verb + Action

Interactive states (buttons, form elements, etc.)

Focus Value Value 🔲 Checked Value Value 🔽 Disabled Value Value 🔲 Disabled checked Value Value 🗸 Indeterminate Value Value 🗖 **Disabled Indeterminate** Value Value 🔲

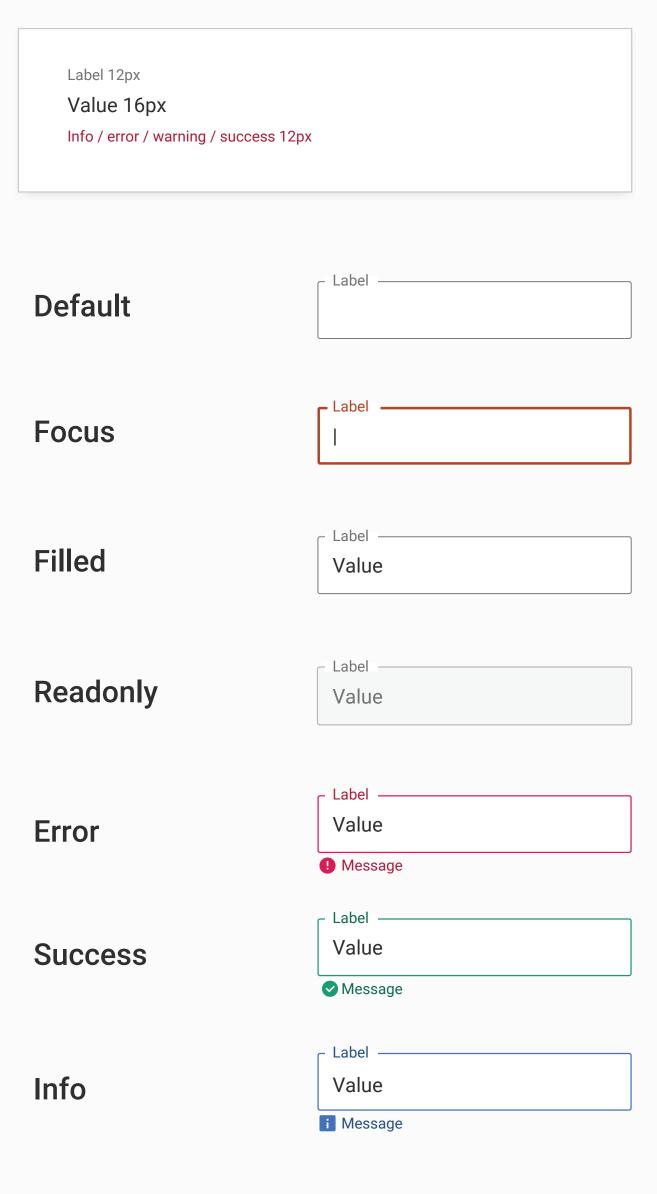
Value

Radio buttons

Use radio buttons when user can only select one option in a list of options The radio button icon is 20x20 px

Default Value Value 🔘 Focus Value Value 🔵 Checked Value Value 👩 Disabled Value Value Disabled checked Value Value

Component



Usage in the search result page to filter out by year range



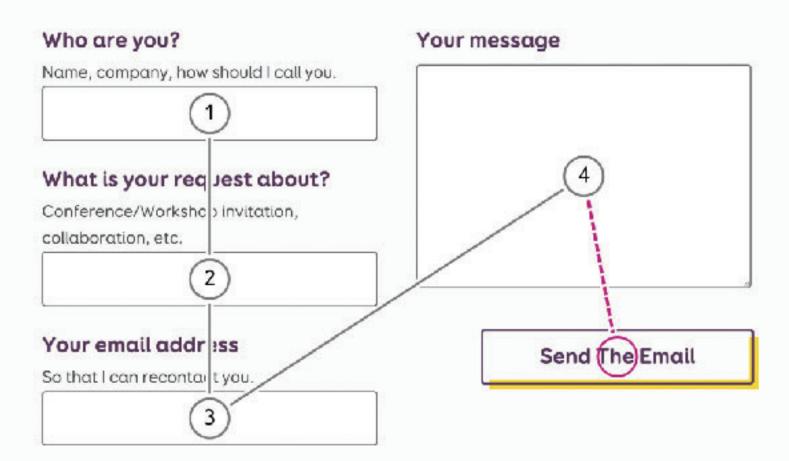


Error case: if user enters something that is not a year with 4 digits and if users enters letters in that field

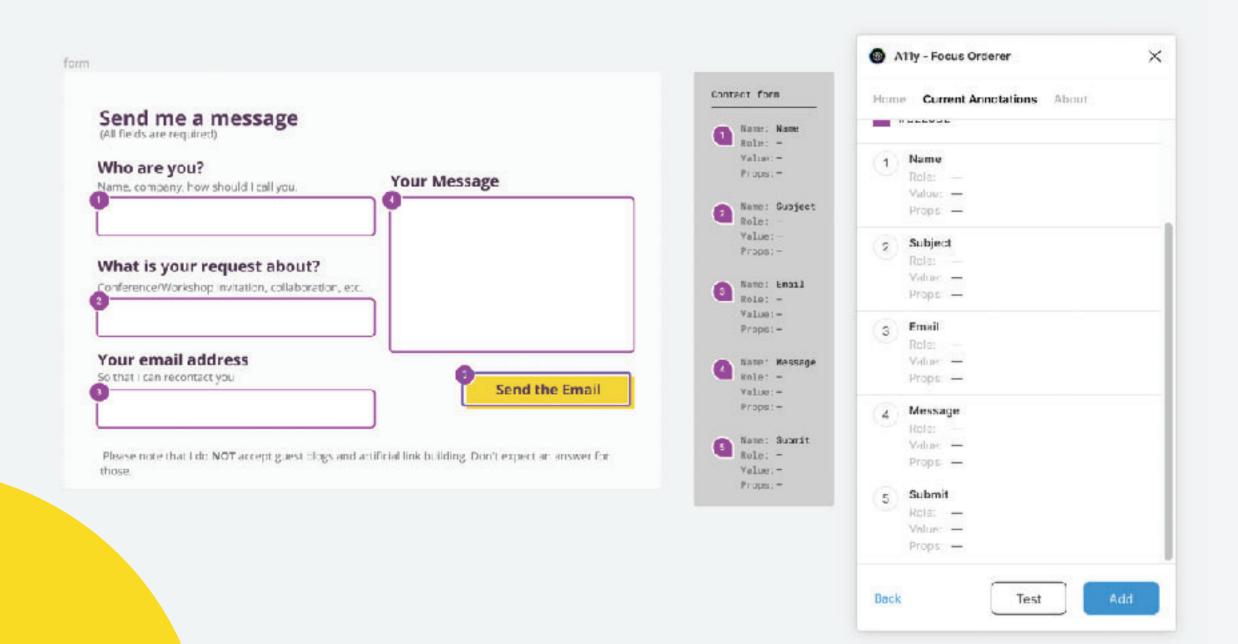
Status of form elements: error, success, etc.

Send me a message

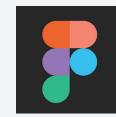
(All fields are required)



Please note that I do **NOT** accept guest blogs and artificial link building. Don't expect an answer for those.



Focus order in form elements



More form accessibility experts can help with

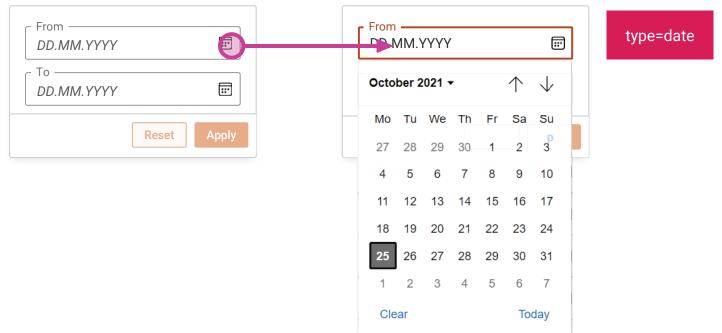
- Correct HTML5 type
- Autocomplete, autofill, etc.
- Specific "invisible labels"
- Legends and field grouping markup
- Default focused elements when page opens

Select



We use native HTML option when it opens

Date range filter

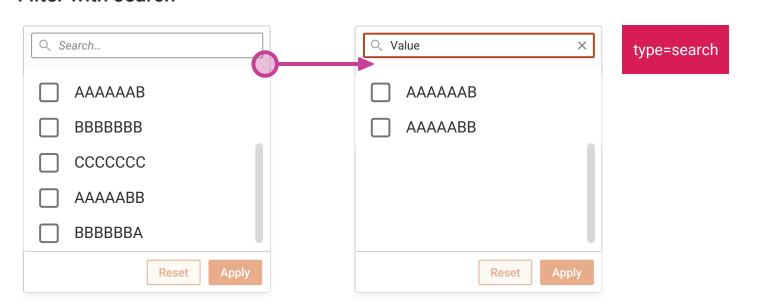


HTMI 5 date nicker

Note that the calendar icon might change depending on browser.

We can't change its color (that color is not in the styleguide but this is okay)

Filter with search

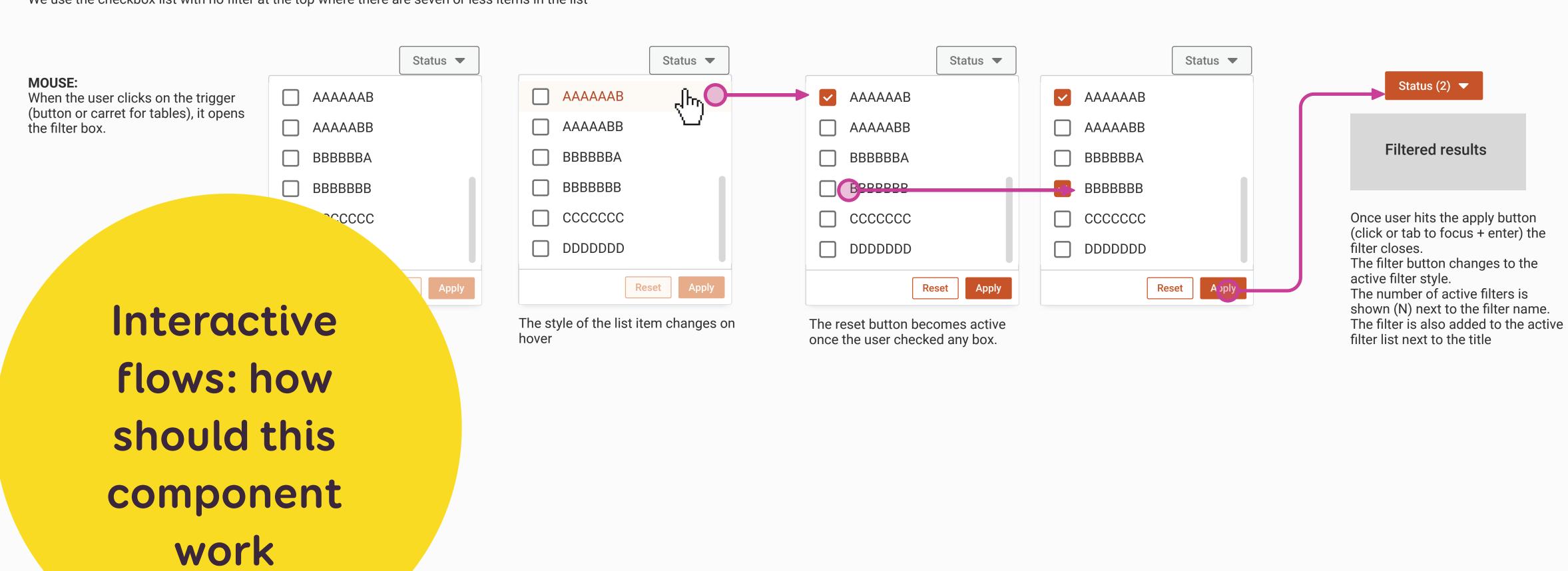


HTML5 search input.

Note that the x style might change depending on browser

Checkboxlist Filters Interaction flow

We use the checkbox list with no filter at the top where there are seven or less items in the list



Checkboxlist Filters Interaction flow

We use the checkbox list with no filter at the top where there are seven or less items in the list

Status ▼ Status ▼ Status T Status ▼ **MOUSE:** Status (2) ▼ AAAAAAB When the user clicks on the trigger AAAAAAB AAAAAAB AAAAAAB (button or carret for tables), it opens AAAAABB the filter box. AAAAABB AAAAABB AAAAABB Filtered results **BBBBBBA** BBBBBBA BBBBBBA BBBBBBA BEDDEDE BBBBBBB **BBBBBBB** BBBBBBB CCCCCC Once user hits the apply button CCCCCCC CCCCCC (click or tab to focus + enter) the DDDDDDD DDDDDDD DDDDDDD DDDDDDD filter closes. The filter button changes to the active filter style. Apply Reset Reset Reset Apply Reset The number of active filters is shown (N) next to the filter name. The style of the list item changes on The reset button becomes active The filter is also added to the active filter list next to the title once the user checked any box. hover How should it Status T Status ▼ Status T Status ▼ AAAAAAB AAAAAAB AAAAAAB work with <space> AAAAAAB AAAAABB AAAAABB <space> AAAAABB keyboard AAAAABB **KEYBOARD**: BBBBBBA **BBBBBBA BBBBBBA** If the user hits <enter> / <space> on the trigger (button or carret for BBBBBBA BBBBBBB BBBBBBB **BBBBBBB** navigation? tables) BBBBBBB CCCCCC CCCCCC CCCCCC <esc> DDDDDDD DDDDDDD DDDDDDD <escape> closes the box DDDDDDD Reset Apply Reset Reset Apply Reset If the user hits <tab> it gives the <keydown>: the next If the user hits <space>, this focus to the "Reset" then "Apply" element is highlighted element is checked. It still keeps The first element in the list gets the the focus highlight untill the user (focus) Then they can press <enter> / focus when the list is open via <keyup>: the previous focuses another element. <space> to apply the filter space/enter element is highlighted

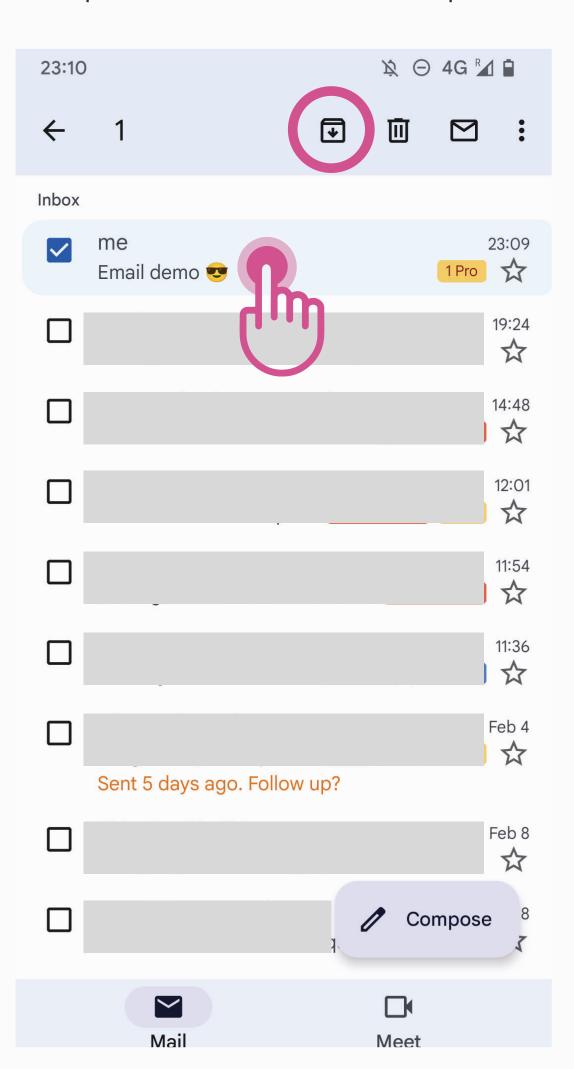
(focus)

☼ ⊖ 4G ¼ • 23:10 ■ Search in mail Inbox ₩ 19:24 公 14:48 公 12:01 公 11:54 公 11:36 公 Feb 4 ☆ Alternatives Feb 8 公 for complex Compose gestures Meet

Complex gesture — swipe right to archive

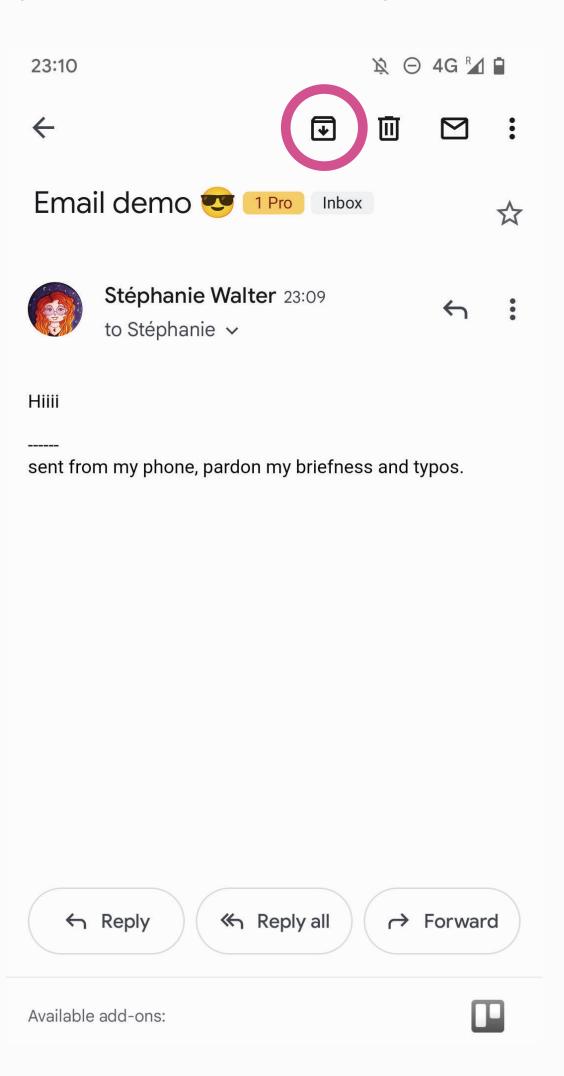
Alternative:

- long press to show the toolbar
- then press the "archive" icon at the top



Alternative:

- open the mail details
- press the "archive" icon at the top





Summary goes hereJelly beans soufflé chocolate lollipop. Toffee muffin biscuit biscuit jujubes apple pie chocolate cake donut. Bonbon sugar plum macaroon donut cake biscuit. Dessert biscuit jelly bear claw icing dan...

Prep: Serving: 3 hours 4-6 persons

Cooking: Cost:

25 min 3€/person

Ingredients

- 31/4 cups (455 g) gluten free flour
- 1 tbsp plus 1 tsp (29 g) brown sugar
- 2 tsp kosher salt
- 1/2 cube of yeast
- 2½ cups (400 ml) whole almond milk

- Alt="Slices of pizza with a lot of melted cheese, tomato sauce, ham and green olives"
- Save, share and rate: presentation icons that don't need to be vocalized by assistive technogly if the button is

What should the assistive technology announce for those images?

Title of the tile



To be allocated: 40.000.000,00 EUR
Adjusted amount: 200.000,00 EUR

Announced

text for "icon

buttons"

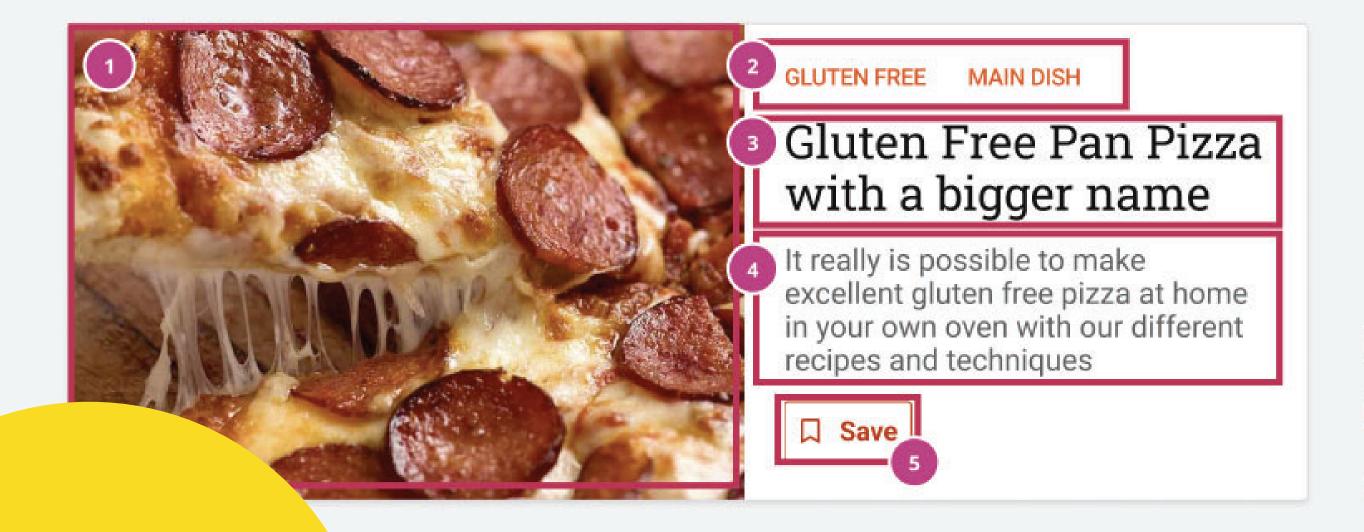
Amount	Percentage	locations	All
24.999.594,45 EUR	62,50%	230	
0,00 EUR	0,00%	0	
1.000.000,00 EUR	2,50%	25	

1 Alt = "View Graph"

2 Alt = "View Tables"

Alt="Slices of pizza with a lot of melted cheese, tomato sauce, ham and green olives"







- 2 GLUTEN FREE MAIN DISH
- Gluten Free Pan Pizza with a bigger name
- It really is possible to make excellent gluten free pizza at home in your own oven with our different recipes and techniques

Announced content order

Navigation states

Default :hover :focus :active

Docs Docs Docs

The default color is #ffffff with 0.8 of opacity

When users hover the item, the color is #fffffff with no opacity (1) The background changes for a #303030 10% opacity

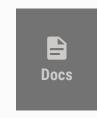
We use the material UI ripple effect for :focus (when users tabs) the link

We use the material UI ripple effect for :active (when users click) on the link

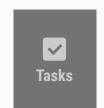
Extra content for assistive technologies

botton page item

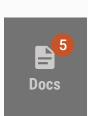
Navigation Icons Accessibility Guidelines for Notifications



Screen reader should read: "No new documents in my documents"



Screen reader should read: "No new tasks in my tasks"



Screen reader should read: "5 new documents in my documents"
On the notification number, role=presentation to avoid reading it twice



Screen reader should read: "5 new tasks in my tasks"

On the notification number, role=presentation to avoid reading it twice

Description

This ticket is a placeholder to centralize the documentation of page titles. The titles are being implemented as the pages are being convergence architecture.

Matomo pagename / trackname	HTML Page Title	HTML Title Example	
My Dashboard	My Dashboard		Title of the
My Planning	My Planning		
My Portfolio	My Portfolio		page
My Documents	My Documents		
Saved Search results	Search results for "[Saved search]"	Search results for "My Search by country"	
Operation - Overview	Operation ([number]) - Overview	Operation (2001-0389) - Overview	
Operation - Contracts	Operation ([number]) - Contracts	Operation (2001-0389) - Contracts	
Operation - Counterparts	Operation ([number]) - Counterparts	Operation (2001-0389) - Counterparts	
Operation - Current Team	Operation ([number]) - Current Team	Operation (2001-0389) - Current Team	
Operation - Team History	Operation ([number]) - Team History	Operation (2001-0389) - Team History	
Operation - Project	Operation ([number]) - Project	Operation (2001-0389) - Project	
Operation - Documents	Operation ([number]) - Documents	Operation (2001-0389) - Documents	
Contract - Overview	Contract ([number]) - Overview	Contract (24779) - Overview	
Contract - Securities	Contract ([number]) - Securities	Contract (24779) - Securities	
Contract - Counterparts	Contract ([number]) - Counterparts	Contract (24779) - Counterparts	
Contract - Teams	Contract ([number]) - Teams	Contract (24779) - Teams	
Contract - Dishursements	Contract ([number]) -	Contract (24779) - Dichurcements	











~

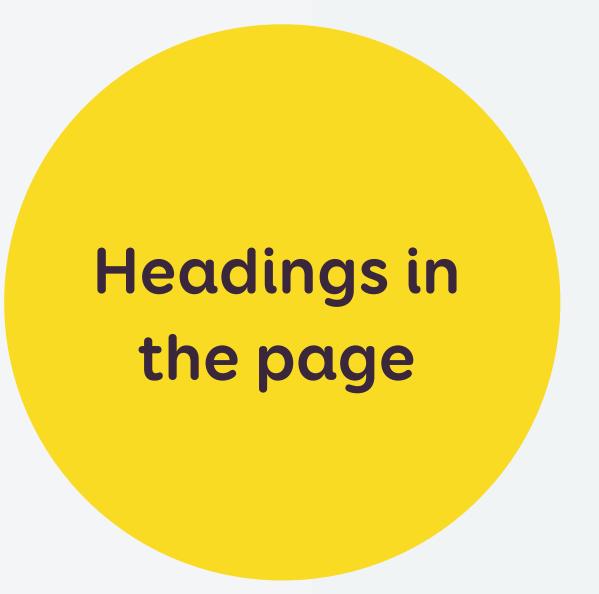


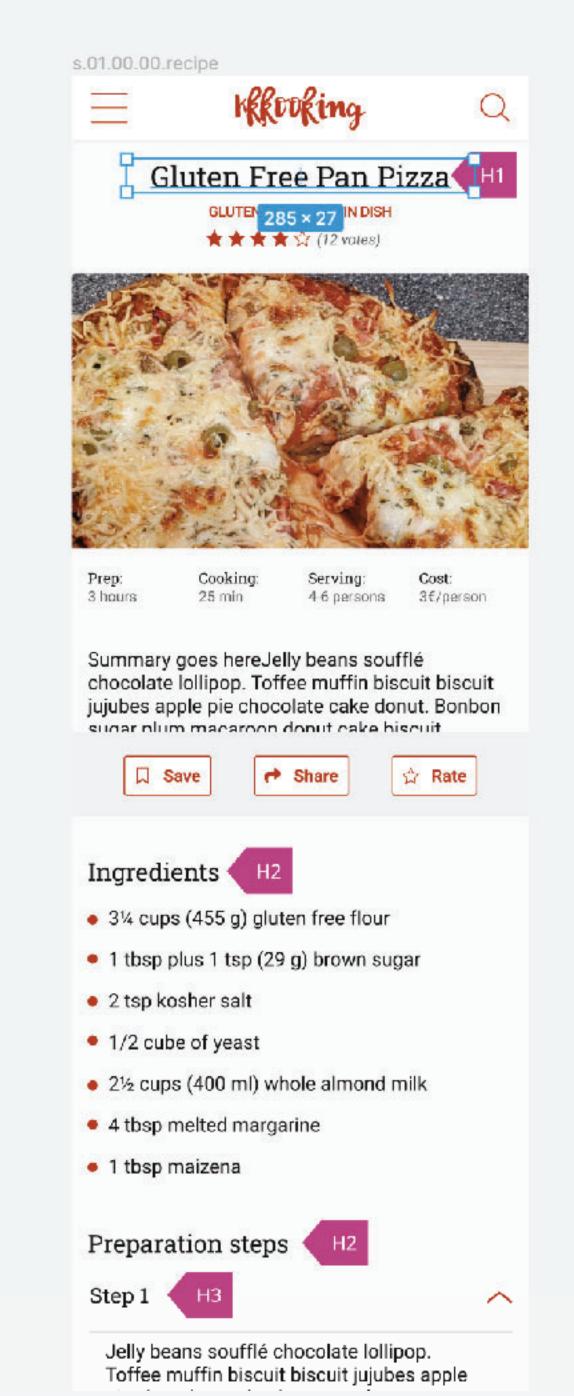


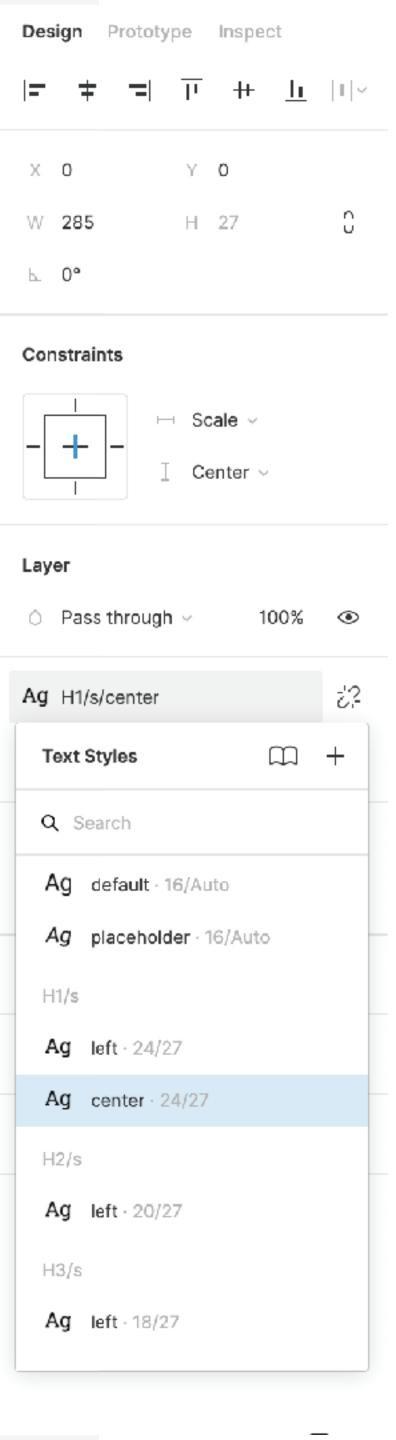












 $m = n_{\rm eff} \cdot n_{\rm eff}$

Search this list SharePoint Following Truelove Rockets Private group 10 onfidential 🛚 5 members → New 🖉 Quick edit 🕮 Export to Excel 👐 PowerApps 🗸 🦯 Automate 🗸 · · · ■ All Items ∨ ▽ □ ✓ Home Conversations Teams 2019 Launches Shared with us Title Launch Date Launch site Astronauts Engine Type Payload : Documents Notebook Microsoft Building 99 Solid Satellite Jackson Cowan Naito Launch 7/23/2019 12:00 AM Rachel Hungerford Pages Rachel Hungerford Daly City Station Space Probe Couch Street Launch 7/23/2019 12:00 AM Liquid 2019 Launches Lincoln DeMaris Site contents Space Center Houston Jason Moore Space Probe Sellwood Second Stage Liquid 7/23/2019 12:00 AM Recycle bin Dunthorpe Satellite Launch Solid Satellite Cape Canaveral Jackson Cowan 9/6/2019 12:00 AM Edit Lincoln DeMaris **Biological Samples** Pearl Launch 10/30/2019 12:00 AM Cape Canaveral Liquid Jackson Cowan Hawthe 11/7/2019 12:00 AM U.S. Space & Rocket Cente Jason Moore Liquid Human Spacecraft Rachel Hungerford Focus order at page level Return to classic SharePoint

Suite header

Name: Office apps Role: Button

Name: SharePoint Role: Link

> Name: Search Role: Combobox

Name: Next steps Role: Button

Name: Notifications
Role: Button
Description: 57 alerts

Name: Settings Role: Button

Name: Help Role: Button

Name: Account Role: Button

Description: Kat Larsson

Props: Haspopup

Main content

Name: Site navigation Role: List

Name: Return to classic SharePoint

Name: Command bar Role: Menu

A Name: New item
Role: Button

6 Name: Column header

Role: Table

Props: Has 1 row, 7 columns

Name: Title Role: Menu

Name: 2019 Launches

Role: Table

Props: Has 6 rows, 7 columns

Site header

Name: Truelove Rockets Home

Role: Link

10 Name: Confidential rating info

Role: Link

Name: Follow
Role: Checkbox
Value: Checked

Name: See all 5 site members

Role: Button Value: Has popup

Exemple de spec accessibilité (WIP)

Comportement zoom 100%

FAQ Questions/Réponses Rechercher un thème par mot clé Q Saisissez ici votre recherche Découvrez les questions les plus posées parmis ces catégories Auto-moto Assurance des Questions sur le fonctionnement accidents de la vie courante



Comportement zoom 200%

FAQ-accessible

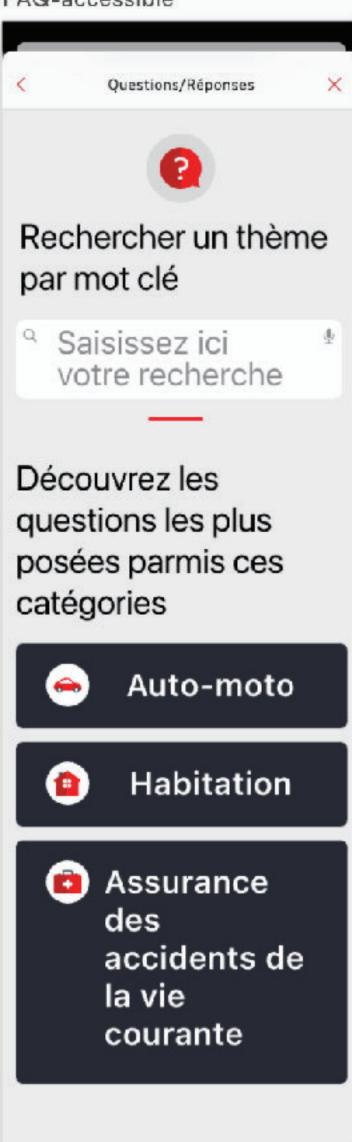
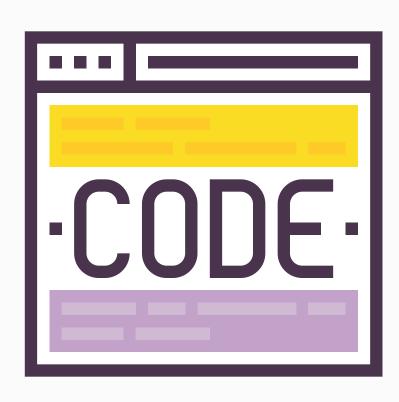


Image from Goulven Baron -Lead Designer, MAIF



With help from Developers & Accessibility Experts

- Correct HTML semantic elements
- ARIA Roles
- ARIA states and properties

Skip To Content **ARIA Landmarks Example**

banner



Visually outline the landmarks and/or headings on the page using the following buttons.

Hide Landmarks | Show Headings

navigation Principles

HTML

Banner

Complementary

Contentinfo

Form

Main

Navigation

Landmarks and Skip to
Content

Region Landmark

region landmark is a perceivable section containing content that is relevant to a specific, author-specified purpose and sufficiently important that users will ikely want to be able to navigate to the section easily and to have it listed in a summary of the page.

ARIA 1.2 Specification: region landmark

Design Patterns

- A region landmark must have a label.
- If a page includes more than one region landmark, each should have a unique label.
- The region landmark can be used identify content that named landmarks do not appropriately describe.

HTML Techniques

ARIA Techniques

Use the HTML section element to define a region landmark.

HTML Example: Using section[aria-labelledby] attribute Defines a label for each region using existing content on the page.

<main>

<h1>title for main content area<h1>

<section aria-labelledby="region1">

<h2 id="region1">title for region area 1</h2>

Landmarks

complementary

The following landmarks are defined on this page:

Banner

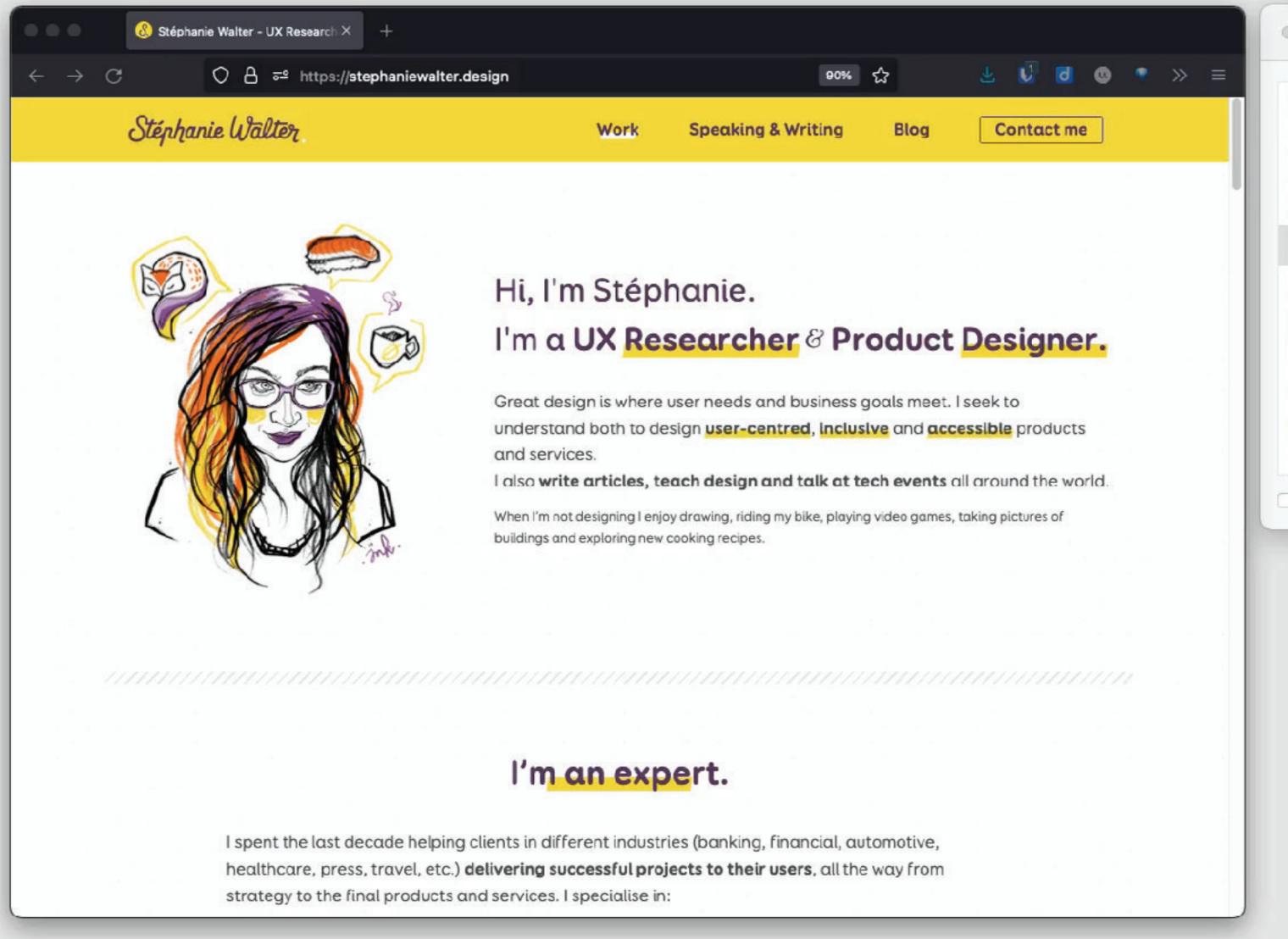
main

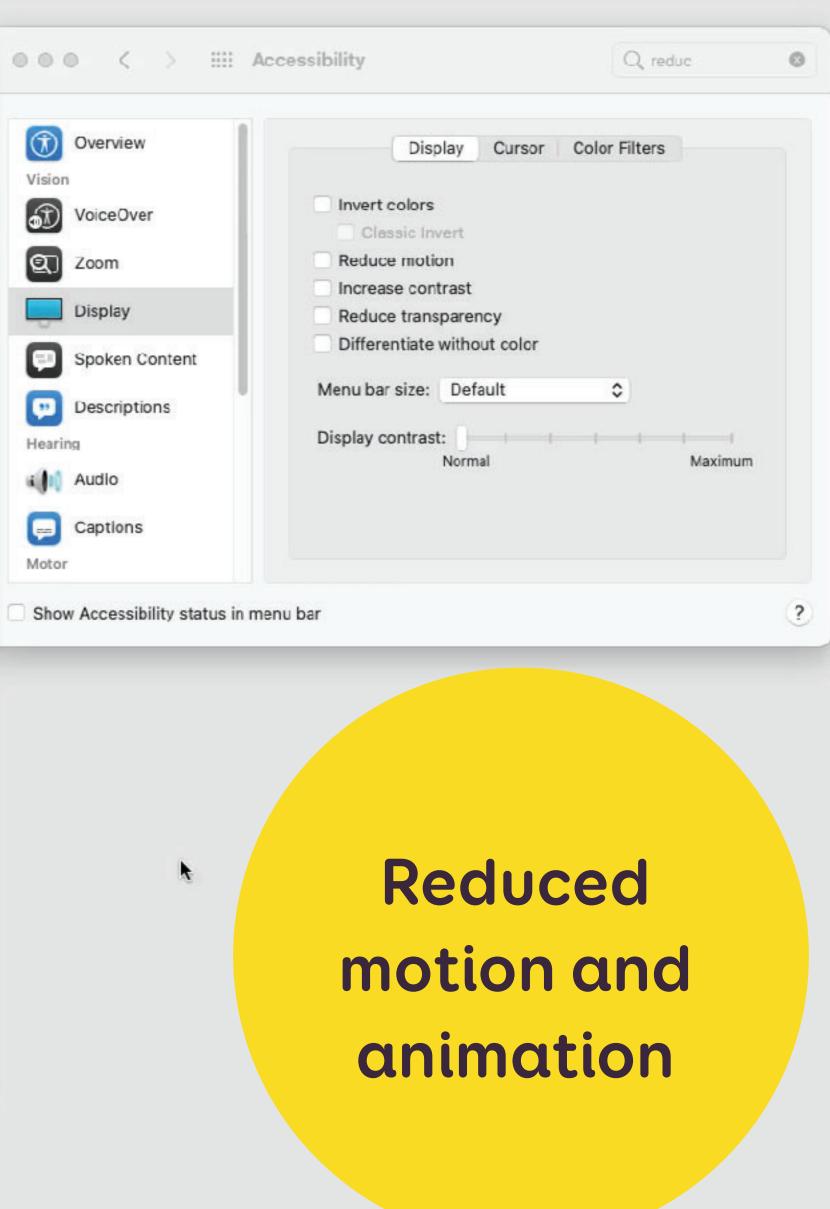
region

- Complementary
- Contentinfo
- Main
- Navigation
- Region

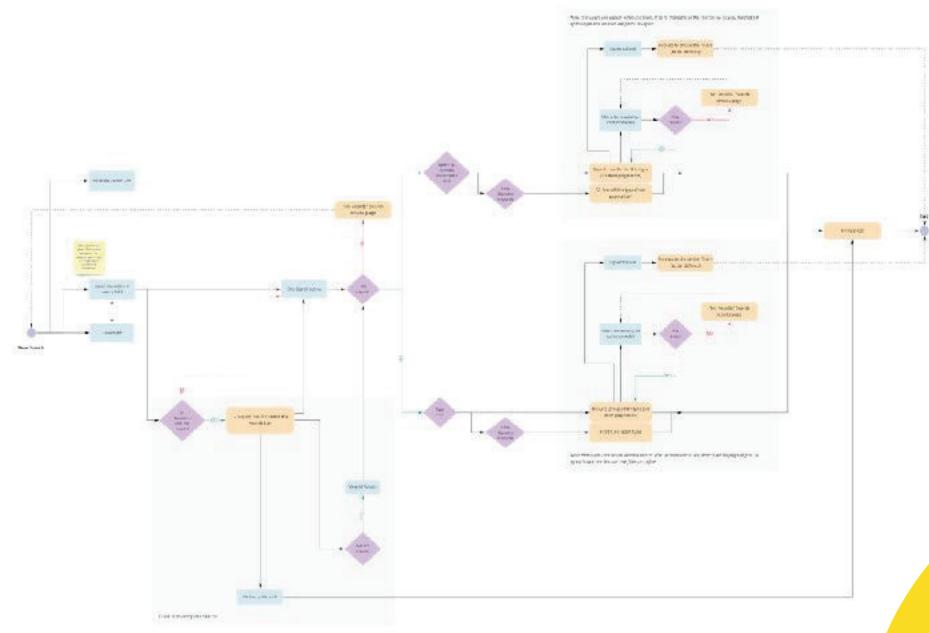
Related Doct complementary

- WAI-ARIA Authoring Practices 1.2
- WAI-ARIA 1.2 Specification
- Accessible Name and **Description Computation** 1.2
- Core Accessibility API Mappings 1.2
- HTML Accessibility API Mappings (latest editors draft)
- HTML Specification
- ARIA in HTML
- Using ARIA in HTML
- WCAG Specification

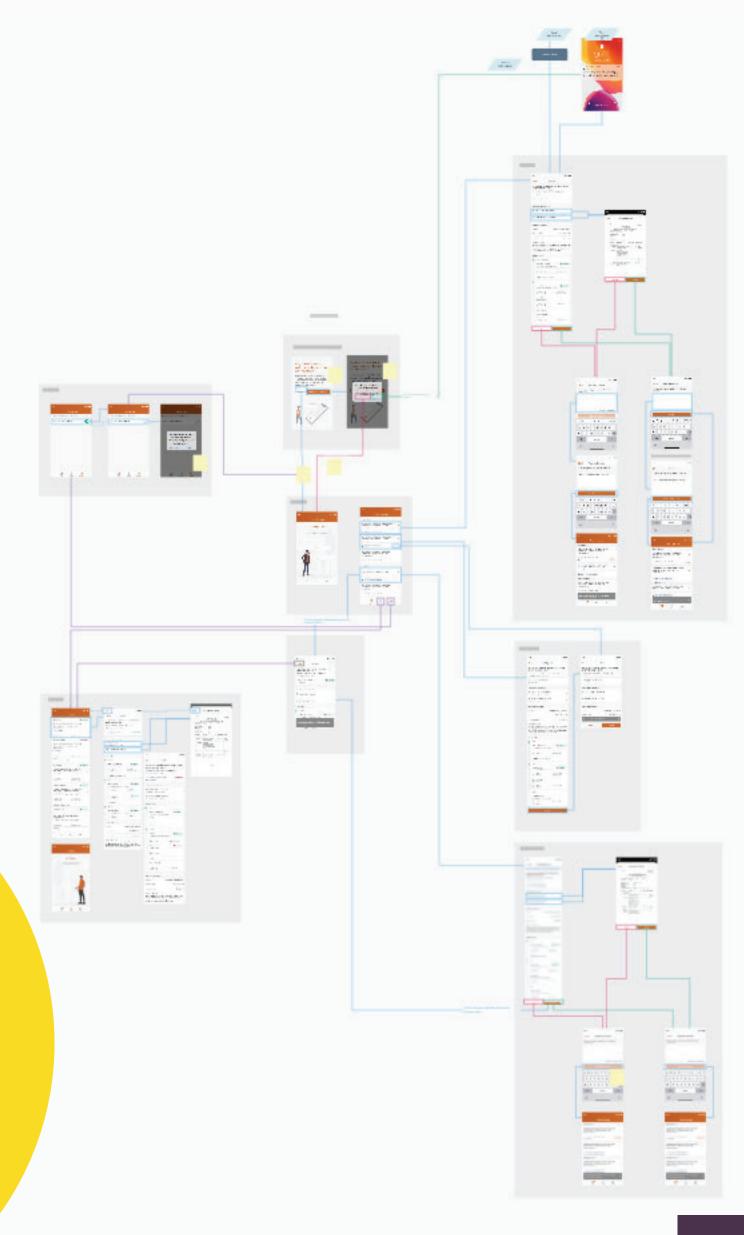




User Flows



Flows to document interactions between pages / views



Screen flow

Access to external documentation for

- Caption for videos
- Audio transcripts
- List of links/CTAs and anchors
 (often SEO excel guide)

E31 $\stackrel{\blacktriangle}{\checkmark}$ \times \checkmark f_{x}			
Λ	Α	С	D
1	Туре	То	Anchor Text
2	Hyperlink	https://stephaniewalter.d	Go to the content
3	Hyperlink	https://stephaniewalter.d	Contact me
4	Hyperlink	https://stephaniewalter.d	Find out what type of structure would suit you
5	Hyperlink	https://stephaniewalter.d	Find an internship (or an apprenticeship)
6	Hyperlink	https://stephaniewalter.d	Reach out to UXers and build a network
7	Hyperlink	https://stephaniewalter.d	Seek feedback and find a mentor
8	Hyperlink	https://stephaniewalter.d	Stay away from "unsolicited redesigns
9	Hyperlink	https://stephaniewalter.d	Find "volunteer" work to fill your portfolio: whe
10	Hyperlink	https://stephaniewalter.d	Let them know the real value of your work
11	Hyperlink	https://stephaniewalter.d	Have a sideproject
12	Hyperlink	https://stephaniewalter.d	My advice on "speculative work" during the inte
13	Hyperlink	https://stephaniewalter.d	Polish your first impression (resume, presentati
14	Hyperlink	https://stephaniewalter.d	Work on your presentation skills
15	Hyperlink	https://stephaniewalter.de	Be honest, don't steal other people's work, crec
16	Hyperlink	https://stephaniewalter.d	Keep on growing as a designer (but don't overd
17	Hyperlink	https://stephaniewalter.d	Smoothly transition towards a UX role inside yo
18	Hyperlink	https://stephaniewalter.de	Ask me Anything: How can I find my First UX Jol
19	Hyperlink	https://stephaniewalter.d	Ask me Anything: How can I find my First UX Jol
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What are the benefits of such documentation?



Benefits for myself, as designer:

To learn more about accessibility.



It forces me to think about different interactions, beyond the "static" pixels I am working on.





Benefits for the design-developer collaboration:

Design documentation helps avoid some misinterpretations.



It helps bring consistency to future pages and interactions.





Benefits for fellow designers:

A good onboarding tool for new designers, especially if they don't know about accessibility.



Prior documentation helps set standards for what is expected for the next designs.





Benefits for everyone else in the team:

Start conversations about accessibility within the company, encourages them to dig further.



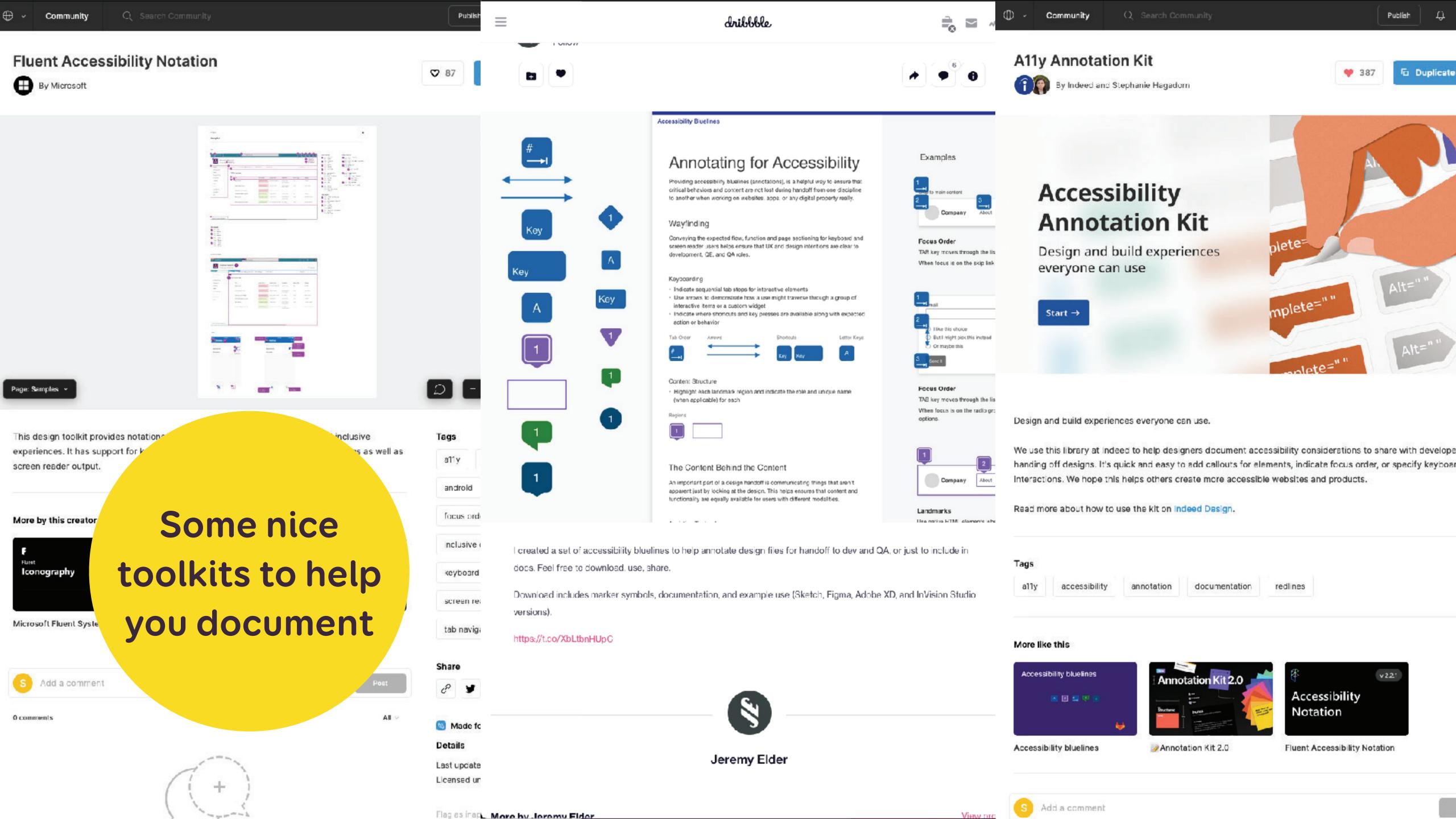


It's a team work.

Communication is the most important aspect here.



Resources



Ressources and links

- Links in the slides
 - Accessibility Annotation Examples from Karen Hawkins
 - Color ratio Matrix tool
 - WCAG for designers
 - A11y Focus Orderer Plugin for Figma
 - Fluent Accessibility Notation Figma
 - ARIA Example: One Main Landmark
 - Reduced motion example on stephaniewalter.design
 - A11y Annotation Kit Figma
 - Accessibility bluelines Figma

- Accessibility Bluelines (Sketch, Adobe XD, Invision Studio)
- More links to help you build and document better accessible designs:
 - Color accessibility: tools and resources to help you design inclusive products
 - Inclusive Components
 - browsing with a desktop screen reader
 - browsing with a mobile screen reader
 - browsing with a keyboard
 - browsing with speech recognition
 - How to document the screen reader user experience