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How **accessibility** can help you to
converge design and development in
a **better product for everybody**



Please, now raise
your hand

**Please, now raise
your hand**

The importance of your message

WHAT IF... ?



Inclusive design

**The most empathetic ideas don't
usually come from what someone
thinks another needs**

**Let's be curious,
never indifferent**

Principle of Adaptability



Portal, content, and commerce capabilities on an extensible architecture to build secure B2C, B2B, and B2E experiences—on our Cloud or yours.



Customer Portals

Enable your business to serve the needs of modern customers with personalization, content targeting and self-service functionalities.

[Learn More →](#)



Digital Commerce

Grow revenue, simplify buying, and encourage repeat orders with a site that makes it easy to do business with you.

[Learn More →](#)



Supplier Portals

Simplify purchasing, support vendors, and increase profitability with a centralized digital marketplace.

[Learn More →](#)



Partner Portals

Create a center for collaboration, support, and growth with your partners with a platform designed to simplify complexity.

[Learn More →](#)



External Websites

Help drive new opportunities by providing prospects with the information about what your organization has to offer.

[Learn More →](#)



Modern Intranets

Keep everyone in your organization productive, self-sufficient, and connected on a unified platform.

[Learn More →](#)



Contact Sales

Menu

Portal, content, and commerce capabilities on an extensible architecture to build secure B2C, B2B, and B2E experiences—on our Cloud or yours.



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Grow revenue, simplify buying, and encourage repeat orders with a site that makes it easy to do business with you.

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WCAG 2.1 – 1.4.10 Reflow (AA)

Zoom (400%)

`user-scalable="no"`

or

`minimum-scale < 2`

A brief history of accessibility in Liferay

What changes are being made in Liferay?

Liferay accessibility plan



PEDS Team Creation

(Platform Experience and Design System)

CERTIFICATION:

DXP Product and Design System (Lexicon)

QA: Specific tests for accessibility

RESEARCH:

Specific tests for accessibility

Currently looking for collaborators / organizations

Liferay accessibility current state

We need your help

Knowing the environment

Know the necessary tools

Accessibility tree

```
▼ RootWebArea "Home - Liferay DXP" focusable: true
  ▼ navigation "Quick Links"
    ▶ list ""
  ▼ list ""
    ▶ listitem ""
  ▼ heading "Home"
    ▶ StaticText "Home"
    list ""
  ▼ list ""
    ▶ listitem ""
  ...
```



Styles Computed Layout Accessibility >>

▼ Accessibility Tree

Enable full-page accessibility tree

▼ RootWebArea "web.dev"

- ▼ main
 - ▼ HeaderAsNonLandmark
 - ▼ generic
 - ▼ link "LEARN MORE"
 - StaticText "LEARN MORE"

▼ ARIA Attributes

No ARIA attributes

▼ Computed Properties

▼ Name: "LEARN MORE"

- aria-labelledby: Not specified
- aria-label: Not specified
- Contents: "LEARN MORE"
- title: Not specified

Role: link

Focusable: true

Validators are very important

Issues: Total Issues 9

Images must have alternate text 3

HIGHLIGHT SHARE ISSUE 3 of 3

Ensures elements have alternate text or a role of none or presentation
[more information](#)

Element Location: `div[data-lfr-editable-id="fvf27hvxvumu"] > .w-100[Loading="lazy"]`

```

```

To solve this problem, you need to fix at least (1) of the following:

- Element does not have an alt attribute
- aria-label attribute does not exist or is empty
- aria-labelledby attribute does not exist, references elements that do not exist or references elements that are empty
- Element has no title attribute
- Element's default semantics were not overridden with role="none" or role="presentation"

Found: **Automatically** Impact: **critical** **cat.text-alternatives** **wcag2a** **wcag111** **section508** **section508.22.a**

ACT Found on: 4/12/2023 at 4:34 PM

Overview **Guided Tests**

Test Name SAVE TEST

Test URL RE-RUN SCAN


http://localhost:8080/group/guest/~/-/control_panel/manage?p_id=com_liferay_journal_web_portlet_JournalPortlet&p_p_lifecycle=0&p_p_state=maximized&p...

TOTAL ISSUES	AUTOMATIC ISSUES	0
0	GUIDED ISSUES	0
	Critical	0
	Serious	0
	Moderate	0
	Minor	0

Best Practices: OFF WCAG 2.1 AA

Issues: Automatic

0



You have (0) automatic issues, nice!

Catch even more accessibility issues with semi-automated guided tests.

[TRY FOR FREE](#)

Get used to using screen readers and keyboard

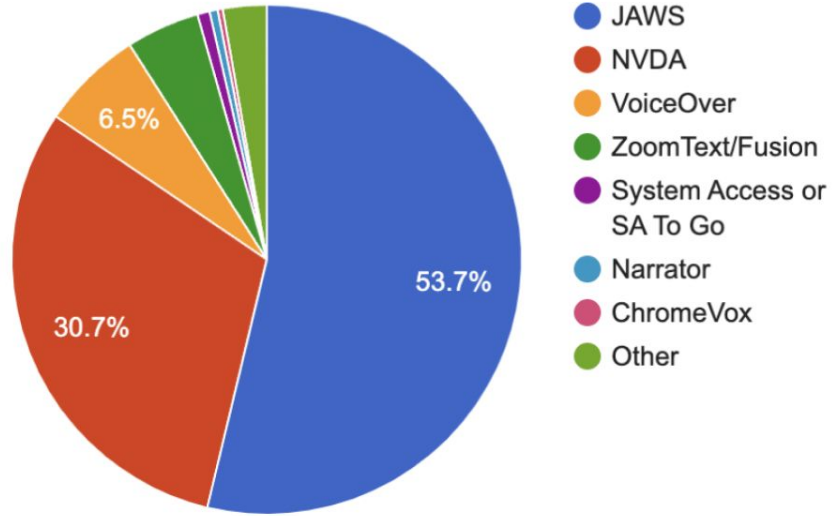
Buttons

- Options menu pop-up collapsed button
- Open Applications Menu **Ctrl+⌘+A** button
- Personal Menu menu pop-up collapsed button
- Filter and Order menu pop-up collapsed button
- Reverse Sort Direction: Currently Descending button
- Search button
- Toggle Info Panel button
- Show View Options menu pop-up collapsed button
- New menu pop-up collapsed button
- Actions for **Test** menu pop-up collapsed button

The screenshot shows a Liferay web interface with a top navigation bar containing 'Web Content', 'Structures', and 'Templates'. Below this is a 'Filter and Order' section with a search bar and a 'Filter and Order' dropdown menu. The main content area displays a list of items under the heading 'WEB CONTENT'. The first item is 'Test', which is marked as 'APPROVED' and 'Modified 2 Days ago by Test Test.'. A central callout box titled 'Buttons' lists various UI elements and their keyboard shortcuts, with red and blue lines connecting the callout items to their corresponding UI elements on the page.

Desktop

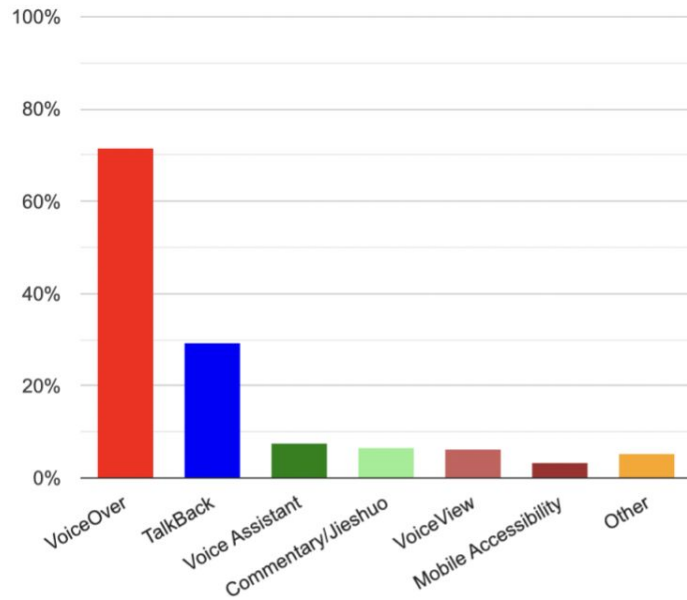
Screen Readers



Response	# of respondents	% of respondents
JAWS	832	53.7%
NVDA	476	30.7%
VoiceOver	100	6.5%

Mobile

Screen Readers



Response	% of respondents
VoiceOver	71.5%
TalkBack	29.1%
Voice Assistant	7.6%

Tabbing vs cursors



Prioritizing issues







Examples of issues we have resolved

Relationship between semantic elements

The image shows a mobile application interface for creating a new document. At the top, there is a dark header with a back arrow, the text 'New Document', a grid icon, and a user profile icon. Below the header, a light blue box contains the text 'Upload documents no larger than 100 MB.'. Underneath, the section 'File Upload' features a 'Select File' button, which is highlighted with a blue border. Below this is a 'Title *' field with a light green border containing the text 'My document'. Further down are 'File Name' and 'Description' fields, both with light gray borders. A dark gray tooltip box is overlaid on the right side of the form, containing the text '× Select File, button, New Document, New Document, group'.

× Select File, button, New Document, New Document, group

Tooltip and aria-label

Title	Document Type	Size	Status	Modified Date	Create Date		
DOCUMENTS							
<input type="checkbox"/>	 tree.png	Basic Document	359 KB	APPROVED	1 Hour Ago	1 Hour Ago	
<input type="checkbox"/>	 stars.png	Basic Document	35 KB	APPROVED	1 Hour Ago	1 Hour Ago	
<input type="checkbox"/>	 satellite.png	Basic Document	14 KB	APPROVED	1 Hour Ago	1 Hour Ago	

Truncate text

No truncate-text i...

No truncate-text in actions / links

Tabs and Navs

Active nav

Settings

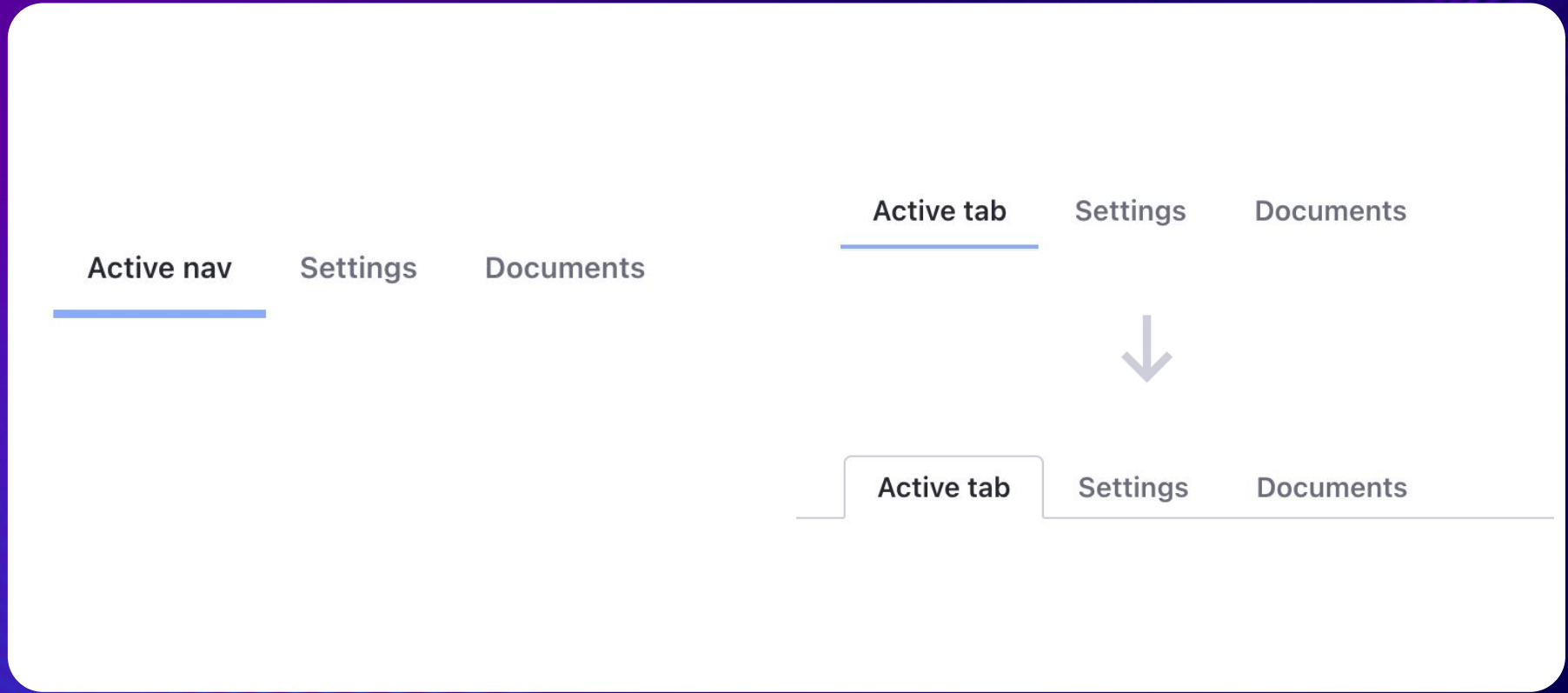
Documents

Active tab

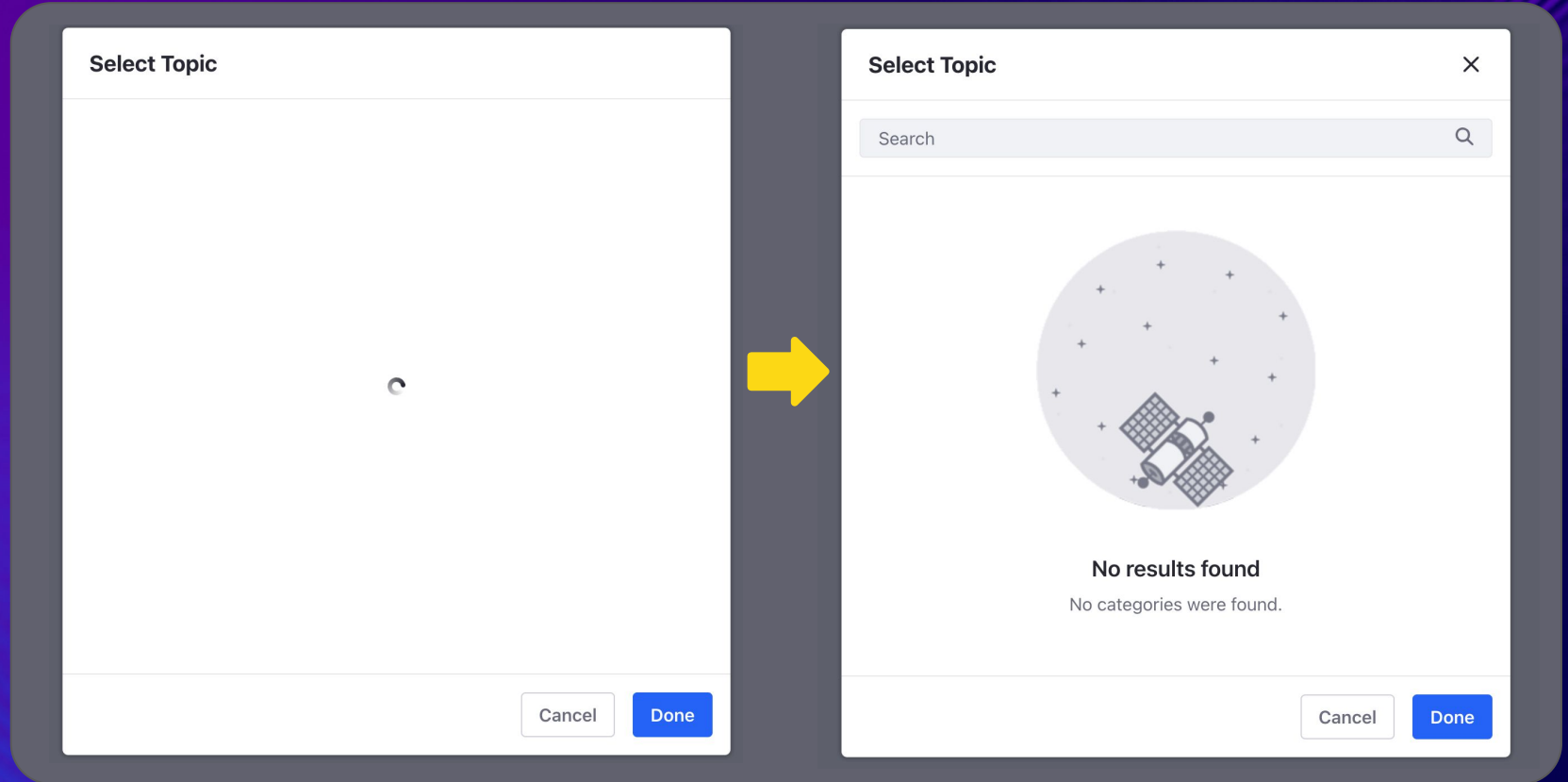
Settings

Documents

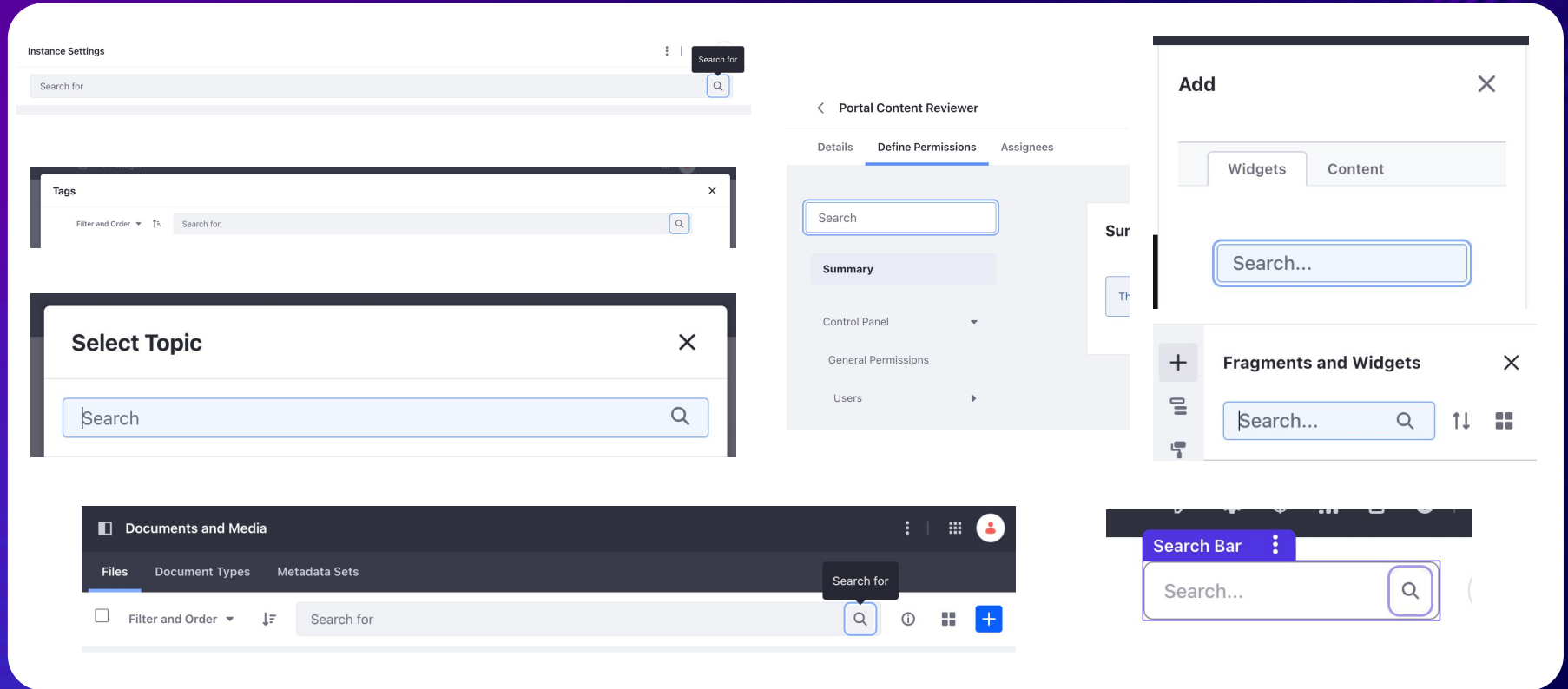
Tabs and Navs



When is the content loaded?



Inconsistency in the search



Inconsistency in the search

Búsqueda automática/autocompletada

 ×

Búsqueda manual

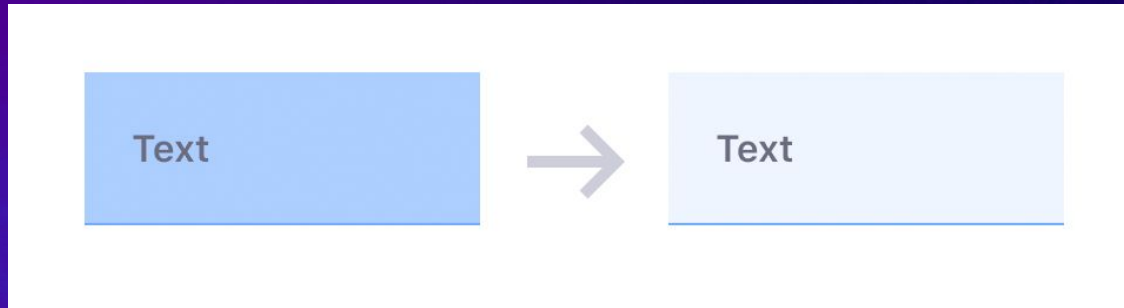
 🔍 × 🔍

Automatic search: What's going on?

The screenshot displays the Liferay Fragments and Widgets interface. On the left, a search bar contains the text "button", which is highlighted with a black border. Below the search bar, the results are categorized into "FRAGMENTS", "BASIC COMPONENTS", and "DIALECT". Under "BASIC COMPONENTS", a "Button" widget is listed. Under "DIALECT", a "Dialect Button" widget is listed. On the right side of the interface, a dark grey notification box with a close icon (X) displays the text "Showing 2 Results". Below this notification, the search results "Home" and "wp1" are visible.

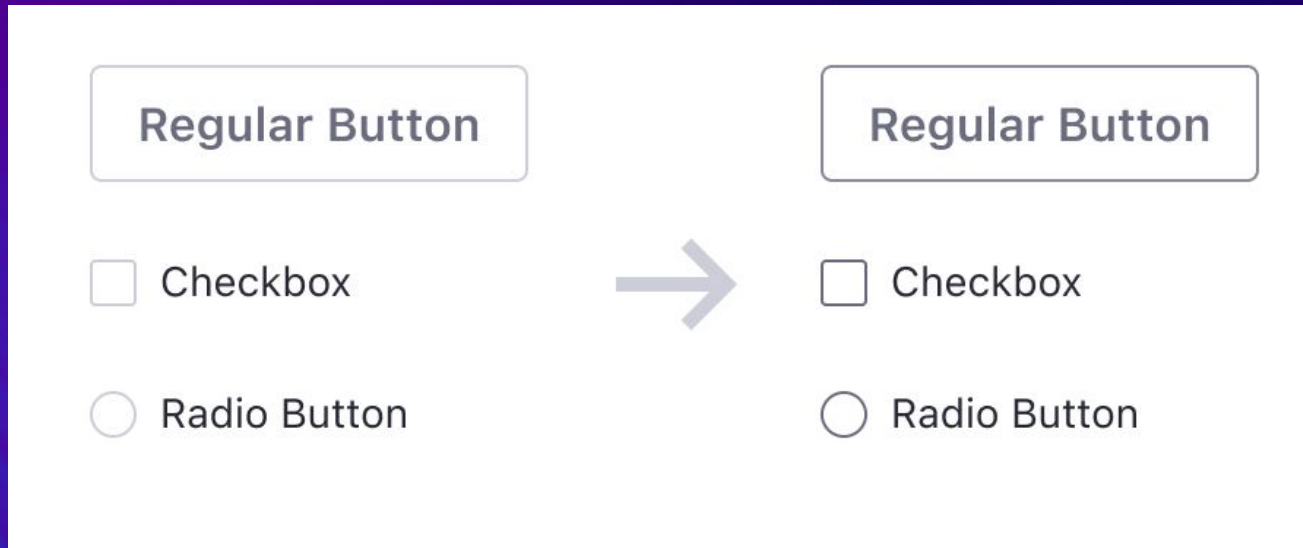
Design contrast: Info boxes

WCAG 2.1 - 1.4.3 - Contrast (Minimum) (Level AA)

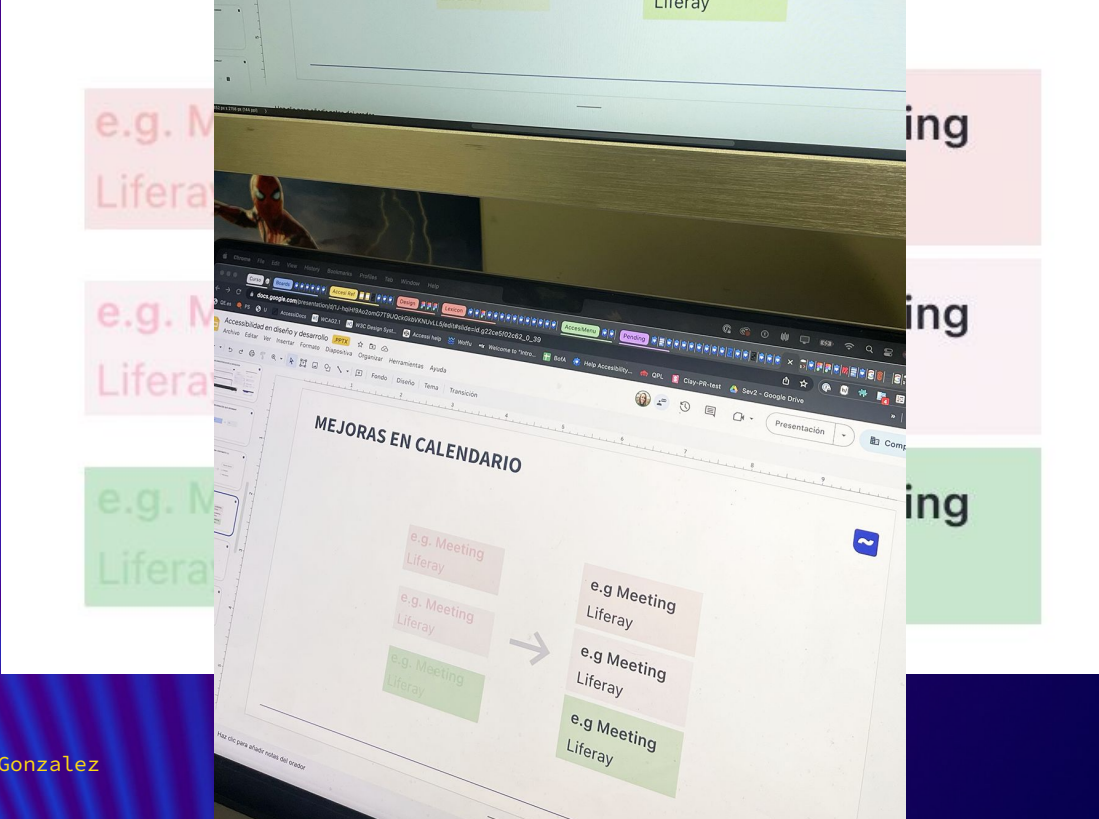


Borders that delimit: CONTRAST 3:1

WCAG 2.1 – 1.4.3 – Contrast (Minimum) (Level AA)



Calendar improve



Active “appreciable” states

The image shows two identical dropdown menus side-by-side. Each menu has a header 'Item Name' with a downward arrow. Below the header are five list items, each labeled 'Item Name'. In the left menu, the first item is highlighted in grey, and a hand cursor is positioned over it. In the right menu, the first item is highlighted in light blue. Below the list items in both menus are two more items, each labeled 'Item Name' with a rightward-pointing arrow.

Active “appreciable” states



Filter and Order ▾



Search for



Home > Provided by Liferay

FOLDERS

Folder 02



Folder 01



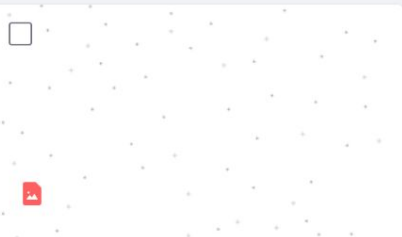
DOCUMENTS



tree.png

Modified 9 Hours ago by Test Test.

APPROVED



stars.png

Modified 9 Hours ago by Test Test.

APPROVED



satellite.png

Modified 9 Hours ago by Test Test.

APPROVED



moon.png

Modified 9 Hours ago by Test Test.

APPROVED



Filter and Order ▾



Search for



Home > Provided by Liferay

FOLDERS

Folder 02



Folder 01



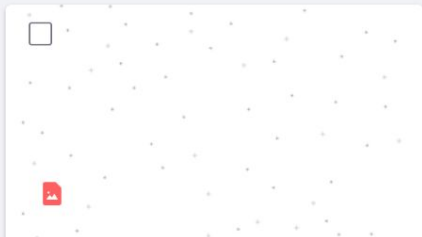
DOCUMENTS



tree.png

Modified 9 Hours ago by Test Test.

APPROVED



stars.png

Modified 9 Hours ago by Test Test.

APPROVED



satellite.png

Modified 9 Hours ago by Test Test.

APPROVED



moon.png

Modified 9 Hours ago by Test Test.

APPROVED



Filter and Order ▾

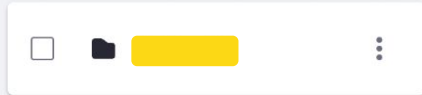
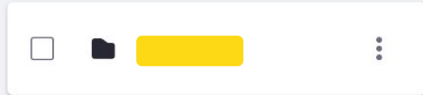


Search for

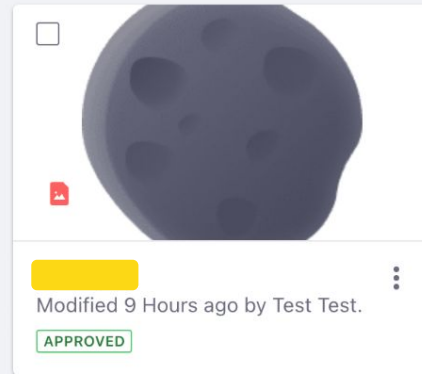
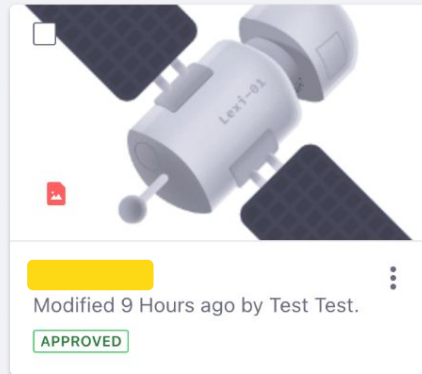
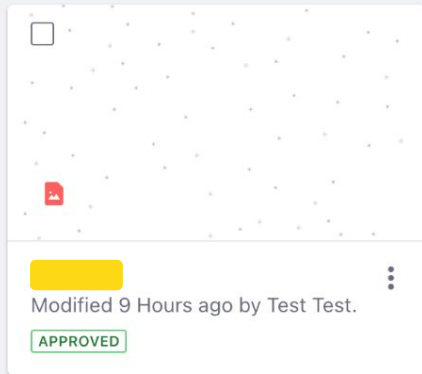
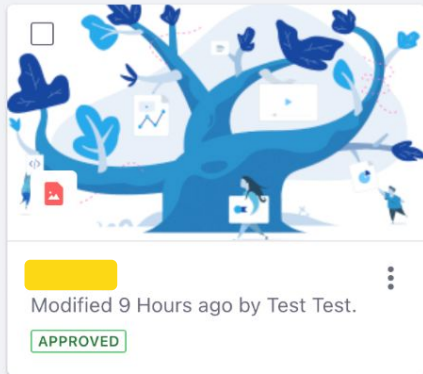


Home > Provided by Liferay

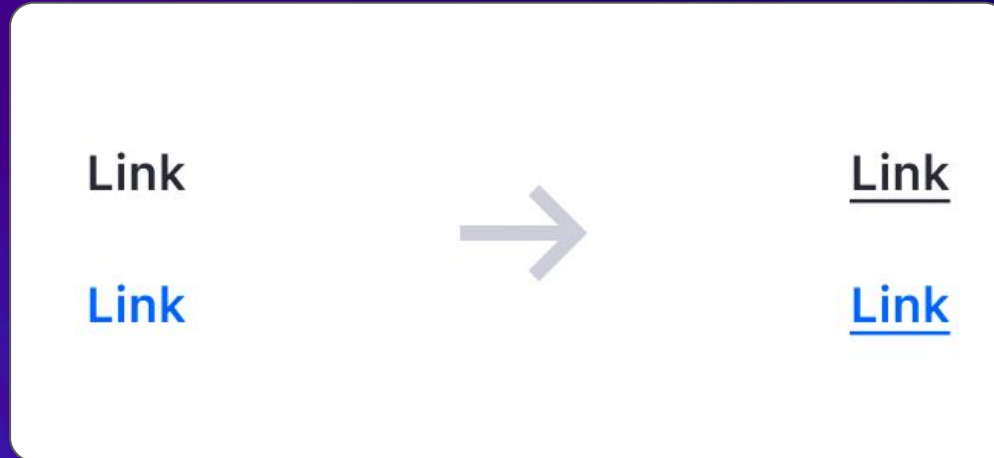
FOLDERS



DOCUMENTS



Links that look like links?



Links and semantics

Terms of Use ✕

Liferay Enterprise Search

Use of Liferay Enterprise Search (LES) apps and features is not covered by Liferay Support and other subscription benefits without an active LES add-on subscription. If you do not want to use or have access to LES, access can be disabled completely by following these steps [here](#). If you are interested in purchasing an LES add-on subscription, please speak to your Liferay sales representative or contact Liferay Sales at sales@liferay.com.

[Done](#)

Links and semantics

Terms of Use

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Done

Links and semantics



Marcos Castro You can download the devcon talk in pdf [here](#)

Marcos Castro You can download the [devcon talk in pdf](#)



Links and semantics

Terms of Use

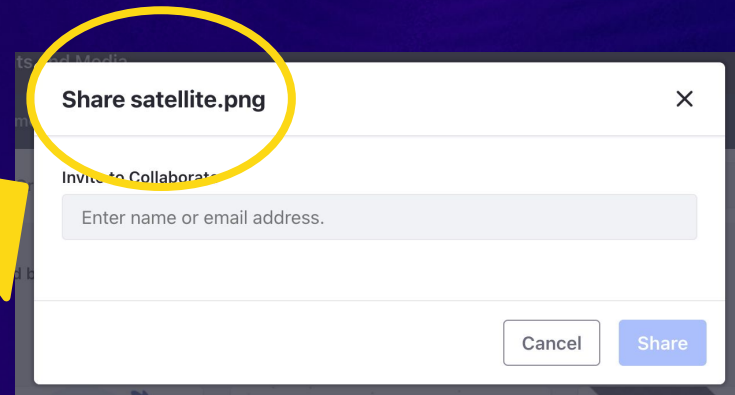
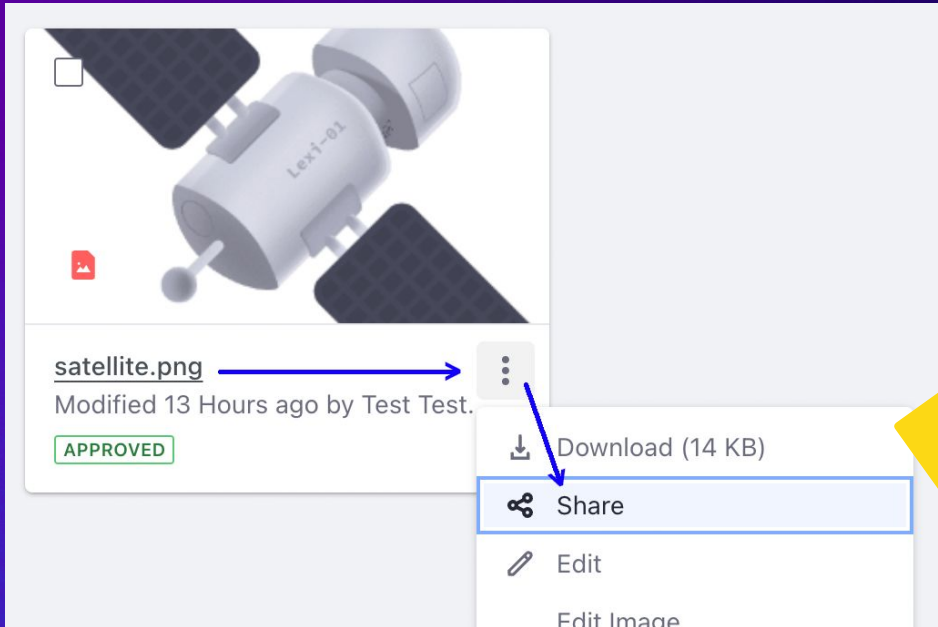


Liferay Enterprise Search

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Done

Keeping semantics in titles



Buttons that are not buttons



```
<button  
  class="btn"  
  title="New"  
>  
...  
</button>
```



```
<a  
  class="btn"  
  title="New"  
  href="javascript:void(0) ;"  
>  
...  
</a>
```

Where I am?

< Edit User Test Test

General Contact Preferences

Information

Organizations

Memberships

Roles

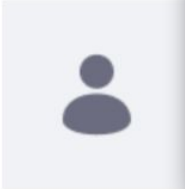
Profile and Dashboard

Password

Apps

Information

USER DISPLAY D



```
<a aria-current="page" href="/">
  Information
</a>
```

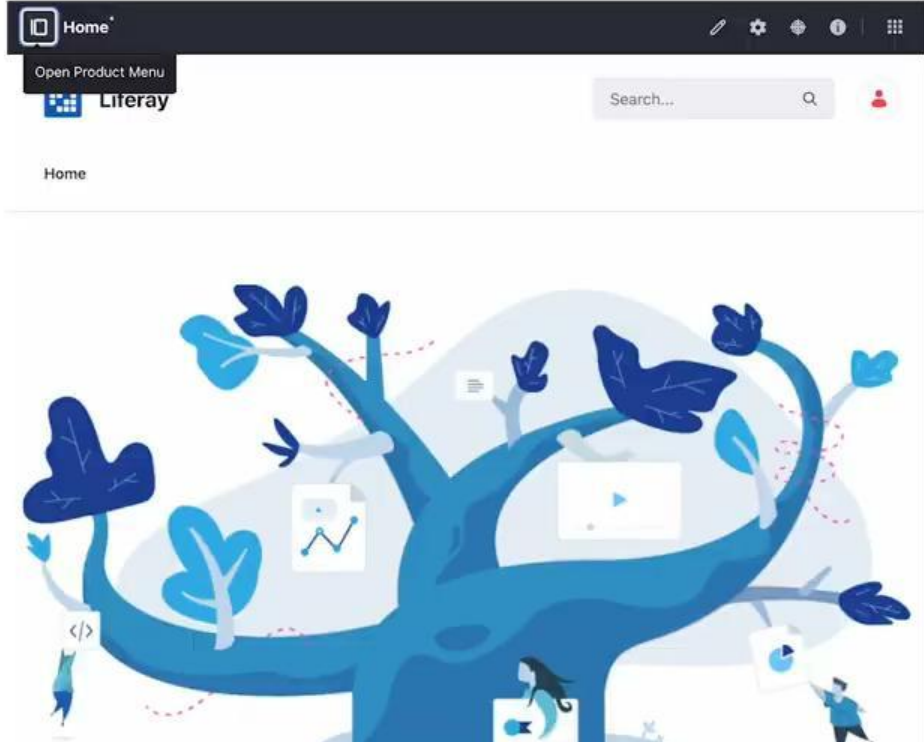
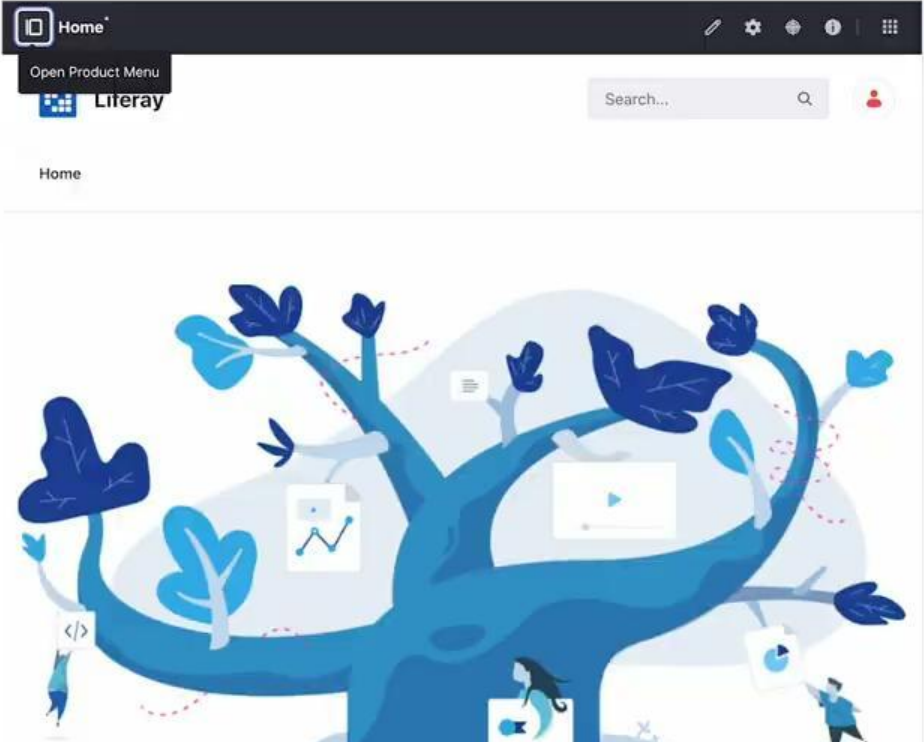
Image

Custom Image

Reduce motion (stopping animations)

Reduce motion on

Reduce motion off



I'm trapped

2.1.2: No Keyboard Trap (Level A)

Edit Content



Enable tab key using:

```
1 |  
2 <h1>HTML Example</h1>  
3  
4 <p class="mb-0">  
5   A paragraph is a <strong>self-contained</strong> unit of a discourse in  
6   writing dealing with a particular point or <em>idea</em>. Paragraphs  
7   usually an expected part of formal writing, used to organize longer  
8   prose.  
9 </p>  
10
```



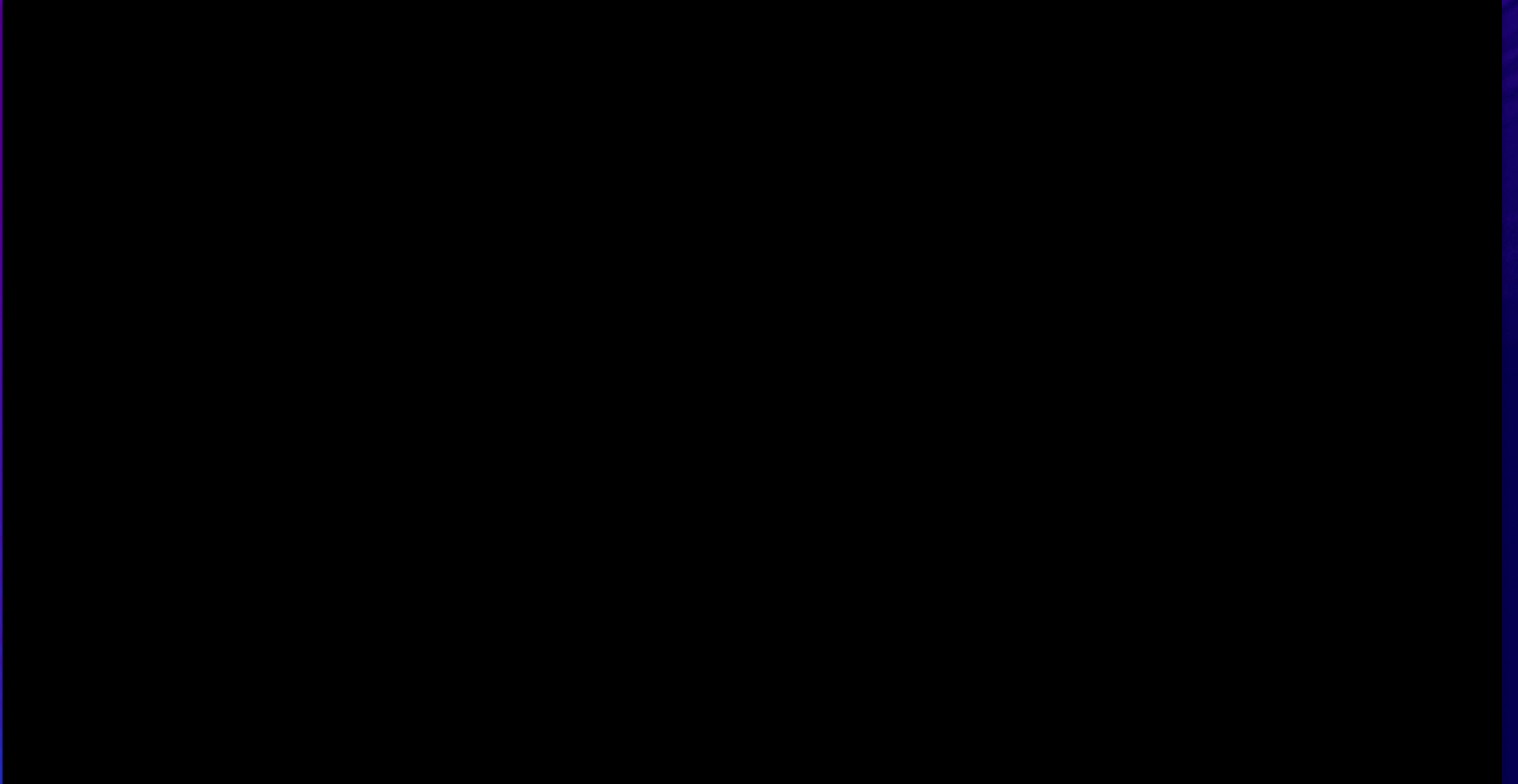
Alerts with links and actions

✓ Success: The element WC1 was moved to [the Recycle Bin](#) ✕

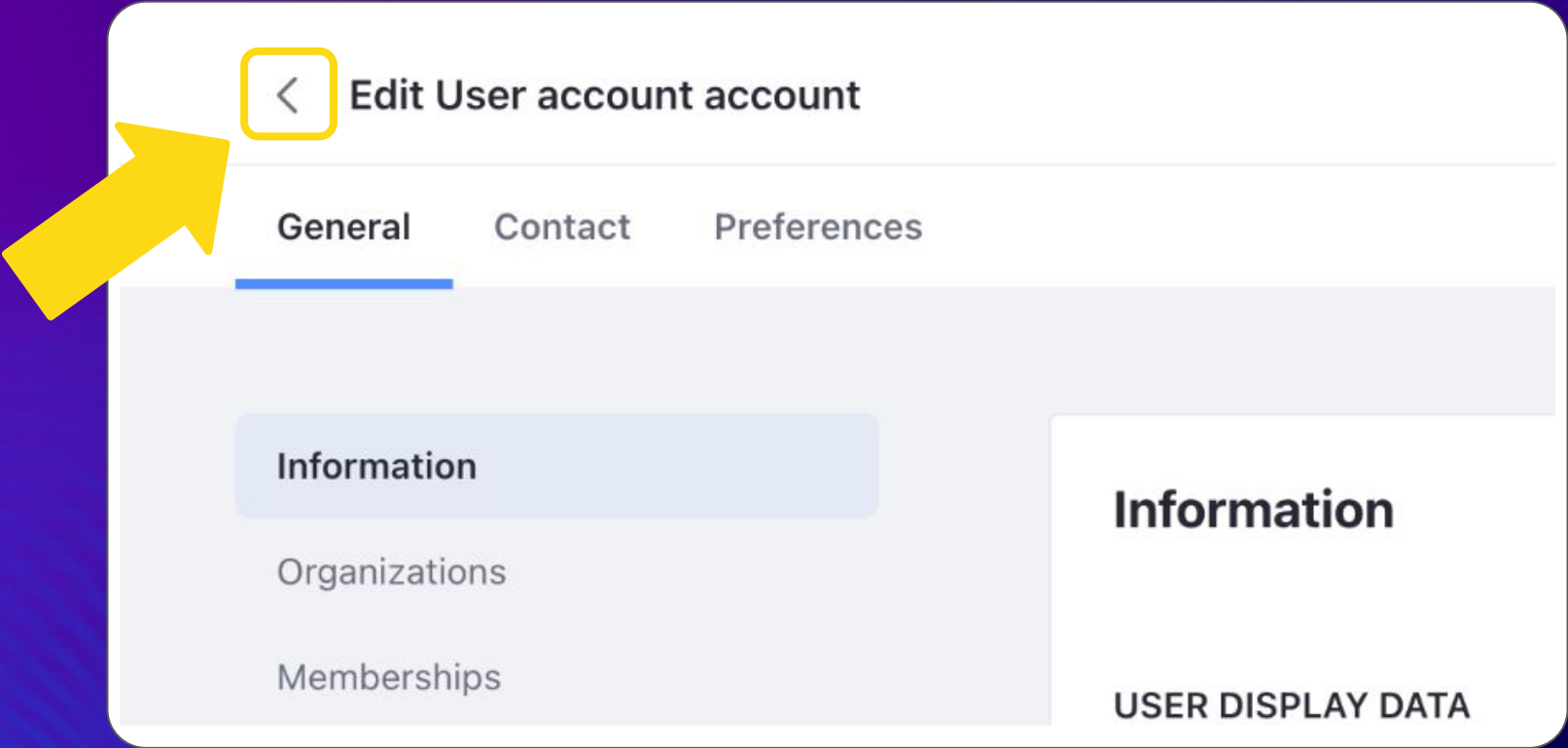
Undo

Zoom 400%

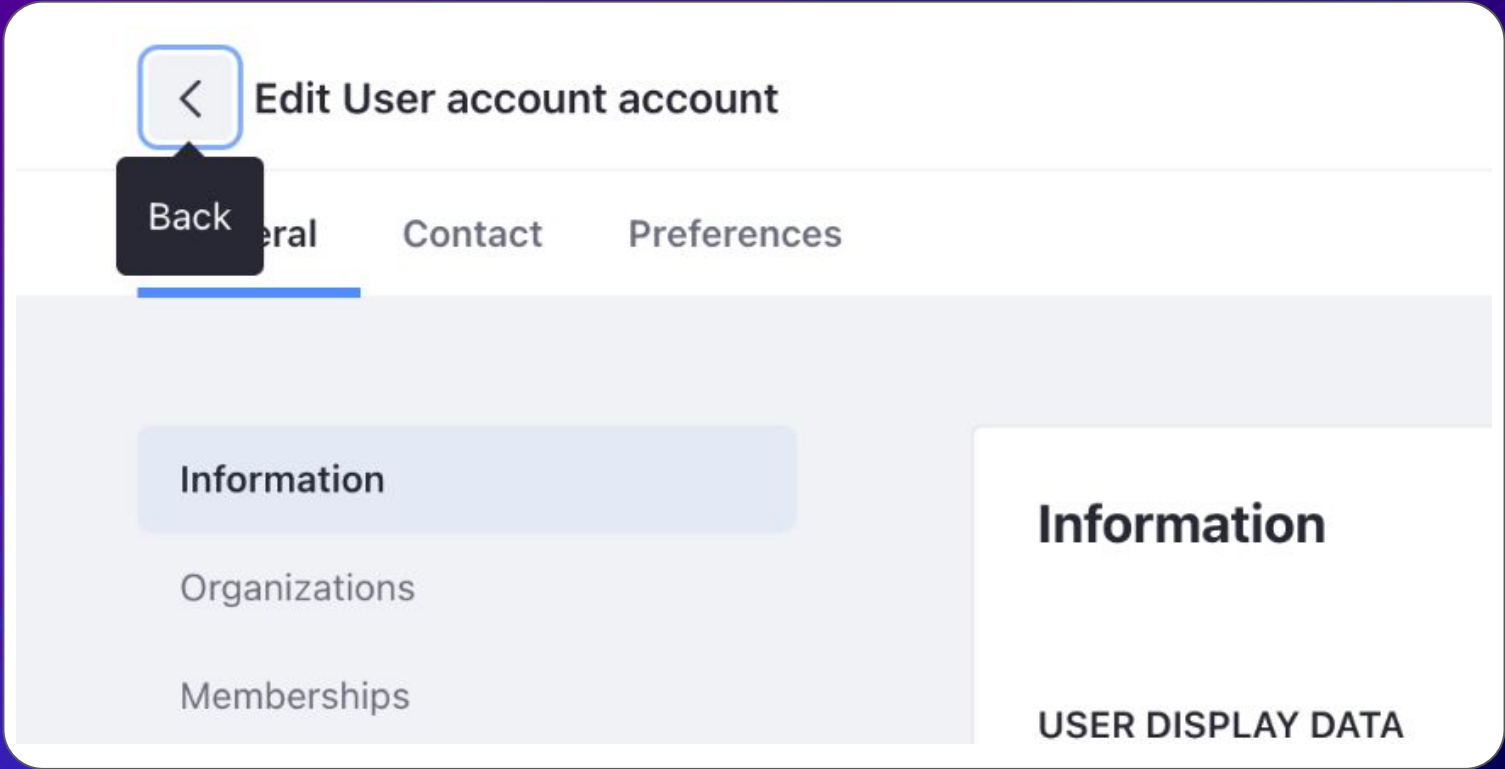
WCAG 2.1 1.4.10: Reflow (Level AA)



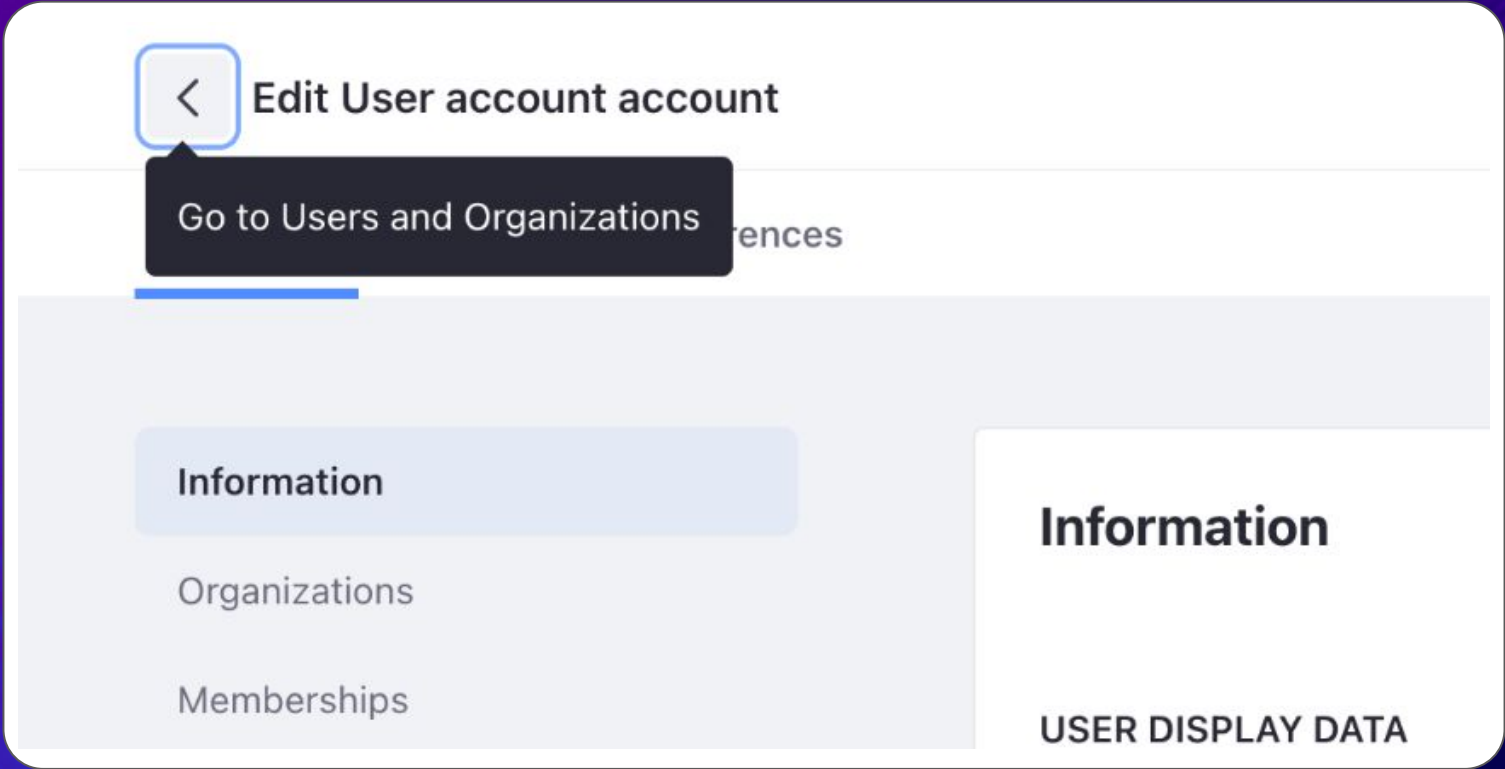
Where I am going?



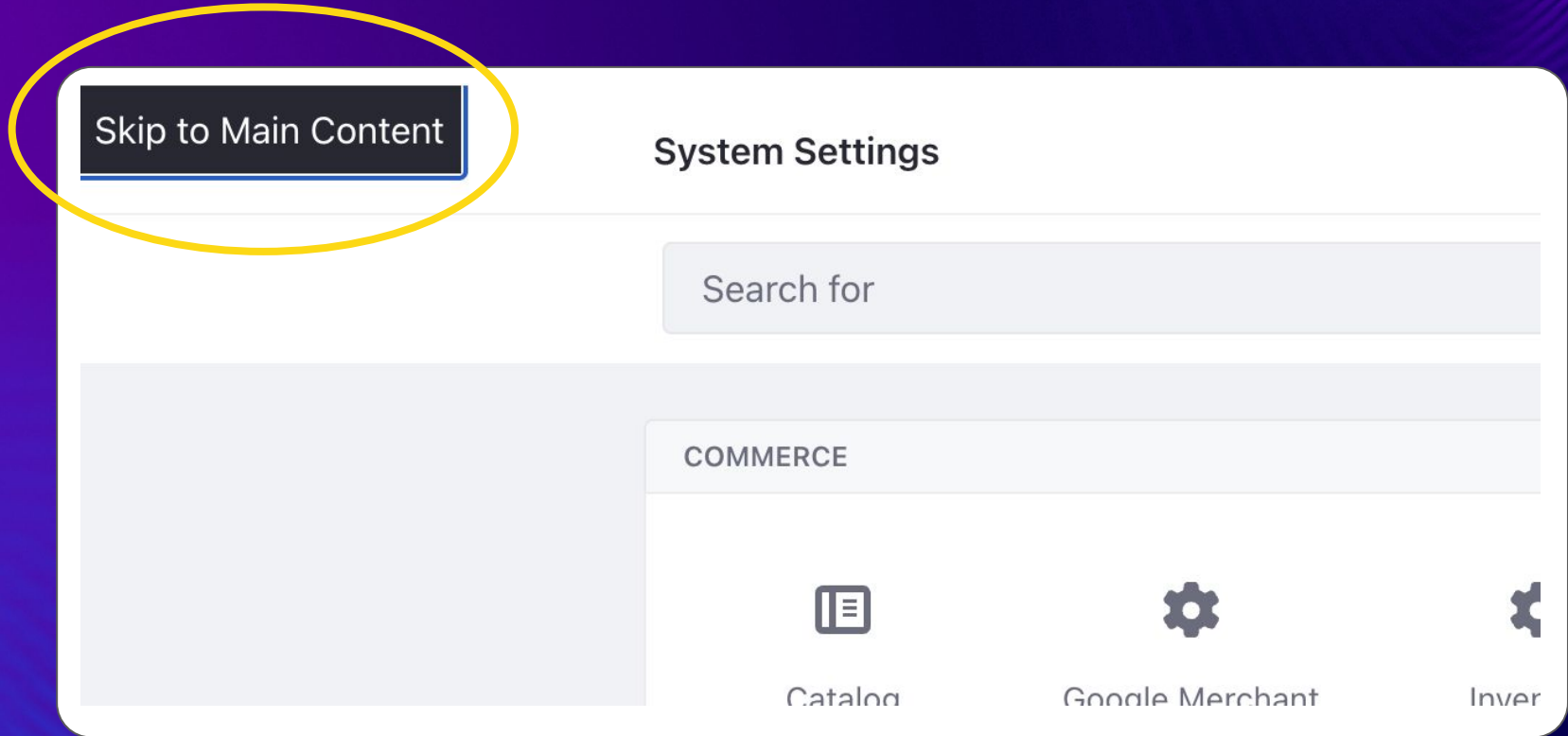
Where I am going?



Where I am going?



Skip to Main Content



Understandable by themselves

Form Controls

Open Applications Menu Ctrl+⌘+A dialog pop up bu...

User Profile menu pop up collapsed button

New Password Required secure edit text

Enter Again Required secure edit text

Save button

Cancel button

PASSWORD

New Password *

Enter Again*

Save

Cancel

Understandable by themselves

PASSWORD

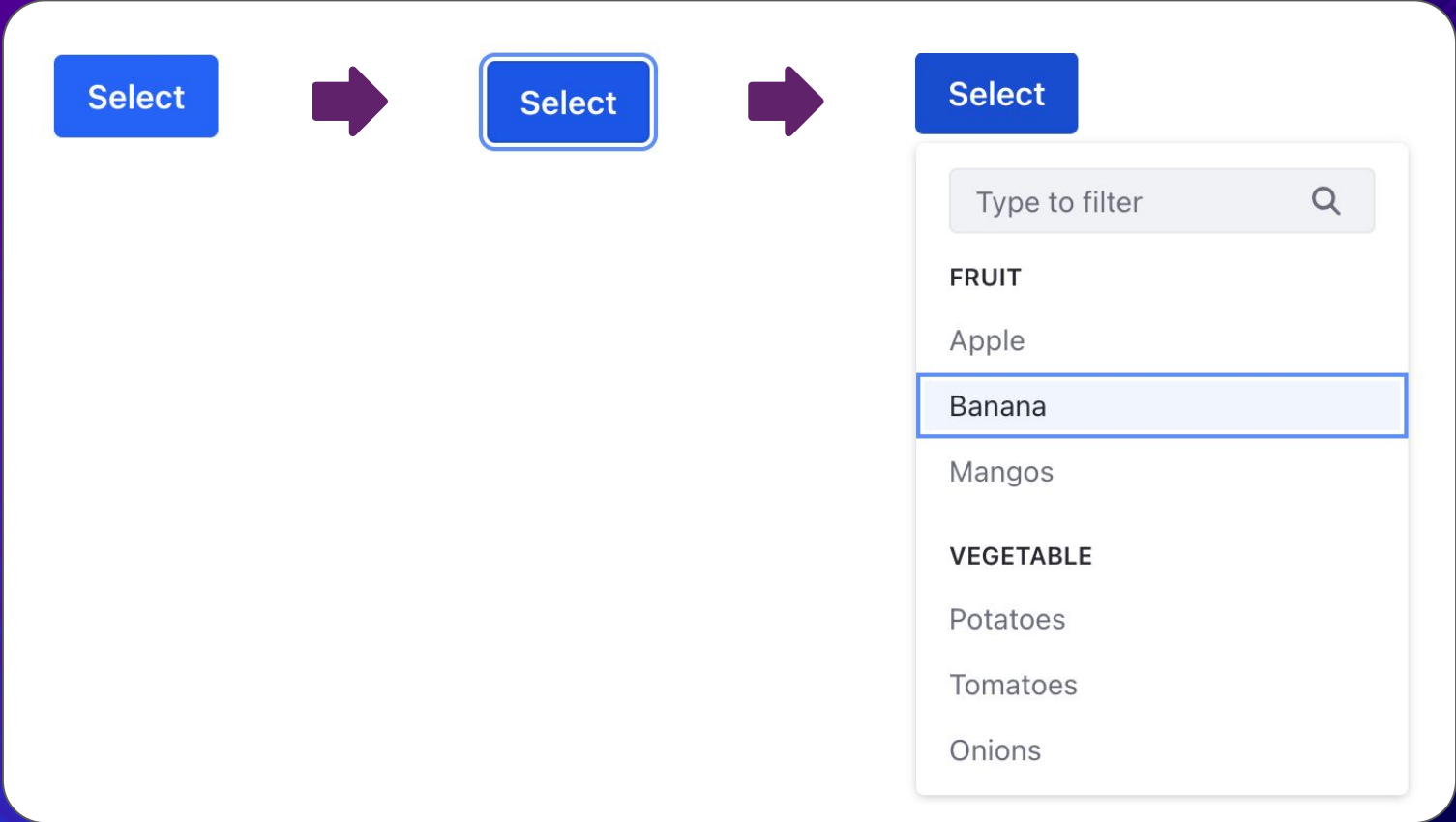
New Password *

Re-enter Password *

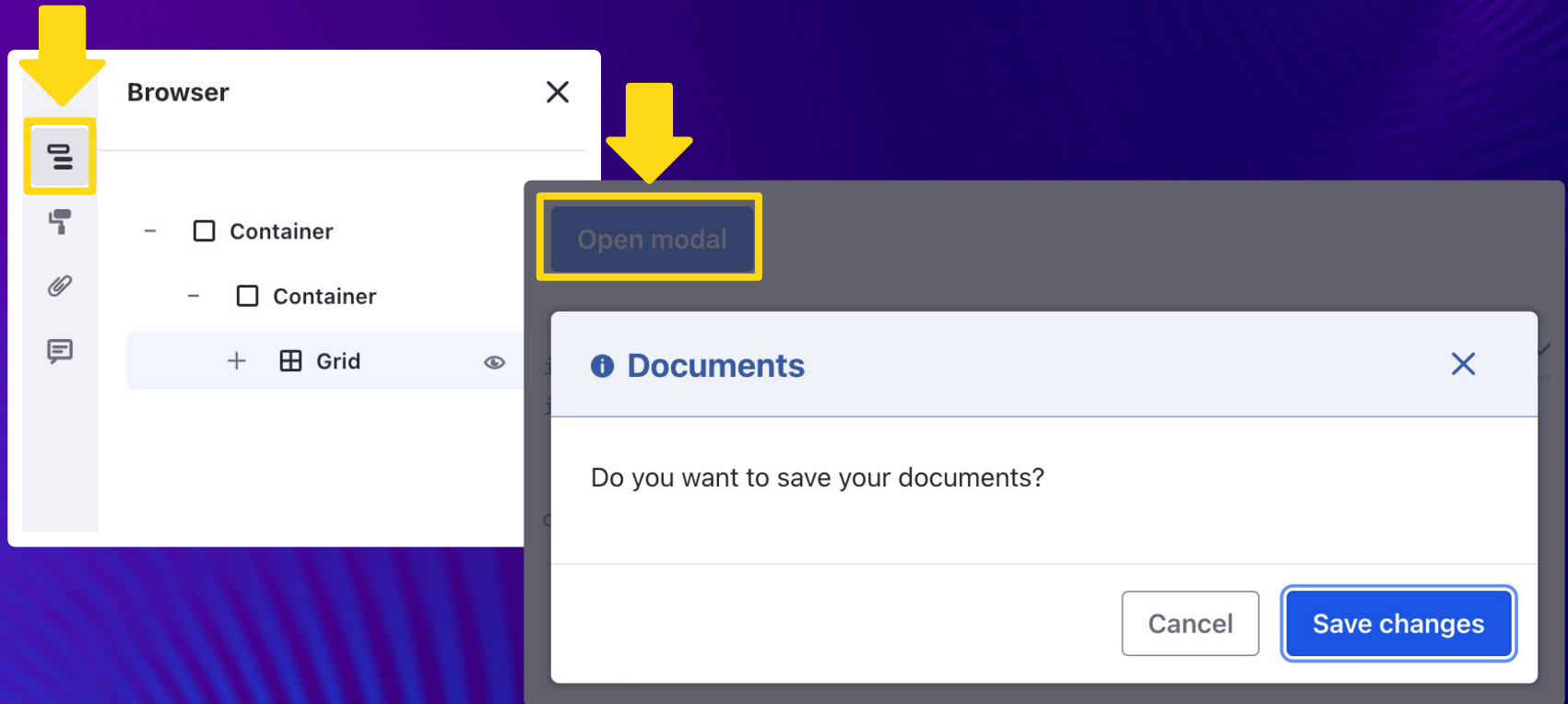
Save

Cancel

Where is the focus?



Where is the focus?



Lexicon / Clay has fixed many issues



**You will notice
big changes**

Next steps

Accessibility menu

Accessibility help menu ×

The following options can help improve the contrast and focus of tabbed components.

- Show underline effect in links
- Show hover effect in buttons
- No timeout notifications
- Increased text spacing
- Focus double border style
- Ellipsis texts
- Autoplayed animations

Advanced components

<https://codepen.io/marcoscv/full/MWqvpRw>

Navbar with 4 items

» Third level > Page detail

Pagination with autoremove

< 1 ... 6 7 **8** 9 10 ... 15 >

Development Design

WE WANT YOU



TO JOIN US



WHAT IF...?





How was this session?

Please share your rating in
the event app. Thank you!