Design system

WPP

— The why

My company was acquired by WPP who had just gone through a rebranding. The ask from the board was that our product UI changed to use their new branding guidelines, however they were not fit for software. This is where the project began.

— The process so far

Here are the steps taken for the new design system project up until this point:

1. Involved the right people, design and engineering leads from each product were invited to a kick off.

2. Ran through the main user journeys for each product and documented which components each product is using.

3. Researched existing mature design systems.

WPP DESIGN SYSTEM

Problem
List your top problems

Inconsistency & Seamless UX

Time & Money Spend

Theming

Teams spend their time on building same things > spent money

Clients don't feel that this product is part of their brand / culture etc.

DS adoption

DS Complexity

DS Understanding

we have to cover all agencies' needs

Solution
Outline a possible solution for each problem

Inconsistency & Seamless UX

DS Complexity

Create usage guides (FAQ)

Learning

Theming

design tokens

Provide ability to change products accordingly to brands

Establish the high level of scalability

Unique value proposition
Clear and compelling message that turns an unaware visitor into an interested prospect

Teams building apps

Easy to use for designers

Saves development time to build new UIs

Business: Clients

new opportunities to win clients

ready-to-use components that supports flexible theaming > consistent and themeable products

Unfair advantage
Something that can't be easily copied or bought

ready-to-use themes for clients/agencies

DS considers agencies needs

Detailed specifications

flexible design system built on tokens

framework agnostic components

Customer segments
List your target customers and users

Teams building apps (Agency)

Designers that create apps

Developers that create apps

POs that create apps

Agency Clients

Clients

Clients that use apps

Agency users that uses apps

Agencies that use or sell apps

Client-facing team

Existing alternatives
List how these problems are solved today

Agency UI kits / Components

DS or UI kits that other agencies have

Every product is built based on its own rules

Public DS

Ready-to-use DS: material, Ant, etc...

Key metrics
List the key numbers that tell you how your business is doing

Number of teams / agencies using DS

how many teams are using DS

Time / Money saved

Number of clients

how many clients were got by selling apps built on DS

?

High level concept
List your X for Y analogy
(e.g. Flickr = YouTube for photos)

a set of lego blocks you can build anything with and connect it to another thing build with this set

Material DS with framework agnostic approach

Esperanto, the worldwide language

Or tool for live translating (tool like a fish in the ear from the The Hitchhiker's Guide to the Galaxy)

Channels
List your paths to customers

Stakeholders

Agency teams that start using DS by stakeholder's decision

choreograph

Change Managment

Change management get everyone ready for DS

Other channels

Meetings, Emails,

Presentations

Ask someone form team to introduce DS

Early adopters
List the characteristics of your ideal customers

Agencies with no own DS to use

Teams that start to build new apps

Possible Teams

Choreograph agency

Bav team

Wavemaker agency

Marketplace

Cost structure
List your fixed and variable costs

Building DS

Design cost

Developers cost

Tools cost (Figma space, github, etc.)

Project & Product teams' time cost

Adoption

Project & Product teams' time cost

Time spent and people resource spent on rebuilding existing solutions

Change Management team

Revenue streams
List your sources of revenue

Building Apps

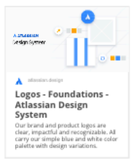
Cutting cost for design & dev effort in any new product

Clients

Logo

www.decathlon.design

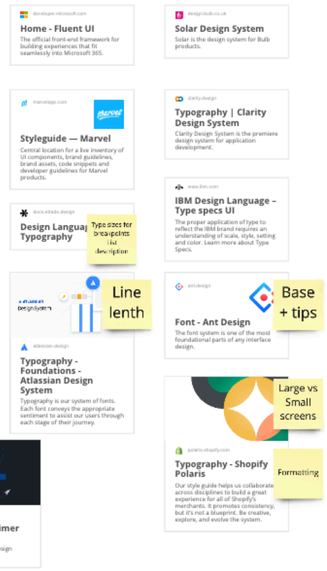
zeroheight



Typography

www.decathlon.design

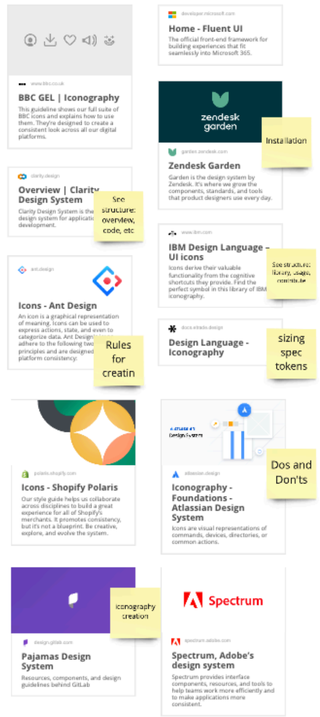
zeroheight



Iconography

www.decathlon.design

zeroheight



Colors

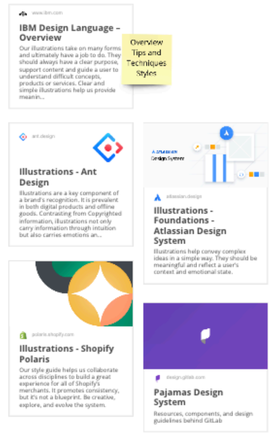
www.decathlon.design

zeroheight

Illustrations

design.duolingo.com

Brand Guidelines - Duolingo



Layou

www.decathlon.de

zeroheight

+Interaction

— The fundamentals

The core (atoms) of the design system are the starting place, these elements include:

1. Colors
2. Typography
3. Grid & Spacings
4. Design artifacts e.g. Border radii, shadows

Color Palette

Primary

#	Token	HEX	Opacity	Usage examples	Accessibility
	wpp-color-primary-100	#EEE8FF	100%	**Icon Button**, **Secondary Button:** Fill - Hover **Chip:** Selectable (Radio) - Fill - Hover **Date Picker:** Date - Range In Between - Selected	**1.19**
	wpp-color-primary-200	#E2D9FF	100%	**Icon Button**, **Secondary Button:** Fill - Pressed **Chip:** Selectable (Radio) - Fill - Pressed, Selected	**1.34**
	wpp-color-primary-300	#CAB8FF	100%	**Primary Button:** Fill - Disabled **Secondary Button:** Border & Text - Disabled **Action Button Primary:** Text & Icon - Disabled **Checkbox:** Selected - Fill - Disabled **Toggle:** Selected - Fill - Disabled **Radio Button:** Selected - Fill - Disabled	**1.77**
	wpp-color-primary-400	#8508E8	100%	**Primary Button:** Fill - Hover **Floating Button:** Fill - Hover **Action Button Primary:** Text & Icon - Hover **Checkbox:** Selected - Fill - Hover **Toggle:** Selected - Hover	AA **6.56**
	wpp-color-primary-500	**#5E00B5**	**100%**	**Clickable elements** **Primary Button:** Fill - Idle, Loading **Secondary Button:** Border, Text, Icon - Idle, Hover, Pressed, Loading **Icon Button:** Border, Text, Icon - Idle, Hover, Pressed, Loading **Action Button Primary:** Text & Icon - Idle **Date Picker:** Day/Year - Selected, Range Start, Range End **Segmented Control:** Text - Selected **Chip:** Selectable (Radio) - Text, Border - Idle, Hover, Pressed **Pagination:** Page number - Selected	AA **9.79**
	wpp-color-primary-600	#47039B	100%	**Primary Button:** Fill - Pressed **Action Button Primary:** Text & Icon - Pressed **Toggle:** Selected - Pressed **Chip:** Selectable (Radio) - Text, Border - Selected **Drop-down Menu Item:** Text & Icon - Selected	AA **11.97**
	wpp-color-primary-700	#2F0069	100%	–	AA **15.85**
	wpp-color-primary-800	#0B001C	100%	–	AA **18.61**

Greys

Cold

#	Token	HEX	Opacity	Usage examples	Accessibility
	wpp-color-grey-000	#FFFFFF	100%	**Fill:** Modals, Cards, Drop-down List Menu, Popover, Context Menu... **Primary Button:** Text - All states **Segmented Control Item:** Fill - Pressed, Selected **Toast:** Button - Text - Pressed **Tag:** Fill - White	–
	wpp-color-grey-100	#F8F9FB	100%	**Fill:** Main **Input, Select:** Fill - Disabled **Segmented Control Item:** Fill - Hover **Toast:** Button - Text - Idle	**1.05**
	wpp-color-grey-200	#F0F2F5	75%	**Input, Select:** Fill - Hover **Checkbox, Radio Button:** Fill - Hover **Action button (Primary & Secondary):** Fill - Hover **Drop-down Menu Item:** Fill - Hover **Context Menu Item:** Fill - Hover **Chip:** Draggable - Fill - Hover **Chip:** Multi - Fill - Hover, Selected **Toast:** Button - Text - Hover **Pagination:** Page Control - Fill - Hover **Date Picker:** Date / Month / Year- Unselected, Range in Between - Fill - Hover	**1.12**
	wpp-color-grey-300	#E7EAEE	100%	**Action button (Primary & Secondary):** Fill - Pressed, Loading **Select:** Fill - Pressed **Divider** **Checkbox, Radio Button:** Fill - Pressed **Drop-down Menu Item:** Fill - Pressed **Context Menu Item:** Fill - Pressed **Segmented Control Bar:** Fill - Idle **Segmented Control Item:** Fill - Idle, Disabled **Chip:** Selectable (Radio) - Fill - Disabled **Chip:** Draggable - Fill - Pressed **Tag:** Fill - Grey **Pagination:** Page Control - Fill - Pressed **Date Picker:** Date / Month / Year- Unselected, Range in Between - Fill - Pressed **Date Picker:** Date - Range Start / End - Hover	**1.14**
	wpp-color-grey-400	#C1C7CD	100%	**Toggle:** Fill - Disabled **Input, Select:** Border - Disabled **Checkbox:** Unselected - Border - Disabled **Radio Button:** Unselected - Border - Disabled **Icon:** Disabled **Chip:** Selectable (Multi), Removable, Draggable - Border - Disabled **Date Picker:** Date - Range Start / End - Pressed	**1.7**
	wpp-color-grey-500	#A2A9B0	100%	**Text:** Disabled	**2.37**

System Colors

Neutral Palette

#	Token	HEX	Opacity	Usage examples	Accessibility
	wpp-color-danger-100	#FFECE9	80%	**Danger:** • Table Row	**1.13**
	wpp-color-danger-200	#FFE0DB	100%	**Danger:** • Validation Tooltip: Fill - Error	**1.23**
	wpp-color-danger-300	#FFAFA3	100%	**Danger:** • Button: Fill - Disabled	**1.76**
	wpp-color-danger-400	#EB0000	100%	**Danger:** • Button: Fill - Hover • Icon • Components: Border - Idle	AA **4.63**
	wpp-color-danger-500	#C40007	100%	**Danger:** • Button: Fill - Idle • Message • Components: Border - Hover	AA **6.26**
	wpp-color-danger-600	#94000F	100%	**Danger:** • Button: Fill - Pressed	AA **9.26**
	wpp-color-warning-400	#D77200	100%	**Warning:** • Icon • Components: Border - Idle	GR **3.33**
	wpp-color-warning-500	#B35F00	100%	**Warning:** • Message • Components: Border - Hover	AA **4.61**
	wpp-color-success-200	#BAFED9	100%	**Success:** • Success Inline Message: Fill	**1.14**
	wpp-color-success-400	#209D5A	100%	**Success:** • Icon • Components: Border - Idle	GR **3.48**
	wpp-color-success-500	#1F844E	100%	**Success:** • Inline Message S size • Components: Border - Hover	AA **5.71**

Typography Guidelines

Typography is our system of font styles which include typeface, sizes, weight, spacing and line height. By tying typographic styles to specific usage and functions in the interface, we create a clear visual pattern and bring consistency across experiences and platforms. Good typography rules help present content clearly and efficiently.

Principles

Consistent

A disciplined consistency with how you size and style type makes the whole interface more intuitive to use. Users who learn how to navigate one experience can apply that same knowledge to each new experience they come across.

Accessible

To make things accessible to audiences with different eyesight constraints, across different browsers, and different mobile devices, make sure to design in a way that works for all users. Use WCAG Guidelines to keep text assible.

Hierarchical

Our typography system creates hierarchy through differences in size and weight of textual elements on the page. A successful hierarchy uses a succinct set of size and weight combinations to both create points of focus and outline the content of a page in an easily scannable structure.

Flexible

Allowing brands to change typography styles is a key principle for our theming approach. We are flexible on typography to create the most effective approach that meets needs for each brand. Follow Theming Guidelines to create your own typography styles set.

Resources

Understanding typography by Material

Link to resource

WCAG Standards

Link to resource

Font Scale & Line Height

The font scale and line height determine the beauty of the dynamics and order of a font system. Font scale refers to a series of font with different sizes. Line height can be understood as an invisible box wrapped outside the font.

We follow global sizing system for font scale and use 4px as a basis unit for sizing fonts. For Line height, we follow the pentatonic scale and natural law to define the best pair for font size and line height. Hwever, there is a strict rule to use even numbers for line height so that it is easy to fir 4px sizing system for components and spacing.

Specification

Font Style	5XL	4XL	3XL	2XL	XL	L	M	S	XS	2XS
Font Size	36	32	28	24	20	18	16	14	12	10
Line Height	44	42	38	32	30	30	24	22	20	20

Font Weight

The choice of font weight is also based on the principles of order, stability, and restraint. For the default system, we use regular (400) and semibold (600) gradation to create hierarchy.

Along with font size and line height, font weight is created by using design tokens, so that we can allow theming for this parameter as well.

Weight	Styles	Usage
Strong	5XL, 4XL, 3XL, 2XL, XL, M, S, 2XS	Use strong font weight for headings, highlighted information in a paragraph, for components that requires to be emphasized and as a part of method that indicates selected item or component.

Typography

Token	Sizing	Preview	Properties		Usage examples
wpp-typography-3xl-heading	**3XL**	**Preview Heading**	Font Family: Size: Weight: Letter Spacing: Line Height:	Inter 28 px / 1.75 rem 600 / Semibold 0px 40px	**Heading H1**
wpp-typography-2xl-heading	**2XL**	**Preview Heading**	Font Family: Size: Weight: Letter Spacing: Line Height:	Inter 24 px / 1.5 rem 600 / Semibold 0px 32px	**Section Heading** **Side Panel Title**
wpp-typography-xl-heading	**XL**	**Preview Heading**	Font Family: Size: Weight: Letter Spacing: Line Height:	Inter 20 px / 1.25 rem 600 / Semibold 0px 32px	**Sub-section Heading** **Modal Window Title**
wpp-typography-l-heading	**L**	**Preview Heading**	Font Family: Size: Weight: Letter Spacing: Line Height:	Inter 18 px / 1.125 rem 600 / Semibold 0px 28px	**Card Heading**
wpp-typography-m-body	**M**	Preview Body	Font Family: Size: Weight: Letter Spacing: Line Height:	Inter 16 px / 1 rem 400 / Regular 0px 24px	**Paragraph body**
		Preview Body	Font Family: Size: Weight: Letter Spacing: Line Height: Case:	Inter 16 px / 1 rem 400 / Regular 0px 24px Underlined	**Links in M paragraph body**

Responsive grid

We use a 24-grid architecture to cover all the cases and be as flexible as possible.
The main principle is to use as much width as possible since we have complex systems and quite a lot of information on a single screen.

We use a percentage approach to cover responsive layouts and to stretch both column, and gutter.

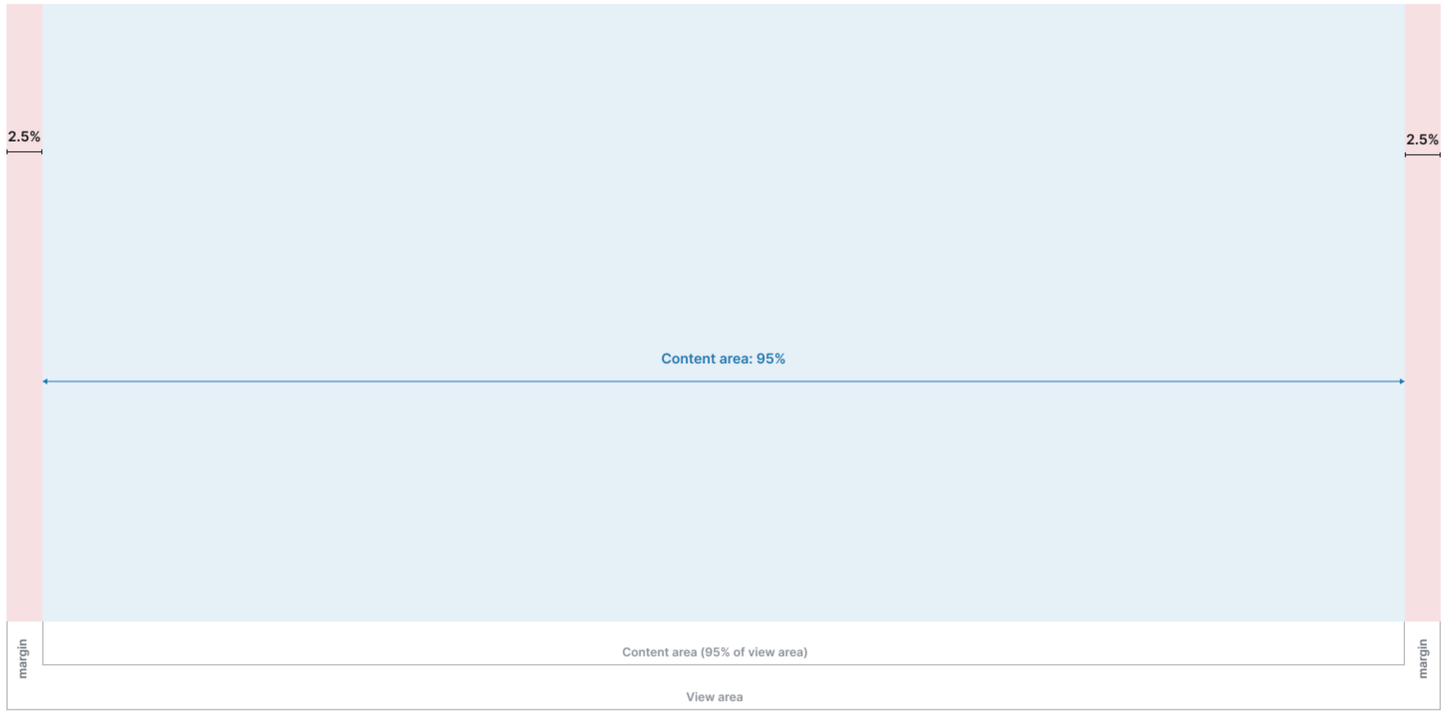
Grid Specification

Content area: **95% of view area**
Content area is an available space to show content.
Content area is an area where columns are applied

Content area position: **Centred**
Max content area: **1812px**

Margins: **0**
Additional space instead of margins:
2.5% of view area on each side

Full screen layout



View Area
View area is a space that is available for placing content.
It might take full size of a browser window or its some part (e.g. when we have left panel)

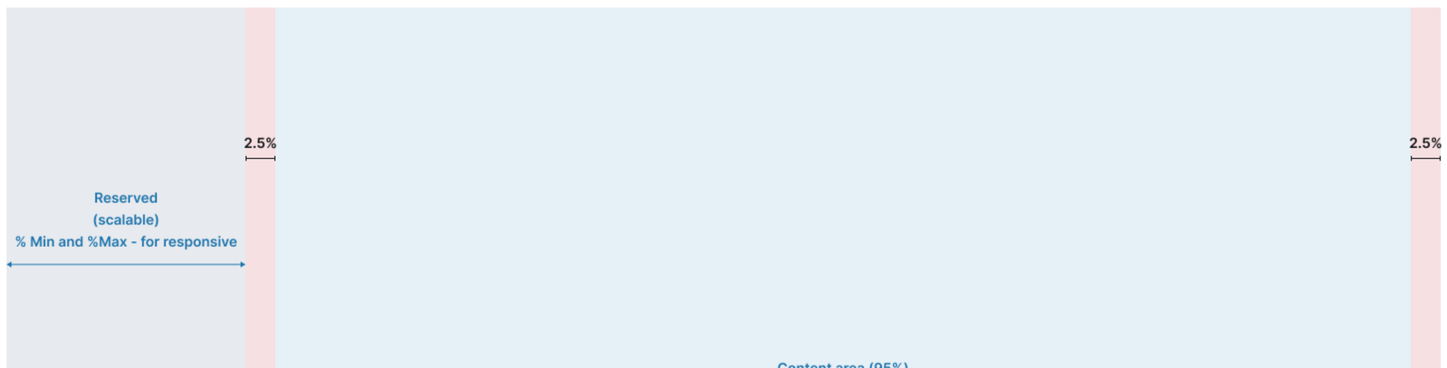
Content Area
Content area is a space that is available for placing content.
Content area should be defined as 95% of view area.
Basically, it depends on view area and changes if view area changes.

Margins
There are no defined margins. although, we have space that replaces margins. It's the rest of view area when content area is defined.
Margins = (View area – Content area)/2
Margins = (100% - 95%) / 2 = 2.5%

So we have margins (additional space) that are 2.5% of view area on each side.

Layout with side navigation

When we have additional Navigation Panel on the left side, it pushes the available view area so that it squeezes.
Content area takes 95%of view area, 2.5% on each side reserved for margins. Grid adjusts to the content area by scaling columns and gutters.



Spacing

Token Name	Value	Usage
wpp-spacing-000	0px	Use to place objects without spacing
wpp-spacing-025	2px	**Pagination:** Pages horizontal spacing **Segmented Control S size:** Horizontal spacing between items **Tooltip:** Vertical spacing between **Title** and **Description** **Popover:** Vertical spacing between **Title** and **Description**
wpp-spacing-050	4px	**Leading Icon Action Button:** Horizontal spacing between **Icon** and **Title** **Inline Message:** Horizontal spacing between **Icon** and **Title** **Inputs:** Vertical spacing between **Box** and **Inline Validation Message** **Text Select:** Horizontal spacing between items **Contained Combobox Multiple Select**: Horizontal spacing between **Chips** **Drop-Down list:** Vertical spacing between **List Items.** Horizontal spacing beteween Menu Item and Tooltip **Context Menu:** Vertical spacing between **Menu Items** **Segmented Control M size:** Horizontal spacing between items **Segmented Control Item:** Horizontal spacing between **Title** and **Counter** **Date Picker:** Vertical spacing between **Calendar Items** **Draggable Chip:** Horizontal spacing between **Drag Icon** and **Title** **Text Only Button group:** Horizontal spacing between buttons **Text Tooltip:** Side margins **Drop-down List Menu** : Vertical spacing between **Select** and **Menu** **Tag:** Horizontal spacing between items **Action Button Group:** Horizontal spacing between buttons
wpp-spacing-100	8px	**Inputs with Labels:** Label vertical spacing **Selection Controls with Labels:** Label horizontal spacing **Modal window header:** Horizontal spacing between **Icon** and **Title** **Text Only Action Button** / **Inline Message M size** / **Validation Tooltip** / **Drop-down List Menu** / **Context Menu** : Side margins **Regular / Multiple Action Buttons:** Horizontal spacing between **Icon** and **Title** **Date Picker / Input with Icon / Search Input:** Horizontal spacing between **Icon** and **Title** **Read Only Input:** Vertical spacing between **Label** and **Text** **Time Picker:** Horizontal spacing between **Inputs** **Message Toast:** Horizontal spacing between **Icon** and **Title / Buttons**
wpp-spacing-150	12px	**Text Input** / **Text Area** / **Combined Input + Select** / **Contained Single Select** / **Drop-down Menu Item** / **Context Menu Item** / **Segmented Control Item S size** / **Selectable Chip S size** / **Tag** / **Title & Text Tootip** / **Draggable Chip** **:** Side margins **Single Date Picker** : Vertical spacing between **Month** and **Year Selects** **Primay and Secondary buttons:** Horizontal spacing between buttons **Secondary and Action buttons:** Horizontal spacing between buttons

Object Styles

Every object style carries a semantic meaning. Specific shapes or effects are used to communicate intent or give cues about the interaction.

Borders

The main substances of borders are border-width, border-style, and border-colour. Borders can translate visuallanguage of a brand. That’s why each substance of border style is available for theming

Substance	Styles	Usage
Border Width	S (1px), M (2px), L (3px)	Borders are used for a bunch of controls, so be really careful with applying M and L border width. You also can use a combination of border widths. Example: S style for inputs, dropdowns, and L size for buttons
Border Style	Solid; Dashed (S, M, L)	It is possible to use either solid. Use them careful and keep in mind that there is certain pattern for borders. For example, dashed borders areused for upload and drag&drop zones
Border Color	inherits Colour Palette	Adjusting main palette will adjust border colours as well. Be really careful with that and go to borders section to check contrast ratio to meet accessibility standards (3:1 contrast ratio for interactive elements)

Shapes

border-radius-XL	20px	Can be used for surface-1 elements.

Shadows

Shadows are used to build hierarchy and elevation for surfaces that are presented in the system.
Shadows can express the degree of elevation between surfaces in ways that other techniques cannot.

Both a shadow's size and amount of softness or diffusion express the degree of distance between two surfaces. For example, a surface with a shadow that is small and sharp indicates a surface's close proximity to the surface behind it. Larger, softer shadows express more distance.

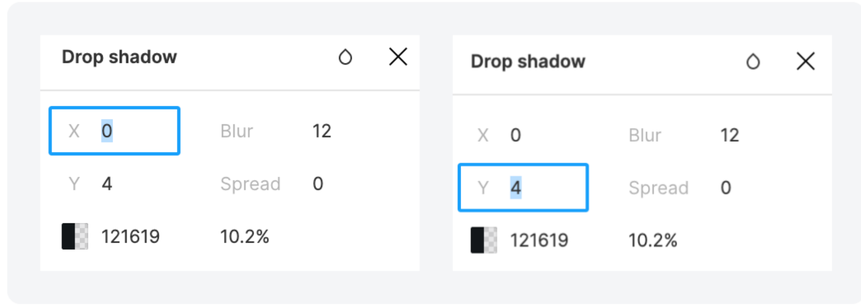
Check specification to be aware of usage examples. Examples:

XS | S | L | XL

Parameters to customize

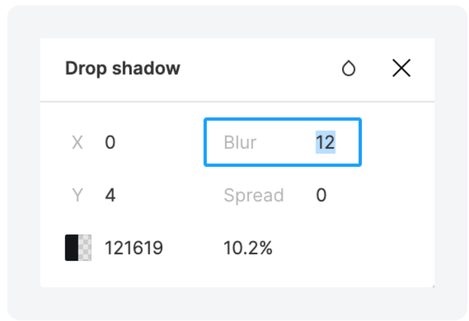
X-position
Y-position

By changing those 2 parameters you can adjust direction of the shadow.



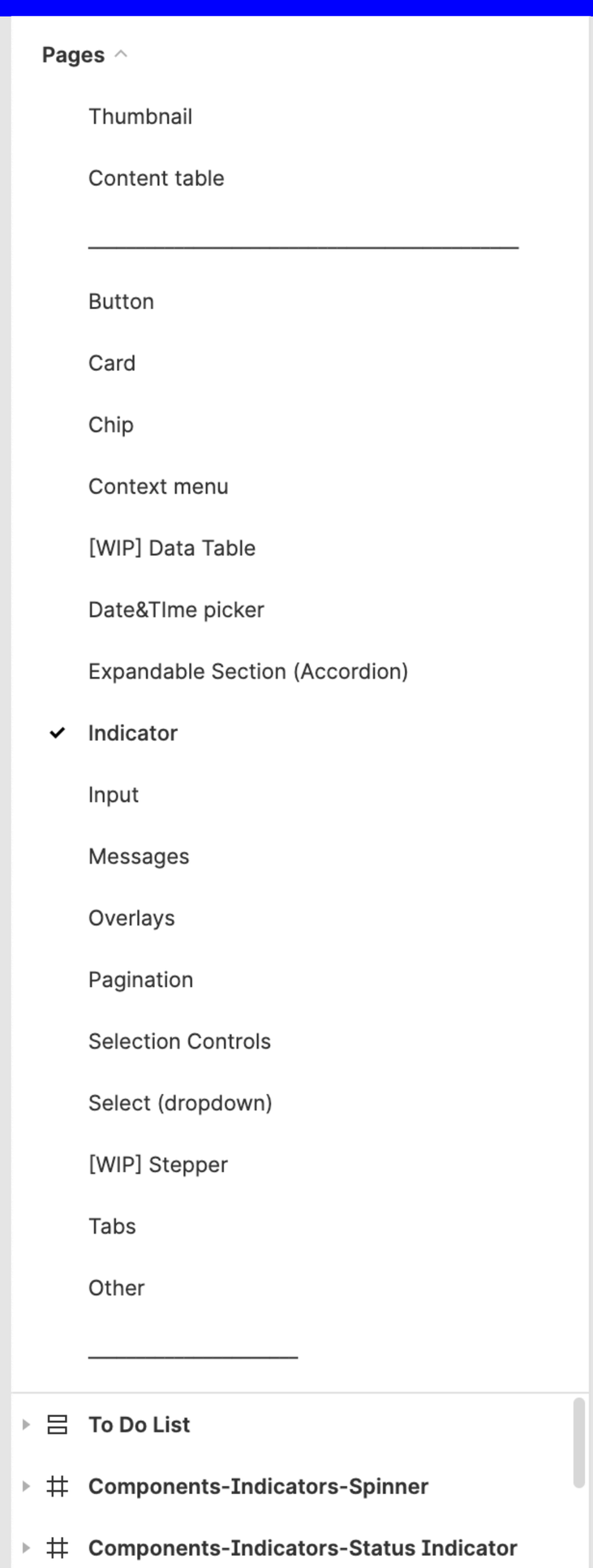
Blur

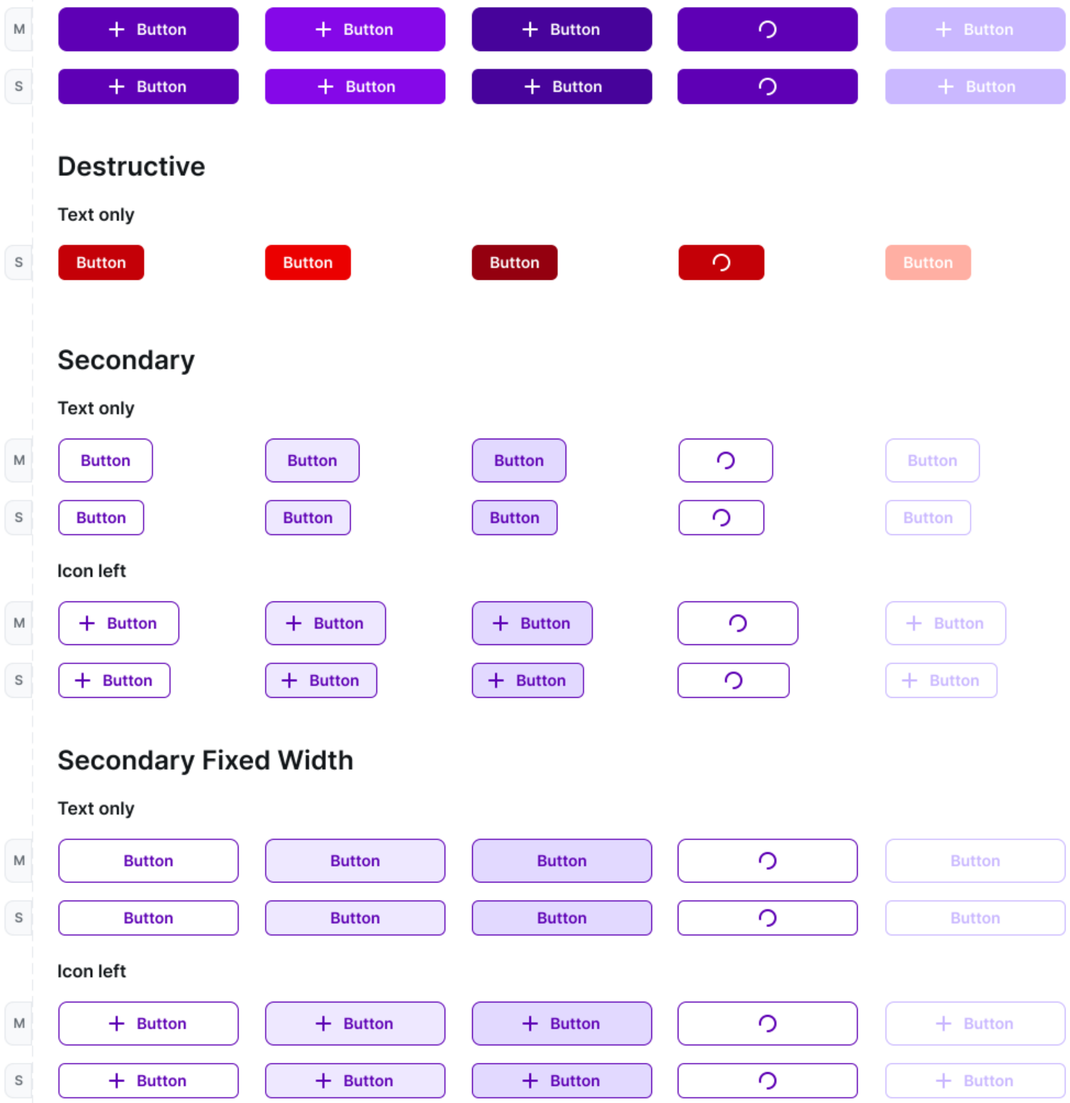
Change Blur parameter to make your shadow smoother and softer



— The components

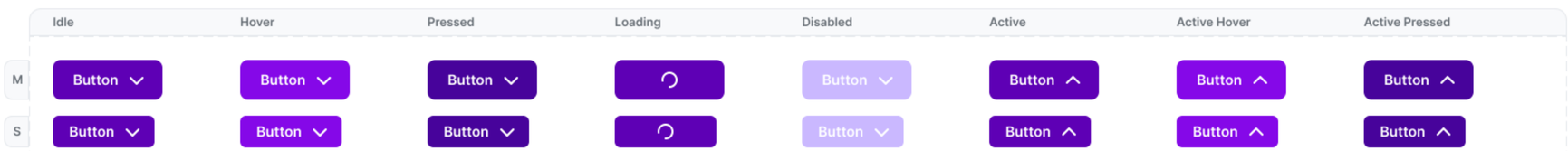
The current list of components is incomplete, but has been prioritised by the requirement of components required by existing products.





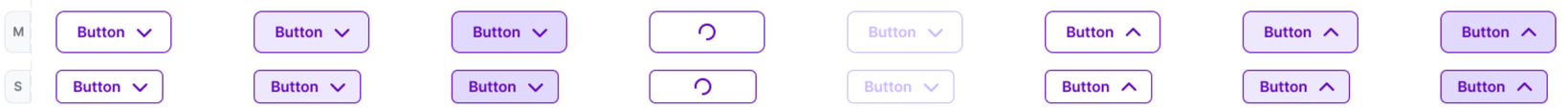
Multiple Action

Primary



Primary Fixed Width

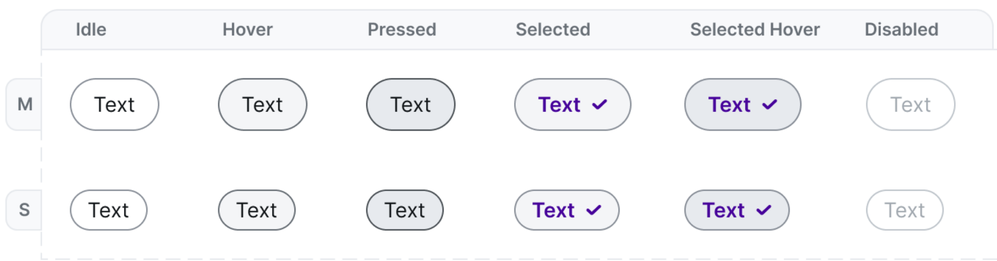
Secondary



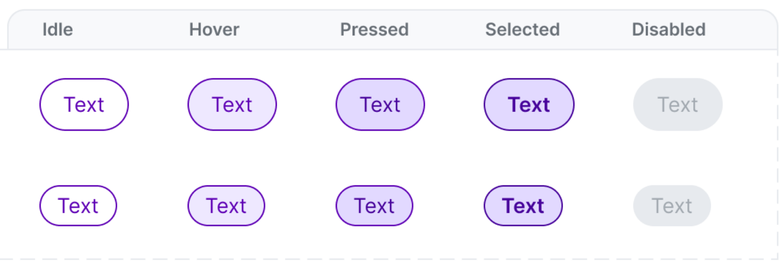
Chip

Selectable Chip

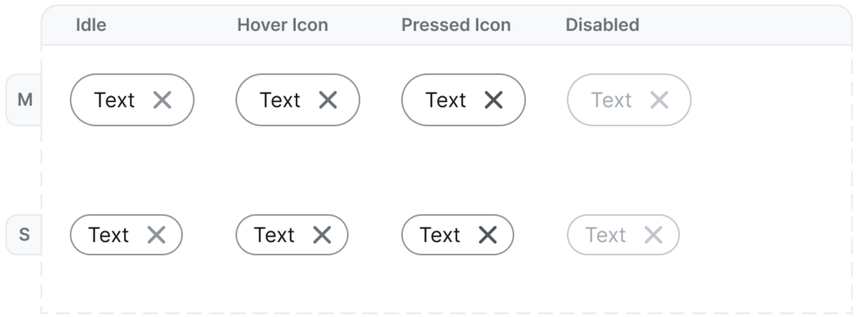
Multi



Radio

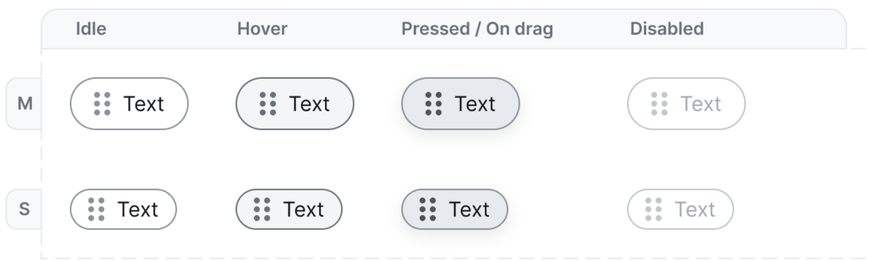


Removable Chip

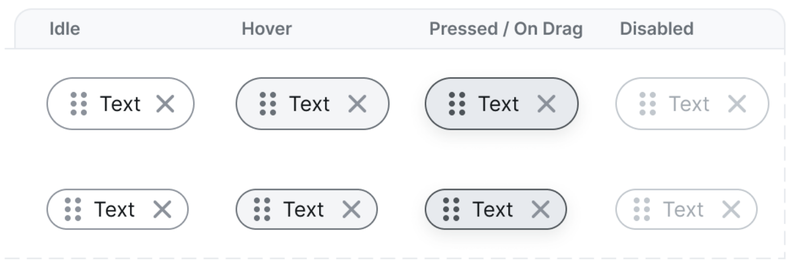


Draggable Chip

Drag



Drag+Close



USAGE

Selectable chips should be used for ~3–6 options.

Multi:
Use for multiple selections. This components is an alternative to checkboxes.

Radio:
Allows selection of a single chip from a set of options. This components is an alternative to toggle buttons, radio buttons, and single select menus.

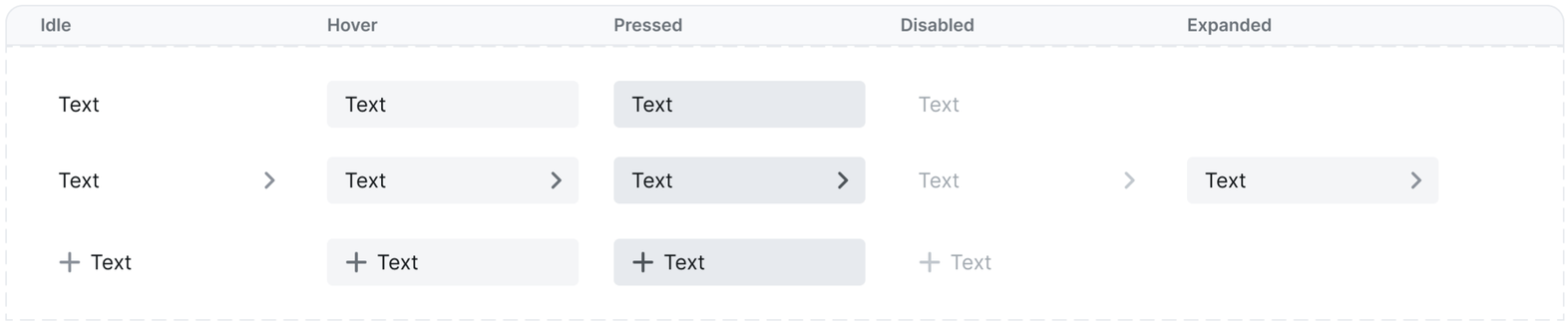
BEHAVIOUR

Multi:
Click on a chip to select it. Multiple chips can be selected or unselected.

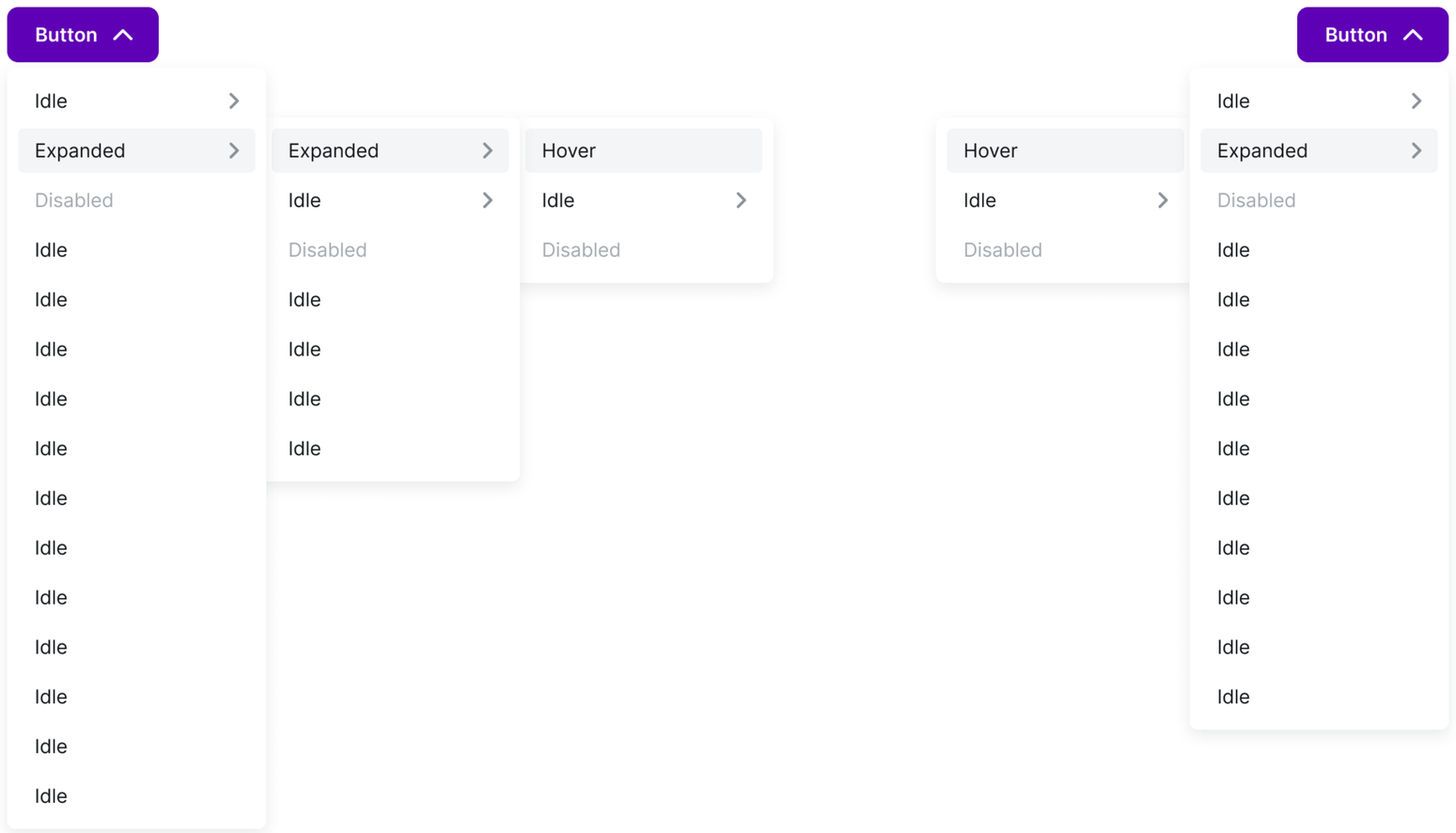
Radio:
Selecting a Radio chip automatically deselects all other chips in the set.

Context Menu

Context Menu Item



Context Menu



We recommend representing up to 15 actions (552px height) and using Cascaded Menu Items to categorize actions into logical groups.

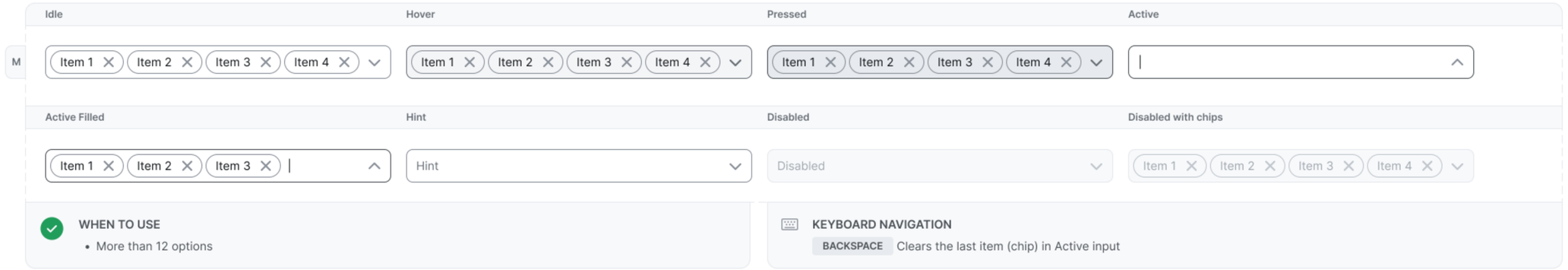
Users can see the expanded Cascading Menu Item by hovering over it.

Expanded menu is always placed under the parent one, overlapping on minus 4px along X-axis. It appears on the same height of Cascading Menu Item minus 8px to align Cascading Item and the first item of Expanded Menu.

Cascading Menu appears to the right on default, but it may open to the left depending on the parent menu position regarding the edge of the

Combobox with Chips

Contained Combobox Multiple Select



Behaviour

UNSELECTED IDLE

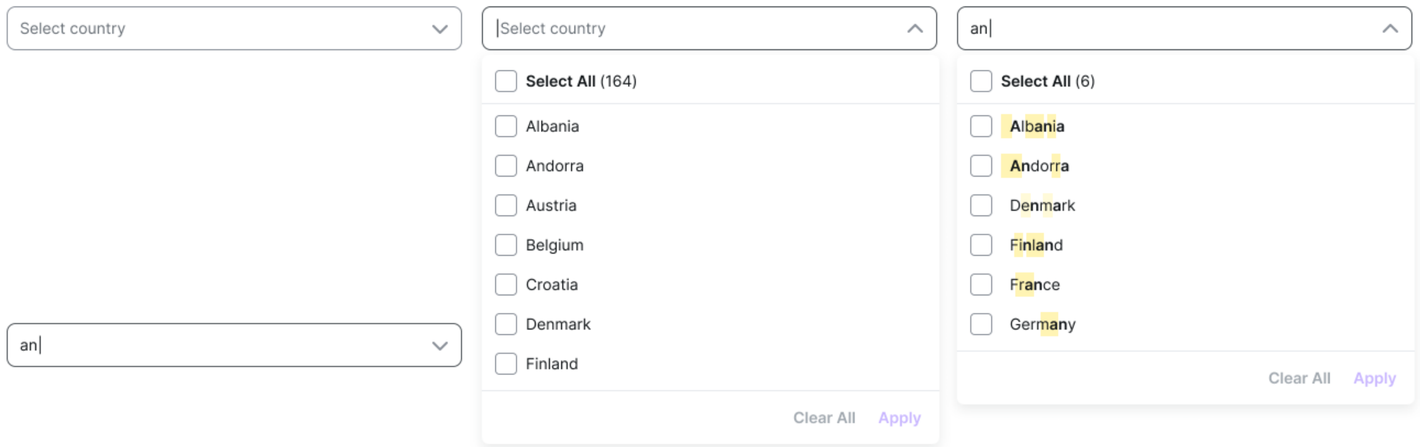
- Hint text gives the users an idea of what they are supposed to select.

UNSELECTED ACTIVE

- The Combobox turns into the Active State after the user clicks on the control box area.
- Hint text stays until the user types.
- It is recommended to sort Menu List Items in alphabetical order or any other relevant order.

UNSELECTED ACTIVE FILLED

- As user types - that filter the List Items and highlight the matches.
- Click on the chevron hides the Menu List and keeps the entered text until Select Control is focused.



SELECTED ACTIVE

- Click on the Menu List Item shows the Chips named after the Selected Item.
- Selected Menu Items move at the top of the list and sort in alphabetical order.
- Selection doesn't affect the text in the input until the user clicks the Apply, or remove it using Backspace.
- Show as many chips as fit into the drop-down width and indicate how many items are selected.
- Indicate a total number of options if Select All applied.
- Clear All keeps the List opened and turn the Combobox into an Active state.
- Click on Chevron hides the List without vanishing the selection, entred text, and filtering.

SELECTED IDLE

- When users delete a chip that don't open the

Search Highlight should be covered by Product FE teams

— Governance

Product teams are under pressure to deliver at speed. Blocking productivity will risk the entire project become obsolescent.

We must establish a crystal-clear governance process that helps users understand what to do when.

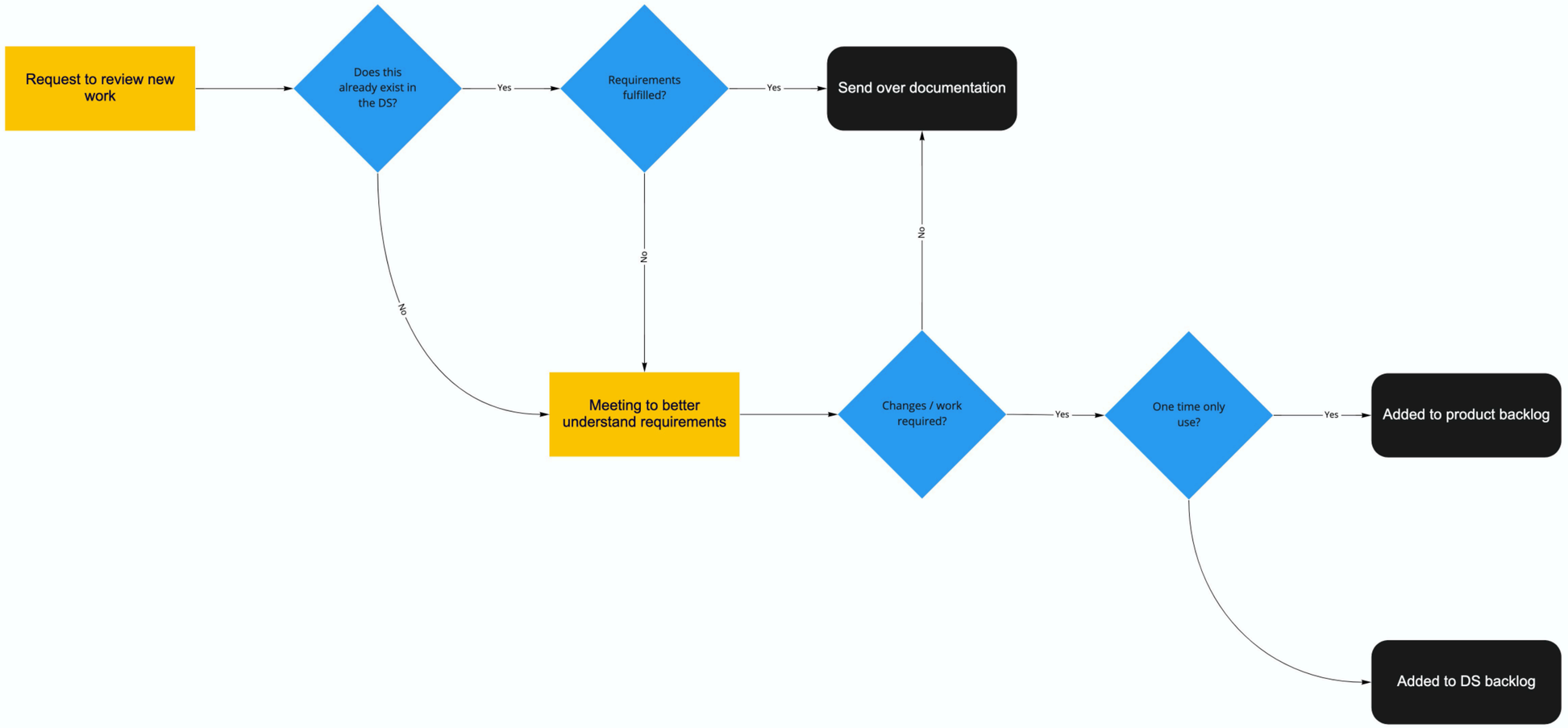
— Processes to address

The main purpose of the design system is for the product teams to use the design system to help design and build new work. However there will always be issues that arise that need a process to be handled well.

1. What happens when the design system’s components don’t exist or don’t fulfill requirements?

2. If new work is needed, is it UI with a one time only use, or should it become part of the design system?

3. How does new work enter the design system?


Request to review new work
Does this already exist in the DS?
Yes
Requirements fulfilled?
Yes
Send over documentation
No
No
Meeting to better understand requirements
Changes / work required?
Yes
One time only use?
Yes
Added to product backlog
Added to DS backlog

— Looking forwards

This project is still a WIP. The high level goals moving forwards are as follows:

1. Combine public documentation for both Design and Development.

2. Add pattern and component interaction documentation.

3. Add company tone of voice

4. Improve documentation to include usage examples, best practices and responsive considerations

5. Integrate accessibility plugins for Figma.

6. Make the changelog transparent, so teams know what and why changes were made to the product.