

# User Experience Design

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The road to a user-focused DriveWorks configurator

# Overview

High level process for anyone with a new or existing DriveWorks implementation.

What is UX/UI Design and why should you care?

The importance of Accessibility

The Design Process Roadmap

Tools of the trade

# What is UX Design?

Designing from the perspective of the user

- User journey to solve a problem, not just the interface
- Create products that provide meaningful and relevant experiences
- Integrate branding, design, usability, accessibility, and function

"UX designers help make technology easier to understand and more enjoyable to use"

Google UX Team

# What is UX Design?

Holistic design of the experience from cradle to grave

Analogous to an engineer designing a car

- What size, what region, what price, what features, etc
- How does it make the driver/passenger feel

# What is UI Design?

Specific design of controls and layout

UI Design is the process of making interfaces with a focus on looks or style.

In DriveWorks this is the look, layout, and functionality of the form controls

Analogous to an engineer designing a door handle, steering wheel, etc

Text Box

Numeric Text Box

Combo Box

Measurement Box

Spin Button

Date Picker

Option Button 1

Check Box 1

# Why should you care about UX?

Ease of use is the best way to retain users

## User Adoption

User acceptance is the #1 reason for DriveWorks implementations to encounter serious roll-out difficulties, if not outright fail.

# Why should you care about UX?

Failing to plan is planning to fail

Planning can save time and effort

Any planning work – no matter how crude – will make future execution efforts smoother.

# Why should you care about UX?

Intuition is the best training

## Less Training and Support

A good UX can mean that you don't have to train on how to use it: it should be intuitive

## Less Rework or rejections

Inform and guide users to make the right choices

# Why should you care about UX?

Attractive interfaces entice, and good experiences retain

## Drive More Sales

Modern interfaces are attractive, and can be a great selling point

Users are more likely to continue to use interfaces that are easy, and they can trust to get the job done

Rebuild trust and re-engage frustrated customers with a new, intuitive design

# Why should you care about UX?

Recap

User Adoption

Planning can save time and effort

Less Training

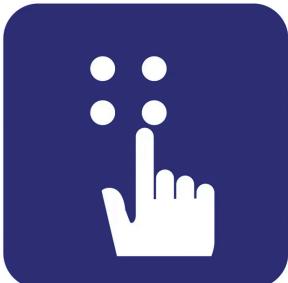
Less Support

Drive More Sales

# Accessibility

Ensure everyone can use your product, regardless of their abilities.

UX design is all about making your product easy to use, and so that includes making sure you are not excluding your users.





# Accessibility

Everyone benefits from accessibility.

⬆️ Elevators

♿ Curb cuts

LARGE print

◐ Color contrast

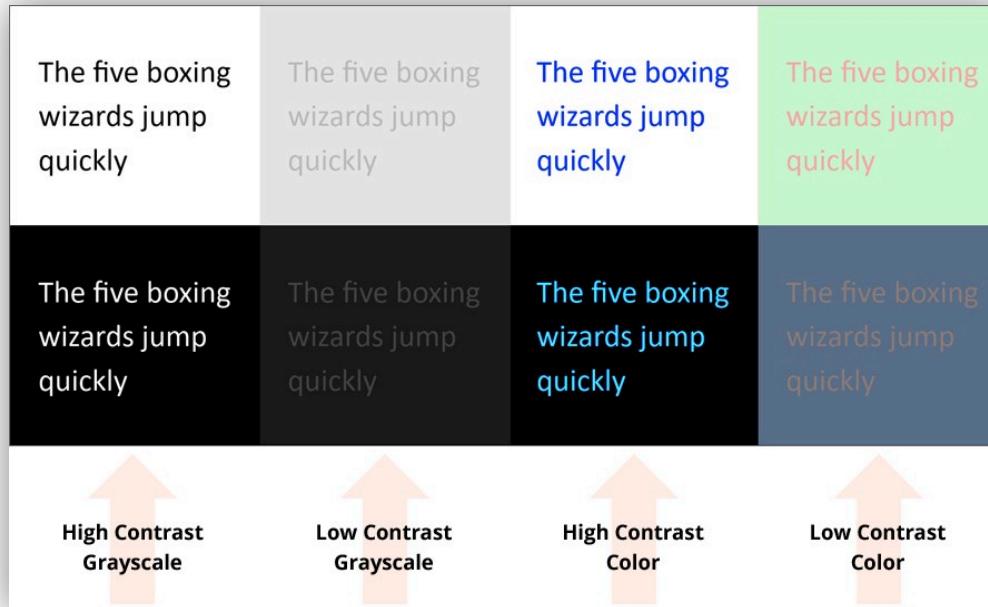
“When UX doesn’t consider ALL users, shouldn’t it be known as “SOME User Experience” or... SUX?”

— Billy Gregory, Senior Accessibility Engineer, The Paciello Group

# Accessibility

Readability and simplicity are key

- Use large, easy to read fonts
- Use high contrast colors



# Accessibility

Don't rely on color alone to denote meaning

First Name      John

Last Name      Doe

Email      john@email

Password      \*\*\*\*

Submit

NORMAL

First Name      John

Last Name      Doe

Email      john@email

Password      \*\*\*\*

Submit

COLOR BLIND (DEUTERANOPIA)

# Accessibility

Don't rely on color alone to denote meaning

First Name	<input type="text" value="John"/>	
Last Name	<input type="text" value="Doe"/>	
Email	<input type="text" value="john@email"/>	
Password	<input type="text" value="*****"/>	
<input type="button" value="Submit"/>		

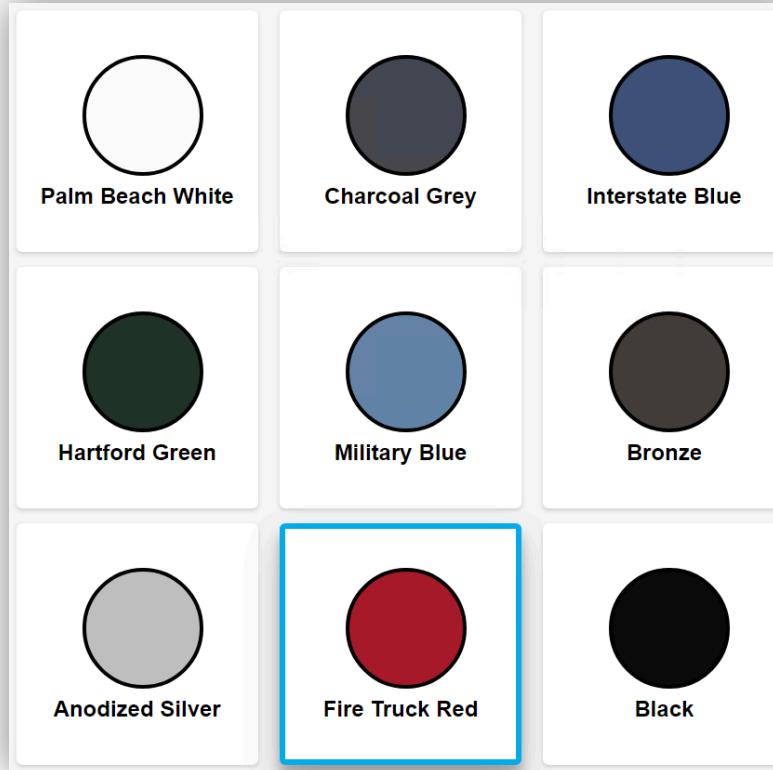
NORMAL

First Name	<input type="text" value="John"/>	
Last Name	<input type="text" value="Doe"/>	
Email	<input type="text" value="john@email"/>	
	enter valid email address	
Password	<input type="text" value="*****"/>	
<input type="button" value="Submit"/>		

COLOR BLIND (DEUTERANOPIA)

# Accessibility

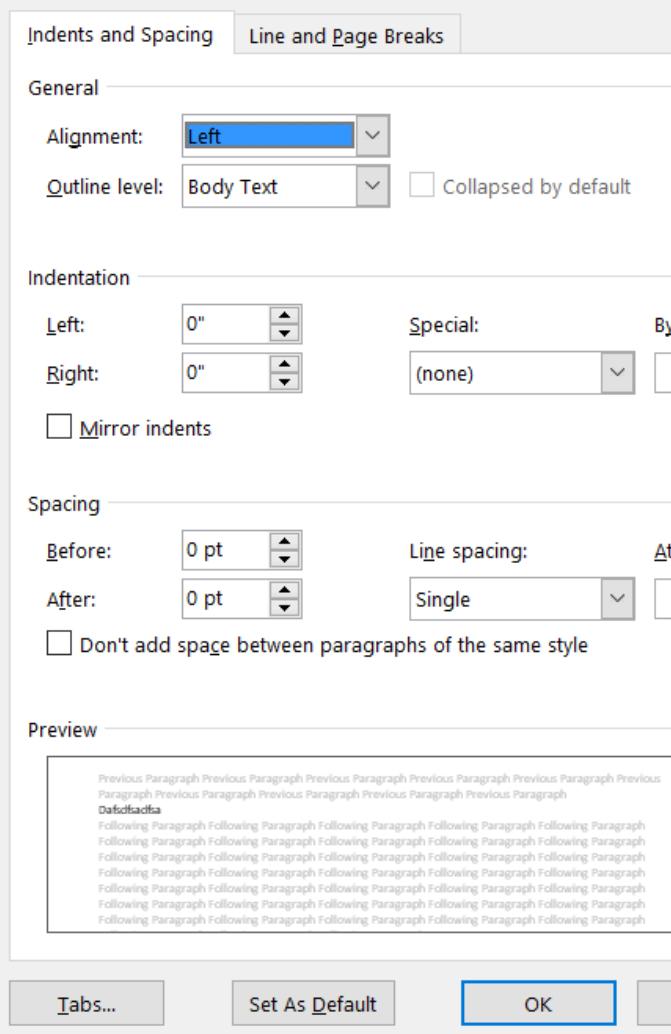
Don't rely on color alone to denote meaning



# Accessibility

## Layout

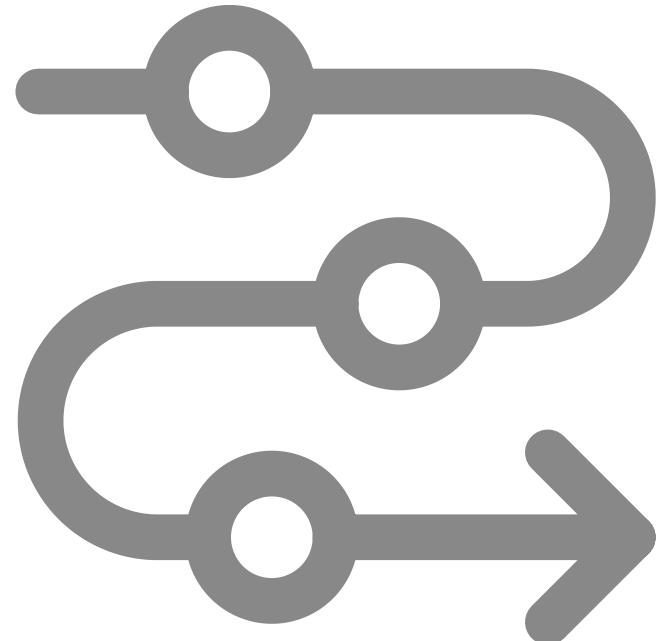
- Ensure adequate spacing between elements
  - Group like items together
  - Spread controls out over multiple pages or tabs
  - Every element has a purpose



# The Design Process

# Design Process Roadmap

1. Identify
  2. Research
  3. Plan
  4. Conceptual Design
  5. Wireframe
  6. Prototype
  7. Implement
- ↻ Feedback loop



# 1. Identify

Goals, Priorities, Audience, Resources

# 1.1 Identify Goals

Aimless Effort without goals may be wasted

Answer the why: What are you trying to accomplish?

- Reduce user input errors
- Reduce training time
- Reduce manual work
- Increase sales
- Retain/increase users

Quantify and qualify your goals

# Priorities

Priorities dictate focus

- Of your goals, which are the most important?
- Are there known issues that need to be addressed first?
- Is this more important than what you are currently working on?

# Audience

Define who your audience is, and what you plan on improving for them

- General Public
- Sales Team
- Internal Designers
- Administrators
- Anonymous users



# Resources

No resources, no progress

- Who is going to be working on this project?
  - Do they have the skills and time to do so?
- Other departments
  - Marketing
  - IT
  - Manufacturing
  - Sales

# 2. Research

Users, Competitors, Alternatives

# Users

User Personas document crucial info

## Sales



### Role

- Generate new sales
- Continue existing sales
- Maintain customer relationships

TPM

Desktop

English

USD

### Motivation

- Win more sales

### Challenges

- Getting quotes to customers efficiently and timely manner

### Previous Solution

- Filling in info into an Excel sheet

### Solution Goals

- More automation in getting quotes to customers

### Other

- Other

# Users

Why should they use your configurator?

- "It is an improvement over their existing solution because..."
- "This will save them time/effort/money because..."

# Competitors / Alternatives

What's the other guy up to?

- Research the competitors and compare their sites
- What are the existing solutions?

# 3. Plan

Timeline, budget, resource allocation

# Planning

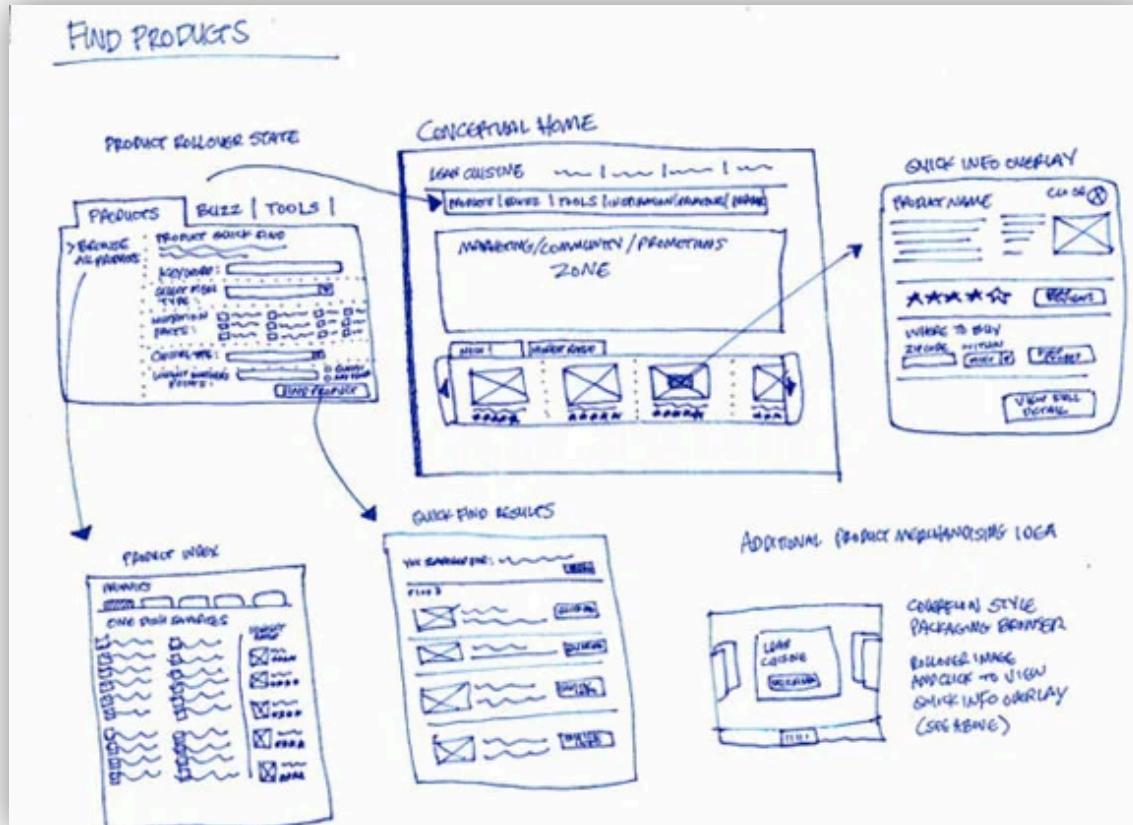
Failing to plan is planning to fail

- Incremental changes, or a complete redesign?
  - Separate project for the UI?
- Who will be working on what
  - Other departments
    - Marketing, graphic design, IT
    - Outsourcing
- Timeline, budget, resource allocation

# 4. Conceptual Design

The Big Picture

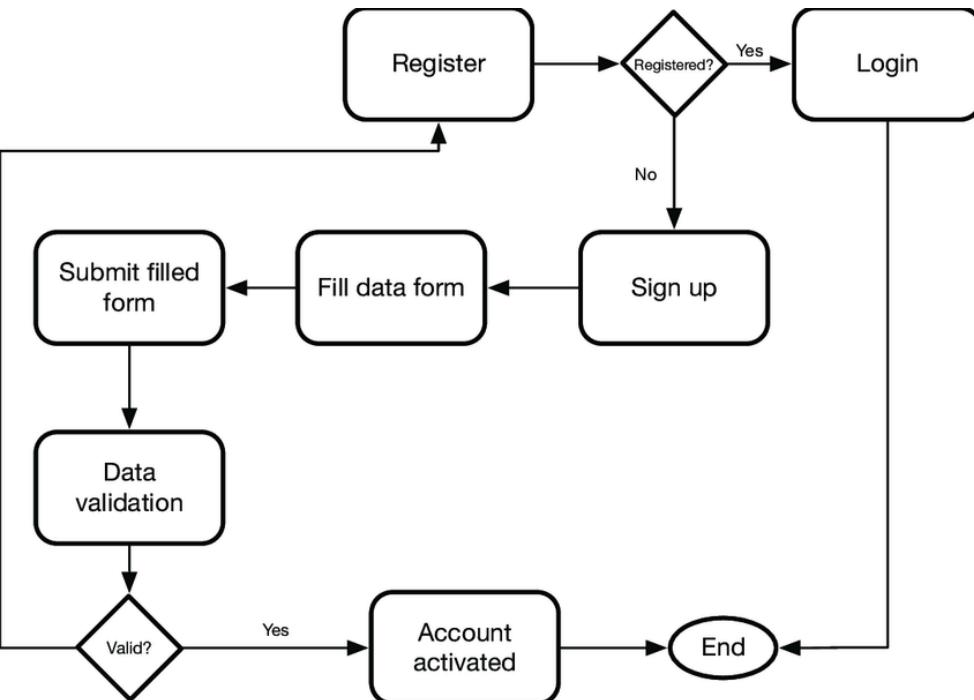
# Pen and Paper



# Flow Diagrams

Hollistic map of the user experience

- Map the flow of the user through the implementation
- States and transitions similar to specification flow
- Collect feedback from stakeholders
- ITERATE ITERATE ITERATE



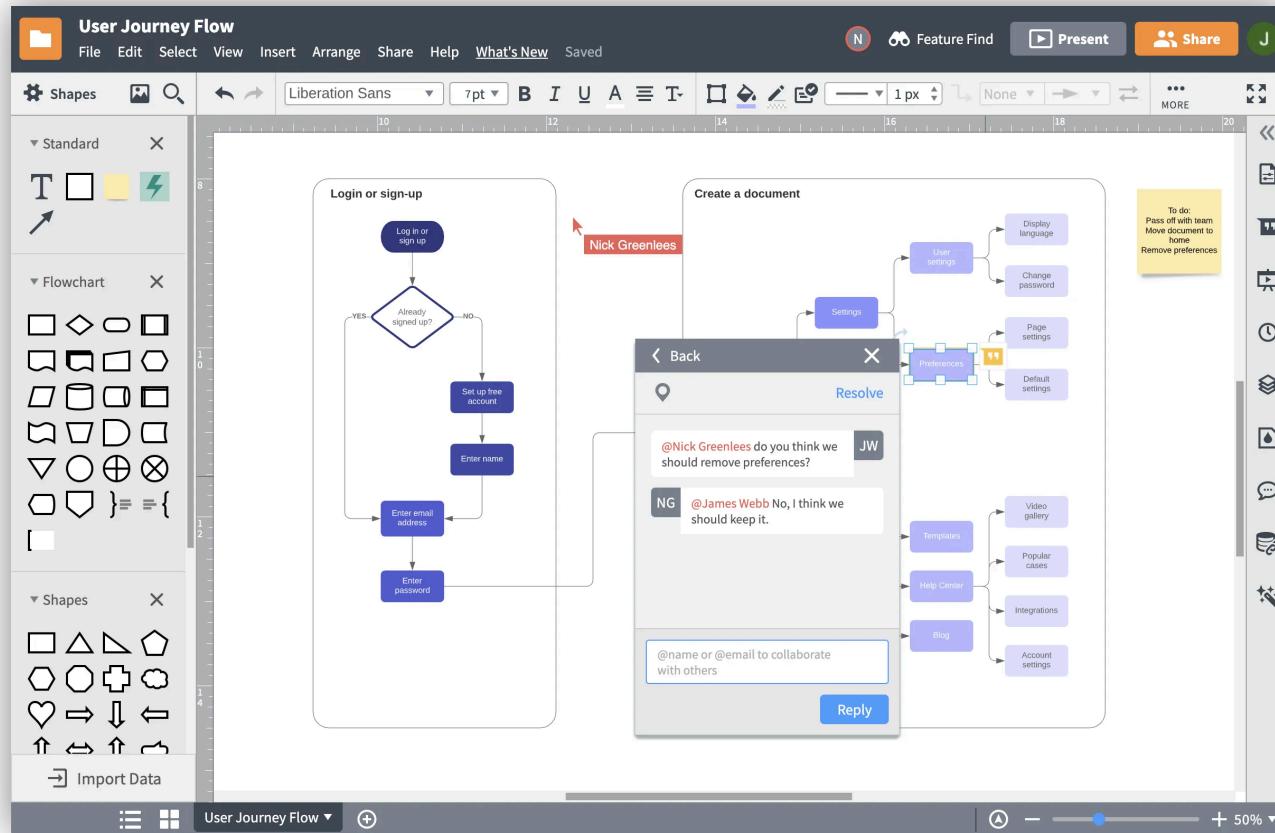
# Flow Diagram Software



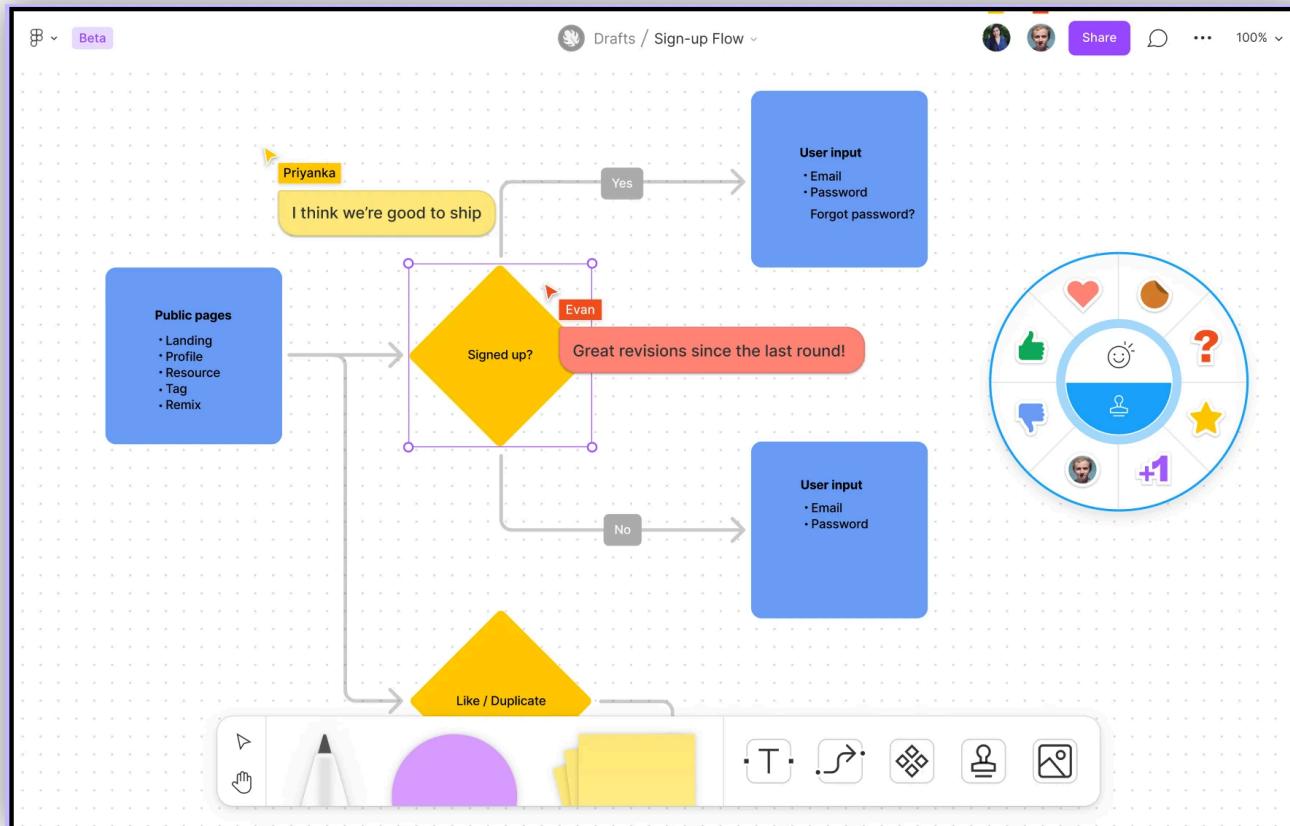
Powerpoint



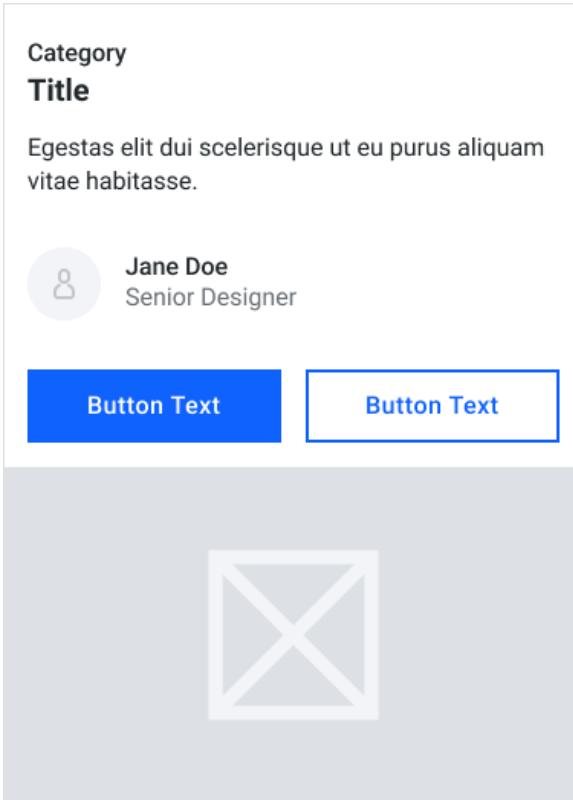
# Flow Diagram - LucidChart



# Flow Diagram - FigJam



# 5. Wireframe

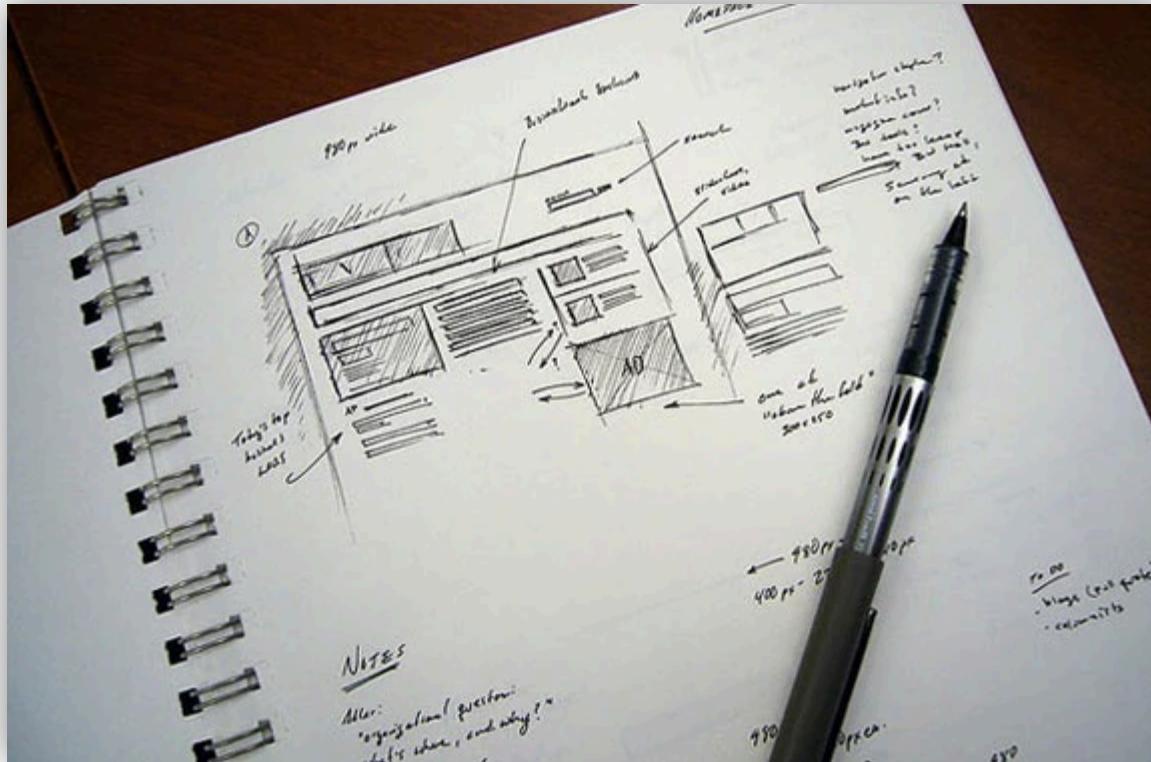


# Wireframe

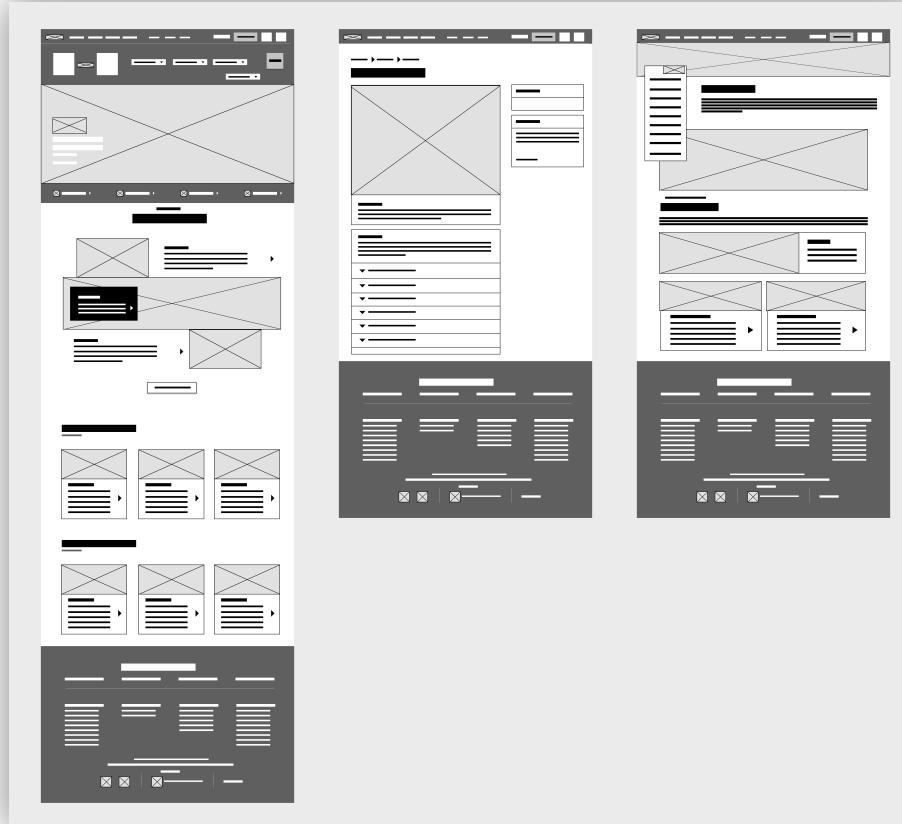
Low fidelity mockup of layout and groupings

1. Overall layout
2. Distinct pages/forms
3. Groupings

# Wireframe Draft



# Wireframe - Figma



# Figma

The screenshot shows the Figma interface with a table component selected for editing. The table has four columns: SERVICES, COST, QUANTITY, and AMOUNT. The first row contains placeholder text 'Service Name', '\$00', '1', and '\$1400'. The second row is empty. The third row is also empty. Below the table, there are summary rows for SUBTOTAL (\$00), DISCOUNT (\$00), and TOTAL (\$00). The right sidebar displays design and prototype tools, including layer, text, fill, and stroke settings. The left sidebar shows the component tree, including 'Frame 28' and its sub-components: 'Services & Amount', 'Service', 'Service Name', 'Frame 22', 'Vector 7', 'Service', 'Service', 'Final Amount', 'Service Label', 'services', 'Frame 20', 'cost', 'quantity', and 'amount'. The 'Service Name' component is currently selected.

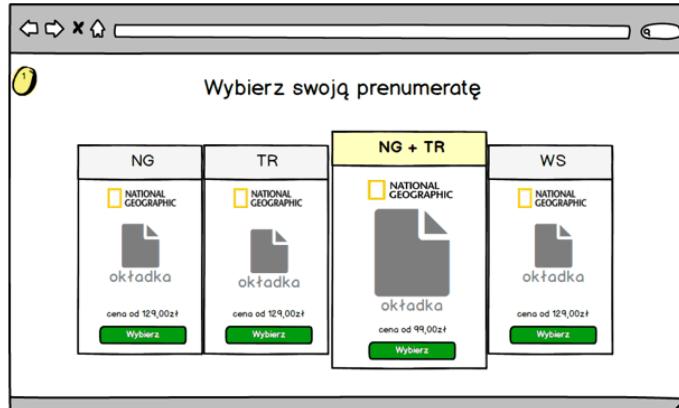
SERVICES	COST	QUANTITY	AMOUNT
Service Name	\$00	1	\$1400
Service Name	\$00	1	\$1400
Service Name	\$00	1	\$1400
	<b>SUBTOTAL</b>		\$00
	<b>DISCOUNT</b>		\$00
	<b>TOTAL</b>		\$00

# 6. Prototype

# Wireframe vs Prototype

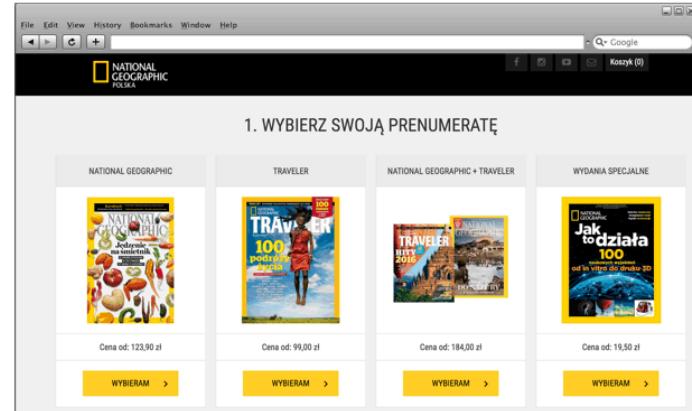
## WIREFRAME

Structure + Functions + Content



## MOCKUP

Style + Colours + Right Content



# Branding and Style Guide

## Semantic Colors

### Background

Use these for large areas such as the page, or use the light ones if a high contrast.



Dark

#1C1C1C



Light

#F0F0F0

### Text Color

Use these for large areas such as the page, or use the light ones if a high contrast.



Light

#F0F0F0



Medium

#A9A9A9



Dark

#333333

### Success

Success colors communicate a positive action or successful situation.

An action must have been successful or solved problem.



300

#90D7AC

500

#90E0E0

700

#90E8E8

### Info

Use info colors to communicate informative status or message.



300

#90D7AC

500

#90E0E0

700

#90E8E8

### Error

Error colors are used to present negative/incomplete information or actions that are destructive or block workflow.

Or could also indicate an action that is not implemented or there was an issue with that progress is delayed.



300

#F08080

500

#F0C2C2

700

#F0A1A1

### Warning

This can be used for generic warning, urgency or attention needed.

Or could also indicate an action that is not implemented or there was an issue with that progress is delayed.



300

#FFD700

500

#FFC107

700

#FFB703

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2024

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## Typography

### Typography

#### Heading Font - Roboto

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnoqrstuvwxyz

##### Heading 1

Font: Roboto

Size: 72px

Weight: 700

Height: 150%

Spacing: 0

Aa Aa

Aa Aa

##### Heading 2

Font: Roboto

Size: 60px

Weight: 600

Height: 130%

Spacing: 0

Aa Aa

Aa Aa

#### Text Font - Poppins

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnoqrstuvwxyz

##### Heading 3

Font:

Roboto

Size:

32px

Weight:

500

Height:

37.5px

Spacing:

0

##### Heading 4

Font:

Roboto

Size:

24px

Weight:

600

Height:

30px

Spacing:

0

##### Text

Font:

Poppins

Size:

16px

Weight:

400

Height:

18px

Spacing:

0

##### Text

Font:

Poppins

Size:

16px

Weight:

400

Height:

18px

Spacing:

0

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## Brand Colors

### Brand Colors

#### Primary

This is the brand color and is used for primary actions, like buttons and key elements. The primary color also highlights the main actions on the page.



#### Secondary

This is the secondary color and is used for secondary actions, like buttons and key elements. The secondary color also highlights the secondary actions on the page.



#### Gray

Gray is a neutral color and can be used for UI, borders, and icons. Most text should either be black/blue or darker shades of Gray, with some additional shades of dark gray for content hierarchy.

Follow common accessibility requirements when creating styling for gray text or background colors.



## Logos

### Logos



Color Logo and Mark



Black Logo and Mark



White Logo and Mark

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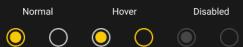
2024

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## Option Buttons

The circles have a diameter of 28px. They are centered in a box 44x44px.

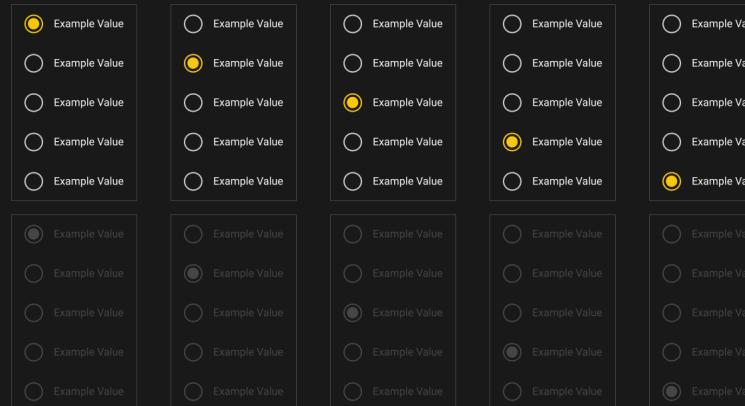


These are single option buttons. They should be organized into Option Groups.



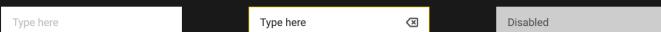
## Option Group

An Option Group is a list of up to 5 option buttons where only 1 may be selected at once. If you need more then 5 consider using a Combo Box instead.



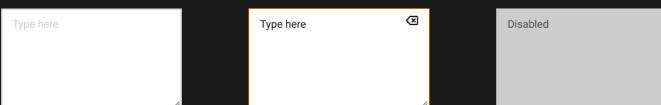
## Text or Numeric Input

Height 47px. Text Style = "Paragraph." Suggested Width 271px.



## Paragraph Input

Meant to allow the user to enter a longer amount of text. Minimum Height 100px. Text Style = "Paragraph." Suggested Width 271px.



## Combo Item

Combo Item is just a single option or item in a combo box. Height 40px, width same as parent combo box. Text style="Paragraph." Second style shows hover.



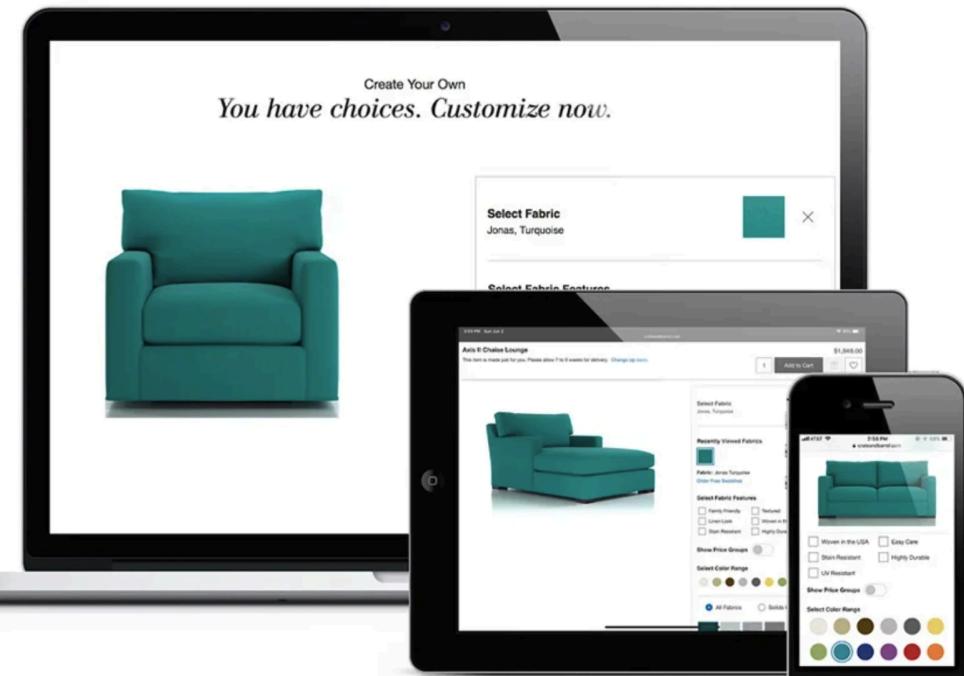
## Combo Box

# Components

- Start small and work up
- Keep sizing consistent
- Consider different sizes and states

# Prototype

High fidelity mockup



- Mockup each distinct page
- Consider different device sizes
- Link pages together
- Share with stakeholders
- **ITERATE ITERATE ITERATE**

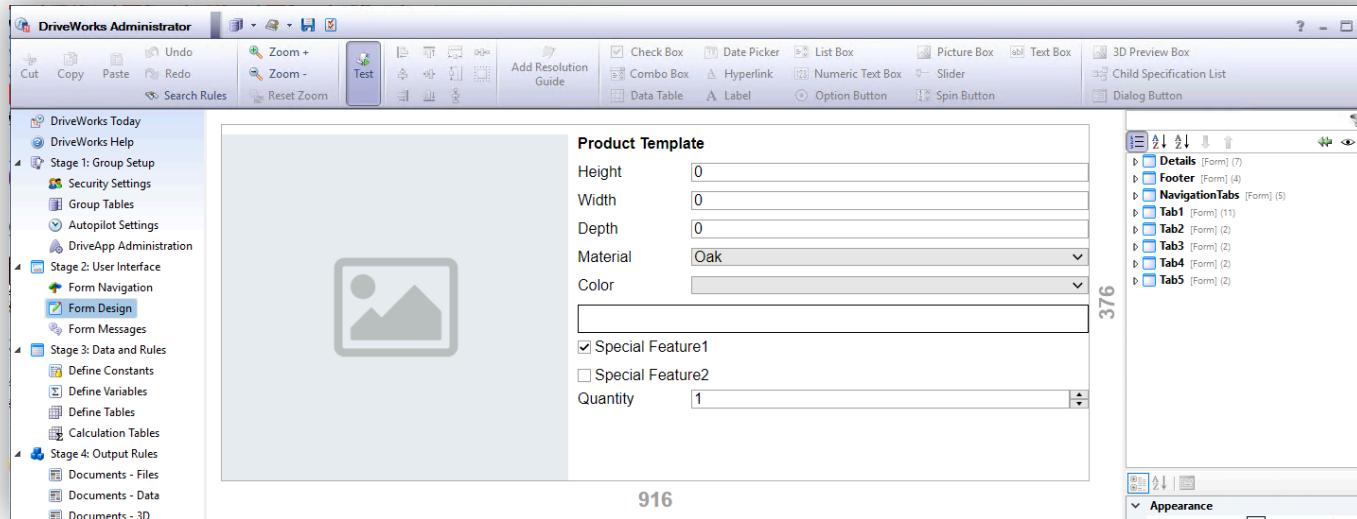
# 7. Implement

Finalize and build

# Implement

## DriveWorks Form Designer

- Create a component collection
- Use variables (or Constants) for sizing
- Consider grouping controls and display them using Frame Controls



# CSS

Text Box

Numeric Text Box

Combo Box

Measurement Box

 m

Spin Button

Date Picker

Option Button 1

Check Box 1

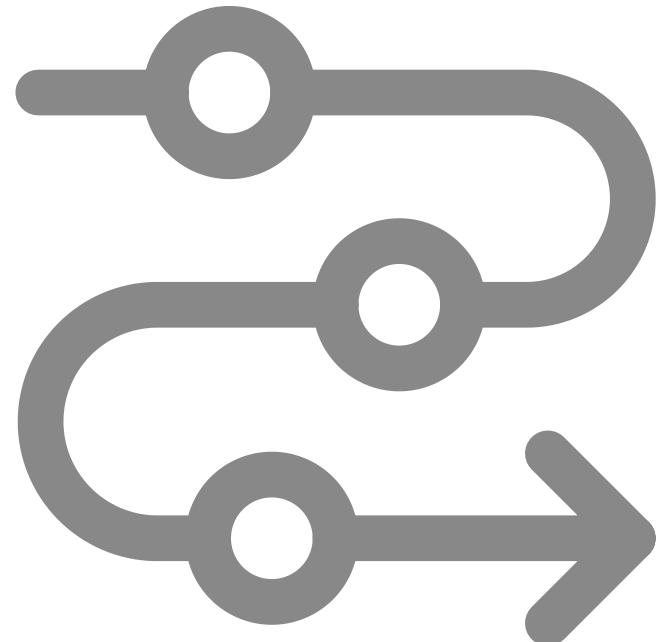
```
[data-metadata*="caption-above"] ::part(label),  
dw-date-picker[data-metadata*="caption-above"] {  
    display: block;  
}  
  
dw-text-box[data-metadata*="caption-above"] ::part(input),  
dw-numeric-text-box[data-metadata*="caption-above"] ::part(input),  
dw-combo-box[data-metadata*="caption-above"] ::part(input-wrap),  
dw-measurement-text-box[data-metadata*="caption-above"] ::part(measurement-input),  
dw-spin-button[data-metadata*="caption-above"] ::part(spin-button),  
dw-date-picker[data-metadata*="caption-above"] ::part(input) {  
    margin-top: .5rem;  
}
```

# 8. Feedback loop



# Design Process Recap

1. Identify - Goals, Priorities, Audience, Resources
2. Research - Users, Competitors, Alternatives
3. Plan - Project, Timeline, Resources
4. Conceptual Design - Brainstorm, Sketch, Ideate
5. Wireframe - Quick low fidelity mockups
6. Prototype - High fidelity mockups
7. Implement - Build in DriveWorks
8. Feedback loop - Continuously improve



# Thank you!

Joseph C. Caswell

