User Experience Design

Joseph C. Caswell, Technical Solutions Consultant, TPM, Inc.

The road to a user-focused DriveWorks configurator

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Overview

High level design 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

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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

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

Google UX Team

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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

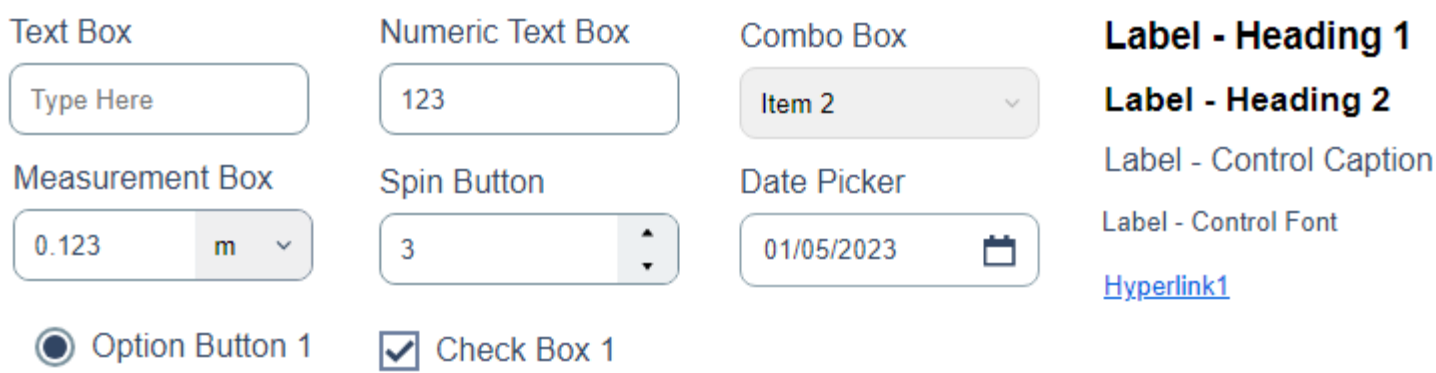
What is UI Design?

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



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.

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Accessibility

Everyone benefits from accessibility.

- Elevators
- Curb cuts
- Large print
- Color contrast

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“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

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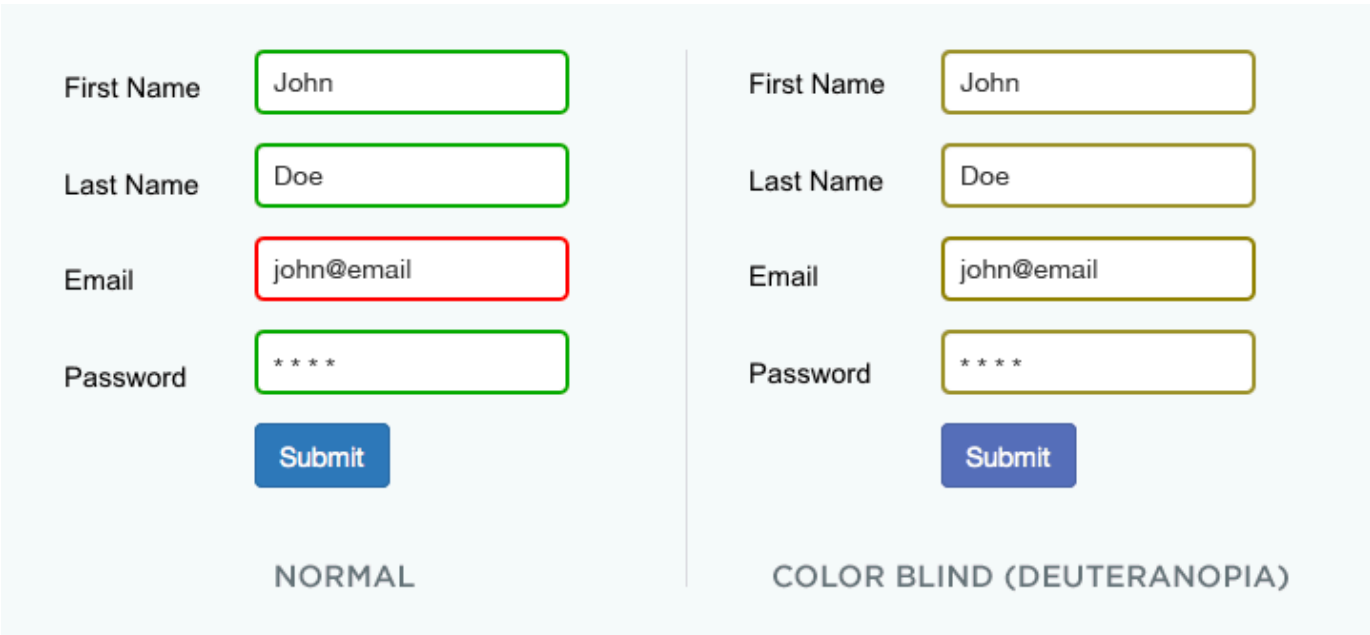
Accessibility

Don’t rely on color alone to denote meaning



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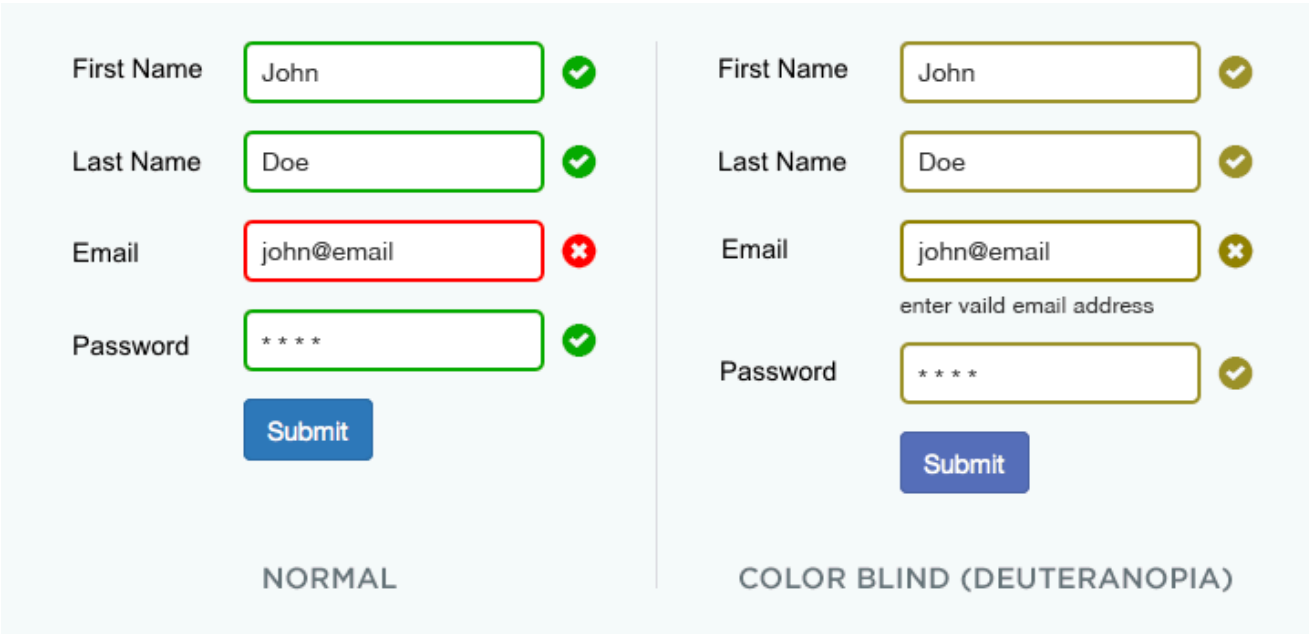

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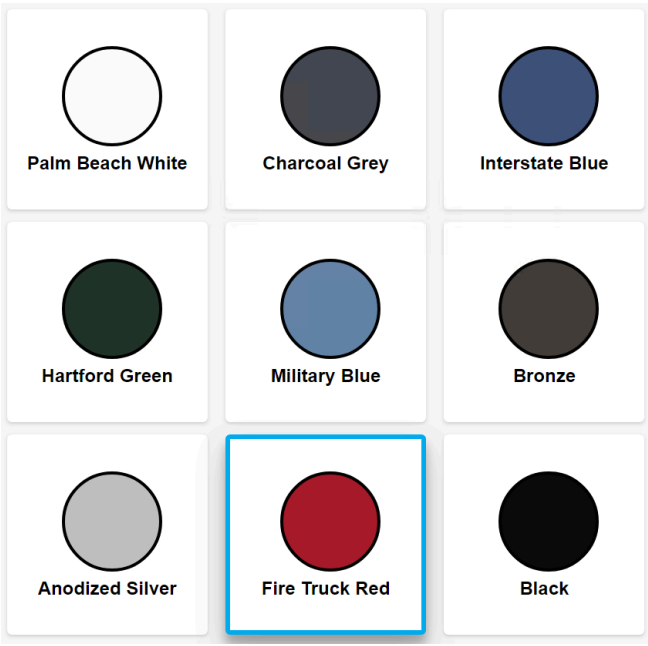

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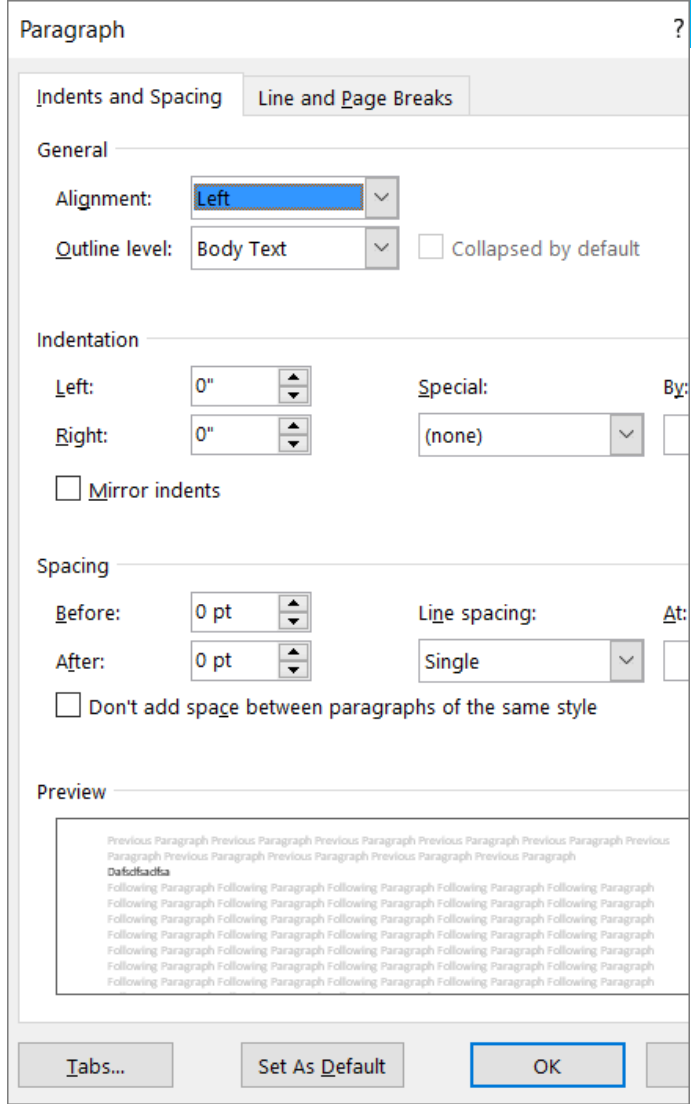
Accessibility

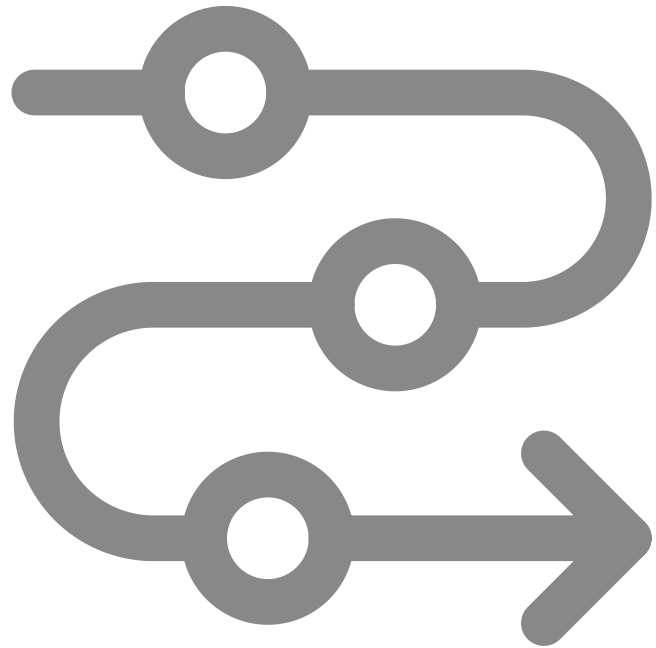
Make sure there is ample space between elements

- Group like items together
- Spread controls out over multiple pages or tabs
- Every element has a purpose


Paragraph
?
Indents and Spacing
Line and Page Breaks
General
Alignment:
Left
Outline level:
Body Text
Collapsed by default
Indentation
Left:
0"
Special:
By:
Right:
0"
(none)
Mirror indents
Spacing
Before:
0 pt
Line spacing:
At:
After:
0 pt
Single
Don't add space between paragraphs of the same style
Preview
Previous Paragraph Previous Paragraph Previous Paragraph Previous Paragraph Previous Paragraph Previous Paragraph Previous Paragraph Previous Paragraph Previous Paragraph Previous Paragraph
Dafsdfsadfsa
Following Paragraph Following Paragraph Following Paragraph

The Design Process Roadmap

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



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1. Identify

a. Goals

b. Priorities

c. Audience

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1.1 Identify Goals

Aimless Effort without goals may be waisted

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

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1.2 Identify 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 then what you are currently working on?

1.3 Identify Audience

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

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

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1.4 Identify 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

Ask lots of questions

Users

- Who are your prospective users?
  - Motivations / Goals
  - Existing solution / workflow
  - Pain points
  - Accessibility needs
  - Devices / browsers
  - Region, language, timezone, currency

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Competitors / Alternatives

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

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3. Plan

- Are you going to make incremental changes, or a complete redesign?
  - Should you have a separate project for the UI and keep the existing project for the logic?
- Identify who will be working on what
  - Do you need assistance from other departments such as marketing or IT?
- Timeline, budget, resource allocation

4. Conceptual Design

This is also known as "The Big Picture."

1. Start by writing down notes and thoughts
- What are some common complaints you have heard from users?

What are some things you have seen in other sites that you are inspired by?

4.2. Define the problem(s) you wish to solve and a way to measure success

- Reduce user input errors by implementing input validation
- Retain users by making the configurator more modern and easy to use
- Reduce training time by making the configurator more intuitive
- Reduce number of rejected quotes by implementing logic to prevent invalid configurations
- Decrease time between quote request and quote delivery by making the configurator require less manual input

4.3. Create User Personas: Typically 1 per user type (Team)

- What is their role / relationship to the company?
- Which groups, projects, or forms should they have access to?
- Why should they use your configurator?
  - "It is an improvement over their existing solution because..."
  - "This will save them time/effort/money because..."
- Review this with stakeholders to ensure it matches their understanding

4.4. Define user workflows

- what are the different things that a user can accomplish?
- These should match the goals you defined earlier
- Request a quote, check status of a quote, create a new project, update password, etc
- Are there different paths that a user could take to accomplish the same thing?
- Which Teams use each workflow?

4.5. Define Design Principles and Guidelines

Use everything you have gathered so far and work with other stakeholders on defining high-level design principles and guidelines that will guide the design process now and in the future.

- "We want to make the configurator as easy to use as possible"
- "We want to match the design of our website"
- "We want to ensure that the configurator is accessible to users in North America"

4.6. Draw a flow diagram

Using technology you are comfortable with, make a high level structure of the configurator. How do different pages/forms interact with each other? What sources do they send or receive information from? Make sure to include, not just pages, but also states the user may be in, such as "waiting for approval" or "received email confirmation." Sometimes these can map to specification states.

- Pen and paper, LucidChart, PowerPoint, whatever you are comfortable with
- Map the flow of the user through the configurator
  - Remember, map their experience, not just the pages
- Include holistic view, including spec transitions, approvals, etc.
- What sources do they send or receive information from? 3D Preview, SQL, API, etc
- Include and flag nodes that still require manual effort
- Collect feedback from stakeholders
- ITERATE ITERATE ITERATE

Flow Diagram Software

If you have something already, use that. If you know something already, use that. Talk with your company with what others are using or what you have licenses for. Consider these:

- Figma has an option called FigJam
  - Easier to learn Figma + FigJam then Figma + other software
  - Integrates well with Figma
  - Consolidated licensing
- LucidChart is industry leader
- integrates with Professional services such as SalesForce, Microsoft Office
  - Use LucidSpark to quickly capture ideas, then LucidChart to make flow diagram
  - Most features, most templates
  - AI assist
- PowerPoint
  - Likely already have license(s)

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5. Wireframe

A wireframe is a low fidelity mockup of the various pages and controls. It is meant to be quick and easy to iterate on. It is not meant to be a final product, rather a way to quickly and easily visualize the layout and functionality of the configurator.

Don’t worry about colors, fonts, etc, rather focus on layout and functionality.

Use technology you are comfortable with. Pen and paper, whiteboard, cut out pieces of paper, Figma, PowerPoint, etc.

1. Start drawing the overall layout (header, sidebar, main content, etc.)
2. Which controls should be grouped together? How are they laid out?
   - How do the controls/groups interact with each other?
   - What information need to be displayed to the user?
   - 3DPreview, images, data records
   - Are some inputs invalid? How do you display that to the user?
3. Create a list of pages / forms and what controls are needed on each

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6. Prototype

A prototype is a high fidelity mockup of the various pages and controls. It is meant to be a representation of the final product, outside of DriveWorks. It is meant to be a way to quickly and easily visualize the layout and functionality of the configurator.

The flow diagram, wireframe, and even the user persona were meant to quickly ideate and iterate rather then needing to be polished. The prototype is meant to be polished and signed off by stakeholders.

This is similar to an engineering drawing: the full specification of the product, but not the product itself.

As such, using a purpose built tool is recommended. Figma and Adobe XD are industry leaders, but if needed, Indesign, Publisher, Photoshop, or even PowerPoint can be used.

1. Using your brand guidelines, start by setting the fonts, colors, logos, etc.
2. Start with the overall layout (header, sidebar, main content, etc.)
3. Design the controls and groupings - the component guide

Figma

- Industry leading software for UI design
- Quickly iterate through ideas
- Focus on design while isolating from minutia of implementation
- Excels at collaboration
  - Can have multiple people work on it at once, unlike DriveWorks Project Form Designer
  - Can capture comments right on design
  - Use "Present" mode to create links to share with stakeholders earlier in process
  - Use "Dev" mode to easily identify spacing, position, styles
- Don’t need to be Technical to design or modify
  - Can be handed off to graphic/web designer without DriveWorks license
  - Professional alignment, spacing, grouping without variables
  - GUI to quickly and easily design and have it write CSS for you
  - API create assets and reuse them (or modify them later)

7. Implement

Use your component guide to make a form that has an example of each of the items (or groups) you need.

Use variables wherever possible to keep things consistent. If you set the standard width of a control via a variable you can edit it from anywhere as opposed to finding the original control and changing it.

You may wish to set your brand colors and fonts in either CSS variables or DriveWorks variables. This makes it easier for others to contribute and not have to train them on your brand guidelines.

If you are using DriveWorks 21+, you can use CSS to style your components. This allows for way more customization than DriveWorks alone, and can be used to match your brand guidelines. It can also allow advanced styling such as animations, shadows, on hover effects, etc.

Don't set the positions of the controls in CSS.

8. Feedback loop

Your job is never done: you can always take feedback and improve.

More objectively, the goal of this exercise was to make things better for your users, and how do you know if you have done that if you don't ask them?

If you had an existing configurator, maybe you decided to take baby steps and only change a few things. You can collect feedback and use it to decide what to change next and how, making sure you stay true to your objectives, priorities, and principles.

Closing Remarks

Key takeaways:

- Planning: Ensure that you have a clear understanding of your goals, priorities, audience, and resources before you begin.
- Conceptual Design: Freeform brainstorming, sketching, and ideation. This is the time to think big and explore possibilities.
- Flow Diagram: Map the flow of the user through the configurator, include states and information sources, iterate based on stakeholder feedback.
- Wireframe: Focus on layout and functionality, group controls, display necessary information, gather feedback from stakeholders.
- Prototype: Create a high-fidelity mockup of the configurator, design controls and groupings, iterate based on feedback, obtain stakeholder approval.

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