

# UX Development Process

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## 1/41 UX Development Process

Hello! And welcome everyone to User Experience Design for DriveWorks!

This presentation is for anyone who wishes to learn more about how to make their DriveWorks implementation more user friendly and more user focused. Ultimately leading to a more successful implementation.

My name is Joseph Caswell, and I am a Technical Solutions Consultant at TPM, a DriveWorks reseller based in the southeast US. It is my job to consult with a variety of customers to guide them to a successful DriveWorks implementation, and in many cases I am directly involved in bringing their DriveWorks projects to life.

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## 2/41 Overview

Don't worry if you have no idea what UX is, or what it entails, this presentation will go over just that. We are going to take a high level overview of the UX design process from cradle to grave.

We'll go over UX design, UI design, and accessibility. What they all are and why they are important.

Then we'll walk through the design process step by step and showcase some tools of the trade along the way.

So let's get started!

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### 3/41 UX Design

What is User Experience Design?

UX Design the process of designing a product from the perspective of the user.

You may have heard of DFM, or Design for Manufacturing. That is the process of taking a look at your products and seeing how you can modify them to be better for manufacturing.

This isn't all that different: instead we are going to be looking to see how things can be improved for the user.

🔖1 UX specifically, is focused on the entire journey, or experience of the user: not just the interface.

🔖2 UX Design is the process of creating products that provide meaningful and relevant experiences to users.

🔖3 It involves the designing with the intent to integrate aspects of branding, design, usability, and function.

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### 4/41 Google UX Quote

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

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## 5/41 UX Design

Let me bring this back to engineering:

Before you can design the door handles of a car, or the dashboard, or even the muffler, you need to know what, or rather, who the car is for.

1 Who will be driving it? In what regions? What weather conditions? What are their expectations? Price point?

2 What is the car supposed to make the driver/passenger feel?

A Ferrari supercar is going to be a very different experience from a chrysler minivan, and every aspect of the design should reflect that. Failing to consider this leads to a bad user experience which means unhappy customers.

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## 6/41 UI Design

What about UI? What's the difference?

1 User Interface design is the process of designing the individual interfaces that make up the product.

2 In our case, this will be the forms and controls that make up the DriveWorks project. How big is your text input? What happens when you type in an invalid input? How are the different controls laid out on the screen? How about for a mobile device?

UX and UI are terms that are often used together, but they have distinct meanings. A UI designer is focused on the specific design of the controls and layout of the product where UX focuses on higher level concepts than that.

3 Bringing it back to designing cars, this is the point where we are designing the door handles, the steering wheel, the dashboard: all the parts that the user interacts with.

Remember, with UX we were focused on the experience as a whole.

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## 7/41 UX - Users

So why should we, as DriveWorks administrators care about user experience?

### #1: User Adoption

You need people to actually use your configurator for it to be successful and ease of use is the best way to attract and retain users. Not hitting that mark is the number one reason for implementations to be unsuccessful.

Just about all of us, at some point in our life has built an automation tool we are really proud of, but no one ends up using it. It's frustrating.

Later we'll talk more about uncovering the needs of you users so you can focus your efforts on what they need.

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## 8/41 UX - Planning

This ties directly into the next reason: planning.

Planning can save time, money, and effort, and will make future efforts smoother.

Working in DriveWorks, we can sink a lot of time into trying to get something to work just right. How often is that time ultimately wasted because we didn't have a clear understanding of what we were trying to accomplish?

Maybe you fought with the oddities of making an HTML email quote, but your customer is frustrated because it can never print out right? Should you have made a PDF instead and attached it to a simple email?

Maybe you stuck a ton of options into a single form, but your sales team or your customers could have told you that most of them are obsolete?

It may not feel as productive up front, but ultimately it's easier and quicker to integrate the user experience into your planning. Believe me, the dividends will pay off later

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## 9/41 UX - Training

Good designs leverage user intuition and past experiences. You can build on this by incorporating visuals such as images or DriveWorks 3D Preview.

👉1 Ultimately, good UX leads to having take less of your valuable time training new users, and less effort fixing things because users input invalid parameters.

👉2 You can save yourself from having to reject specifications by not allowing invalid combinations. Catch errors before they happen, and make it easy for the user to fix them

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## 10/41 UX - Sales

In some circumstances, a good UX can drive more sales as well.

DriveWorks Live allows us to have configurators open to the public, not just for internal use.

Doing so means our user base is larger, more diverse, and we have to compete with all the other sites out there.

You can drive initial interest by having an attractive UI, but, just like anything else, they won't come back unless they had a good experience.

👉1 If you have had a configurator for a while it's possible people have built up distrust or an ick factor. Introducing a new, better, more intuitive design is an opportunity for a marketing blast, and a chance to re-engage customers that may have been frustrated with the old design.

Hey everybody try out Configurator 2.0! It's so much easier to use!

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## 11/41 UX - Review

To recap, you should care about the user experience because

a good UX attracts and retains users,

saves time, money, and effort and can lead to more sales.

All affecting your bottom line

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## 12/41 Accessibility

Before we jump into how to get started designing, I would like to take a moment to talk about something that is very near and dear to my heart – Accessibility

Accessibility is the term for making sure that everyone can use your product, regardless of their abilities.

We are not all perfect humans: Everyone has a different set of eyeballs, brain, hands, experience, etc

If your implementation is public facing, then folks will be accessing it from different browsers, devices, operating systems, and screen sizes.

During the research phase, which we'll cover later, you will uncover which of these to focus on, so you can accommodate those differences in your UI.

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## 13/41 Accessibility 2

Everyone benefits from accessibility.

We are surrounded by technology or design decisions that, while they may be required for people with certain limitations, they are helpful for everyone.

🔗 1 Take elevators for instance: Here in the US they are required by law by the Americans with Disability Act because that is the only way some folks can get from floor to floor.

🔗 2 Curb cutting is the term for sloping a sidewalk down to a crossing as seen here. This design decision shapes and guides you on where to cross the street. But it's also there to assist those confined to wheelchairs. Both elevators and curb cuts assist all of us with our luggage, strollers, bikes, or pulling a cart.

🔗 3 Having large print, and ensuring there is high contrast between text and it's background vastly improves readability for everyone.

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## 14/41 Accessibility Quote

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

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## 15/41 Accessibility

Here are some key things you can do to make your DriveWorks implementation more accessible:

Use large, easy to read fonts and make sure there is enough contrast between the text and the background. Make sure there is enough space between elements so that they don't run together.

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## 16/41 Accessibility

Don't rely on color alone to denote meaning.

A majority of us in mechanical and manufacturing engineering are male, and we are 17 times more likely to be color blind than women.

For invalid input don't just turn the outline from green to red...

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## 17/41 Accessibility

... consider adding a message, or use an icon.

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## 18/41 Accessibility

If you have a color picker for paint, make sure to include the color name, not just the color.

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## 19/41 Accessibility

Make sure there is ample space between elements, and group like items together. Not only is this very helpful for folks with dyslexia or ADHD, but consistent spacing looks more professional, is easier to read, and is easier to understand and navigate. Try not to put too many controls on the page, but rather spread them out over multiple pages or tabs.

🔗1 Along the same lines, don't have items on the page just because. Everything on the page should have a purpose: function, information, or grouping. If a control is not accepting input either hide it or make it clearly disabled.

All of these accessibility tips benefit everyone.

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## 20/41 Roadmap

Now that we've learned about what UX and UI design are, and why they are important, let's take a look at the design process roadmap. We'll go through each of these steps in detail.

- 🔗1 One: Identify your goals, audience, and priorities
  - 🔗2 Two: Research your users, competitors, and alternatives
  - 🔗3 Three: Plan your project, timeline, and resources
  - 🔗4 Four: Conceptualize: brainstorm, sketch, and ideate
  - 🔗5 Five: Wireframe: create quick low fidelity mockups of your pages
  - 🔗6 Then, build a prototype to get feedback from stakeholders
  - 🔗7 Now you're ready to Implement your design in DriveWorks
  - 🔗8 Lastly, don't forget to continuously get feedback to improve your design
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## 22/41 1.1 Identify Goals

The very first step of UX design is the same as the first step in any project: identify your goals. Define what it is that you wish to accomplish with your implementation or redesign. Ask yourself, and your other stakeholders what are you trying to achieve? What are you trying to improve?

👉1 We just covered many reasons to put effort into making a good UX and many of them align with the reasons you got into DriveWorks in the first place. Probably to make your life easier, less repetitive: and ultimately to make your company more money.

👉2 But which of these specifically applies to your company and your implementation? Can you quantify or qualify the improvements you wish to make?

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## 23/41 1.2 Identify Priorities

During this process you may identify several goals. Now it is time prioritize. We can't do everything at once no matter how much we wish we could.

Identify which goals may be the easiest to implement, or will have the biggest impact.

Does it make sense to roll changes out incrementally, or should you do a complete redesign?

Are these goals more important than what you or your team are currently working on?

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## 24/41 1.3 Identify Audience

Next, identify who would be using your implementation.

Will this be open to the general public or just your sales team?

Will this be used by internal designers or administrators?

Will you have anonymous users or will everyone have to login?

Does it make sense to have different implementations for different users?

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## 25/41 1.4 Identify Resources

You can't begin to plan unless you know what resources you have available.

Who is going to be working on this project? Do they have the skills and time to do so?

Do you need to get other departments in your company involved?

Perhaps your marketing team has a graphic designer that can help with the design?

Maybe your IT department can help with setting up a server or web hosting?

Do you already know everything about the product, or do you need to get manufacturing or sales involved?

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## 27/41 Competitors / Alternatives

It's time to move on to the research phase.

Now that you have identified who your users are, it's time to learn more about them.

And the best way to do so is go out and ask them a bunch of questions.

What's their current process? What do they like about it? What do they dislike about it? What errors have they encountered? What do they wish it could do? What are their pain points, or what do they find stops or slows them down?

Do they have any accessibility needs? What devices and browsers are they using? What region, language, timezone, currency, etc?

- Who are your prospective users?
  - What is their motivation, goals in their role?
  - What is their existing solution?
    - Excel, manual process, existing configurator, competitor's configurator, etc
    - What do they like about it?
    - What do they dislike about it?
    - What errors have they encountered?
    - What do they wish it could do?
    - What are their pain points?
  - Do they have any accessibility needs?
  - What devices / browsers are they using?
  - Region, language, timezone, currency, etc
- What are your competitors doing? / What are the alternatives?
  - What are they doing well?
  - What are they doing poorly?
  - What are they (not) doing that you could do?
  - Take screenshots, make notes
- What applications/websites are familiar to your users?
  - Can you use similar patterns?