

User-Centered Software Design in the All Hazards Analysis Application

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Asia Kristen Haslam





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Asia Kristen Haslam

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Idaho National Laboratory Idaho Falls, Idaho 83415

http://www.inl.gov

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User-Centered Software Design

IN THE ALL HAZARDS ANALYSIS APPLICATION

Asia Haslam, American University in Bulgaria | Mentor: Rachel Reichenberger

USER-CENTERED DESIGN (UCD)

BENEFITS OF UCD

CHALLENGES OF UCD

UCD is 'the practice of creating engaging, efficient user experiences.'

The key principles are:²

- An early focus on users and their tasks
- Experience-based measurement of product usage
- A cyclical design process to refine the product based on user feedback
- It's easier to plan for the user throughout the design process than to redo all your work after the product is complete.
- A user-friendly product saves your users time and effort. If your product is difficult to use, your users may not even be aware of all its capabilities.
- UCD requires significant work up-front.
- The product goes through multiple revisions.
- Finding sample users to perform product testing can take effort.

UCD IN THE ALL HAZARDS ANALYSIS (AHA) APPLICATION



Help Documentation

I helped create the interface for a part of the app where users can read app instructions and even add their own.

(i)

Tooltips in Application

If a user hovers over a button, a tooltip appears to explain what the button does.



New User Meeting

The AHA team held a meeting with new users. I was able to introduce the dynamic docs and get feedback.



Advanced User

Analyst

- Comfortable trying new features
 Works with data inn
- Works with data inputs and outputs
- Goals: app is powerful, allows them to work efficiently

User Personas

User Personas are a UCD strategy to visualize key users of a product

so you can design for their needs. These are AHA's key users:

New User Analyst

- May use app rarely
 Works mostly with
- Works mostly with data inputs
- Goals: app is userfriendly, easy to navigate



Analysis-Focused User

- High-level view of app
- Focuses on impacts of infrastructure disruption
- Goals: app displays information quickly, exports data

Walkthrough with Users

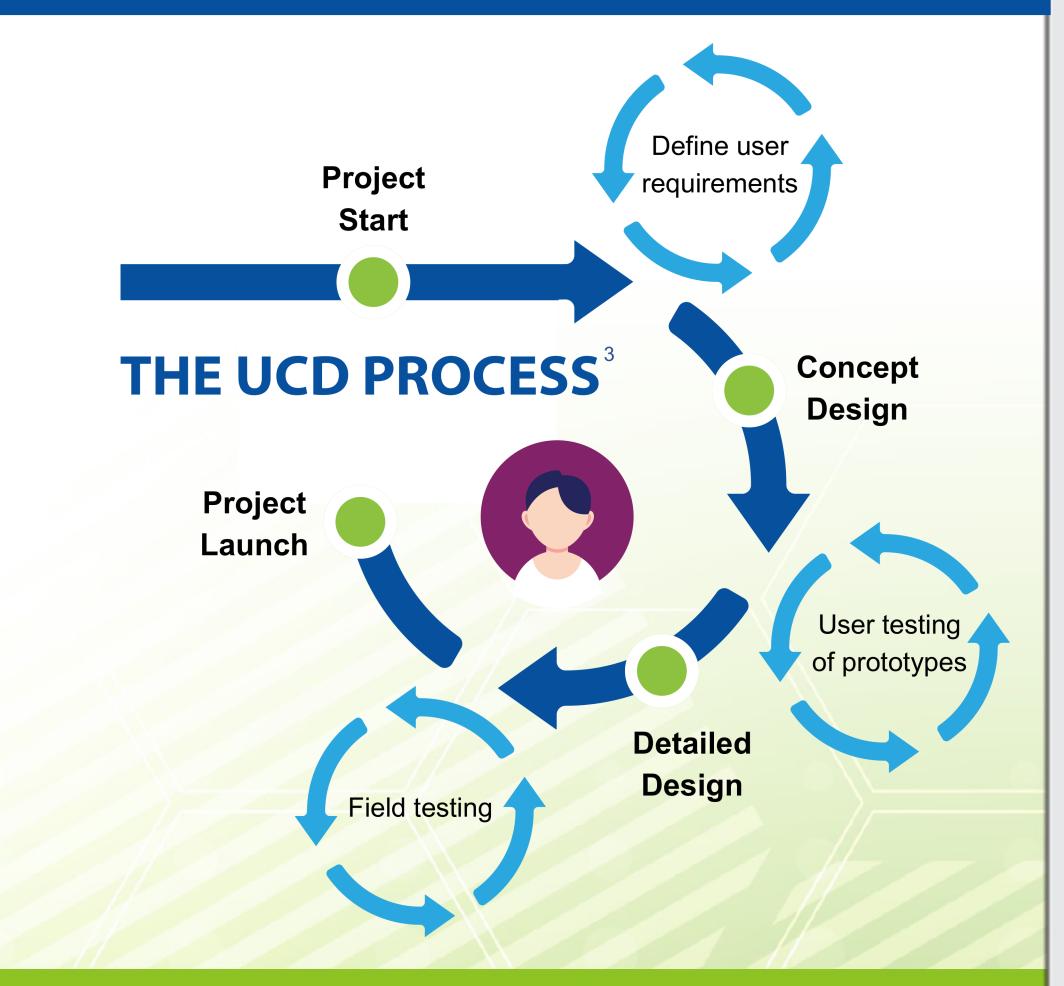
The AHA team regularly invites users to show us how they use the application and provide feedback.

Comments in code

A messy codebase is even worse than a messy website. I added descriptive comments to make my code readable.

LESSONS LEARNED + NEXT STEPS

- Incorporating UCD doesn't have to be a long, expensive process.
- User-centered design is not just for software development—I
 even followed the UCD process while creating this poster!
- Based on AHA user interviews, new users need access to resources to learn how to use the application.
- AHA users will use the editable help documentation to create and share standard operating procedures.
- New features will be tested to validate that they are meeting the needs of the users.





References:

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- 3. UCD Process diagram adapted from: Grebe, H. (2023) UX process and Skills
- Diagrams, Make It Easy! Available at: https://www.hankgrebe.com/ux/ux-diagrams/

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