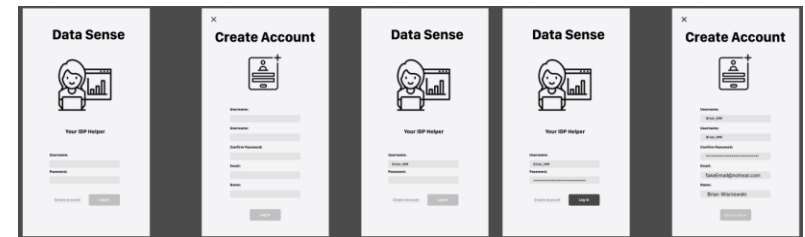# DataSense

## A New and Improved IDP Calculator

**DataSense** is a cutting-edge application designed to empower researchers and other users of the OSU IDP Calculator. This app provides a user-friendly interface with intuitive data categorization, making it easier to understand data protection policies. The design emphasizes clean, user-centric visuals, and includes features such as saving custom layouts, learning more about data elements, adding friends, and more.
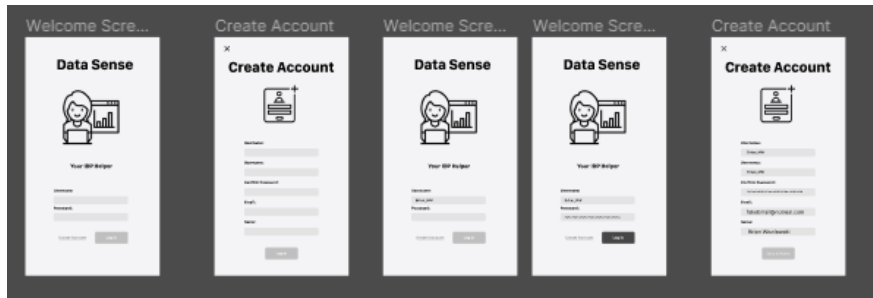
# Executive Summary

The user testing of DataSense, which is a prototype application designed to improve the user experience associated with the OSU IDP Calculator, yielded overall positive feedback among participants. Users generally found the user interface to be intuitive but did point out challenges related to incomplete functionalities – which is largely explained by the application being in a prototype state – and ambiguity in the function of certain widgets, such as icons chosen for buttons. Key recommendations included: clarifying icon functionality by using labels or titles, removal of the autocomplete feature for text, implementing pop-up text hints when "hovering" over key elements, and evaluating whether the need for customizability – i.e., potentially not making customizability the default setting. These recommendations address user concerns called out in user testing, which should improve the overall usability and experience of researchers, or other users, of the IDP Calculator.
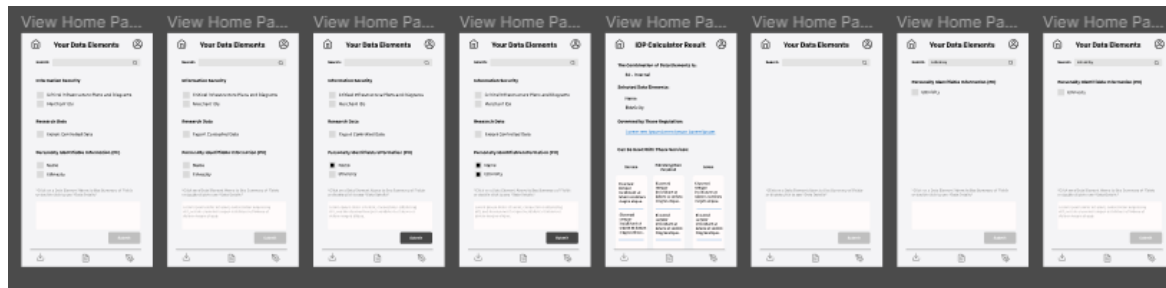
# Task 1: Create an Account and Log-in



Participants engaged in the task of creating an account and logging in, navigating through the prototype's account creation process. Users were instructed to press "Create Account," fill in account details, enter credentials, and finally log in.

The results indicated that the account creation and login process was generally smooth for most participants, with a majority successfully completing all steps. However, challenges arose for one participant who struggled with the autocomplete feature, leading to confusion during the process. The feedback emphasized the importance of improving autocomplete functionality to enhance user experience and streamline the onboarding process. Overall, participants appreciated the clarity in instructions but identified specific areas, such as autocomplete, that require fine-tuning for optimal usability.

| Metrics | Time on Task | Success (Y/N) | Errors | Sticking Points |
|---|---|---|---|---|
| Participant 1 | 35.29 s | Y | 0 | 0 |
| Participant 2 | 20s | y | 0 | 1 – He couldn't figure out where to click |
| Participant 3 | 1m | y | 1-didn't create account | 1.   Didn't know where to press, got confused by my name being filled in |
| Participant 4 | 21 | y | 0 | 0 |
| Participant 5 | 19.64 | n | 1 | 1 |

| Completed (Y/N) | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |
|---|---|---|---|---|---|
| Participant 1 | y | y | y | y | na |
| Participant 2 | y | y | y | y | na |
| Participant 3 | y | y | y | y | na |
| Participant 4 | n | n | y | y | na |
| Participant 5 | n | n | y | y | na |

# Task 2: View Home Page with Data Element Summaries and Get IDP Calculator Results
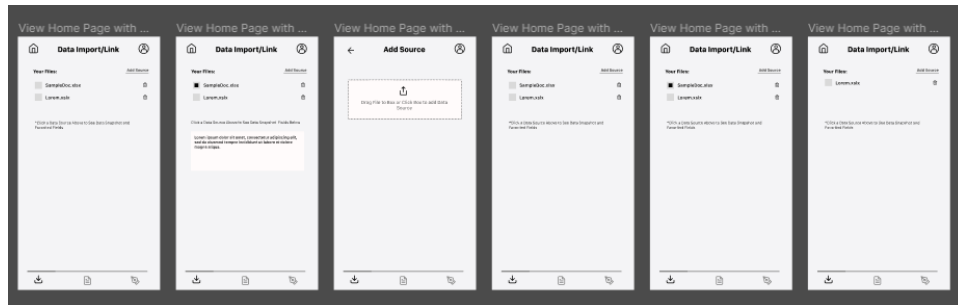


In this task, participants were instructed to explore the home page, click on data elements to view summaries, and obtain results from the IDP calculator.

The results indicated that participants generally navigated the home page and IDP calculator functionalities successfully. However, some users encountered difficulties due to ambiguous task phrasing, leading to momentary confusion. Participants expressed a preference for a "hover" functionality for data element summaries, suggesting an improvement to enhance user experience. Overall, the findings emphasized the importance of refining instructions and incorporating user-friendly features for seamless navigation.

| Metrics | Time on Task | Success (Y/N) | Errors | Sticking Points |
|---|---|---|---|---|
| Participant 1 | 1.29min | y | 0 | 1 – Task Phrasing Ambiguous |
| Participant 2 | 53.8 s | y | 0 | 3 – Brute Forcing |
| Participant 3 | 1.2 min | y | 0 | 1 – fumbled around and clicked random stuff |
| Participant 4 | 43.9s | y | 0 | 0 |
| Participant 5 | 51.33s | y | 0 | 1.  Instructions unclear |

| Completed (Y/N) | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |
|---|---|---|---|---|---|
| Participant 1 | y | y | y | y | y |
| Participant 2 | y | y | y | y | y |
| Participant 3 | y | y | y | y | y |
| Participant 4 | y | y | y | y | y |
| Participant 5 | y | y | y | y | y |

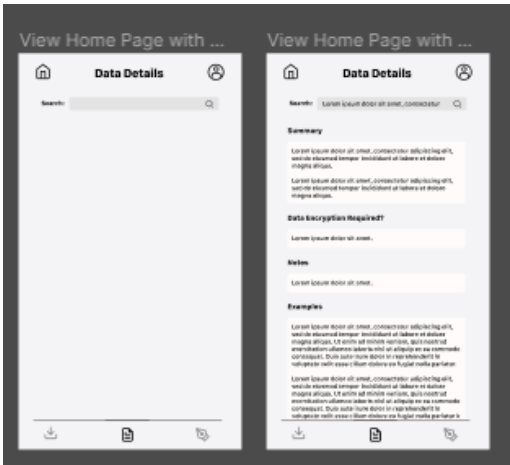# Task 3: Add, Delete, and View Snapshot for Data Sources



Participants engaged in tasks involving adding, deleting, and viewing snapshots of data sources.

Results indicated that participants, for the most part, successfully added, deleted, and viewed snapshots of data sources. However, some users found certain icons ambiguous, leading to minor navigation challenges. Recommendations included clarifying icons or providing titles for better user guidance. Overall, participants appreciated the simplicity of the task but emphasized the importance of clear visual cues for improved usability.

| Metrics | Time on Task | Success (Y/N) | Errors | Sticking Points |
|---|---|---|---|---|
| Participant 1 | 1.04m | y | 0 | 1 – Haven't used IDP for a while and forgot what she's doing |
| Participant 2 | 14s | y | 0 | 0 |
| Participant 3 | 40s | y | 0 | 0 |
| Participant 4 | 36s | y | 0 | 1 – brute forced it |
| Participant 5 | 32s | y | 1 – clicked random stuff and proceeded ahead | 0 |

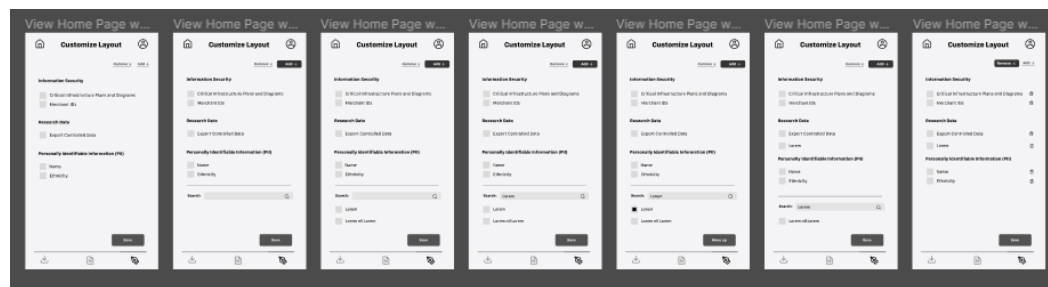| Completed (Y/N) | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |
|---|---|---|---|---|---|
| Participant 1 | y | y | y | y | y |
| Participant 2 | y | y | y | y | y |
| Participant 3 | y | y | y | y | y |
| Participant 4 | y | y | y | y | y |
| Participant 5 | n | y | y | y | y |

# Task 4: Learn About Specific Data Elements



Participants were tasked with learning about specific data elements by navigating to the "Data Details" page and using the search box.

Results indicated that participants found this task generally easy, with users successfully navigating to the "Data Details" page and utilizing the search box. Some users noted concerns about ambiguous icons, although these did not significantly impede task completion. Overall, participants found the task straightforward, emphasizing the need for clarity in visual elements for enhanced user understanding.

| Metrics | Time on Task | Success (Y/N) | Errors | Sticking Points |
|---|---|---|---|---|
| Participant 1 | 12s | Y | 0 | 0 |
| Participant 2 | 3 s | y | 0 | 0 |
| Participant 3 | 17s | y | 0 | 0 |
| Participant 4 | 8.95s | y | 0 | 0 |
| Participant 5 | 5 | y | 0 | 0 |

| Completed (Y/N) | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 |
|---|---|---|---|---|---|
| Participant 1 | y | y | na | na | na |
| Participant 2 | y | y | na | na | na |
| Participant 3 | y | y | na | na | na |
| Participant 4 | y | y | na | na | na |
| Participant 5 | y | y | na | na | na |

# Task 5: Customize Layout by Adding and Removing Elements



This task focused on customizing the layout by adding and removing elements. The purpose was effectively to design a home page.
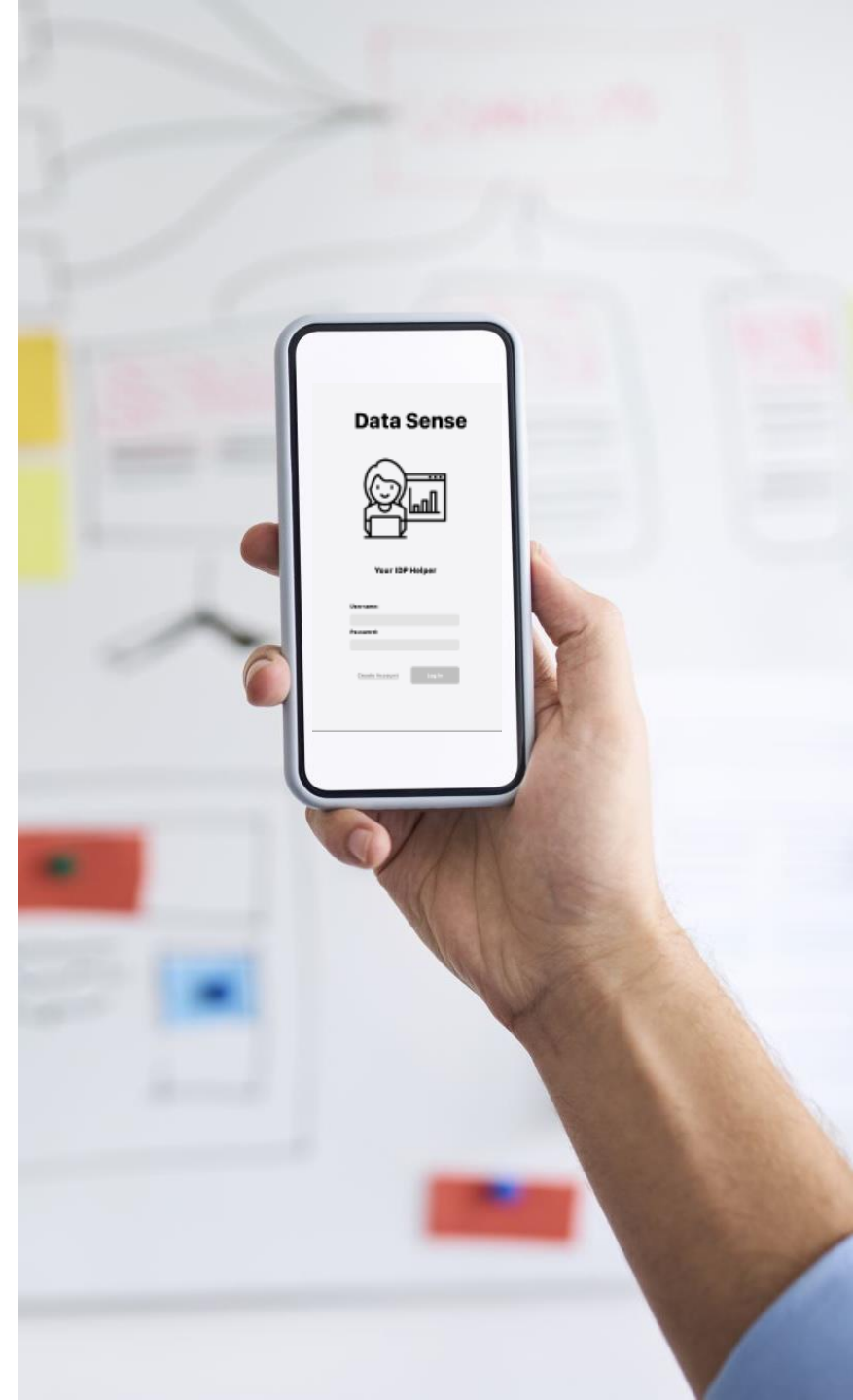
Results indicated that participants, in general, found customizing the layout easy, but a subset faced challenges getting momentarily lost in additional functionalities. Recommendations included adding instructional pop-ups and clarifying buttons to guide users through the customization process effectively. Participants appreciated the customizability aspect but stressed the importance of clear instructions for a more streamlined experience.

| Metrics | Time on Task | Success (Y/N) | Errors | Sticking Points |
|---|---|---|---|---|
| Participant 1 | 1:15 m | Y | 0 | 0 |
| Participant 2 | 27s | y | 0 | 0 |
| Participant 3 | 51s | y | 0 | 0 |
| Participant 4 | 1.56m | n | 1 – He got lost in other functionality | 5- he got lost in other functionalities |
| Participant 5 | 37s | n | 1 – He got lost in other functionality | 5- he got lost in other functionalities |

| Completed (Y/N) | Step 1 | Step 2 | Step 3 | Step 4 | Step 5 | Step 6 | Step 7 | Step 8 |
|---|---|---|---|---|---|---|---|---|
| Participant 1 | y | y | y | y | y | y | y | y |
| Participant 2 | y | y | y | y | y | y | y | y |
| Participant 3 | y | y | y | y | y | y | y | y |
| Participant 4 | y | y | y | y | y | y | y | n |
| Participant 5 | y | y | y | y | y | y | y | n |

# Recommendations

1) **Improve Autocomplete Feature:** Enhance the autocomplete feature in the account creation process to prevent confusion.
2) **Clarify Icons:** Provide clearer icons or include titles to avoid ambiguity in navigation.
3) **Enhance Instructions:** Integrate instructional pop-ups for tasks involving customization and other complex functionalities.
4) **Implement Hover Functionality**: Consider incorporating a "hover" functionality for data element summaries for a more user-friendly experience.
5) **Clarify Instructions:** Review and revise task instructions to ensure clarity, minimizing potential confusion.
6) **Evaluate Customizability:** Consider conducting further user research to evaluate the necessity and preferences regarding the customizability aspect, especially in comparison to the current IDP calculator at OSU.

# Conclusions

- This concept is worth pursuing.
  - More user testing should be done before committing serious resources to its development. Currently, I think once the 6 above recommendations are implemented then the app is worth producing into a minimum viable product.