



## Interaction Design for the Animal Disease Spread Modeling Application

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### Background

In the present overhaul of the ADSM application there is a need to re-imagine the front-end user interface in order to greatly improve the user-experience and offer a more universally approachable application. Significant changes have already been applied to the page layout, navigation scheme, and the overall approach of the parameter-input user interaction. These changes are consistent with a contemporary approach to interaction design and the modern “flat” UI aesthetic. In order to ensure the most comprehensive approach to the redesign of the application interface and interactions user research must be added to the general best-practices approach. Preliminary ethnographic interviews will be conducted with the existing user base in regard to the legacy application in an effort to identify: any overlooked pain points in the application; particularly effective or useful interactions and interfaces that should be carried forward in the new ADSM. Insights gained from this inquiry will inform the continued refining of the new input interface, as well as the re-design of the results interface. Upon substantial completion and implementation of the entire application redesign, further user-interviews will be conducted to validate the new application design and inform any necessary iterative changes.

### Goals

1. Identify pain-points and effective interactions in the existing application.
2. Gain a clear understanding of the range of user expectations and use scenarios for the ADSM application.
3. Validate the efficacy of the final application redesign.

### Research Question

1. Are there areas of the legacy application that are particularly difficult to navigate or interact with?
2. Are there any particularly quirky concepts/constructs within the information architecture or interface design?
3. How much “tinkering” is involved in model setup and in which portions of the application is such activity centered?
4. Does the application and/or nature of building simulations lend itself to an idiosyncratic use or understanding of the application?
5. What sort of insights are sought from simulation results?
6. What sort of visualizations best support the effective parsing of results?

### Methodology

The preliminary study will focus on ethnographic research employing non-directed interviews and contextual inquiry. Each participant session will last approximately 45 minutes and will begin with a brief interview to determine the context of the participant’s research. An observation/inquiry session will follow where the participant will be observed interacting with the legacy application in a “real-world” scenario determined by the interview sequence. Follow-up interviews will follow the same sequence with the redesigned ADSM application and will be focused on usability and user experience.

### Participants

1. Individuals who use the application in the daily course of their work.
2. Users who are practiced with the legacy application and will eventually transition to the new application.
3. At least four users for the preliminary study who are representative of the age range and experience of the existing user base.
4. Demographics of follow-up usability study to be determined

