



May 12, 2018

**Project title:** A Usability Study for “All Things Missouri” Notebook Tool

This study will be conducted by SISLT PhD student Michele M. Kroll (Community Development Specialist-MU Extension) for the Fall 2018 Problems course. Dr. Isa Jahnke is the Faculty Adviser overseeing this project. Chris Fulcher, CARES is the project consultant.

## 1. Project Background:

Under the direction of Chris Fulcher, the Center for Applied Research and Engagement Systems (CARES) is a mapping and data visualization center at the University of Missouri that integrates technology and information to support decision-making processes. All Things Missouri - <https://allthingsmissouri.org/> is a gateway to maps, data, reports, and resources to help professionals address the three *grand challenges* that emerged from the University of Missouri’s Extension 2017 listening tour:

- Economic opportunity
- Healthy futures
- Educational access and excellence

The portal is designed to support decision-makers in accessing, analyzing, and visualizing data to inform better and more data-driven strategies. One of the goals for “All Things Missouri” is to support Extension field specialists in understanding community needs through data resources. To better address the *grand challenges* identified, MU Extension field specialists will focus in these areas: agriculture and environment; youth and family; business and community; and health and safety. All Things Missouri has structured its data portals around these four program areas to support Extension Field Specialists programming efforts.

## 2. Goals

There are following main goals for this project.

The **first goal** is to study the usability of the recently launched All Things Missouri website, especially the mapping room and reporting tools. (Usability study)

The **second goal** is obtaining new knowledge about how MU Extension faculty want to use the data visualization tools with the portal functionality.

### 3. Methods

In order to analyze the usability of the system, user experience feedback will be collected. The usability evaluation incorporates user tasks in order to understand the quality of the user's experience when interacting with the newly designed interface.

**M1.1 Task-based Usability with Think Aloud:** 12 users will be asked to conduct defined tasks by interacting with the interface. The tasks will be developed together with CARES team. This will be video recorded with Morae. Possible tasks are, for example:

Task 1: (CES) Complete a basic report for your triad (CES) using your program area (youth and family, business/CD; ag and natural resources). Send the report to your email.

Task 2: (FS) Complete a basic report for your assigned counties (FS) using your program area (youth and family, business/CD; ag and natural resources). Send the report to your email.

Task 3: Complete a basic map. (insert data type of map) and print map.

**M1.2 SUS survey:** Users fill the System Usability Scale (SUS) survey, a standardized survey with 10 items that shows a score between 0-100% to assess the system's efficiency (means, if the users can carry out the tasks efficiently (nor not) when using the system).

**M1.3 Follow-up Interview:** A survey with open ended questions will be filled out to receive additional comments and feedback from users (e.g., tell me about your experience with the systems, what you like, what not; if/how they want to use it in the near future).

**M2.1 Focus Group Interview:** Two semi-structured focus group interviews with 12 users (each 6 participants with 1-2 hrs. per group) will be conducted; video/audio recorded to collect user preferences and needs. Group 1 interviews are with CES and Group 2 are with Field Specialists.

**Location:** WC Office in Clinton

### 4. Recruitment & Participants

University of Missouri Extension Faculty from the WC region will be recruited for this project. Wayne Prewitt, WC Regional Director and Michele Kroll will recruit faculty for the study. Group 1 are Community Engagement Specialists and Group 2 are field specialists. Permission has already been received from Wayne Prewitt, WC Regional Director.

### 5. Deliverables

**D1.** Video-recorded task based evaluation sessions including SUS survey and audio-recorded interviews will be made available to the client via Box.com

**D2.** Design recommendations (quick and dirty report for the client)

**D3.** A study report will focus on providing actionable design recommendations that address the portals tools usability, features, and functionality from users' perspective. The report includes an introduction, study background, goals, methods, results, design recommendations, conclusion, references and attachments.

## 6. Publication of Study Outcomes

Michele Kroll would like to use data and information gained from this study for the purposes of academic publication or presentations. (ex: Journal of Extension) Prior to commencing the academic publications work, CARES director, Chris Fulcher, will review and either accept or decline the research project proposed by Michele Kroll. Ideally, CARES would collaborate in this process with a resulting co-authored publication, academic conference or industry presentation.

## 7. Proposed Timeframe

Project will be conducted from August 15, 2018 through December 15, 2018.

Date 2018	Task	Where
August-Sept	Develop Study Instruments and submit IRB	MU Campus- Online
September-October	<ul style="list-style-type: none"> <li>• Task Analysis with 12 users (Think Aloud) with Morae</li> <li>• SUS Survey in Morae</li> <li>• Follow-up interview in Morae/Zoom</li> </ul> <p>D1 and D2 to the client</p>	<p>Michele (Clinton-WC Office)</p> <p>Box</p>
October	<p>Focus Group Interviews</p> <p>(Group 1- CES- 6 users)</p> <p>(Group 2- FS- 6 users)</p>	Clinton- WC Office
November	Data Analysis	
December	<p>Write Report</p> <p>D3 send to the client</p>	Online/ Office