

Creating Engagements: Bringing the User into Data Democratization

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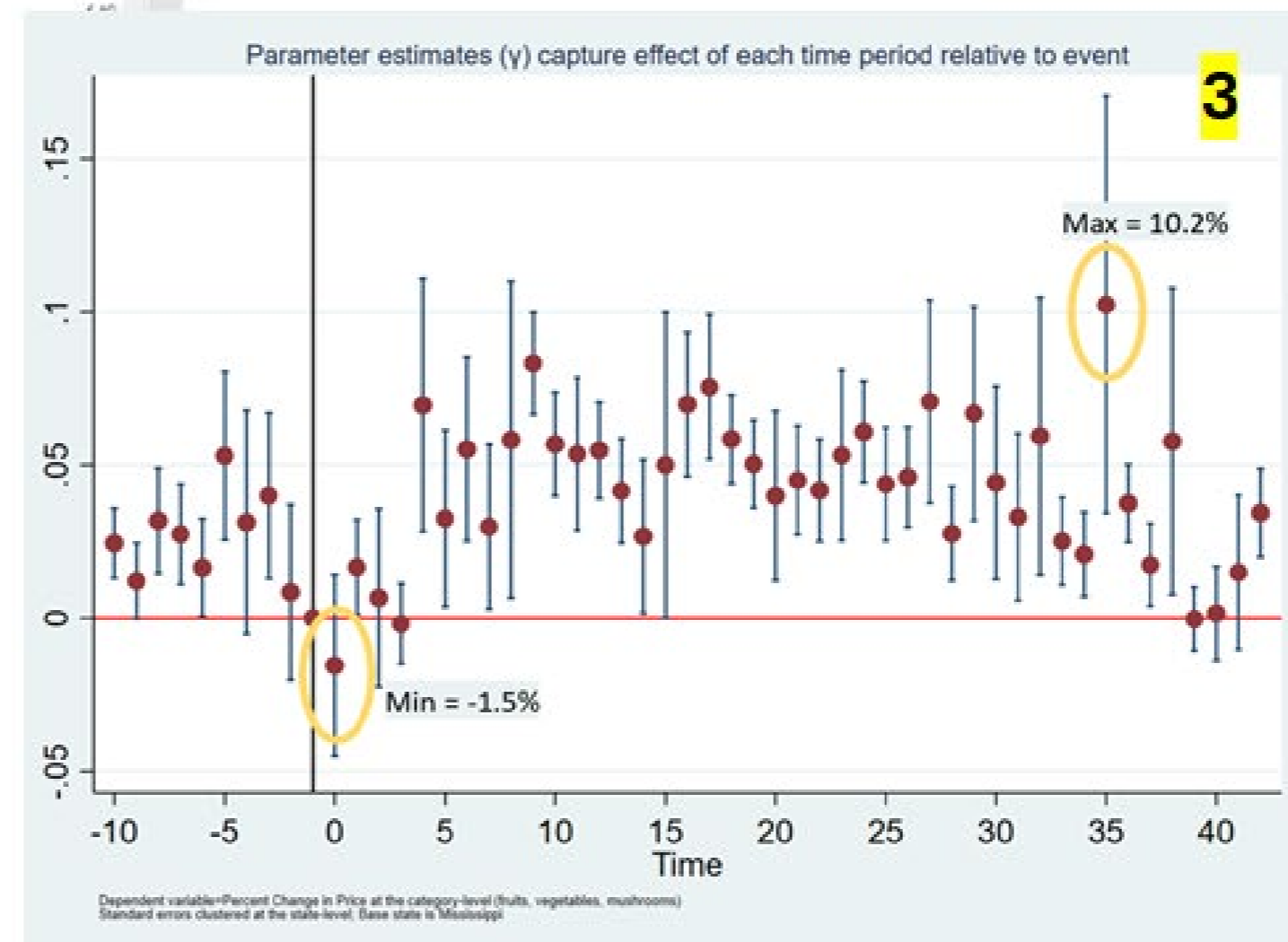
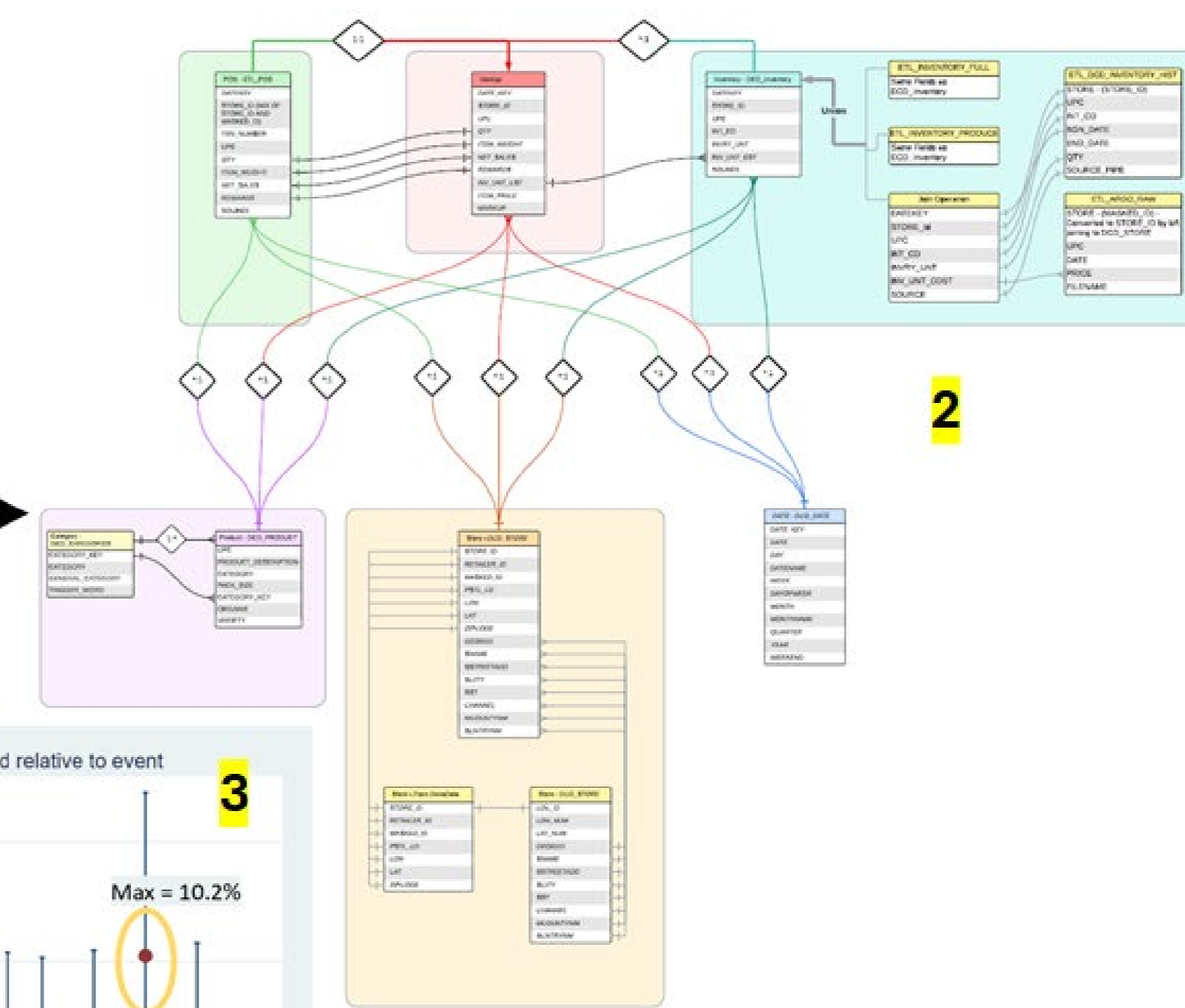
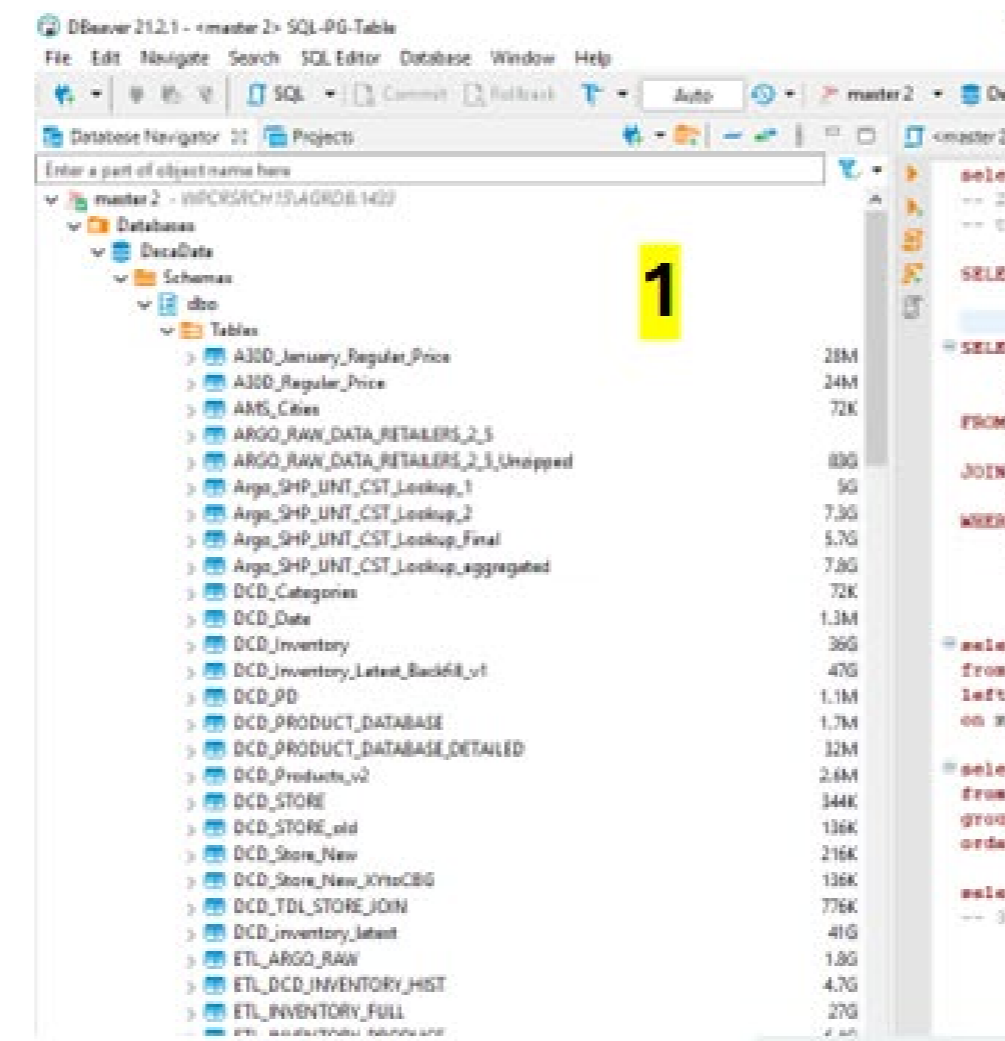


Quick Stats

- **Degree.** Ph.D. in Agricultural Economics, B.A. in Mathematics
- **Area.** Empirical industrial organization, food marketing and policy
- **My burning question.** How can policies and market-based mechanisms be leveraged to address barriers to food access?
- **Research edge.** I create organized data systems to answer food policy questions.

“Power” data user

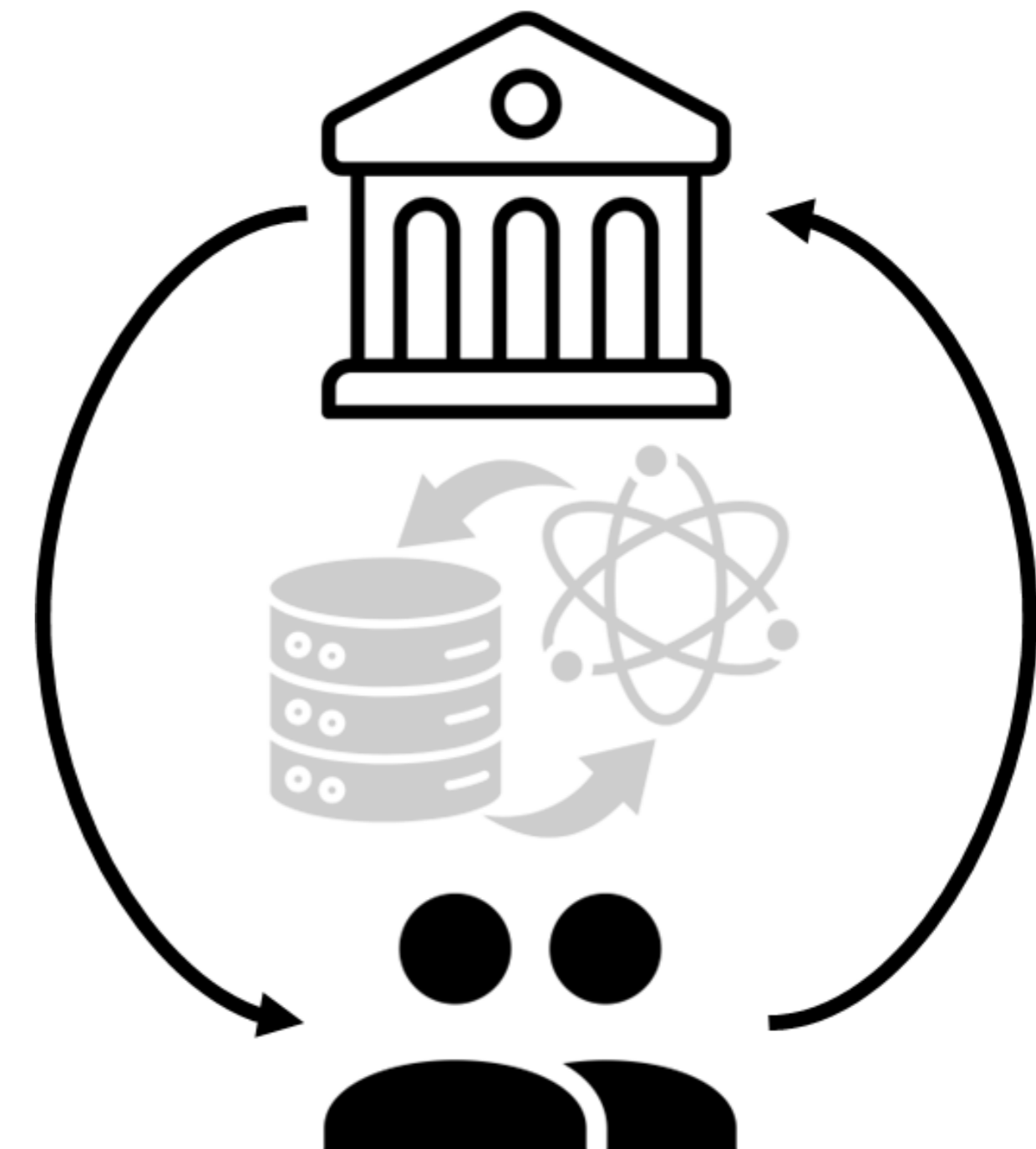
→ Partner with USDA ERS to access data assets (product sales and purchases, retail census, food environment, food assistance) for my research.



Contribution to the Special Issue

Article focuses on learning from models in other fields to enhance **user engagement**, a necessary precondition to building a community of federal data users.

1. Uses a **Theory of Change** framework to trace the path from strategic interventions to improved user engagement in data democratization tools.
2. Identifies **psychological barriers** prevent people from adopting new tools.
3. Discusses **strategies** to boost user engagement and overcome psychological barriers to technology adoption.



Engagement: the active interaction between users and the government and the adoption of open data tools.

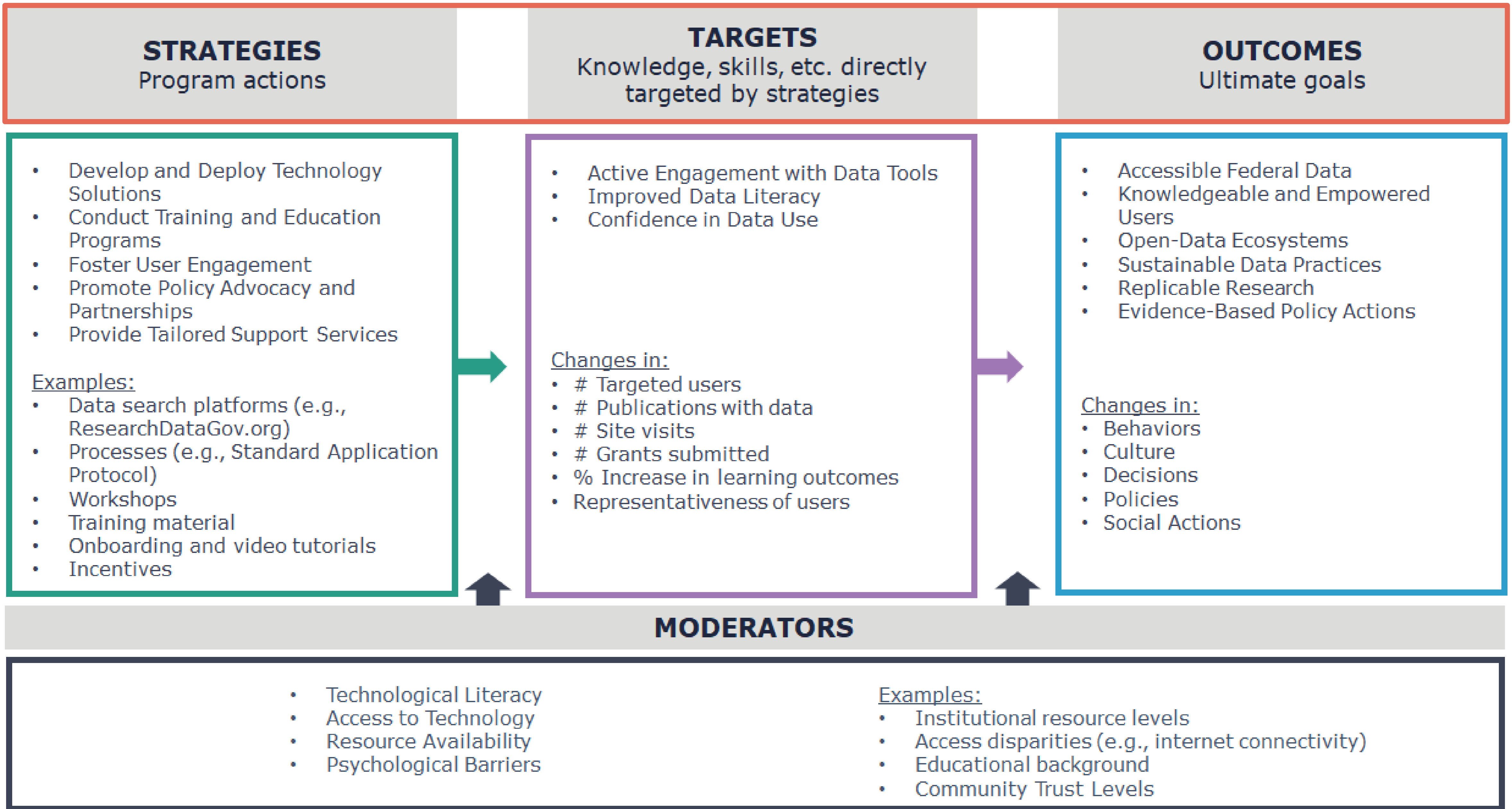
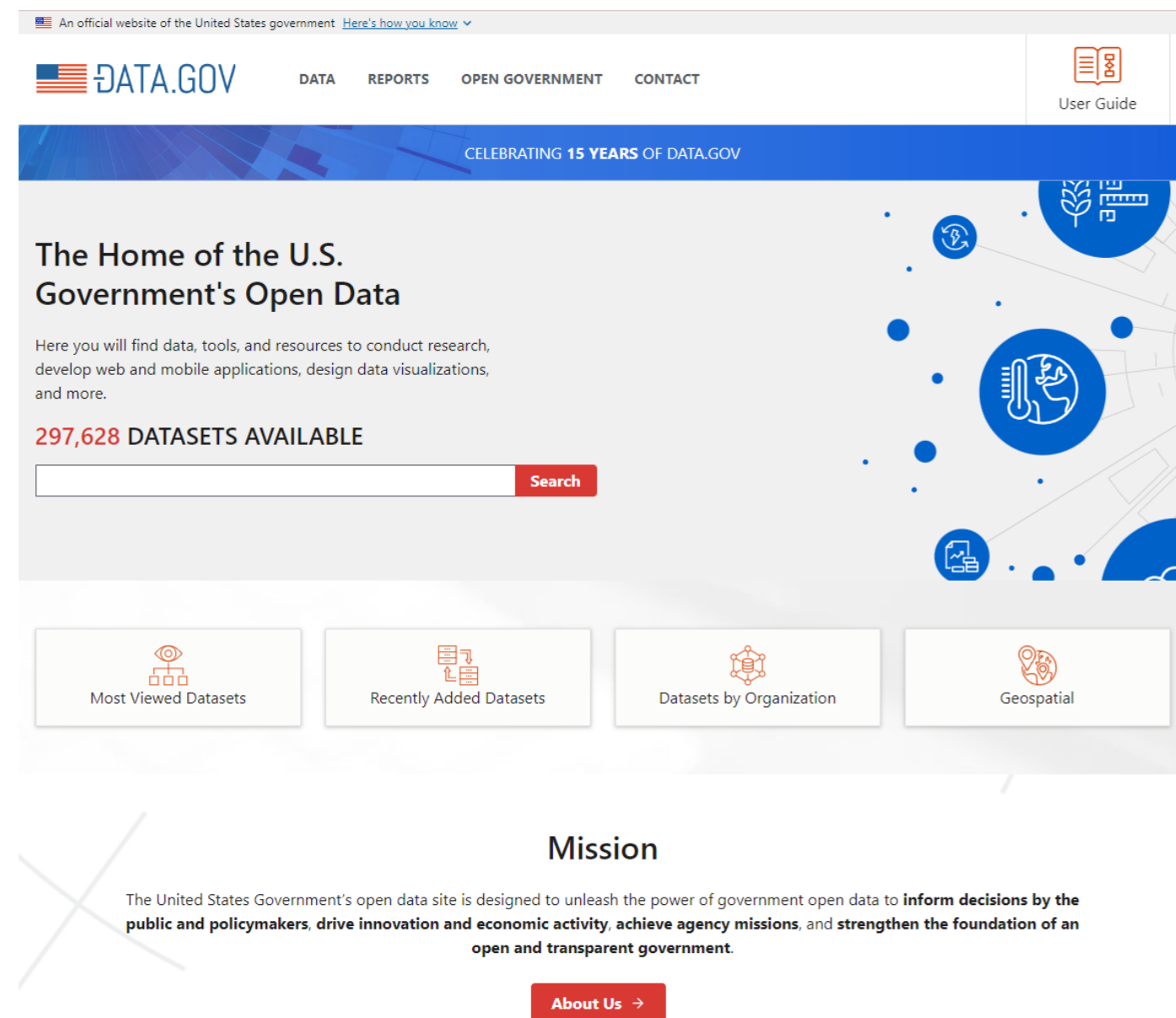
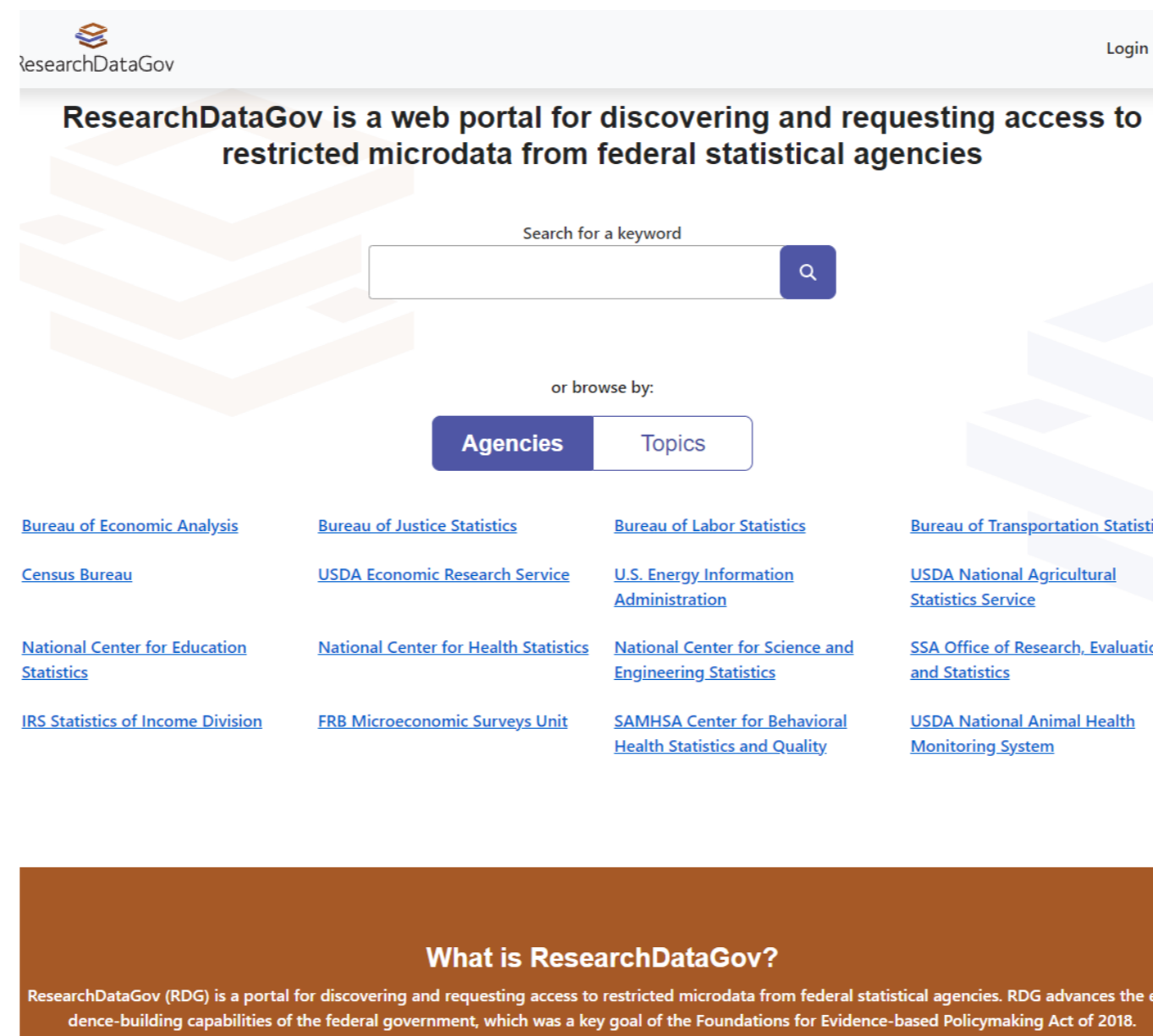


Figure 1. Theory of Change Framework, adapted from Harvard University's IDEAS Impact Framework.

Examples of Tools



Data.gov promotes the concept of "open government" and aims to make government data more open and accountable.



ResearchDataGov.org supports federal agencies in responding to federal mandates requiring them to publish their information online.



DemocratizingData.ai provides usage statistics to track who uses USDA-produced datasets and where they are published.

Strategies to Build User Engagement

1. Reward systems and gamification **to incentivize usage**
2. Social engagement features like social media integration and crowdsourcing **to foster community interaction**
3. Effective user onboarding **to communicate value**
4. Workshops and focus groups **to gather feedback**



Example #1: Rewards Systems and Gamification

- Incentives matter
- Examples: virtual currencies, progress bars, badges, rankings
- Incentives encourage participation and contribution
- Adapting incentives to democratizing data tools: reward contributions to dataset improvements and usability



36 - Incentive-Based Interventions
from Part III - Behavior Change Interventions: Practical Guides to Behavior Change
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Enhancing user engagement: The role of gamification in mobile apps

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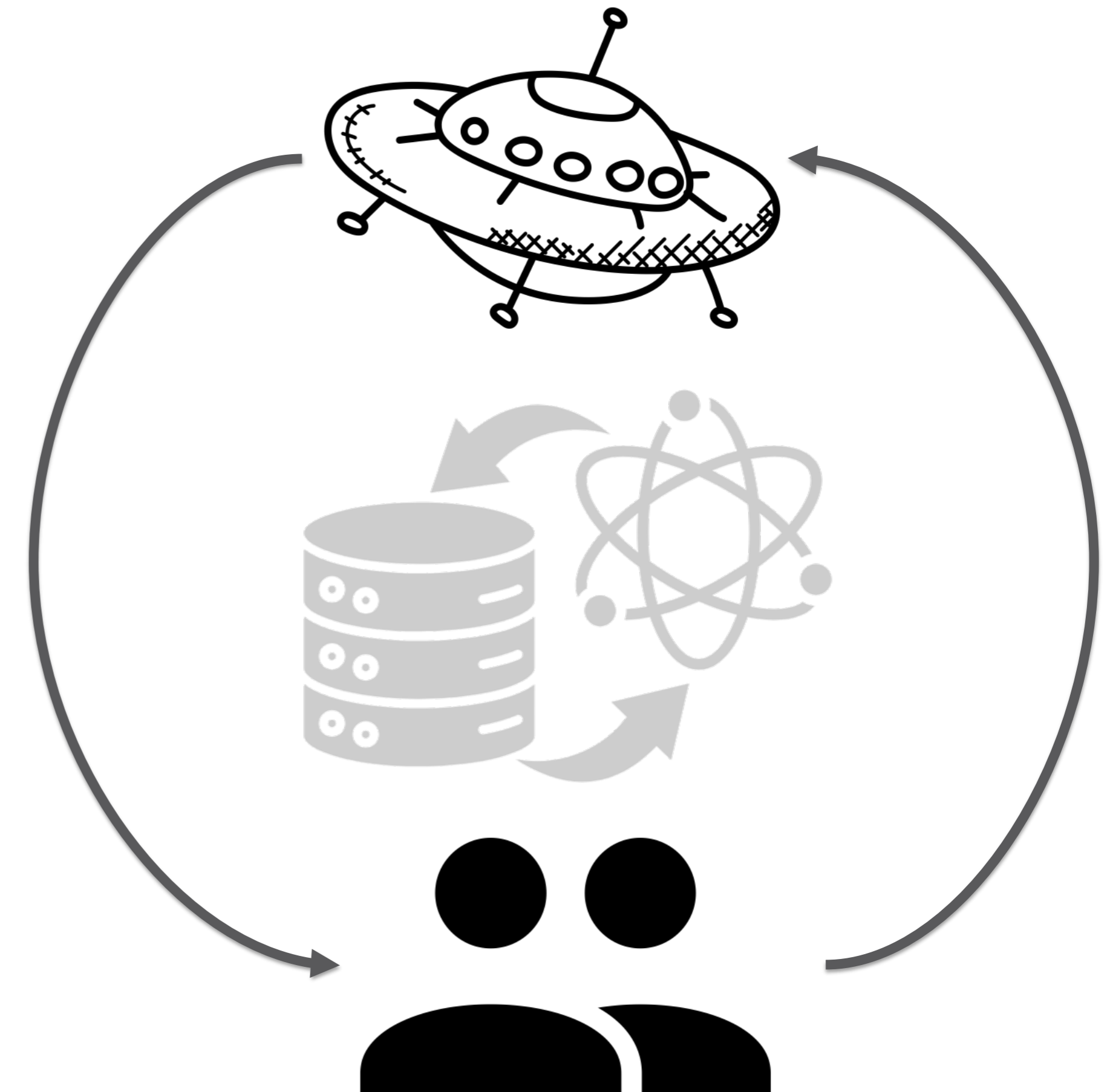
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ABSTRACT

Organizations are increasingly making use of gamification to enhance users’ engagement with their mobile apps. However, more research into the mechanisms that facilitate user engagement and its consequences is needed. Drawing on the self-system model of motivational development, this study investigates how gamification might foster user engagement and positive marketing outcomes. Data from 276 users of a mobile gamified app were analyzed using partial least squares regression. The results showed that gamification increases user engagement through satisfaction of the needs for competence, autonomy and relatedness. User engagement, in turn, leads to greater intention to use, disseminate WOM about, and to positively rate, the app. Finally, this study provides a number of theoretical and practical implications that can help developers design more effective gamified mobile apps.

Case Study: SkyServer's Reward-Based Incentives

The screenshot shows the SciServer website interface. At the top left is the SciServer logo. The navigation bar includes links for Home, Visual Tools, Search Tools, CrossMatch Tools, More Tools, Support, and CasJobs, along with a Sign In button. The main header features the SkyServer logo and the tagline "EXPLORE THE UNIVERSE WITH THE SLOAN DIGITAL SKY SURVEY". Below this is a "Data Release 18" dropdown menu. A section titled "Choose a tool..." offers six options: Navigate, Explore, Finding Chart, Quick Look, Radial Search, and SQL Search, each with a corresponding icon. Below this is a section titled "or a question..." with a grid of expandable buttons for various topics such as "About the Sloan Digital Sky Survey", "How do I get data?", "Visual Tools", "About SciServer", "What can I do with my data?", "Search Tools", "Educational Resources", "How do I find help?", and "Other Tools".



Example #2: User Onboarding and Workshops

- **User onboarding** familiarizes users with the platform and its features
- **Workshops** provide training on data resources, applications, and necessary skills
- Create forums for soliciting user input and identifying emerging needs
- Complement onboarding materials and strengthen understanding of data tools

The screenshot shows a user guide interface. At the top left, it says 'U UserGuide'. On the top right, there is a search bar with a magnifying glass icon, the text 'Search', and a keyboard shortcut 'Ctrl+K'. Below this is a table of contents with the following items: 'Chapter 1: Introduction to the User Guide' (highlighted in blue), 'Chapter 2: Background and Context', 'Chapter 3: Workflow Overview', 'Chapter 4: Corpus Development', 'Chapter 5: The ML Algorithms', 'Chapter 6: Validation Tool', 'Chapter 7: Jupyter Notebooks and SciServer', 'Chapter 8: Application Programming Interface', 'Chapter 9: Usage Dashboard', 'Chapter 10: Dashboard for Network Exploration', 'Chapter 11: Community Outreach and Engagement', 'APPENDIX A: Metadata Schema', 'APPENDIX B: Metadata Table and Data Dictionary', 'APPENDIX C: Technical Workflow Description', 'APPENDIX D: Show Us the Data Workshop Results', 'APPENDIX E: Measuring Dataset and Data Asset Usage', and 'References'. The main content area is titled 'Chapter 1: Introduction to the User Guide' with the subtitle 'Democratizing Data Search and Discovery Platform User Guide'. Below this is a section '1.1 Overview' with two paragraphs of text. The first paragraph describes the purpose of the user guide. The second paragraph explains the structure of the user guide, mentioning various chapters and their content. At the bottom left of the page, there is a 'Powered by GitBook' logo.

Case Study: USDA Workshop on Data Usage Statistics

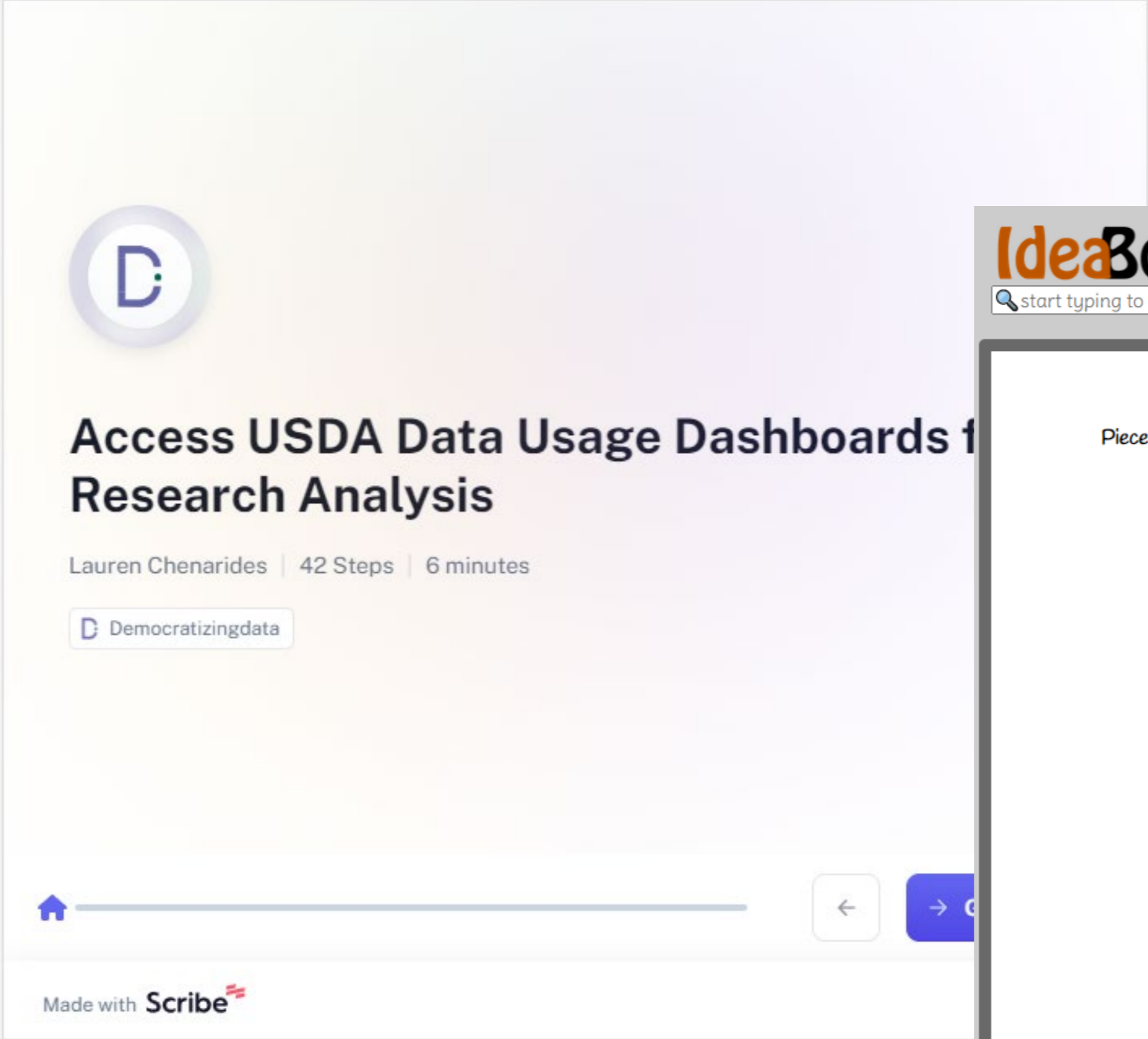
June 10, 2024

Enhancing Data Discovery with DemocratizingData.ai

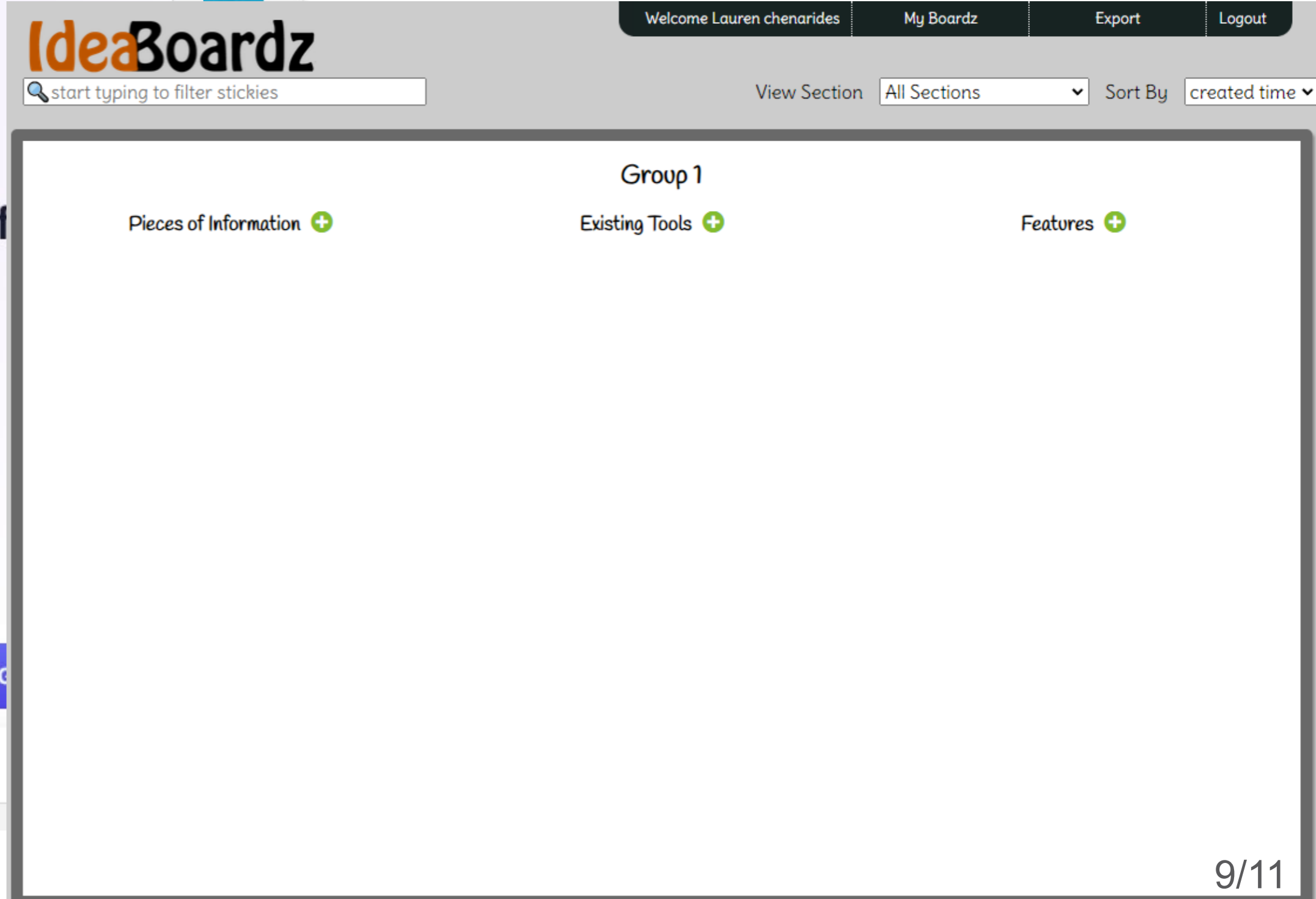
This workshop will introduce the DemocratizingData.ai platform of its dashboard to research-oriented agricultural economists and provide insights from the usage of USDA data. The focus of the workshop is to gather feedback from the group about the current functionality of the dashboard and potential future improvements.

More Coming Soon

Workshop User Guide



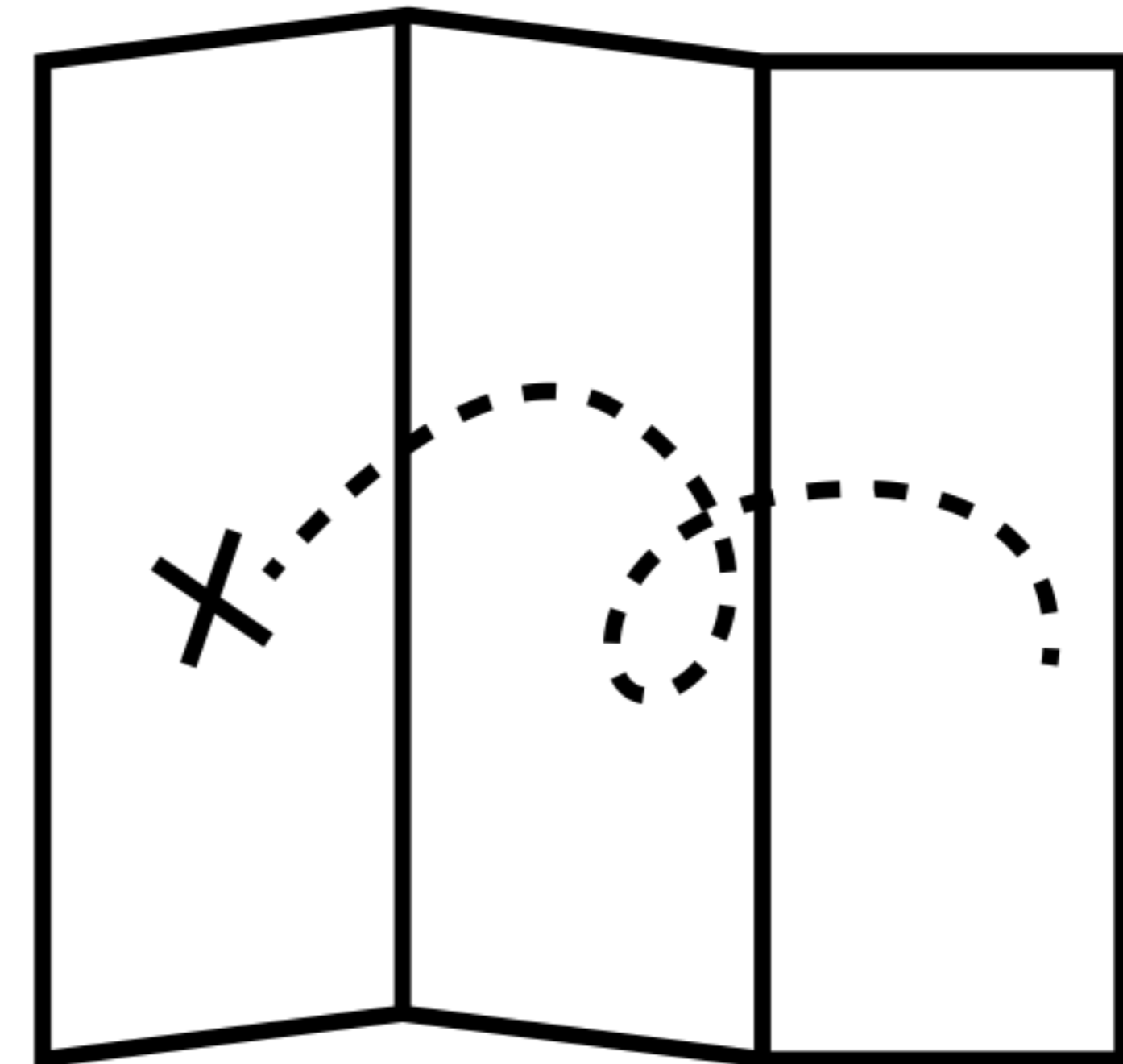
The screenshot shows a user guide titled "Access USDA Data Usage Dashboards for Research Analysis" by Lauren Chenarides. It consists of 42 steps and takes 6 minutes to complete. The guide is associated with the "Democratizingdata" organization. The interface includes a home icon, navigation arrows, and a "Made with Scribe" watermark at the bottom.



The screenshot displays the IdeaBoardz dashboard. At the top, there is a navigation bar with "Welcome Lauren chenarides", "My Boardz", "Export", and "Logout" options. Below this is a search bar with the placeholder text "start typing to filter stickies". The main content area shows a "Group 1" section with three items: "Pieces of Information +", "Existing Tools +", and "Features +". At the bottom right, there are controls for "View Section" (set to "All Sections") and "Sort By" (set to "created time").

The Road Ahead

- Challenges remain, such as identifying the full scope of federal data users
- Need for sustainable funding and resources
- Potential for open data initiatives to not initially reach all user groups equally
- Importance of addressing underlying disparities in access to technology and data literacy to engage diverse and under-represented user groups



MODERATORS

- Technological Literacy
- Access to Technology
- Resource Availability
- Psychological Barriers

Examples:

- Institutional resource levels
- Access disparities (e.g., internet connectivity)
- Educational background
- Community Trust Levels



"The only way to get people to adopt a new idea is to make them want it. And the only way to make them want it is to show them how it will make their lives better."

Nir Eyal (author of *Hooked: How to Build Habit-Forming Products*)



ADRF User Guide

Thank You!

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