



## Designing Governance Tools for Agricultural and Environmental Data

### About the Event

Open Environmental Data Project (OEDP)'s Environmental Dataset Re-Mix Workshops work on existing environmental datasets and data governance tools, articulating redesigns that make them usable to lay audiences, reusable to public needs, and inclusive of cultural knowledge within participants' communities.

On April 4, 2023, OEDP co-hosted a Dataset Re-Mix Workshop with [OpenTEAM](#), where we examined the development of data governance tools for both agricultural and environmental data. We mainly focused on drawing comparisons and contrasts between OpenTEAM's Ag Data Wallet and OEDP's [Community Data Hubs model](#). These two tools are at different stages of development: the Ag Data Wallet is in a community co-design and technical development phase and the Community Data Hubs model in the research and ideation phase before co-design. While these tools focus on different kinds of data—agricultural and environmental—they have some shared data governance goals.

During the workshop, OEDP's Research and Policy Associate Emelia Williams led a learning conversation with Dorn Cox, OpenTEAM's Project Lead, to learn about the Ag Data Wallet development process. The conversation was followed by breakout sessions that dedicated space for participants to ask questions, give feedback, and provide actionable suggestions informed by challenges and lessons from their respective fields and experiences. Our goal was to generate design ideas for participants' own data governance projects, actionable design recommendations for the Ag Data Wallet and Community Data Hubs model, and considerations for data governance tools more broadly.

For more information on these tools, click [here](#). For a recording of the workshop's learning conversation, click [here](#).

### Key Learnings

These learnings have been synthesized from the workshop's breakout discussions. While these conversations centered on the Ag Data Wallet and the Community Data Hubs, many of the learnings can be adapted for other data governance tools housing personal and nonpersonal data in different contexts.

#### 1. The process of building together instills trust

In the creation of any data governance tool, the process of development presents opportunities for building trust with potential users. Even before there is a product to test, developers and user communities can build trust together. An iterative series of conversations can facilitate the integration of users' priorities and concerns about their data into technical features that address those concerns. For example, to address users' concerns with privacy, developers could implement a system of pop-up alerts providing users with information about who will have access to the data they are about to share. Iterative conversations that include feedback mechanisms allow for trust to be built as concerns are addressed in the design process.

## **2. Mobilize existing communities**

Leveraging the trust, governance systems, and organization in existing community structures can augment user understanding and encourage greater buy-in. Existing communities often already have decision-making and conflict resolution processes in place that could be used to test tools and increase participation in design and development. Data governance systems and tools reflect and interact with those existing governance and organizational systems, for example, when decisions about specific permissions or protections have to be made, users can rely on already-established voting or decision-making authority or processes.

## **3. Data use cases and stories are necessary**

Data use cases presented alongside the development of a data governance tool can help developers communicate how an early-stage prototype will evolve into a usable product. These cases can support other developers interested in communicating with user communities, and when thoroughly documented, allow for other communities and developers to learn what works and what doesn't in different contexts. By growing this foundation of data use cases focused on agricultural and environmental data, communities and developers can also note and adapt processes of both creating new data governance tools, but also what it takes to maintain those tools, and integrate them into existing software and hardware ecosystems and in the policy landscape. Documentation and storytelling about data use and management allow users to see how data's value can be augmented.

## **4. Communities and users have diverse interests and capacities**

Not all farmers or environmental data users share similar goals, priorities, interests, or capacities. In developing a data governance tool, it is critical to understand and design for the diversity of users as people with different resources, living and working in different political contexts and geographies. Understanding the landscape of incentives and disincentives that users respond to is necessary for creating a tool they will want to use. For example, farmers who use data as an asset in ecosystem service markets need different design considerations around traceability and granularity rather than summary-level data needed and used by other farmers. In the environmental data ecosystem, data users might have varying needs regarding interoperability and standards, based on where they are and what regulatory agencies they are working with.