

# Esri Generate + Design Event Report

**About this Document:** On May 19th and 20th, [TechSoup](#) representatives in collaboration with Esri and TechImpact held a design thinking event called, “Generate + Design.” This two-day event brought together food security organizations working in the Greater Philadelphia area. This report is meant to describe how the participants formed their overall designs for new applications of technology in the food security sector. This project is generously supported by Esri.

## Executive Summary

This report runs through the Generate + Design event in greater Philadelphia on the topic of food security. It first describes the attendees of the event, both participants and facilitators, to get a sense of the different perspectives in the room. Participants included government workers, leaders at food security organizations, and members of [TechImpact](#).

We came into this event with a previous understanding of the issues comprising food security based on our research and our work with food security organizations. These issue areas were generally agreed upon by our participants and they expanded our understanding with examples of how each issue affected their experiences. Participants also expanded our understanding of the constraints within the field, such as what’s difficult in the food security space.

From this discussion of the issues, the participants created a host of design questions that were synthesized for ideation on Day 2 of the event. A system of values based on the subtext within the original proposed questions was also shared to better guide the subsequent discussions. Participants then formed two teams, tackling two broad design questions formed by combining the previously synthesized questions.

Despite pursuing two different questions, both groups designed extremely similar models that were broadly focused on a database of information that is fueled by user inputs so that those in need of food assistance can quickly search for resources. In both designs, food pantries are connected with larger food banks so they can seamlessly update their inventories.

# Participants

The Esri Generate + Design event in Philadelphia drew seven participants working in food security from across the Philadelphia area and two participants from TechImpact. Four TechSoup employees facilitated the event, assisting in the design and ideation process. The hosts of the event were three members of the Esri nonprofit relations team.

## Day One

### Issue Description

The discussion of food security was framed around five core issues, with participants adding additional context based on their own experiences:

#### Food Availability

Definition: consistent access to food supplies as well as the management and maintenance of supply chains.

Expansion from participant:

- Food bank: finding ways to provide fresh food—specifically produce—at a more consistent rate and cheaper price. Participant's organization is trying to connect urban farms to food relief organizations to provide more options for fresh produce.

#### Food Utilization and Safety

Definition: maintaining nutritional value and preventing illness, especially as related to food rescue.

Expansion from participants:

- Food Bank: Connecting donors with recipients - or with pantries to store the food - before spoilage.

#### Economic and Physical Access

Definition: proximity to markets and the financial means to acquire food.

Expansion From Participants:

- Food pantry: a participant highlighted Brooklyn, where people do not often have access to nearby grocery stores. People in these areas are often restricted to

smaller markets, such as bodegas or corner stores, that do not have the same quality or quantity of food.

- Food bank: people have to make a decision with their limited finances between paying for heat, rent, food, or other necessities.

## Stability

Definition: The ability to withstand a variety of disruptions.

Expansion From Participants:

- Food bank: grants associated with food security are decreasing, so food relief organizations have to rely more on private funders and philanthropic donations to survive. This funding is both unstable and unsustainable.

## Government Policy

Definition: Regulation and budget support for each of the above named areas.

Expansion From Participants:

- Food support and delivery organization: Efforts are hindered by lack of government support. The organization's perspective on the issue is that nourishment needs to be treated as important medical care, and therefore be included in healthcare coverage. Food is not currently considered as a necessary aspect of healthcare, so federal healthcare budget cuts affect programs like theirs first.
- Food bank: Instability in government programming makes it more difficult to provide food effectively. Cuts to SNAP, NSLP, and TEFAP lead to greater pressure on food security organizations.

## What's Hard

Apart from lack of money and limited time of volunteers, a variety of specific problems form the issue of food insecurity. Participants gave a better understanding of the day-to-day struggles of their work:

## Individual Factors

- Stigma
  - Parents receiving food aid have to admit that they have trouble feeding their kids
  - Elderly risk their autonomy by admitting they can't feed themselves
  - Issues of pride among all potential participants
- Access
  - Employed individuals have limited amount of time to pick up food
  - Physical ability to reach food distribution centers

## Systemic Factors

- Policy Change
  - Mass confusion over specifics of US government changes to federal food assistance
  - Reduced supply of meals from the federal government increase demand on food relief orgs
    - Food bank: Need has quadrupled
  - Grant assistance decreases lead to tighter budgets when combined with increased demand
    - More reliance on private donors
- Coordination
  - Food relief organizations are siloed with individual information
  - Data on potential clients, potential partners, and locations of small pantries and FBO's is scattered
  - Lack of sharing on how organizations meet requirements for grants



- Infrastructure
  - No consistent dataset showing all food security organizations
  - Difficulty in mapping infrastructure: capacities, preferences, locations of those in need and those with food
- Measurement
  - Big question asked by a participant: How do you actually measure impact?
  - The perspective of folks who are food insecure is difficult to gather, but necessary, to incorporate into any solutions

## Data Specific Factors

- Optimization
  - Data is needed on local, state, and regional levels to best assess need and allocate resources
  - Capacity levels of individual sites and optimal transit routes to avoid spoilage
- Impact
  - Food distribution vs. food eaten
  - Quality of pantry's facility, storage, food options
  - Allergies, religious and dietary restrictions to create a more equitable system

## Day 2

### Forming and Selecting design questions

Participants learned how design questions can help describe their ideas in an expansive format while narrowing the focus so that teams can brainstorm solutions. The following seven design questions represented themes discussed in the first day and were presented to participants for ideation on Day 2:

- How might we (HMW) align data across organizations seamlessly in a way that reduces administrative burdens?
- HMW measure the amount of food eaten versus the amount of food distributed?
- HMW connect to the people who need food so that we can support them on a consistent basis?
- HMW make access to food less intrusive?
- HMW unify systems so that we can trust shared data and benefit from common infrastructure?
- HMW re-engineer the physical and digital food distribution experience to preserve privacy and dignity?
- HMW map the capacity of the physical infrastructure and capacity of the food distribution network?



Participant groups combined multiple questions on day 2 so that the two teams could effectively work on one large question, each. Below are the questions that were combined, and the two final questions addressed during the session:

- HMW align data across organizations seamlessly in a way that reduces administrative burdens? + HMW unify systems so that we can trust shared data and benefit from common infrastructure? = **How might we align data across unified systems seamlessly so that we can trust and benefit from the shared data and meet the administrative requirements?**
- HMW map the capacity of the physical infrastructure and capacity of the food distribution network? + HMW connect to the people who need food so that we can support them on a consistent basis? + HMW re-engineer the physical and digital food distribution experience to preserve privacy and dignity? = **How might we map the capacity of the food distribution experience so we can consistently connect people to food support in a way that preserves their privacy and dignity?**

## Guiding Values for Design

There were consistent values and guardrails discussed in the formation of the above questions that are not necessarily present in their verbiage. Therefore, guiding values were presented to keep in mind during the ideation process, with feedback from the participants adding to this list before designing began. The values are as follows:

**Voice & Feedback:** Perspectives from people who are experiencing food insecurity should be included and prioritized in all proposed solutions.

**Collaboration & Coordination:** Effective coordination is required across service providers, funders, and government agencies.

**Environmental Impact:** Solutions should avoid environmental harm and strive for a positive ecological impact.

**Transparency & Trust:** Transparency fosters trust in the data and systems used for critical decision making.

**Privacy & Dignity:** The preservation of privacy and dignity for all community members is a requirement.

**Equity & Inclusivity:** Solutions should be safe to access and available to all, ensuring cultural competence is embedded in every solution.

## User Personas and Ideas

Using the “how might we” questions and brainstorming exercises to create possible solutions, teams began crafting personas of their audience. These artifacts informed their eventual low-fidelity technology prototypes—sketches—of their ideas. All ideas were presented on white boards and pitched to the entire audience at the end of day two.

### Idea 1: Food Source: building toward one system, one world

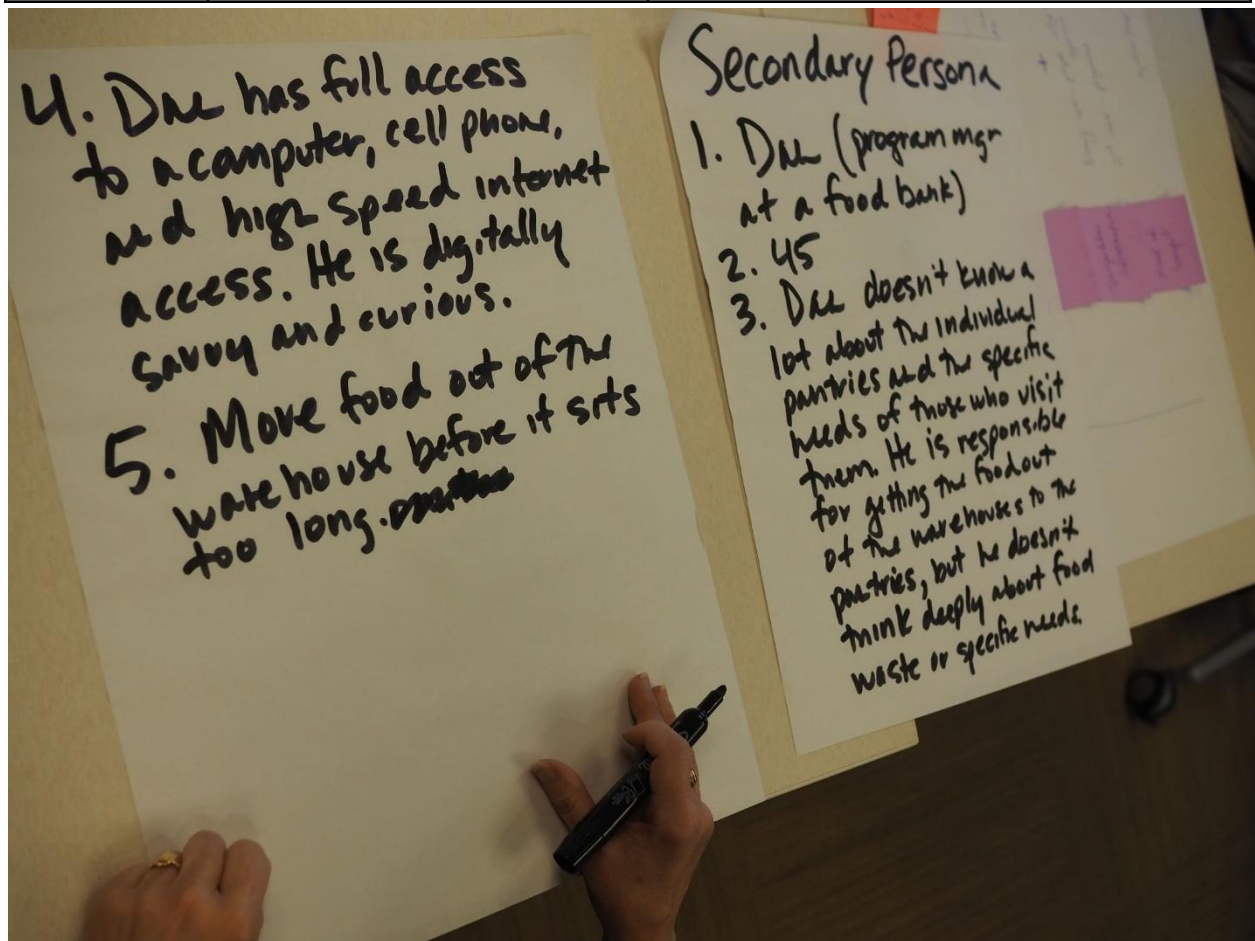
#### Design Question

*How might we align data across unified systems seamlessly so that we can trust and benefit from the shared data and meet the administrative requirements?*

#### User Personas

|                           | Primary User Profile                                                                                                                                                     | Secondary User Profile                                                                                                                                                                                                                                            |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>               | Marquerita                                                                                                                                                               | Dan                                                                                                                                                                                                                                                               |
| <b>Age</b>                | 41                                                                                                                                                                       | 45                                                                                                                                                                                                                                                                |
| <b>Connection</b>         | Struggles to put food on the table; has 3 kids still in school (10, 13, and 7); part of the working poor and has to make tough choices about bills and food; has 2 jobs. | Program Manager at a food bank. Doesn't know a lot about the individual pantries and the specific needs of those who visit them. Responsible for getting food out of the warehouses to the pantries, but doesn't think deeply about food waste or specific needs. |
| <b>Digital Capability</b> | Owns a cell phone and relies on public wifi and a basic plan at home when she can afford it.                                                                             | Full access to a computer, cell phone, and high-speed internet access. Digitally savvy and curious.                                                                                                                                                               |

|            | Primary User Profile                                                 | Secondary User Profile                                                                      |
|------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Goal       | Keep a roof over her head, be able to reliably pay bills each month. | Move food out of the warehouse before it rots too long.                                     |
| Challenges | Making hard choices; worried about ICE and her immigration status.   | Doesn't know what to send to each pantry; doesn't know the current capacity of each pantry. |



## Conceptual Overview

Imagine a mobile app where clients can find pantries near them that are open when it's convenient and have the food on hand that their families want. No more searching

online to find open hours and mapping addresses. Clients can report on the quality of the food and other characteristics, providing key information to other clients and to pantry managers that can improve and refine the pantry's services. A profile will capture preferences to help the user make future choices. Inside the pantry, a QR code can be scanned so that later, a client can anonymously share what food was eaten and what was not. Information about how much time it took to get to the pantry, how much time the client spent in the pantry, and what food they brought home will be provided to the pantry to improve services. All personally identifiable information will be deleted and not recorded.

Valuable information about pantry visits will be shared with food banks to improve services and resource allocation. A critical need voiced by pantries was more data on what is eaten. Pantries want to be better at providing the food people want not only to please the clients but to also reduce waste. Clients can use this service to provide that information and more.

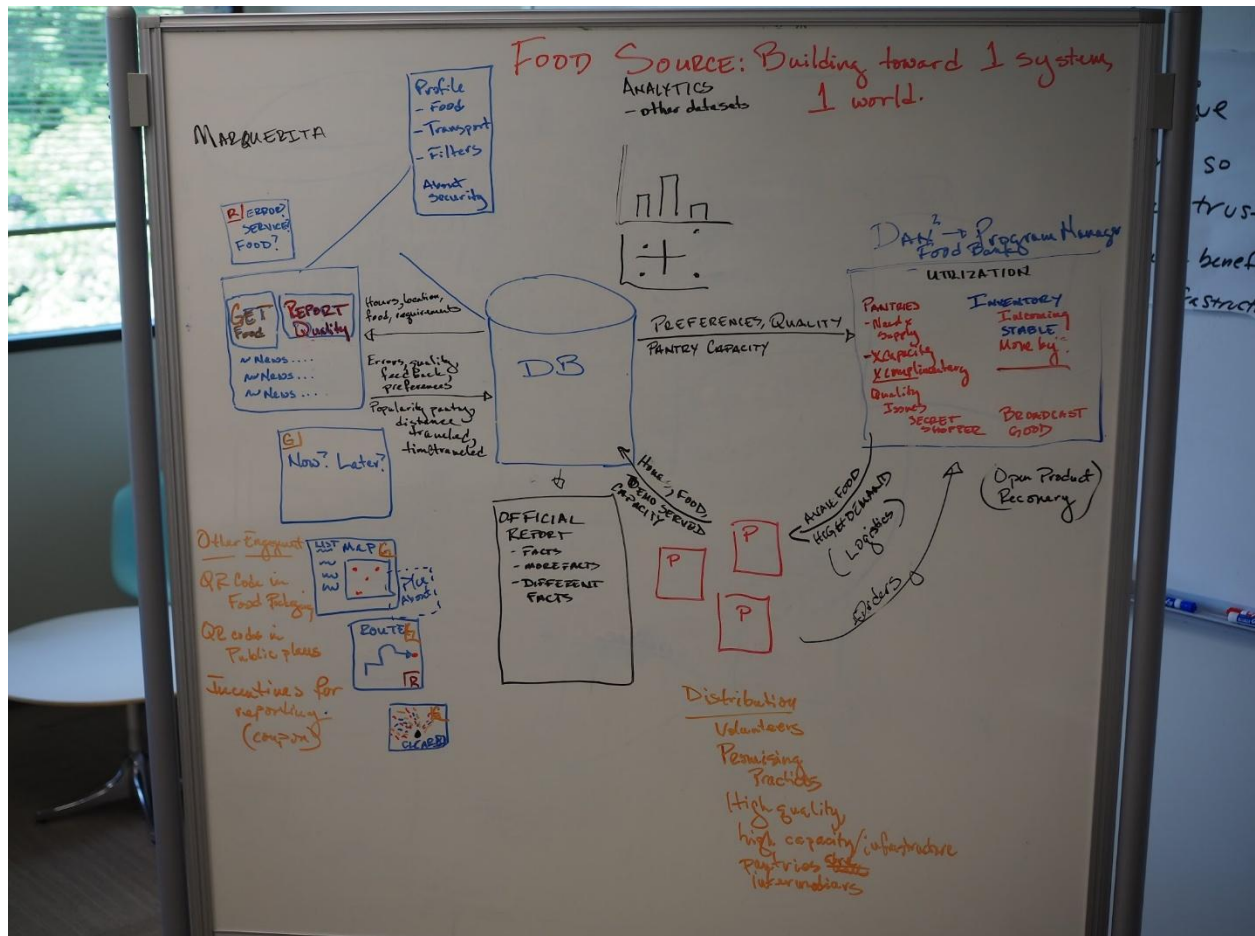


Figure 1: sketch of One World, One System

## Idea 2: Personal Pantry

### Design Question

How might we map the capacity of the food distribution experience so we can consistently connect people to food support in a way that preserves their privacy and dignity?

## User Personas

|                           | Primary User Profile                                                          | Secondary User Profile                                                                                                                         |
|---------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>               | Reba                                                                          | Gladys                                                                                                                                         |
| <b>Age</b>                | 35                                                                            | 75                                                                                                                                             |
| <b>Connection</b>         | Single woman with 3 kids with a job looking to feed herself and her children. | A volunteer at the church in the city who opens a food pantry twice a month for 2 hours, to anyone.                                            |
| <b>Digital Capability</b> | Android phone with limited mobile data.                                       | iPad, flip phone, has wifi (home + church).                                                                                                    |
| <b>Goal</b>               | Anonymity, convenience, timing.                                               | Distribute all donated food from the congregation at each scheduled distribution time.                                                         |
| <b>Challenges</b>         | Transportation, time, info access.                                            | Limited to refrigeration + storage, limited volunteers, visibility issues, succession plans, individual capacity, limited time for engagement. |



network, possibly incentivizing a volunteer-led pantry to join. When that small, disconnected pantry uses the system, their participation also creates an introduction to other food pantries and food banks, so that a future conversation or connection might happen. To encourage network building, another feature of this tool are in-person, community events that bring together providers to not only offer food to a community, but also to meet each other and learn about their services in order to expand and map the food resource community. These events are also an opportunity to share Personal Pantry with providers and clients.

Food banks can better support pantries when they know more about their community needs, and in the case of this prototype, the volunteer-led pantry staff often don't know what resources may be available and don't have a succession plan for what happens when volunteers no longer supply the labor. In addition, small pantries often don't have the infrastructure or space to store their food over time, so they are incentivized to share their inventory and information on Personal Pantry so that clients will come and benefit from it.

When a pantry is connected to a formal network, it might receive infrastructure support, greater visibility, and possibly funding so they can continue operating and serving the community. That connection also allows for better resource allocation across the region, whether that means opening a new pantry in the area or better supporting a small, hyper local pantry. Personal Pantry is a solution that provides access to food resources, information about client need to pantries and food banks, and an intentional network building apparatus to build connections to organizations that are serving a region.

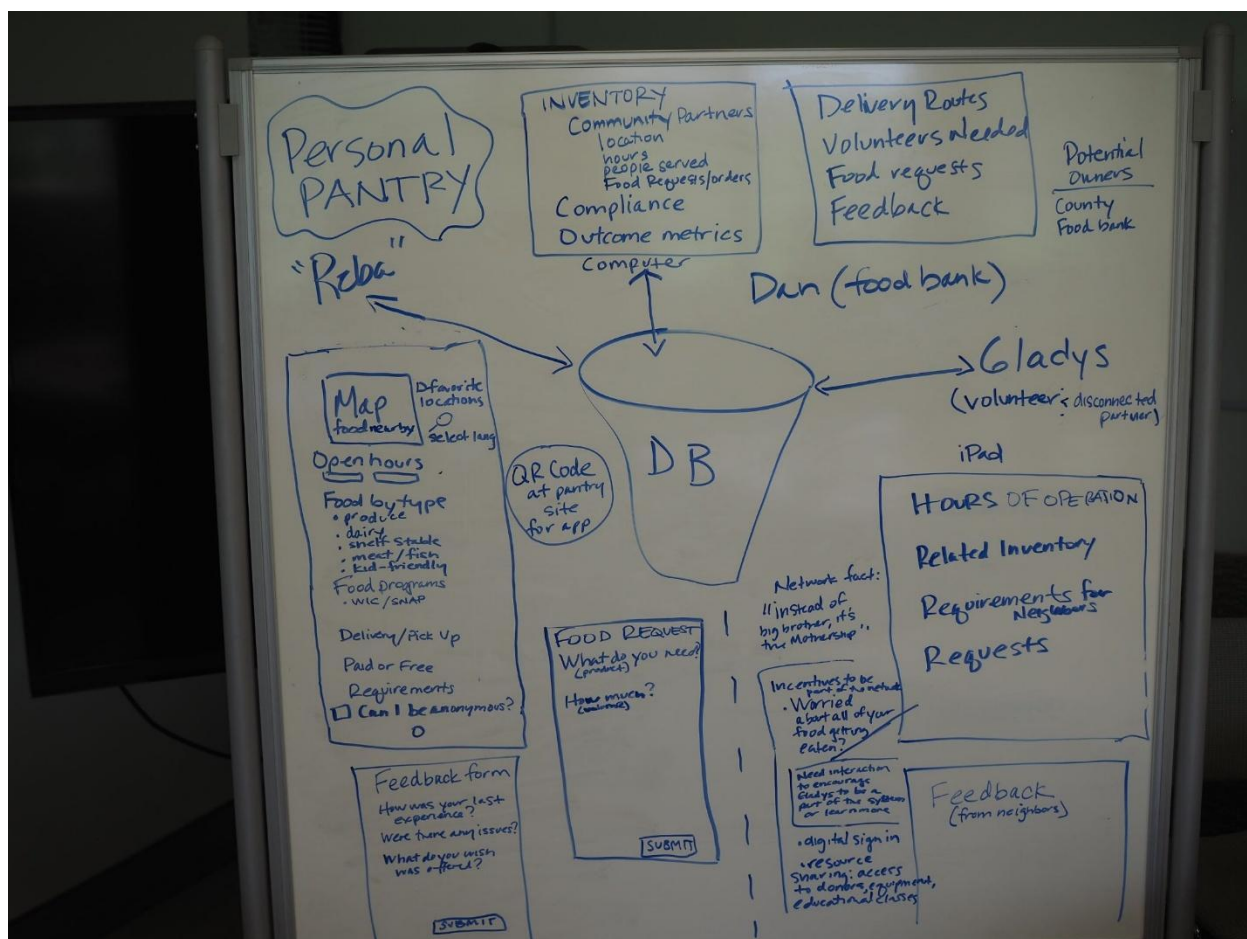


Figure 2: sketch of Personal Pantry

## Next steps

Interviews with representatives from food pantries, food banks, and food resource organizations will be conducted to expand upon and validate the ideas crafted by teams. Information from this Generate and Design event will be consolidated and presented to experts at the 2026 ESRI Annual User Conference to ignite interest in using tools and expertise to address the problems expressed by participants and to explore designing the ideas participants created. Stay updated on this project here: <https://page.techsoup.org/impact-drive>

Learn more about the methods and projects led by the [Caravan Studios](#) team at [TechSoup](#).