

AgriMap NYC

Mapping where New York City grows

A guide to creating a grower-led census

Developed by:
Angela Trude
Anne-Laure White
Ashwini Achutharaman
Natasha Bernstein Bunzl
Alexa Calderon
Mariel Lopes Carvalho Wolverton
Catalina Velasco Daza

Additional support:
Rasheed Perry
Sofia Jimenez Saborit

Welcome!

This guide was created because we believe the most meaningful data is created *with* people, not only *about* them. Individual everyday experiences bring the insight and context that turn data into something real and useful. Our work would not have been possible without knowledge shared by urban farmers and gardeners in New York City.

This guide illustrates a participatory approach to creating a census of urban agriculture: one that sees food producers not as data points, but rather as partners in the design process. Throughout the process, we asked ourselves the following question:

How can we make sure that we account for the diversity of experience inherent in growing food in urban spaces and sharing information with others?

We hope that this guide will help you answer this question within the context of your city and the unique contributions of food producers within it.

What's inside

This guide walks you through how to:

- Collect community feedback through interviews and workshops
- Analyze qualitative data with a lens towards equity and inclusion
- Translate broad themes into questions and digital tools
- Conduct outreach that builds trust and reduces accessibility barriers
- Sustain and adapt your census over time, based on institutional circumstances

You will also find exercises, spaces to brainstorm, checklists, templates, and examples to help guide you through.

How to use this guide

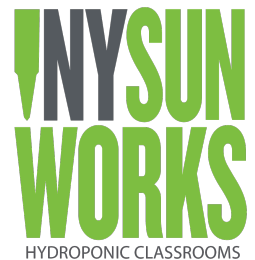
This is not a set of rules, but a flexible toolkit that is meant to be adapted to many different contexts. We invite you to remix and improve alongside your community. You can move through from start-to-finish or skip to sections most relevant to your project. We recommend start-to-finish if you are approaching the issue for the first time.

About AgriMap NYC

AgriMap NYC is a collaborative project led by NYU Steinhardt's Department of Nutrition and Food Studies in partnership with the Center for Sustainable Business at NYU Stern. The project started as M.A.P. NYC (Mapping Agricultural Production in NYC) in 2021, when the COVID-19 pandemic exacerbated inequities in the food system. We realized that without a baseline of information on what was being grown in New York, where, and under whose maintenance, we could not develop concrete policy goals to support and expand urban agriculture. Our platform did provide an overview of the state of urban agriculture in New York, but lacked the engagement necessary for the breadth and depth of information needed.

In 2023, we received funding from the Foundation for Food and Agricultural Research (FFAR) to revisit the wiki-style census with a more rigorous ground-up approach. As a user-generated data platform, it is imperative that the survey and information on the platform reflect the needs and priorities of growers, even with the project's broader goals of impacting the food system from a public and private perspective. This community-centered approach equips policymakers, funders, and nonprofits with better data about urban agriculture that reflects the information growers actually want to share, including contributions to sustainability, education, public health, food security, and community resilience.

Our Partners



Cornell Cooperative Extension
Harvest New York



We also want to acknowledge the team at Farming Concrete, Alexina Cather, Leigh Ollman, and Mike Treglia of the NY Cities Program at The Nature Conservancy for sharing expertise and offering feedback over the course of this project's duration.

The Process



**Determine
your purpose**



**Understand the
landscape**



**Establish your
advisory board**



**Host
workshops**



**Conduct
interviews**



**Review and
summarize**



**Develop a
census
survey**



**Assess for
sustainability**



**Create an
implementation
plan**



Outreach



Evaluate



iteration checkpoints

Your Purpose

Before you start any of the work, it is important to understand your team's goals and community concerns. The following questions are meant to serve as guides for clarifying your intentions. We strongly encourage you to take some time to jot down notes for each one. If you are working in a team, have each person do the activity individually first before coming together as a group to align on common goals.

What brings you to this work?

What questions do you want to answer?

What problems are you trying to solve?

Iteration + Bias

Key Points

- Understand what iteration is and why it is crucial at all stages of the process
- Acknowledge biases and ways to minimize them

The Importance of Iteration

As you conduct your interviews and workshops, it is essential to acknowledge that participatory design is not linear. Every piece of feedback that you get from a potential user or stakeholder should be evaluated to see how it can improve your census or tool. No matter what stage of the process you are at, always remember that it is a cycle.

Bias

Bias → The action of supporting or opposing a particular person or thing in an unfair way because of allowing personal opinions to influence your judgment

Cambridge Dictionary

Bias can show up in conscious and unconscious ways. Unconscious bias can sometimes be more nefarious, as it is harder to detect. Maintaining a non-linear approach creates more opportunities for reflection, feedback, and identification of any possible biases shaping the output.

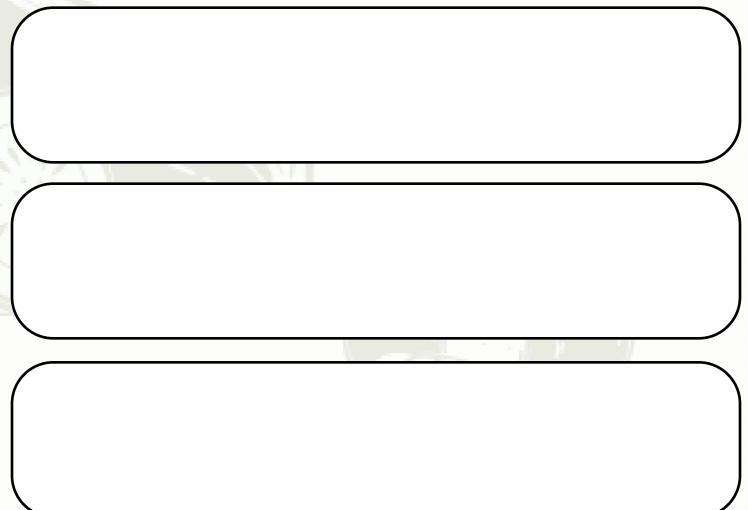
Your Turn!

What are some biases that you have about the data, population, and/or process? How can you reduce the influence of those thoughts when collecting and analyzing data? Do this activity individually first and then come together as a team to share responses.

Bias



Intervention



How to Reduce Bias

Bias often enters our work undetected. We perceive ourselves as neutral participants, but many factors in our own experience, preferences, and approach can skew data collection and analysis. The following are common forms of bias:

Selection Bias

This occurs in the phase of selecting and reaching out to participants. If we only reach certain kinds of growers, such as those that are more easily accessible because they speak English, are tech-savvy, or are connected to institutions, we are demonstrating selection bias.

Confirmation Bias

This occurs when we ask leading questions, guiding our interviewees to provide answers that validate our pre-conceived ideas.

Sample Size Bias

This occurs when the data collector ascertains a certain amount of data to be adequate before reaching data saturation. This risks leaving out important respondents.

Bias can infiltrate any data process. It is at greatest risk of appearing when decisions are made from the top-down, without the input of communities most impacted. In a ground-up census like ours, reducing bias requires intentional design for inclusion, equity, and accuracy.

Strategies for Reducing Bias

- Co-design: Involve a diverse group of people in shaping questions, methods, and goals from the beginning.
- Use inclusive formats: Offer the census in formats that meet the needs of different kinds of users, such as telephone, paper, and digital, as well as multiple languages.
- Open-ended questions: Allow more nuanced and elaborated responses.
- Diversify the team collecting data: Include data collectors with many cultural and linguistic backgrounds.
- Iterate, iterate, iterate: Pilot the survey with different people and revise based on feedback. You might also revise the survey when you notice possible bias or issues arise over the course of your data collection.
- Track participation: Monitor who is and is not responding. Adapt outreach to fill gaps.

As you continue through the process, think about who may be unintentionally excluded by your current approach and what assumptions you are making. Brainstorm strategies to address each bias.

Iteration and Bias Checkpoint

Throughout this toolkit, you will find this symbol at steps in which it is helpful to iterate and/or address biases. Return to this section for strategies on how to do so.

Understand the Landscape

Key Points

- **Establish your community of knowledgeable people**
- **Attend events, workshops, and conferences**

To create a sustainable resource, it is important to understand diversity of experience, past and current initiatives, and priorities. Urban agriculture is stewarded, supported, and led by many people that might be able to provide expertise. If you already have work developed, draw on those existing resources and focus on building trust in relationships. If you are starting a new project, you will want to look for institutional experts, policymakers, and food producers. You might attend workshops and conferences to broaden your network and stay up-to-date on various issues. Meet people where they are. Going to local gardens is a great way to connect.

Your Turn!

What media does your community use to connect?

**Whose voices are most heard?
How can you connect to people
with less of a platform?**

The Advisory Board

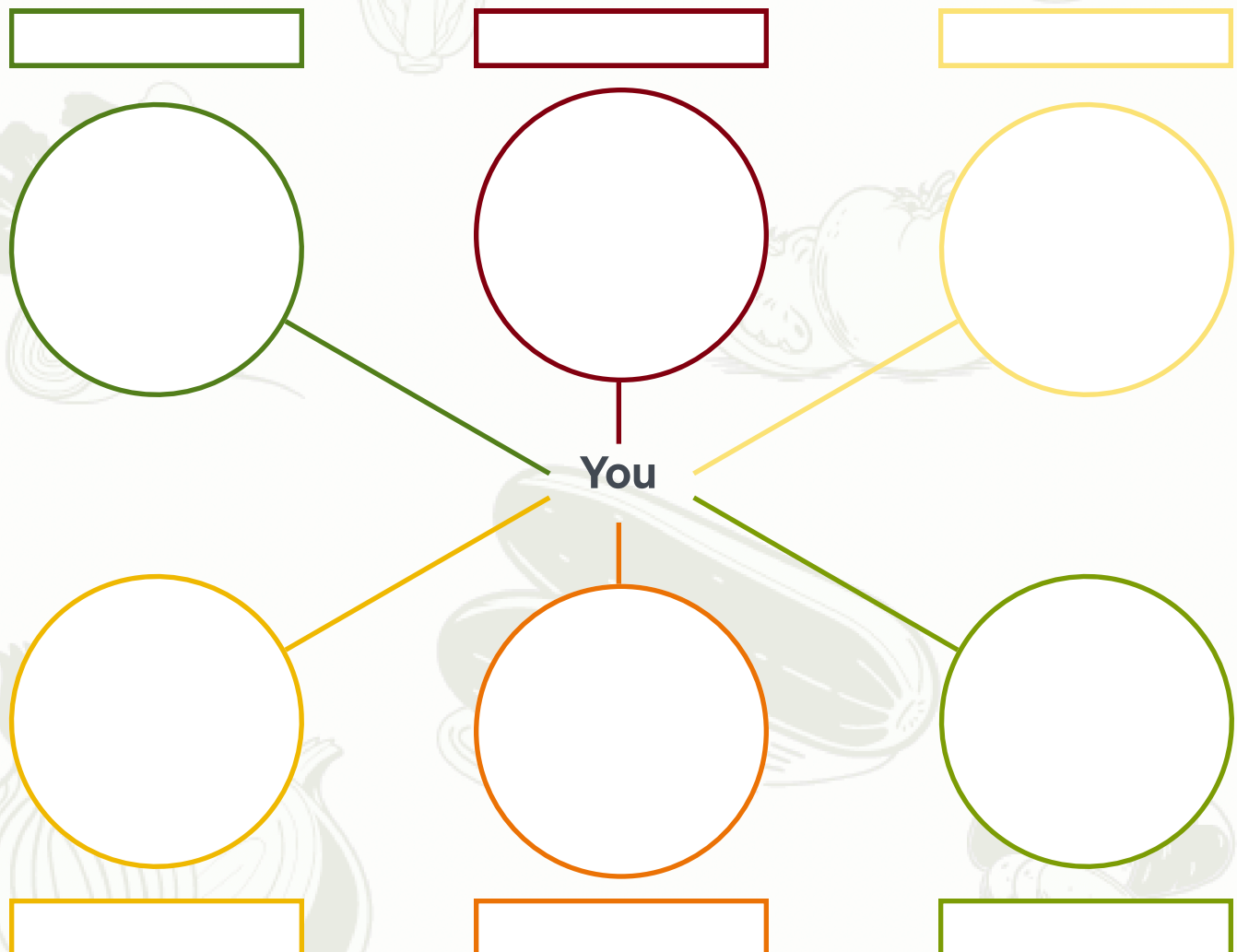
Key Points

- Create a networking map to identify your circles of communication
- Establish norms and expectations for your advisory board

An advisory board is a group of people that provides guidance, insight, and multiple perspectives on the project. When recruiting board members, consider attributes such as subject matter expertise, local network, connections, and potential to support fundraising.

Networking Map

A networking map is a useful tool for identifying people with relevant experience or interests to guide the development of the project. In the rectangles, describe an interest group. Inside each circle, write the names of people in your network that belong to that group.



Reaching Out

For each person in your network who would provide valuable expertise, list their name and contact information. Invite relevant stakeholders to be on your board, considering their experience and institutional or community background.

Name	Role	Email	Contacted On

Establishing Norms

How representative of the community is this board?

How often do you want your board to meet? Consider board member capacity and timing of goals and deliverables.

What is the best method of communication for all board members?

What are the benefits of group meetings? What are the benefits of one-on-one conversations?

How often will board members receive project updates?

In what capacity will the board inform decision-making?

How can the board ensure adherence to grower-led, data-driven decisions?

Gathering Information

Key Points

- Differentiate between methods of data collection and the appropriate context to utilize each one
- Clarify the importance of ethics and sampling biases

	Description	When to use
Interviews	• One-on-one or one-to-group conversations • Answer a set of questions while encapsulating unique perspectives	• Deeper understanding of individual experience • Detailed insight, subjective context
Workshops	• Structured brainstorming, testing, discussion, and critique as a group • Hands on activities, combination of small-group and large-group discussion	• Collaborative design and brainstorming • Hands-on engagement or product/tool testing • Non-hierarchical decision-making • Developing group consensus
Observation	• Participatory observation: the observer may join in, actively participating to understand experience more closely • Non-participatory: observe quietly as a fly on the wall	• To understand behaviors and routines • To understand the environment in which potential users work
Focus Groups	• Guided discussion with small group of participants	• To test a product or idea • Uncover common interests, goals, or themes among a set of users • Identifying and honing in on areas of agreement or disagreement

Select the method(s) of data collection most appropriate for your questions, community, capacity, and landscape. We will walk you through two of these data collection methods: interviews and workshops.

Ethics and Privacy

It is crucial to respect and protect the privacy of all participants. If any part of this work will be published or used for academic research, Institutional Review Board (IRB) approval may be required. From the start, provide participants with clear and accessible information about:

- What they are being asked to do
- What data is being collected
- How the information will be used and stored
- Who will have access to the information

Participation should always be voluntary. Participants must be informed of their right to decline, withdraw, or request that their data be removed at any point, without penalty.

Allow time for participants to ask questions before obtaining consent or collecting data. Equally, allow participants to ask questions during data collection and emphasize that they have the right to rescind their participation at any time. When appropriate, anonymize or aggregate data to reduce risk and protect identities.

If your project goes through an IRB process, always share a contact person or office so that participants know who to reach out to with questions or concerns.

Sampling and Representation

How you recruit participants shapes whose experiences are most visible. Sampling bias occurs when the people sampled are not actually representative of the broader constituency. Sampling bias can occur when some people are easier to reach than others, often those with higher visibility through social media, employment, or institutional connections. Small-scale growers, immigrants, and older adults are among those that might be left out. When designing your sampling approach, ask yourself:

- Who is most likely to hear about the project?
- Who may avoid participating? Why?

Consider strategies to broaden participation, such as:

- Working through community connectors, rather than only institutional relationships
- Offering multiple ways to participate (in-person, phone, multilingual)
- Providing compensation or childcare support when possible
- Allowing anonymous participation.

Compensation

Consider one of the following forms of compensation. If you have minimal resources, brainstorm creative strategies to honor the time of the participants.

- Gift card
- Stipend
- Drawing for a prize
- Swag (bag, hat, short, etc)
- Food and/or beverages
- Volunteering or bringing your organization to volunteer on their farm or garden
- Providing assistance with an administrative task
- Highlighting their work on social media, if that is of interest and value to them
- Sharing their events or needs with others

Interviews

Key Points

- Use the insights you gained to identify which areas require further clarification
- Test your questions with key informants prior to starting formal data collection

After preliminary assessment of the landscape and prospective interviewees, your next step is to create an interview guide with questions that reflect problems and opportunities requiring further clarification.

Who to Interview

Who you interview will directly inform the development of the survey. It is important to align participation with project goals. Some projects may start with a smaller, place-based sample, such as a neighborhood or type of grower. Others look for to represent large geographies with a smaller sample size. The key is being intentional. Choose interviewees that reflect the range of experiences you are trying to understand, not just those that are most vocal or easily accessible. Use the following questions to guide your thought process about who to interview.

What is the goal of the census or survey?

What perspectives are essential for this project?

Who are the constituents of the urban agricultural community in the region of interest?

Fill in some potential contacts in the box below.

Name	Role	Affiliated Organization	Contact Information

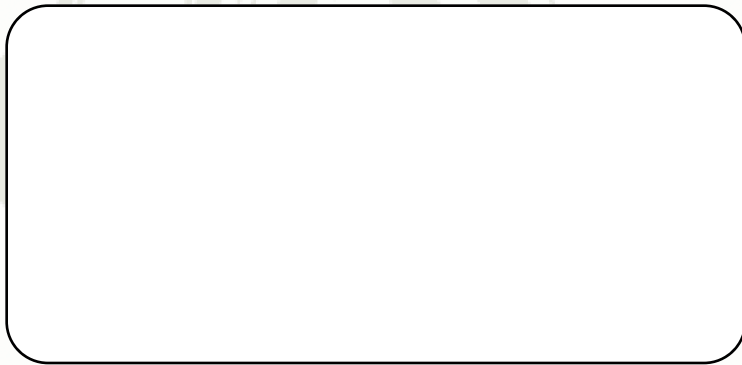
Your Turn!

This exercise will help you develop interview questions that elucidate the needs, priorities, obstacles, and capacity of urban food producers as they relate to the census survey. For each problem area, come up with at least three questions that can help you learn more.

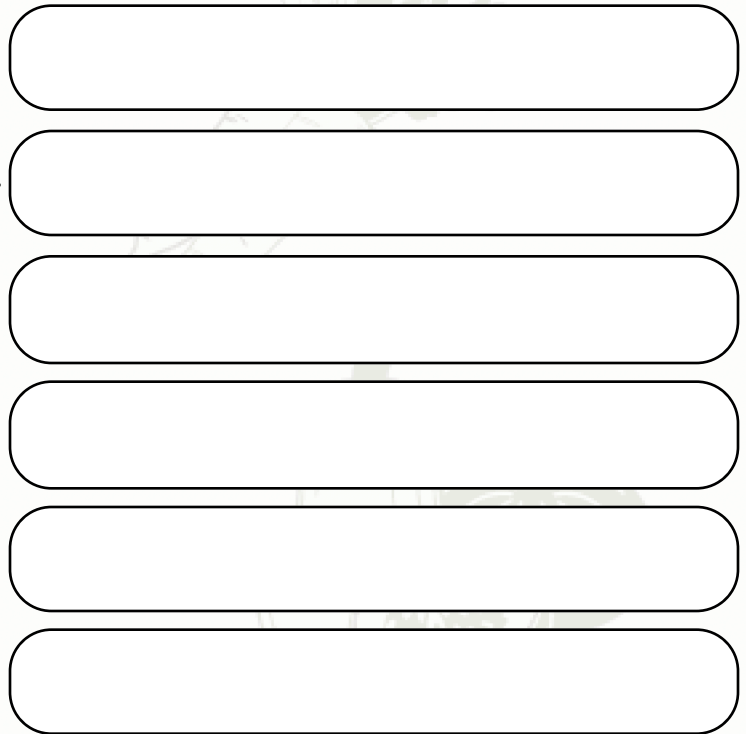
Problem	Questions
	→
	→

Repeat the same exercise with the possible opportunities for growers.

Opportunity



Questions



Things to Remember

When creating your interview guide, remember to include the following:

- Introduction to the project and background information
- Purpose of the interview
- Estimated time for interview
- Where the data will be shared
- Compensation (if applicable)
- An opportunity to allow the interviewee to reject or consent to the interview
- Open-ended questions that can be answered with more than just yes or no
- Documentation of interview (notes, audio-recording, photos)



Checkpoint

Are you reaching the target audience? Is the sample that you are interviewing representative of the population? If not, use this as an opportunity to rethink your recruitment strategy. You can bring on more people, new voices, or brainstorm new recruitment approaches.

Testing

Test your interview guide with someone who has a strong background in the subject. This could be a farmer or gardener, or another experienced participant. Based on their feedback, make edits to the questions and flow.

Workshops

Key Points

- Create a workshop template based on insights from interviews
- Develop strategies for individual and group feedback

Workshops are interactive group sessions that bring participants together to collaborate on a set of challenges, goals, or ideas. Workshops often involve structured activities — brainstorming, mapping, group discussion — with multiple modes of engagement — visual, oral, and written. They are a space for creative problem-solving and community design, allowing the lived experience of diverse participants to generate ideas and shape the census.

Your Turn!

Use the following questions to guide your brainstorm as you design the workshop.

What is the purpose of the workshop?

How long does it need to be?

Workshops should have a strict time maximum that respects the capacity and energy of participants

What are the main questions you want answered?



Checkpoint

Your second and third workshops will inevitably build on the ones before them. Consider your long term strategy, while keeping in mind points of tension or clarity that arose from previous sessions.

How many people will you include?

The following table compares small and large groups. We advise against larger groups, as the lack of intimacy can make it harder for participants to contribute honestly and meaningfully. Consider conducting multiple smaller scale workshops to reach a larger constituency. If time is a constraint, adapt the workshop guide for more hands on activities than discussions.

	Small Group	Large Group
Size	6-12 people	15-30 people
Benefits	Easier to facilitate Deeper conversations	Greater diversity of participant backgrounds and opinions
Challenges	Fewer voices	Harder for everyone to contribute

Responsibilities

Hosting a workshop requires a team to help the event run smoothly. Based on the description for each role, list the person on your team who is the best fit. Individuals can have multiple roles.

Primary Facilitator

Sets the tone, keeps the conversation productive, and maintains a high level of participation from as many people as possible. The facilitator is not an expert, their role is a neutral position that encourages the group to actively engage. The facilitator is familiar with the project but does not hold all the answers.

Secondary Facilitator

Intervenes with further questions or insight where appropriate. They will also keep an eye on engagement and workshop dynamics, offering support to the primary facilitator when needed.

Note Taker

Writes comments down in real-time on large sized chart paper/easel at the front of the room for the community and/or on a laptop or notepad. When taking notes, be sure to write the actual verbiage of the participant.

Small Group Discussion Note Taker

Writes comments and observations on a notepad or laptop for the internal team to review after.

Translator

Provides clear, comprehensive translation throughout the workshop for any non-native English speakers.

Supporter

Organizes the materials, escorts participants to the bathroom, receives food, and organizes a coffee or food table.

Time Keeper

Ensures that activities and discussions are kept within the allotted time. Communicates/signals to the moderator.

Photo Taker

Documents workshop activities and actions through photos and short videos. Responsible for uploading all photos to a shared drive, naming each file, and blurring faces of participants who do not consent to have their photo taken.

Sample Workshop Structure

The following is an example of a workshop structure used in the development of AgriMap NYC. Feel free to take inspiration from it and alter as best fits your needs.

Welcome + Introductions	10 minutes	Thank people for their time. State goal of session. Walk through agenda. Allow everyone to introduce themselves.
Community Guidelines	5 minutes	Set the tone and ground rules for the workshop.
Purpose of the Tool	10 minutes	Based on participant responses, the facilitator writes down main purposes. Discuss with the group.
Data Priorities	20 minutes	Have each person individually write all the information they would want in a tool. Form small groups and share, summarizing priorities into “must haves” and “parking lot”. Reconvene as a large group.
Feedback on Functionality	15 minutes	Look at apps/platforms with similar functionality to those that the census will need and ask the group what they like and do not like.
	10 minutes	Introduce option A and B of your platform. Observe how people interact with it. Ask for initial thoughts and impressions.
Hands-on Tool Testing	30 minutes	Allow participants to use the preliminary platform for 10 minutes and observe. Organize into small groups after to discuss their experiences. Share as a large group.
Closing	10 minutes	Summarize the major points of the session. Offer a chance to add final thoughts. Announce next steps in the design process and any future events. Thank participants for their contribution of ideas and time. If time permits, host a meal for informal connections at the end of the workshop.

Review and Summarize

Key Points

- **Transcribe, anonymize, and code all interviews and workshops**
- **Interpret your findings**

At this point, you should have a good amount of data from your one-on-one interviews, observations, focus groups, and/or workshops. The next step is to summarize these ideas and quotes so that you maintain the integrity of the individuals.

Transcribing

There are four parts to reviewing and summarizing qualitative data.

Step 1: Audio record

This part is done during the data collection. After asking for consent, use a recording device to capture the interviewee's exact words.

Step 2: Transcribe

Transcriptions of audio-recorded data should be verbatim. Based on the resources available, you might want to use a software to transcribe, before having a person listen again to ensure accuracy. If such software is not available, a person might conduct preliminary transcription and subsequent verification. This means listening to the audio-recording and writing it down exactly as it was spoken. When you transcribe, it is important to anonymize all names, places, and other identifying information.

Step 3: Check transcription

After transcription is completed and anonymized, another party should listen and read to ensure accuracy. If the interview and transcription was conducted in another language, translation should occur here. Translation might be conducted by a member of the team proficient in both languages, or a proficient outside party.

Step 4: Coding

Coding can vary based on the focus of the project and who is coding. We recommend the research team conduct line-by-line coding and discuss all possible terms and keywords that emerge. The codes/keywords can be generated from terms the team uses or from the community. The team should then revise and test the codebook on a new transcript until a consensus is reached.

Coding

Coding is a technique used to analyze qualitative data. Researchers will develop a set of codes, or short phrases that capture a particularly salient concept. This helps to organize interviews and workshop discussions into clear and comparable data pieces.

Double coding is when two or more people independently analyze the same data, often resulting in the exploration of distinct themes. When using coding to create a grower-informed census, double coding is recommended to capture the breadth of themes and reduce bias.

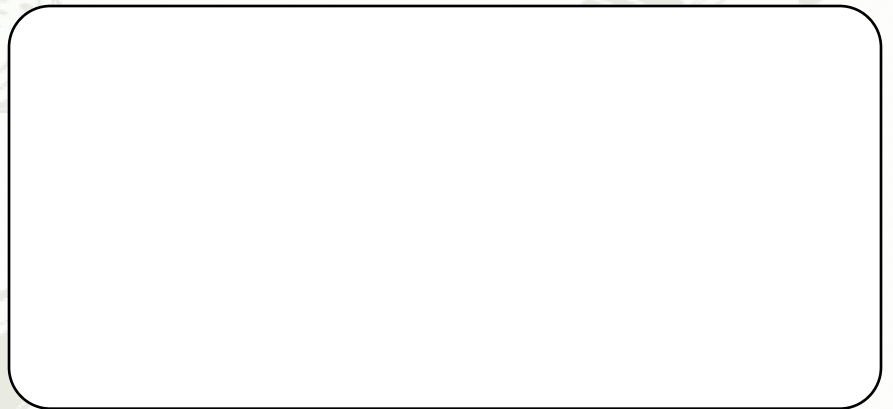
Your Turn!

Before coding, create a list of questions to guide your process. These questions will lead to the codes that are most relevant to the project and landscape. For more information on how to code, styles of coding, and applications, check out *The Coding Manual for Qualitative Researchers* by Johnny Saldaña.

How do people talk about, characterize, and understand data in urban agriculture?



What topics emerge in your personal interview notes? Why did you include those notes?



What were important themes that cropped up in multiple interviews or workshops?



How would you code the following response?

The first two sentences are done as an example to illustrate how the ideas within each excerpt could be interpreted. Any of these codes would be valid, so the project team should select the one that best fits the context and goals of their work. Are there codes or keywords you would add for the first two? How would you code the second two? Note that coding does not need to be sentence-by-sentence. Sometimes, whole paragraphs may be coded using one keyword. Multiple codes can also be applied to the same sentence.

Growing food in my community has made eating healthy more affordable for my family. Our neighborhood is rapidly gentrifying, and supermarkets are becoming more expensive. At the garden, I choose to grow vegetables I ate growing up.

Financial security
Family
Nutrition
Autonomy
Food Access

Politics
Inequality
Community
Gentrification



Checkpoint

Have two or more members of the team code multiple times, comparing their codes as they go and clearly defining each code and considering how these codes elucidate next steps in priorities and design. Keep going until the team achieves relative agreement in how they code, aligning on definitions and interpretations. Each iteration will provide necessary clarifications, solidifying the codebook

Create a Grower-Informed Census

Key Points

- Transform the insights you gained from the coded transcripts into a census survey

After compiling, transcribing, and coding data, you can transform feedback from the participatory design process into a census survey that reflects findings and builds information and advocacy-potential for the community.

A Note on Our Project

Our survey-building process was atypical, because we developed a participatory design process after an initial iteration of the project was completed. We therefore had a survey before conducting interviews and workshops, and our task was to revise the survey accordingly. This section will show you how to summarize key topics from your data collection, create thematic groups, and generate survey questions from there.

Creating your Survey Questions

Step 1: Summarize key issues

Use your coded transcripts to extract recurring issues and ideas. Highlight what matters to growers, not just what you expected to hear. Consider what was brought up unprompted and what challenges were described repeatedly in detail.

Step 2: Rank priorities

From your qualitative data, highlight which themes were most important to growers, and which were either not important or actively avoided. These might include topics like “yield” or “garden mission.”

Step 3: Divide into themes

Create broader categories based on the ranked priorities. For example, you might take multiple mentions of “support needed” and isolate topics for financial support, volunteer support, and bureaucratic support. You can start creating thematic groups by pulling out all sections within one particular code. From there, you can break down the code into further themes if applicable. Themes will differ based on the interview and workshop questions, community involved, and coding of data.

“Because people bring everything else. And that was the problem with this garden. There weren’t that many members. And so that was the first thing we really tried to do was to get more members, because you need to have people.”

“So on a wider scale, I know there’s probably a lot of gardens in the city are probably stewarded by elders. And I think that’s something that we think about a lot is like, what’s going to happen to those gardens when these people can no longer work in the gardens?”

“Knowing that a lot of the gardeners are elders, I think that might be a barrier to this project of getting things updated.”

Capacity Building

Potential themes:

- Food access
- Transportation
- Physical accessibility
- Digital Infrastructure

What other themes can you think of? Write them below:

Step 4: Draft a survey outline based on key themes.

Not all themes become individual sections. After creating your thematic groups with relevant quotes and data, making an outline can help you move towards organized and prioritized survey topics. Look at your themes and see which ones are most important and can be grouped into headers for an outline. We included our survey structure as an example. To respect the time of the users, we suggest surveys have no more than three sections.

Your Turn!

On the left is our outline with the sections we included in our survey. Use that as a reference and make your own outline in the space provided on the right.

Our Outline

1. Farm/Garden profile

- a. Background information (i.e. name, hours of operation, address)
- b. Accessibility to the public (i.e. wheelchair access, open to public, open to volunteers)
- c. Self-defined profile (i.e. mission, photos)

2. Production and impact

- a. Yield (weight, types of crops, etc.)
- b. Goals and outcomes (distribution, specialization, community focus)
- c. Spatial aspects (i.e. size, pollinator spaces)
- d. Resources (given and taken)

Your Outline

1. Section 1:

- a.
- b.
- c.

2. Section 2:

- a.
- b.
- c.

3. Section 3:

- a.
- b.
- c.

Step 5: Draft questions

Use simple language to transform the themes into concrete questions. Avoid technical language that may be unclear to the respondent. When possible, use phrases that come directly from the interviews. Have clear answers for each question.

What types of questions should you include?

Choosing the right format for your questions is important. Be sparing about open-ended questions. They are more likely to be skipped, require more time to answer, and are prone to typos and errors. Multiple choice, check-all-that-apply, and short answers are beneficial for different kinds of questions.

Formatting Questions

Proper formatting can make the survey process smoother, facilitating the user's understanding and movement through data entry. For a survey, most questions should have defined choices. Multiple choice limits the space for error, non-comparable data, and user fatigue compared to text boxes. Some question formats are illustrated in the box below.

Multiple Choice

Where do you distribute most of your produce?

- ☐ farmers' markets
- ☐ on-site pick up
- ☐ local bodegas
- ☐ food pantries
- ☐ community fridges
- ☐ other:

Check all that Apply

What crops do you grow?

- ☐ greens
- ☐ squash
- ☐ peppers
- ☐ tomatoes
- ☐ herbs
- ☐ other:

Percentage Bar

How much of your space is dedicated to growing plants for food?



Things to Remember

When creating your survey, keep the following in mind:

- Use the survey to test hypotheses and to collect missing information.
- Listen to each voice equally. Consider the sum of parts, not only the loudest voices.
- Keep language inclusive and simple. Provide definitions as needed.
- Feedback is key. Test your survey with growers before wider use.
- Ask questions that empower, rather than extract.
- Keep survey questions and the survey as concise as possible. Consider the time constraints of users.

Your Turn!

Based on your outline, create questions for each section. Consider flow, clarity, capacity to adequately respond, and feasibility from the perspective of data management. Write the format of each question in parentheses next to the question.

Section 1:

Section 2:

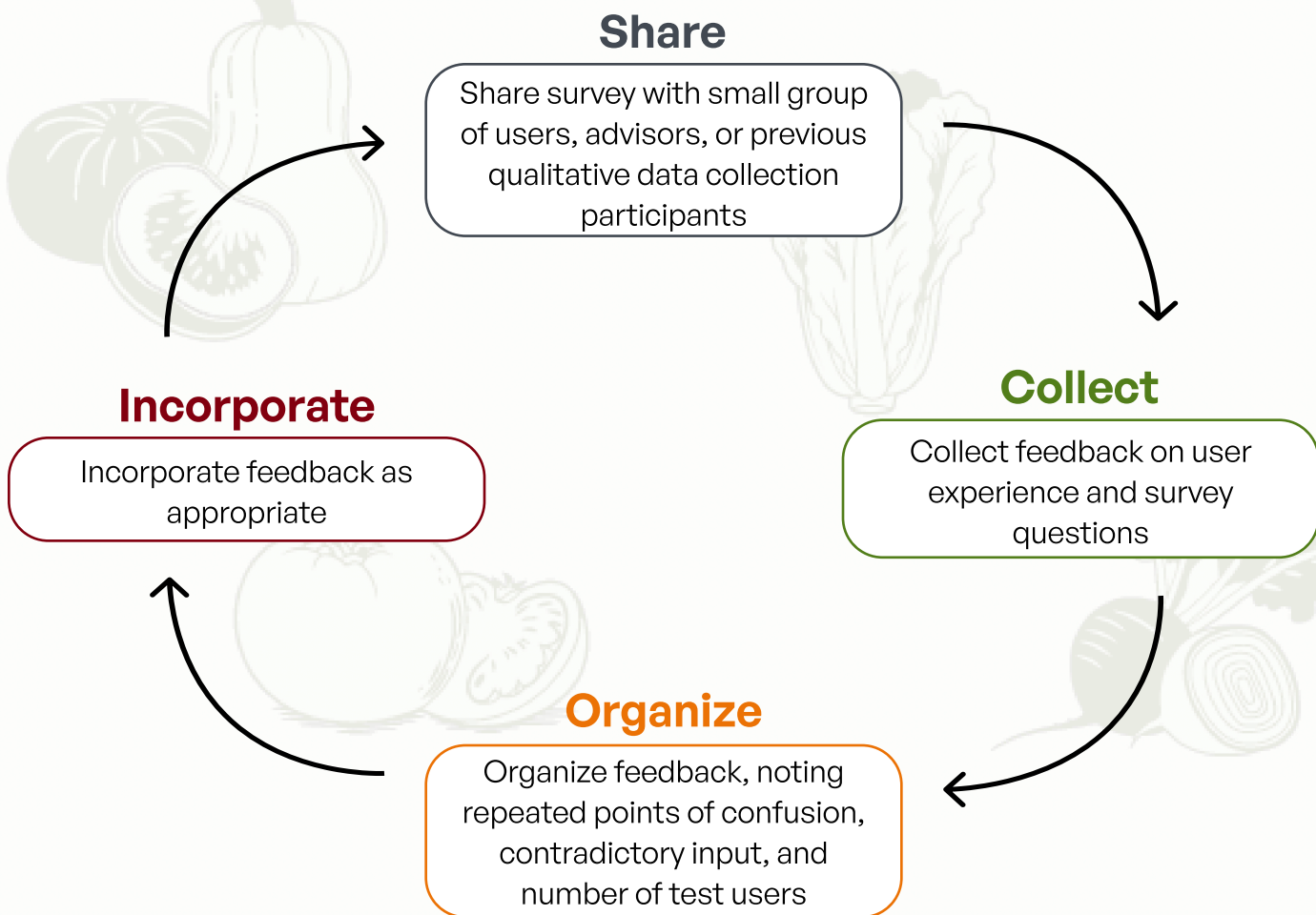
Section 3:

Step 6: Pilot your survey

Test your survey with several potential users. This is a good opportunity to reach out to people in your Advisory Board, previous interview or workshop participants, or other users that can pilot and provide feedback on the survey.

Iterative Feedback Loop

This diagram shows how iteration transforms the feedback process. Reference it throughout your work developing a census.



Evaluate your Survey

Use this checklist to evaluate your own survey.

- ☐ Themes reflect grower concerns
- ☐ Questions use plain, inclusive language
- ☐ All voices and types of growing operations are represented
- ☐ Survey was reviewed by growers
- ☐ Question formats are appropriate and mixed
- ☐ Survey is concise and easy to fill out

Create an Implementation Plan

Key Points

- Using data from the interviews and analysis, decide whether a physical or digital platform is more appropriate
- Establish connections with organizations to help you gather and distribute your data
- Brainstorm potential funding avenues
- Consider long-term maintenance strategies

An implementation plan outlines concrete steps to put the census into action. Using data gathered from participants, as well as an assessment of institutional capacity and the funding landscape, it provides a structure for how the survey will move from design to reality, from distribution strategies and timeline to outreach.

Your Turn!

Use the prompts below to reflect on the census survey.

The target audience for the survey is:

The primary users are:

The decisions that this census might inform include:

To us, longevity means:

Physical or Digital?

Both physical and digital platforms have pros and cons. Consider the following diagram when deciding which one is more suitable for your census.

	Physical	Digital
Cost	Low upfront cost High long term cost	High upfront cost Low long term cost
Accessibility	Provide translations Use multiple platforms to reach people Create a guide and/or script	Provide translations Include contact email and phone number Simple visuals and cues
Examples	Paper handouts, in person surveying, mailed surveys	Mobile application, website, survey form, SMS messaging

For Both Physical Surveying and Digital Platforms

- Make the purpose of the survey clear to the user.
- Include information on how to inform potential participants.
- Provide guidance on how to field questions, concerns, and digital or manual errors.

Distribution

Who will distribute, collect, and conduct further research with census data? In the space below, list specific community organizations that have trusted relationships to growers or government bodies that might be able to assist with dissemination.

Organization

Contact Information

--	--

Funding

Consider what forms of compensation or incentives are available to sustain the work for the duration of the project and how engagement can be sustained after initial implementation is completed.

What parts of the project need funding?

How long is funding needed?

What sources of funding can sustain this work?

Maintenance

How will the census be maintained? Maintenance may look like periodic physical surveying through an organization, asynchronous digital updates through a virtual platform, or a one time effort.

Frequency

Who is responsible?

Strategies for Long Term Maintenance

- Create a stewardship group comprised of growers, students, and other advocates that value this information and can shape future iterations.
- Avoid feedback fatigue. Only collect data when you have a clear use for it.
- Avoid tool fatigue. Collaborate when possible. Rather than have many projects, save resources and build stronger by building together. This avoids people becoming overwhelmed and exhausted by the many surveys or data platforms in their orbit.
- Plan events, community days, volunteer days at partnering gardens, social media campaigns, and newsletters to highlight the work and its contributors.
- Create comprehensive documents of the census design, decision making, possible challenges and approaches, as well as relevant passwords, code, data sources, and community partner contacts.

Sustainability

Key Points

- Decide on a sustainability plan that aligns with community priorities and goals to ensure that the data is beneficial for future researchers, growers, or advocates

What is Sustainability?

Sustainability → the quality of being able to continue over a period of time

Cambridge Dictionary

Your Sustainability Checklist

Iterate, Iterate, Iterate

- ☐ Share results with growers through events, visual summaries, and/or demonstrations of the platform
- ☐ Incorporate feedback into the design of the platform and survey
- ☐ Monitor and troubleshoot bugs
- ☐ Return to those who contributed information and help them use the final product

Document the Process

- ☐ How were the interview questions, survey drafts, and distribution strategy made?
- ☐ Why were these decisions made?
- ☐ What could have been done differently to make the project better?
- ☐ What kinds of limitations were faced?

Plan for Regular Updates

- ☐ Establish a timeline for revisiting the survey and its platform

Secure Ongoing Support

- ☐ Explore long-term funding channels
- ☐ Apply for grants
- ☐ Explore partnerships with community groups, institutions, and funders that are value-aligned and stable community fixtures

Outreach

Key Points

- **Partner with trusted organizations to host events and distribute outreach materials**
- **Meet people where they are, from their gardens to events and workshops**
- **Incorporate many modes of communication, including digital and analog materials**

What is Outreach?

Now that you have your survey and platform, it is time to spread the word and encourage participation. Outreach is not about simple promotion. It is about building long-lasting relationships. Ensure that participants are valued and heard, and that they know their perspectives are safe, worthwhile, and relevant. Be open to meeting people where they are, whether that be physically, digitally, logistically, or emotionally.

Community Centered Outreach

There are many strategies for reaching out to possible participants.

- Partnerships: local garden networks, food justice organizations, mutual aid groups, churches, schools, local advocacy groups
- Locations: green markets, garden events, workshops, skill-sharing events
- Engagements: event tabling, attending panels, social media content, reaching out to local reporters, writing op-eds, talks
- Analog materials: fliers, posters
- Digital materials: SMS/whatsapp, social media, email listservs

Strategies for Accessibility

- Use plain language and bold, friendly design.
- Translate into key languages spoken by food producers in your area (e.g. Spanish, Mandarin, Bengali).
- Include visuals and icons when possible.
- Clear, concise mission statement.
- Share the *why*.
- Be transparent about how results might be shared or used.
- Offer small incentives when possible (i.e., public shout-outs, free seeds, and swag).
- Accommodate different accessibility needs (time, physical need, technological).

Your Turn!

Planning outreach is like planting a resilient garden. Use the following prompts to create a vibrant and fruitful ecosystem.

Step 1: Make a crop plan

What plants do you want in your garden? The first step is to make a plan. Use the box to brainstorm your audience.

Step 2: Gather your growing materials

A successful garden requires the right tools. What methods work enable communication with possible survey participants? Circle from the following list.

- In-person visits (markets, gardens, tabling)
- Paper fliers/posters
- WhatsApp threads or text chains
- Email and listservs
- Social media posts
- Local newsletters or zines
- Partner organizations
- Peer ambassadors
- Other:



Checkpoint

Are you reaching a diverse group of users? What are the obstacles? Can you reconfigure your outreach plan to make sure that this reaches a broad and representative audience?

Step 3: Choose when and where you want to plant

Plants are best adapted for certain seasons and locations. When and where will you implement your plan? Think about key events and community spaces that might facilitate outreach. Where do people already gather? When do people have most capacity?

Step 4: Make space for pollinators

Pollinators move across the garden to help all the plants thrive. Who are trusted messengers in the community? These could be individuals, organizations, or local businesses. Use the box to list project pollinators.

Evaluation

Key Points

- Utilize quantitative and qualitative measures to assess the performance of your platform

After working hard to collect data, implement findings to produce a ground-up census that reflects grower priorities and needs, and disseminate widely, it is important to take a step back and evaluate the project. Some of the evaluation metrics might be specific to your community while others are more commonly used.

What is Evaluation?

Evaluation → the collection of data to assess reach, impact, and significance of the project

Reed et al, 2021

Quantitative Evaluation

Quantitative data is the easiest form of evaluation. You can collect big-picture metrics to assess reach, continued use or drop-off, data downloads, and more.

Metrics to Track

- Number of clicks
- Number of users adding spaces
- How often spaces are updated
- Amount of time spent on the platform
- Percentage of users that fully complete the survey

Qualitative Evaluation

Qualitative evaluation might look at user experience from a more subjective perspective. You may ask questions based on observation or feedback forms.

Questions to Self

- How are you seeing this census implemented in projects?
- What kinds of feedback are you getting about its usability and practicality?

Questions to Growers

- How easy was it to navigate through the platform?
- What are you using this tool for?
- Where have you applied information from this tool?

Key Takeaways

Build a diverse advisory board of experts.

A supportive team with diverse backgrounds and expertise will make the census stronger. Build an advisory board that can offer support in development and implementation.

Include community voices throughout the process.

A census that includes important and relevant information for implicated communities will produce more meaningful data and greater long-term viability.

Plan your outreach strategy to reach a broader audience.

A diverse constituency, as urban food producers are, requires diverse outreach, engagement, and implementation methods. Offering multiple languages, points of access, and outreach venues allows a broader audience to participate.

Create opportunities for feedback.

Make room for feedback at each stage of census development, allowing space for adjustments when necessary.

Future Directions

Information about where urban agriculture takes place and its impact can be vital for creating smarter policy around food access, housing, green urban planning, environmental sustainability, public health, and more. Beyond policy, this information can inform academic research, private investment in urban agriculture, and individual participation in local food systems. Consider how this work can be applied after dissemination. We can all learn and grow together!

Keep in Touch!

We look forward to seeing how your community applies this work! Reach out with thoughts and questions.

Contact us at: **AgriMapNYC@nyu.edu**

Or reach out to NYU's Department of Nutrition and Food Studies at: 212-998-5580



Sources

Bødker, S., Dindler, C., Iverson, O. S., Smith, R. C. (2022) *Participatory Design*. 1st ed. Cham: Springer International Publishing.

Collier, D. & Mahoney, J. (1996) *Insights and Pitfalls: Selection Bias in Qualitative Research*. World politics. [Online] 49 (1), 56–91.

Mackieson, P., Shlonsky, A., Connolly, M. (2018) *Increasing rigor and reducing bias in qualitative research: A document analysis of parliamentary debates using applied thematic analysis*. Sage Journals, Volume 18, Issue 6.

Nickerson, Raymond (1998) *Confirmation Bias: A Ubiquitous Phenomenon in Many Guises*. Sage Journals, Volume 2, Issue 2.

Reed, M.S., Ferré, M., Martin-Ortega, J., Blanche, R., Lawford-Rolfe, R., Dallimer, M., and Holden, J. (2021) *Evaluating impact from research: A methodological framework*. Research Policy, 50.

Saldaña, Johnny (2013) *The Coding Manual for Qualitative Researchers*. SAGE Publications.

Steinke, J., Ortiz-Crespo, B., van Etten, J., Müller, A. (2022) *Participatory design of digital innovation in agricultural research-for-development: insights from practice*. Agricultural Systems, 195, 103313

Walter, S. (2022). *User Journey Mapping*. Sebastopol: SitePoint Pty, Limited.

Zahle, Julia (2025) *Bias and Debiasing Strategies in Qualitative Data Collection*. Philosophy of Science, 00, pp. 1-18.