



How to Build a Municipal Food Waste Strategy

A Toolkit for New York State Municipalities

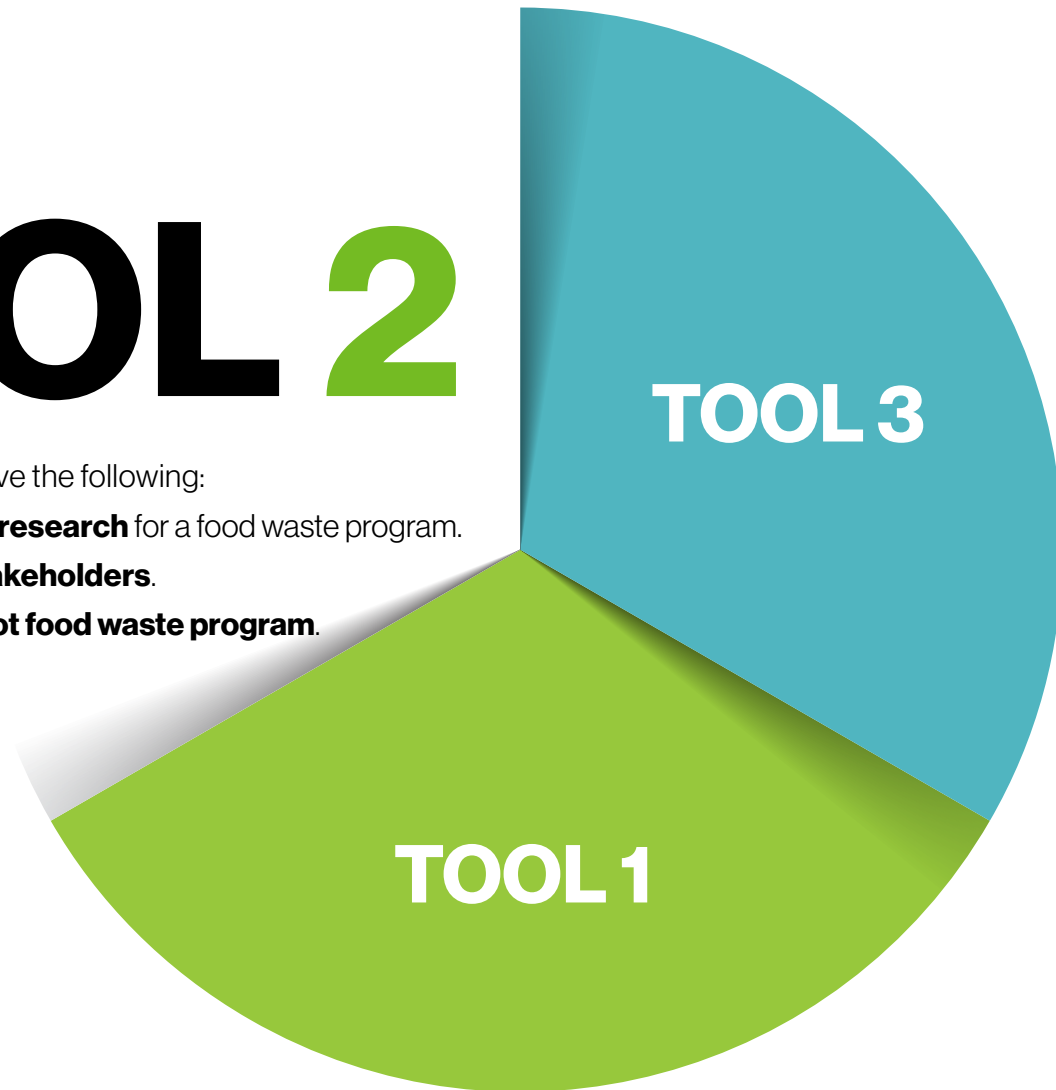
Tool 2: Defining scope and conducting a pilot



TOOL 2

Designed to help you achieve the following:

- Conduct **foundational research** for a food waste program.
- Engage **connected stakeholders**.
- Plan for and launch a **pilot food waste program**.



Wait! Before using this tool, make sure you have completed **Tool 1** of this toolkit.

Before beginning you should have

- **Confidence** about your ability to educate others on food waste and how to address it,
- **A high-level** goal for your food waste program,
- **High-level** budgetary considerations in place, and
- **Informal commitments** from core stakeholders willing to participate.

This tool is the second of a three-part toolkit that was developed by the [New York State Pollution Prevention Institute \(NYSP2I\)](#) to help municipalities large and small.

In **Tool 1**, you defined your program goal, gained early commitments from stakeholders, and considered potential funding. **Tool 2** will walk you through the process of first solidifying the foundational aspects of your program, then designing and planning a pilot based off this foundation.

This process is broken into three steps:

- **Step 1:** Lay the foundation for your municipal food waste program.
- **Step 2:** Develop a pilot food waste program.
- **Step 3:** Write a pilot program plan.



Lay the foundation for your food waste program.

A successful food waste program stands on a firm foundation that is built through the following:

Strength and weakness analysis:

Don't reinvent the wheel if you don't have to. Find out what activities or resources already exist within or outside of your municipality that are either addressing food waste or that could be used to do so.

Project scoping:

Begin making the vision you developed in **Tool 1** real by defining the logistical boundaries you plan to work within. This means considering the geographic focus of the project, the number of participants it will involve, and the timelines that will guide it. You may also want to identify the specific tactics (e.g., backyard composting, outreach and education, or donation) you will use alongside your strengths and weaknesses, and consider any external circumstances or contingencies.

Setting your baseline:

In order to design the most effective program, you'll need to have a good understanding of where your potential stakeholders are when it comes to food waste. How aware of it are they? How much do they generate? What are the biggest barriers they face when it comes to addressing it? Answering questions like these will help you understand the lay of the land before diving in.





Food waste program foundational focus areas

Strength and weakness analysis

Before you decide how you will address wasted food in your community, learn what programs or resources are already in place or available to you in order to best direct your energies. Determining existing strengths could reveal new opportunities, just as it will help you better understand areas that require more attention as part of your planning.

You may be familiar with a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis. This is a useful tool originally developed in the 1960s for business management that can be applied to many different contexts. It's a useful method for organizing what you learn during your research into categories that can be easily interpreted.



The results of this SWOT analysis will inform both your pilot and any long-term program that follows. Once you know what existing tools and resources are available to you, you will also have a better picture of areas that need more resources or attention.



Need a brush-up on SWOT analysis?

SWOT analysis is a tool that is valued by professionals in diverse fields. To get a detailed overview on how it works and what it entails, visit [Community Tool Box's SWOT analysis explainer](#).

Project scoping

Now you're ready to begin defining the scope of your program more. By now, you should be familiar with the ways in which food is wasted, what is already being done in your community, and where the gaps are that need to be filled. Most importantly, you should have the method for addressing food waste that you will use narrowed down, whether it's a form of **prevention** (avoiding waste being created in the first place), **recycling** (waste is turned into a resource), or **distribution** (donation).

Remember to refer back to the goal statement you developed in **Tool 1** as a guiding principle. Let's use the sample goal statement provided in **Tool 1** to the right. ➤

In order to **reduce the environmental footprint of businesses in our city**, we aim to address food waste by **establishing a food waste collection and composting program for local businesses to create the foundation for a future program that will allow residents and all businesses to participate.**



To begin defining the scope of your project, you should define high-level answers to the following questions that apply to your project:

- **Who are the potential participants?** (e.g., grocery stores and large restaurants)
- **What general geographic location will the program cover?**
- **How will food waste be collected?** (e.g., picked up or dropped off)
- **Where will the food waste be managed?** (e.g., municipal site or composted at home)
- **How long do you foresee the program running until positive results are seen?**

You should also consider how any relevant **regulations or laws surrounding wasted food** could affect your plan, such as the [New York State Food Donation and Food Scraps Recycling Law](#) (effective January 1, 2022). The legislation will require large businesses that produce more than two tons of food waste to send excess edible food to donation centers and commit anything that is inedible to be recycled. Local circumstances may limit what types of food can be donated or what types of food recycling methods are available.

Furthermore, a number of laws exist at the federal and state level concerning issues of liability, date labelling, and tax deductions in regards to food donation and feeding animals. Learn more about New York State's laws surrounding food donation for human and animal consumption—[visit this resource archive for helpful, to-the-point fact sheets.](#)



What method(s) will you use to address food waste?

Learn more about specific strategies of prevention, diversion, and distribution in our in-depth food waste resource, "[A Q&A Guide for New York State Businesses, Municipalities, and Communities.](#)"

Setting your baseline

Baselines are set at the beginning of a program to give you a sense of what you're working with and to serve as a reference point for measuring progress later on. For your food waste program, the most important data points for establishing your baseline are those that help you understand potential participants at the outset of the initiative. Knowing key facts about them — like what they know about food waste, how much of it they generate, or what they are already doing to address it — will help you get your bearings before diving into program development. This will lead to a program that meets participants where they're at.

Identifying connected stakeholders for baselining

In **Tool 1**, you engaged with your core stakeholders to gain buy in. Now it's time to widen your reach and engage connected stakeholders.

Connected stakeholders, as you learned in Tool 1, include many different businesses, community members, and other organizations that will be integral to the success of your program, playing both active and passive roles. We will explore recruiting and engaging connected stakeholders in Step 2, but at this point, you should take some time to narrow down the kinds of organizations or individuals that are best suited to your program.

The right connected stakeholders for your program should follow from your goal statement. For example, you may be interested in reducing food waste in an apartment complex, so you will want to learn about the residents who live there as well as its administrators or owners. Or, if cafeterias in schools are where you plan to tackle wasted food, you should learn more about how those are run, who runs them, and what kind of food waste they typically generate and why.

If the sector or group you are interested in is fairly small within your location, you can simply list out each. However, if that's not feasible due to sheer size, consider contacting a sample selection. You may also want to refer to existing studies or data about your target sector(s) or demographic group(s) that are published by universities or public agencies.

Once you define the general kind of participants who you want to take part in your program long-term, you should begin learning more about their needs and the challenges they face. This exploration should attempt to uncover unique motivations, such as any benefits they might gain by addressing food waste.



Pro tip: Get the most out of your stakeholder engagement.

Remember to include direct, even informal, interaction with stakeholders as part of your exploratory work. Not all research can be done from afar, after all. Doug McKenzie-Mohr's Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing, is an excellent resource for identifying the main barriers and benefits stakeholders face when it comes to achieving your programs goals.





What data to collect

At a minimum, try to determine the following data points through your research:

- **Number of possible participants** (e.g., “approximately 70 large businesses in the community producing food waste”)
- **General estimate of food waste generated** (e.g., “about 20-30 tons per week across all target businesses”)
- **Familiarity with food waste** (e.g., “About 10% have a donation program.”)
- **Most common challenges to method or behavior you are trying to address** (e.g., “Eighty percent say it’s too expensive.”)
- **Most common motivating factors for addressing food waste** (e.g., “climate change” or “ending hunger in local communities”)
- **Location and geographic reach of activities** (e.g., “Jane’s Food Hauling Service is based in Syracuse, but operates over a 90-square-mile area.”)

How to collect data

Below are some simple research methods you can use to gather data from your list or sample.

- **Phone-banking**
- **Online searching**
- **Direct connections through core stakeholders**
- **Chamber of commerce**
- **Visiting company websites** (e.g., mentions of food donation programs)
- **In-person visits**
- **Online surveys**
- **Workshops**

To start estimating food waste generation, use the following online resources:

- [Organic Resource Locator](#)
- [Food Waste Estimation Calculator](#)



Before moving on to the next section, make a list with the following items:

- ☐ Type(s) of food waste you will address
- ☐ 1-3 possible needs shared by potential stakeholders
- ☐ Target population of your program

Step 2:

Develop a pilot food waste program.

Now that you have solid foundational information, it's time to turn your attention to execution.

A key to designing and executing a successful long-term program is to first design and execute a pilot program. Have the list you created in the previous section at hand while going through this step.

What is a pilot program?

A **pilot program** is an experimental trial that can be used to test the feasibility of a proposed program.

Why run a pilot program?

A pilot program provides data and experience that can help a team understand how a full-scale version might work in practice. It's an opportunity to see what's effective and what detracts from success, but perhaps the best part of a pilot program is that it can save you from many headaches down the road. A full, municipality-wide food waste program is likely to call on multiple resources, especially in terms of funding and time. A pilot program is an excellent tactic for avoiding expensive mistakes, allowing you to correct course early on in your efforts. Another benefit of piloting is the opportunity to test and improve. The results of your pilot will give you real data (and experience) that will help to make your larger program more resilient.

Designing a pilot

A successful pilot is paramount to realizing an expanded program. When designing a pilot, turn to the foundational work you completed in Step 1 of this tool. Set parameters for what you hope to achieve using what you learned through your initial strength-and-weakness analysis, scoping, and data gathering. Focus on addressing specific barriers and challenges identified during your foundational research and data gathering. For example, if access to a compost bin is a barrier for residents to participate in backyard composting, your program may not be very successful unless you provide compost bins.

As you might expect, the scope of the pilot will be a much tighter, scaled-down version of the initial scoping you completed for your food waste program in **Tool 1**. Though smaller in scope, the pilot should still include most or all of the elements that the full-scale program plan requires. For most programs, you do not want to include things in your pilot that you are unable to include in a full-scale program.

Key components of a pilot plan:

A refined goal statement
Scope for the pilot
Measures of success
A pared-down timeline and budget
Pilot participants (core and connected stakeholders)
Outreach, communication, and training tactics
Required materials and equipment
Logistics and scheduling

Key Focus Areas

Stakeholder Collaboration

Many of these pilot components, such as the goal statement, will simply be a matter of adjusting the work you did in **Tool 1**, as well as incorporating results from Step 1 of this tool. Some of this work may be straightforward. The next section will focus on what tends to be the more difficult areas to define: stakeholder collaboration and success measurement.



Stakeholder Collaboration

Engaging stakeholders as pilot participants

Stakeholder collaboration will be an integral and ongoing part of your pilot and long-term program. A stakeholder partnership is mutually beneficial. A participant may gain new knowledge and skills for addressing food waste that will help them save money or pursue internal sustainability goals.

By the same token, you will learn new insights from stakeholders that you can use to adjust and improve your program. Ideally, pilot participants will become champions of the program and play an invaluable role in recruiting others to the initiative. The components of stakeholder collaboration that you'll cover in this tool center on qualifying candidates for the pilot and nurturing two-way communication with your stakeholders.

Understanding stakeholder types

The most common stakeholders in a food waste strategy include:

- **Businesses like restaurants, grocery stores, and cafés**
- **Municipal institutions like schools and hospitals**
- **Community organizations like nonprofits, churches, and neighborhood associations**

In **Tool 1**, you began stakeholder engagement by reaching out to **core stakeholders** and introducing your initial plans for addressing food waste. These stakeholders are decision-makers and community leaders whose buy-in you obtained, even informally, in support of your food waste initiative.

Now that you are close to developing your pilot plan, it's time to begin more actively engaging the **connected stakeholders**. You will have already engaged a number of them through your baselining work. This engagement will be more extensive and longer term.

Remember that this tier of stakeholders encompasses all the actors that will take part in the pilot. This group will depend on your specific plan, but may include any or all of the following: the haulers, the recyclers, the businesses, the residents, and many other organizations or individuals.

Not all connected stakeholders will be involved in your program to the same degree. Some may prefer to be **external stakeholders**, which means they share information or feedback that will be useful to the program even if they don't take on a definite role. While external stakeholders have an important role to play in a pilot, the first participants you invite should be willing to be active.

In all likelihood, you were motivated to launch a food waste program by an issue you care about. Perhaps it was climate change. However, it's important to remember that your stakeholders might have different motivations for taking part.

Try to learn what matters most to them and, if it differs from you, find ways that addressing wasted food relates to what they care about. For example, they may want to end hunger in their community. Ultimately, your stakeholders need to see a benefit to taking part in your program that relates directly to them. These benefits and other motivating factors should be identified in Step 1.

As you reach out to potential participants, you may encounter some skepticism or reluctance. These concerns might be relieved in advance using the proposal you developed for core stakeholders in **Tool 1**. Other concerns expressed to you may serve as valuable feedback that you can incorporate into the pilot design. Try to tease out the specific challenges that motivate the reluctance to determine if there are direct actions you can take to mitigate their concerns. For example, if donation liability is brought up, you should consider including liability protection education during the pilot roll-out.



Qualifying best candidates for a pilot

You may be eager to include as many stakeholders as possible to take on food waste in your community. However, the stakeholders who are best suited for your pilot will be those that are ready to participate, and prepared to support a successful initiative. Ideally, they should also represent the breadth of the population in your focus area. Take time to consider each candidate's suitability in light of the parameters of your initiative through surveys, interviews, or another assessment method. Sometimes willingness to participate will be the most important characteristic.

The subsequent questions are qualifying questions you can use to build a shortlist of stakeholders to invite to your pilot. Use what you discovered while setting your baseline in Step 1 as a starting point. Depending on your program, these stakeholders may be residents, businesses, or other groups.

- **Is the candidate both willing and able to manage any additional responsibilities and/or activities that may be required by your food waste program?** In the case of a business, consider this question both in terms of organizational buy-in among decision-makers and available resources.

- **Does the candidate have a basic understanding of or interest in food waste in the context of your program** (e.g., composting)?
- **Does the household or business already have a food waste advocate or champion to help motivate participation?**
- **Has the organization or person participated in or led similar initiatives in the past?**
- **Is your proposed plan suitable to how much food waste the candidate generates? Is the candidate able to meet any logistical requirements** (e.g., deliver food waste to a facility or prepare it to be collected on a regular basis)?
- **Does the candidate currently subscribe to or engage with the communication platforms you plan to use for outreach and education?**
- **Is the candidate willing to provide feedback about their experience throughout the pilot?**

Choosing the right number of stakeholders for a pilot

Since a pilot is above all else a learning exercise, only a limited number of stakeholders should be involved. The exact number will depend on a number of factors, including the following:

- **Regional scope**
- **Breadth of sector or service types addressed by your plan**
- **Depth of data needed from each stakeholder**
- **Variety or similarity of challenges between individual stakeholders**
- **Number of willing participants**
- **Associated cost per participant** (e.g., cost to purchase bins and signage or labor to collect and clean totes)
- **Capacity of participating collection service, donation facility, drop-off location, or recycling facility**

The number of stakeholders you include in your pilot should reflect the breadth and depth of your program's focus. Ensuring a diversity of participants will provide better insight into opportunities for successfully scaling up the program. If, for example, you are honing in on restaurants, you may want to deepen what you can learn about restaurants of different sizes and locales. In this scenario, you might aim to recruit restaurants that each represent one of the main types found in your community (e.g., a large chain restaurant, a small independent restaurant, or a takeout restaurant).

Be sure to balance the variety and number of participants carefully; the longer the list of participants and stakeholders, the more effort and resources are likely to be required to manage the pilot.



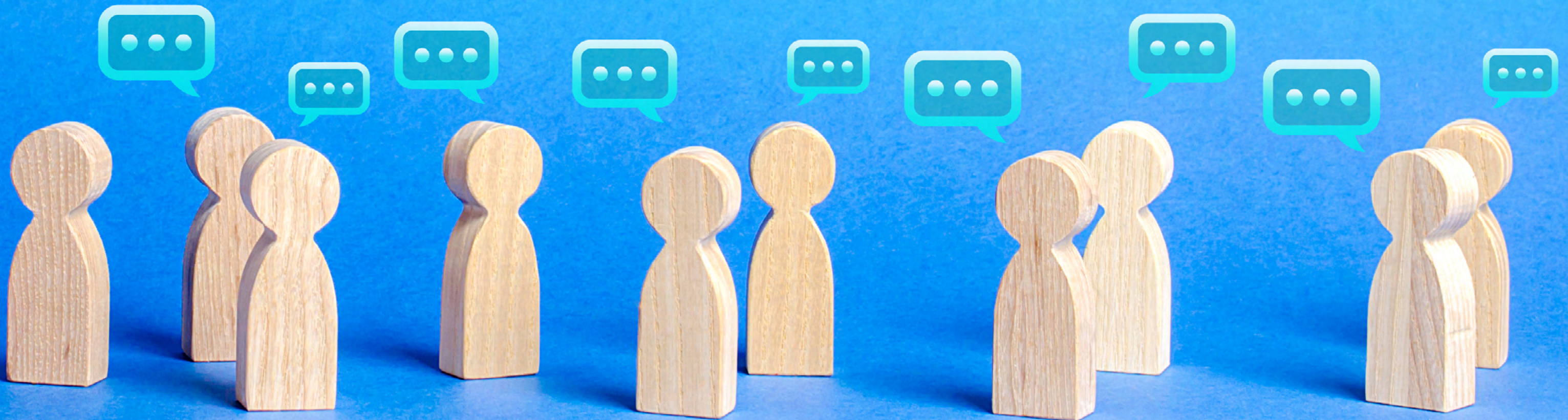
Nurturing two-way communication with pilot stakeholders

Ongoing communication between you and all of your stakeholders—whether they are actively participating to mitigate food waste on site (food retail businesses, for example) or providing ancillary support (a compost collection service or volunteers)—will go a long way in making your pilot as useful as possible. It will make it easy for you to share updates or other important details to project participants. The insights and experiences of your stakeholders will highlight what works well in your pilot and what needs improvement or a change in direction. They may also illuminate entirely new learnings or discoveries you missed in your preparatory work.

Accessible, practical **feedback mechanisms** are essential to supporting productive two-way communication, as well as for making any changes to the pilot in real time or identifying improvement opportunities upon scale up. These are channels through which stakeholders can share positive and negative comments, performance metrics, experience, or other information with you.

Below are some common methods for facilitating feedback:

- **A schedule of feedback sessions** (meetings)
- **A schedule of weigh-ins or other data captured from participants**
- **Participant journaling**
- **Focused workshops before and after the pilot**
- **Surveys before, during, and after the pilot**
- **Periodic phone calls or site visits with pilot participants**
- **Digital platforms that facilitate group discussion** (e.g., Slack®)



How will you track success?

One of the most important reasons for tracking the success of your pilot in clear, practical terms is to demonstrate the value of your program in order to win the support of core stakeholders, decision-makers, and potential funding sources when it comes time to expand it into a full-scale, ongoing program. The specific data you'll want to gather depends on how you will measure success. This is typically done through a set of indicators or performance measures that you build from baseline metrics that you gather before your pilot. You then use these to track your pilot's progress throughout and assess it once it's complete.

Some data commonly used for tracking success include the following:

- **Money saved by participants or the municipality**
- **Food waste prevented, diverted, or donated**
- **Participants' perceptions and understanding of food waste**

When choosing the data you want to collect, you should also make other considerations, like the following:

- **What information will most clearly show success?**
- **Is the data readily available?** (e.g., Will participants have to weigh their own waste? Or will food weight be automatically tracked through other means?)
- **What level of accuracy do you expect to achieve?** The more general your expectations for data are, the easier it may be to collect relevant information. Precise data is not always necessary and can be expensive to obtain. Typically, self-reported data is less reliable.

Learning about the businesses, nonprofits, households, or other organizations you want to work with will help you make smarter decisions when it comes to program design. However, even if collecting as much data as possible about every participant is ideal, it's not always practical.

If food waste generation is a key metric for you but collecting the data first-hand is not feasible, a next-best solution for obtaining info for your baseline

is to estimate food waste generation for each participant. And remember, you can always update your estimates if you learn more specific details about participants over the course of the pilot.

Regardless of the metrics you choose to track, be sure to collect "before and after" data points at a minimum. This will allow you to quantify your pilot's progress and benefit to your community, which could help when transitioning to a full-scale program.



Need help estimating food waste?

Use our "[Food Waste Estimator](#)." It's an easy-to-use tool for finding average levels of food waste in the U.S. for common sources, such as grocery stores, schools, or hospitals.



Pro tip: Create a control group.

If your pilot will be measuring the success of a behavior change, candidates for a control group should be identified. A control group participates in some elements of the pilot but not all, which allows you to evaluate the impact of certain actions or activities by comparing results with those of the pilot group.



Step 3:

Write a pilot program plan.

The final step of this tool is to bring everything you've done into a written plan that you can use to launch a pilot. A model is provided below that you can use as is or adjust as needed. Once your plan is complete and agreed upon by your team and decision-makers, you will be ready to launch your pilot.

Executive summary

Summarize your pilot at a high level by describing the challenges and opportunities surrounding food waste. Include in this section the overall objectives of your efforts (e.g., reduce hunger within community or save businesses costs) through the pilot and beyond.

Goal statement

Include a refined version of the goal statement you developed in Step 2 of **Tool 1**. This typically means narrowing the “tactics” and “desired outcomes” to reflect the scope of your pilot.

Scope

Describe, as specifically as possible, the project's proposed geographic reach, the number of participants it will involve, and the length of time it will take. Remember to keep scalability in mind. Don't purchase compost bins for all pilot participants if you don't intend to do so when you scale up to a full-scale program.

Measures of success

List here the metrics or other criteria that you will use to track the success of the pilot and how you will go about collecting the data and information. Consider including a control group as a part of your pilot if you are planning to measure a behavior change so that you can verify that improvement is the result of your outreach and education strategy and not a coincidence.

Timeline and budget

Use a timeline with calendar dates to convey the pilot as a full process, highlighting key milestones like launch date, stakeholder meetings, and reporting or assessment opportunities. A timeline could also help you select the best time of year to run your pilot. For example, if you are working with local schools, you can tie in launch with the beginning of the school year. Or a backyard composting initiative might be more successful if it begins in the spring, not the dead of winter.

Also provide an estimated budget and identify, when possible, available funding streams. This should follow from your work in Step 3 of **Tool 1**.

Participants

List here the stakeholders who you have engaged and who have agreed to take part in the pilot and their role in the pilot.

If you are unable to list specific candidates at this point, use this section simply to answer some basic scoping questions: How many will participate? What type(s)? Where will they be located? What common food waste challenges do they share?

Outreach, communication, and training

Consistent, informative communication to all of your stakeholders—both the participating

organizations and core decision-makers—is essential to a successful pilot. Use this section to outline a brief communications strategy: What communication channels will you use? How often will communications be sent out? How will your messaging speak to stakeholder challenges? How will it communicate the program's benefits to stakeholders?

The content of your communications can cover a broad range of purposes, and will depend wholly on the focus and challenges of your specific initiative. However, some common types of content may apply: project updates and news, surveys and feedback, or training materials.

Materials and equipment

Build a list of any assets you will need to effectively carry out the pilot. For example, if you are establishing residential drop-off points for food waste, you may need one or more vehicles, containers for residents to fill, and tools for measuring the amount of waste that is collected.

Logistics and scheduling

In addition to obtaining material resources, you will need to plan how they will be deployed. This depends a great deal on the particulars of your pilot. To continue the collection example above, this would involve detailing pick-up and drop-off locations and times, and assigning the stakeholders responsible for ensuring success.



Pro tip: Create a map.

Use an actual map of your municipality and other surrounding resources to mark and annotate the location of activities or assets that will be useful to your food waste efforts. This could include proximity of your site to large food waste producers, potential food donation drop spots, or even locations of equipment on site at your municipality. You could use a paper map or a digital mapping tool to do this. Either way, this will give you a visual layout that you can go back to for quick reference.



Ready for more?

Review the checklist items below to make sure you have completed everything you need to move onto **Tool 3** of this toolkit.

- ☐ You have a strong sense of the size and scope of your wider plan to address food waste.
- ☐ You now have strong ties with core decision-makers and connected stakeholders in your community who can help you expand and strengthen your efforts once your pilot is complete.
- ☐ You've designed and launched a pilot that will help you build a more permanent food waste strategy.

Download Tool 3: "Scaling up your pilot into a long-term program"