



**The Recycling  
Partnership**  
Solving for Circularity

Center for Sustainable Behavior & Impact

# Accelerating Behavior Change to Achieve a Circular Economy

2023 Knowledge Report



# Table of Contents

<b>How to Use This Knowledge Report</b> .....	5
For Brands .....	6
For Recycling Program Designers and Coordinators .....	6
For Policymakers .....	7
For Haulers and Material Recovery Facilities .....	7
<hr/>	
<b>Executive Summary</b> .....	8

<b>We Can't Fix Recycling Without Improving Recycling Behaviors</b> .....	11
---	----

---

<b>Key Themes for Accelerating Behavior Change</b> .....	16
Context & Learning Plan .....	16
Summary of Market & In-Home Research .....	17
Theme 1: The Need for Systematic Communications .....	19
Theme 2: Increasing Confidence in the Recycling System .....	24
Theme 3: Tailoring While Scaling — Support to Meet a Variety of Needs .....	27
Theme 4: Designing with Recycling Behaviors in Mind .....	31

---

<b>Where We Are Headed</b> .....	35
----------------------------------	----

---

<b>Additional Resources &amp; Acknowledgements</b> .....	37
--	----



## Committed to building a better recycling system since 2014.

The Recycling Partnership (The Partnership) has been committed to building a better recycling system since 2014. Some of our first programs focused on recycling access — expanding curbside collection and carts. Our data showed that if you had \$1 to invest in recycling, improving access was the place to spend it. And the good news is that over 3,400 community recycling programs and 135 million households have been supported by The Partnership’s work so far, which includes placing 1.4 million carts to improve residential access and capacity which has diverted an estimated 770 million incremental pounds of recyclables from landfills.



**Now is the time to accelerate our work, take the next step, and unlock the next big opportunity in our recycling system: recycling behavior change.**

Why? Because while being able to recycle is a critical first step, recycling happens when people have the knowledge, confidence, and desire to recycle. Unfortunately, many Americans are confused about what and how to recycle, and that lack of confidence in themselves, labels, or the ultimate impacts, has grown into a lack of confidence in the recycling system. In fact, even if every American had curbside recycling, we know that over half of all residential materials would still be lost to landfills and one of the main reasons for that is behavior — not access. And with

important legislative requirements coming from Extended Producer Responsibility (EPR) and content mandate laws on the horizon, we simply cannot achieve our target recycling rates without changing behavior.

This is why The Partnership launched The Center for Sustainable Behavior & Impact (The Center) in 2022 — to understand the barriers, prototype solutions, and deploy behavior change resources to recycling communities across the U.S. It is the next phase in our mission to optimize the U.S. recycling system and advance the circular economy.

This report summarizes all that we have learned in The Center's first year. We are moving fast to expand solutions and activate local recycling communities because we know there is no time to waste. And it is going to take all of us. If you are reading this, you have a critical role to play — whether it is implementing, advocating for, or funding this change. Get involved, and we can make it happen together. If this work is important to you, please also help us by sharing this report with your network in the recycling community.

Thank you,

Keefe Harrison  
CEO, The Recycling Partnership



**Improving  
Recycling  
Behaviors Will  
Take All of Us.**

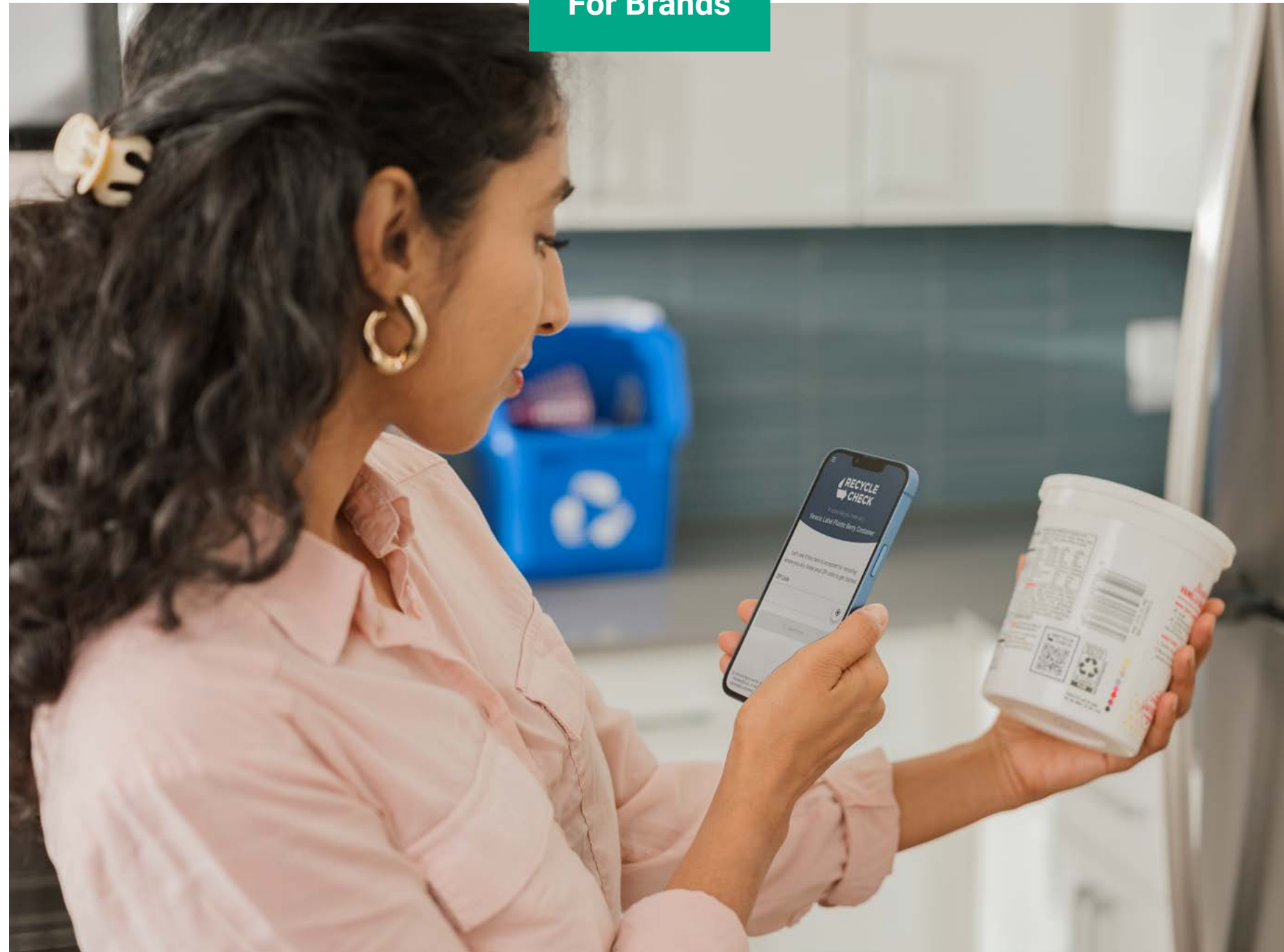


## How to Use this Knowledge Report

Thank you for reading our report and your interest in learning how to help the U.S. recycling system reach its fullest potential through behavior change. **Recycling is complex and highly interdependent, and as such, it takes a village to achieve measurable and continuous improvements.** That village is made up of all of you – the individuals, communities, companies, governments, and more who are working all along the recycling value chain. You each have an essential role to play in making recycling work better for everyone.

So, what if our village of changemakers had a shared understanding of the challenges, opportunities, and actions needed to influence and shift recycling behaviors for good? What if we could all collaborate from the same playbook? That is what we aim to provide with this 2023 Knowledge Report. It is a collection of research findings, yes, but more than that, it is a collection of the opportunities we must take to turn insights into action. Depending on which link you represent in the value chain, you may find various parts of this report relevant and valuable to your mission and everyday work.

## For Brands



- **Deepen your understanding of how people make recycling decisions**, to encourage actions that increase material capture through your messaging and other outreach tactics.
- **Reimagine product design and package labels** so that recycling is the obvious choice for your customers and a “next life” is guaranteed.
- **Find opportunities to partner with local recycling programs** to get them the tools and resources they need to change household behaviors.

## For Recycling Program Designers & Coordinators



- **Leverage the audience and behavior insights** gained from our quantitative and qualitative studies to help your program resources go further. The Partnership also offers free outreach and campaign resources you can customize to fit the needs of your community during implementation.
- **Demonstrate the value of organizing your community into groups** with similar needs and behaviors (what we call audience segmentation) to your organization so you can effectively address recycling barriers for different audiences – even with more limited resources – and avoid the communication pitfall of trying to tell everybody everything all at once.
- **Better understand the variety of dynamic factors influencing people’s recycling decisions**, both at the individual and household levels.
- **Find inspiration on how to design programs** that build confidence in recycling and help people recycle right.

## For Policymakers



- **Discover what is proven to be effective** in local recycling programs around the country.
- **Uncover ways to support the behavior change efforts** of organizations in your community. They need more resources to affect change, especially when it comes to building a communications infrastructure.
- **Learn why policy is an important piece of the behavior change puzzle** and why we cannot rely on education alone. This is especially true when bringing transparency and accountability to claims of product recycling.

## For Haulers and Material Recovery Facilities



- **Confirm the household behaviors contributing to contamination** and the areas where your organization can help influence behavior change.
- **Understand from your customers' perspectives** the types of services, tools, education, and reminders they need to be successful.
- **Discover the most effective ways to support the behavior change efforts** of the cities and counties you serve, knowing that what works for one community, or one segment of the community, may not work for all.



## Executive Summary

Recycling is often cited by Americans as the most common action taken to help the environment, and eight in 10 Americans report that recycling is worth the effort. And yet, we know that over half of household recyclables end up unnecessarily in the trash instead of the recycling bin. How do we close this intention-action gap? The answer is behavior change – something many in the industry have worked to solve for years. Though certainly a challenge, our work proves not only that behavior change is possible – it is happening. We have seen targeted engagement and behavior interventions cut contamination in half and increase materials collected by as much as one-third. Achieving these results requires a deep understanding of what drives behavior and then creating conditions that support the recycling behavior we want to see.

The Partnership and The Center are leading the way and have set the foundation necessary for the industry to yield a true, tangible, and valuable return on investment in behavior change. We have directly observed recycling behavior in 16 people's homes, conducted over 100 in-depth interviews, surveyed more than 10,000 people across the country, and conducted 7 community pilots to test new strategies. Through our multi-stakeholder, evidenced-based approach, we have demonstrated that the following four key themes must be true to make widespread behavior change possible.





#### Theme 1

## We have Systematic Communications

**Recycling rules change, and that is a good thing, but people do not expect change. With the pace of improvements in recycling and packaging design, we must build a ‘communications infrastructure’ that can help people embrace ongoing change and make learning easy and rewarding.**

Most Americans (75%) do not recall receiving communications of any kind from their local recycling program in the past year, but the minority of people who do remember receiving communications report higher satisfaction and stronger participation behaviors. To address this gap, we are building a communications framework to include data-backed touchpoints along the journey from point of purchase to point of disposal.



#### Theme 2

## People have Confidence In Recycling Outcomes

**Until now, we have been able to take Americans’ confidence in recycling for granted. However, recently, that confidence is in decline, and we know there is a significant correlation between confidence and positive recycling behaviors. It is now imperative that we provide Americans more transparency with support, reassurance, and guidance to restore their confidence and protect recycling participation.**

In 2022, only half of survey respondents believe the items they place in their recycling bins are made into new products. There is convincing evidence that lifting back the curtain on recycling to demonstrate how and why the system works through local storytelling, tours, customer feedback, and more could reverse this trend.



#### Theme 3

## Engagement and Outreach are Tailored to Different Audiences

**For a long time, communities have wanted to move beyond a “one-size-fits-all” approach. Coming out of our foundational research, The Center is equipped to build the tools for a modular approach that will achieve scaled behavior change.**

At the community level, our in-field pilots show that multi-layered interventions applied over time are likely needed to drive behavior change. The Center’s motivational segments, ethnography, and BIPOC-focused research provide a strategic roadmap forward. For instance, in one application of messaging designed using motivational segments, an empathetic message aimed at destigmatizing resident confusion increased route tonnage by 38%. This intervention yielded an added seven tons of recyclables per month per route.



#### Theme 4

## Recycling Systems are Designed with Behavior in Mind

**Inside their homes, recyclers have created “home-grown” systems and “rules of recyclability” to decide what gets to the curb. The Center is drawing on bright spots to design trends in successful recycling behavior. Together, we must bring new thinking and behavior-centered design to alleviate the hard work of household recycling.**

There is evidence that we have not yet offered residents the right set of in-home solutions. In 2022, only 61% said that they had everything they needed to do a good job recycling. Pilots testing the distribution of in-home bins had mixed results but showed significant potential to boost recycling participation. Yet we know many homes create their own recycling processes and much more can be done to meet people where they are and finetune their current practices.



**With evidence-backed solutions, behavior change does happen.**



Even in households with recycling access, only

**50%**

of available recyclable materials are captured.

## We Can't Fix Recycling Without Improving Recycling Behaviors

Recycling is a complex, reverse supply chain that begins in the household and its success depends on the small, everyday actions of hundreds of millions of people across the country. In American kitchens and bathrooms, individuals decide what will be recycled or trashed, how to prepare a product for recycling, and why it might be worth the extra effort to recycle. If there is confusion, lack of confidence, or other barriers and friction points households are less likely to recycle or to recycle all that they can.

Unfortunately, The Partnership's data shows that there is confusion and a growing lack of confidence. According to the 2022 Recycling Confidence Index, when shown a card with basic recycling information, 84% said it would give them more confidence in their recycling, but only one in four could remember receiving any information from their program and less than half the public (47%) said they believe their recyclables are always or usually made into new things. So, while setting up access to recycling is an important first step for improving the situation, recycling behavior change is a critical supplement to enable the ultimate act of recycling and ensure the success of expanded access. Even in households with recycling access today, only 50% of recyclable material gets recycled. Across the country, over half of residential recyclable materials lost to landfill is due to behavior gaps— amounting to 15 million tons of material each year. Beyond losing valuable material for future packaging, this loss also drives 63 million metric tons of carbon dioxide into our atmosphere and costs \$834 million in landfill expenses. We also are missing a potential 17,500 jobs that would be generated if this material were captured in the recycling system.



If we want to fix recycling, we need to deeply understand the barriers, motivators, and friction points and find new ways to change recycling behavior. And we need to do it now. In addition to the mounting economic and environmental costs, extended producer responsibility (EPR) legislation adds to our already urgent need to unlock behavior change. Manufacturers will soon be held responsible for reaching ambitious target recycling rates and incorporating post-consumer recycled content (PCR) into their packaging. To achieve this, we need proven best practices for driving increased participation in recycling that will lead to higher recycling rates and increased availability of recycled content.

## But what exactly is behavior change?

Behavior change is a critical step to increase recycling rates, but how exactly can we get people to act differently and change habits for good?

Education and communications are often part of the solution, but there is a significant base of research that shows awareness and education alone do not change behaviors.

Behavior change is a social science that dives deep into what makes an audience tick, uncovers where their friction points are, and provides (often simple) solutions that help people change.

# Examples of Successful Behavior Change in Other Industries

## Retirement Savings



At the end of the 20th century, individuals suddenly had greater responsibility for their own retirement income security due to the relatively low social security income replacement rate and a corporate shift from defined pension plans to defined contribution plans (e.g. 401 (k) plans).

A 2006 behavioral research study discovered that default options in 401 (k) plans had a significant impact on savings rates. Standard economic theory suggested that defaults should have little effect on retirement savings, and at the time most U.S. companies had a standard opt-in enrollment—meaning employees had to actively choose to participate in the 401 (k) plan. However, the study revealed that participation rates went up significantly when a plan switched from opt-in enrollment to opt-out enrollment (meaning an individual was automatically enrolled in the 401 (k) plan and had to actively choose not to participate). In one company, enrollment went up 35% in the first 3 months after the change and stayed 25 points higher after two years.

This important finding led to a widespread change in corporate America, and many companies switched to opt-in retirement savings plans—to the benefit of millions of Americans.

Source: [nber.org](https://www.nber.org)

## Preventative Medication



Tens of millions of Americans are prescribed medication for preventative reasons because we know that investing time and money in prevention pays off with better long-term health and lower costs in the future. Hypertension is generally an asymptomatic disease, and patients are given medication to reduce the risk of future problems, such as heart attacks and strokes. However, we also know that people tend to discount future probabilities— and so the extra effort of taking medication today might not seem worth preventing some distant and unknown future problem. For that reason, adherence rates for hypertension treatments are notoriously low. In other words, people often skip or stop taking their medications.

One tool has proven effective to change this behavior—a medical app that supplies prompts and reminders at the right time. A study showed that the medical app can increase medication adherence by 77%. This type of tool has proven more effective than traditional information campaigns about the importance of medication.

The potential positive impact on patient health and long-term medical costs is profound. Today, over 62% of patients now use a digital health platform to manage their health.

Source: [medisafe.com](https://www.medisafe.com)



# Our Programs Change Recycling Behavior

One successful example is The Partnership’s groundbreaking behavior program called “Feet on the Street,” focuses on improving recycling quality. Originally started eight years ago in Massachusetts, the program has since been researched, piloted, scaled, and granted funding in more than 70 communities nationwide. It gives people real-time, personalized feedback on the items they place in their recycling carts, so they know what is and is not accepted in their community. This program changed behavior — shifted what and how residents were recycling — by intercepting them at the right time with the right message. At the end of the pioneering Massachusetts project, the amount of plastic bag contamination dropped from 43% to 15%. The major metropolitan cities of Atlanta and Chicago all saw similar successes from the Feet on the Street program. For instance, the educational pilot in Atlanta led to a 27% increase in recyclable materials and a 57% decrease in contamination.

Behavior change is possible, and it is needed if we want to improve recycling rates across the U.S. However, it will take a focused, collaborative, and synchronized effort from stakeholders across the recycling value chain. For this reason, The Partnership launched The Center staffed by both recycling and behavior change experts and was developed with support from authorities and practitioners in the fields of environmental research, behavioral science, community recycling program management, and sustainability marketing to ensure that its research practices meet the highest scientific standards, while also still being accessible and actionable for local communities.

Much of The Center’s foundational research is complete, including a deep dive ethnography study, comprehensive surveys, and in-field pilots—and the learnings are summarized in this report. This year, The Center will be launching its Recycling Program Solutions Hub, an open-access, free digital tool to make data, best practices, and resources rapidly available and easily accessible to local and state recycling leaders, including our forthcoming Equitable Outreach Guide and Toolkit. The Center’s tools and resources will be simple to use, actionable, and customizable for different community needs. Over the next three years, The Center will continue to prototype solutions, refine learnings and tools, and activate best practices for improving recycling behaviors in communities across the U.S. to help increase recycling rates, reduce waste, and deliver more post-consumer recycling material.

The long-term vision is that all U.S. residents feel confident when they recycle – they know what to recycle and how to do it, and they know what will happen to the materials after they are collected. This confidence will significantly improve participation and residential recycling rates. And, we believe, support our mission to mobilize people, data, and solutions across the value chain to unlock the environmental and economic benefits of recycling and a circular economy.



**Taking it  
from research  
to results.**

# Key Themes for Accelerating Behavior Change

## Context & Learning Plan

The core question for The Center is “What does it take for people to recycle well every chance they get?” When we think about this question, we look at it through a lens of three stage gates that influence recycling behavior:



### Access

These are the conditions that shape people’s opportunity and ability to recycle. Do people have easy access to the service and the recycling containers they need to be successful?



### Knowledge

This is the specific information people need to decide what, when, and how to recycle. Is there guidance on what should and should not go in the bin, such as on-container signage, a mailed guide, or an online resource? How often are they receiving the information and the reminders? Are product and packaging labels helping or hurting?



### Engagement

This stage is more complex and abstract. It encompasses an individual’s values, beliefs, attitudes, and identity and the social dynamics and social norms at play within their household and community. At its most basic, it answers the question: once a person can recycle through access and information – will they and will they do it properly?



The Center’s work reaches across all three stage gates. We examine the impacts of upstream issues like packaging design as well as access and infrastructure challenges, but a significant amount of our focus is on the second and third stage gates: knowledge and engagement.

In our first year, the goal of our learning plan has been to better understand how knowledge gaps, perceptions of recycling, personal beliefs, demographics, and psychographics impact on-the-ground recycling behavior. Which barriers and motivators arise for different audiences? What common trends and patterns do we see across the recycling public? To do this, we have gone behind the scenes in 16 people’s homes, conducted over 100 interviews, surveyed more than 10,000 people across the country, and then tested engagement and intervention strategies through seven community pilots.

The Center will be taking our learnings to communities to start action and continuing to improve recycling through robust data and human-centered research with our aim to help reach waste reduction, material recovery, and diversion goals. We serve as an incubator developing behavioral interventions and innovations and rapidly prototyping solutions then testing them in real-world contexts to measure actual changes in generation, capture, contamination, and participation, and scaling these best practices to the wider industry.

*To learn more about the three stage gates, please refer to our [Start at the Cart](#) white paper.*



## Summary of Market & In-Home Research

To address the goals of our foundational research, The Center completed seven separate research projects made up of broad-reaching surveys, in-depth studies, and multiple community pilot projects.



Overall, The Center surveyed 10,000+ Americans and tested 23 intervention strategies in 52,00+ American Homes.

**Audience Segmentation Research** characterized several types of single-family curbside recyclers or “audience segments” by learning their specific barriers, motivators, and psychographics, such as self-perception, values, beliefs, and lifestyle. The study aims to inform strategic investments in communications and tools tailored to each segment and included a qualitative phase with 24 participants and a quantitative phase which surveyed a nationally representative sample of over 2,500 participants.

**Recycling Confidence Index Research** established a baseline measurement of confidence in recycling nationwide that will be tracked over time and explored a combination of practical, ‘nuts and bolts’ operational factors and perceptive, intrinsic values factors. This included a quantitative online survey completed by a nationally representative sample of over 3,100 participants and qualitative focus groups with 23 participants.

### **In-Home Insights to Accelerate Behavior Change – Ethnography Research Report**

used in-home observations and in-depth interviews to understand how household recycling systems work in the context of daily life, the values and beliefs that drive behavior, and how specific barriers get in the way of recycling right. Teams of ethnographers along with a staff member from The Center conducted home visits and interviews with 23 individuals within the cities of San Diego, California, and Columbus, Ohio to document household recycling behavior.

### **Consumer Insights on Packaging, Labels, and Claims for Recycling Research Report**

examined how people decide what to recycle, why confusion exists, and how product labels play a role. The effort began with a baseline survey completed by a nationally representative sample of more than 1,310 participants to test how people interpret real-world products and packaging labels. Subsequent phases with nationally representative samples of over 1,000 participants were then used to gather user experience input and test an on-product QR code to figure out if an item is recyclable.

### **Recycling Racial Equity, Diversity, and Inclusion Survey**

compiled a baseline understanding of recycling awareness, behavior, barriers, and motivators for adults who identify as Hispanic/Latinx, Black/African-American, Asian-American/Pacific Islander, or Native American. In the first phase, a professional moderator of color held in-depth interviews with nine participants and gathered input on advertisements included in a final comprehensive survey completed by 1,200 adults across the country.

**In-Field Pilots and Case Studies** to put our cumulative expertise, knowledge, and learning into practice by hitting the streets. In-field tests were conducted in eight communities across the country to test messages and intervention strategies, such as mailers, cart tags, in-home bins, and door-to-door canvassing, and track and evaluate their impact on overall recycling participation and/or capture.

**Equity Gap Analysis** incorporated key census data into The Partnership’s **National Recycling Database**, including race, ethnicity, average income, languages spoken, education level, and type of housing for all U.S. communities. By overlaying demographics within our robust programmatic data set of 9,000 communities, we were able to uncover persistent inequalities in the provision of recycling services. For example:

- Cities with majority Black populations are 50% more likely to not have a curbside recycling program than the country as a whole.
- BIPOC households are twice as likely to live in multifamily housing, which offers on-property recycling access at a rate 50% lower than single-family housing.
- Wealth disparities (in terms of lower median income and rates of home ownership) have a clear impact on recycling participation, with subscription programs skewing towards white, wealthy homeowners.

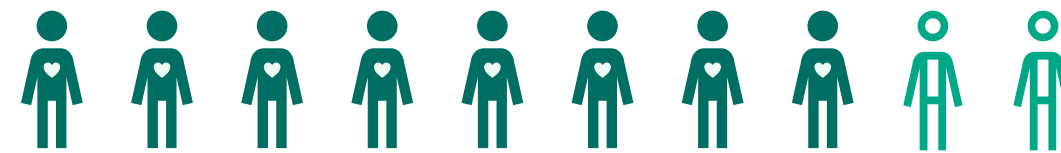
## Overcoming the Intention-Action Gap

### People Intend to Recycle. We Must Clear the Way for Them to Act.

Most people believe recycling has a positive impact, think it is important, say they are recycling most of the time, and feel guilty when they do not do it. Recycling is a strongly felt social good and this sentiment has come up repeatedly in research conducted by The Partnership and others in the industry.



This past year we uncovered more powerful evidence to support this claim:



8 out of 10 people living in the U.S. believe recycling has a positive impact and see it as a valuable public service.

1. The vast majority of people believe recycling makes a difference (77%), has a positive impact (77%), and is worth the effort (72%). This value is so deep-seated that more than half of people admitted they feel guilty when they do not recycle.

[Recycling Confidence Index Research Report](#)

2. Most people think that recycling is important and 88% say recycling is a responsibility for everyone and only works if we all take part.



[Audience Segmentation Research Report](#)

3. People value recycling as a public service (86%) and think it is a turnoff when someone is wasteful and does not recycle (62%). Half of the people have even pulled recyclables from the trash or stopped someone from throwing them in the garbage.

[Consumer Insights on Packaging, Labels, and Claims for Recycling Research Report](#)

This was also reflected in our community pilots. For example, most participants interviewed by canvassers ranked recycling as seven or higher in importance and reported they believe it makes a difference, is a positive social norm, and feel it is their personal responsibility.

[Hammonton, New Jersey Pilot Project](#)

**Yet, despite all this, we know approximately half of all recyclables in U.S. households do not make it into the right bin – amounting to 15 million tons of material each year lost due to behavior gaps.**

While people intend to recycle, their everyday recycling actions often do not reflect this. So why does this intention-action gap exist? And what can we do to solve it? Some of this is about confidence – both in people’s confidence in their ability to properly recycle and in the outcomes and impact of their recycling. Some of it is about barriers at the product, system, and household levels.

One thing is clear though. **We must protect positive perceptions of recycling because we know they correlate with many positive recycling behaviors.** Additionally, we have seen firsthand in our research how negative social media content and news coverage create confusion, skepticism, and mistrust in the minds of Americans. While we do not need to spend our limited resources convincing people that recycling is important, because they already believe this, we do need to show people how recycling works and give them the support they need to do it right.



## Theme 1 The Need for Systematic Communications

Recycling rules change, and that is a good thing! Change over time is necessary to adapt to shifts in market conditions, new recycling facility technology, and the terms of waste hauling contracts. However, people do not expect them to change and lack access to the information they need to recycle right in the current moment. Many people think they know how to recycle, but when tested they are often mistaken, confused, or using outdated information to make decisions. The pace of change in packaging design and recycling innovation is only expected to accelerate and we need a systematic ‘communications infrastructure’ on par with our collections infrastructure to fill the gap, help people embrace ongoing change, and make learning easy and rewarding.

In the absence of regular guidance, feedback on how people are doing, or a clear place to go for answers, people begin to create their systems and rules for recycling. Often these are based on misconceptions and blind spots that lead them to unknowingly make errors and mistakes. This helps explain why as much as 25% of recyclables collected are contaminated and cannot be recycled, according to the U.S. Environmental Protection Agency.



**75% cannot recall receiving a communication from their local program.**

## By the Numbers

**People Have Questions. We Must Provide Clear and Effective Answers.**



**People have important questions and are hungry for information, but do not know where to find answers. Our research helps identify several common areas of confusion that must be alleviated through better communications and improved packaging and product labels.**



**When tested with real-world packaging, 70% admitted being confused and many answered incorrectly.**

### Understanding Packaging and Labeling Cues

People rely heavily on product labels with most (78%) looking at them to know whether a product is recyclable and more than 80% trust that the recycling information on those labels is correct. When tested with real-world packaging 70% admitted being confused and many answered incorrectly.

[Consumer Insights on Packaging, Labels, and Claims for Recycling Research Report](#)

### Adhering to Local Accepted Materials Lists

There is significant uncertainty around specific materials. When asked if different items should go in the recycling bin, 46% of people said “yes” for Styrofoam and 31% for food waste, which does not belong in curbside recycling carts.

[Recycling Racial Equity, Diversity, and Inclusion Survey](#)

Similarly, door-to-door canvassers reported many residents were surprised they could not recycle plastic bags or bag their recyclables.

[Hammonton, New Jersey Pilot](#)

Nearly one-third (30%) of people admit to “wishcycling” (i.e., they say they recycle something they are unsure about in case there is a chance it might get recycled).

[Consumer Insights on Packaging, Labels, and Claims for Recycling Research Report](#)

### Preparing Materials for Recycling

About 30% or more of people are confused about how clean items need to be, how to recycle items that are made of multiple materials, and what happens to materials after they leave the home.

[Audience Segmentation Research](#)

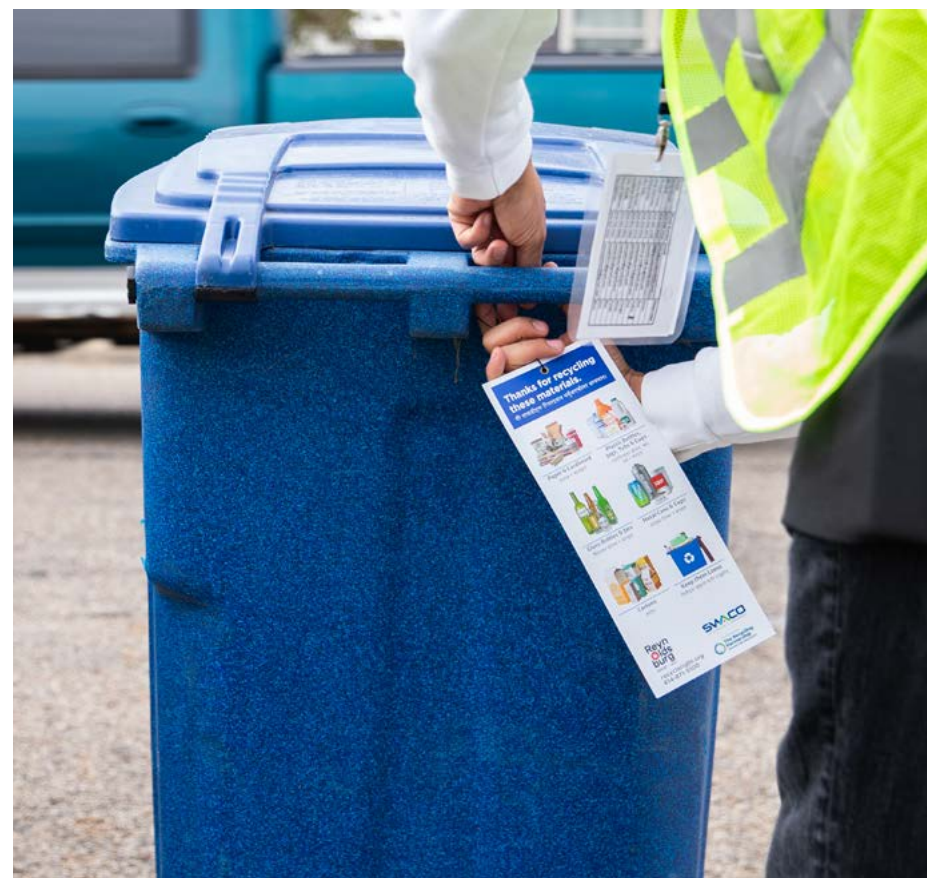
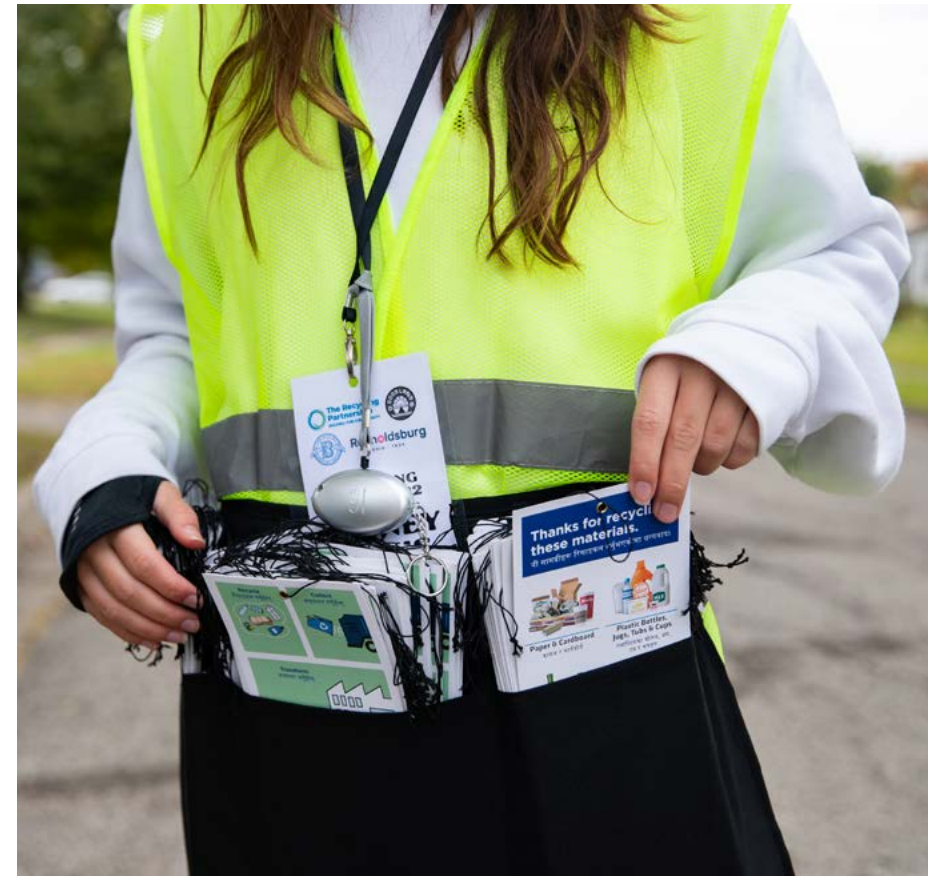
Nuances around commonly recyclable items, such as paper, pose special mental challenges. For example, 94% of homes take part in a recycling program, yet 42% of paper in homes is still found in the garbage. Resident engagement found that people are confused about staples, adhesives, glossy coatings, and cellophane windows on envelopes and worry they may contaminate a whole load if they make a mistake.

[Sarasota County, Florida Case Study](#)

### Staying Up to Date

Many people believe what can and cannot be recycled does not change and rely on what an item seems to be made of, memory, common sense, or outdated information. Likely a large part of the recycling public is part of a group called “Long-time Coasters” who rely on what they learned in childhood about recycling, which is often partial and inaccurate.

[In-Home Insights to Accelerate Behavior Change - Ethnography Research Report](#)



**Most Americans (75%) do not recall receiving communication of any kind from their local program within the past year. However, our Recycling Confidence Index Research showed these communications make a big difference for the minority of people who remember them, who are more likely to:**

- **Be satisfied** with their service
- **Recycle more at home** and see it as a priority in their daily life
- **Be confident** in their ability to recycle
- **Believe their recyclables are always or usually made into new things**
- **Feel informed** about what happens to their recyclables

Additionally, we know from our Feet on the Street anti-contamination program that when we give people feedback and require them to pay attention, they are then successful in learning and adopting new behaviors. **Cart tags have been an integral part of this anti-contamination program and have proven themselves as a promising channel for reaching people in many different applications.** For example, they are very effective in reducing contamination, driving high message recall (up to 65% in our **Reynoldsburg, Ohio pilot**), and in some cases have increased the amount of material recycled (such as in our Reynoldsburg, Ohio and our **Chicago, Illinois pilots** when they were combined with mailers).

However, a regular cadence of communications is key. One notification to residents with basic information is important, but unlikely to drive significant behavior change. While The Center’s in-field pilots showed that cart tags are a memorable and promising channel, we often saw that a single or even a handful of messages may show no measurable impact. As an example, our focused work in anti-contamination consistently shows that a minimum of four consecutive tags is needed to see an impact.

## ACTION

### Build a Communications System of Push and Pull Messaging

The fate of recyclable materials rests in the hands of a broad set of stakeholders who must all do something new and different to support a transition to a circular economy. Coordinated action is needed to bring an effective communication infrastructure to life. To set the stage, The Center is building a communications framework to include data-backed touchpoints along the recycling journey from point of purchase to point of disposal. We know knowledge and awareness alone are not enough to correct all recycling behavior, but without them, we cannot expect improvements in recycling.

Our [Paying it Forward Report](#) finds that once communities have access, annual investments of \$1.2B are needed for education and outreach to improve recycling behaviors. When we consider how much brands spend to get their products into people's homes, the investment to help get those same products properly recycled feels justified. Such a communications system of push and pull messaging will regularly inform people of changes and answer questions as they arise. It will empower people to take ownership of recyclables, properly dispose of them, and be flexible and expect adjustments as we move toward a more circular economy. The Center has built up a body of knowledge on behavior, sentiment, barriers, motivators, psychographics, and demographics to build a communications system that would:

---

**Provide frequent visuals of what can and cannot be recycled at home.** Ideally, these come in the form of physical mailers or on-container signage and focus on commonly known trouble spots like plastic bags and Styrofoam.

---

**Give different levels of information for different types of recyclers.** Those just getting started need to focus on the basics first, while more proficient, committed recyclers may want more specifics on how clean containers should be or where to go for “drop-off only” items.

---

**Activate positive feelings to increase enthusiasm for recycling.** Incentives and recognition all help reinforce good recycling behavior as a positive social norm and make learning rewarding. Recycling success stories that show how and why the system works builds trust that doing it right is worthwhile. Even something as simple as a bin decal reading “Headed off to a new life, not the landfill” provides encouragement and reassurance.

**Offer learning in the right contexts.** “Moments of change,” such as during a move or when shopping for the home, are times when people are more open and ready to learn. They provide an opportunity to frame proper recycling practices as part of continuous home organization and lifestyle improvement.

---

**Guide people on how to correctly interpret packaging and product labels.** Education on what labels really mean is necessary, but this work would also encompass policy to make labels less confusing, such as removing chasing arrows, and new solutions, such as QR codes on products with community-specific recycling information.

---

**Set people's expectations that recycling does change - both what is accepted and the services available - and frame change as positive.** Make recycling more convenient by periodically providing instructional signage, posters, mailers, and magnets to give ongoing, up-to-date information. Part of this effort is also helping people understand what happens once their recyclables leave the curb and that every small action matters.

Featured Solution

# Recycle Check

## Solving Consumer Confusion with Dynamic Local Information

**60% of consumers are confused about what and how to recycle.**

Too many household recyclables – from cereal boxes to yogurt tubs – end up in landfill. To help address this problem, policy at all levels of government are establishing more transparent packaging label and recyclability claims requirements, setting the stage for brands to play a critical role in the solution.

### What if there were an easy-to-use tool to help both brands and consumers?

Recycle Check is a new platform from The Partnership that offers an interactive package-specific solution providing localized recycling information to consumers across the U.S. With Recycle Check, consumers can scan a QR code or click a link to get real-time package-specific recycling information in seconds.

This tool simplifies the way product packages provide local recyclability information, utilizing The Partnership’s [National Recycling Database](#), a state-of-the-art resource that centralizes recycling information from more than 9,000 U.S. communities covering 97% of the U.S. population.

## How Recycle Check Works



### Apply

Brands apply for and purchase a customized QR code and link for their eligible package.



### Scan Item or Click Link

Recycle Check can be deployed as a customized on-pack QR code or website link for each package. Consumers scan the on pack QR code or click the link.



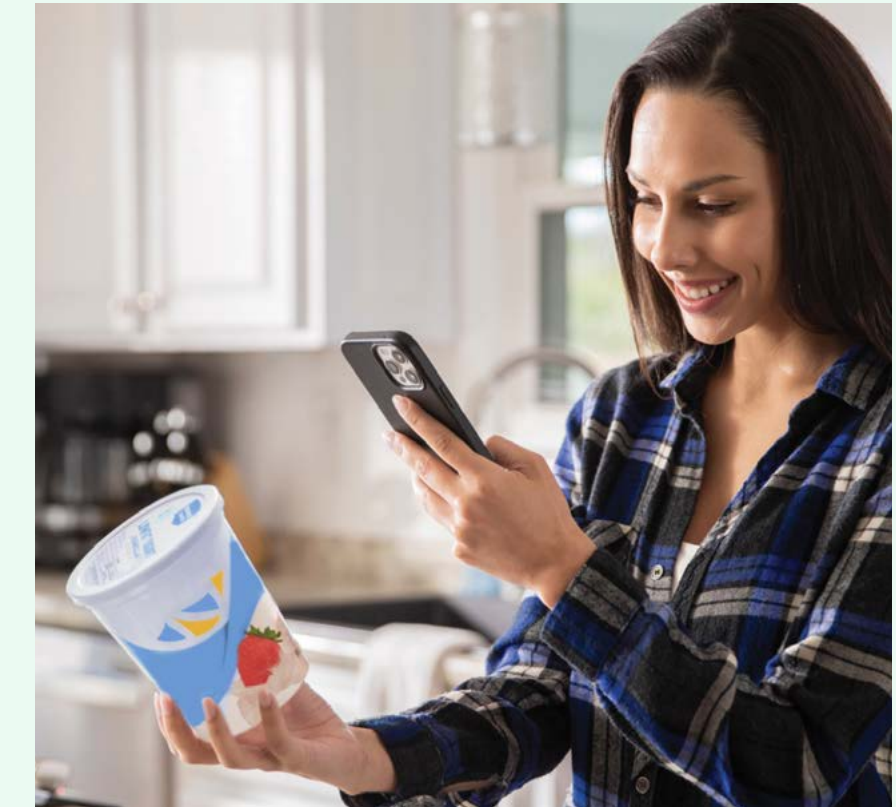
### Find Out if It is Accepted for Recycling Locally

This leads to the Recycle Check platform with a pre-filled package type.



### Recycle or Dispose of Item

Consumers enter their zip code or allow location permissions and receive a clear, yes-no answer about whether they can recycle the item – in seconds!



Learn more and sign up at [recyclingpartnership.org/recyclecheck](https://recyclingpartnership.org/recyclecheck).



## Theme 2

# Increasing Confidence in the Recycling System

---

**Until now, we have been able to take Americans' confidence in recycling for granted, but we now see it is in decline. People are exposed to misinformation and given an inaccurate picture of recycling more than they are hearing what they need to know to properly recycle and trust in the outcome and there is a significant correlation between confidence and positive recycling behavior. We must improve confidence in the system through targeted, tested, and motivational messaging that provides transparency on how the system works and reassures people that recycling is worth their effort.**

While many people feel recycling is their responsibility, there is low confidence that recycled materials are handled properly once they are collected and that they are eventually made into new products. When people see what appear to be widespread news stories or social media content about recyclables not getting recycled or saying that recycling causes more environmental harm than good, doubt and uncertainty start to creep in. They begin to wonder if it even matters whether they recycle at all or if recycling and learning how to do it better are just a waste of time.

In general, people feel blind to the process and outcomes and there is a big opportunity to improve trust by increasing transparency around what happens to recyclables once they leave the home. This lack of confidence also makes people doubt their ability to recycle properly. With recent pressures to reduce contamination in the wake of China's 2017 National Sword policy, the message people are hearing is "recycling is hard, you are probably doing it wrong, and your errors are causing whole truckloads of collected recyclables to be thrown out." They look around at what others are doing (or not doing) and are left to rely on the hope that recycling is working and worth the effort.



 **By the Numbers**

## People Are Losing Confidence. We Must Provide Honest Reassurance.



**A lack of confidence in the system dampens enthusiasm for recycling and creates doubt in people's ability to recycle.**

Across all curbside recyclers surveyed, people were hesitant to recycle if they perceive it to be difficult, if they lack confidence about what to do, or if they are unsure if recycling is worth it. Even the most committed recyclers worry recycling is falling short with 44% admitting they are unsure if their recycling is actually recycled and not going to trash, and 35% wondering if their program is handling recycling properly.

[Audience Segmentation Research Report](#)

Very few people – just 17% – feel well informed about what happens to their recycling, and less than half (47%) believe their recyclables are made into new things. The rest believe that happens only sometimes, rarely, never, or they are not sure. Additionally, one in five people believe their recycling is often just dumped in the trash.

[Recycling Confidence Index](#)

Even active recyclers expressed uncertainty and skepticism through comments like this one: “It makes me wonder...you watch the documentaries and Vice investigations and stuff. You're like, is the recycling even getting recycled?”

[In-Home Insights to Accelerate Behavior Change - Ethnography Research Report](#)

If people found out items put in their recycling bin were not being made into new things, 24% said they would recycle less. That number was even higher (32%) among less-committed recyclers who rated their confidence in their own knowledge of recycling as low.

[Consumer Insights on Packaging, Labels, and Claims for Recycling Research Report](#)

Concerns about recycling perfectly are holding back the capture of recyclable material. Even dedicated recyclers express concerns about the lack of transparency and worry about recycling incorrectly since it may potentially cause an entire load of materials to be thrown away due to minor contaminants like a soiled piece of paper.

[Sarasota County, Florida Case Study](#)

Overall, two out of three people say they want to receive more information about recycling with specifics, including why it matters and how to do it better.

[Recycling Racial Equity, Diversity, and Inclusion Survey](#)

Even the most committed recyclers have concerns about recycling and what they are seeing and not seeing to indicate the success of recycling. And 34% are frustrated that others in their community do not recycle, while 10% say they would be judged if they did recycle.

[Audience Segmentation Research Report](#)

**ACTION**

## Increase Recycling Confidence and Foster Positive Recycling Behaviors

The good news is we have strong evidence that increased confidence in system outcomes improves the perception of recycling and correlates with positive recycling behaviors. This came through in our [Recycling Confidence Index Research](#) as well as several of our community pilots. For example, in the [Hammonton, New Jersey pilot](#), households who ranked the importance of recycling higher (7-10) contributed to more than 80% of instances where recycling carts were set out at the curb. Households in [Elgin, Illinois, and Baldwin Park, California](#) who received in-home bins and a mailer often reported positive sentiments about recycling, including that it helps the environment and that their city was doing enough to support it.

We see several opportunities to increase recycling confidence and foster positive recycling behaviors.



**Proactively share recycling success stories with the public to counteract the flow of recycling myths and misinformation and show how and why the system works.** This helps make the abstract and aspirational aspects of recycling feel real and believable. At the local level, programs can conduct facility tours or share communications displaying what happens to materials collected in their community. Downstream, manufacturers can label and feature products as “made with recycled content” to help people understand how their recyclables live a second life.

**Develop and test motivational messaging to build and reinforce positive sentiments about recycling.** Since motivations may vary across demographics and among different cultural communities, testing is essential. However, our research consistently showed that what motivates most people to recycle is reducing waste, protecting the planet, and preserving resources and the environment for future generations. Across all the BIPOC (Black, Indigenous, and People of Color) audiences we surveyed, advertising messages that resonated most focused on warnings about the future, especially where children were featured prominently. However, whenever showing visuals of people, it is essential they reflect the audience you intend to reach.

**Help people overcome barriers by providing support and delivering feedback on how they are doing individually and collectively.** Increase the ease and convenience of recycling by ensuring people have adequate containers both inside and outside of the home, providing frequent collection service, delivering instructional materials, and sharing regular, ongoing information about what can and cannot be recycled. Consider developing recognition or incentive programs or conducting cart tagging initiatives to highlight regular errors or reassure people they are doing things right.



For more on how cart tags were part of a motivational campaign, see the [Reynoldsburg, OH Pilot Project Report](#).



### Theme 3

## Tailoring While Scaling – Support to Meet a Variety of Needs

---

There is a lot of individuality and variability in recycling behavior and because human behavior is nuanced, recycling messaging and tools need to be nuanced as well. For a long time, communities have wanted to evolve beyond the “one-size-fits-all” approach. Coming out of our foundational research, The Center is equipped to build custom tools that can scale rapidly in a more modular approach to effectively change behaviors.

At the community level, it is unlikely that there is a single messaging strategy or intervention that on its own will measurably change behavior or have the same effect across all households. The high-level behavior patterns and trends that appeared from our [\*\*Audience Segmentation Research\*\*](#) and [\*\*In-Home Insights to Accelerate Behavior Change - Ethnography Research\*\*](#) begin to provide a roadmap to customize solutions to different types of recyclers.

 **By the Numbers**

**People Have Diverse Needs. We Must Offer Tailored Supports.**



Our research and insights show us that we need to us meet people where they are, celebrate and reinforce what is working well, and introduce ways to improve upon what they are doing now.

When we segmented active curbside recyclers, five distinct groups appeared, each with different behaviors, beliefs, barriers, and motivations. Each warrants different solutions, encouragement, and reassurance in the areas of recycling where they lack confidence. These ranged from “Eco Activators” and “Committed Followers,” who had fewer barriers and needed more ‘301-level’ recycling support, to “Discouraged Self-Doubters,” “Detached Abiders,” and the “Conflicted and Overwhelmed,” all of which had more barriers, lower confidence, and needed clarity on the basics and why recycling is important.

[Audience Segmentation Research Report](#)

**49% Dedicated**



**51% Frustrated, Confused, Less Dedicated**





The wide variability we found in our research studies also came through in our in-field community pilots with different messages and interventions having different impacts on different households. Below are three motivational messages, which were used in our [Reynoldsburg, Ohio](#), and [Chicago, Illinois](#) pilots.

**Motivational messages tested included:**

**Top Left: Empathetic**

Showing empathy for recycling confusion



**Middle Left: Emotional**

Reminding people to think about the future of their waste.

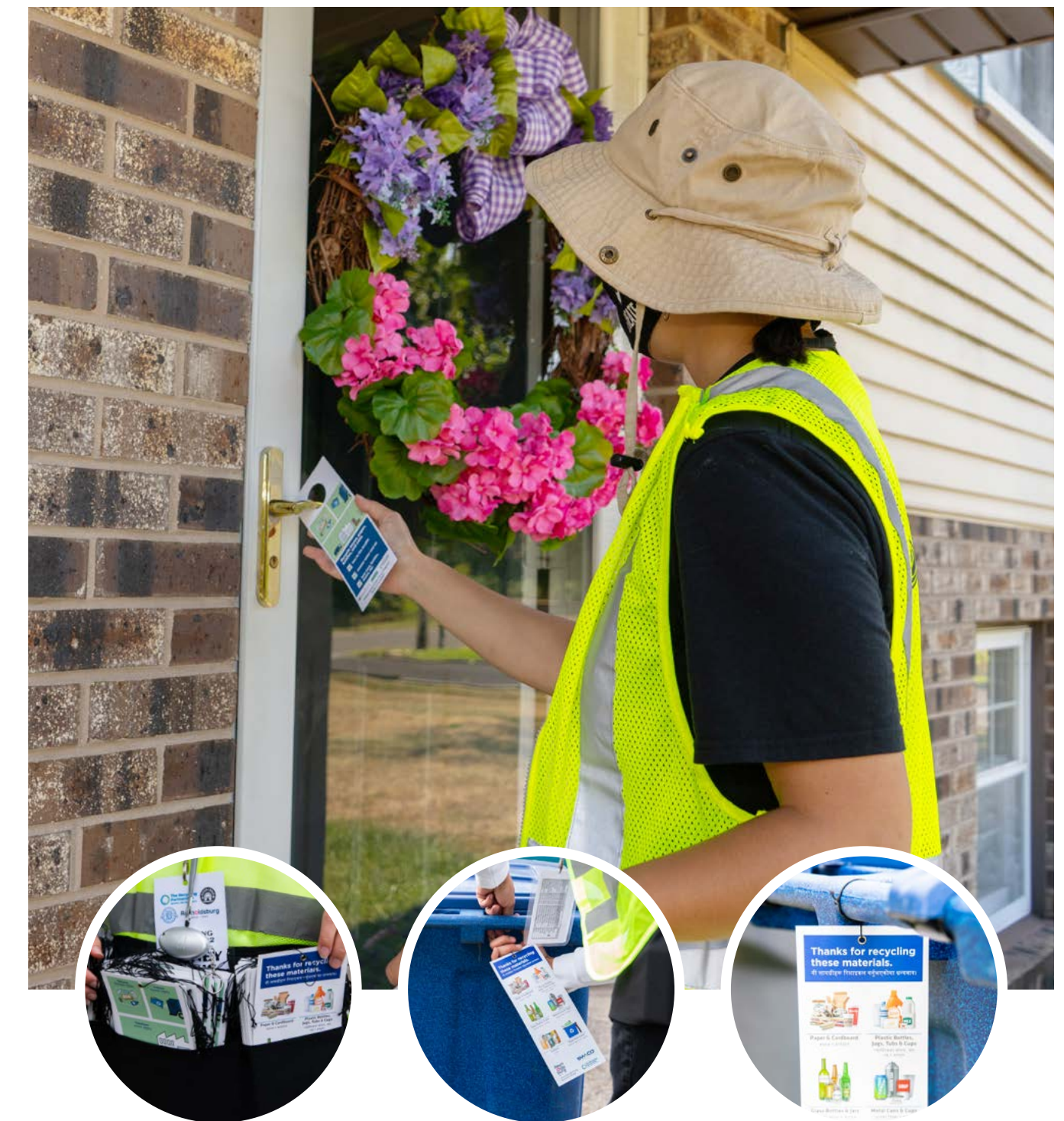
**Bottom Left: Logical**

Showing recycled materials being made into new things.



In Reynoldsburg (a suburb of Columbus), two of the three motivational messages (Empathetic and Emotional) contributed to an increase in average recycling tons. **In the routes that received a series of cart tags with the Empathetic message destigmatizing confusion, there was a statistically significant 38% increase in average recycling route tonnage after the interventions, relative to the control. This increase resulted in an average increase of seven added tons of recycling per month per route.** On one route in the Emotional message group, there was a statically significant increase of 38% in average recycling tons in the phase after the interventions, relative to the control. In Chicago, the Empathetic and Emotional messages drove statistically significant increases in how much material was recycled by the groups who received them either as a mailer or cart tag, or both.

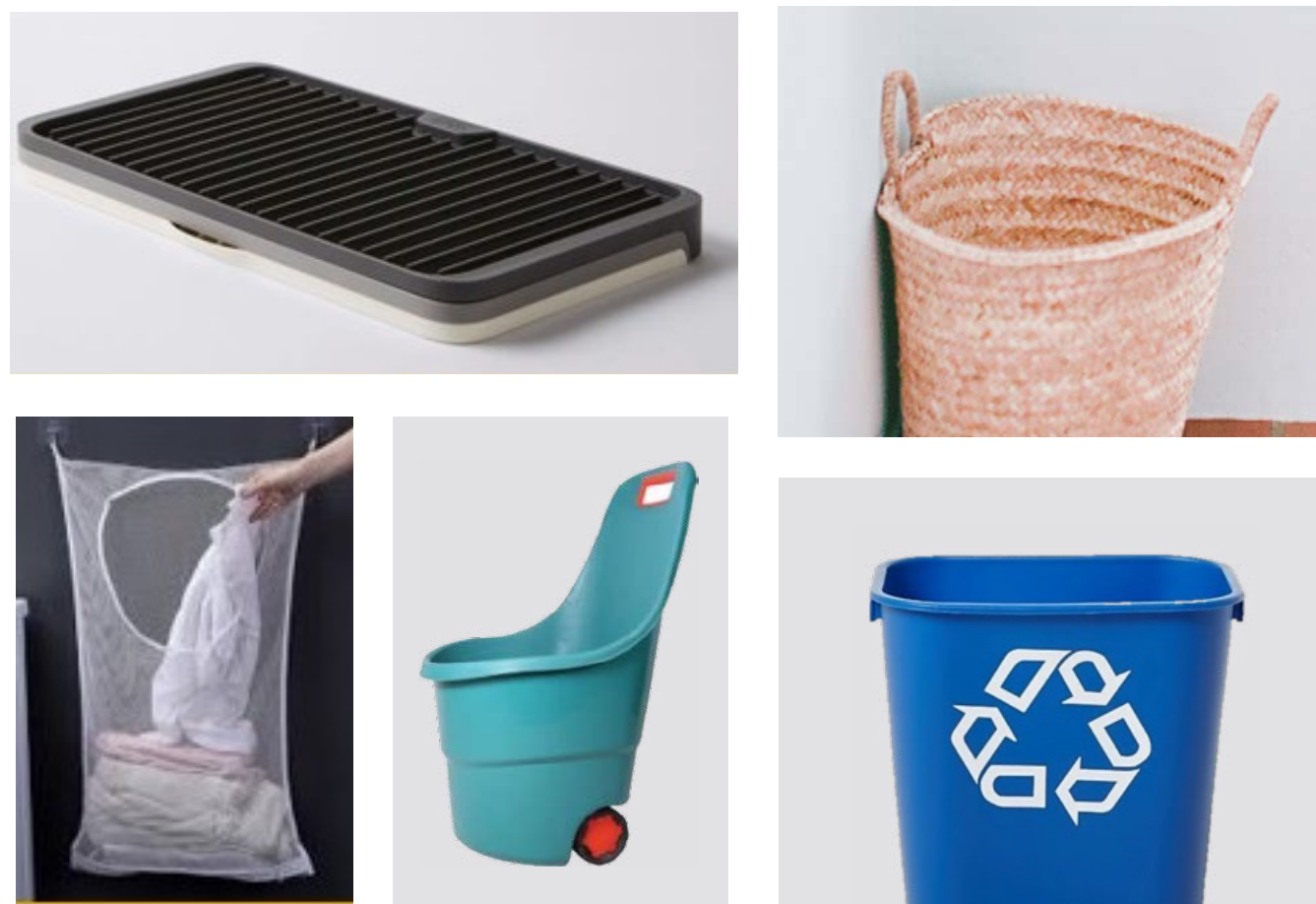
We also have evidence that tailored and repeated messaging effectively drives behavior change. This has been true in our anti-contamination studies. Additionally, in [Sarasota County, Florida](#), where we conducted a case study, the recycling program tailored campaign messaging for their community to better resonate and be memorable and thus experiences higher recycling participation and capture than the national average.



**ACTION**

## Customize Support in Scalable Ways

Our research and in-field community pilots point to the following strategies for customizing support in a scalable way to effectively change behaviors:



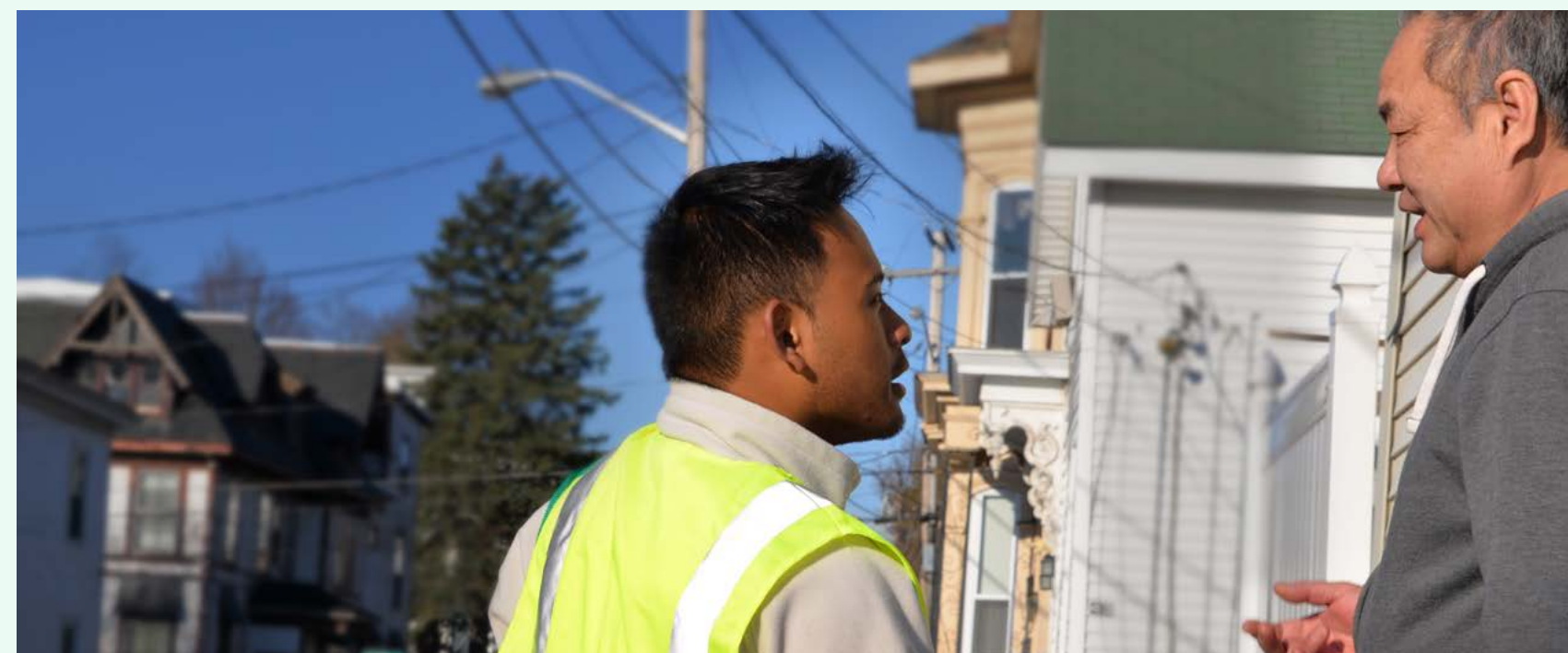
Starter examples of containers for increasing flow within the home.

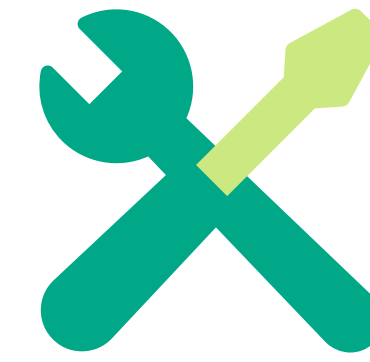
### Celebrate and support the different home-grown recycling systems.

Instead of providing just the standard blue recycling bin, local programs can promote tools or create toolkits tailored to each of the four identified recycling systems that will better integrate with a home's current flow and aesthetics.

**Tailor support by recycler audience segment or personality type.** Create a range of resources and messaging that will resonate with the different recyclers in your community to give them the support they need and help them feel seen and heard. For example, use a friendly challenge to spark the “Long-time Coasters” competitive side in a way that inspires a growth mindset around learning new recycling practices or create teaching tools to support those leading “Partner Learners” at home. Similarly, “Eco Activators” and “Committed Followers” empowered with the right tools can act as recycling ambassadors in their households or community. Meanwhile, solutions that simply show how to recycle and demonstrate its benefits will better support “Discouraged Self-Doubters,” “Detached Abiders,” and the “Conflicted and Overwhelmed.”

**Develop campaigns with layered interventions and repeated messaging to drive measurable results.** By layering interventions, we mean using multiple tactics at the same time or over time. This helps account for different segments of your community, which may respond better to different styles of messaging and different types of tools. The goal is to meet people where they are on the spectrum of recycling everything they can and in the right way. Repeating messaging across a range of channels, such as your website, social media, mailer, cart tags, etc., also helps drive higher recall and this sustained investment has shown success in higher performing programs, such as [Sarasota County](#), and in places like Seattle, Portland, and San Francisco where recycling has been in place for a long time.





#### Theme 4

## Designing with Recycling Behaviors in Mind

As we have now seen, inside the home, people are creating their own “home-grown” systems and “rules of recyclability” to help decide what gets to the curb. The Center is drawing on bright spots in the research to help the industry innovate and design trends in successful recycling behavior.

These “home-grown” indoor recycling systems that do not necessarily mirror their trash system. These systems revolve around people’s unique recycling routines, including where they typically gather recyclables and how they configure bins. People are open to adjustments but are often attached to the existing system they have created to fit their lifestyle.

[In-Home Insights to Accelerate Behavior Change - Ethnography Research Report](#)

Together, we must bring new thinking and behavior-centered design to alleviate the hard work of household recycling. This is key because while the success of recycling depends on everyday decisions made in homes across the country, it starts with the choices manufacturers, retailers, and local municipalities make when designing products, packaging, and recycling programs.



Collecting



Putting on Shoes



Going Downstairs



The Walk



Accessing Containers

## By the Numbers

### People Are Left to Create Solutions on Their Own. We Must Offer the Right In-Home Tools.

Our research shows significant evidence that we have not yet offered residents the right set of in-home solutions, and where we are seeing impact, we need to amplify dissemination of tools.

How well recyclables “flow” from inside the home to the outside collection container can affect whether items are recycled properly – both in terms of capture and quality. When flow is disrupted, for example by full recycling containers or “log jams” created by large items like cardboard boxes, recyclables can end up in the trash can.

[In-Home Insights to Accelerate Behavior Change – Ethnography Research Report](#)

Across all curbside recyclers surveyed, common barriers that stop people from recycling include:

- Every day, functional elements such as container capacity, a lack of in-home bins or storage space, and infrequent or complicated collection schedules. We know at least one in five people face some sort of capacity challenges.
- Confusion or frustration about the recycling system itself. People see that others are not recycling or are not doing it right or they do not feel they receive enough support from their city or town’s local program.

[Audience Segmentation Research Report](#)

Providing residents with in-home recycling bins or guidance on setting up a home recycling system may help residents overcome barriers to improve recycling behavior and both call for further study. While our Ethnography research showed that the two-bin system can be limiting and does not work well for every household, the results of our in-field pilots showed some evidence, while mixed, that in-home bins can drive measurable changes in behavior.

After receiving in-home bins and mailer messaging, we saw increases in the amount of paper and cardboard recycled in both **Elgin, Illinois and Baldwin Park, California** (with 4.6% and 9.4% respectively), though these increases were not statistically significant. In our **Cincinnati, Ohio pilot**, one in five homes requested in-home bins after receiving a mailer offering one for free. Of the group who received in-home bins, there was a statistically significant 33% increase in people setting out their recycling carts for collection compared with only 7% for the control group. Additionally, amongst people who both received an in-home bin and were not previously recycling before receiving one, we saw an increase of 26% in recycling ‘set outs’ (compared with 11% for the control group). This is particularly impressive since it requires a very significant behavior change to move from being a non-recycler to setting out recycling. Moreover, focus groups conducted with residents after the intervention revealed that all focus group participants who received an in-home bin were still using it over a year later. These findings show that providing in-home bins could be an effective strategy for boosting participation.





**ACTION**

## Keep It Simple

As we have discussed, people experience lots of points of friction in the recycling process and confusion that creates starts and stops in their decision-making. The Center seeks to be a hub of innovation, taking an evidenced and entrepreneurial approach, and convening stakeholders to prototype groundbreaking solutions that can help make proper recycling second nature. These may range from physical objects in the home to help sort material to digital ‘smart’ tools, but our foundational research points to several key strategies.



### Forming new recycling “rules of thumb” through easy-to-remember, easy-to-reference information.

Decision-making models, or mental shortcuts, can help people quickly make recycling decisions in the context of daily life where there is limited time and information. These kinds of tools make the act of recycling simpler and more efficient.



**Developing upstream solutions to design for recyclability.** This includes clear, consistent, and accurate on-pack instructions and labeling and education about how to find and interpret them. This will require manufacturer buy-in, but also new policies and laws.

**Introducing strategies that help households improve flow.** This could include increasing collection frequency to reduce overflowing bins and log jams, helping define spaces for recyclables within the home to improve organization, and offering up ways to increase efficiency by reducing the time, obstacles, repetitive motions, or walking involved in recycling.

**Finding solutions to help people reduce the physically hard work of recycling.** For example, storing and breaking down large cardboard boxes can be a big burden for recycling. Solutions to reduce log jams and overflowing bins could include cart compactors, better box designs and storage solutions, or drop-off locations for boxes where people who are moving or storing things can also go to pick up the boxes they need.

### Starter Ideas: Solutions to Reduce Log Jams and Overflowing Bins



#### Collapsed Box “Side Car”

A trash or recycling bin with a slot on the side or back for holding flattened boxes before they go to the cart. The side car keeps them from piling up in entry ways and garages.



#### “Rip Cord” Box

A box with a zipper to quickly collapse and flatten the box. No utility knife needed. Boxes cause build-up that can disrupt flow. Breakdown and disposing experience is elevated, like out-of-box experience.

#### [Recycle Strip](#)



**Together,  
Let's Support  
People**



## Where We Are Headed

Let us quickly sum up what we know today. A communications infrastructure is just as critical as collection and processing infrastructure, but currently, it is sorely underfunded. People are confused about how to recycle and confidence in recycling is waning. Meanwhile, the recycling system continues to evolve. New technology is allowing us to recycle more material than we ever have before. However, if everyday people do not have the support and information they need, they lose confidence and lack trust, and behaviors do not change.

Recycling is a loosely connected, but highly dependent system and its ultimate success comes down to behavior change. Together, stakeholders across the value chain must take action to make the conditions necessary for behavior change true.

**And The Partnership and The Center are taking the lead.**

Through our work this past year we have made tremendous progress in identifying specific barriers and piloting unique solutions. In the Spring of 2023, the Recycling Program Solutions Hub, a free digital

tool that gives local and state recycling leaders access to actionable data, training, and resources they can apply in their communities was launched. This will include our forthcoming Equitable Outreach Guide and Toolkit with best practices for multicultural, equitable, and inclusive recycling outreach. We will also be evolving our Audience Segmentation, Ethnography, and Recycling Confidence Index research by analyzing the existing data for added findings that we can put into action and pilot. Additionally, we are taking our key learnings and best practices to states like California where access to recycling is high, but recycling rates still are low (just 42%), which means behavior change will be the critical factor in closing the gap to meet aggressive EPR targets.

Behavior change is certainly a challenge, and our work is far from finished, but together, through access, knowledge, and engagement innovations we know we can overcome the intention-action gap and give people the support they need to help recycling succeed.

Featured Solution

# Recycling Program Solutions Hub

## Connecting Programs, Materials, People, and Success

The Recycling Program Solutions Hub is an open-access, free tool for recycling program leaders to access, track & verify critical recycling program data. Centered around connectivity and actionable suggestions; community leaders have a first-hand opportunity to co-create a stronger system.

- Interactive U.S. recycling map, allowing users to drill into state or community-level views, compare their program with similar communities.
- Library of resources and access to program improvement strategies through a built-in learning management system.
- Accurate program data points community program staff to curated lessons, best practices, and peer connections.
- Staying involved keeps users supported and updated on new opportunities and changes in the system.



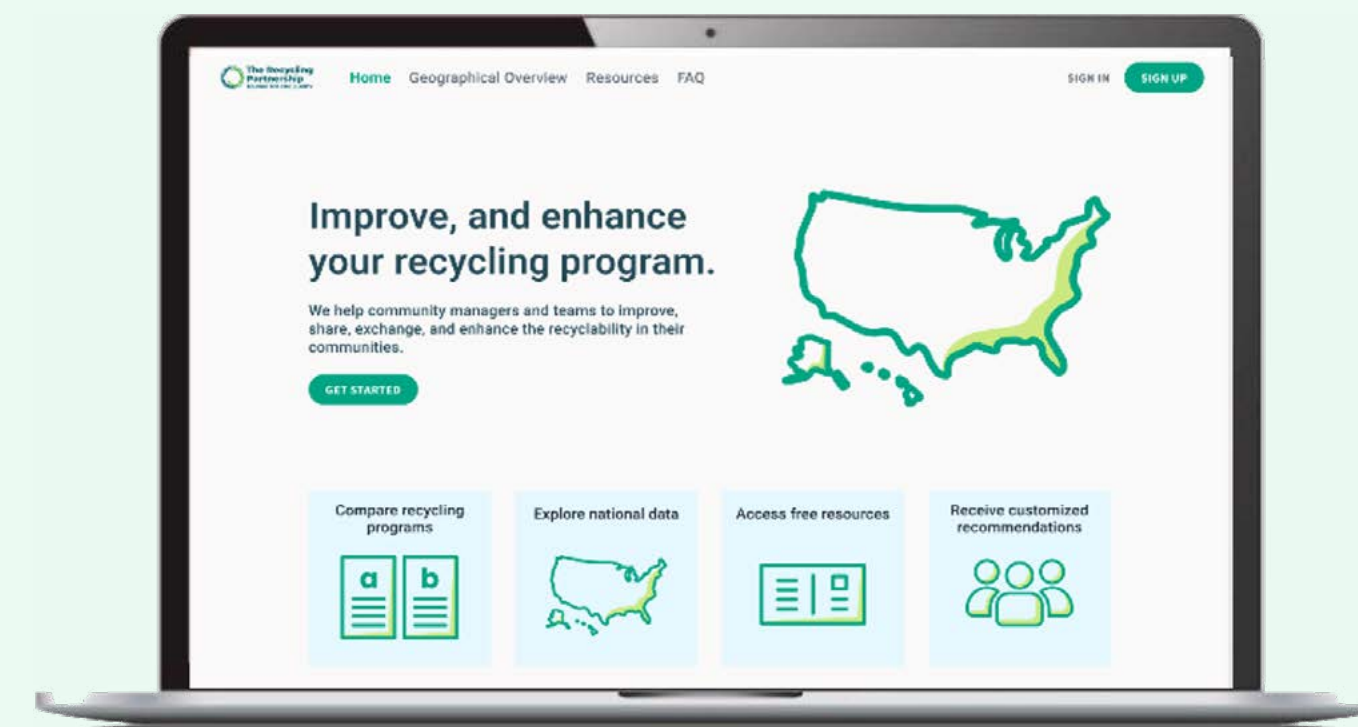
Local Recycling Program Dashboard with Customized Recommendations



Data-driven Localized Recycling Information on Packaging



Data-driven Actions to Optimize Access, Measurement, Engagement



Local recycling program managers scan here to become an early adopter of this tool.



# Additional Resources & Acknowledgements

## Additional Resources & Research Reports

For more information about The Recycling Partnership's people-focused research and the insights described in this report, please click on the following links.

- ◆ [2022 Foundational Audience Segmentation Research](#)
- ◆ [2022 Recycling Confidence Index](#)
- ◆ [In-Home Insights to Accelerate Behavior Change, Ethnographic Research](#)
- ◆ [Consumer Insights on Packaging, Labels, and Claims for Recycling](#)
- ◆ [2021 Recycling Racial Equity, Diversity, and Inclusion Survey](#)
- ◆ [Pilot Projects + Case Study](#)
  - ◆ [Pilot: Baldwin Park, California + Elgin, Illinois](#)
  - ◆ [Pilot: Chicago, Illinois](#)
  - ◆ [Pilot: Collier County, Florida](#) (Single-Family and Multifamily)
  - ◆ [Case Study: Sarasota County, Florida](#)
  - ◆ [Pilot: Cincinnati, Ohio](#)
  - ◆ [Pilot: Reynoldsburg, Ohio](#)
  - ◆ [Pilot: Hammonton, New Jersey](#)

## Knowledge Report Leads & Principal Investigators

### Elizabeth Schussler

Senior Director of Social Change, Behavior, and Impact

### Louise Bruce

Managing Director of The Center for Sustainable Behavior & Impact

### Michelle Metzler

Director of Community Programs

## 2021-2022 Research Initiative

### Principal Investigators

#### Alita Kane

Community Program Manager

#### Asami Tanimoto

Senior Business Systems and Program Analytics Manager

#### Jessica Levine

Diversity and Inclusion Manager

#### Sarah Dearman

Chief Innovation Officer

## Pilot Project Partners

City of Chicago, Illinois

Atlantic County Utility Authority, New Jersey

Town of Hammonton, New Jersey

Sarasota County, Florida

City of Reynoldsburg, Ohio

Solid Waste Authority of Central Ohio

City of Elgin, Illinois

City of Baldwin Park, California

Collier County, Florida

City of Cincinnati, Ohio

## Report & Research Contributors

### Aaron Burman

Vice President Data, Analytics, and Products

### Allison Francis

Director of Creative and Design

### Andrew Linebarger

Data Analyst

### Andy Payne

Graphic Design Manager

### Anthony Brickner

Visual Media Designer

### Cody Marshall

Chief Optimization Officer

### Craig Wittig

Vice President of Grant Implementation

### Emily Wittig

Graphic Designer

### Joe Bontempo

Chief of Staff

### Kendall Glauber

Recyclability Solutions Director

### Kevin Goolsby

Fellow at The Center for Sustainable Behavior & Impact

### Lea Hensel

Senior Marketing and Communications Manager

### Marjory Appel

Chief Marketing & Communications Officer

## Launch Advisors for The Center for Sustainable Behavior & Impact

To support its first phase The Center worked with six Launch Advisors; experts and practitioners in the fields of environmental research, behavioral science, community recycling program management and sustainability marketing to ensure that its research practices meet the highest scientific standards, while rooted in the everyday challenges of local communities.

### The Launch Advisors are:

#### Bridget Anderson

Deputy Commissioner of Recycling and Sustainability, NYC Department of Sanitation

#### Jason Hale

Director of Operations, Ocean Plastics Asia, SYSTEMIQ Ltd.

#### Steve Raabe

Founder and President, OpinionWorks

#### Suzanne Shelton

Founder, President, & CEO, Shelton Group

#### Joseph Sherlock

Applied Behavioral Researcher, The Center for Advanced Hindsight at Duke University

#### Cynthia Shih

Senior Advisor, Delterra



**Lead Funding Partners**

Thank you to our inaugural funding partners who made the establishment of The Center for Sustainable Behavior & Impact possible.



**Research Funding Partners**

Contributed significantly to the advancement of research and evidence for informed interventions for behavior change include:



**Acknowledgement of Partners, Contractors, and Other Research Contributors**

- |                    |                    |                              |
|--------------------|--------------------|------------------------------|
| BluTerra           | Ipsos              | ReCreate Waste Collaborative |
| Cascadia           | Kessler Consulting | Searchlight Research         |
| C+C                | Lead Point         | Sung & Co                    |
| Dr. Teresa Donegan | OpinionWorks       |                              |
| Good Land          | Point Forward      |                              |



**The Recycling  
Partnership**  
Solving for Circularity