

# Unlocking Recycling's Potential: Day 1

February 21, 2024



**The Recycling  
Partnership**  
Solving for Circularity



**CENTER FOR  
BEHAVIOR & THE  
ENVIRONMENT**



**CRRA**  
Ending waste.

# Agenda

## DAY 1

### Welcome

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**Why Behavior Change Matters in this Moment?**

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**Behavior Change & Behavior-Centered Design**

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**Equity & Recycling**

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**Interactive Adventures with Behavioral Insights**

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**Framing, Empathizing, Mapping**

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## DAY 2

**Opening, Reflections, and Warm-Up**

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**About Connected Recyclability**

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**Levers of Behavior Change**

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**Ideate, Prioritize & Refine Solutions**

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**Prototype, Test, Launch, Assess**

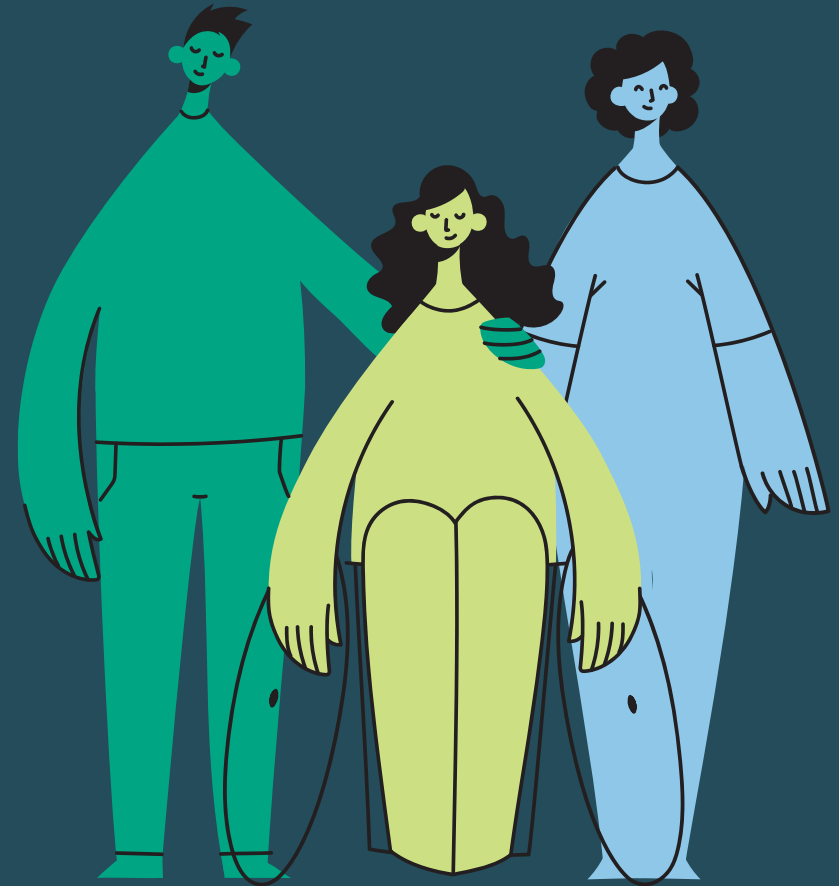
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**Equity - What's next?**

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# Welcome!

Louise Bruce  
Managing Director, Center for Sustainable Behavior & Impact  
The Recycling Partnership



# All stakeholders contribute to the success of recycling.



- 1** All packaging needs to be designed for recyclability.
- 2** All households need access to recycling in their home.
- 3** Residents need to be supported effectively so they can fully engage.
- 4** Recycling facilities need to effectively process the material.
- 5** Recycling facilities need sufficient end markets.



# All stakeholders contribute to the success of recycling.



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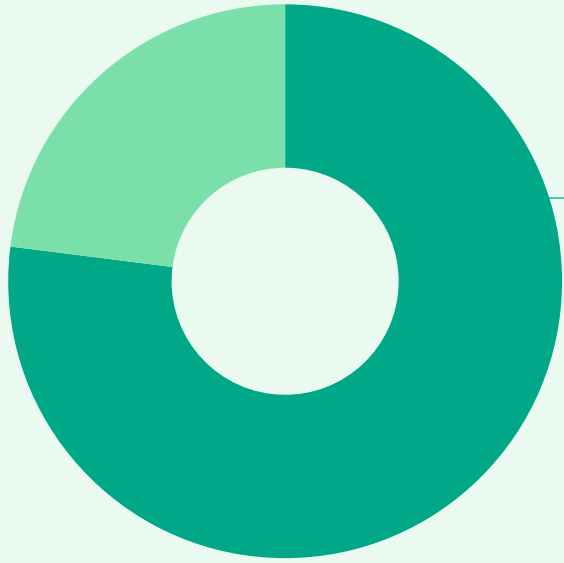
**Leverage social and behavioral science to deliver innovative, human-centered solutions.**

# What's your role?





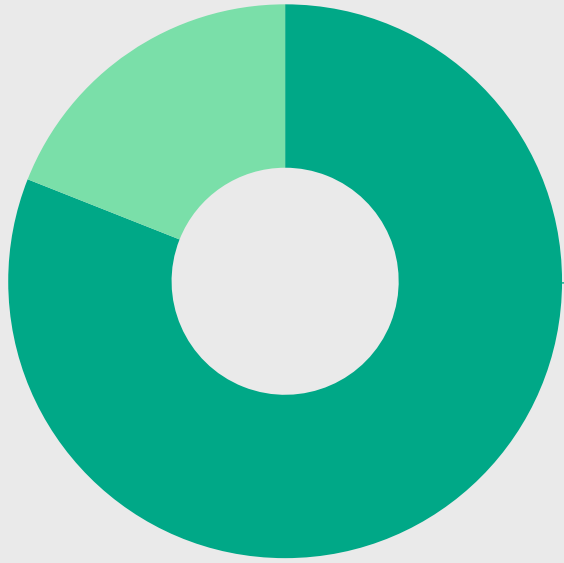
**When it comes  
to recycling,  
there is a belief-  
behavior gap.**



# 77%

Believe recycling makes a difference and has a positive impact.



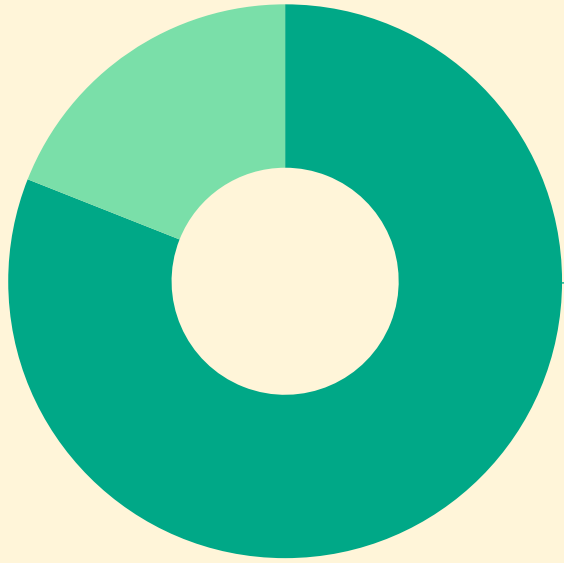


**81%**

Say we are not doing enough as a society to combat wastefulness.

More than half admitted they feel guilty when they do not recycle.

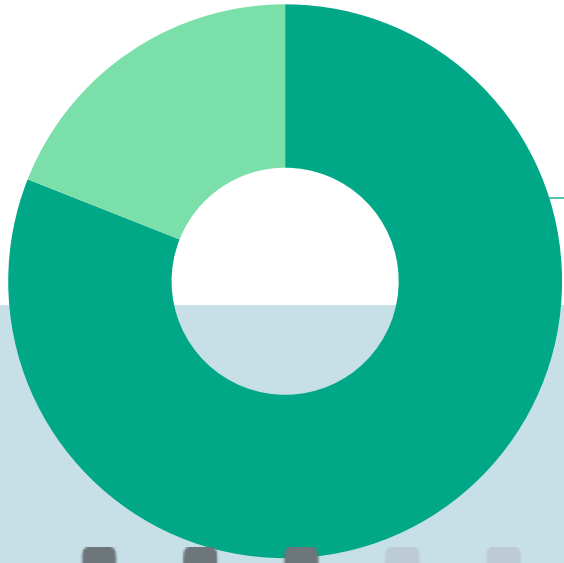




81%

Say they have the instructions they need to recycle.





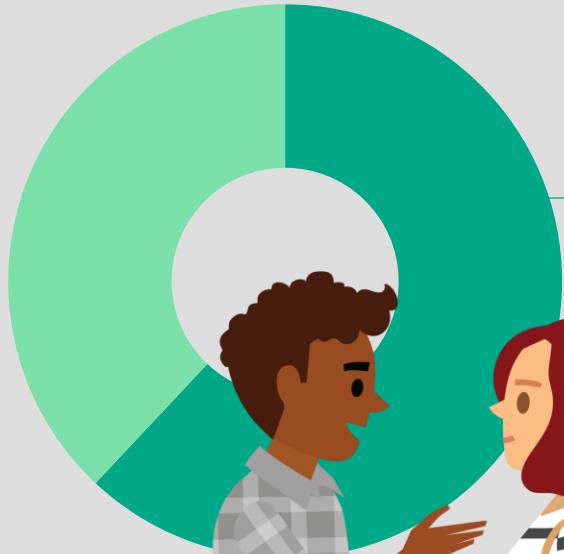
8/10

See a relationship  
between recycling  
and solving the  
plastic pollution  
problem

78% Louisiana

77% Texas





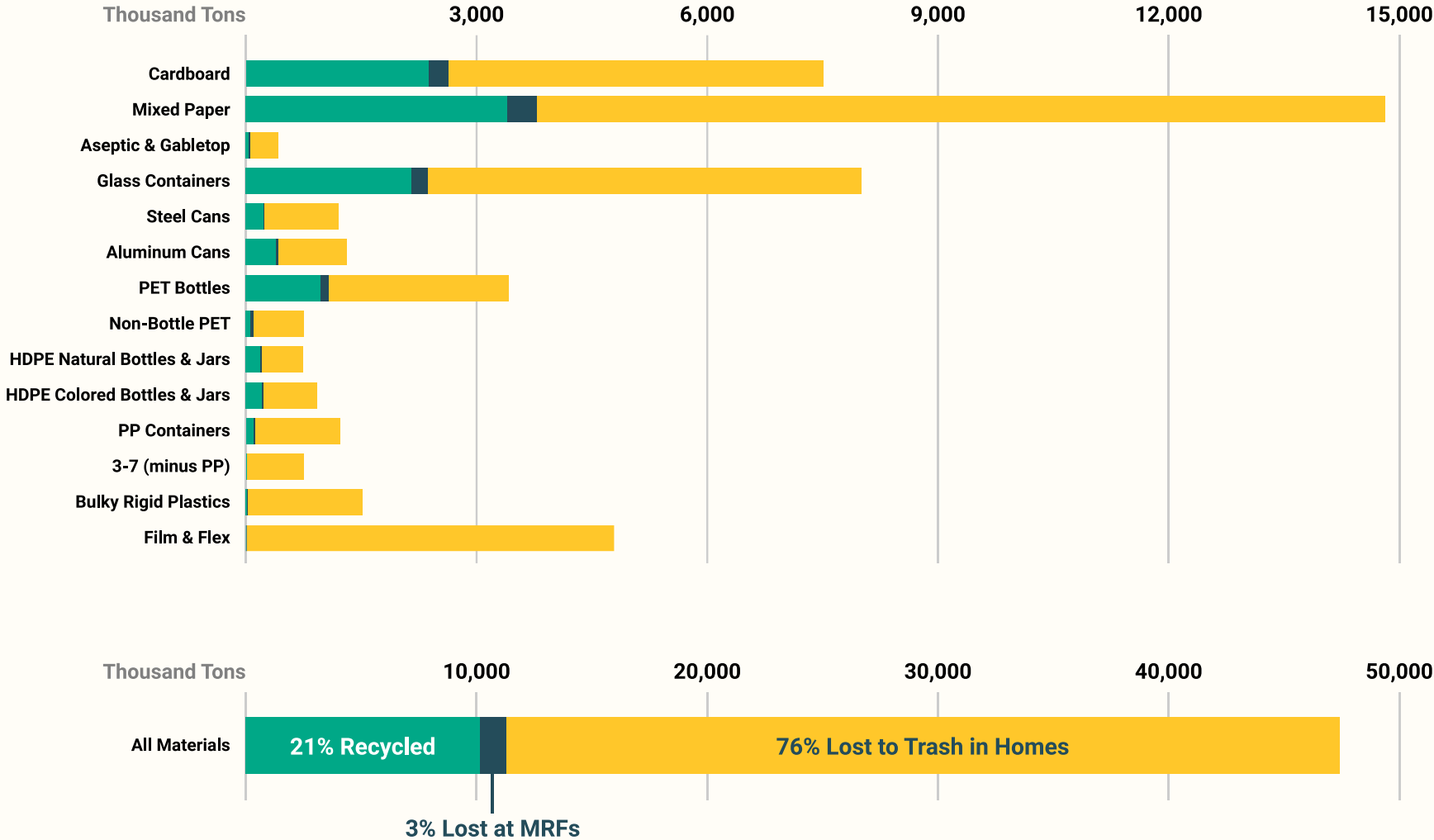
62%

Consider it a turn off if someone doesn't recycle





# Yet, 76% of Residential Recyclables Are Lost





**50%+ lost from  
households with access  
to curbside collection.**

Please close your eyes.

Picture a household  
that CAN recycle, but  
does NOT participate.







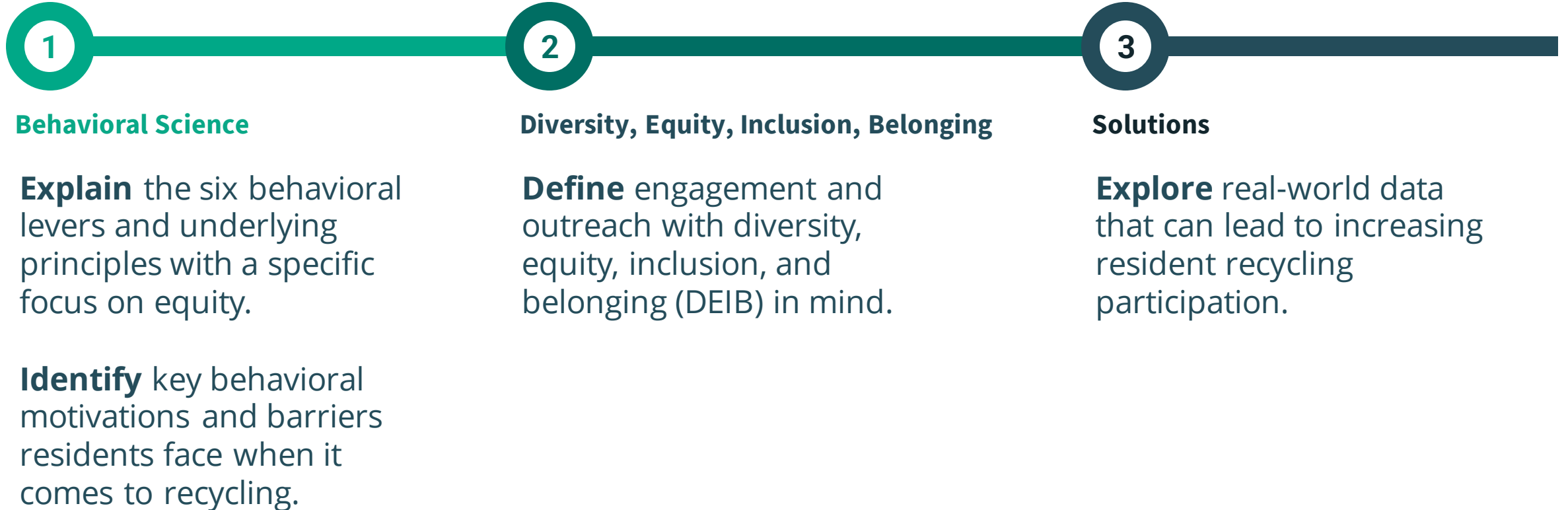




Public education and information are part of the solution, but there is a significant base of research that shows **awareness and information alone do not change behaviors.**

## Workshop Objectives

Understand how applying a behavioral lens can enhance the effectiveness of recycling programs, ensuring no one is left behind.



Get in Touch:

**Louise Bruce**

✉ **[lbruce@recyclingpartnership.org](mailto:lbruce@recyclingpartnership.org)**

🌐 **<https://recyclingpartnership.org>**



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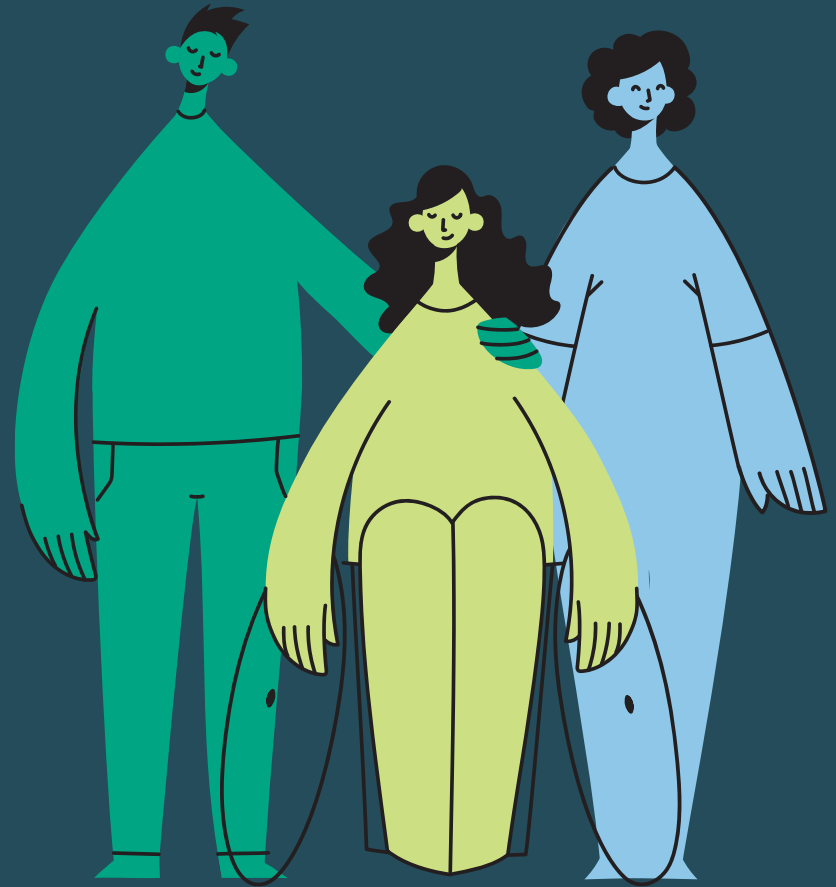
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**Equity - What's next?**

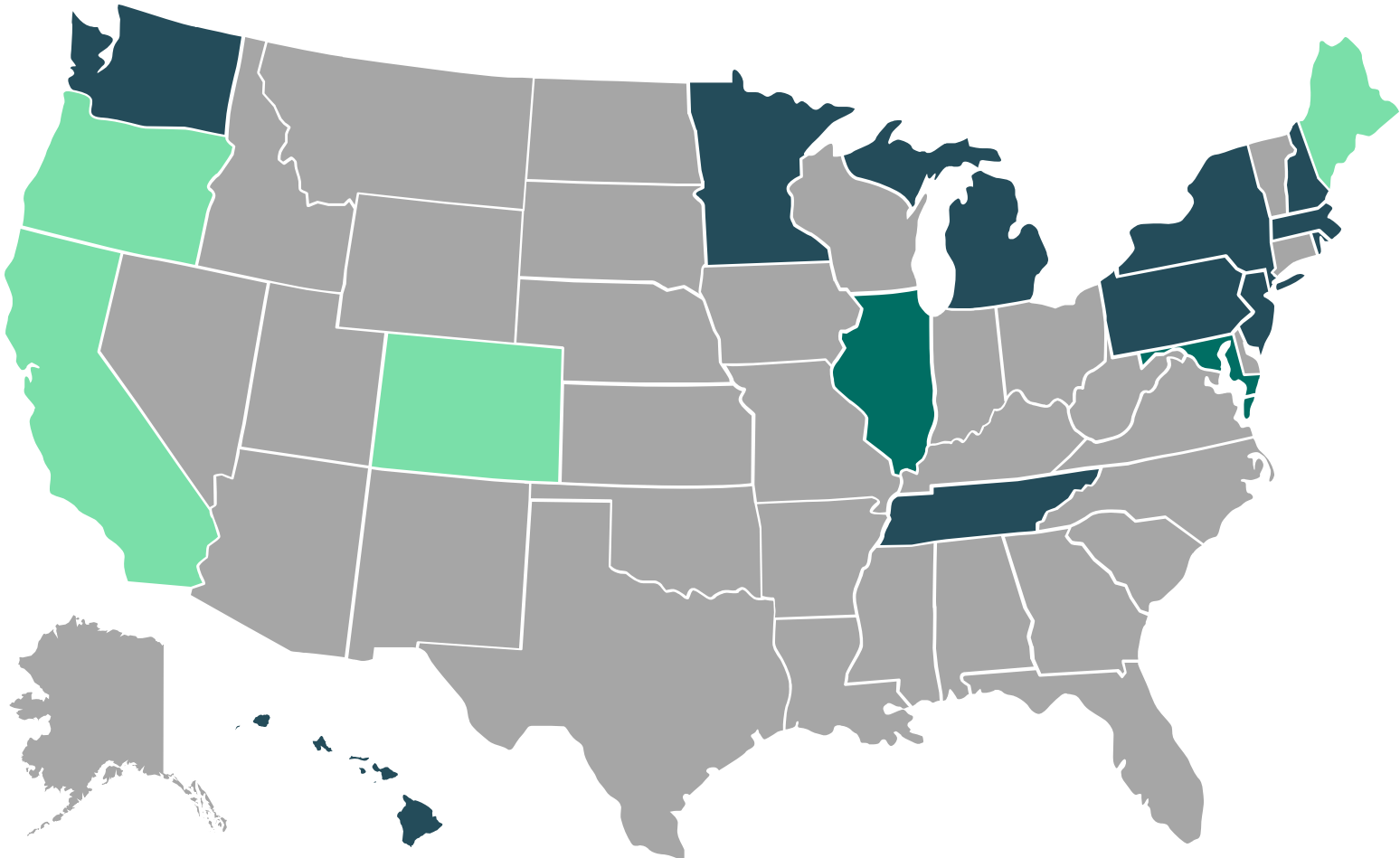
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# Why this moment creates a unique opportunity to support behavior change.

Linnea Whitney Skierski  
Director of Policy Implementation  
The Recycling Partnership



# U.S. EPR Policy Landscape



-  **EPR for Packaging Legislative Activity in 2024**  
(introduced or expected)
-  **EPR for Packaging Laws Passed & Currently Being Implemented**  
(CA, CO, ME, OR)
-  **Needs Assessment passed in 2023**

## U.S. Policy Landscape: EPR Requires Substantial Investments in Public Engagement

Implementation Activities	California	Colorado	Maine	Oregon
Scope	Improvements	100%	100%	Improvements
Reduction and Reuse	●	●	●	●
Recyclability Determination	●	●	●	●
New Access	●	●	●	●
Education and Outreach	●	●	●	●
MRF Improvements	●	●	●	●
Need for Improved Data and Measurement	●	●	●	●



Significant need



Need to be determined



Minor need



To use **recyclable or compostable marketing claims**, producers must ensure statutory criteria are met starting **Fall 2025.**

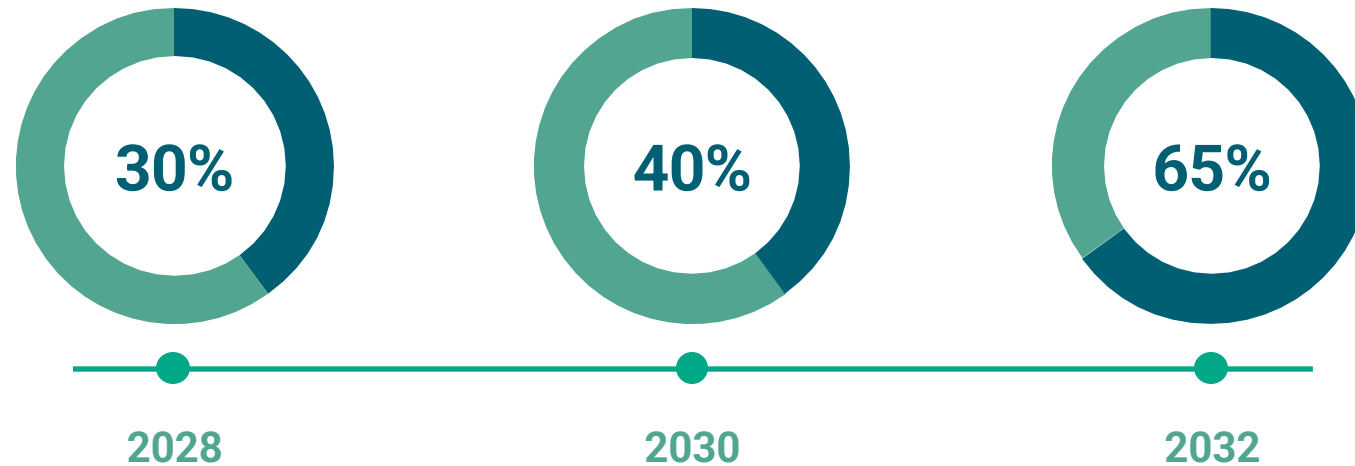
A finalized state study with data on key recyclable criteria is expected in Spring 2024.



All covered packaging materials must be deemed **recyclable or compostable** by **January 2032** or potentially be subject to **sales bans** and **civil penalties** in California.

## SB 54 Mandated Goals for Plastic Packaging & Food Service Ware

Plastic materials covered by the policy must achieve mandated **recycling rates**.





# 65%

**recycling rate target  
for all plastic covered  
materials by 2035**

## How will the system get there?

1

Significantly increasing  
packaging design innovation

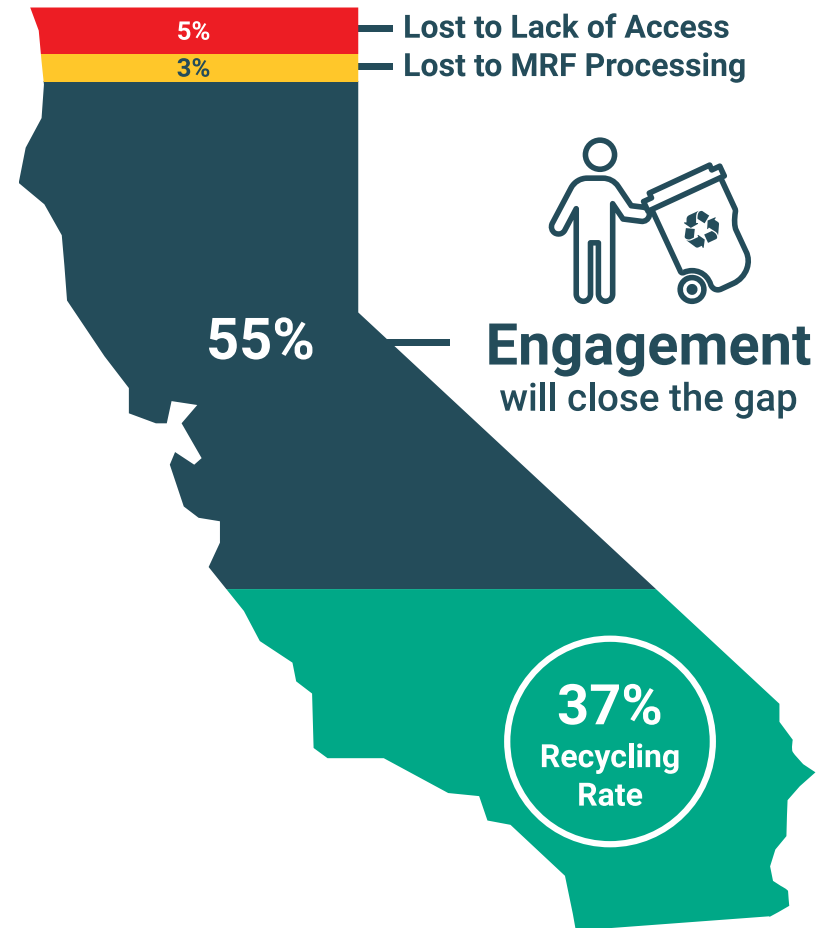
2

Supporting the public through  
behavior change initiatives

3

Improving domestic markets  
and infrastructure

# State of California Pathway to 65% Recycling Rate



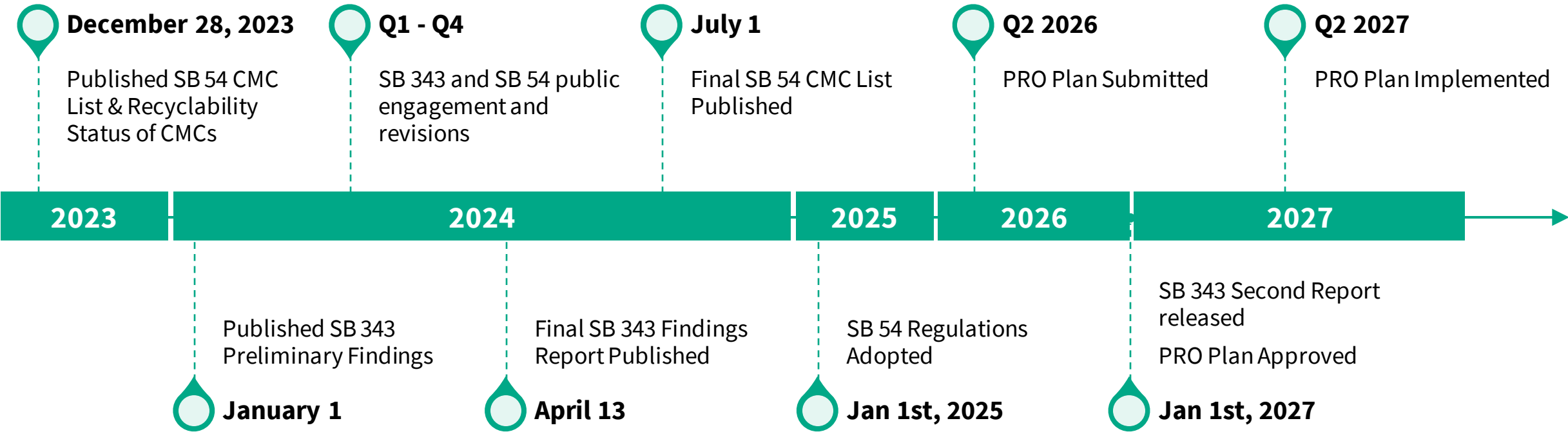
Full engagement encompasses the ability to recycle all recyclable materials, including through material acceptance



## SB 54 Explicit Focus on Reuse, Refill, & Composting Behaviors *(in addition to recycling)*

With an intent to advance these four areas





## The Success of Shifts in Consumption and Waste Starts Now



1

EPR laws will not succeed in changing the system and marketplace of consumption without behavior change.

2

EPR will provide support for residents (extending to composting, reuse, refill), let's make sure they are evidence-backed.

3

EPR is already creating ripples of change. We can harness this change to maximize positive impacts.

Get in Touch:

**Linnea Whitney Skierski**

✉ **[lwhitney@recyclingpartnership.org](mailto:lwhitney@recyclingpartnership.org)**

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# What is Behavior-Centered Design?



**Behaviors**  
What you do  
“I recycle.”



**Beliefs**

What you know or accept to be true  
“Recycling is important.”

**Attitudes**

What you think is good or bad  
“Recycling is good.”

**Intentions**

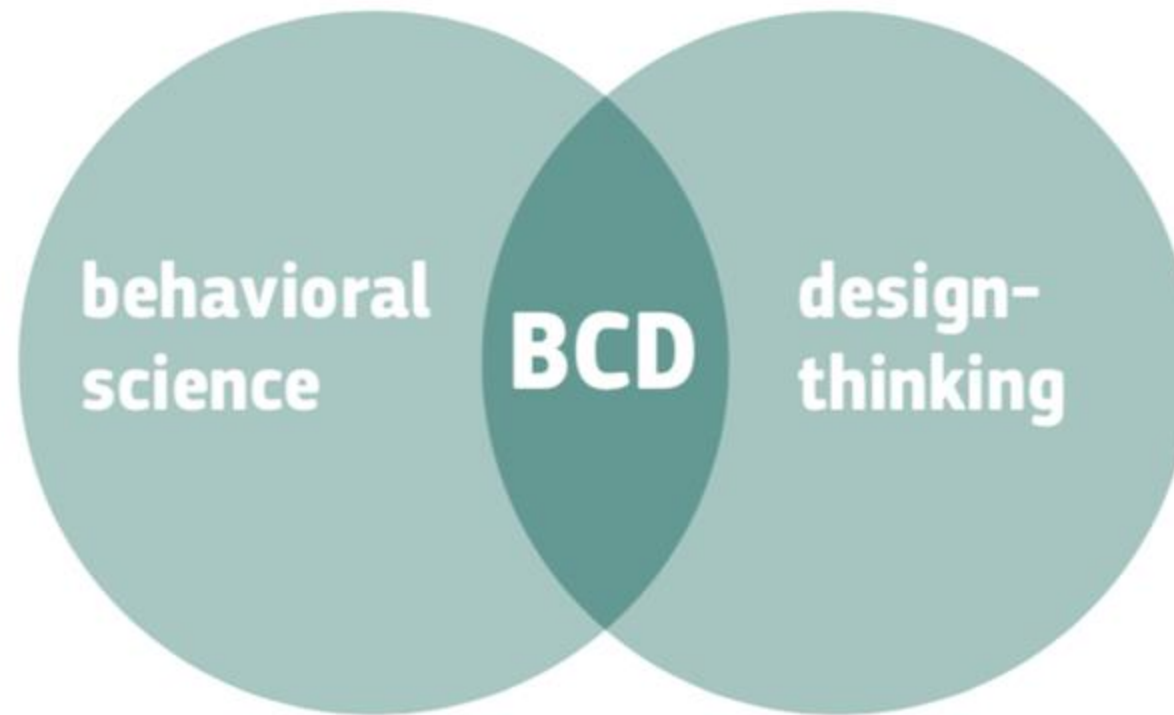
What you plan or intend to do  
“I want to recycle.”

**Context**

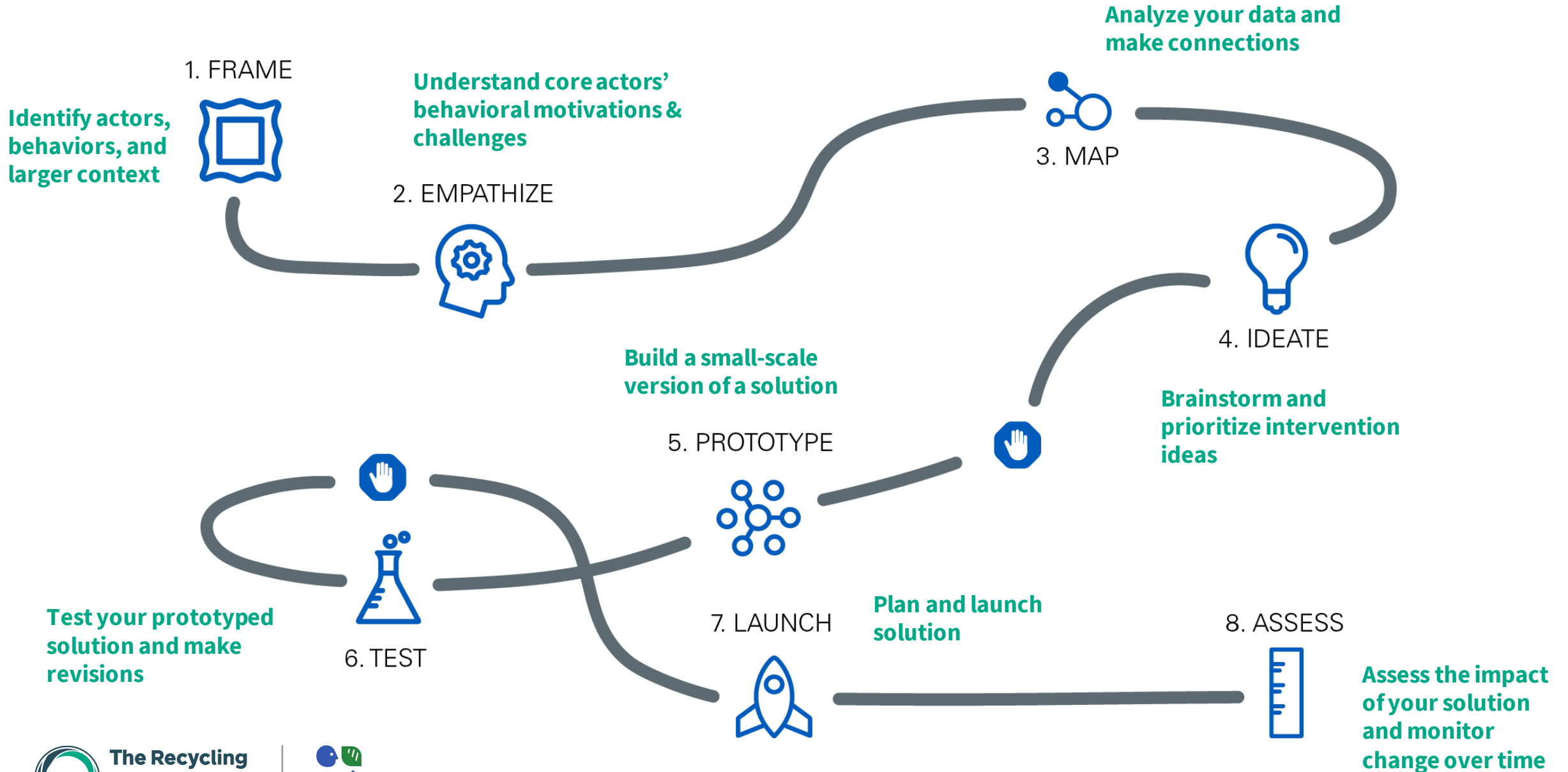
The environment for the behavior  
“I have recycling bins in each room in my home.”



# What is Behavior-Centered Design?



# The Behavior-Centered Design Journey



# BCD x Diversity, Equity, and Inclusion

**Diversity** = Celebrating and recognizing all the ways that people differ and are unique: *representation*

**Equity** = Creating fair treatment, access, opportunity, and advancement for all people, while at the same time striving to identify and eliminate barriers that have prevented the full participation of some groups: *fairness, justice*

**Inclusion** = Creating environments in which any individual or group can be and feel welcomed, respected, supported, and valued to fully participate: *belonging*

# BCD x Diversity, Equity, and Inclusion

## Some examples of what this looks like:

- ✓ Inviting people to participate in framing the problem and solution design
- ✓ Considering enabling conditions and structural barriers for change
- ✓ Asking ‘whose perspective is not captured in this solution?’
- ✓ Conducting research with a diverse set of people
- ✓ Supporting people’s choices and agency
- ✓ Use data to design solutions, not assumptions

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# Introduction To Creating More Equitable Recycling Outreach

Jessica Levine  
Diversity, Equity, and Inclusion Manager  
The Recycling Partnership





**Overview of DEIB at The Recycling Partnership**

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**DEIB By the Numbers**

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**Barriers to Consider**

---

**Equitable Outreach in Recycling Programs**

---

**Creating Outreach that Resonates**

---

**Introduction to Equitable Recycling Outreach Guide**





WE  
ENVISION  
a Future  
WHERE THE  
BURDEN  
OF WASTE IS  
transformed  
INTO A  
BENEFICIAL  
RESOURCE

## The Recycling Partnership Stands Up and Speaks Out for Equity & Inclusion

### Our Team

We foster a culture of belonging through inclusion efforts and our commit to diversifying both staff and board through thoughtful, intentional recruitment and continuous learning.

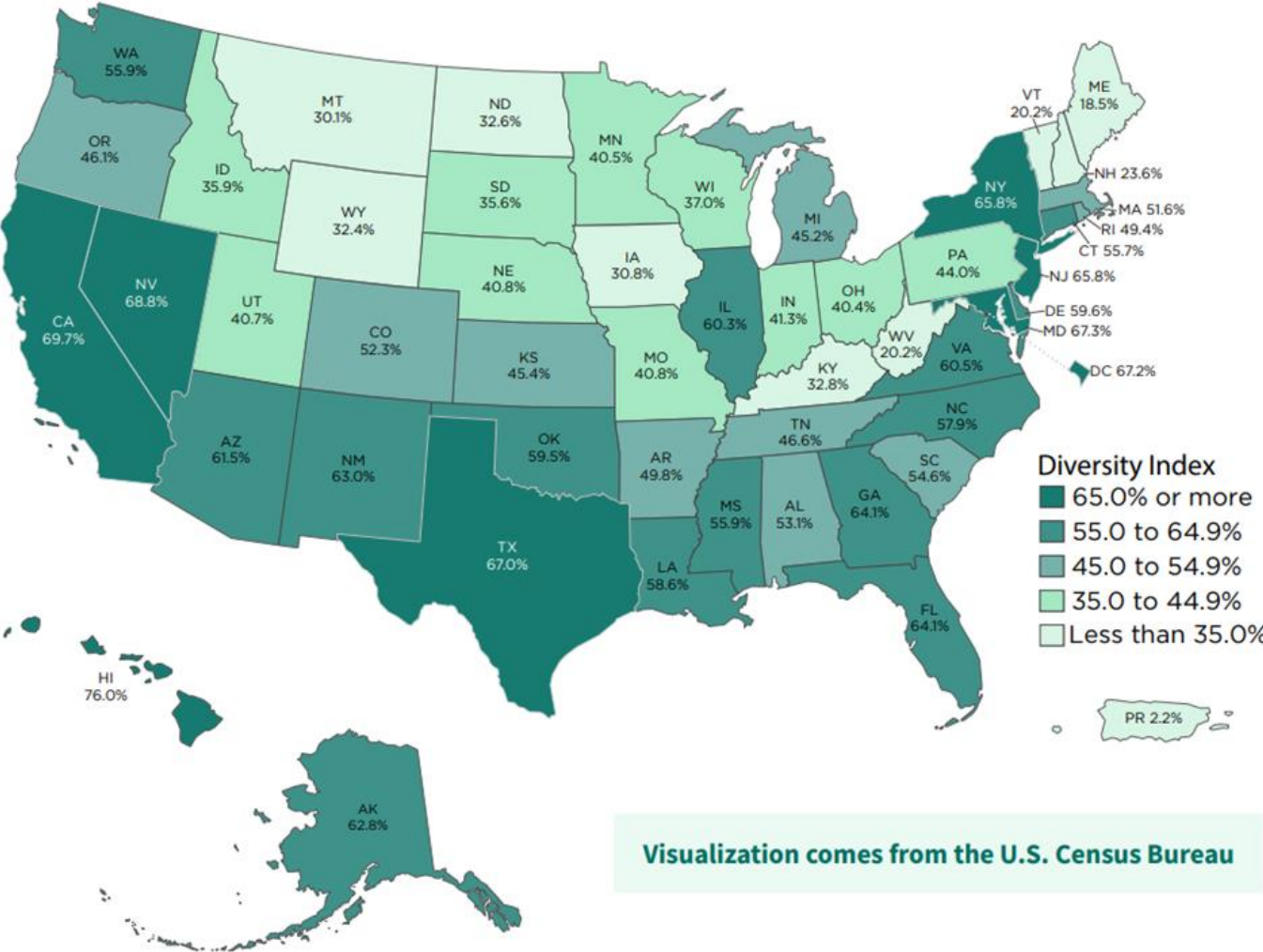
### Our Work

We work to enhance recycling access, education, and participation in communities through research, prioritizing historically under-served BIPOC populations, and by integrating diverse perspectives into all our initiatives.

### Our Industry

We are committed to propelling the diversification and equitable representation of all people within the recycling and circular economy industry, starting through the establishment of the FTP Fellowship Program.

# By The Numbers: The US Is Becoming More Diverse But Recycling Is Lagging In Many Places



- 1
- 2
- 3

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 related to household income and home ownership have clear impacts on recycling participation, with subscription programs skewing towards white, wealthy homeowners.

### Barriers Might Look Like:

- Lack of access to collection service as well as lack of information about how to sign up, ask questions, or recycle properly.
- Out of pocket or perceived costs of recycling, including bags, service, taxes, potential fines, or time and effort.
- Social pressures and frustrations, such as not seeing others recycle, feeling judged for not recycling, or judged for recycling.



*There is no "one size fits all" strategy or solution.*

# Applying a DEIB Lens to Recycling

**Recycling through a DEIB lens means having access to outreach resources that are:**

- Reliable and easy-to-use
- Culturally appropriate and relevant
- Readily available for different audiences

**It also means:**

- Engaging with diverse audiences in effective and respectful ways.
- Seeking diverse partners to collaborate with and co-create relevant outreach materials.
- Finding ways to embed equity into program strategies.

**Diversity** = Representation of All Members of Your Community


**Equity** = Resources that are Justly Distributed

**Inclusion** = User-Centered Design

**Belonging** = Authentic Connectedness to Community Services and Waste Reduction





A photograph of a young couple in a modern kitchen. The woman, on the left, has long dark hair and is wearing a light green button-down shirt. She is holding a white mug and looking towards the man with a smile. The man, on the right, has dark hair and is wearing a teal V-neck sweater over a collared shirt and blue jeans. He is also holding a white mug and looking back at the woman. They are standing in front of a kitchen sink with a black faucet. To the right of the sink, on the countertop, is a blue recycling bin with a white recycling symbol. The kitchen has white cabinets and a large window in the background showing green foliage. A teal text box with a yellow border is overlaid on the left side of the image.

**Not all marketing is designed equitably. Equitable outreach is best achieved through research, participatory design, and co-creation.**

# Creating Meaningful Outreach that Resonates



## Translation

Translation replaces words in one language with corresponding words in another language.

## Transcreation

Transcreation goes beyond translation and adapts messaging to convey culturally relevant meaning in an audience's language.

## Social Marketing

A way to inspire social change by understanding an audience and a behavior through interventions and marketing.

## Co-Creation

Include all stakeholders in the design process to ensure results meet their needs.

# Introduction to Creating More Equitable Recycling Outreach, A Guide to Meaningful Engagement

- Designed to provide guidance to tailor public engagement
- Offer practical tips, data and insights to improve effectiveness and strengthen community engagement

## Key Themes

- Each program priority audience is different and merits a custom approach
- Effectively reaching individuals requires a welcoming approach
- Inclusive multicultural outreach must take complexities of reality that people face every day into account





## The Free Download Includes Resources

### Research-Backed Insights

Data and information supporting equitable outreach strategies.

### 5-Step Process to Get Started

Clear, actionable steps for implementation.

### Photo Library

Photos representing the diverse communities we serve.

### Customizable Messaging

Educational and instructional messaging in the following languages:

- Chinese
- Spanish
- Tagalog
- Vietnamese



Links to resources are in the guide: [recyclingpartnership.org/equitable-recycling-outreach](https://recyclingpartnership.org/equitable-recycling-outreach)



Get in Touch:

# Jessica Levine

✉ [jlevine@recyclingpartnership.org](mailto:jlevine@recyclingpartnership.org)

🌐 [recyclingpartnership.org](https://recyclingpartnership.org)



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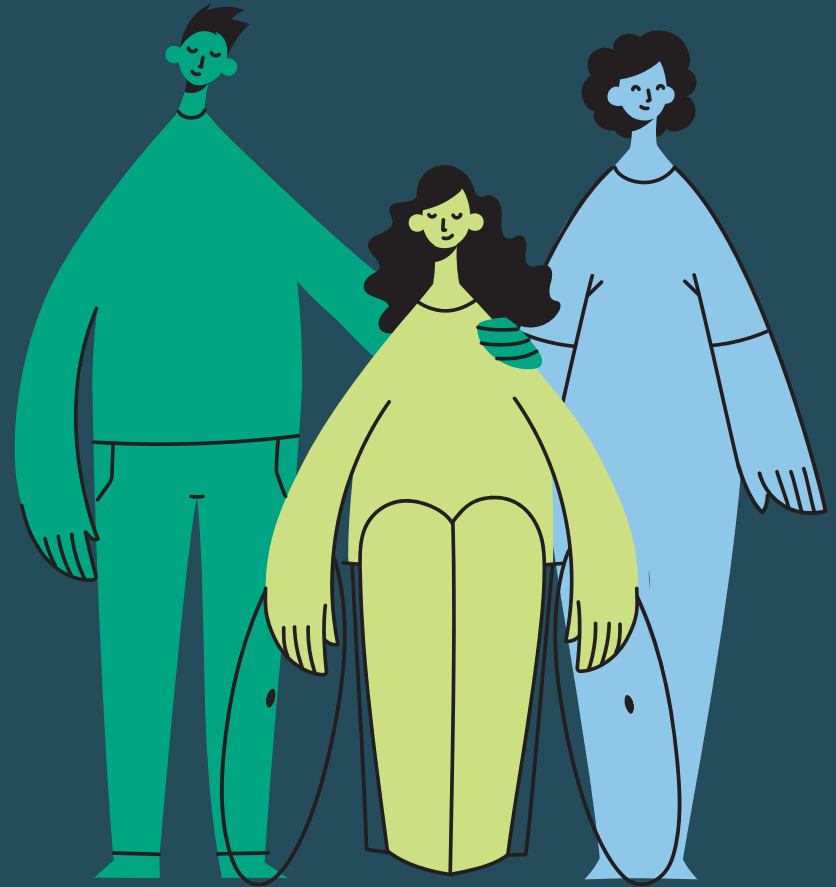
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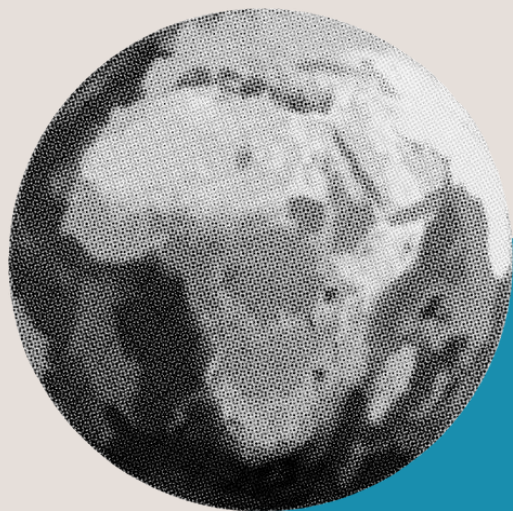
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**Equity - What's next?**

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# Behavioral Science Speed Talks





# COMPOST

**BREAKING IT DOWN**

Presented by: Joseph Sherlock



Duke



# A (VERY BRIEF) INTRO

The Center for Advanced Hindsight works at the intersection of research and the real world, using behavioral science to make people happier, healthier, and wealthier at home and abroad.

## Who We Are

Behavioral scientists, PhD students, post-docs, interns, volunteers, and generally interesting people from across the globe

## WHY WE'RE WORTH LISTENING TO

Over 250 publications & more than 50 reputable partners

# OUR GOAL

*Design a program that  
helps people...*

- 1) Start composting
- 2) Continue composting
- 3) Compost correctly



# OUR APPROACH



Behavioral  
Economics



Human Centered  
Design



Rigorous  
Evaluation





# OUR DESIGN JOURNEY



**START**

Partner with City Hall

Return to City Hall; develop  
next steps for scaling program

**1 EXPLORATION**

**2 PILOT**

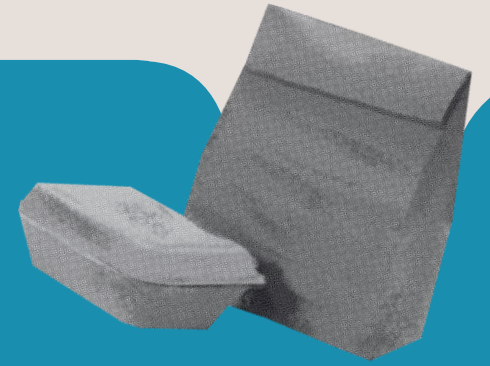
**3 RANDOMIZED  
CONTROL TRIAL**

Duke

CENTER FOR  
ADVANCED  
HINDSIGHT

# PHASE 1

## Exploration



Meet with Durham Solid Waste Management

Conduct user surveys and interviews

Define and refine program prototypes



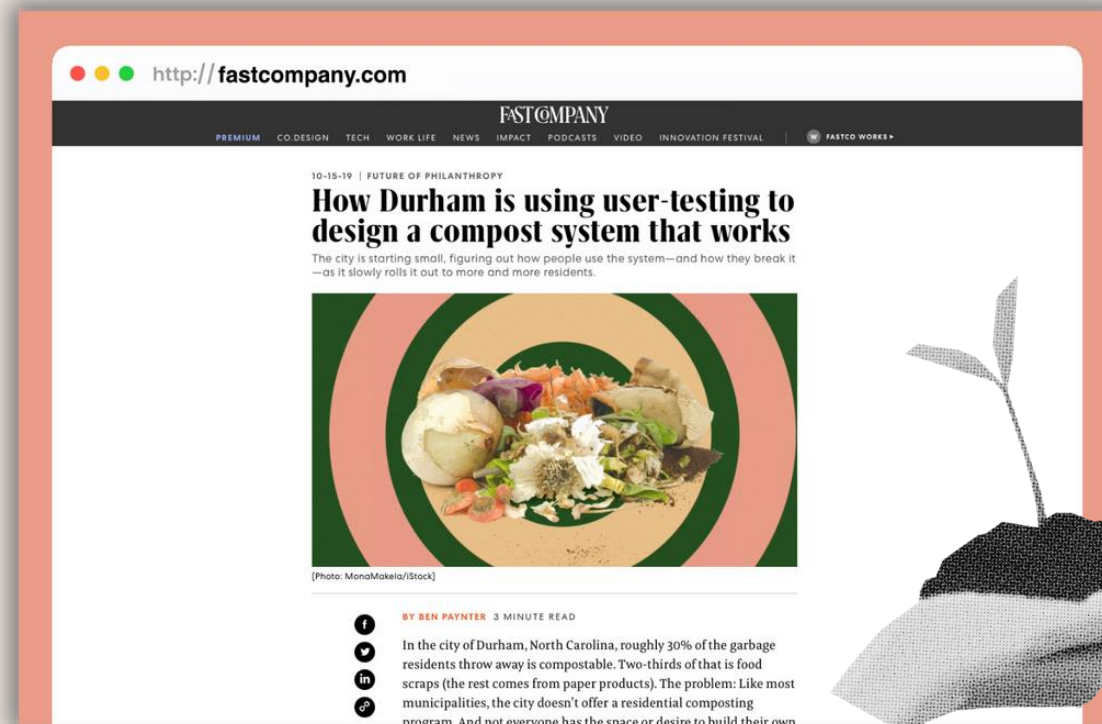
# PHASE 2

## Pilot

80 household curbside composting pilot

User surveys and interview

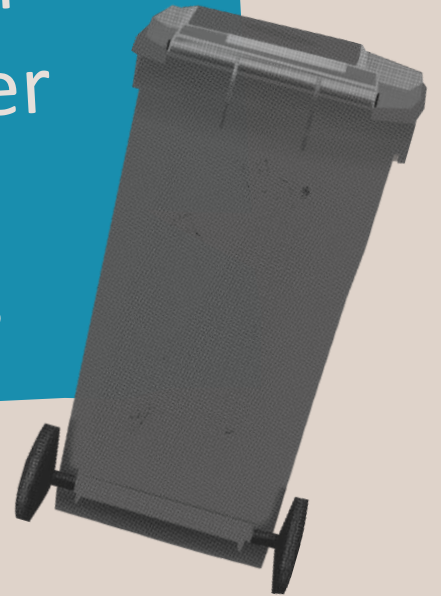
Feedback-based adjustments





# Insights & RESULTS!

- Education & awareness reduced contamination
- 5,550 lbs food waste diverted from landfill
- More participants reported using 1 or fewer trash bags per week (54% --> 70%)
- Composting linked to identity and values



# PHASE 3

## Randomized Control Trial

360 household trial

Modify for environmentalist spillovers

Measure trash & compost

Interview and off-board

Data analysis

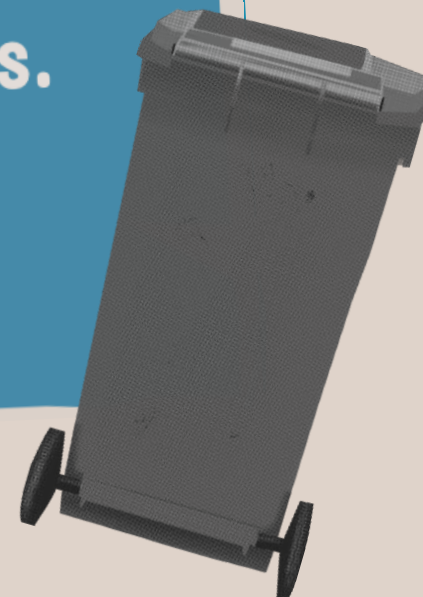






# CURRENT STATUS

We are currently analyzing the effects of the RCT on participants' behaviors, feelings, and identities.  
Here's a sneak peek at our results...



## Treatment vs. Control Average Trash Weight

### Weekly Average Trash Weights

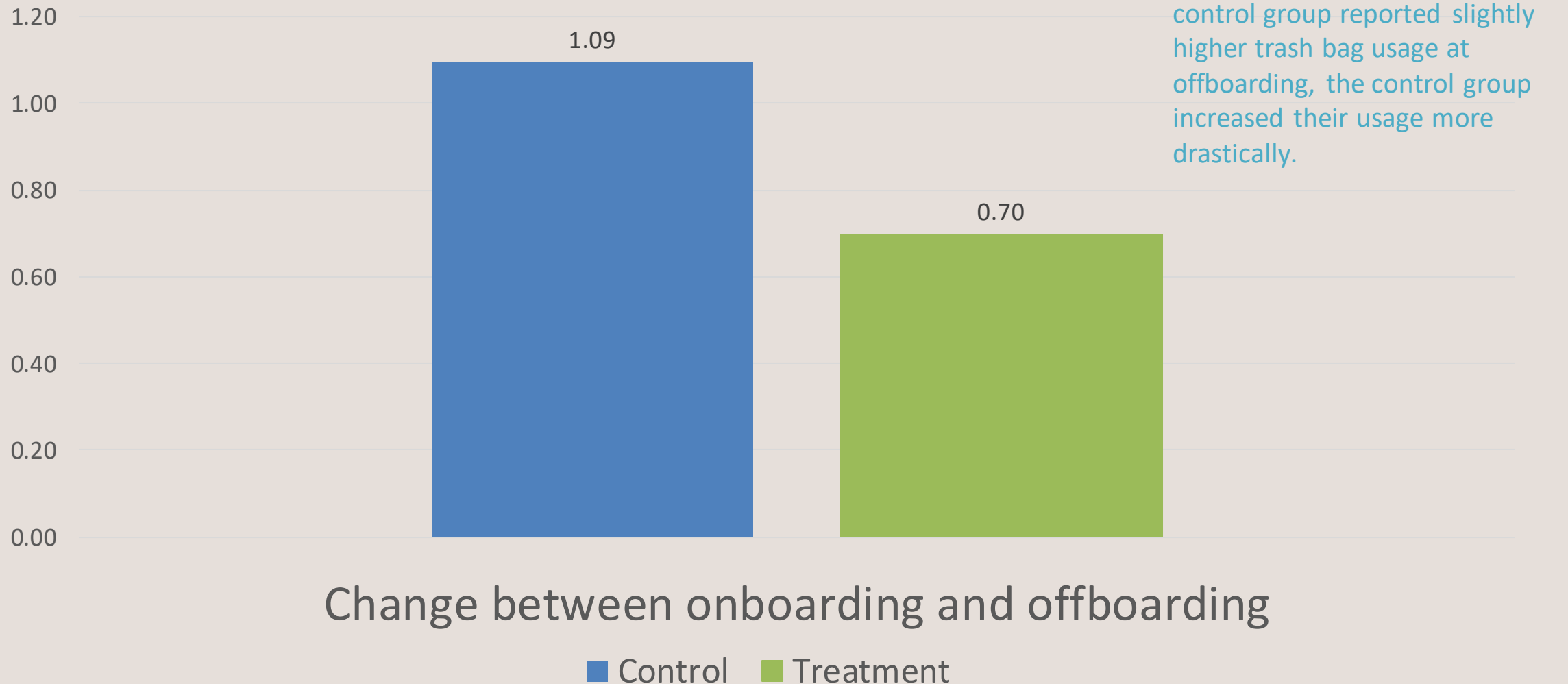
Treatment: 71.8 lbs.

Control: 74.1 lbs.

Difference: -2.3 lbs.

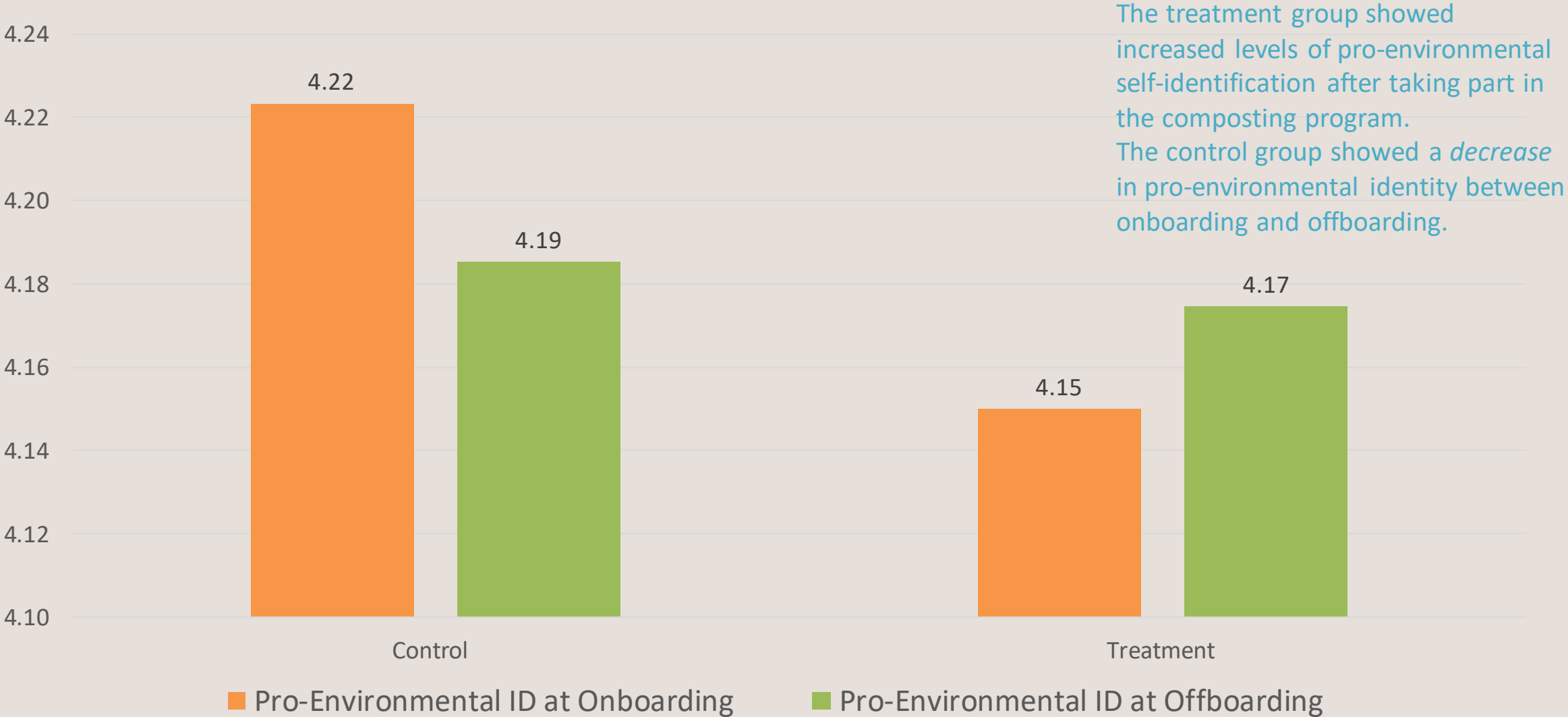


# Estimated Increase in Number of Trashbags Used in the Last Week

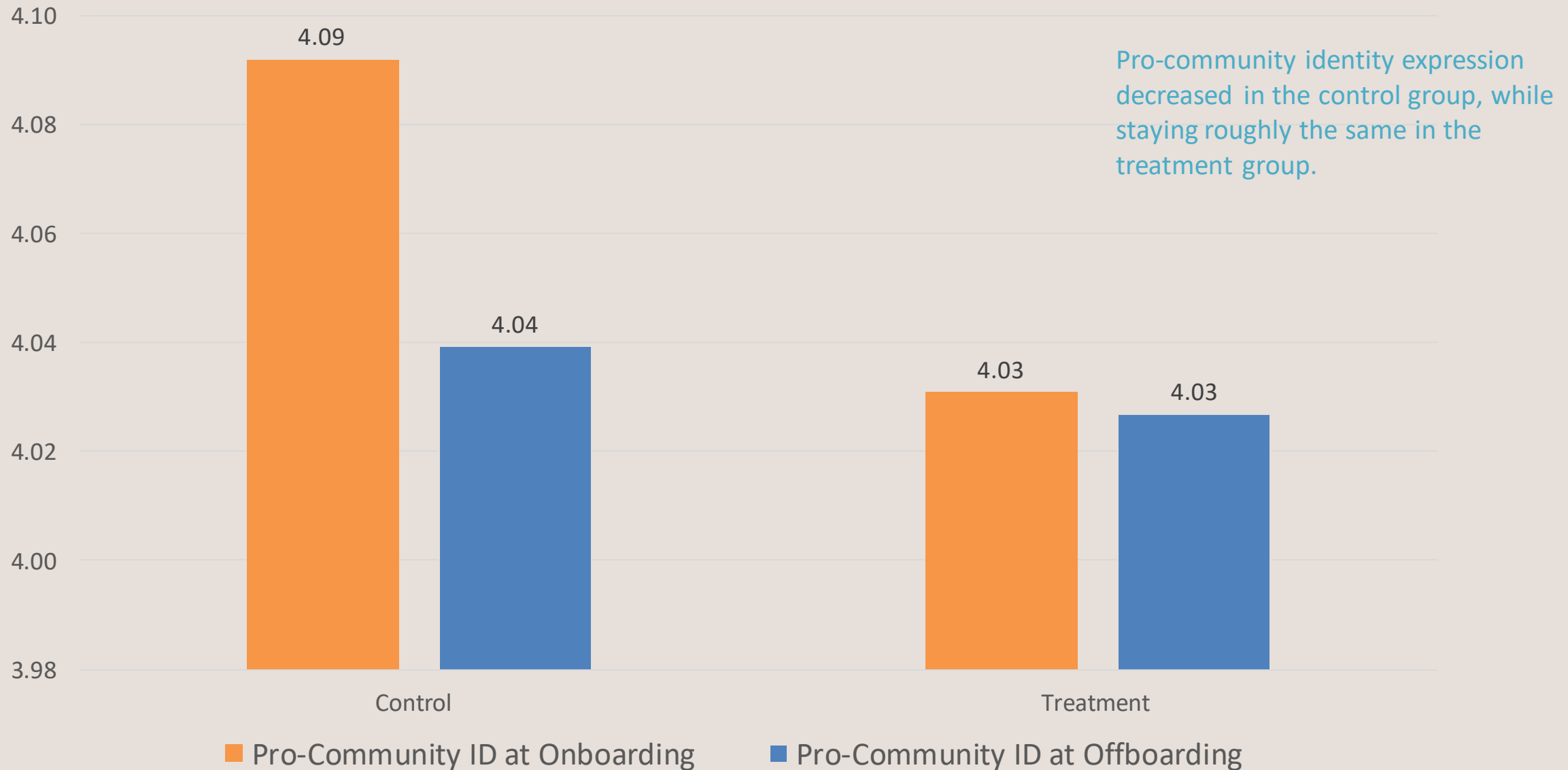




# Change in Pro-Environmental Self-Identification

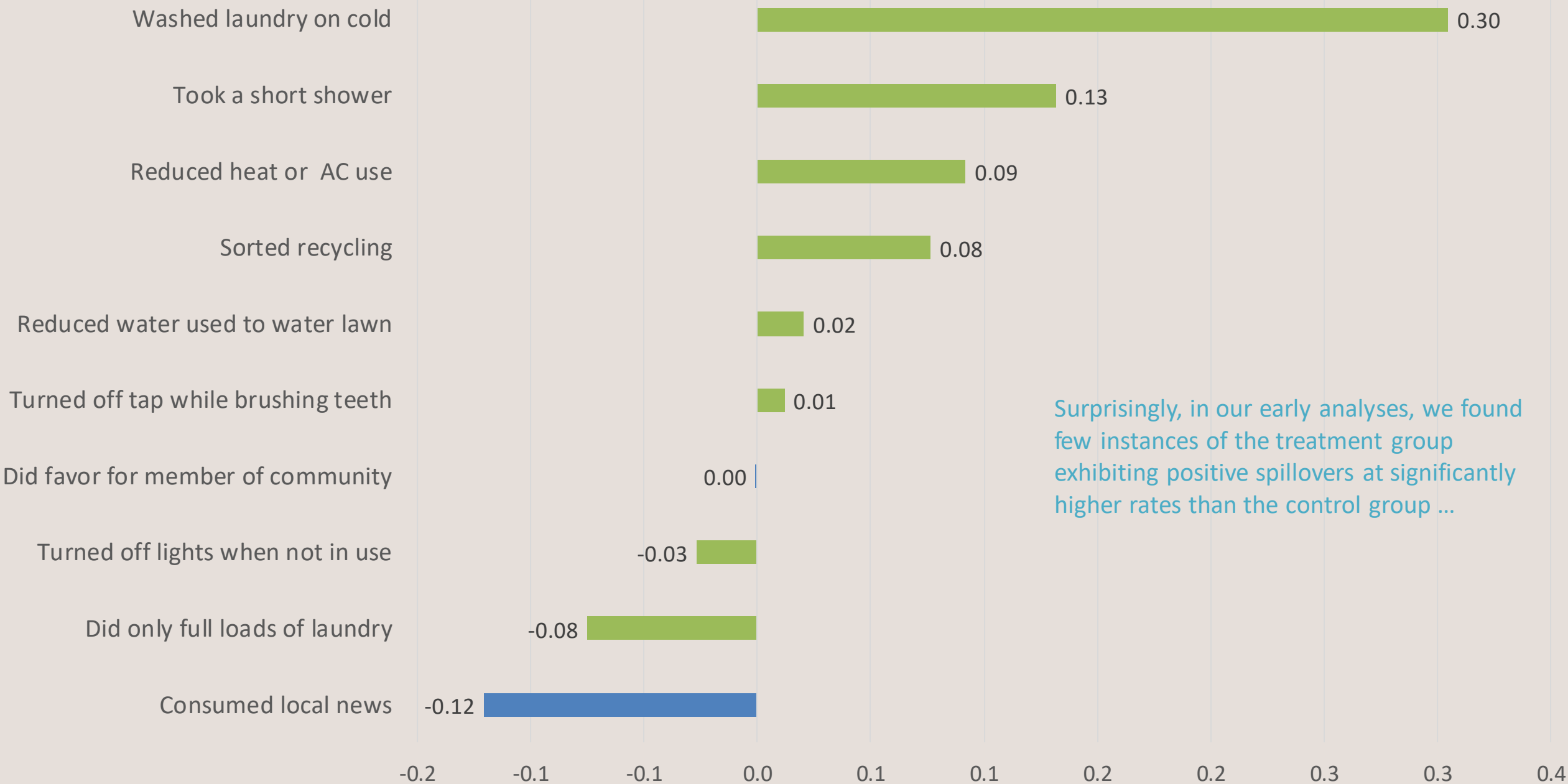


# Change in Pro-Community Self-Identification



Subjective Frequency (never- always) of Pro- Environmental and Pro-Community Spillovers

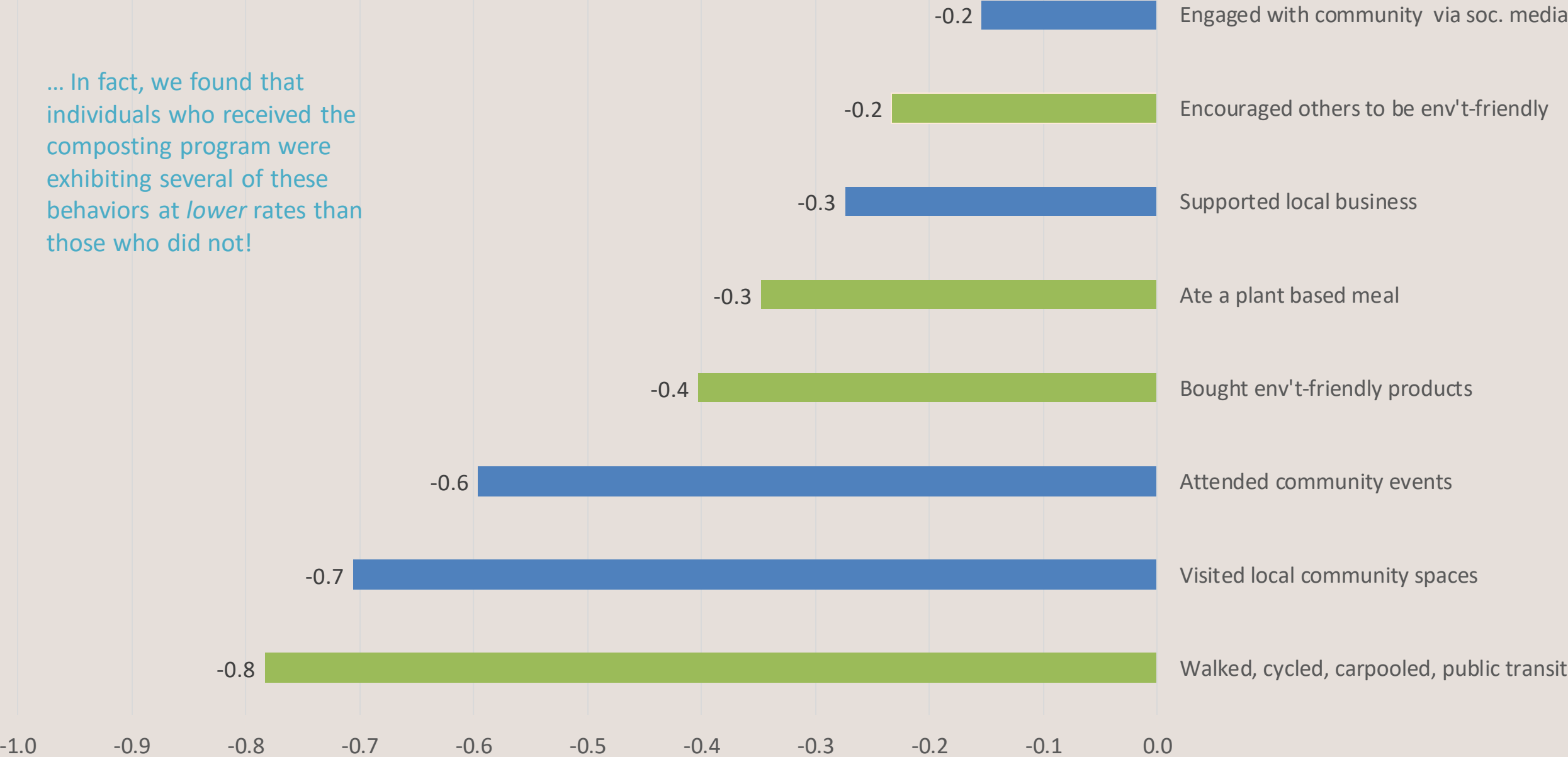
(difference between treatment and control)



Surprisingly, in our early analyses, we found few instances of the treatment group exhibiting positive spillovers at significantly higher rates than the control group ...

**Numeric Frequency of Pro- Environmental and Pro-Community Spillovers**  
(difference between treatment and control)

... In fact, we found that individuals who received the composting program were exhibiting several of these behaviors at *lower* rates than those who did not!



# IMPACT



## Scalability

City of Durham to create “How To” guide for other municipalities to emulate once local programming is complete



## Environmentalism

Increasing awareness and accessibility of composting reduces greenhouse gases and promotes healthy soil



## Capacity Building

By partnering with community stakeholders, we build their capacity to create data-informed programs

# RESOURCES

Center for Advanced Hindsight:  
[Advanced-hindsight.com](http://Advanced-hindsight.com)



City of Durham:  
[durhamnc.gov/935/Composting](http://durhamnc.gov/935/Composting)



# KEEP IN TOUCH!

Joseph Sherlock, Principal Researcher



# Social Norms and Sustainable Behavior

February 21, 2024



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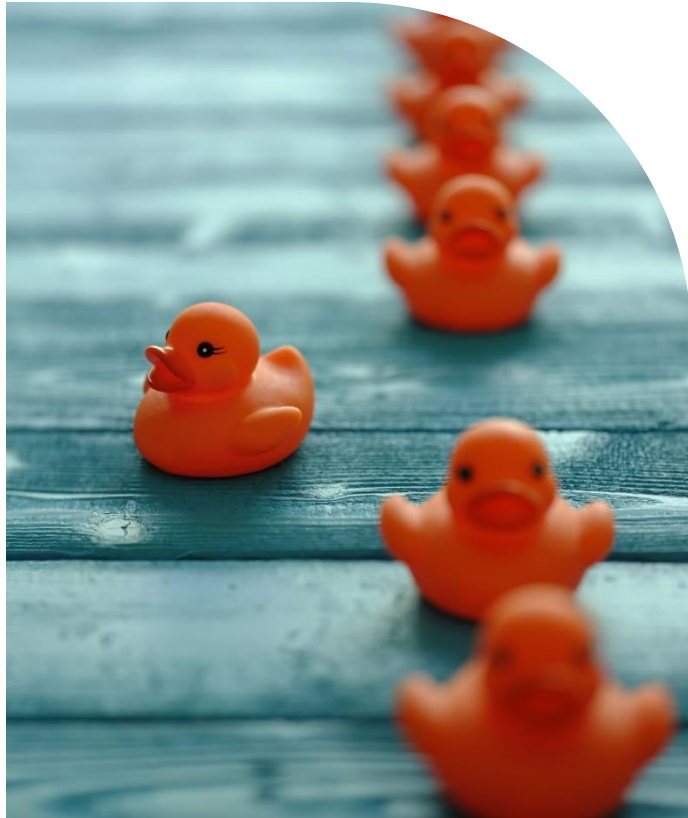
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## TAKE HOME MESSAGE

*We can leverage the human desire for belonging and drive behavior change by strategically highlighting what other people do or approve of doing.*



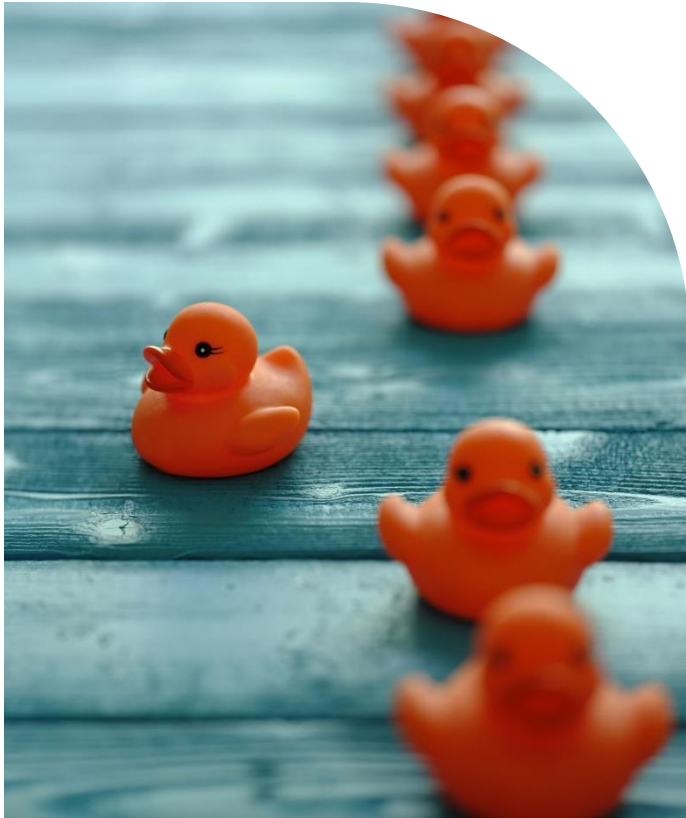


Not Sure How to Act?

**We Pay Attention to...**

 **What other people DO**

 **What other people APPROVE or DISAPPROVE of**

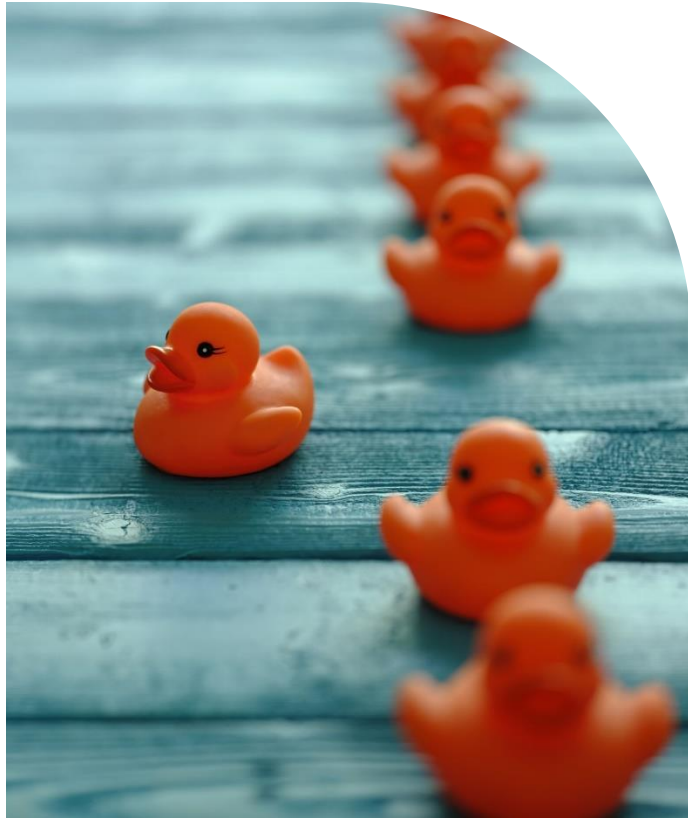


Not Sure How to Act?

**We Pay Attention to...**

 **What *we believe* other people DO**

 **What *we believe* other people  
APPROVE or DISAPPROVE of**



Not Sure How to Act?

## We Pay Attention to...

 **Descriptive Norms**  
What **we believe** other people **DO**

 **Injunctive Norms**  
What **we believe** other people  
**APPROVE or DISAPPROVE of**



# Evidence for the Impact of Social Norms on Behavior



## ENERGY + TRANSPORTATION

- Abrahamse et al. (2007)
- Nolan et al. (2008)
- Ayres et al. (2009)
- Bator et al. (2019)
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## WATER

- Dickerson et al. (1992)
- Kurz et al. (2005)
- Schultz et al. (2019)
- Bhanot (2021)



## WASTE + RECYCLING

- Schultz (1999)
- Wang & Katzev (1990)
- Viscussi et al. (2014)
- Hewitt et al. (2023)



## HOTEL TOWELS, LITTER, & MORE...

- Goldstein et al. (2008)
- Schultz et al. (2008)
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## Research Guidance

# Norms are Powerful, Use Wisely!



Highlight the desired norm



Show comparisons to similar others



Social influence is underestimated





*Give Your*  
**Food Scraps**  
*New Life*  
*by Placing Them in Your Green Cart*

**Join Your Salinas Valley Neighbors by Properly Placing Your Food Scraps in the Green Cart**

Our program turns food scraps into compost that can enrich the soil on our farms and in our home gardens while keeping waste out of the landfill.

**Nothing Goes to Waste**

- Burnt toast? That's compost!
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**Reduce Waste Going to Landfills**

- In the landfill food scraps go to waste but in your green cart they become compost for our farms and home gardens.

**Need More Space in Your Trash Cart?**

- Place food scraps where they belong, in your green cart.

**79%**

of residents think it's important to reduce the amount of waste going to the landfill by placing food scraps in the green cart.

Together, we are enriching the soil on farms and in home gardens throughout our valley.

**Food Scraps Come From:**



Unwanted trimmings from meal prep

Those last bits after a meal

Food that's been in the fridge too long

## Real World Example

## Injunctive Norms



79% of residents think it is important to reduce the amount of waste going to the landfill by placing food scraps in the green cart.



**SOLEDAD**  
CALIFORNIA



February 2022

Dear Soledad Resident,

In early January, a letter was sent telling you about a new state requirement for recycling food scraps instead of disposing of them in the trash. To meet the requirement, food scraps from residents in our City and throughout the Salinas Valley Region are now going in our green carts so they can be turned into compost.

Ahead of the new food scraps recycling program, we knew there would be widespread support from residents for this change in household routines. Residents in our region share the belief that making compost from food scraps is *the right thing to do* and 79% think it is *important to reduce waste going to the landfill*<sup>1</sup>.

**In only the first six weeks of this program, 23% of households in your neighborhood placed their food scraps in the green cart instead of the trash. The number of households will continue to grow as more of our neighbors create new food scrap habits.**

As a reminder, *if it grows, it goes!* Collect food scraps from meal prep, the end of a meal, and even food that has gone bad in your refrigerator and place it unbagged in your green cart.

On behalf of the City of Soledad, Salinas Valley Recycles, and Tri-Cities Disposal & Recycling, thank you for your participation. For questions about this program, please visit the Salinas Valley Recycles website:  
<https://svswa.org/residential/foodscraps>.

Sincerely,

City of Soledad

<sup>1</sup> 2021 survey of Salinas Valley residents.

## Real World Example

# Dynamic Norms



In only the first 6 weeks...  
23% of households in your neighborhood placed food scraps in the green cart. The number will continue to grow.

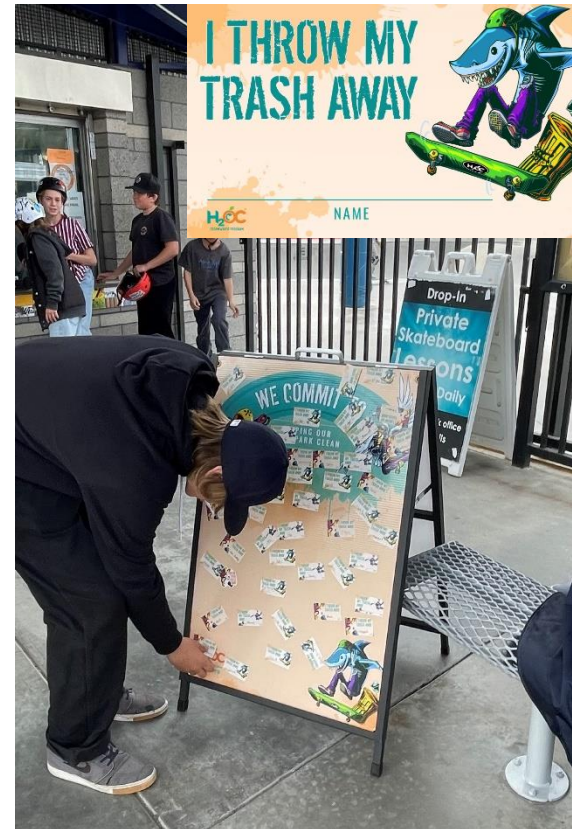


## Real World Examples

# Grouping Commitments to Highlight Approval



Houston Zoo



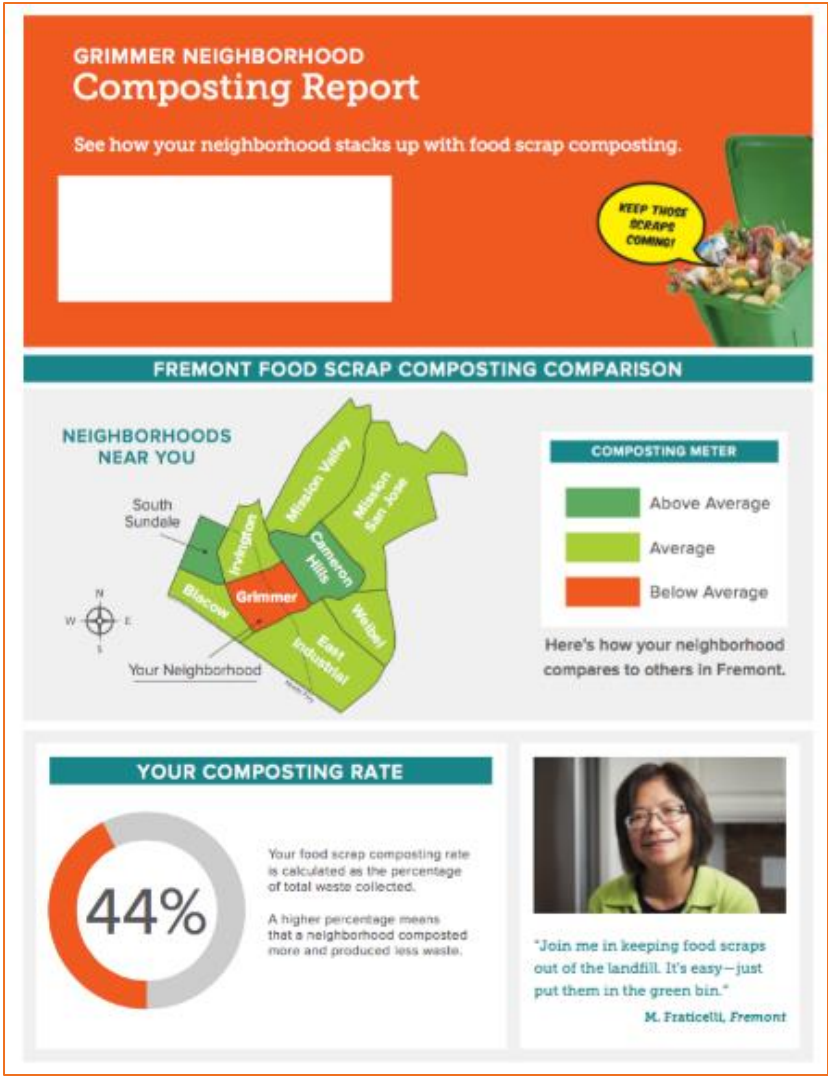
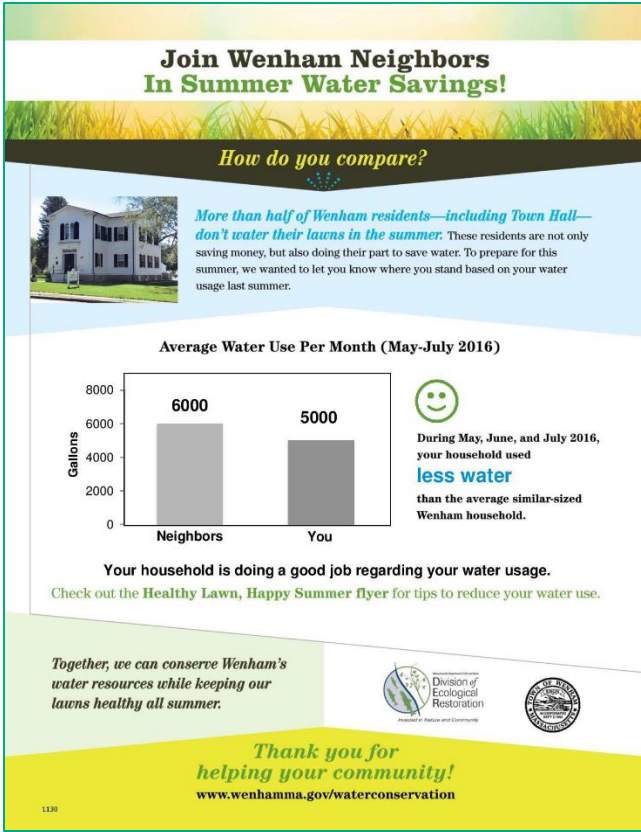
Orange County Stormwater



Cal Recycle Used Oil Block Grantee

Real World Examples

# Compare to Similar Others



## TAKE HOME MESSAGE

*We can leverage the human desire for belonging and drive behavior change by strategically highlighting what other people do or approve of doing.*

Get in Touch:

# Jennifer Tabanico

✉ [tabanico@actionresearch-inc.com](mailto:tabanico@actionresearch-inc.com)

🌐 [actionresearch-inc.com](http://actionresearch-inc.com)



**The Recycling  
Partnership**  
Solving for Circularity



# Social Norms and Sustainable Behavior

February 21, 2024



**The Recycling  
Partnership**  
Solving for Circularity



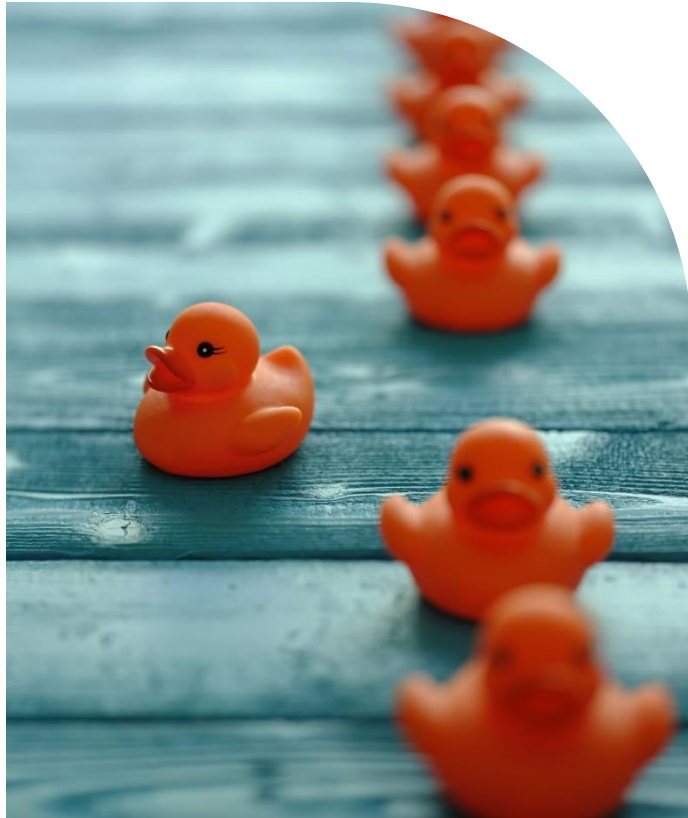
**CENTER FOR  
BEHAVIOR & THE  
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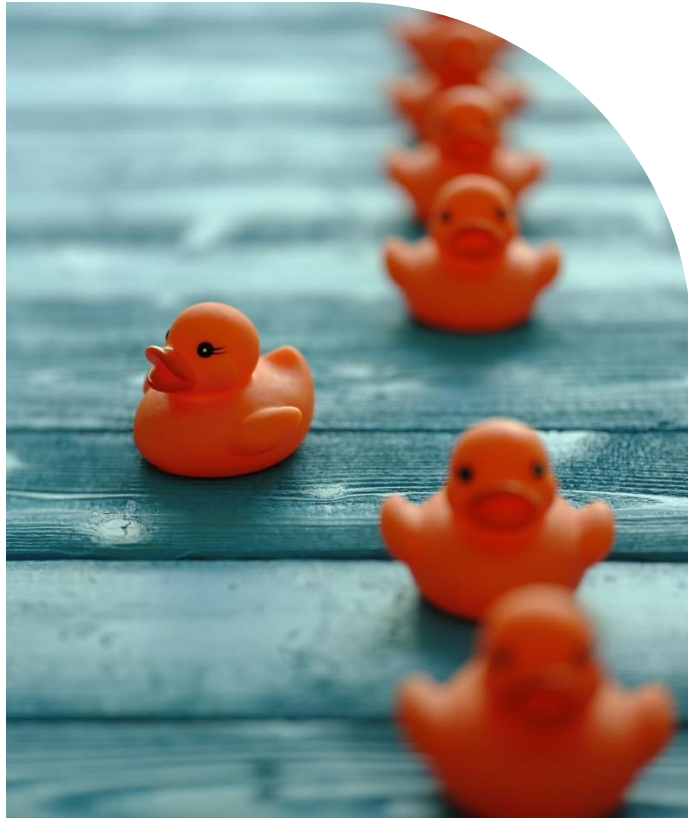


Not Sure How to Act?

**We Pay Attention to...**

 **What other people DO**

 **What other people APPROVE or DISAPPROVE of**

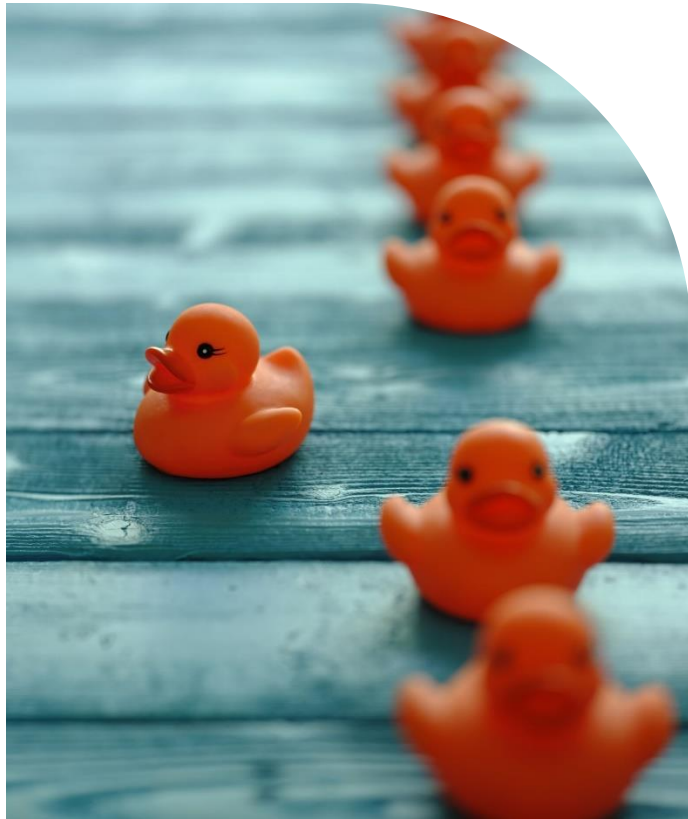


Not Sure How to Act?

**We Pay Attention to...**

 **What *we believe* other people DO**

 **What *we believe* other people  
APPROVE or DISAPPROVE of**



Not Sure How to Act?

## We Pay Attention to...



**Descriptive Norms**

What **we believe** other people **DO**



**Injunctive Norms**

What **we believe** other people  
**APPROVE** or **DISAPPROVE** of



# Evidence for the Impact of Social Norms on Behavior



## ENERGY + TRANSPORTATION

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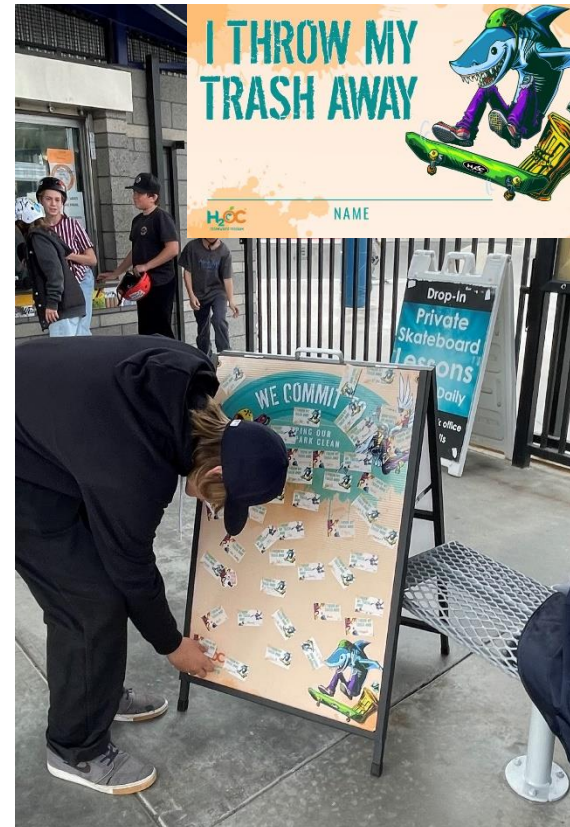


## Real World Examples

# Grouping Commitments to Highlight Approval



Houston Zoo



Orange County Stormwater




Cal Recycle Used Oil Block Grantee

Real World Examples

# Compare to Similar Others


**Join Wenham Neighbors  
In Summer Water Savings!**

*How do you compare?*

 *More than half of Wenham residents—including Town Hall—don't water their lawns in the summer.* These residents are not only saving money, but also doing their part to save water. To prepare for this summer, we wanted to let you know where you stand based on your water usage last summer.

**Average Water Use Per Month (May-July 2016)**



Category	Gallons
Neighbors	6000
You	5000

 During May, June, and July 2016, your household used **less water** than the average similar-sized Wenham household.

**Your household is doing a good job regarding your water usage.**

Check out the *Healthy Lawn, Happy Summer* flyer for tips to reduce your water use.

*Together, we can conserve Wenham's water resources while keeping our lawns healthy all summer.*


**Thank you for helping your community!**

[www.wenhamma.gov/waterconservation](http://www.wenhamma.gov/waterconservation)

1130


**GRIMMER NEIGHBORHOOD  
Composting Report**

See how your neighborhood stacks up with food scrap composting.

 **KEEP THOSE SCRAPS COMING!**

**FREMONT FOOD SCRAP COMPOSTING COMPARISON**

**NEIGHBORHOODS NEAR YOU**




**COMPOSTING METER**

- Above Average
- Average
- Below Average


Here's how your neighborhood compares to others in Fremont.

**YOUR COMPOSTING RATE**

 **44%**

Your food scrap composting rate is calculated as the percentage of total waste collected.

A higher percentage means that a neighborhood composted more and produced less waste.



*"Join me in keeping food scraps out of the landfill. It's easy—just put them in the green bin."*

**M. Fraticelli, Fremont**

## TAKE HOME MESSAGE

*We can leverage the human desire for belonging and drive behavior change by strategically highlighting what other people do or approve of doing.*

Get in Touch:

# Jennifer Tabanico

✉ [tabanico@actionresearch-inc.com](mailto:tabanico@actionresearch-inc.com)

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# Wishcycling

Erez Yoeli with Eli Kramer and Dave Rand





Survey a representative sample of ~700 Americans...

Survey a representative sample of ~700 Americans...

1. Ask participants whether they recycle
2. If respond yes: quiz to assess recycling knowledge
3. Assess attitudes towards recycling and climate change





Item	Photo	Category
Cardboard		Unambiguous recyclables
Jar		Unambiguous recyclables
Paper		Unambiguous recyclables
Container		Unambiguous recyclables
Tuna can		Unambiguous recyclables
Tin foil		Unambiguous recyclables

Item	Photo	Category
Utensils		Unambiguous non-recyclables
Coffee cup (photo changed)		Unambiguous non-recyclables
Hanger		Unambiguous non-recyclables
Plastic bag		Unambiguous non-recyclables
Pizza box with leftover pizza		Unambiguous non-recyclables
Full peanut butter		Unambiguous non-recyclables
Dirty paper plate		Unambiguous non-recyclables

Item	Photo	Category
Empty peanut butter jar		ambiguous
Oily pizza box		ambiguous
Dirty tinfoil		ambiguous
Dirty can (photo changed)		ambiguous
Dirty container		ambiguous

Results...

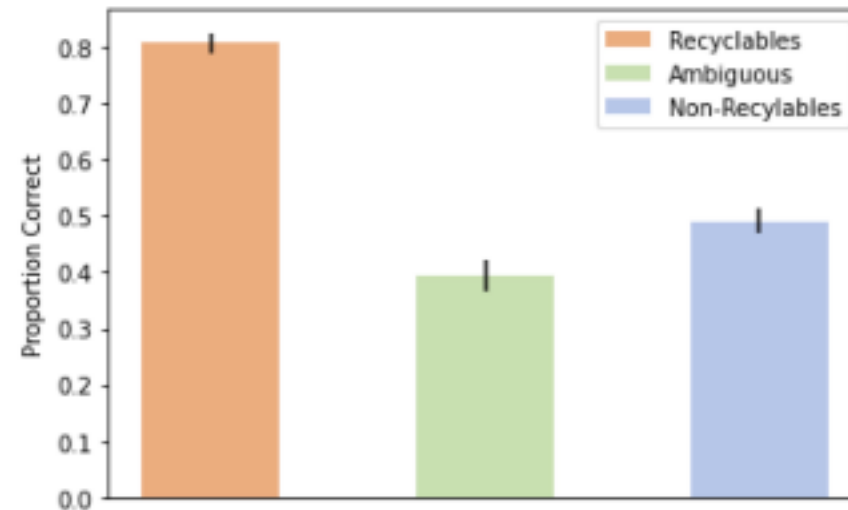
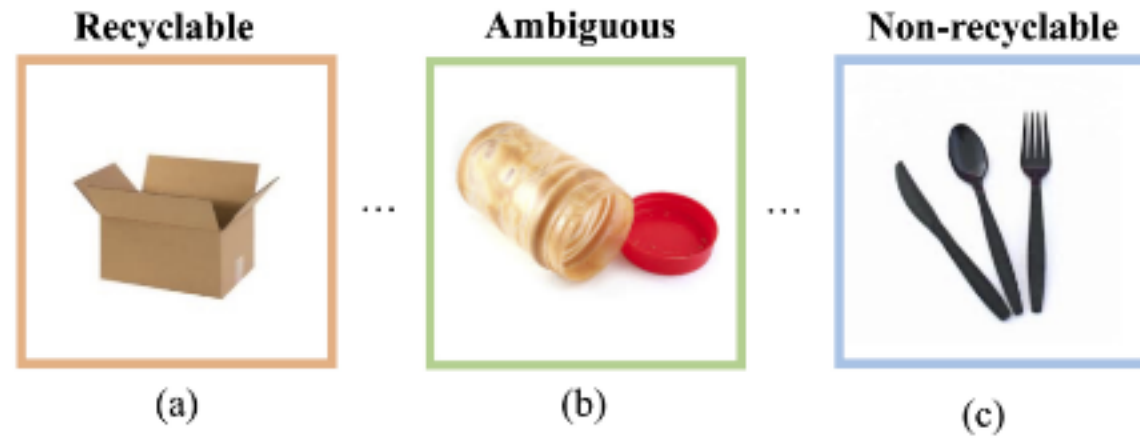
80% of respondents report that they recycle



80% of respondents report that they recycle

	(1)	(2)	(3)	(4)
Climate Gravity Question	0.058*** (0.015)		0.054** (0.018)	
Recycling Importance Scale		0.103*** (0.015)		0.097*** (0.018)
Individual Characteristics	No	No	Yes	Yes
Observations	635	638	554	554
Adjusted R <sup>2</sup>	0.021	0.069	0.057	0.091

## Recyclers' Performance on the Quiz



	With Ambiguous Items		Without Ambiguous Items	
	(1)	(2)	(3)	(4)
Climate Gravity Question	−0.036*** (0.007)		−0.030*** (0.007)	
Recycling Importance Scale		−0.028*** (0.008)		−0.021** (0.008)
Controls for Individual Characteristics	Yes	Yes	Yes	Yes
Observations	8,152	8,152	5,887	5,887

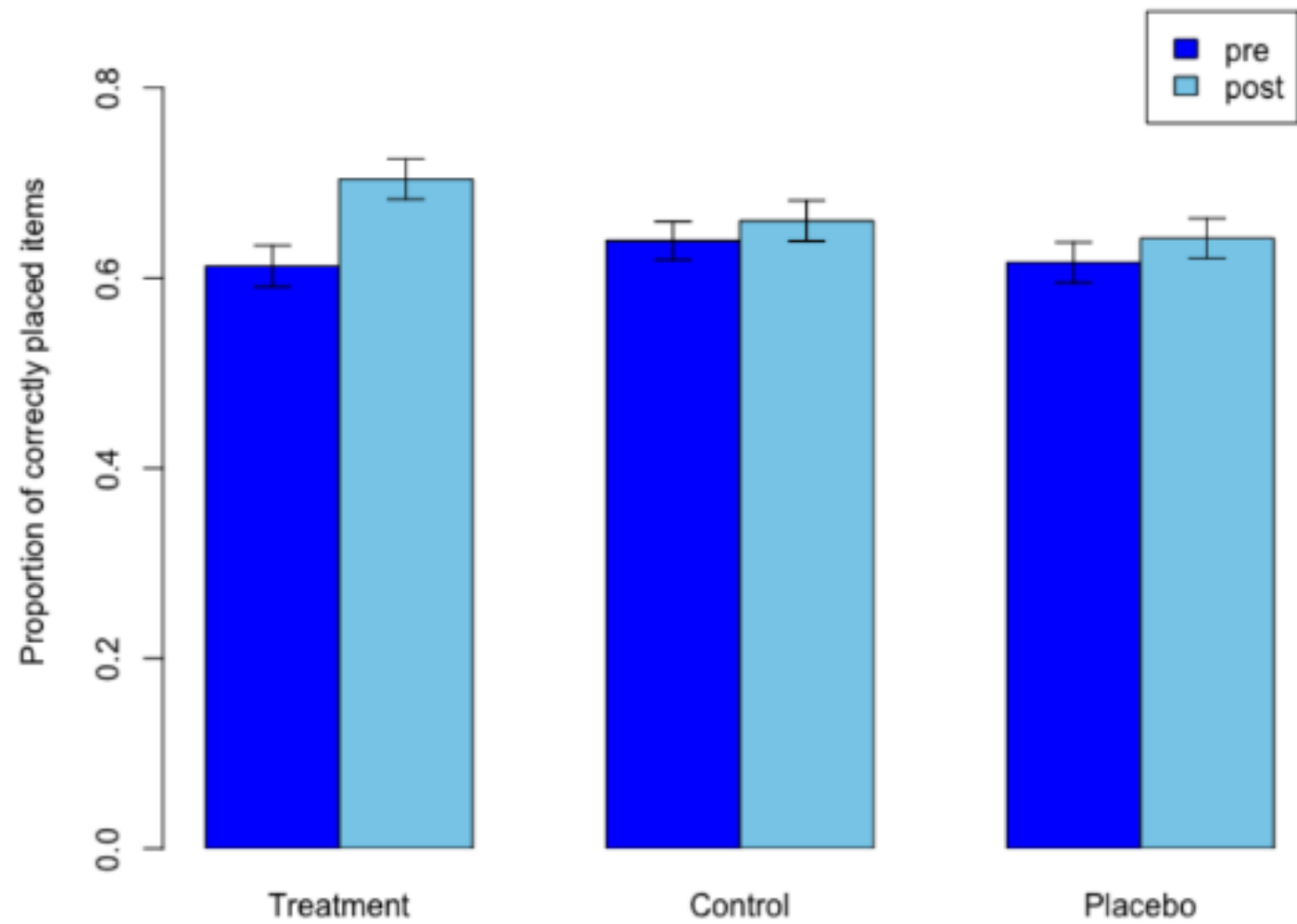
Already motivated to help, but motivation is channeled ineffectively.

Can an informational intervention work?

Already motivated to help, but motivation is channeled ineffectively.

Can an informational intervention work?





Questions? Suggestions?

[eyoeli@mit.edu](mailto:eyoeli@mit.edu)



# Unlocking Recycling's Potential: Day 1

February 21, 2024



**The Recycling  
Partnership**  
Solving for Circularity



**CENTER FOR  
BEHAVIOR & THE  
ENVIRONMENT**



**CRRA**  
Ending waste.

# Agenda

## DAY 1

**Welcome**

---

**Why Behavior Change Matters in this Moment?**

---

**Behavior Change & Behavior-Centered Design**

---

**Equity & Recycling**

---

**Interactive Adventures with Behavioral Insights**

---

**Framing, Empathizing, Mapping**

---

## DAY 2

**Opening, Reflections, and Warm-Up**

---

**About Connected Recyclability**

---

**Levers of Behavior Change**

---

**Ideate, Prioritize & Refine Solutions**

---

**Prototype, Test, Launch, Assess**

---

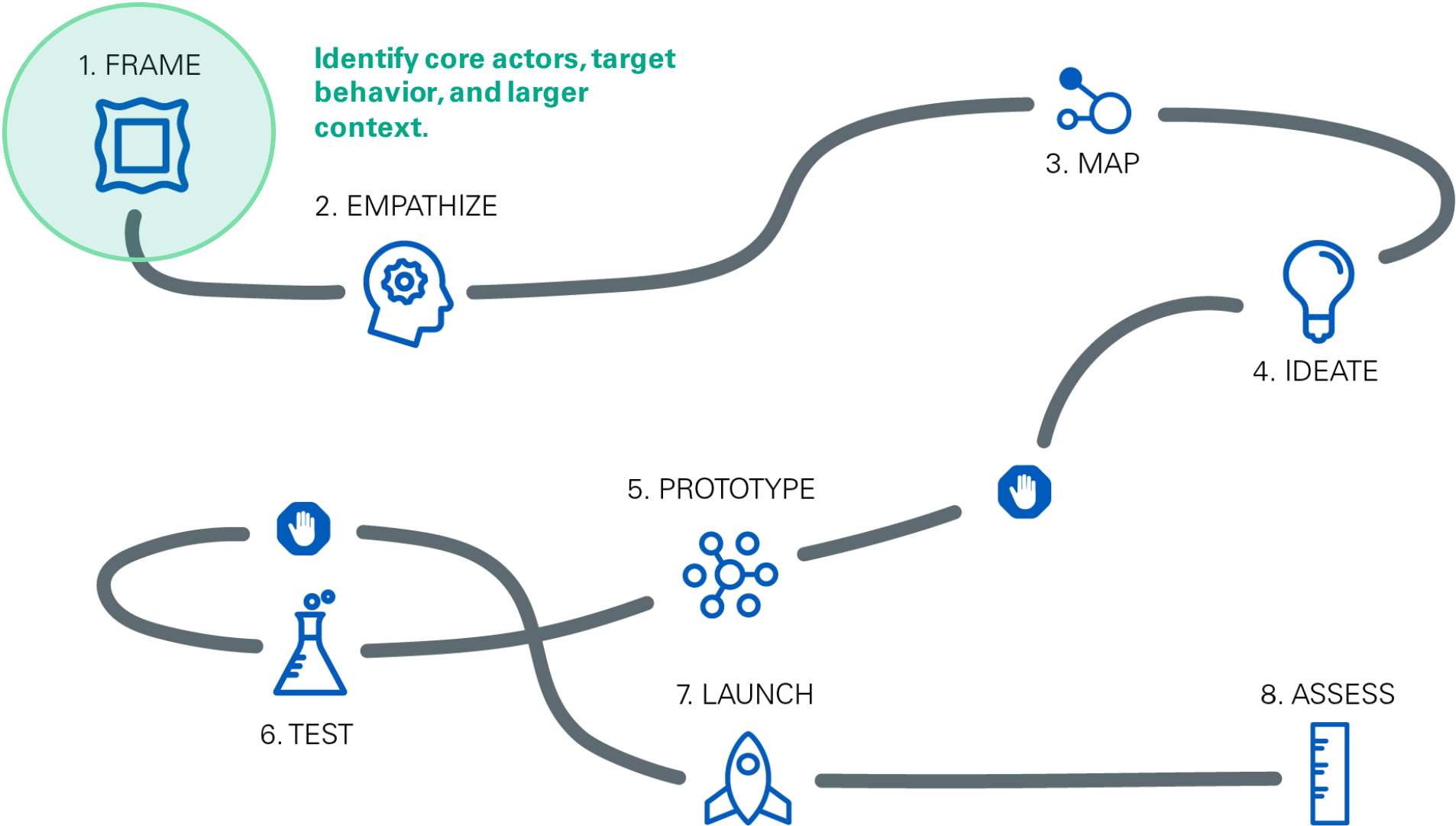
**Equity - What's next?**

---

# Framing the Challenge



# The Behavior-Centered Design Journey



# Frame

**What?** Identify the target behavior, actors, and context for your environmental challenge.

**How?** Background research, problem-behavior-actor mapping, stakeholder-actor mapping, observation

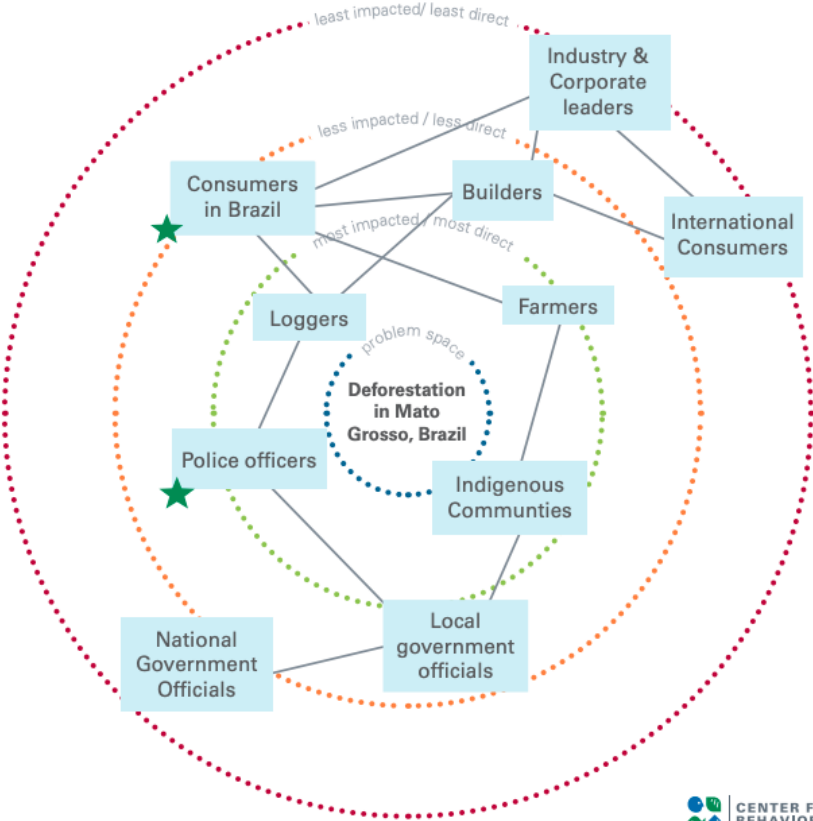
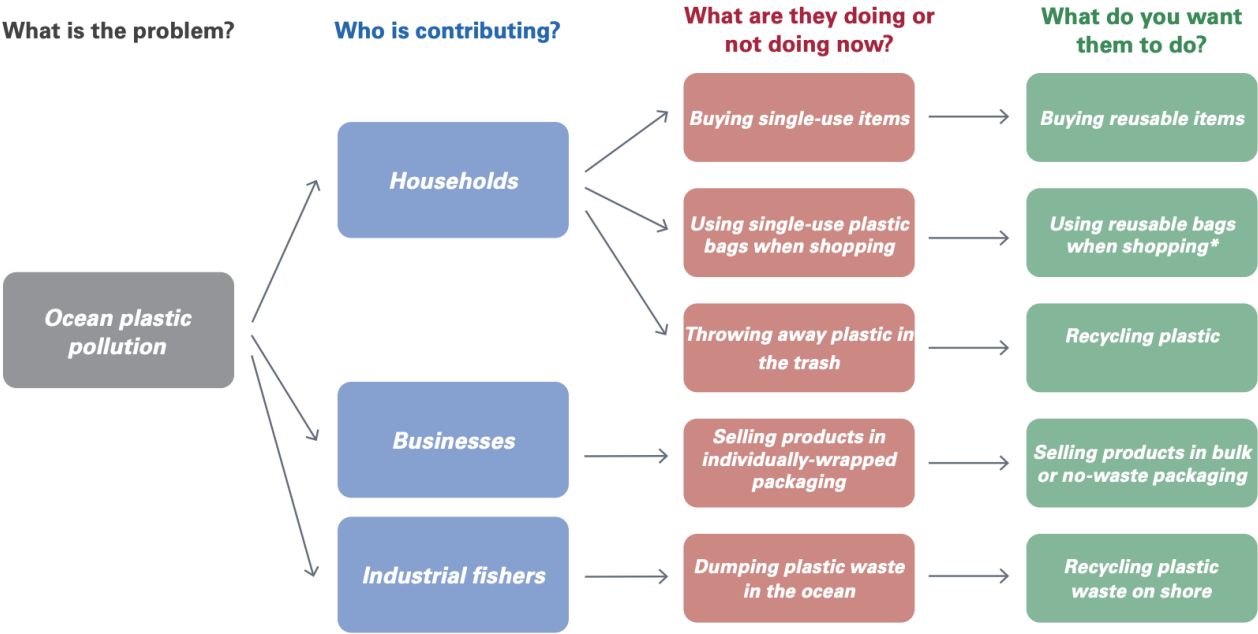
## Key Principles:

- It's important to identify the 'who' and 'what' of behavior change
- Behaviors operate within larger systems
- Beliefs, attitudes, intentions ≠ behaviors

## DEI Considerations:

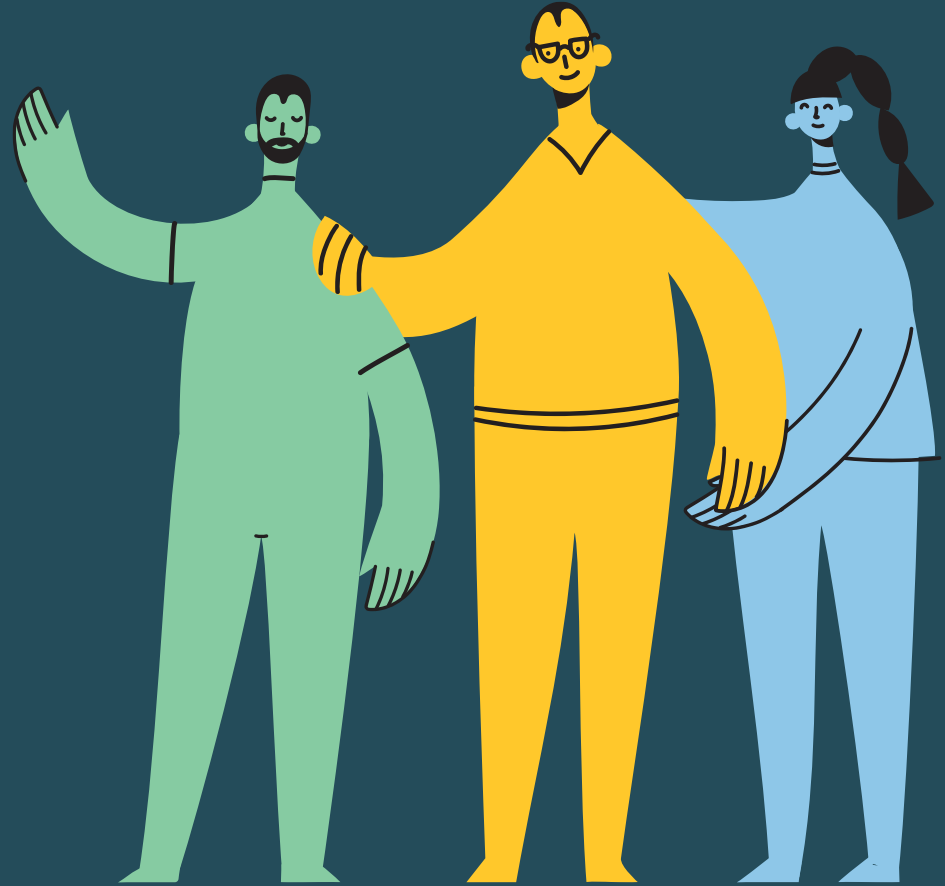
- What are the power dynamics among actors in the larger system?

# Framing the Challenge Tools

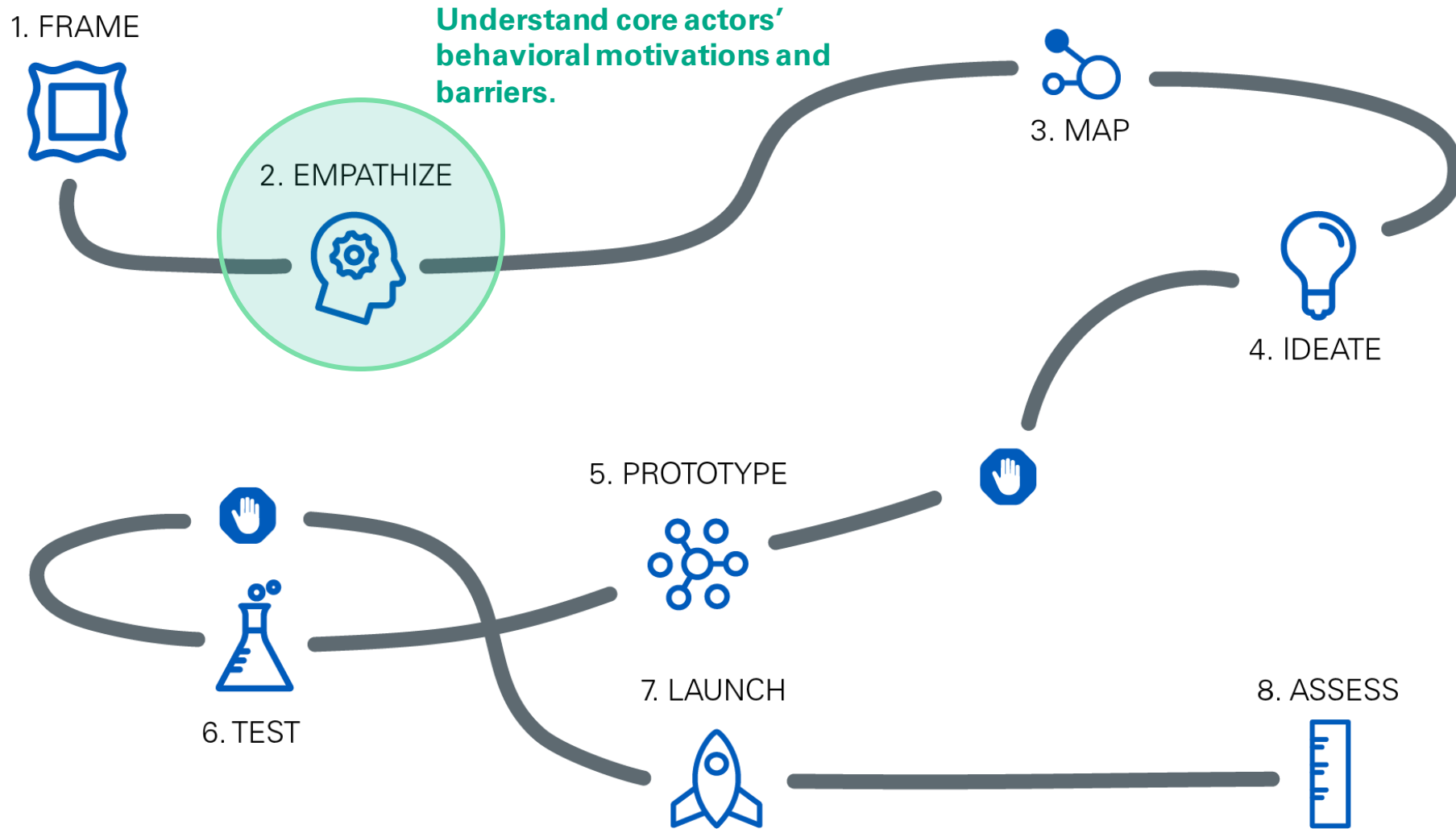




# Empathizing with Our Communities



## The Behavior-Centered Design Journey



# Empathize

**How?** Surveys, key informant interviews, participant photography, observation

## Key Principles:

- Empathizing means understanding people in and on their own terms
- Recognizing your biases and assumptions can help you be more curious and open minded

## DEI Considerations:

- Follow ethical guidelines for collecting data
- Understand your position and identity during research
- Engage in deep and active listening

---

## Behavior Change For Good



We often state that we want to use behavioral tools and strategies to influence the behaviors of other people for good. But we want to think about what that really means and how we make sure that we are indeed doing good.

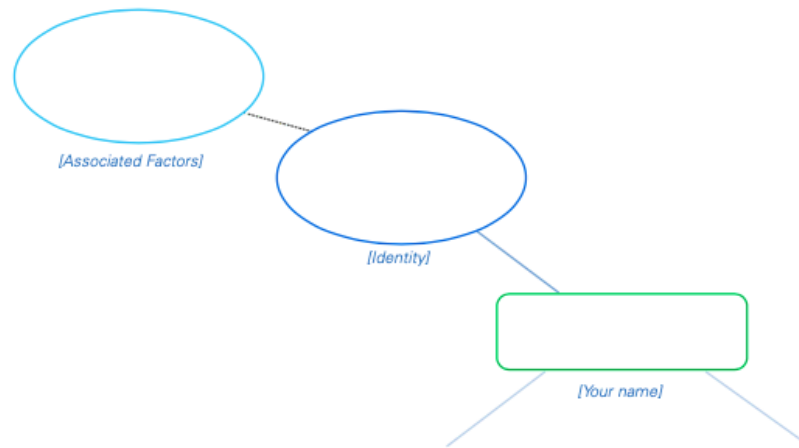
It can be tempting to assume that our audience thinks like we do, has the same values, or reacts the same way, but often, they don't. When we don't take the time to understand people, and in particular, the assumptions we might be making about them, we can replicate the same status quo conditions we're trying to change. Though we have the best intentions, we may in fact cause harm if we are not thoughtful about how we make decisions. It's crucial that we are responsive to the people we're working with and not to our own assumptions.



## EMPATHIZE

### Paseo Protocol

Use the space below to visualize the identities and experiences you are bringing to your design work. 1) Write your name in the center. 2) Draw lines to add words or phrases describing different identities you hold. 3) Add associated factors or meanings for each identity. 4) On the next page, use the questions to reflect on how your values, identities, and experiences could affect how you approach your current behavior change project.



Adapted from Tania Anaissie, Beytna Design and from National School Reform Faculty

# Pros/Cons, and Considerations to Make the Most of Research

	Quantitative	Qualitative
PROS	<ul style="list-style-type: none"><li>• Defined confidence in insights</li><li>• Correlations tell a story</li><li>• Comparable over time</li></ul>	<ul style="list-style-type: none"><li>• Exploratory</li><li>• Anecdotes can be powerfully real, relatable</li><li>• Most people like to talk about recycling</li></ul>
CONS	<ul style="list-style-type: none"><li>• Limited depth of individual insights</li><li>• Beware of canned answers</li><li>• Waste behaviors are complicated thus short questions may be flawed (and long questions may also be flawed)</li></ul>	<ul style="list-style-type: none"><li>• Uncontrolled, context specific settings</li><li>• Social dynamics are unpredictable</li><li>• Curiosity can take over</li><li>• Results lack defined confidence</li></ul>
CONSIDER	<ul style="list-style-type: none"><li>• Reasonable confidence within smaller demographic groups requires planning</li><li>• Standard methods may not be equitable</li><li>• Transcreation of questions</li></ul>	<ul style="list-style-type: none"><li>• Developing a panel of reviewers or participants</li><li>• Plan for developing sharable insights “snacks” for stakeholders</li></ul>



# There are many behaviors and data points to track





# Research Best Practices



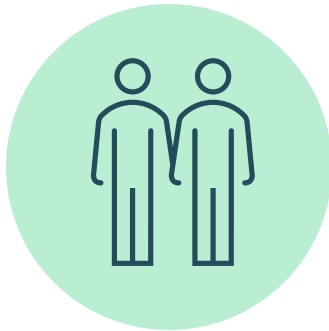
Ask for consent



Challenge your biases  
and be curious



Respect people's time  
and circumstances



Be honest and  
build trust

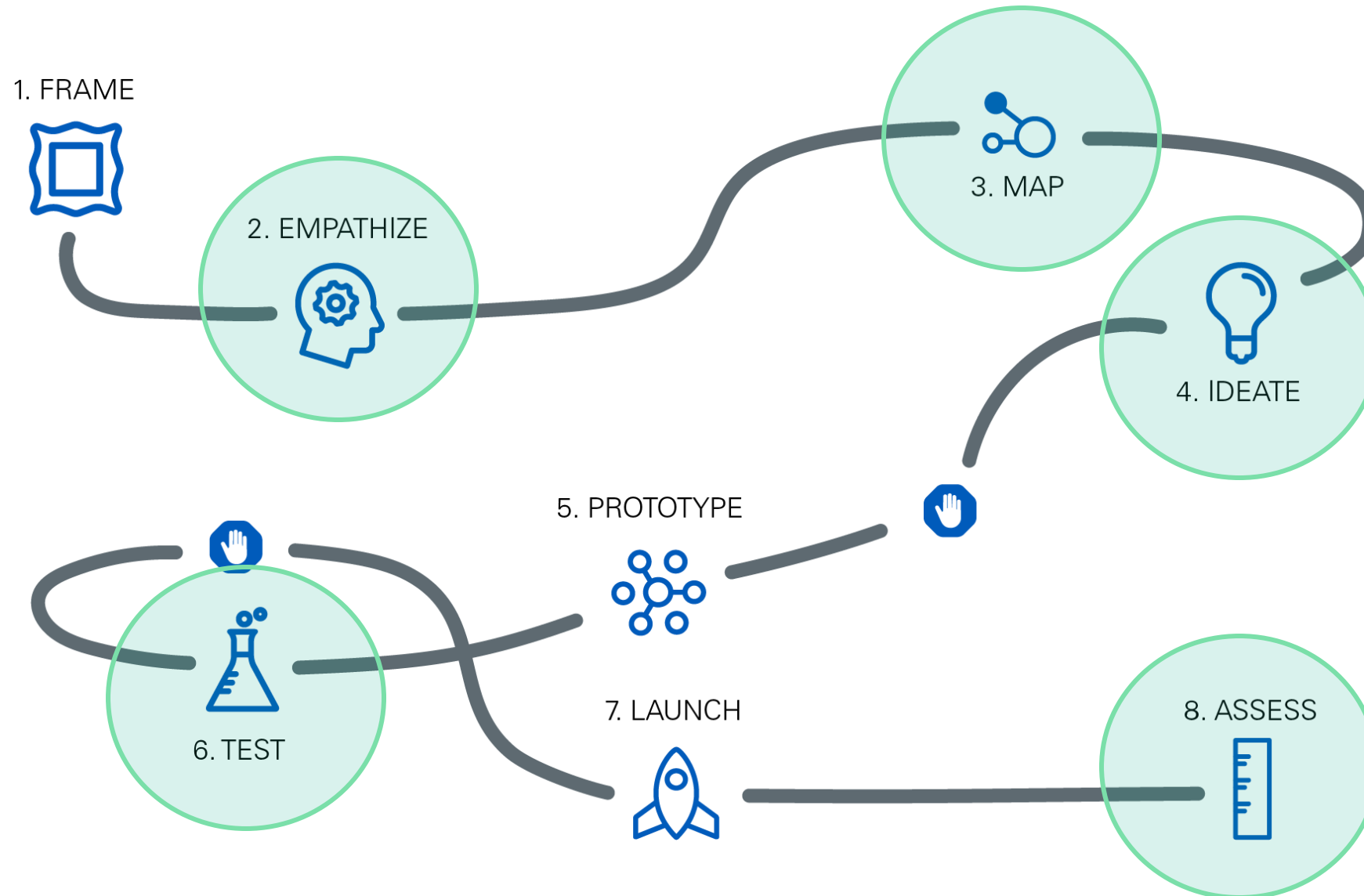


Test your tools and  
get feedback



Document your  
methods and  
processes

## The Importance of Good Data



# Types of Recyclers

Elizabeth Schussler

Sr Dir Social Change, Behavior, & Impact

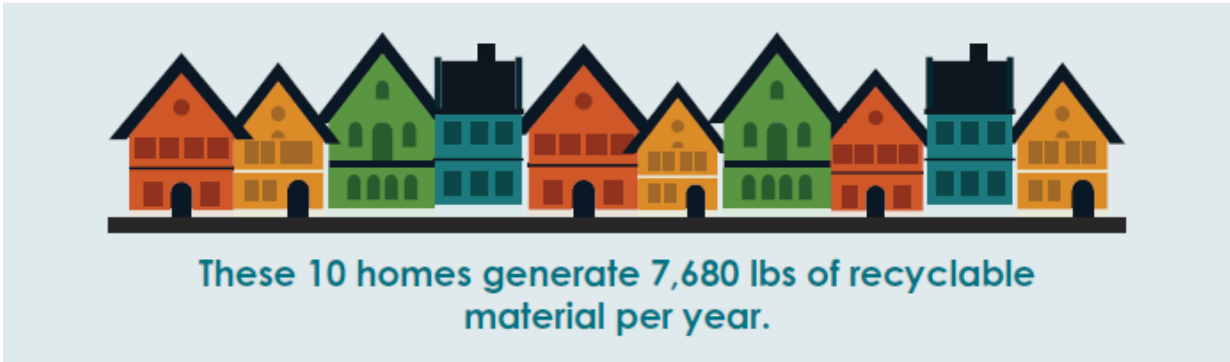
February 21, 2024



**The Recycling  
Partnership**  
Solving for Circularity

We mobilize people, data, and solutions across the value chain to reduce waste and our impact on the environment while also unlocking economic benefits.

# Despite High Levels of Public Support, 50% of Recyclables Lost Due to Behavior Gaps

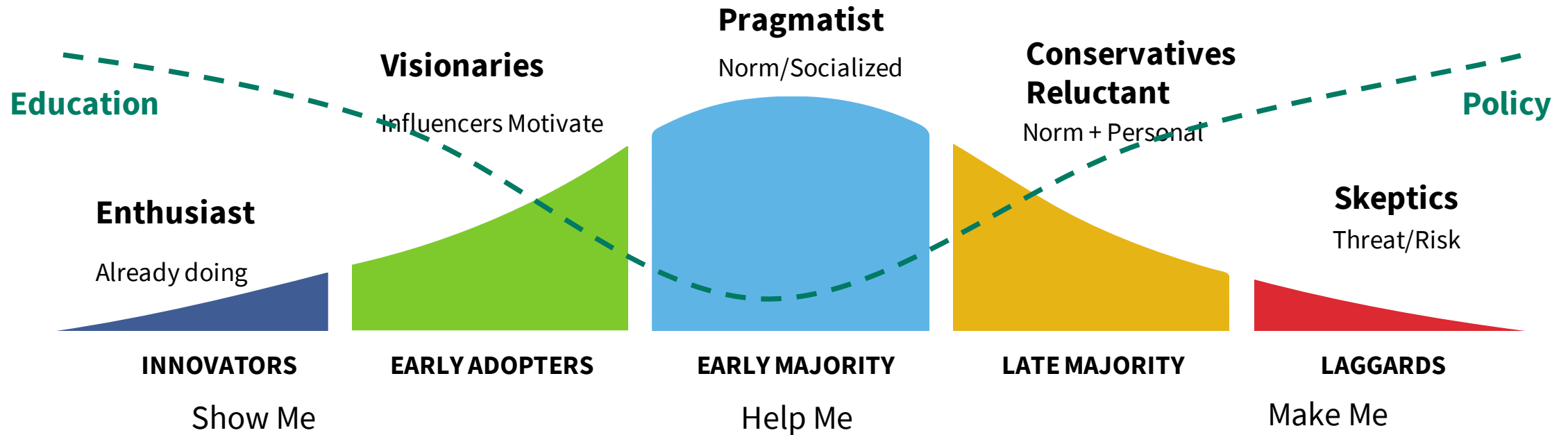


	Participant Capture Rate
Cardboard	81%
Natural HDPE Bottles	64%
Glass	62%
Mixed Paper	61%
Colored HDPE Bottles	57%
PET Bottles	56%
Aluminum Cans	55%
Aseptic/Cartons	51%
Steel Cans	48%
Non-bottle PET	44%
Bulky Rigid	39%
Polypropylene	30%

# Tailoring: What do we know about participation in a city?

## How can data shape our strategy?

### TYPICAL ADOPTION CURVE-Inverse reach

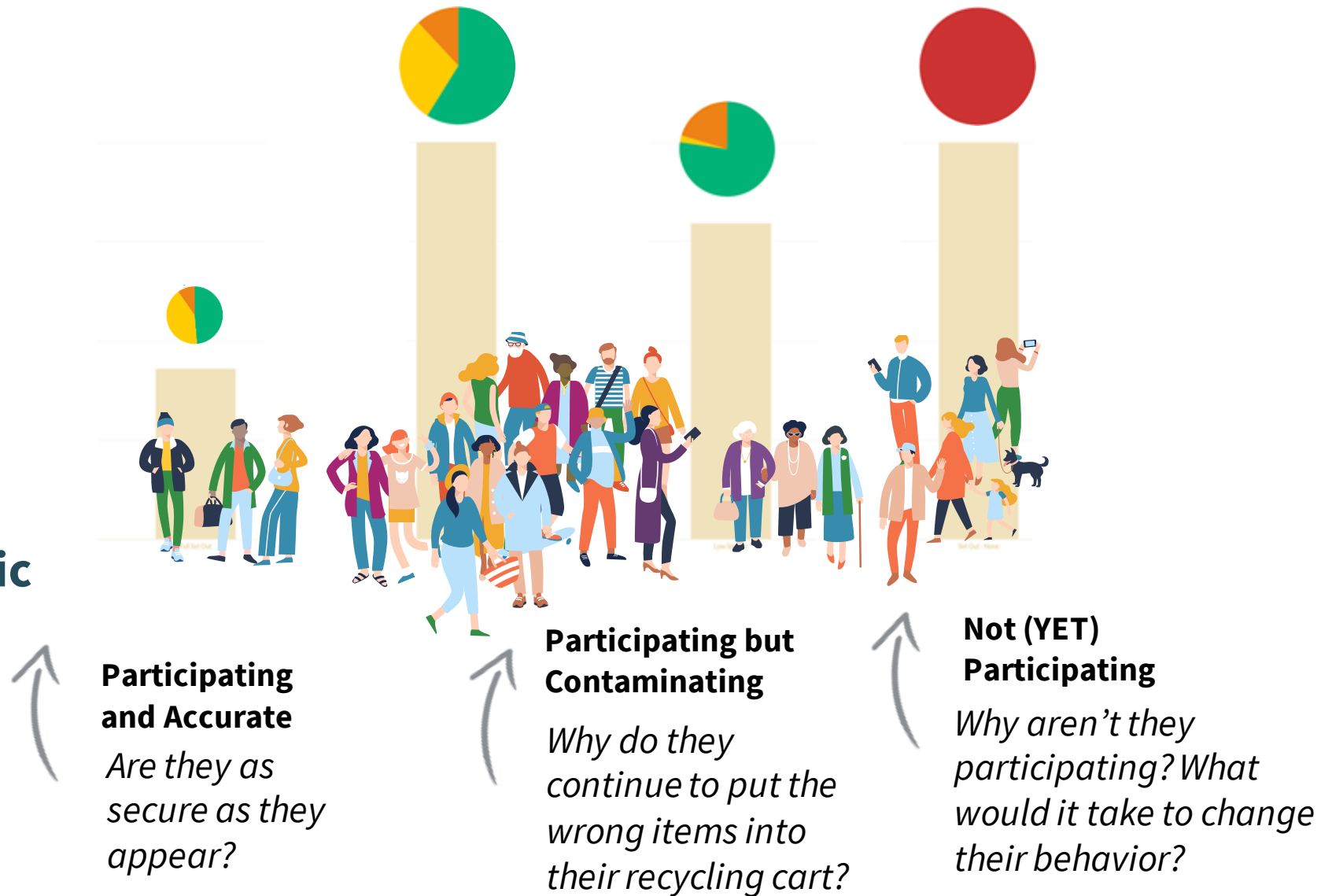


Typical outreach and policy serve the ends of the spectrum, but do not serve the "movable middle".

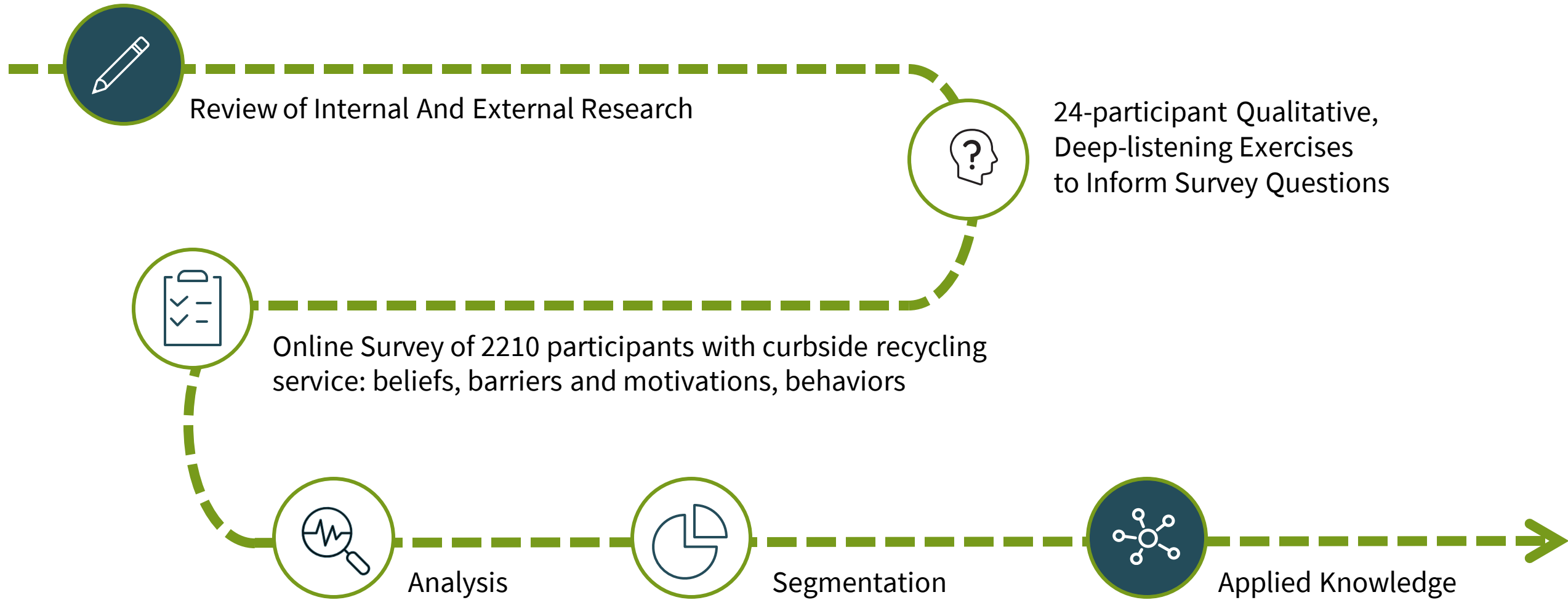
# Why Segment Audiences?

What people SAY about recycling informs our interventions...

Behavior measures (what they DO and how they respond), are more specific metrics of success.



# Our Process From Research to Applied Knowledge





# Segmenting Respondents into Predictive Groupings

## Categories of inquiry that shape segmentation

### Psychographic:

values, interests, lifestyle and personality characteristics.

### Behavioral:

tendencies, habits, products and service usage.

### Demographic:






age, race, religion, gender, family size, ethnicity, income, education.

### Needs:

requirements for participation and confidence in recycling.



12% don't recycle and are distributed across the segments.

5 Types of Recyclers	Eco Activators (25%) 	Committed Followers (24%) 	Discouraged Self-Doubters (18%) 	Detached Abiders (16%) 	Conflicted, Overwhelmed (16%) 
Segment Tendencies (but not exclusives)	45+ yo, higher income & education, larger home, more Asian, fewer Black	45+ yo, higher income, average race/ethnicity mix	18-64 yo, lower income & education, smaller household, more Black	45+ yo, small households, more conservative	18-64 yo, mid-upper income, larger household, more Hispanic, Black, Asian

*Recycling* fill in blank  
+ Inclinations

*Protects the planet*  
• Social, Emotional






*Is right to do, a civic duty*  
• Private, Practical

*Reduces waste*  
• Private, Practical

*Is or feels required*  
• Private, Emotional

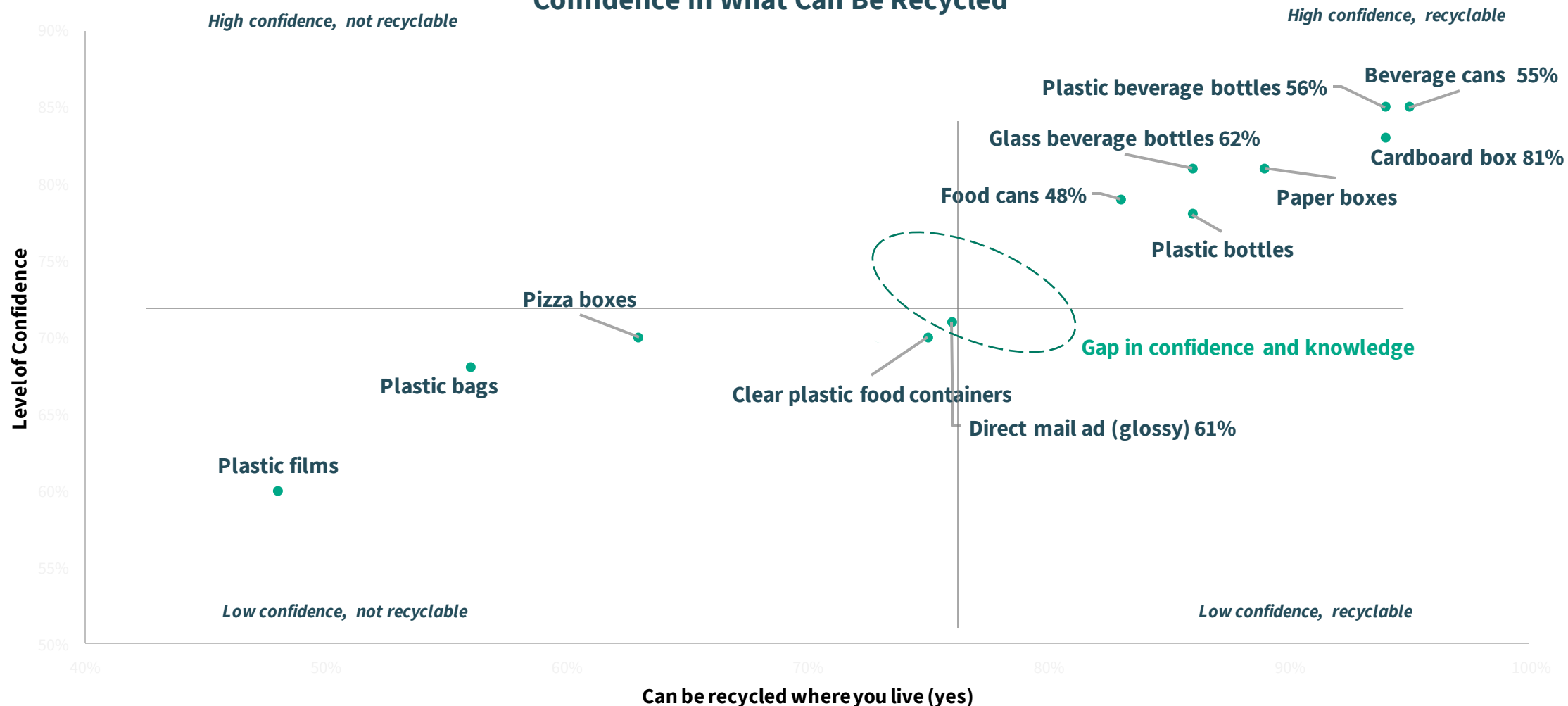
*Could help me and the planet*  
• Social, Emotional

2 groups	MORE DEDICATED		LESS DEDICATED		
Feelings about recycling	HOPEFUL PROUD PASSIONATE FRUSTRATED	IMPORTANCE RESPONSIBILITY CONFIDENT COMMUNITY	GUILT CONFUSED TOO HARD ALONE	FOLLOWING ALONG UNSURE CONFUSED RESENTFUL	PASSIONATE JUDGED ANXIOUS TOO MUCH EFFORT
Behaviors around recycling	<ul style="list-style-type: none"> <li>Research and teach</li> <li>Overcome issues</li> </ul>	<ul style="list-style-type: none"> <li>Organized</li> <li>Intentional</li> <li>Consistent</li> </ul>	<ul style="list-style-type: none"> <li>Defer to labels (pkg, bin)</li> <li>Low effort</li> <li>Resent lack of support</li> <li>Doubt selves, process</li> </ul>	<ul style="list-style-type: none"> <li>Organized</li> <li>Defer to gov, friends</li> <li>Low effort, detail</li> <li>Doubt benefits</li> </ul>	<ul style="list-style-type: none"> <li>Research and teach</li> <li>Defer to digital, friends</li> <li>Resent warnings, fines</li> <li>Don't go out of the way</li> </ul>

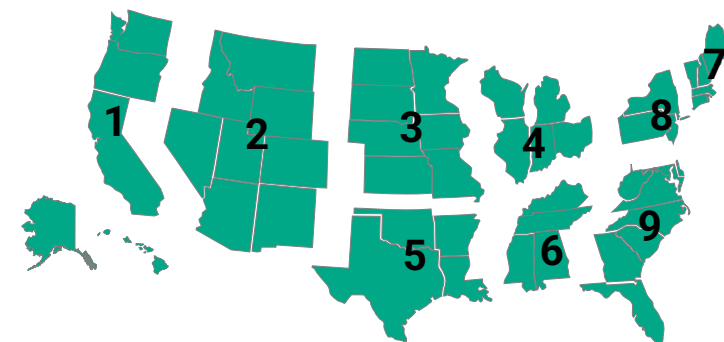
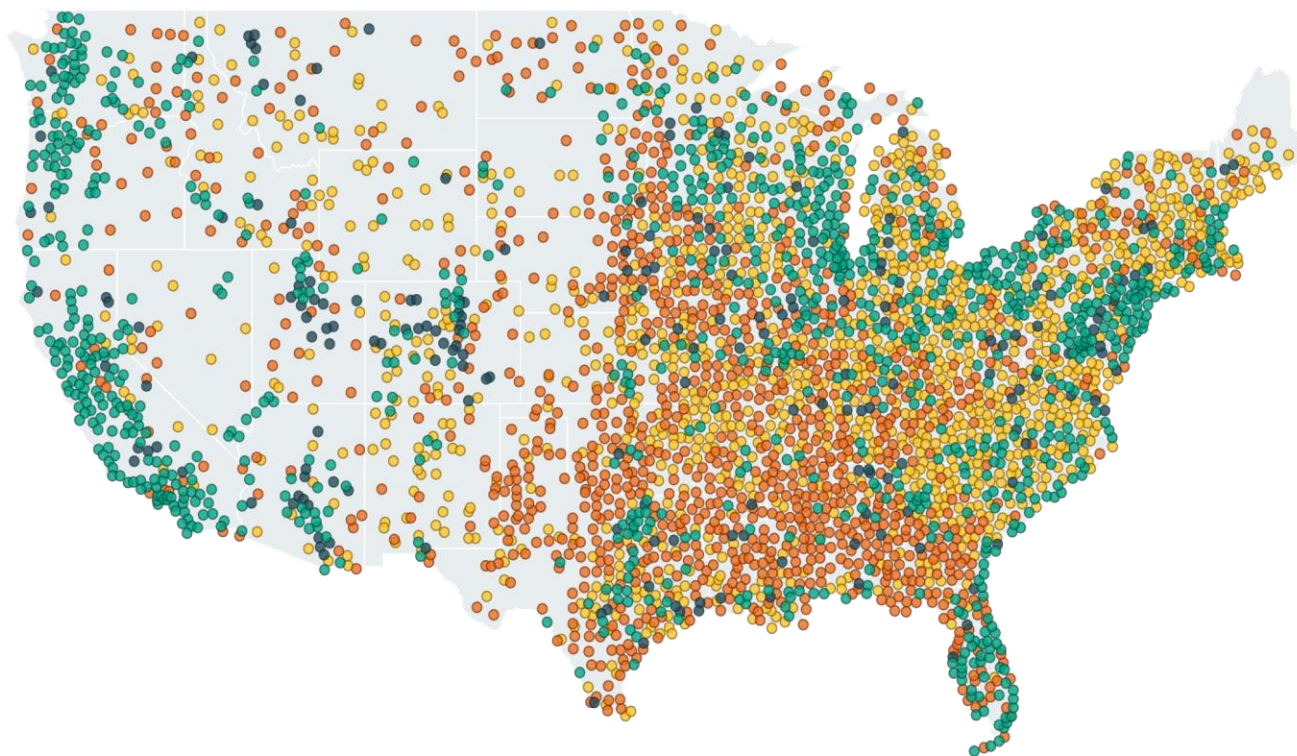
5 Types of Recyclers	Eco Activators (25%) 	Committed Followers (24%) 	Discouraged Self-Doubters (18%) 	Detached Abiders (16%) 	Conflicted, Overwhelmed (16%) 
Segment Tendencies (but not exclusives)	45+ yo, higher income & education, larger home, more Asian, fewer Black	45+ yo, higher income, average race/ethnicity mix	18-64 yo, lower income & education, smaller household, more Black	45+ yo, small households, more conservative	18-64 yo, mid-upper income, larger household, more Hispanic, Black, Asian
<b>Recycling</b> <i>fill in blank</i> <b>+ Inclinations</b>	<b>Protects the planet</b> • Social, Emotional	<b>Is right to do, a civic duty</b> • Private, Practical	<b>Reduces waste</b> • Private, Practical	<b>Is or feels required</b> • Private, Emotional	<b>Could help me and the planet</b> • Social, Emotional
<b>Feelings</b> about recycling	<ul style="list-style-type: none"> <li>• Hopeful</li> <li>• Proud</li> <li>• Passionate</li> <li>• I'm not doing enough</li> <li>• Disappointed</li> </ul>	<ul style="list-style-type: none"> <li>• Important, easy</li> <li>• Responsibility</li> <li>• Confident</li> <li>• Connected to others</li> </ul>	<ul style="list-style-type: none"> <li>• I could do more</li> <li>• Guilt</li> <li>• Confused</li> <li>• Takes too much effort</li> <li>• Alone</li> </ul>	<ul style="list-style-type: none"> <li>• It is expected</li> <li>• Unsure about benefits</li> <li>• Confused</li> <li>• Overwhelmed</li> <li>• Disconnected</li> </ul>	<ul style="list-style-type: none"> <li>• I could do more</li> <li>• Passionate</li> <li>• Judged (do or don't)</li> <li>• Anxious, exhausted</li> <li>• Worried, embarrassed</li> <li>• Takes too much effort</li> </ul>
<b>Behaviors</b> around recycling	<ul style="list-style-type: none"> <li>• Research and teach</li> <li>• Overcome issues</li> <li>• Learned + improved</li> <li>• Like to sort</li> <li>• Doubt others recycle</li> <li>• No info = wishcycle</li> </ul>	<ul style="list-style-type: none"> <li>• Organized</li> <li>• Intentional</li> <li>• Consistent</li> <li>• Learned + improved</li> <li>• No info = wishcycle</li> </ul>	<ul style="list-style-type: none"> <li>• Defer to labels (pkg, bin)</li> <li>• Ignore, avoid</li> <li>• Low effort</li> <li>• Resent lack of support</li> <li>• Doubt selves, process</li> </ul>	<ul style="list-style-type: none"> <li>• Organized</li> <li>• Defer to gov, friends</li> <li>• Low effort, detail</li> <li>• Resent requirements</li> <li>• Doubt others recycle</li> <li>• Doubt benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Research and teach</li> <li>• Crave organization</li> <li>• Defer to digital, friends</li> <li>• Frustrated, too hard</li> <li>• Resent warnings, fines</li> <li>• Don't go out of the way</li> </ul>
<b>Needs + Conditions</b> to recycle (incl reassurance and positive impacts)	<ul style="list-style-type: none"> <li>• System investment</li> <li>• More participation</li> <li>• More information</li> <li>• Expand accepted</li> </ul>	<ul style="list-style-type: none"> <li>• Feedback</li> <li>• Expand accepted</li> <li>• More predictability</li> </ul>	<ul style="list-style-type: none"> <li>• Invitation, appeal</li> <li>• More encouragement</li> <li>• In-home bins, tips</li> <li>• Frequent reminders</li> <li>• Quick reference</li> </ul>	<ul style="list-style-type: none"> <li>• Invitation, appeal</li> <li>• Gratitude, incentive</li> <li>• Local pride, support</li> <li>• Address cost/benefit</li> <li>• Econ development</li> </ul>	<ul style="list-style-type: none"> <li>• In-home bins, tips</li> <li>• Address cost/fines</li> <li>• Gratitude, incentive</li> <li>• Frequent reminders</li> <li>• Customer service</li> </ul>
<b>Universal needs</b>	<ul style="list-style-type: none"> <li>• Recycling is worth the effort – benefits, impacts, reliability, actually happening? <ul style="list-style-type: none"> <li>• Tips: “How clean is clean?”</li> </ul> </li> <li>• Tailored instructional information</li> <li>• Social proof that others are participating, and that leadership supports recycling.</li> </ul>				

Confidence in knowledge deteriorates with items that have food residue, are complex materials (e.g., glossy vs plain paper), or are less consistently recyclable.

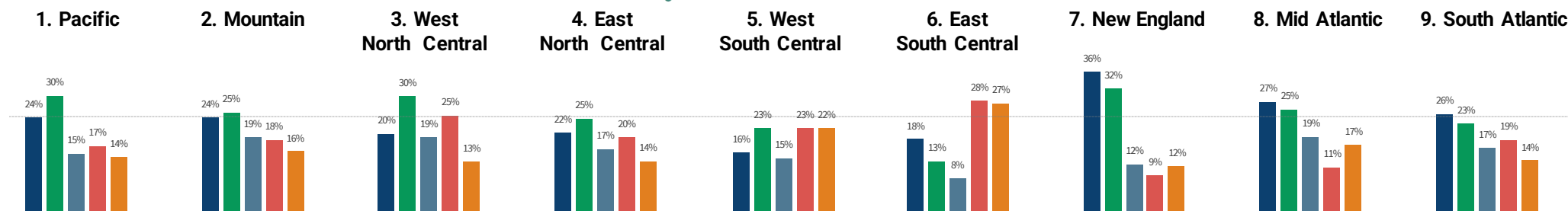
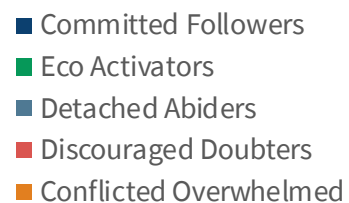
## Confidence in What Can Be Recycled



## ACCESS

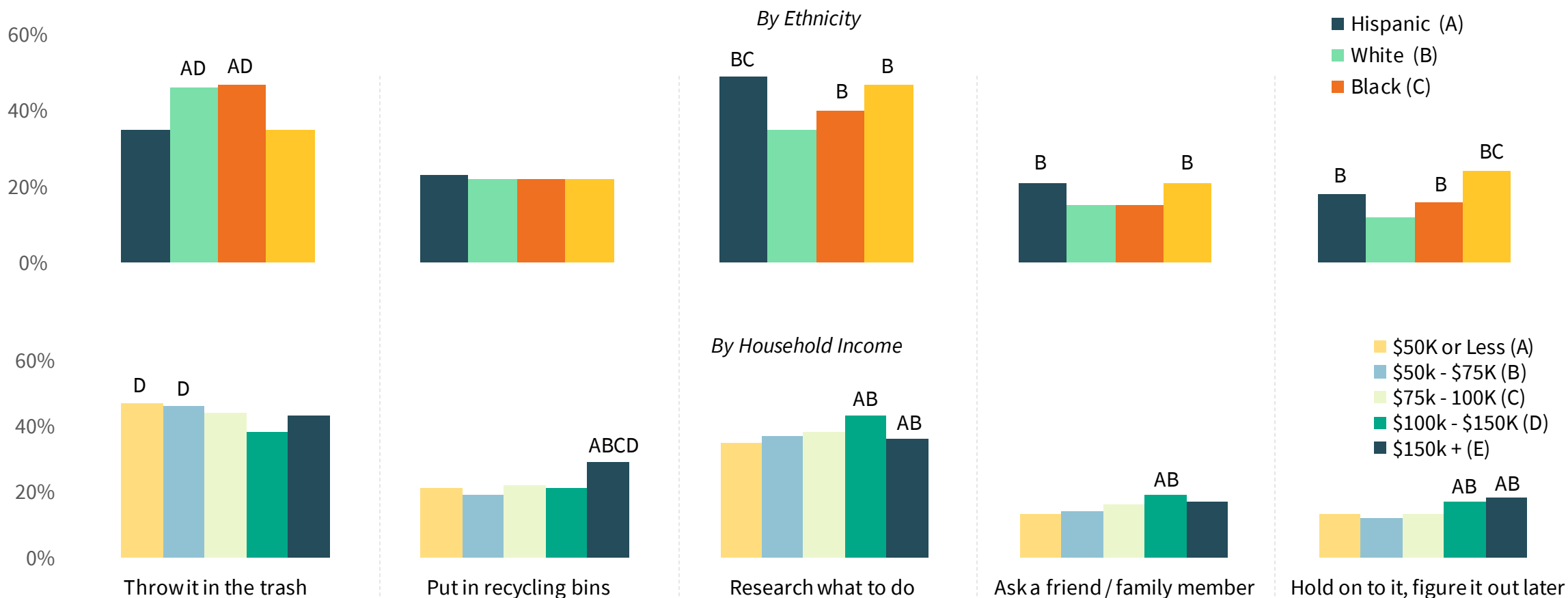


## SEGMENTATION

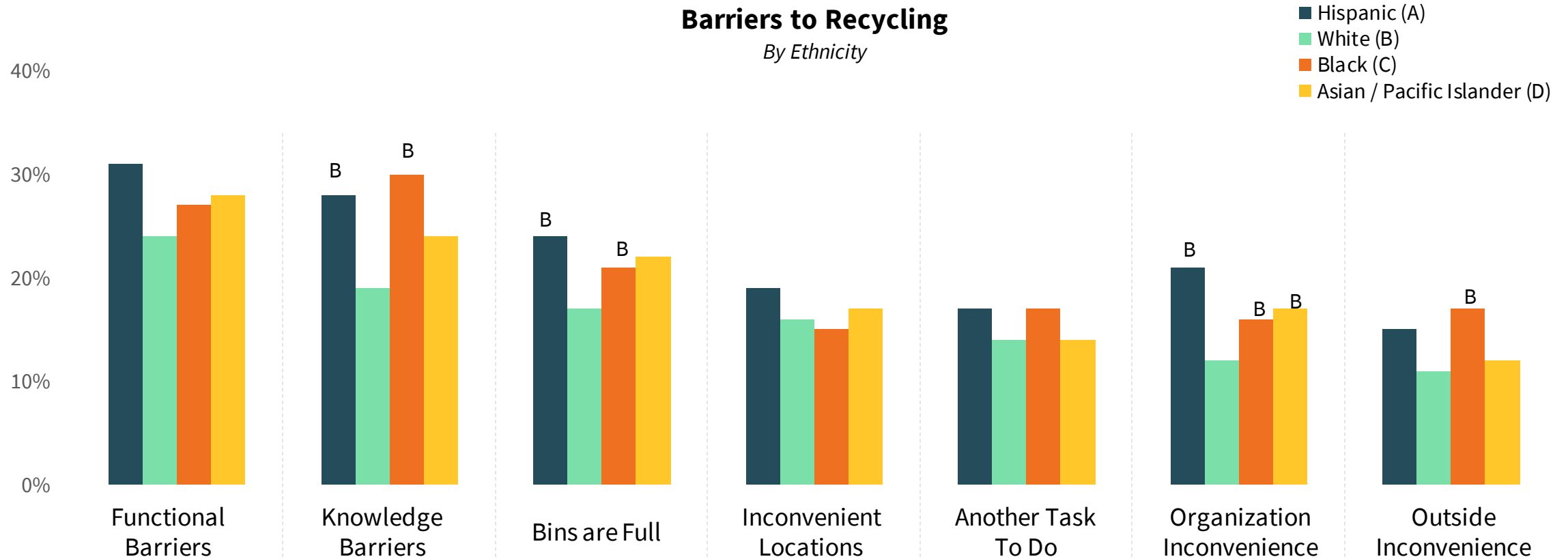


White, as well as lower income households, are less likely to figure out whether to recycle items.

## Action When Don't Know What To Do



# Hispanic/Black households report more knowledge barriers.



**How to read:** If there's a letter on top of the bar, it means that **bar is significantly higher** than the bar/sample with the corresponding letter for that attribute. Ex: Hispanic/black households are more likely to experience knowledge barriers than white households.



## Activity: Discuss how you can apply this audience segmentation to your case study?

1

Discuss key motivations and barriers from your case study dataset.

2

Why do you think the core actors are currently doing or not doing the target behavior?

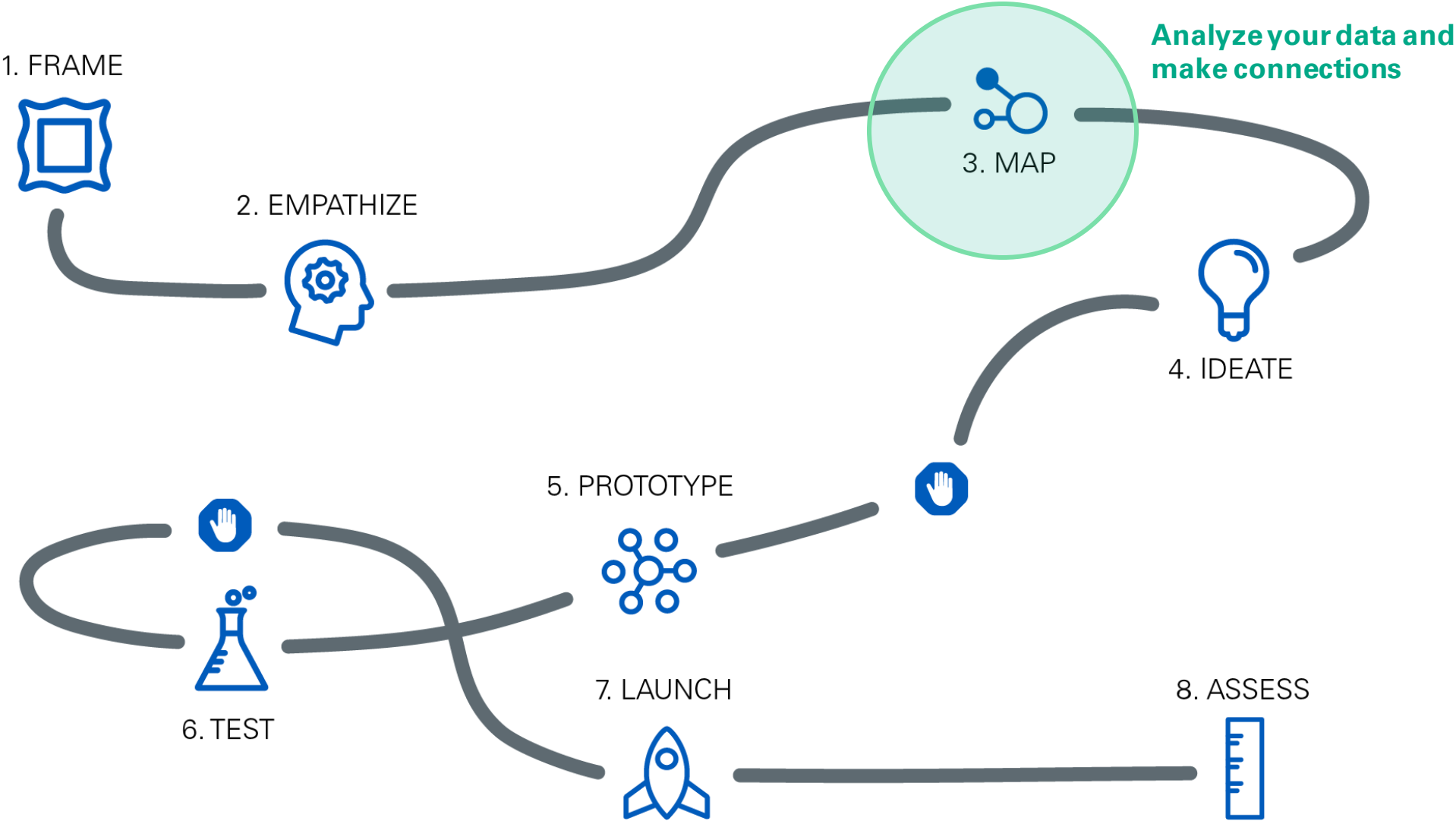
3

Are there any trends you notice among segments of people represented in the data?

# Mapping Behavioral Insights



# The Behavior-Centered Design Journey



# Map

**What?** Draw causal links between data and behavioral science.

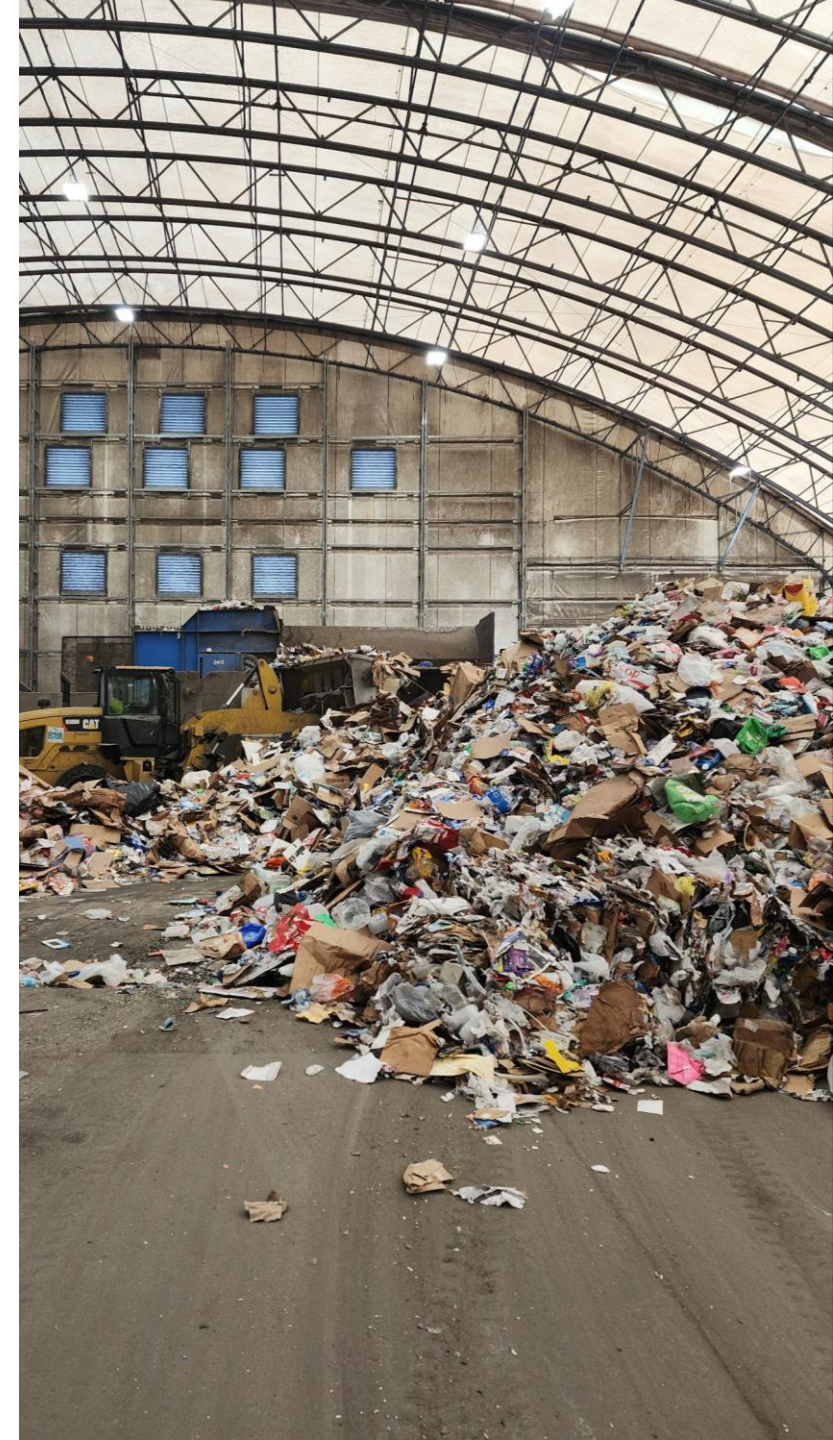
**How?** Write hypotheses about the motivations and barriers that are likely to increase our target behavior.

**Key Principle:**

- Ground your hypothesis about what could change behavior in observation and science

**DEI Considerations:**

- Build your hypotheses based on data, not assumptions
- Consider how context affects motivations and barriers



## Step 1

# Activity: Data Processing

1

Review your data for your case and notes from the Empathize step.

2

Remember to question your assumptions! Based on your experience and data, what do you think is most likely to make a difference?

3

In your groups, select 1-2 key motivations/barriers you find most insightful or likely to cause behavior change

## Step 2

# Write a Hypothesis

**Data point:** What you learned from your research.



**Hypothesis:** Why this data point is relevant for creating behavior change.

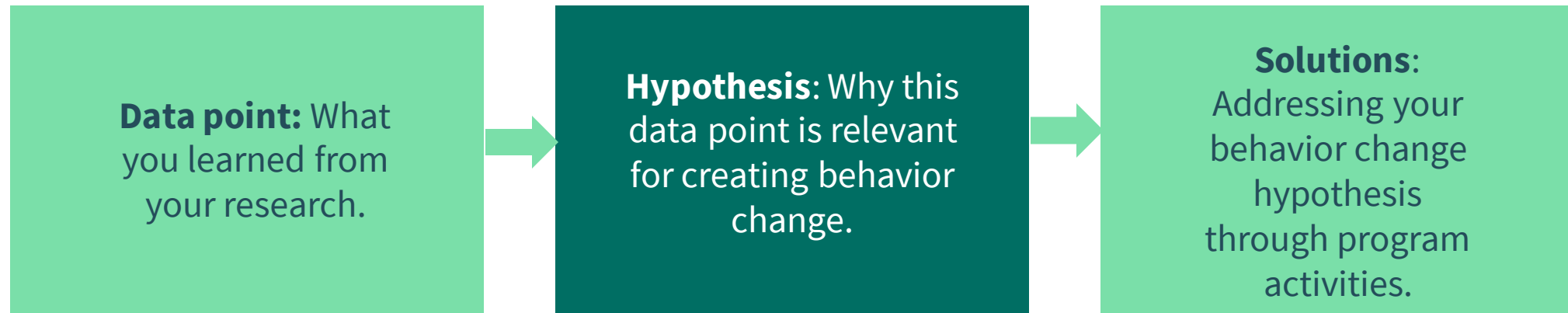


**Solutions:**  
Addressing your behavior change hypothesis through program activities.



## Step 2

# Write a Hypothesis





# Translating Data to Hypothesis

## Example formula:

If [target actor] believe/know/think/feel/see [desired state based on motivation or barrier] then [target actor] will [target behavior].

**Example barrier:** *Using a reusable bag is not a visible behavior by others.*

**Example desired state:** *Believe other people are using reusable bags*

**Example hypothesis:** If households believe other people are using reusable bags, then I expect households to bring reusable bags.

## Step 2

# Activity: Write a Hypothesis

1

Based on the 1-2 key motivations and barriers you selected as a group, identify key beliefs, attitudes, or context you want to change.

2

Use your worksheet to develop hypotheses for behavior change.

3

Refine hypotheses and vote on your favorite.

# Unlocking Recycling's Potential: Day 2

February 22, 2024



**The Recycling  
Partnership**  
Solving for Circularity



**CENTER FOR  
BEHAVIOR & THE  
ENVIRONMENT**

# Agenda

## DAY 1

**Welcome**

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**Why Behavior Change Matters in this Moment?**

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**Behavior Change & Behavior-Centered Design**

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**Equity & Recycling**

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**Interactive Adventures with Behavioral Insights**

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**Framing, Empathizing, Mapping**

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**About Connected Recyclability**

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**Levers of Behavior Change**

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**Ideate, Prioritize & Refine Solutions**

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**Prototype, Test, Launch, Assess**

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**Equity - What's next?**

---

# Digital Solutions to Support People



## Younger citizens have unmet needs

Question	18 -44	44+
I'm <b>confused</b> about recycling information on packaging	More	Less
I <b>don't know</b> how or where to learn about <b>local recycling</b>	More	Less
I <b>don't get</b> recycling information from my local service often <b>enough</b>	More	Less
I want to <b>learn more</b> about recycling	More	Less

Younger citizens expressed a **greater gap** in knowledge as well as a **desire** to fill that gap

## BIPOC citizens have unmet needs

Question	Hispanic/Black/Asian	White
I'm <b>confused</b> about recycling information on packaging	More	Same
I <b>don't know</b> how or where to learn about <b>local recycling</b>	More	Same
I <b>don't get</b> recycling information from my local service often <b>enough</b>	More	Same
I want to <b>learn more</b> about recycling	More	Less

BIPOC citizens expressed a **greater gap** in knowledge as well as a **desire** to fill that gap



## How Can We Reach Our Audience?

Younger citizens and BIPOC populations can be best reached through digital means

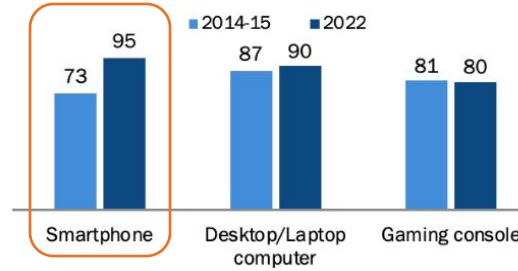


**Younger** citizens are largely dependent on digital devices, like smartphones.

**Young BIPOC** citizens live in an especially digital world.

### Nearly all teens in 2022 have access to a smartphone, up from 73% in 2014-15

% of U.S. teens who say they have access to the following devices



Note: Teens refer to those ages 13 to 17. Those who did not give an answer are not shown. The 2022 question wording further clarified access at home.

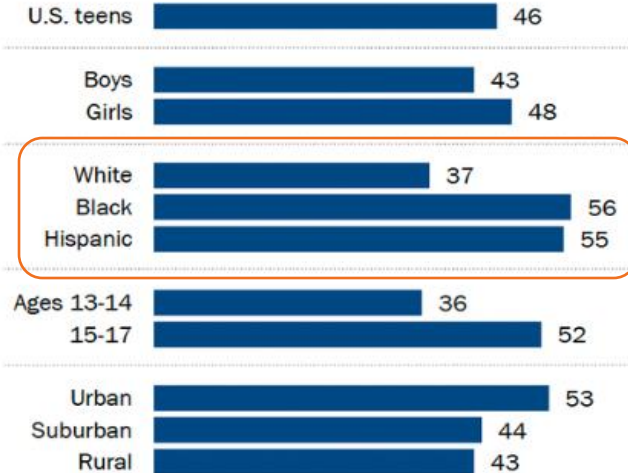
Source: Survey conducted April 14-May 4, 2022.

"Teens, Social Media and Technology 2022"

PEW RESEARCH CENTER

### Black, Hispanic teens more likely than White teens to say they are online almost constantly

% of U.S. teens who say they use the internet **almost constantly** either on a computer or a cellphone



Note: Teens refer to those ages 13 to 17. White and Black teens include those who report being only one race and are not Hispanic. Hispanic teens are of any race. Those who did not give an answer or gave other responses are not shown.

Source: Survey conducted April 14-May 4, 2022.

"Teens, Social Media and Technology 2022"

PEW RESEARCH CENTER

Address the requirements of **younger and BIPOC** demographics through methods that successfully **reach** and **engage** them

**A reasonable strategy to address population needs is to provide them with information, such as a mailer**



**Can we do more?**

## Behavior Change Journey

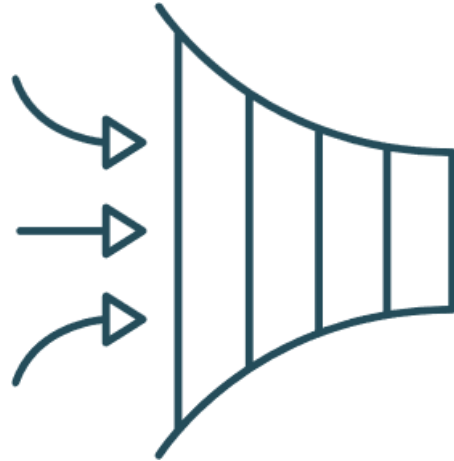
Recycling is a continual journey; information may only help in one part of it.



A behaviorally designed approach allows for effective engagement and habit formation.



## Behavior change journeys have two broad stages



### Funnel

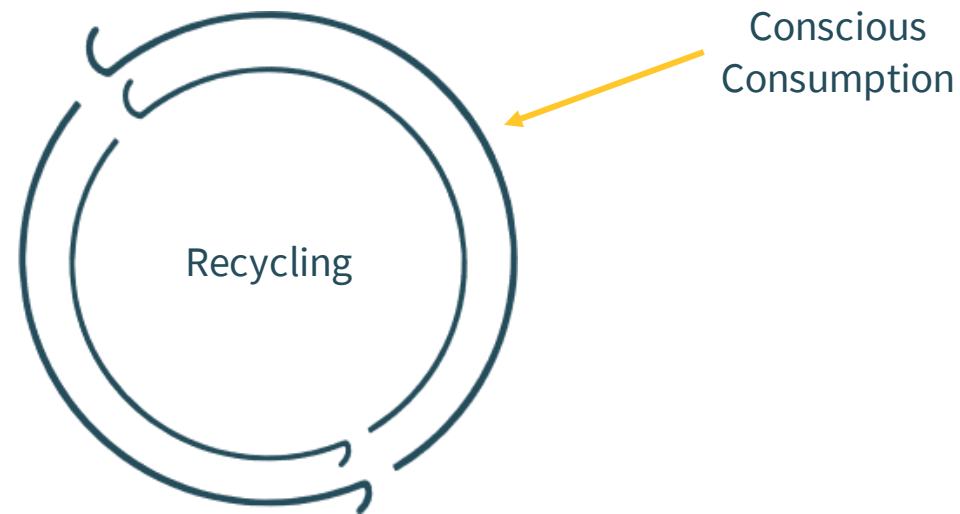
Raising awareness and curiosity to **spark** motivation to start, or restart



### Loop

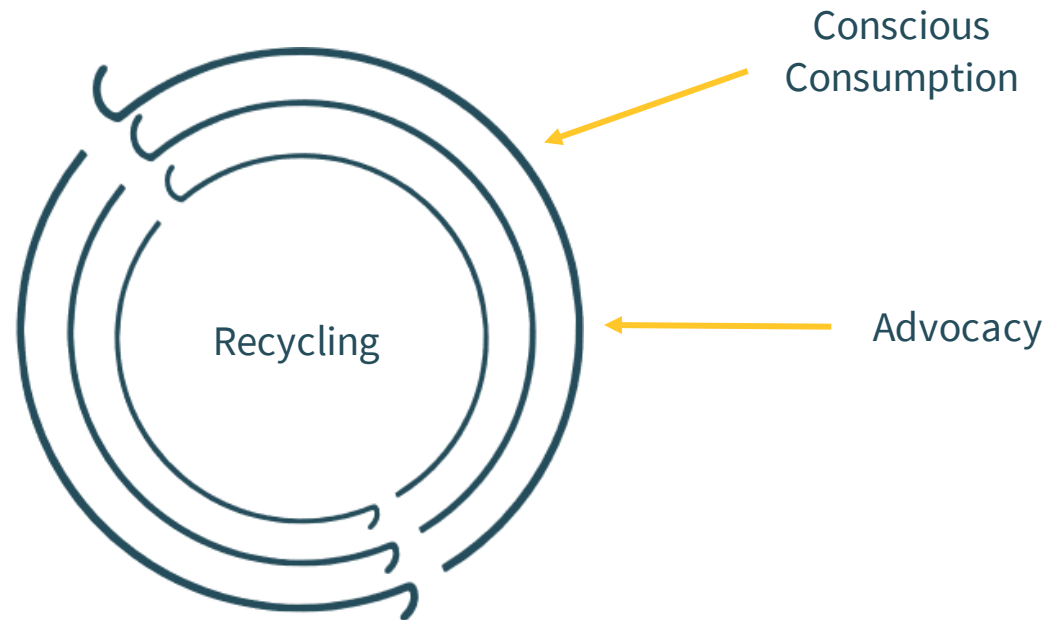
**Sustaining** motivation to continue, through reward, felt impact, and meaning

# Core behaviors are supported by deeper levels of involvement and behavior change



Loop

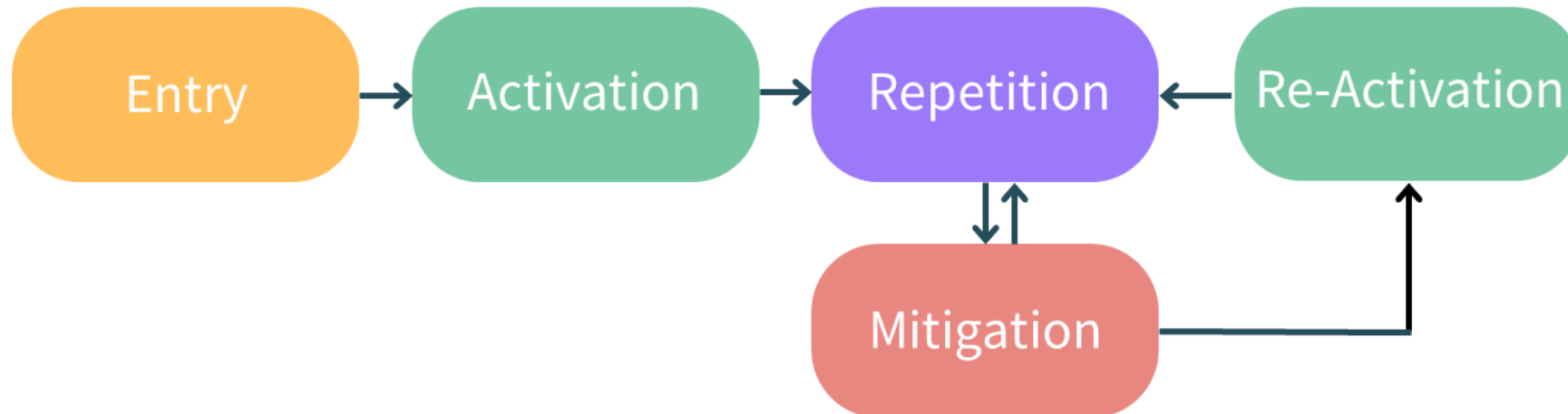
# Core behaviors are supported by deeper levels of involvement and behavior change



Loop



**Consider where your efforts are having an impact and where greater attention is needed along the behavior change journey**



**Behavioral User Journey:** A framework for outlining desired user behaviors and the strategies to facilitate them

### An ecosystem of solutions allows a comprehensive approach

Individual A

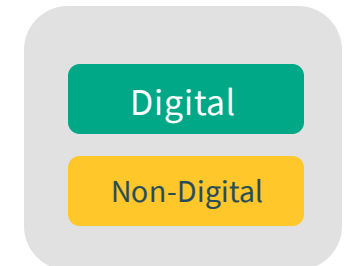
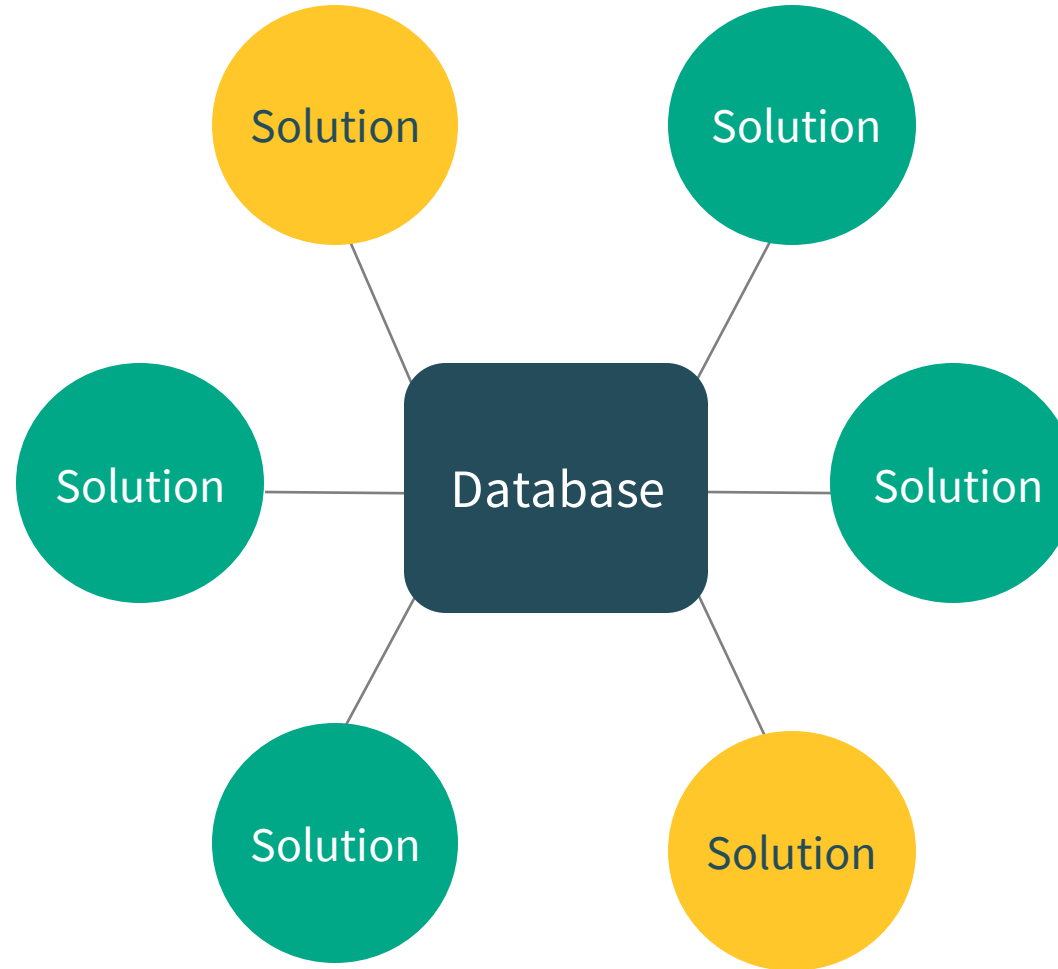


Individual B

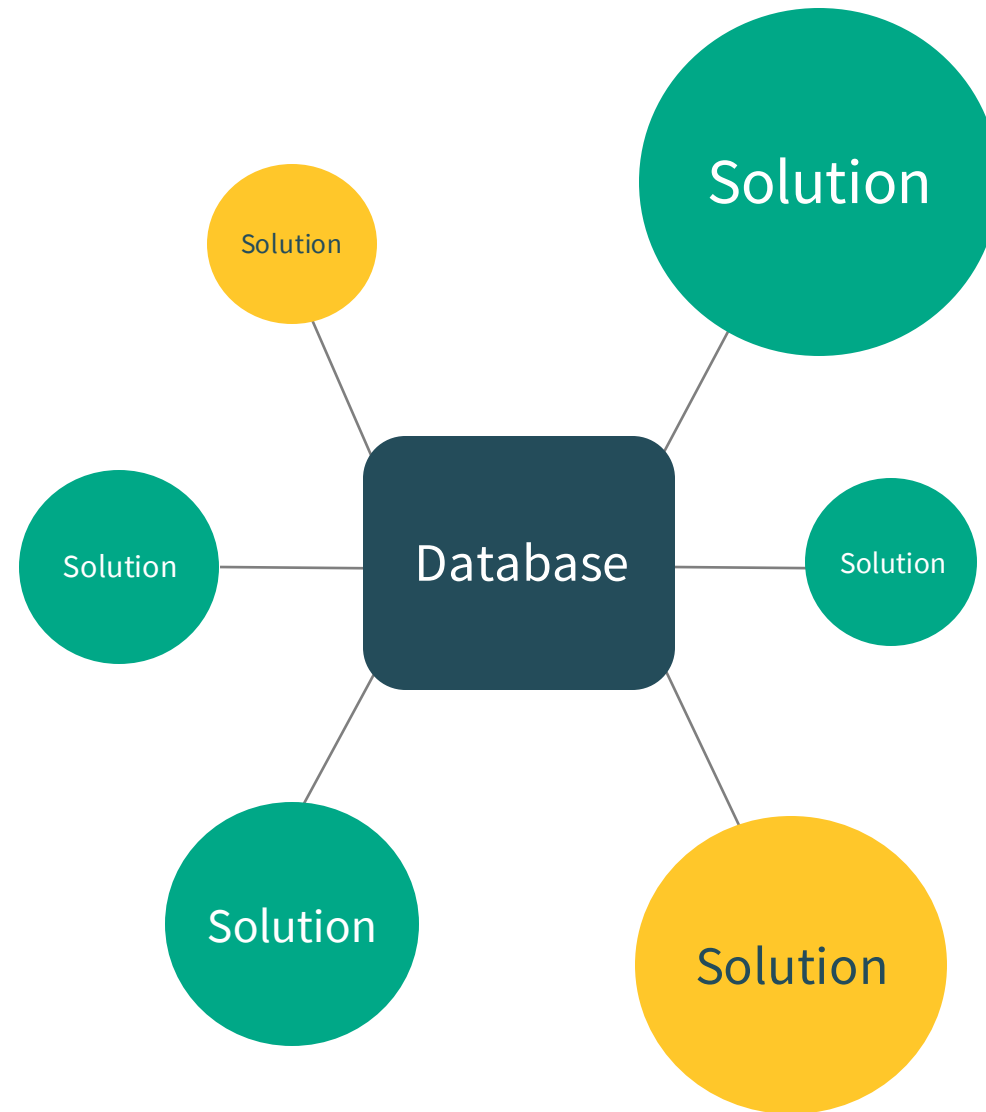


Target  
Population

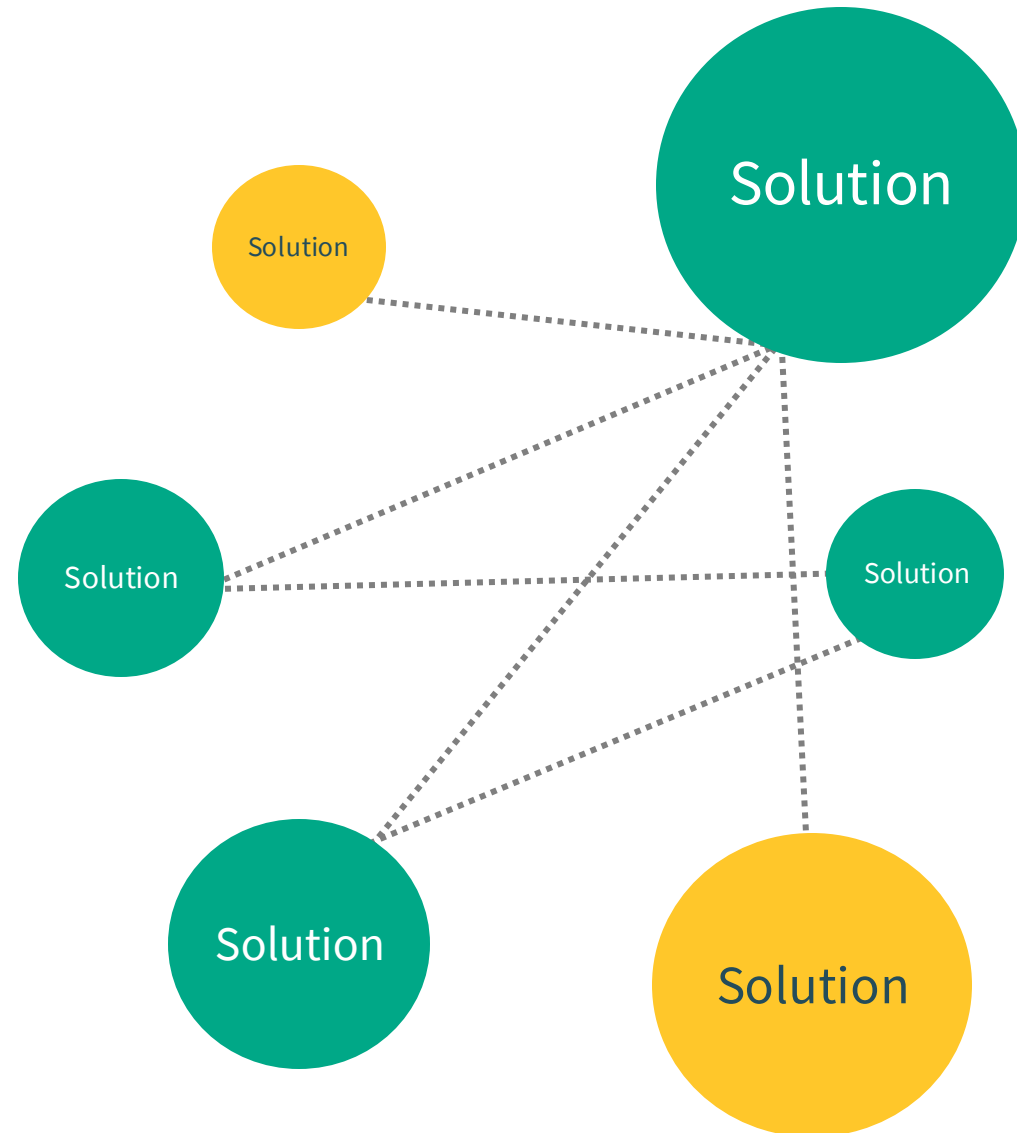
A **database** can connect an array of digital and non-digital solutions



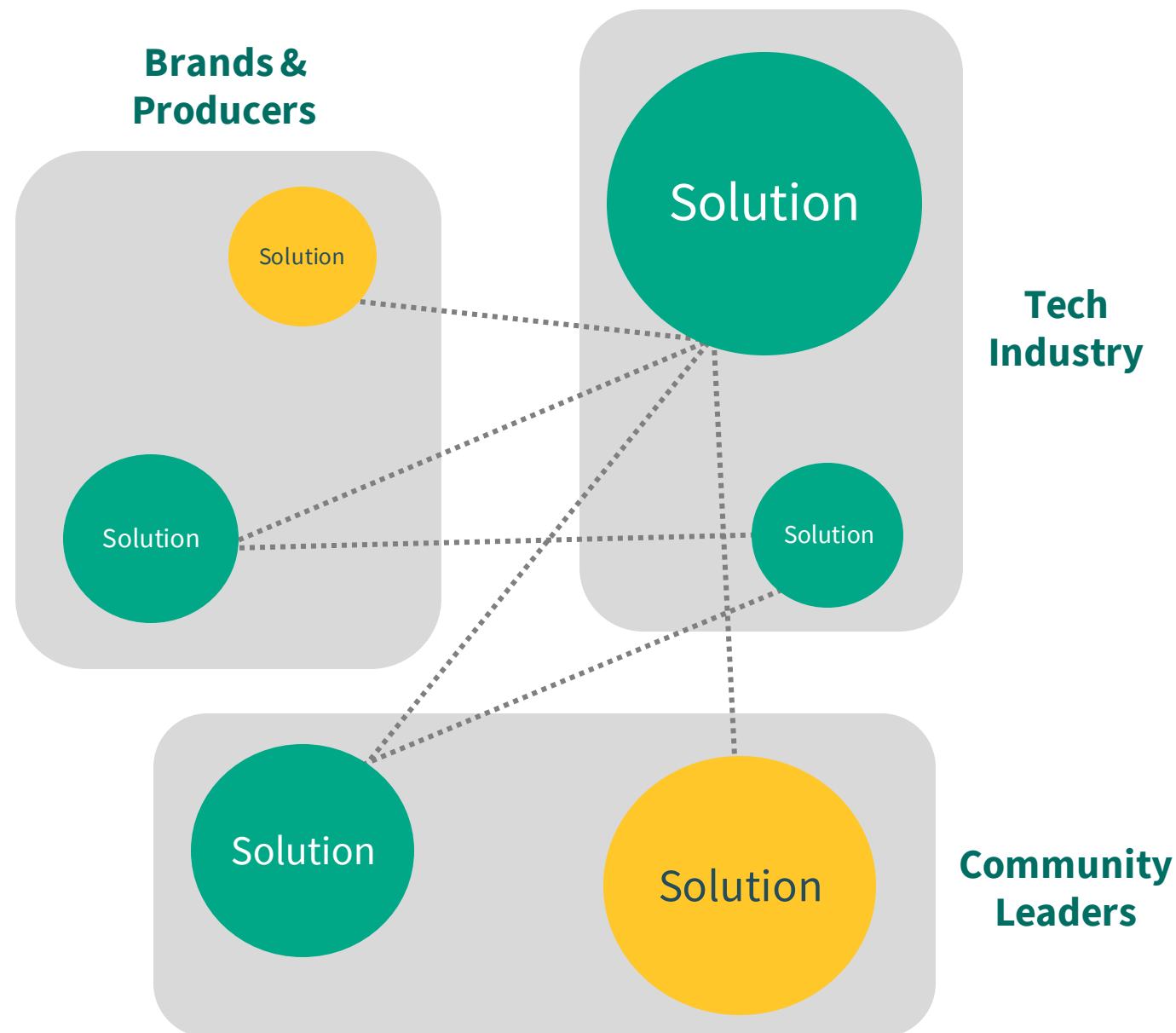
Each solution  
can **adapt** its role and  
capacity to the  
**community it serves**



Solutions can **interconnect** with others, enhancing **overall functionality**



A **national database** has the potential to **unify** and serve as a collaborative platform for **shared innovation** and **sustainable progress**



Address the requirements of **younger** and **BIPOC** demographics through methods that successfully **reach** and **engage** them...

**How will you leverage digital solutions and behavioral design to meet the challenge?**



# Improving Systemwide Outcomes Through Data & Trust



## Why the Need for Dynamic Solutions?

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**Imagine if every time  
you drove into a new  
city or county, the rules  
of the road changed...**

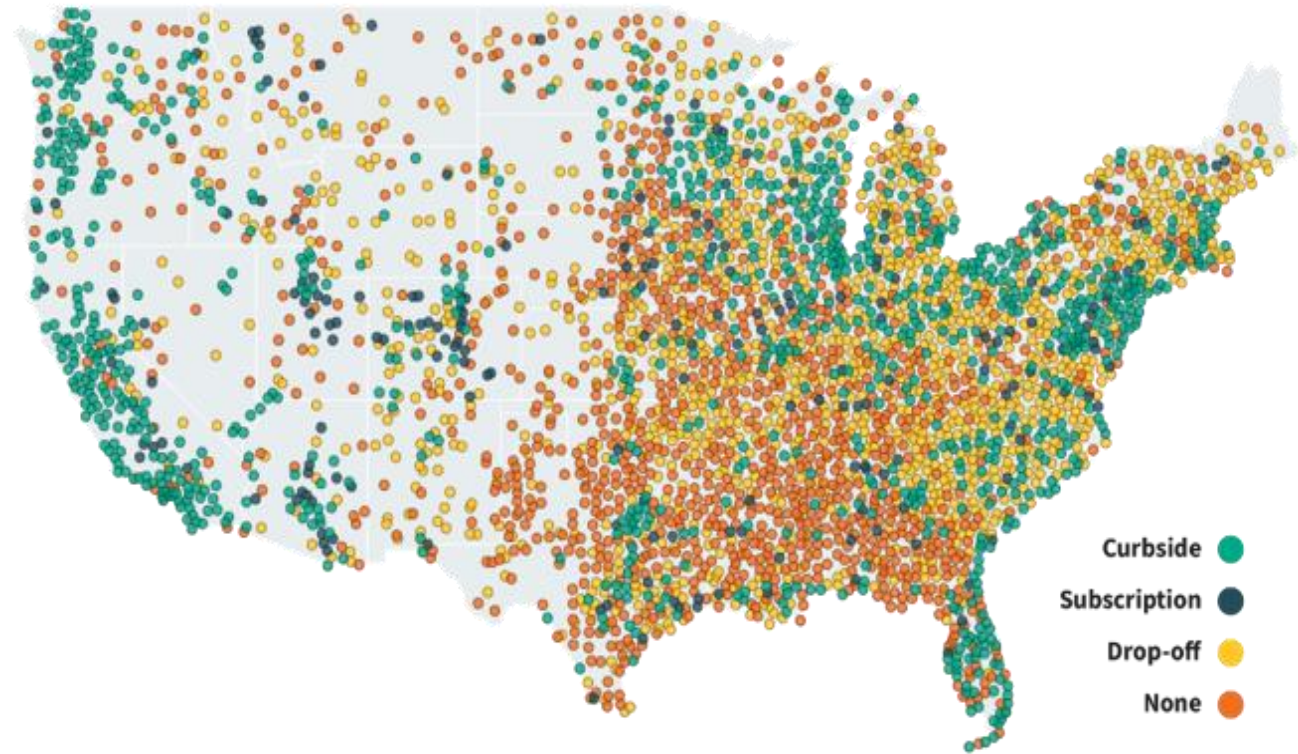




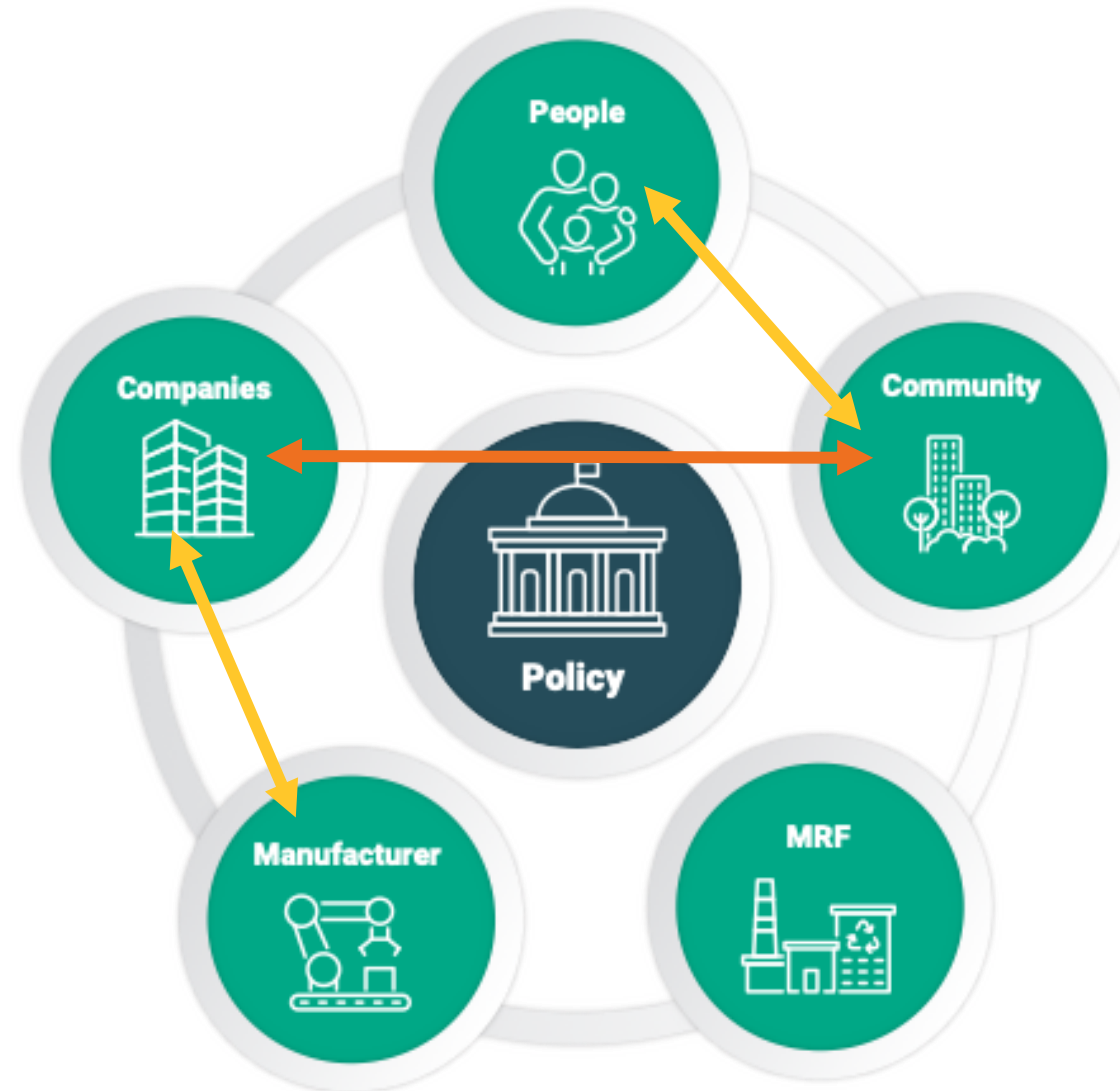
# Disjointed Landscape of Local Recycling Programs



**9,000+ Programs**  
**30,000+ Communities**

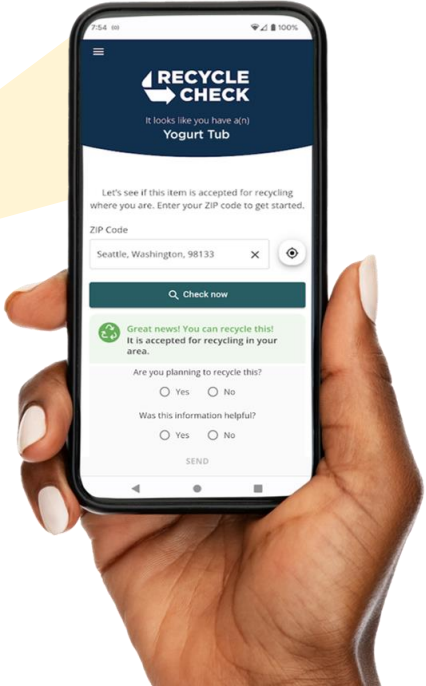


# All Stakeholders Contribute to the Success of Recycling





Scan the QR code  
for local recycling  
information



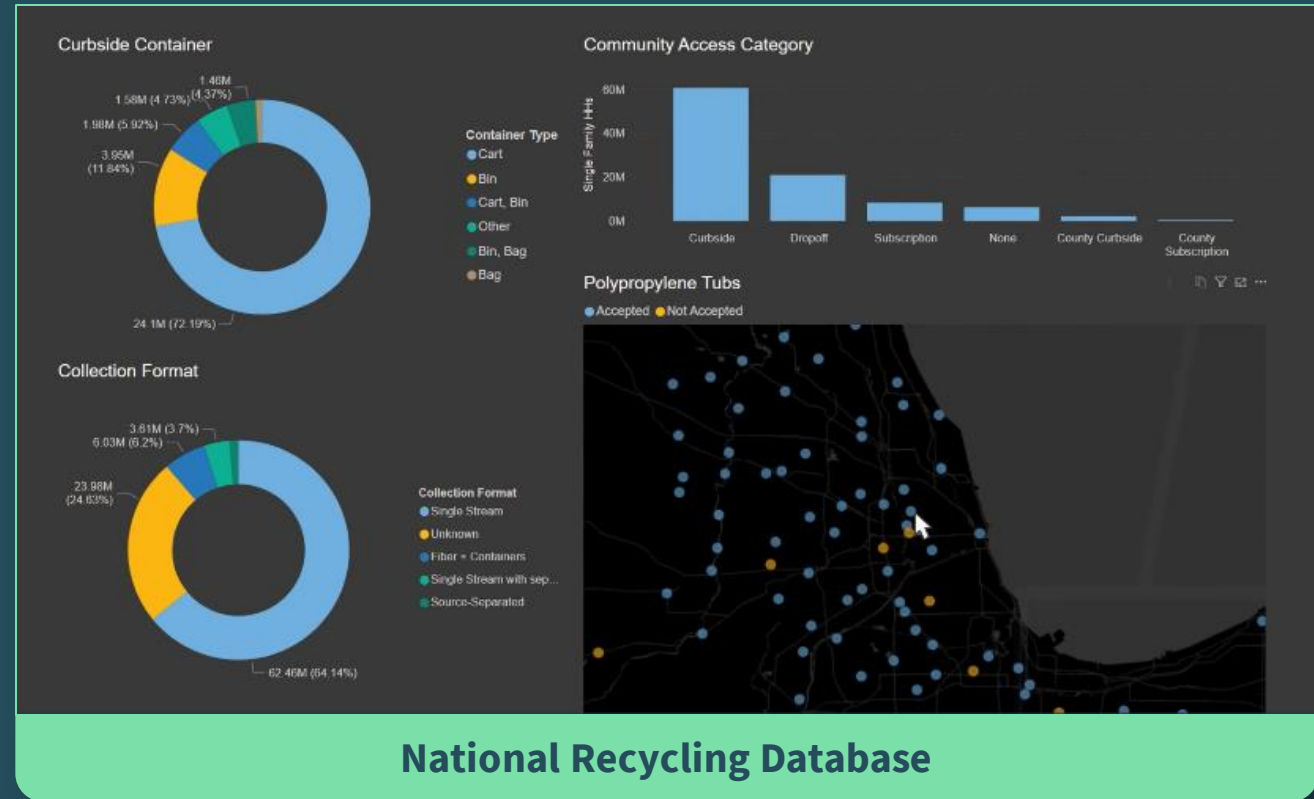
*Designed in collaboration with [Yerecic Label](#).*



Resident-facing tools are  
powered by the

*National Recycling Database*

Providing accurate, local,  
dynamic, recycling data that  
connects the entire recycling  
system



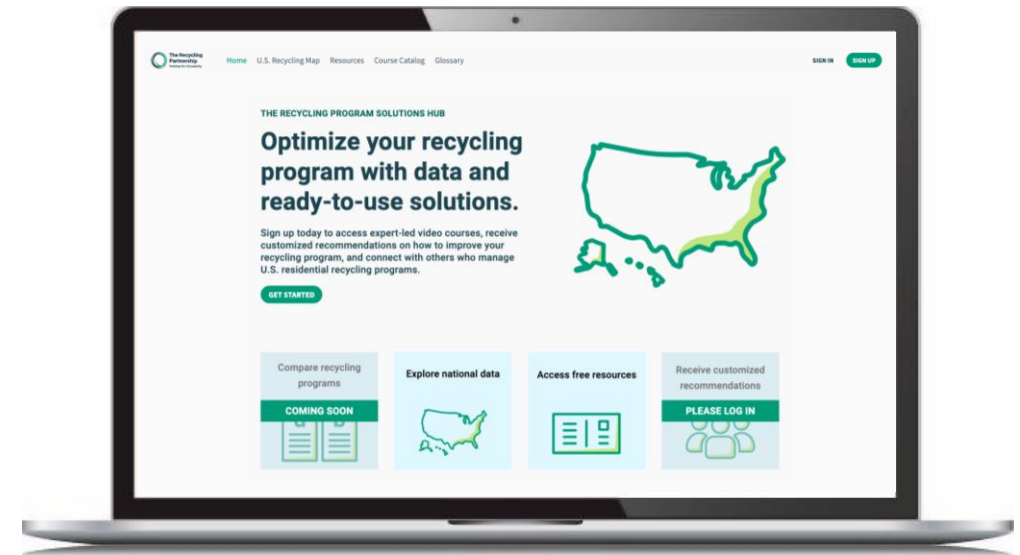


The **Recycling Program Solutions Hub** is an open-access, free tool for recycling program managers to control the accuracy of critical recycling program data.

The **National Recycling Database** is the underlying structure for the Hub.

It becomes **more accurate and thorough** as recycling staff verify and update local data in the Hub.

[community.recyclingpartnership.org](https://community.recyclingpartnership.org)



## Key Features

- Interactive Map
- Learning Hub & Resources
- Custom Recommendations
- Peer-to-Peer Networking



# Who knows what's recyclable? You do!

We need your knowledge to help ensure the information is accurate.



## Materials accepted

- ☒ Brown glass beverage bottles
- ☒ Brown glass jars
- ☒ Clear glass beverage bottles
- ☒ Clear glass jars
- ☒ Green glass beverage bottles



Bertie can take all the guesswork out of recycling.

Do envelopes count as recycling?

...



- 78%** Think a QR code would make recycling less confusing
- 74%** Would scan a QR code to **find out if** a package can be recycled
- 73%** Said the QR code would **help them trust** it will be recycled into something else
- 73%** Would **feel better about a brand's commitment** to recycling with a QR code



## All Stakeholders Contribute to the Success of Recycling



## Consider how your solutions will support:



**PEOPLE:** to ensure they are supported and motivated to recycle mindfully



**COMMUNITIES:** tools are specific to and celebratory of local conditions



**COMPANIES:** can advance recyclability solutions at scale and adhere to policy requirements

Get in Touch:

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✉ [lkeenan@recyclingpartnership.org](mailto:lkeenan@recyclingpartnership.org)

🌐 [Recyclingpartnership.org](https://Recyclingpartnership.org)

**Hasaan Aleem**

[hassan@nuancebehavior.com](mailto:hassan@nuancebehavior.com)

[nuancebahavior.com](https://nuancebahavior.com)



**The Recycling  
Partnership**  
Solving for Circularity

We mobilize people, data, and solutions across the value chain to reduce waste and our impact on the environment while also unlocking economic benefits.

# Unlocking Recycling's Potential: Day 2

February 22, 2024



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Solving for Circularity



**CENTER FOR  
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# Levers of Behavior Change







# Material Incentives



- ✓ Make it easy (or the alternative hard)
- ✓ Give rewards or penalties



## Recycling is about to get easier!

### ¡Reciclar será mucho más fácil!

**A free, in-home recycling basket and information on what's recyclable is on its way!**

*¡Un contenedor de reciclaje gratuito, una calcomanía e información sobre lo que puede reciclar están en camino!*

**Scan to learn more**  
*Escanee para más información*

**Sarasota County**  
scgov.net | call 311

**The Recycling Partnership**  
SOLVING FOR CIRCULARITY

## WARNING!

### ¡ADVERTENCIA!

**THE FOLLOWING HAS BEEN FOUND IN YOUR BLUE RECYCLING CART**  
Los siguientes artículos fueron encontrados en su Bote de Reciclaje Azul

- Plastic Bags (Bolsas Plásticas)
- Styrofoam (Espuma de Poliestireno)
- Food or Liquid (Comidas o líquidos)
- Electronics (Electrónicos)
- Housewares (Artículos para el Hogar)
- Hazard or Chemical Waste (Residuos Químicos o Peligrosos)
- Yard Waste (Residuos de la Yarda)
- Other (Otros)

**Please make sure only recyclable materials are placed in your blue cart.**  
Por favor asegúrese que solo materiales reciclables sean depositados en su bote de reciclaje azul.

**Failure to do so may result in the removal of your blue cart.**  
El fallo en no hacerlo puede resultar en que su bote de reciclaje azul pueda ser removido.

**For a complete list of what can and can't be recycled, call 311 or visit:**  
Para una lista completa de lo que debe o no debe reciclar, favor de llamar al 311 o visita:

[www.chicagorecycles.org](http://www.chicagorecycles.org)

# Rules & Regulations (Policies & Mandates)



- ✓ Set standards
- ✓ Mandate behavior
- ✓ Prohibit behavior

	Pre-EPR	With EPR
British Columbia	50-57%	81%
Belgium	10%	89.8%
Spain	4.8%	80.7%
Netherlands	70%	82%
South Korea	64%	78%
Quebec	28%	64%
Portugal	38%	60.4%

# Information



- ✓ Provide step-by-step instructions
- ✓ Build awareness and understanding





Source: Ethnographic research conducted by **Point Forward** and **The Recycling Partnership**.



# These levers tend not to work on their own.



- Financial incentives can backfire.
- Payments can crowd-out other motivators.
- Incentives can drain limited resources.
- Fines can be seen as just the 'cost' for behavior.



- Rules often need enforcement.
- Rules do not work if norms are misaligned.



- Correcting an information-deficit rarely leads to lasting behavior change.
- Caring/knowing is not a pre-requisite to change.

# Emotional Appeals

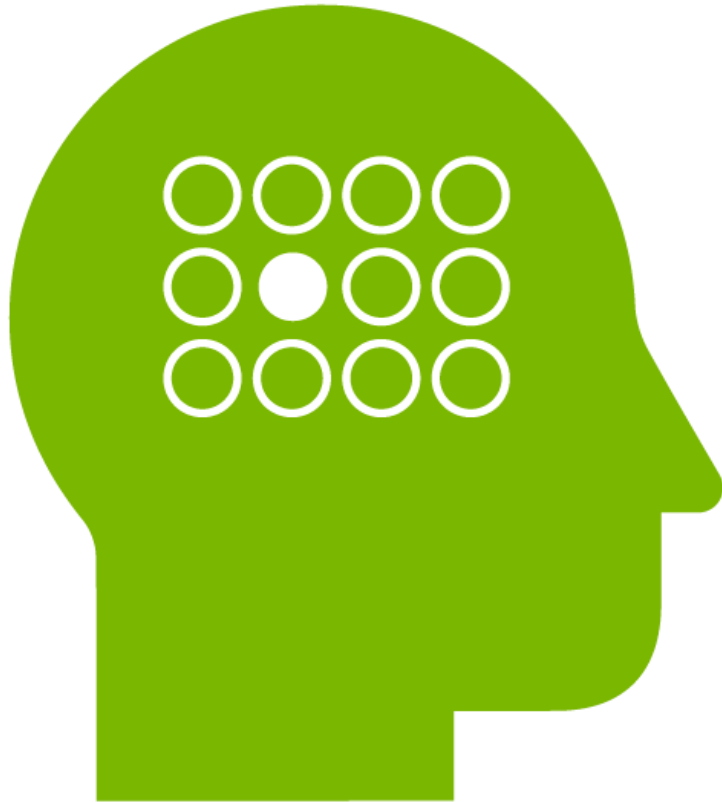


- ✓ Leverage emotions in specific contexts
- ✓ Personalize the message

The Partnership has had success addressing confusion and frustration head on with an empathetic tone.



# Social Influences



- ✓ Make engagement in the desired behavior observable
- ✓ Highlight others who are performing the target behavior
- ✓ Eliminate excuses for not engaging in the target behavior



# Choice Architecture



- ✓ Direct attention
- ✓ Simplify messages and decisions
- ✓ Use timely moments and prompts
- ✓ Facilitate planning and goal setting







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---

# Behavioral Solutions Speed Talks



# Recycling Behavior Change

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A case study from Wales

Bettina Gilbert  
Head of Technical  
Support and Financial  
Mechanisms, WRAP



# VISION

**Our vision is a thriving world in which climate change is no longer a problem**

# MISSION

**Our mission is to make the world a more sustainable place. We bring people together, we act on the facts, and we drive change**

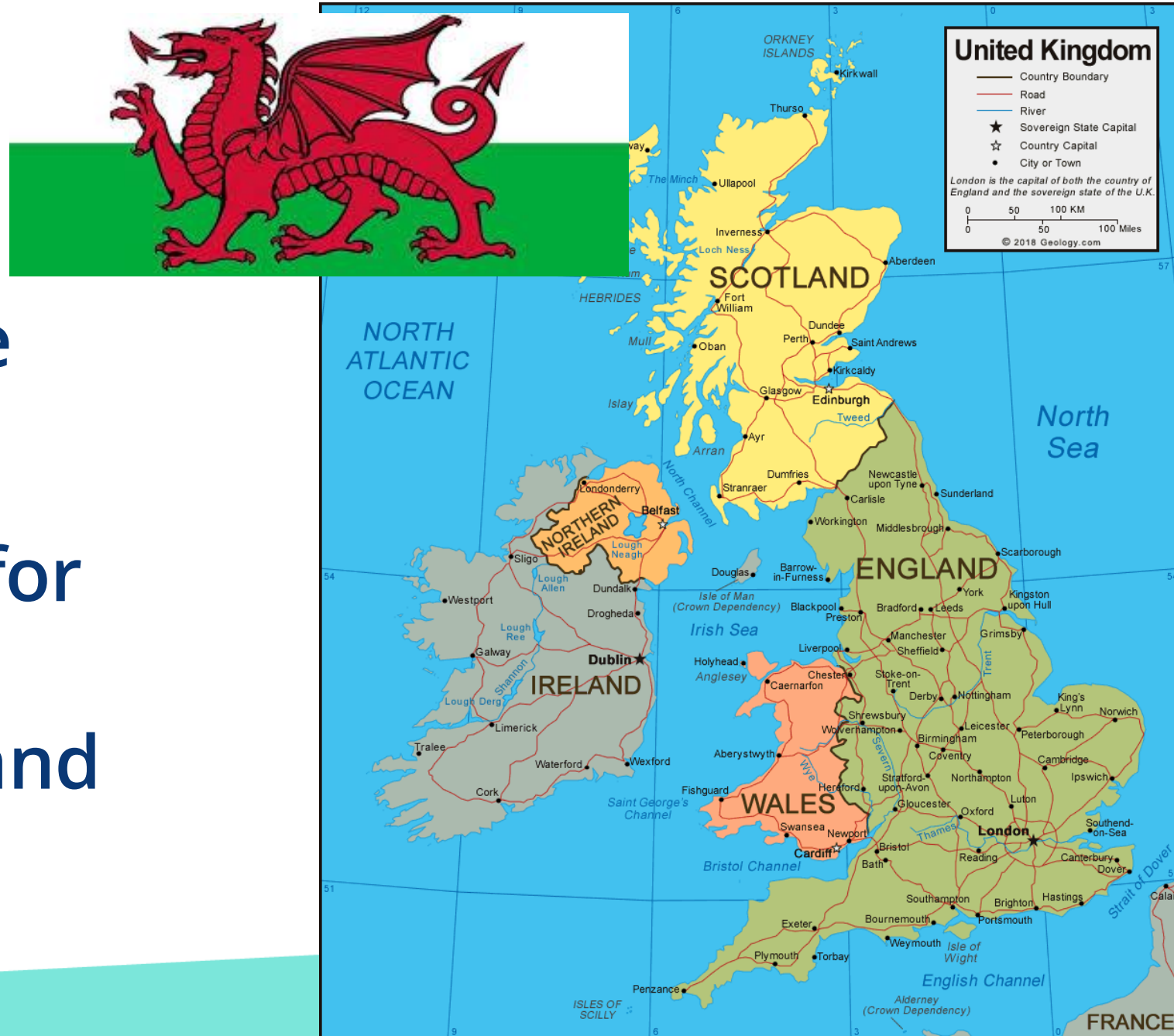
# PURPOSE

**Our core purpose is to help you tackle climate change and protect our planet by changing the way things are produced, consumed and disposed of**



# About Wales

- Population 3.24m
- Industrial heritage
- Proud nation
- Devolved powers for waste
- Ambitious waste and circular economy strategy



# Two key policy levers

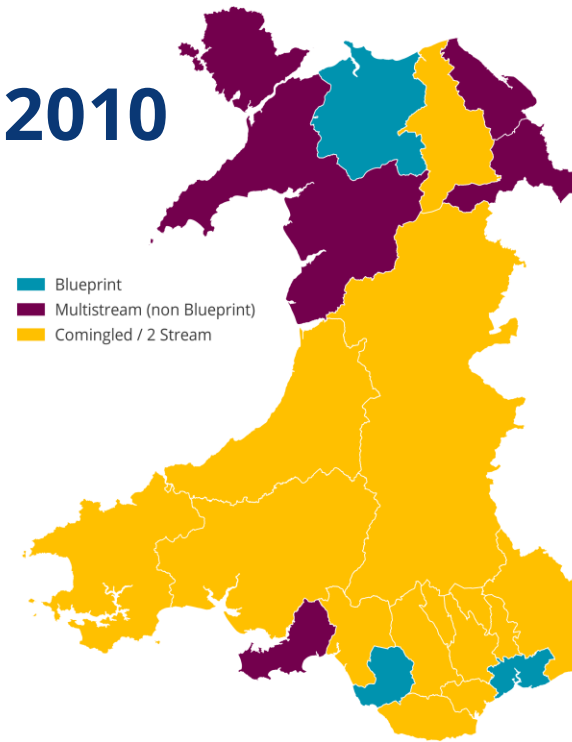
## Statutory Targets

By 2024/25 every LA in Wales must have:

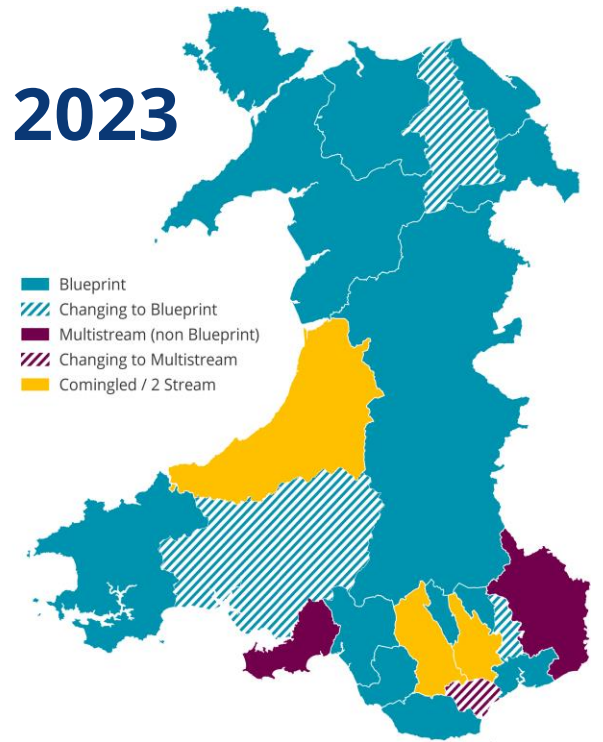
- a minimum of 70% of waste being reused, recycled or composted
- a maximum of 30% waste being used to create energy
- a maximum of 5% of waste being landfilled

## The Collections Blueprint

2010



2023





# Welsh context

95%

of Welsh households  
**regularly recycle**

50%

**Miss one or more items** which could be recycled at the kerbside

The barriers to recycling correctly can be grouped into four key areas:

1

**Situation**  
(primarily service related)

2

**Motivations**

3

**Knowledge**

4

**Behaviors**

These need to be addressed by delivering targeted and effective behavior change campaigns.

# Understanding behaviors

- Dry and food recycling trackers

 Dry Recycling Tracker Survey Wales - Spring 2023 Results  Copy link

We found recycling to be an **established** and **normalised behaviour** in Wales.

95% of citizens reported that they regularly recycle.





Watch on  YouTube

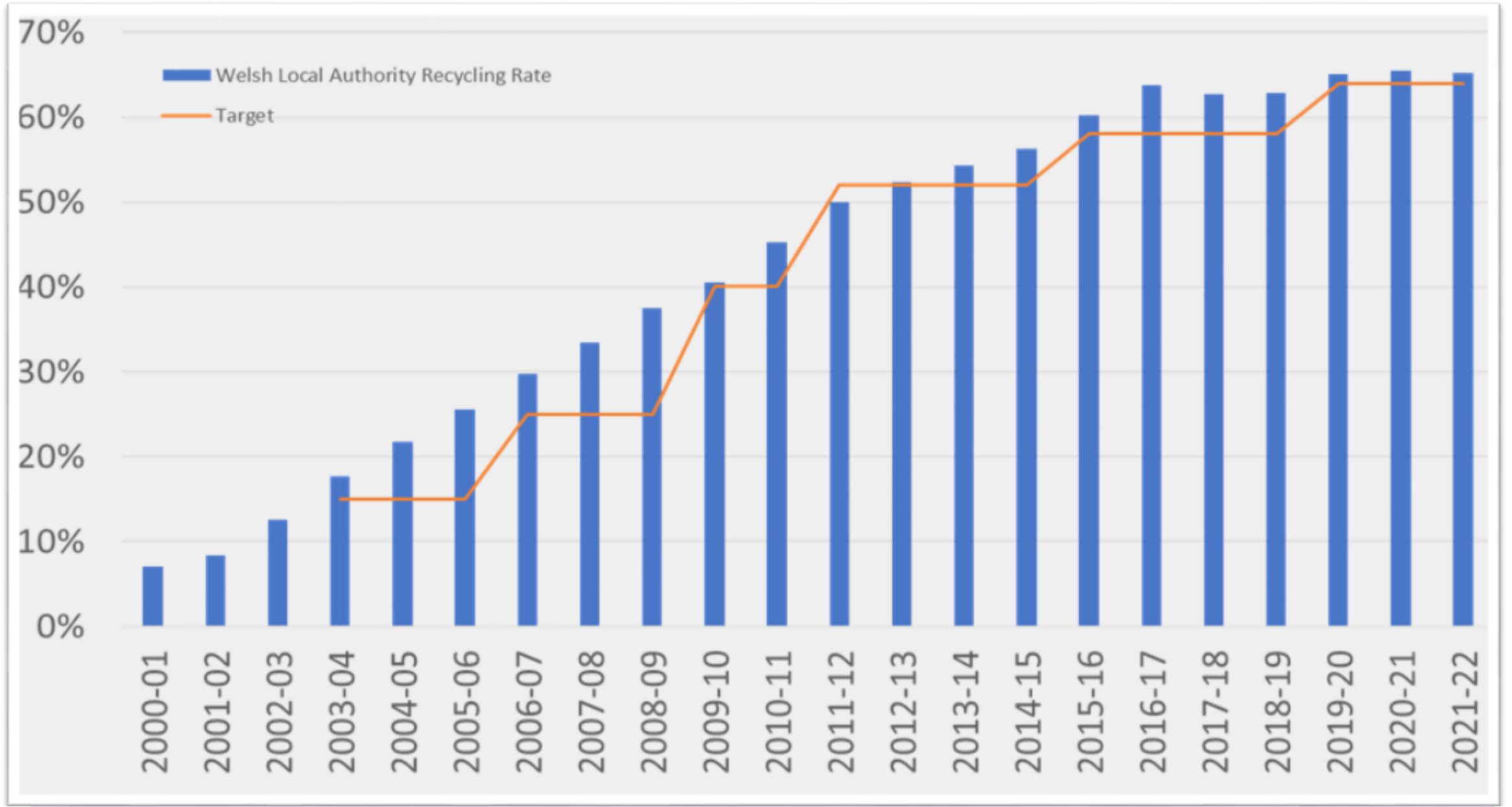


- Sustainable Lifestyle Segmentation



<https://youtu.be/4JZsH6Y-Two?si=Xj0cEESdDOFY3hBi>

# The results



# Thank you

---

**wrap.org.uk**

 @WRAP\_UK

Bettina Gilbert

bettina.gilbert@wrap.org.uk

# Using Incentives, Tools and Feedback to Increase Recycling

Michelle Metzler

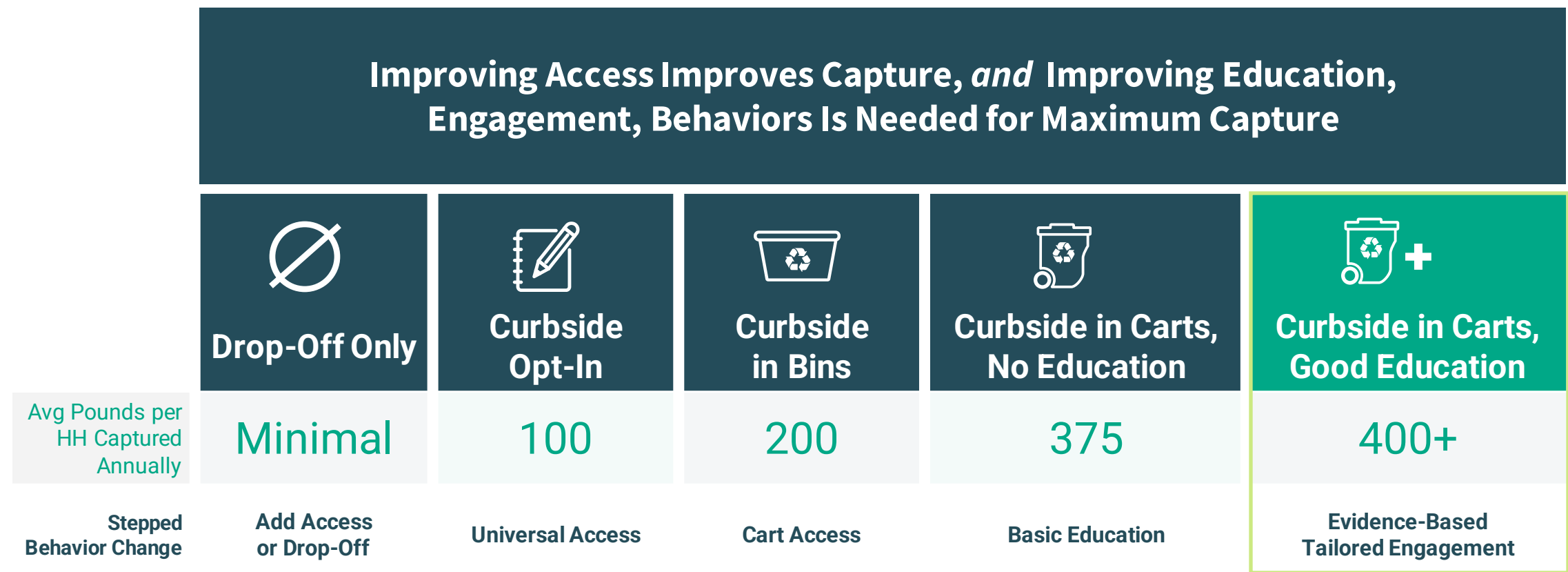
Director of Community Programs

February 21, 2024



**The Recycling  
Partnership**  
Solving for Circularity

We mobilize people, data, and solutions across the value chain to reduce waste and our impact on the environment while also unlocking economic benefits.



*On average, single-family households generate ~750-800lbs of recyclables each year.*



### Pay as You Throw (PAYT)

Variable rates for garbage service with and higher cost for more service

### Impact

- Increased recycling
- Study across Massachusetts found PAYT as the most important factor in increasing recycling (Starr & Nicolson, 2015)
- Common structure in states with high recycling rates



Starr, J., & Nicolson, C. (2015) Patterns in trash: Factors driving municipal recycling in Massachusetts. *Resources, Conservation and Recycling*, 99, 7-18.  
<https://doi.org/10.1016/j.resconrec.2015.03.009>.



Top Messages

Empathy "We get it. It can be confusing."

Logic "Recycling makes sense."

Emotion "We have to do better!"



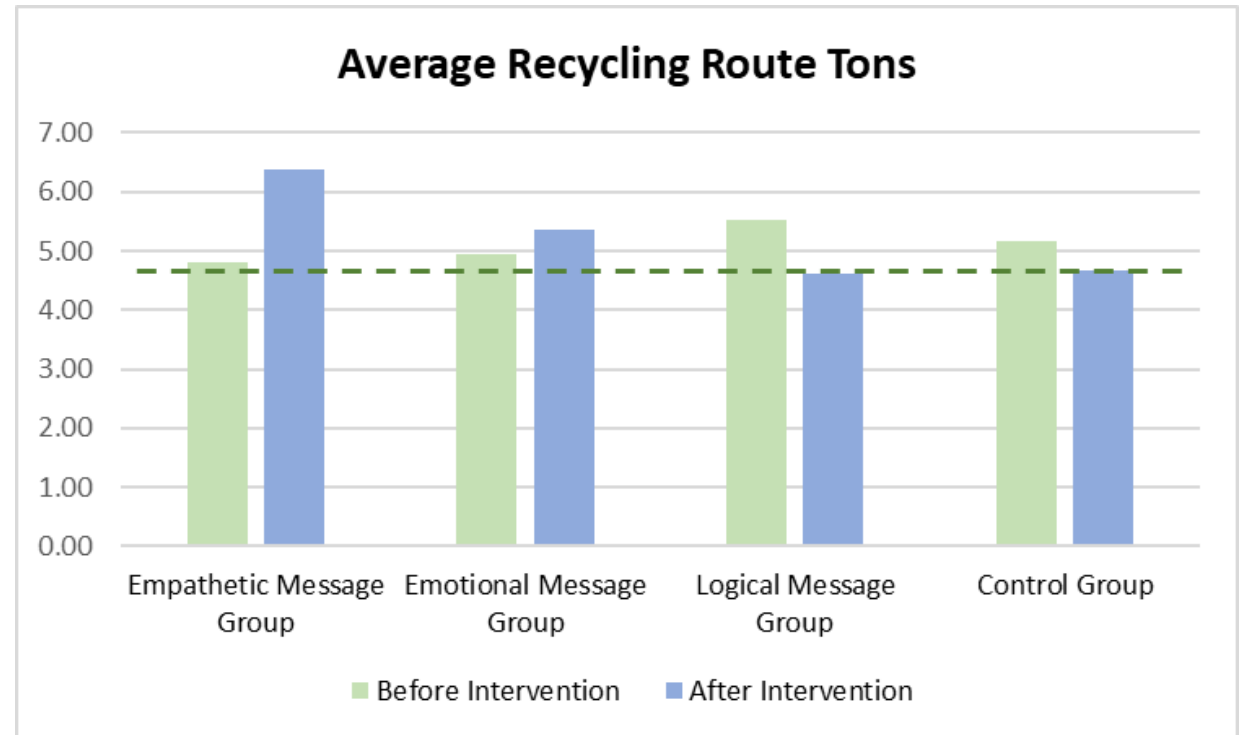
### Pilot Design

3 pilots testing motivational messaging delivered by cart tag and mail

### Findings

Cart tags + mailers using emotional and empathetic messages increased recycling route tons substantially.

- **Empathetic Message Group:**  
38% increase in average route tons (51% increase on one route)
- **Emotional Message Group:**  
16% increase in average route tons (38% increase on one route)



According to the control route tons went down, but the interventions using the emotional and empathy messages saw increases.



## Pilot

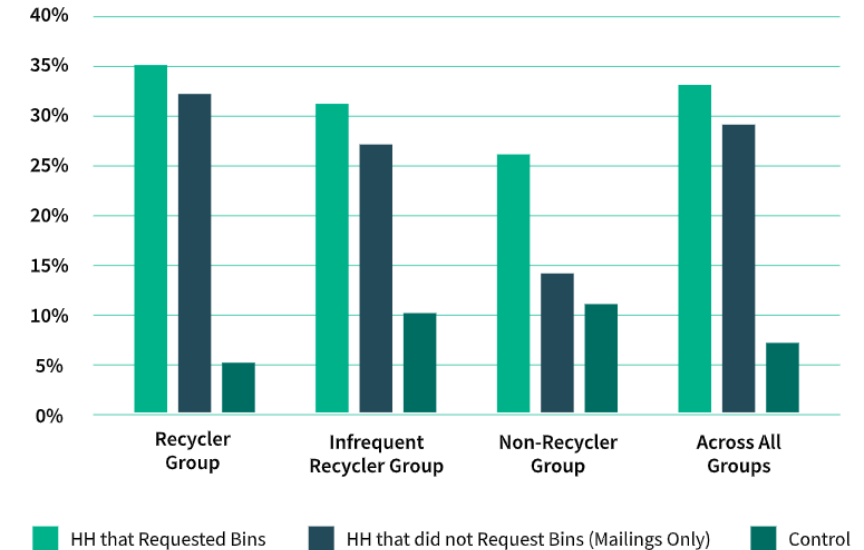
- **5 Mailers For All Intervention Group Households**
  - Free in-home recycling bin by request
  - Two Recycling Calendars – Reminder to act
  - Two Motivational Message – Empathetic and Logical

## Findings

- **Recycling Households**
  - Mailers significantly increased recycling participation
  - The in-home bins contributed to a small increase in set out beyond the mailers only.
- **Non-Recycling Households**
  - Mailers alone was not enough to change behavior
  - Households that opted to receive an in-home bin helped some non-recyclers start recycling.

### Average Increase in Recycling Set Out

Difference Between the Average Collection Set Out in Baseline and Post Intervention Phase







## Program Design

- Informational Mailing
- Four rounds of cart tagging
- Carts with contamination are not serviced

## Results

- Decreases contamination 20-60%

## Impact of Cart Rejection

- New Bedford, MA – Feedback only
- Dartmouth, MA – Feedback and rejection
- Dartmouth reduced contamination by nearly twice the rate of New Bedford
- One year later
  - Dartmouth maintained the lower contamination rate
  - Impact eroded in New Bedford





- 1 Design the system with behavior in mind
- 2 Design interventions that target specific behaviors
- 3 Deploy interventions that help residents overcome barriers to recycling
- 4 Measure outcomes



Get in Touch:

# Michelle Metzler

 [mmetzler@recyclingpartnership.org](mailto:mmetzler@recyclingpartnership.org)

 [recyclingpartnership.org](https://recyclingpartnership.org)





# Unlocking Recycling's Potential: Day 2

February 22, 2024



**The Recycling  
Partnership**  
Solving for Circularity



**CENTER FOR  
BEHAVIOR & THE  
ENVIRONMENT**

# Agenda

## DAY 1

**Welcome**

---

**Why Behavior Change Matters in this Moment?**

---

**Behavior Change & Behavior-Centered Design**

---

**Equity & Recycling**

---

**Interactive Adventures with Behavioral Insights**

---

**Framing, Empathizing, Mapping**

---

## DAY 2

**Opening, Reflections, and Warm-Up**

---

**About Connected Recyclability**

---

**Levers of Behavior Change**

---

**Ideate, Prioritize & Refine Solutions**

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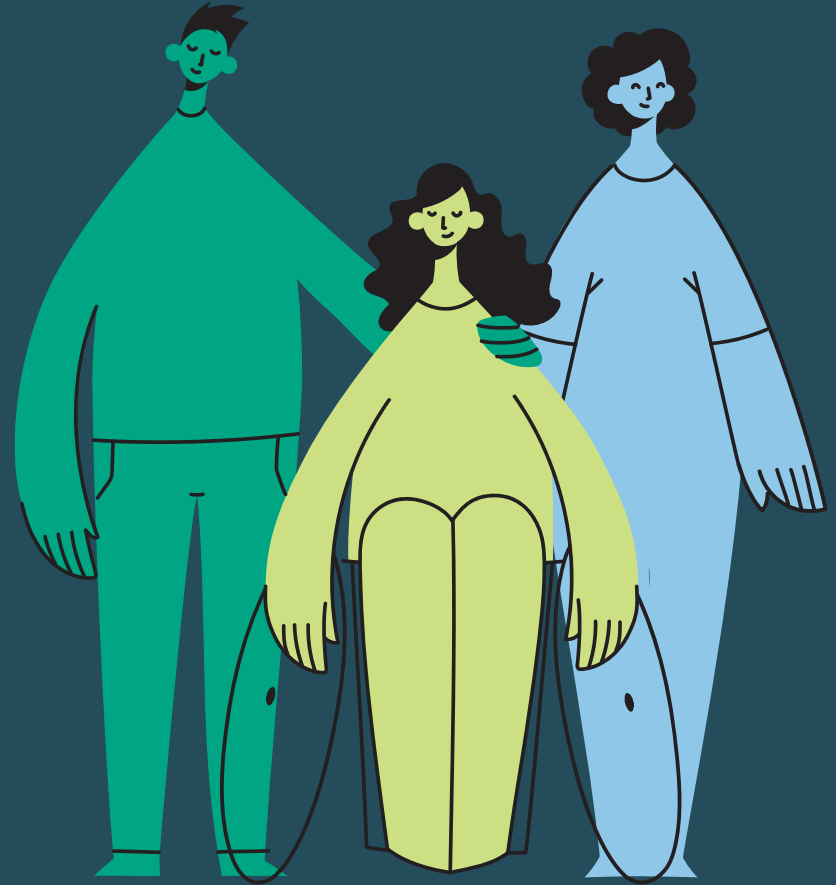
**Prototype, Test, Launch, Assess**

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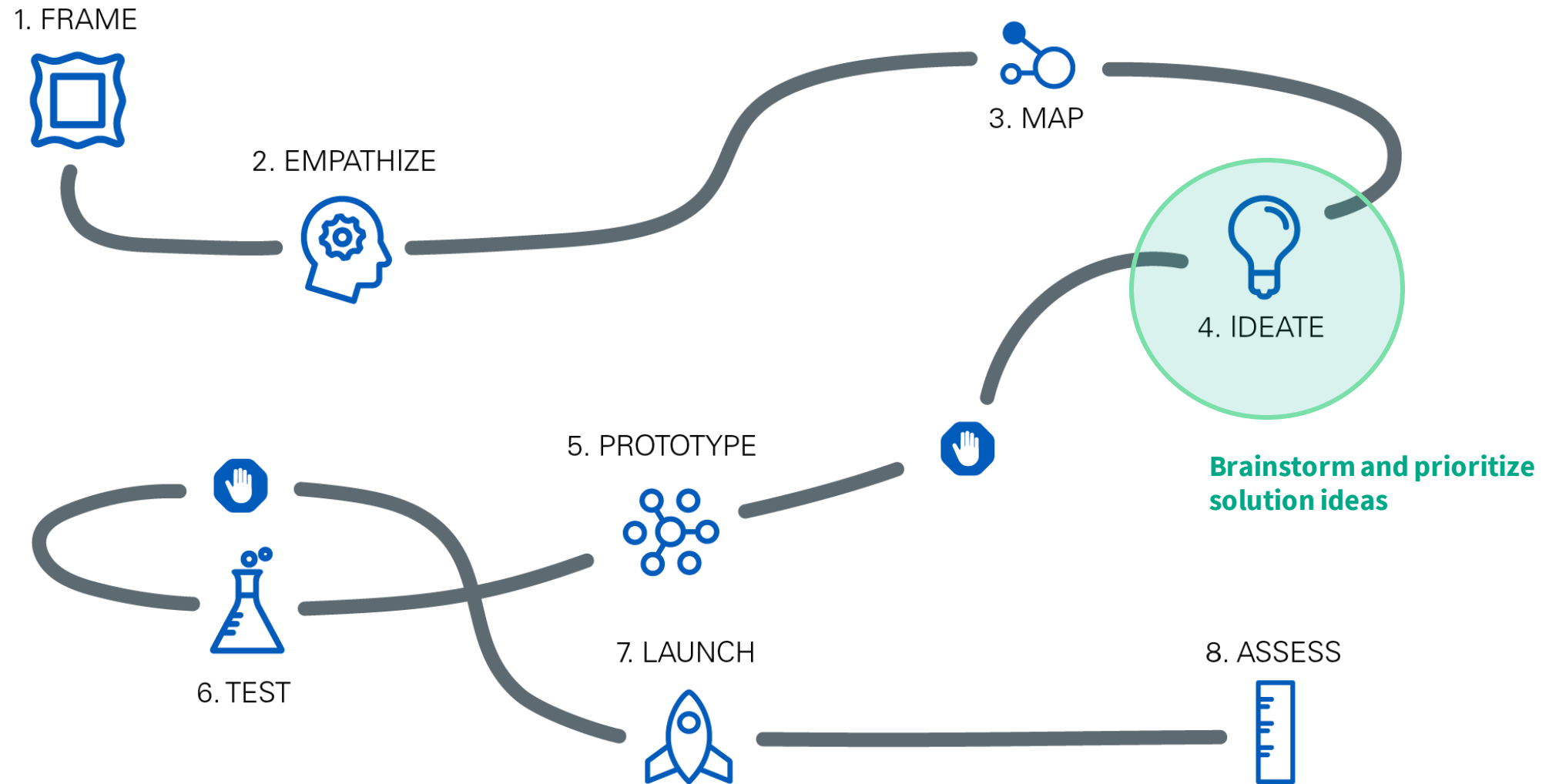
**Equity - What's next?**

---

# Ideating Solutions



# The Behavior-Centered Design Journey





# Ideate

**How?** Brainstorm solutions

## **Key Principles:**

- Aim for quantity > quality of ideas
- Think creatively and ‘outside of the box’

## **DEI considerations:**

- Ideas support public interest and minimize harm
- Involve stakeholders and actors to increase transparency



## Activity: Ideate Ideas!

1

Take 3 minutes to write down ideas on your own. Put one idea per sticky note.

2

Share ideas with your group.

3

Brainstorm more ideas together. Consider adding ideas that would increase equity in your case study.

# Prioritizing and Preparing Your Solution Pitch





# Activity Part 1: Prioritize and Revise Ideas

1

Prioritize ideas using the impact and feasibility matrix. Select 1-2 ideas you want to feature.

2

Talk with your group and table navigators about your ideas to strengthen them.

# Activity Part 2: Prepare Your Pitch

3

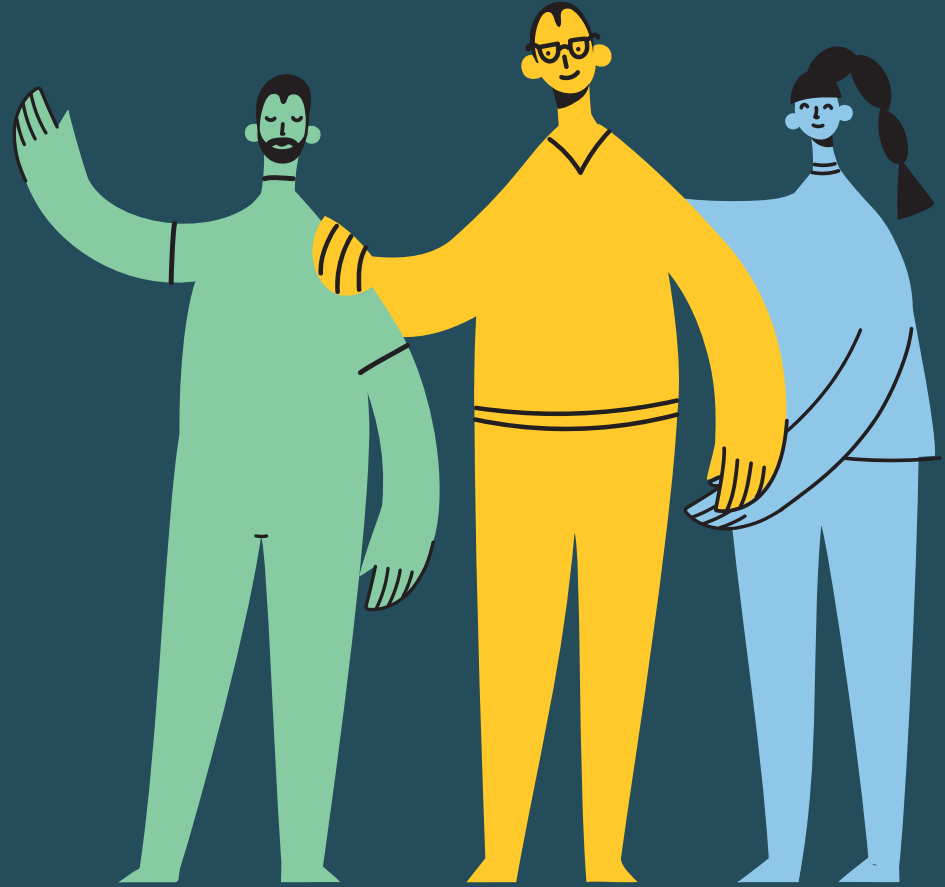
Discuss how you could share your idea in a 2-minute pitch. How does it work? What does it look like? Who will receive it? What are the DEIB considerations?

4

Write/draw your behavior, actor, hypothesis, and final solution idea on your solution board.

You can also add questions or suggestions for future research on sticky notes.

# Solution Share & Pitch



## Activity: Solution Share & Pitch

1

Finalize your pitch in your group for 5 minutes.

2

Odd-numbered tables pitch while even-numbered tables explore and give feedback with sticky notes.

3

Even-numbered tables pitch while odd-numbered tables explore and give feedback with sticky notes.

# Unlocking Recycling's Potential: Day 2

February 22, 2024



**The Recycling  
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Solving for Circularity



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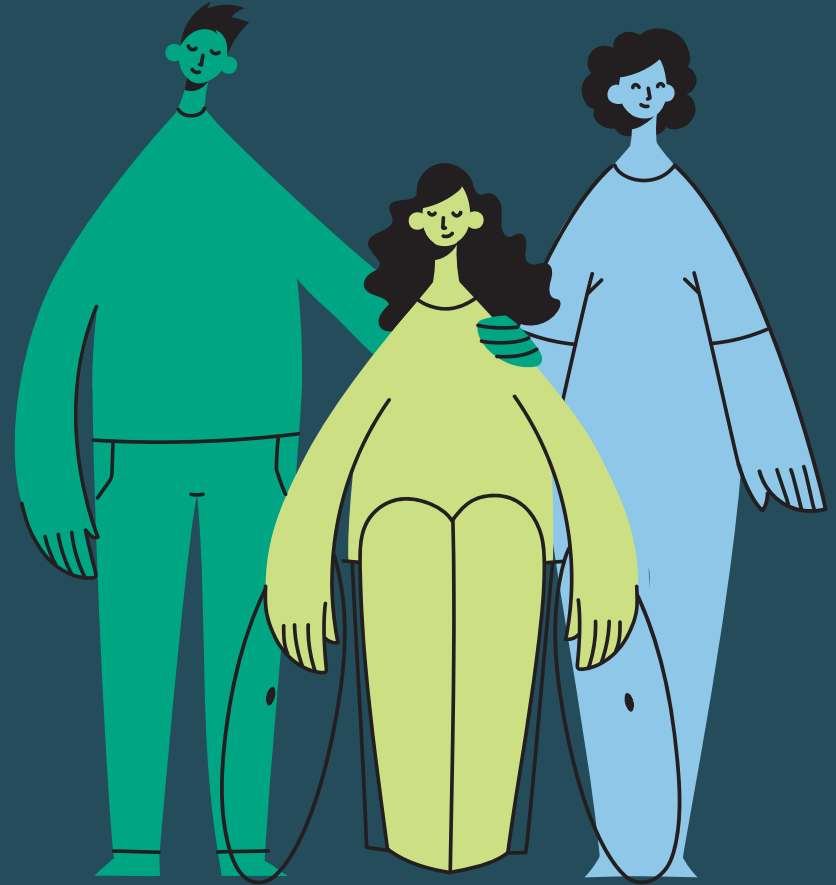
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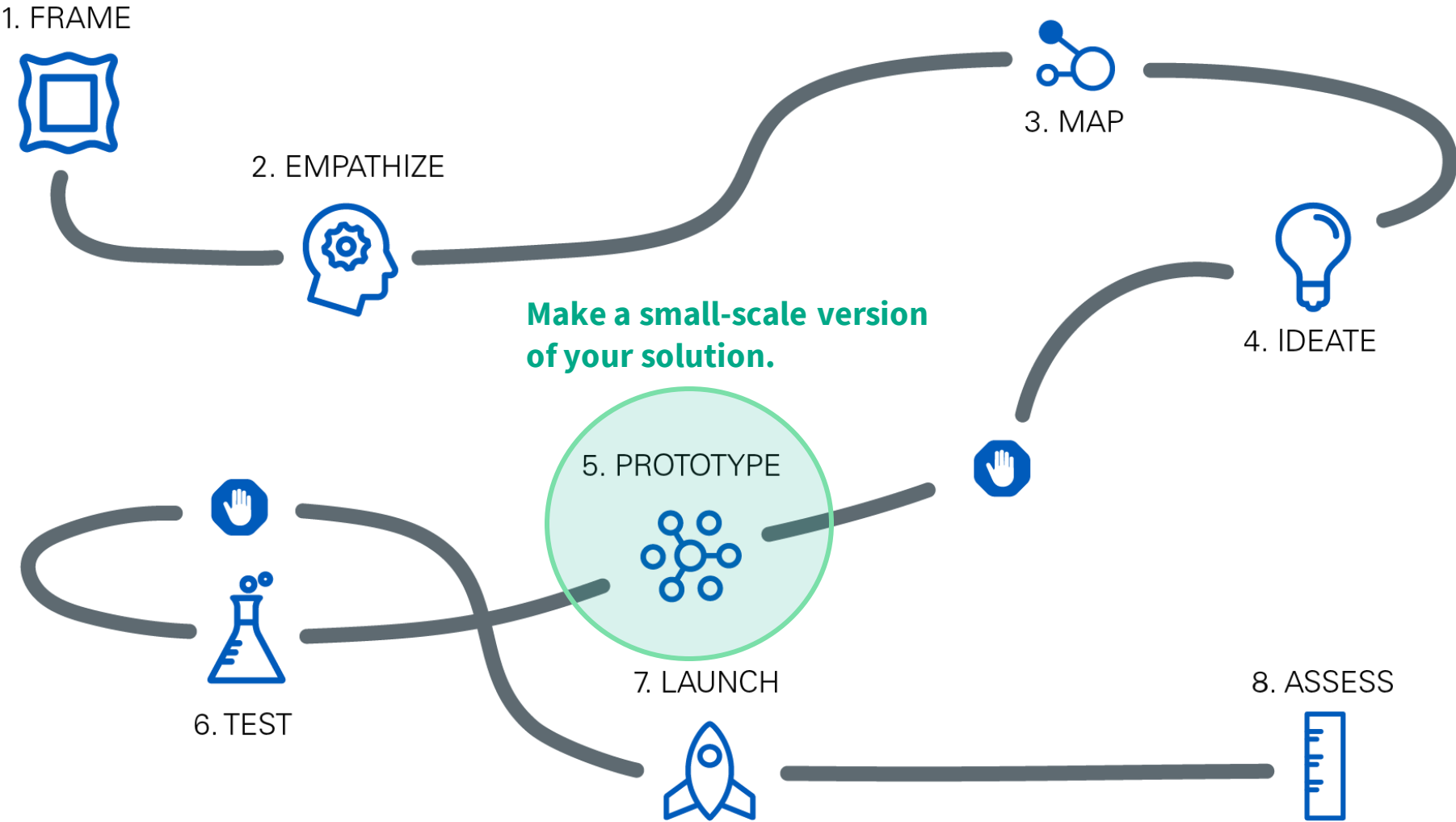
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# Prototype, Test, Launch & Assess





# The Behavior-Centered Design Journey



# Prototype

**How?** Make a small-scale version of your solution and prepare to share your idea.

## **Key Principle:**

- Aim for a good draft, complete enough to be testable but still in a work in progress

## **DEI Considerations:**

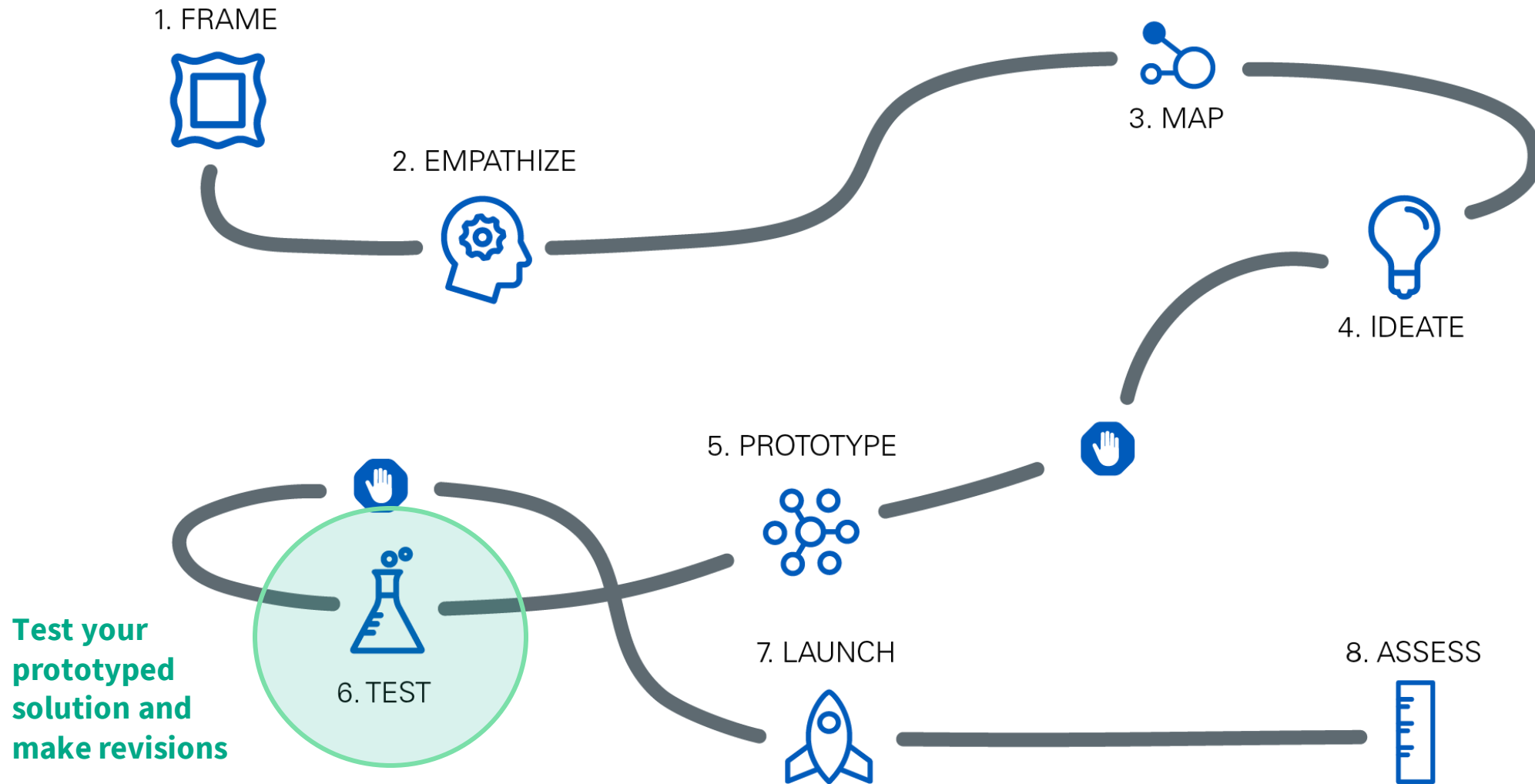
- Does the prototype incorporate the broader context?
- Does the prototype work for the many, not just the few?

# Examples of Prototypes

An experiential prototype could look like...

- A **storyboard** of key moments in time
- A **drawing** or set of drawings
- A short **play or scene** that shows what happens
- A small-scale **interactive space**

## The Behavior-Centered Design Journey



# Test

**How?** Present your solution idea to a focus group, run a simulation, do a mini-scale pilot, conduct interviews or surveys

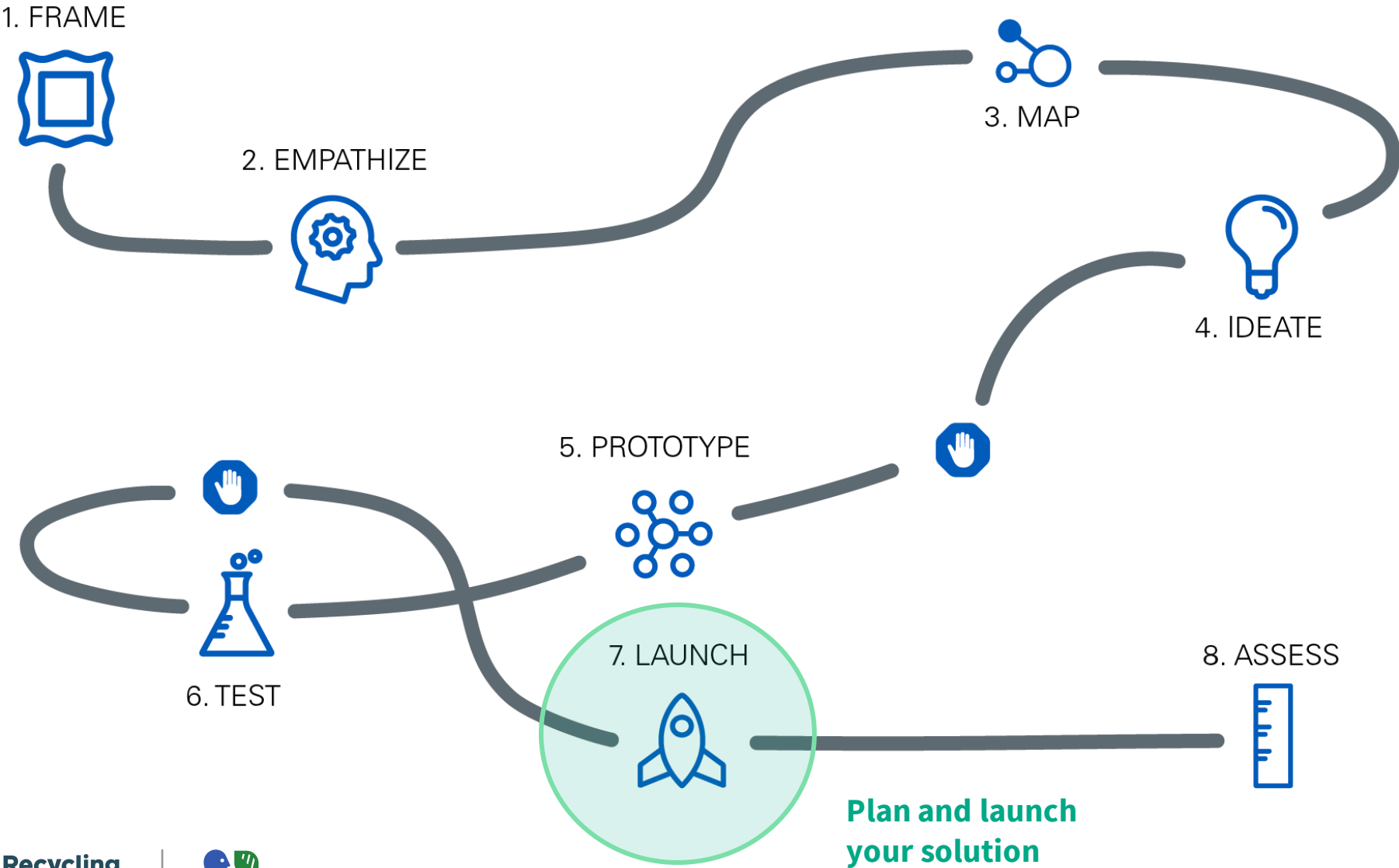
## Key Principles:

- Get feedback on your idea in a real-world setting

## DEI Considerations:

- Think about representation in your test group
- Consider the impact or any potential harms of your test/pilot
- Consult local stakeholders on what's appropriate

The Behavior-Centered Design Journey



# Launch

**How?** Completing an assessment plan, completing a launch plan and budget, planning interventions at scale

## Key Principles:

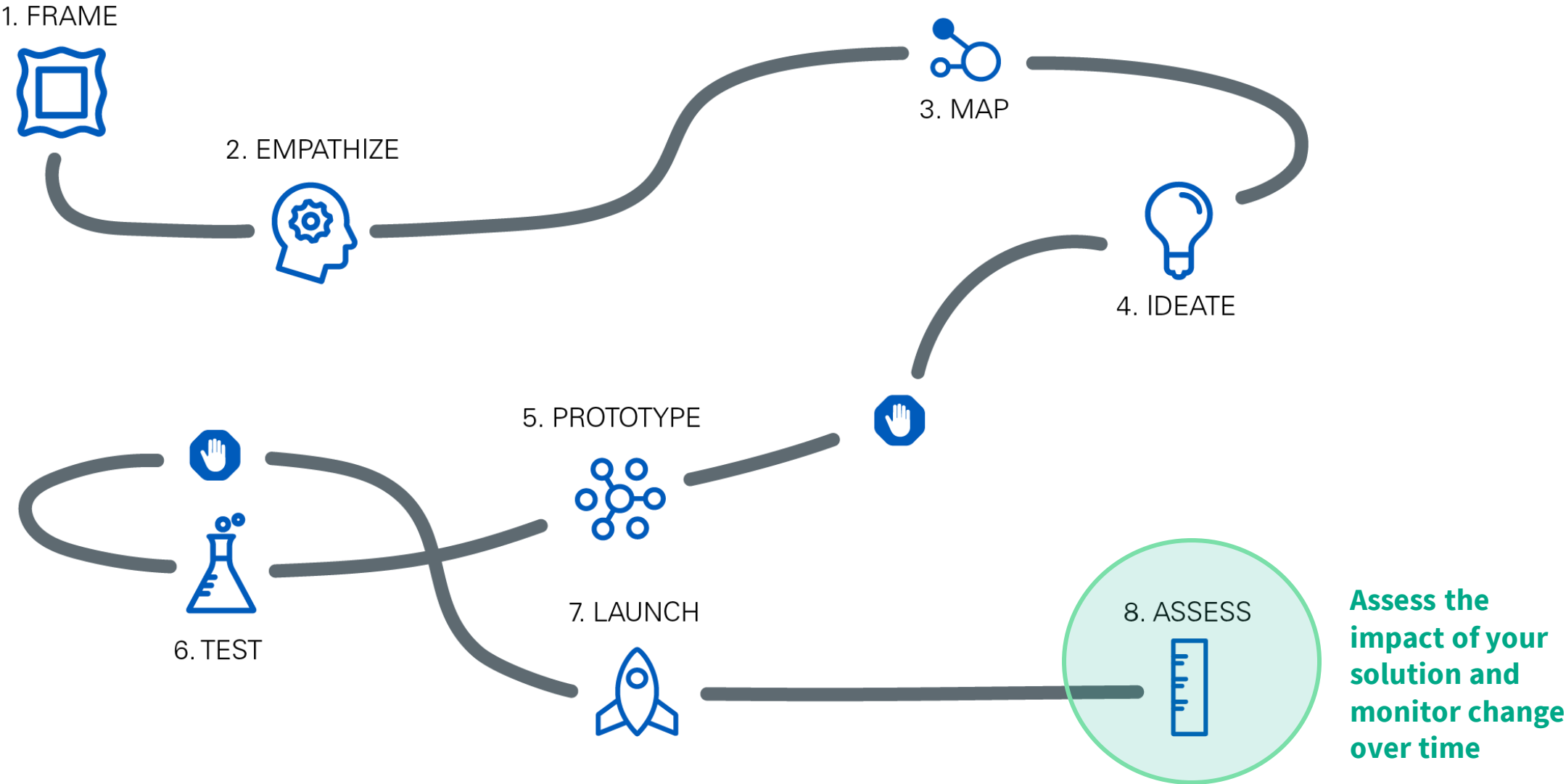
- Think of Assess while you plan for Launch
- Include lots of detail (what, where, when, who, etc.)!

## DEI Considerations:

- Have local experts be involved in implementation
- If you are running an experiment, consider fair treatments



# The Behavior-Centered Design Journey



# Assess

**What?** Measure the impact of your solution and monitor change over time.

**How?** Conducting post-intervention surveys and interviews, running experiments, identifying indicators, reflecting on and sharing what you learned

## Key Principles:

- Reflect on what worked and didn't work
- Look for observable change in behavior due to your solution

## DEI Considerations:

- Report all outcomes with diverse actors
- Monitor for long term and unintended effects

# Case study: Evaluating heavy-item pickup communications

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Anna Keleher, Behavioral Insights Team

*With thanks to Keep Indianapolis Beautiful*





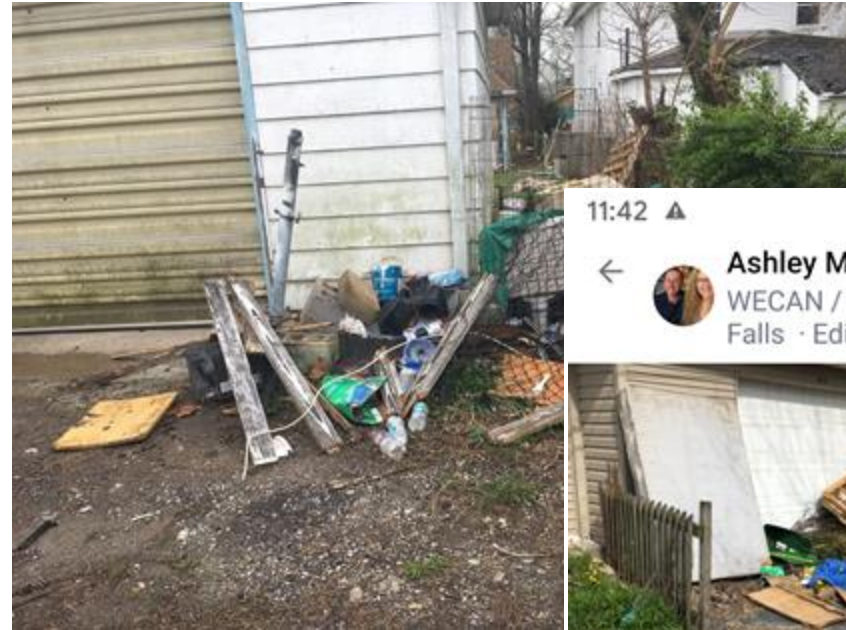
# Outline

---

- **Context & research question**
- **Evaluation design**
  - Selecting a methodology
  - Finding & making data
  - Analysis
- **Results & follow-up**
- **Takeaways**

# Context

- BIT worked with Keep Indianapolis Beautiful (KIB) and the Department of Public Works in Indianapolis—**specifically by increasing uptake of the free heavy item pick up service.**



# Context

- BIT worked with Keep Indianapolis Beautiful (KIB) and the Department of Public Works in Indianapolis to address dumping behaviors in Indianapolis—**specifically by increasing uptake of the free heavy item pick up service.**
- We conducted on-the-ground qualitative research with residents and **applied our knowledge of behavioral science to design a solution.**



## Potential Barriers

### Potential Barrier: Present Bias

Present bias describes the tendency for people to overweight the immediate costs and benefits of an action compared to future consequences. If costs are in the present and benefits are in the future, people will be less likely to act.<sup>1</sup> The present “cost” of holding trash or arranging a large-item pick-up may outweigh the longer-term benefits of keeping the environment clean.

**Indianapolis Context:** Present bias can help explain the presence of litter along Indianapolis roadways, at bus stops, and in parking lots. The long-term consequences of littering in Indianapolis, such as the monetary costs of cleaning, the environmental impacts (despite the city’s distance from the ocean, the White River can carry trash downstream), and decreased quality of life, are significant.<sup>2</sup> However, the present costs can seem high as well -- holding on to garbage is unpleasant and the “friction costs” section below discusses how proper waste disposal can require outsized effort in Indianapolis.

### Promising strategies:

- **Reduce the immediate discomfort** (i.e., “costs”) of holding on to trash. One way to accomplish this is through encouraging the use of redesigned packaging or carrying







# Solution: A mailer to inform residents about their free heavy trash pick-up service

A salient headline invokes a **deadline**



Simple & direct **call-to-action**



Magnet as a **reminder** of upcoming pick-up days





# Selecting an evaluation methodology

---

**Our question:** Does sending an informational postcard to remind and inform recipients increase usage of the heavy item pickup service?



# Selecting an evaluation methodology

---

**Our question:** Does sending an informational postcard to remind and inform recipients increase usage of the heavy item pickup service?

- **Do I need to measure impact?** → **Impact evaluation** (e.g., field trial or online RCT, quasi-experimental methods, diff-in-diff, pre/post designs)
- **Do I want to understand effectiveness or feasibility?** → **Formative evaluation** (e.g., user feedback, interviews, prototyping, observation)
- **Do I want to know if my program was implemented as intended?** → **Process evaluation** (e.g., surveys, observations, data collection and monitoring of key outputs)



# Selecting an evaluation methodology

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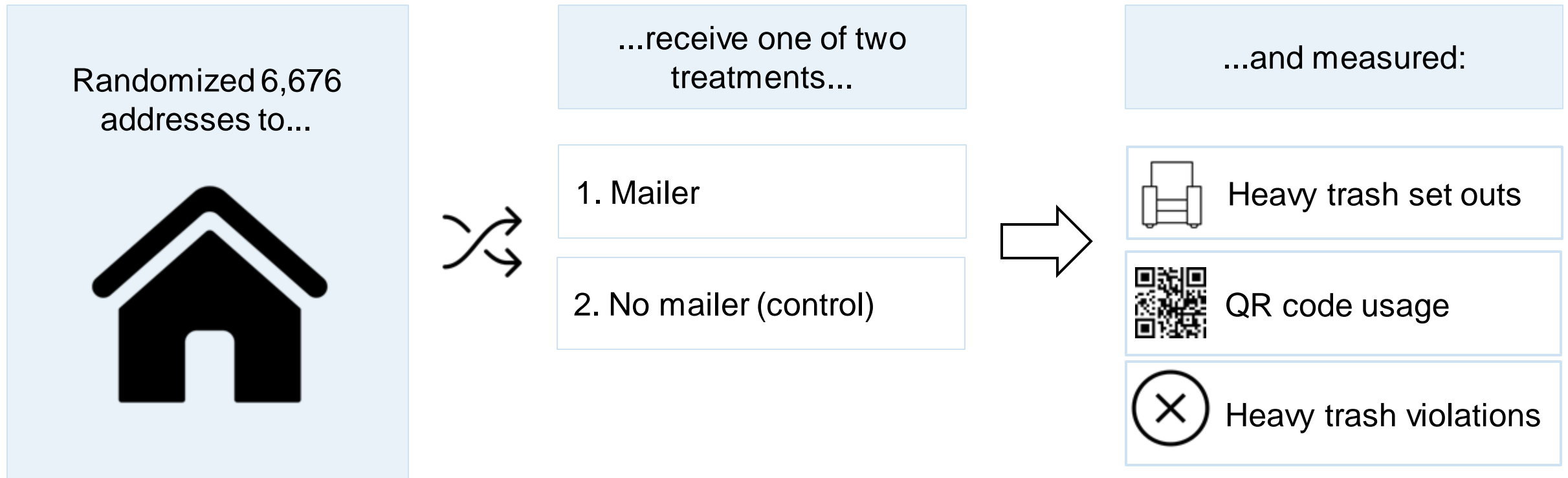
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# We ran a RCT to evaluate the impact of the mailers

In May 2021, KIB mailed the postcards to the selected addresses. Volunteers counted the presence of heavy trash at each selected address at two points after sending (June 16 & July 21).





# An RCT provided actionable results

---

Positive

**Scale the postcard** to all Indianapolis households

Null


**Not expand investment in postcards** with this type of messaging

Backfire

**Do not use postcards** with this type of messaging



# Data: Finding it & making it



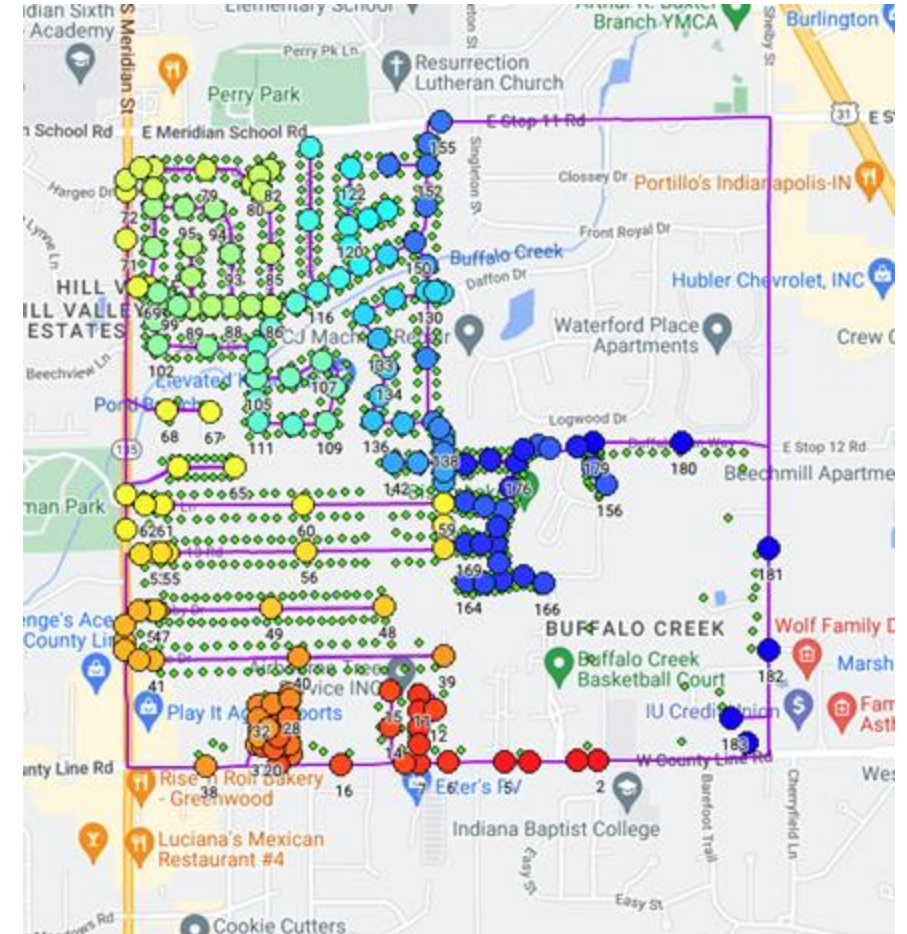
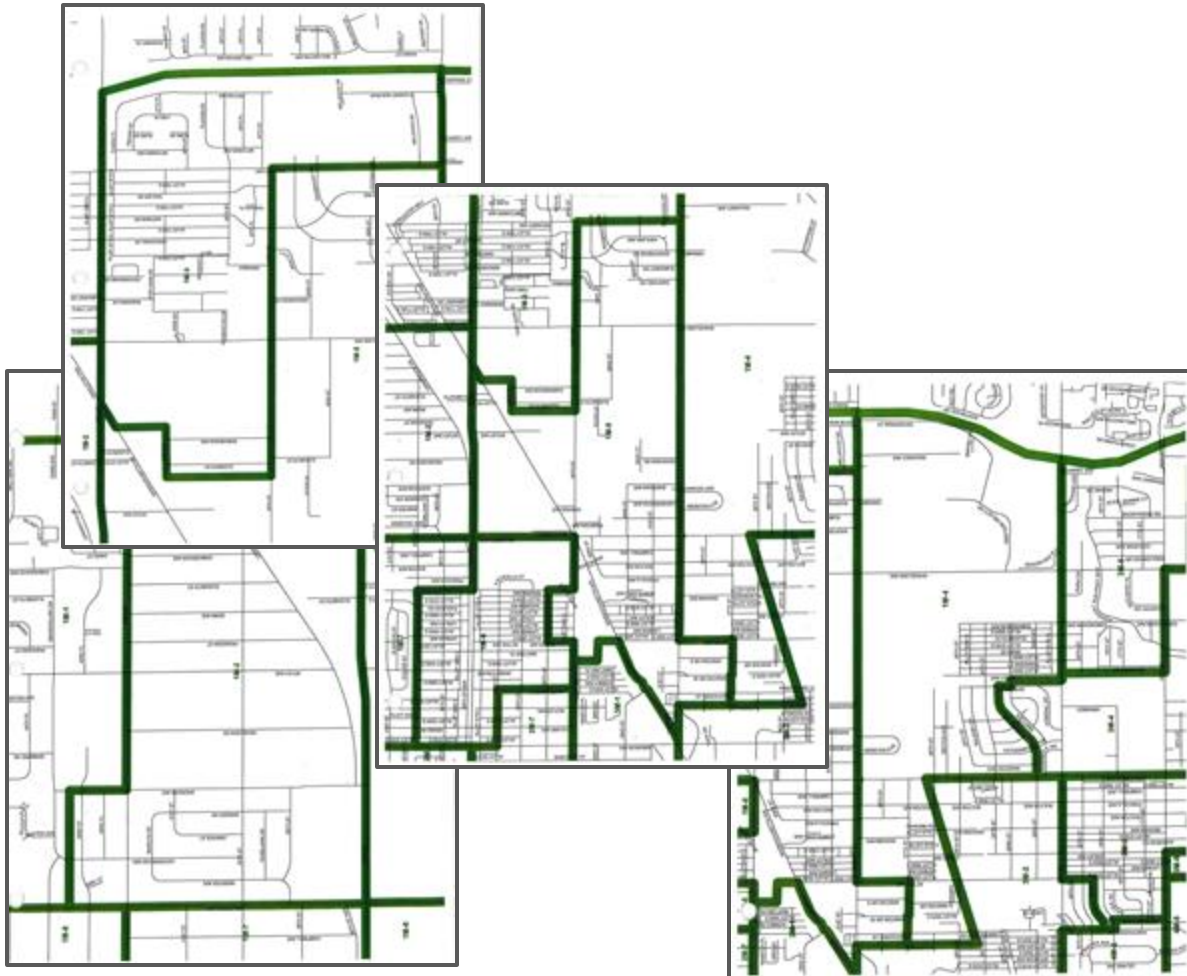
	A	B	C	D	E	F
1	First Name	Last Name	Street Address	City	State	Zip Code
2	James	Butt	6649 N Blue Gum St	New Orleans	LA	70116
3	Josephine	Darakjy	4 B Blue Ridge Blvd	Brighton	MI	48116
4	Art	Venere	8 W Cerritos Ave #5	Bridgeport	NJ	8014
5	Lenna	Paprocki	639 Main St	Anchorage	AK	99501
6	Donette	Foller	34 Center St	Hamilton	OH	45011
7	Simona	Morasca	3 Mcauley Dr	Ashland	OH	44805
8	Mitsue	Tollner	7 Eads St	Chicago	IL	60632
9	Leota	Dilliard	7 W Jackson Blvd	San Jose	CA	95111
10	Sage	Wieser	5 Boston Ave #88	Sioux Falls	SD	57105
11	Kris	Marrier	228 Runamuck Pl #2	Baltimore	MD	21224
12	Minna	Amigon	2371 Jerrold Ave	Kulpsville	PA	19443
13	Abel	Maclead	37275 St Rt 17m M	Middle Island	NY	11953
14	Kiley	Caldarera	25 E 75th St #69	Los Angeles	CA	90034
15	Graciela	Ruta	98 Connecticut Ave	Chagrin Falls	OH	44023
16	Cammy	Albares	56 E Morehead St	Laredo	TX	78045
17	Mattie	Poquette	73 State Road 434 E	Phoenix	AZ	85013
18	Meaghan	Garufi	69734 E Carrillo St	Mc Minnville	TN	37110
19	Gladys	Rim	322 New Horizon Bl	Milwaukee	WI	53207
20	Yuki	Whobrey	1 State Route 27	Taylor	MI	48180
21	Fletcher	Flosi	394 Manchester Blv	Rockford	IL	61109







# Data: Finding it & making it







# Data: Finding it & making it

---



## **Awesome volunteers!**

- Willing to wake up early
- Willing to drive behind garbage trucks
- Blinded



# Data: Finding it & making it

ht_june16	ht_july21	violatio	violatio	violatio	route	[primary_n	[street_pre	[street_name]	[street_	[street_post	Apt	Notes
					3W-1	8546		Bison Woods	Ct			
					3W-1	8548		Bison Woods	Ct			
					3W-1	50		Brookacre	Ln			
1					3W-1	110		Brookacre	Ln			
					3W-1	130		Brookacre	Ln			
1					3W-1	131		Brookacre	Ln			
					3W-1	504		Buffalo Ridge	Cir			
					3W-1	505		Buffalo Ridge	Ct			
					3W-1	506		Buffalo Ridge	Ct			
					3W-1	512		Buffalo Ridge	Cir			
					3W-1	513		Buffalo Ridge	Cir			
					3W-1	514		Buffalo Ridge	Ct			
					3W-1	519		Buffalo Ridge	Cir			
					3W-1	520		Buffalo Ridge	Cir			
					3W-1	522		Buffalo Ridge	Ct			
					3W-1	523		Buffalo Ridge	Ct			unbundled trash (pic)
					3W-1	527		Buffalo Ridge	Cir			
					3W-1	528		Buffalo Ridge	Cir			
					3W-1	530		Buffalo Ridge	Ct			
1					3W-1	531		Buffalo Ridge	Ct			BBQ
					3W-1	535		Buffalo Ridge	Cir			



# Analysis

---

We will use a logistic regression:

$$\text{outcome}_i \sim \text{bernoulli}(p_i); \text{logit}(p_i) = \alpha + \beta_1 \text{Treatment } i + \beta_2 \text{MultiUnit} + \beta_3 \text{Route}$$

where the function logit is defined as the log-odds ratio:  $\text{logit}(p) = \log\left(\frac{p}{1-p}\right)$

and where  $i$  represents the individual,  $p$  represents the binary outcome of interest (heavy trash set out or not), *Treatment* represents an indicator variable equal to 1 if the individual was randomly assigned to receive the mailer and 0 if they were assigned to control, *MultiUnit* represents whether or not the address reflects one or multiple (2-4) units, and *Route* represents the 1 of 8 trash routes being followed for data collection. We will conduct an Intent-To-Treat (ITT) analysis with heteroskedasticity-robust standard errors.

Our primary coefficients of interest is  $\beta_1$  which represents the average causal effect of being assigned to our treatments. We are testing the hypothesis that the average difference between the treatment and control group is statistically significantly different than zero.

# Analysis

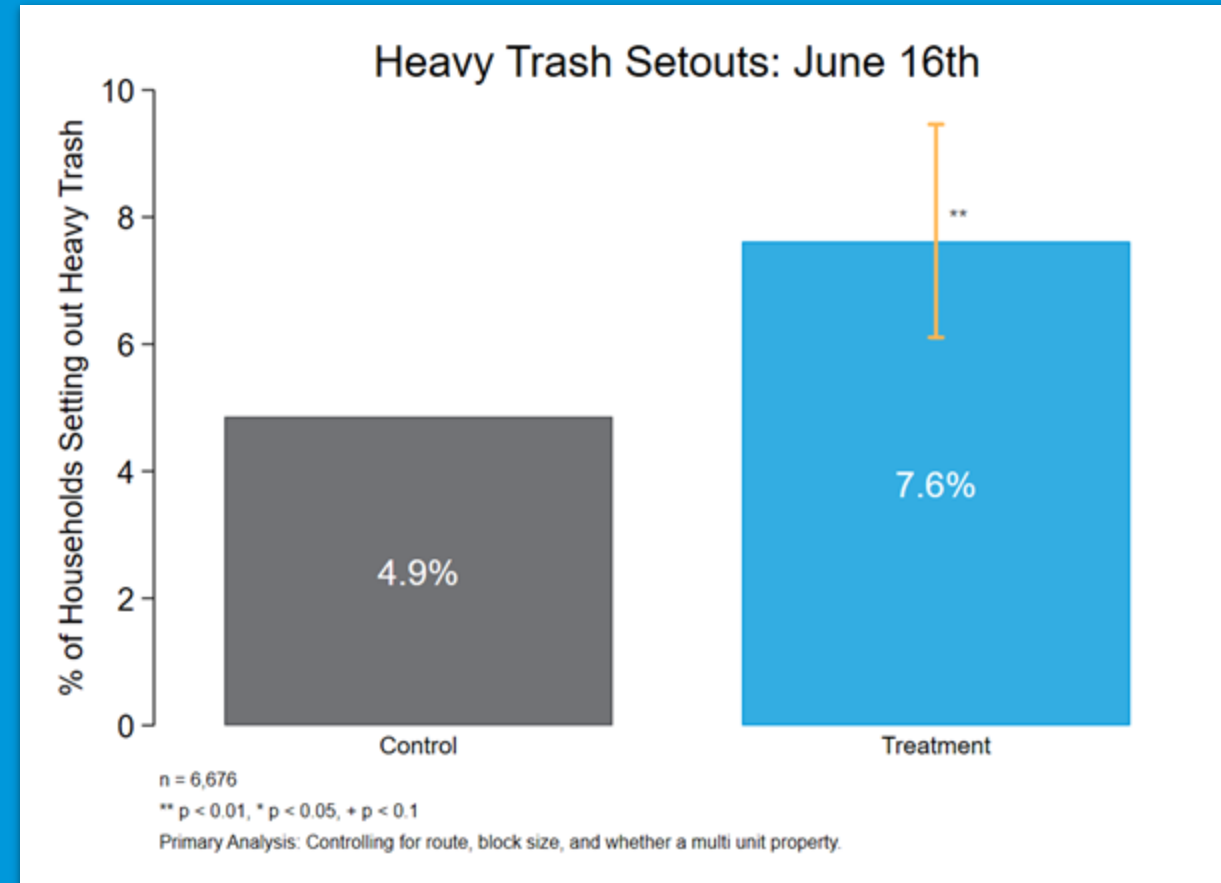
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## The mailers had an immediate, large, impact on proper disposal

On the first heavy trash collection day after the mailing, households who received the mailer were **55.1% more likely to properly set out trash for collection.**

- This equals ~180 more set outs from households that received the mailer. These results were statistically significant.
- If we sent mailers to all eligible households on DPW heavy trash routes (~120,000), we would expect to have seen **3,240 additional trash items set out** in the first month.







# Testing a more “scalable” mailer

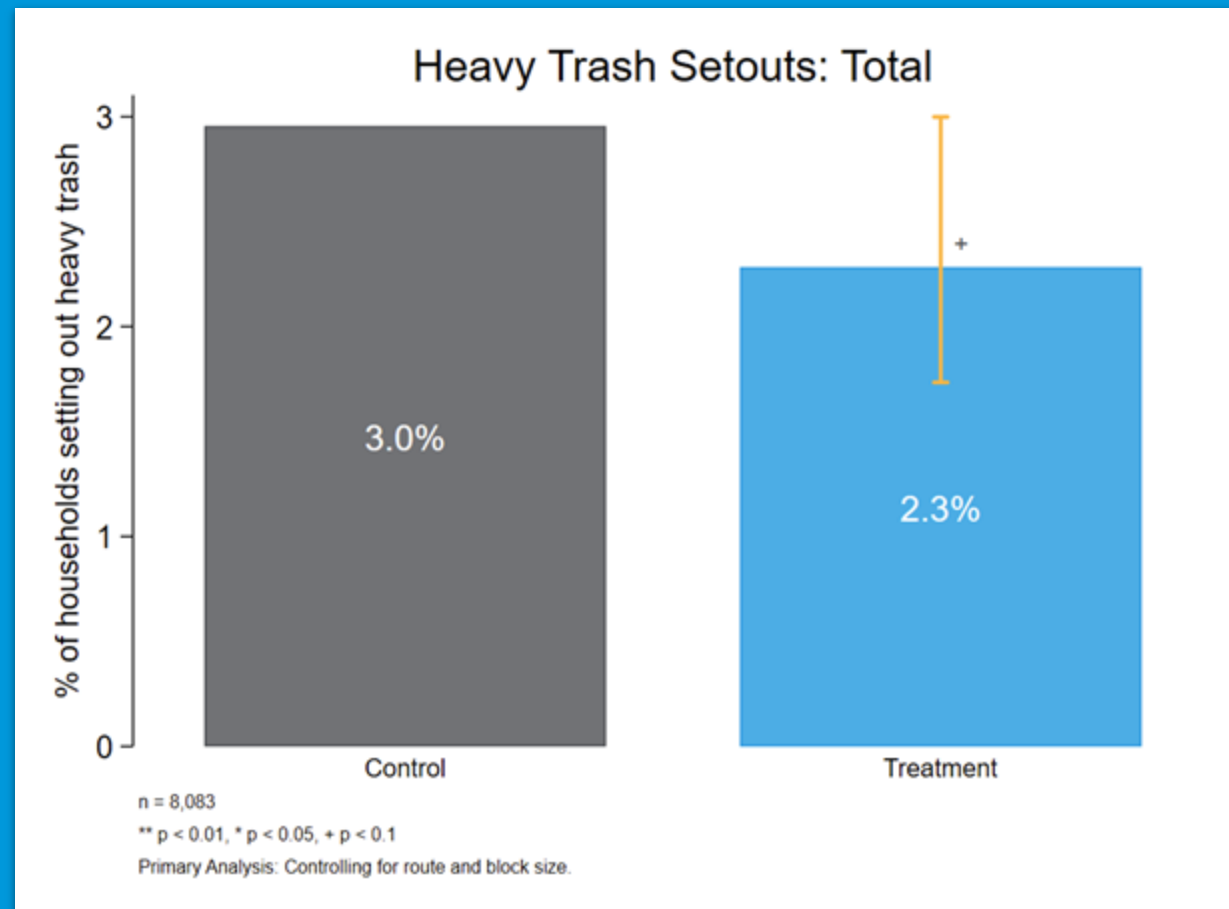
We tested the impact of a cheaper and low-effort design. The goal was to **understand whether the more tailored and expensive design was worth the cost to scale.**

- Smaller mailer
- No magnet
- Asked households to use the QR code/link to look up their own heavy trash service information online.



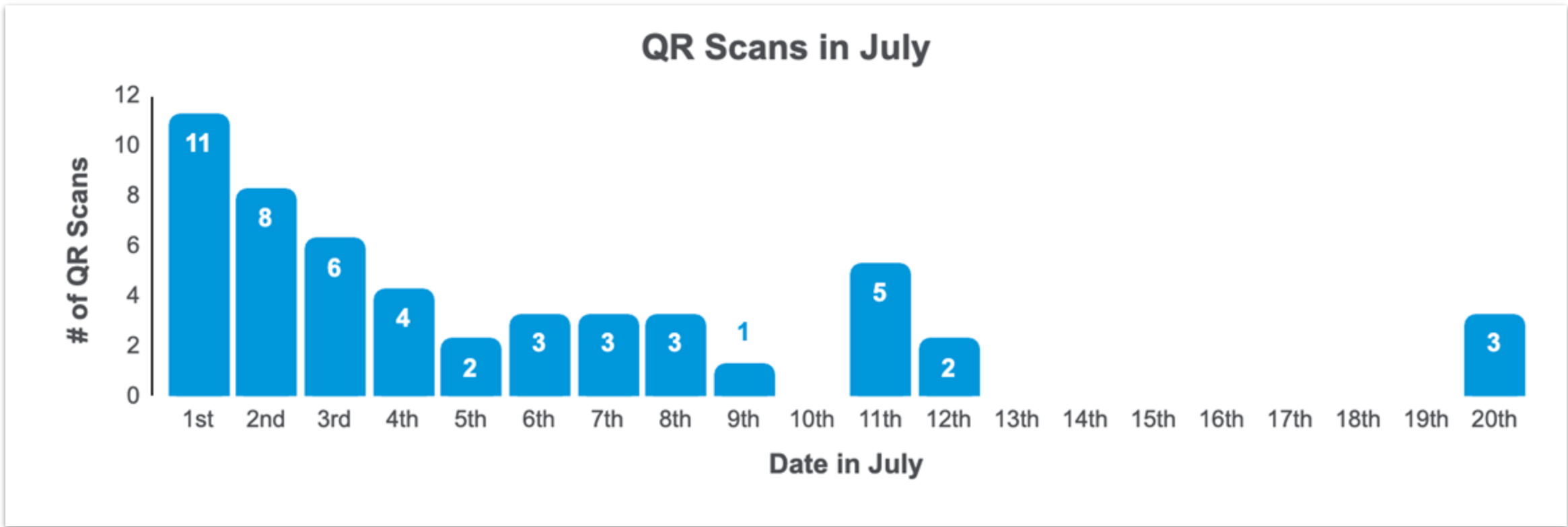
# The “scalable” mailer failed to generate the same effect.

- Overall, there were 26 *fewer* set outs from households that received the mailer across our data collection dates on July 13 and 20th.





# QR code engagement suggested that postcard personalization was important





# Takeaways for evaluating waste programs

---

- **Let your research question guide the evaluation approach**
- **Evaluation is a continuous process**
- **You can do it!**
  - Even if your data is limited
  - Even if you aren't an expert (ask me about off-the-shelf resources!)

# Assessing Engagement

Asami Tanimoto  
Senior Business Systems & Analytics Manager

February 21, 2024



**The Recycling  
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Solving for Circularity

We mobilize people, data, and solutions across the value chain to reduce waste and our impact on the environment while also unlocking economic benefits.



Where do I start?

## There are many ways to measure



Tons Collected



Capture Rate



Set Out Rate



Subscription Rate



Recycling Rate



Participation Rate



Recovery Rate



Contamination Rate



Composition



Thoughts, Attitudes, Beliefs



# What is your goal? What question do you want to answer?

## Increase Recycling Tonnage

- Collected weight
- Households served to normalize data (pound/household/year)
- Recycling vs. waste

Example: Reynoldsburg, OH

## Increase Recycling Participation

- Set out data for each address over 4 weeks
- Manual audit (FOTS) or cart tip data (RFID)

Example: Cincinnati, OH

## Increase Recycling Capture

- Composition of recycling & waste streams applied to collected tonnage per households served
- Generation, composition, capture, contamination

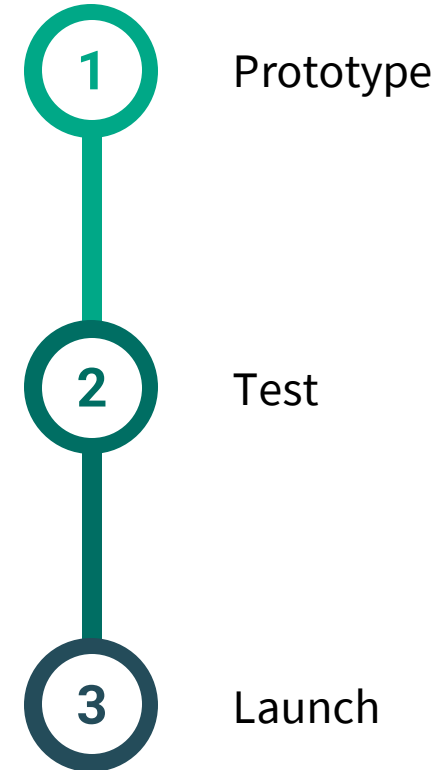
Example: Folsom, CA

## Improve Confidence

- Recycling Confidence Index
- Survey of 10 factors to gauge people's confidence in their recycling habits & in their recycling program

Example: Folsom, CA

# Who? What? When? How?



# Large Southern City Example

- **Goal:** Improve quality of recyclables collected in 48 routes of the city (~10%)
- **Intervention:** Yes/No info via mailer, customizable cart tag (warning, rejection), social media
- **Measurement:** Set out rate, participation rate, tagging rate from FOTS and generation rate, composition, contamination, and capture rate from capture study





## Large Southern City Example - Results



- Data from Feet on the Street Tracking
  - Weekly set out rate hovered between 34% and 42%
  - 31% of households never set out over 4 weeks (69% participating)
  - Tagging rate decreased 28% over 4 weeks
- Capture study collected paired garbage and recycling cart contents from 144 households chosen from 12 routes before and after intervention
  - Average contamination rate decreased 41%
    - Sampled households with bagged recyclables in their recycling cart decreased 2% and weight of bagged recyclables decreased 23%
    - Sampled households with bagged garbage in their recycling cart decreased 27% and weight of bagged garbage in recycling decreased 50%
    - Number of households with less than 10% contamination almost doubled
  - Average participating household capture rate increased 12%
    - 22% more households captured more than half of their recyclables in the recycling cart
    - Almost every material type's capture increased but most metal, glass, and plastic containers are still behind average participant capture rates and can be improved

1

What question do you want to answer?  
What metrics are relevant?

2

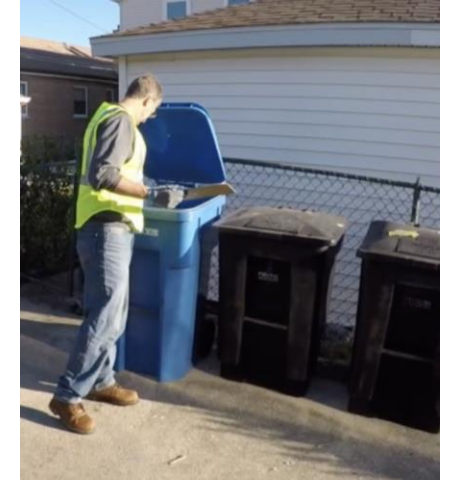
Determine details of measurement:  
Who? What? When? How?

3

Conduct measurement before and after  
intervention

4

Adjust intervention based on results



Get in Touch:

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**The Recycling  
Partnership**  
Solving for Circularity

We mobilize people, data, and solutions across the value chain to reduce waste and our impact on the environment while also unlocking economic benefits.

# Unlocking Recycling's Potential: Day 2

February 22, 2024



**The Recycling  
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ENVIRONMENT**

# Agenda

## DAY 1

**Welcome**

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**Why Behavior Change Matters in this Moment?**

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**Behavior Change & Behavior-Centered Design**

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**Equity & Recycling**

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**Interactive Adventures with Behavioral Insights**

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**Framing, Empathizing, Mapping**

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## DAY 2

**Opening, Reflections, and Warm-Up**

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**About Connected Recyclability**

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**Levers of Behavior Change**

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**Ideate, Prioritize & Refine Solutions**

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**Prototype, Test, Launch, Assess**

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**Equity - What's next? And Closing Remarks**

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# Equity: What's Next?

Host:

Kevin Goolsby, The Recycling Partnership

Panel:

Jessica Levine, The Recycling Partnership  
Freddy Coronado, SF Environment Dept.





## Equity: What's Next? Highlights from the Panel Discussion

**Kevin:** What drives your passion for this work and what personal connection or motivation inspires you in these efforts?

**Jessica:** I joined the organization in 2018 as the youngest at the time and the first person of color and I asked a lot of questions. I told you yesterday that I'd be small but mighty and use my voice to enact some type of change. And so that's what I started to do. I founded a platform called the Recycling Inclusion Fund that allocates resources to support BIPOC communities and populations in research to understand the access and participation gaps that hinder BIPOC populations from being able to actively participate in their local recycling programs. Looking at where I started and how I've been able to learn, grow, and use my voice to drive change in this industry, even if it's a small and incremental way, I feel like my passion fuels that because I'm able to really be a part of you all being in the room right now.





## Equity: What's Next? Highlights from the Panel Discussion

**Kevin:** What drives your passion for this work and what personal connection or motivation inspires you in these efforts?

**Freddy:** I have been doing multi-family residential work for almost a decade. Believe it or not, this is my 10th year doing this work in the sector. It is super difficult work, but if we're trying to get diversity and inclusion, we have to work with the sector, especially our affordable housing sites properties. I have a background in geography, and one of the best classes that I took was called the Geography of Ethnic Communities. And in this course, we learned about what are the different demographics that make up an ethnic community, like cultural traits. And I have taken this to work and applied it. As a child, I did move a lot. I noticed how much the waste management systems of where I live differed. My lived experience has resulted in me wanting to work in zero waste, especially interacting with residents.



## Equity: What's Next? Highlights from the Panel Discussion

**Kevin:** What common hurdles do you face when empathizing and communicating with diverse communities?

**Freddy:** My biggest advice, especially if your city is very diverse, is to learn the geography of the communities that you're trying to serve. Learn what you're trying to do, the culture. What are the needs of your residents? I think it's really important to show up for a community as much as you can, before you start enacting a program that's going to result in a lot of infrastructure change.

**Jessica:** It's so important for you to be visible, to get to know the communities that you're engaging with, before you make assumptions on what they may need or what they may want, because it could be a complete miss!





## Equity: What's Next? Highlights from the Panel Discussion

**Kevin:** What other strategies are there to promote inclusivity and equity? What are some practical tips and strategies that people can take away?

**Jessica:** Don't think you have to start from scratch! Find organizations that can support you with resources like research, toolkits, customizable templates. The Recycling Partnership, and many other organizations, have invested the dollars into identifying those insights so that you have a more informed approach to how you are reaching and engaging with your diverse communities.

**Freddy:** Focus on Multifamily. Connect with your government agency/office in charge of affordable housing. Create technical support throughout the system, from beginning to end, for all actors, to support change. Create tools & resources to support, rather than putting the work on to others. Find public domain resources & modify. Seek out & take advantage of EPA grants for environmental justice. There's a lot of money right now!



## Equity: What's Next? Highlights from the Panel Discussion

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**Jessica: A Question to the Audience - Do any of you have examples of how you've been able to amplify your programs with the support of community-led organizations or businesses?**

### **City of San Jose:**

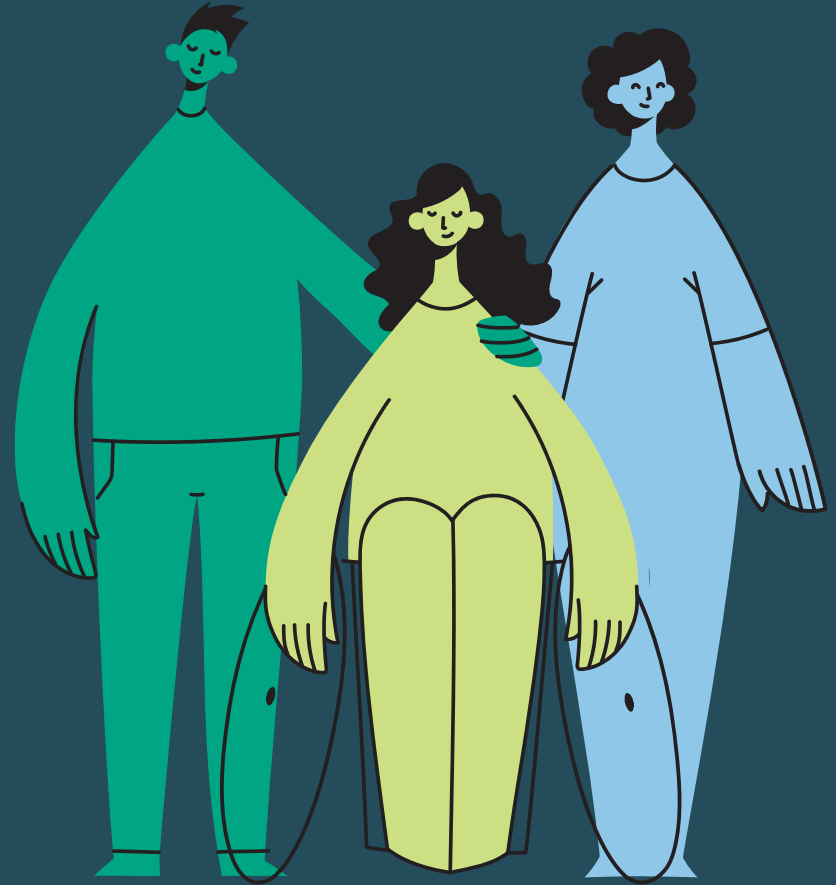
Partnered with CBO's who work with English language learners in the community to co-create materials in different languages to reduce recycling contamination. Review materials, practice google searches and check results for accuracy in different languages.

### **Stop Waste, Alameda Co.:**

How to reach new audiences with our messages? Approach = RFP for Social Media Influencers to produce content for food waste reduction. The RFP resulted in a contract with a chef community that supports job creation in local community.



# Closing and Next Steps



The Recycling Partnership is proud to partner with the following organizations and speakers to make this workshop possible.

## Hosting Partners



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**CRRA**  
Ending waste.

## Speakers



Duke



MIT / Erez Yoeli

nuance



## Insights Partners

POINT FORWARD



## On-site material management



And thanks to YOU the community programs, companies, and non-profits (etc.) for joining us here and for being part of our programming!



**CRRA**  
Ending waste.

### **CRRA Mission**

Provide CRRA members with resources to advance local, regional and statewide waste reduction efforts which result in critical environmental and climate protection outcomes.



Join the CRRA Behavior Change Technical Council

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SCAN ME



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**Director of Policy Implementation  
CRRRA Board Member, Technical Council Liaison**



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# Behavior Change for the Environment Starts Here



[behavior.rare.org](http://behavior.rare.org)



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# Thank You!

