

SCALING CITYWIDE BEHAVIOR CHANGE

Lessons in Consumer
Behavior Design from
Closed Loop Partners'
Reuse and Waste
Reduction Campaigns

WHO WE ARE

About Closed Loop Partners

Closed Loop Partners is at the forefront of building the circular economy. The firm is comprised of three key businesses that create a platform for systems change: an investment group managing venture capital, private equity and catalytic capital & private credit investment strategies, Closed Loop Capital Management; an innovation center, the Closed Loop Center for the Circular Economy; and an operating group, Closed Loop Builders. Closed Loop Partners is based in New York City and is a registered B Corp.

About Closed Loop Partners' Center for the Circular Economy

The Closed Loop Center for the Circular Economy (the Closed Loop Center) is the innovation arm of Closed Loop Partners. The Closed Loop Center helps businesses solve their most pressing material challenges. We're built on the principle that a world without waste is not only an environmental necessity, it's a path to profitable growth. To learn more, visit <https://www.closedlooppartners.com/closed-loop-center/>

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INTRODUCTION

BEHAVIOR CHANGE IS A DESIGN CHALLENGE

For decades, behavior change efforts have focused on changing consumers. Our work shows a different path to behavior change: redesigning the environment around the desired behavior. When systems are designed to minimize effort and reinforce action, participation becomes the easy, intuitive choice.

DESIGNING FOR THE BEHAVIORS WE WANT TO SEE

What does it really take for people to adopt a new habit? Behavioral science tells us that habits are formed through repeated actions in consistent contexts, and research suggests that it can take anywhere from a few weeks to several months for a new behavior to become automatic.

Drawing on nearly a decade of real-world testing across cities, retail environments and consumer-facing initiatives, Closed Loop Partners reveals how organizations can accelerate adoption of circular solutions through integrated system design.

What we've learned

We know that people are far more likely to adopt a behavior when they see others doing it. Social norms are powerful drivers of behavior, while shame and guilt rarely produce change that lasts. Repetition matters, but so does visibility. The

behaviors that become habits are often the ones that feel familiar, expected and easy to do. This is especially true when it comes to more novel systems, like reusable or returnable packaging.

Whether refilling shampoo in-store, grabbing a to-go beverage in a reusable cup, returning a reusable takeout container or participating in another reuse system, the operational complexities of reverse logistics, technology and inventory management should remain behind the scenes. A consumer's cognitive effort should be near zero. Convenience should be built into every stage of the experience.

What should consumers see? Clear messaging that is impossible to miss. The right reminder at the right place and time can change behavior. Consumers should also see that others are participating. Visible social norms around reuse, refill and reduction habits reinforce new behaviors and help them feel expected rather than exceptional. Staff interactions, supported by frictionless operational design, also play an especially important role in reinforcing those behaviors and adopting new habits.

The critical shift: from consumer challenge to design challenge

Our work has pointed us to a simple but profound truth: behavior change is often framed as a *consumer challenge* when it is fundamentally a *design challenge*.

Over the last decade, the Closed Loop Center has successfully shifted consumer behavior at scale through some of the largest community-wide activations in North America, working alongside leading brands, retailers, municipalities, community groups and foodservice operators to test and refine circular solutions in real-world settings.

From citywide reusable cup systems to multi-retailer bag waste reduction campaigns, we have seen a consistent pattern: people are more likely to participate when actions are visible, convenient and easy to incorporate into existing routines.

Across communities from Arizona to California, New Jersey to Virginia and beyond, these initiatives have demonstrated how thoughtful program design, clear communication and strong

local partnerships can normalize new behaviors, ranging from choosing reusable options to participating in take-back and recycling programs.

What's next

While many of the examples in this report focus on packaging systems, our work also spans electronics, textiles, healthcare and other material streams. Across sectors, successful programs share a common goal: making it easier for people to return, reuse, repair and recover valuable products and materials.

Our findings show that behavior change does not happen by accident. It happens when we intentionally design for the behavior change we want to see.



OUR APPROACH & METHODOLOGY

ADVANCING CIRCULARITY ACROSS U.S. CITIES

Citywide activations are a key step to making the circular economy a tangible, everyday reality.

WHY WE FOCUS ON CITIES

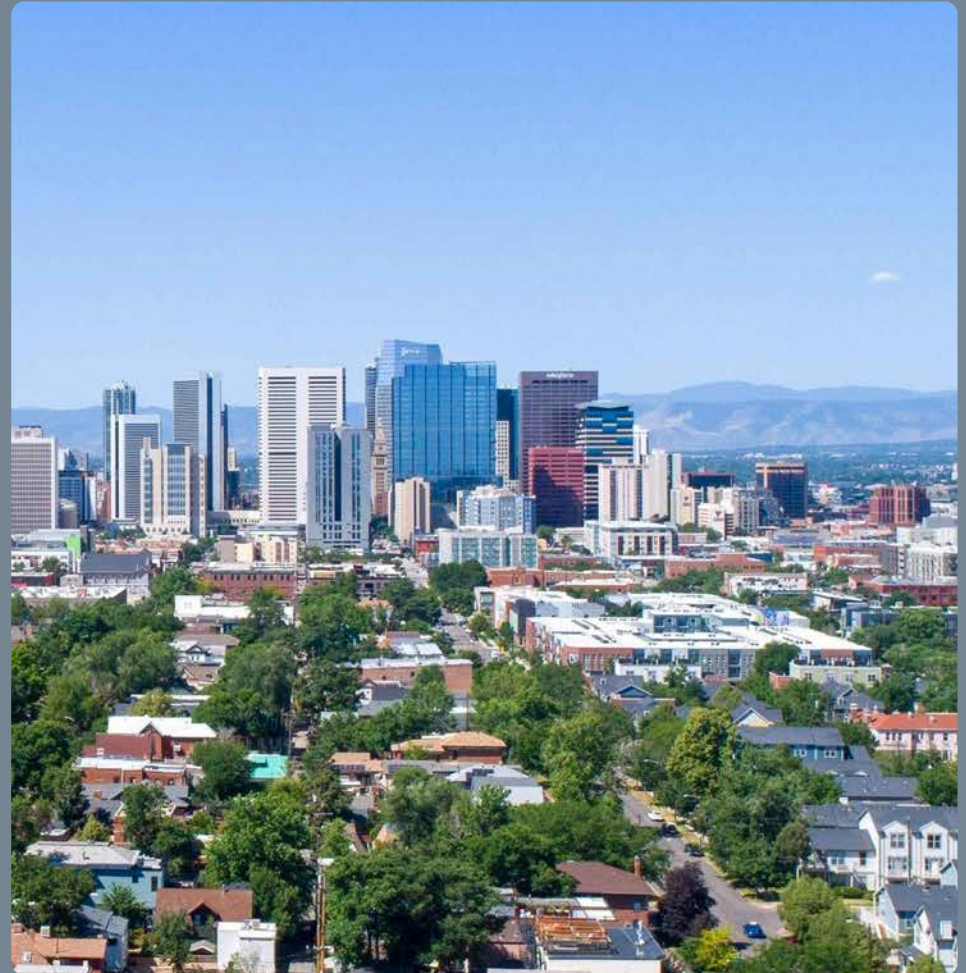
Cities bring together people, businesses, infrastructure, and consumption patterns in ways that make behavior change both visible and measurable. A single city can bring together residents, retailers, restaurants, waste haulers, community organizations and local government around a shared challenge, creating the conditions needed to test and accelerate new models for reuse, refill, repair and recycling.

Because daily decisions are repeated at such a large scale, even small shifts in behavior can produce meaningful environmental and economic impact.

Working at the city level makes it possible to align these stakeholders around shared goals and create the consistent experiences that help new behaviors become habits.

Equally important, cities serve as testing grounds for innovation. They provide a real-world environment to test, refine and measure

new approaches to reuse, refill, recycling, and waste reduction. Successful models can then be adapted and scaled to other communities, turning local insights into broader solutions that accelerate the transition to a circular economy.



HOW WE HELP ORGANIZATIONS DRIVE CONSUMER BEHAVIOR CHANGE

Diverse organizations increasingly recognize that consumer participation is essential to the success of a circular economy. Yet lasting behavior change requires more than a single intervention. It requires commitment from brands and retailers to municipalities, operators and community partners. **That's why the Closed Loop Center takes a collaborative approach to helping organizations turn intention into action.**

We work with stakeholders across the value chain to research, design and test systems that make sustainable behaviors easier, more intuitive and more rewarding. In doing so, we identify what drives participation, remove barriers to engagement and help scale solutions that deliver measurable behavior change. From bring-your-own initiatives and take-back programs to citywide reuse systems, our work transforms insight into action and action into lasting habits.



OUR 5-PART METHODOLOGY

A collaborative approach to scaling consumer behavior change through design.



OUR FINDINGS

5 KEY INSIGHTS FROM NEARLY A DECADE OF IN- MARKET TESTING

Drawing on years of consumer research, pilot programs and real-world activations, these five insights reveal what consistently drives participation in circular systems and what organizations can do to accelerate adoption.

1

FRICITION CAN MAKE OR BREAK PARTICIPATION

Across hundreds of diverse retail environments, the Closed Loop Center has consistently found that friction plays a critical role in shaping consumer behavior. Friction can either discourage participation or encourage it, depending on how and where it is introduced.

In many circular systems, participation drops when consumers are required to take additional steps, make extra decisions, remember new behaviors or seek out information on their own. Even highly motivated consumers may choose the default behavior when sustainable alternatives feel inconvenient or difficult to access. **One of the simplest ways to influence behavior is to reduce decision-making friction at the point of interaction.** Frontline staff can help by replacing uncertainty with clear, routine prompts that guide consumers toward available options without adding complexity to the transaction.

At the same time, our work has shown that strategically introducing friction into existing behaviors can be a powerful catalyst for change. Small disruptions to familiar routines can prompt consumers to pause, reconsider a decision and choose a different behavior. For example, across our bag waste reduction initiatives, we've seen that limiting the placement of single-use bags at checkout can prompt customers to reconsider whether they need a bag, often leading them to forgo one altogether.

The most successful behavior change programs understand that friction is not inherently good or bad. Instead, they intentionally reduce friction around the desired behavior and, in some cases, introduce modest friction around the behavior they are seeking to change.

Why this matters

Friction shapes behavior. Too much friction can discourage participation while thoughtful friction can interrupt old habits and encourage new ones. The most effective programs make desired behaviors easy while creating moments for consumers to reconsider their choices.

CASE STUDY: TRANSFORMING HOW ONE CITY'S RESIDENTS CONSUME THEIR BEVERAGES



In 2024, the Closed Loop Center helped deploy the [Petaluma Reusable Cup Project, a citywide reuse system in Petaluma, California and an initiative of the NextGen Consortium](#). The program demonstrated how reducing friction can transform reuse from a deliberate choice into an everyday behavior across an entire city.

By creating a seamless system across the community through shared branding, reusable cups, conveniently located return points and participation across more than 30 businesses, the program made reuse easy, intuitive and accessible. Customers could participate without needing to learn different rules at different locations or go out of their way to return a cup.

The program was intentionally designed with:

- Public return and collection points
- Transit-adjacent return locations

- Participation across multiple businesses
- Consistent branding and system design

Within 12 weeks, more than 220,000 purple cups were successfully returned. By providing convenient return infrastructure, a consistent customer experience and participation across multiple businesses, the system reduced friction at every stage of the reuse journey. The results demonstrate that consumers are far more likely to adopt and repeat a behavior when participation fits naturally into existing routines.





KEY LEARNING



The most effective programs carefully manage friction, making desired behaviors easier while creating moments that prompt consumers to reconsider existing habits.

2

THE MOST EFFECTIVE MESSAGES REQUIRE THE LEAST EXPLANATION

Across our consumer behavior research and in-market campaigns, one lesson consistently emerges across cities: consumers are far more likely to adopt a new behavior when the desired action is simple and easy to understand.

Consumers should never wonder

- Is reuse or “bring your own” cup or bag welcome here?
- Do I need an app to participate?
- What do I do next?
- Where do I return this?

Additionally, instead of emphasizing broad concepts like sustainability or the circular economy, successful campaigns tell people exactly what to do.

Whether encouraging reuse, return or reduction, the most effective messages focus on specific

actions, such as returning a cup or skipping a bag when not needed. Conceptual messages may inspire, but they do not instruct.

Effective messaging

- ✓ Skip the bag
- ✓ Bring your bag
- ✓ Return it here

Less effective messaging

- ✗ Support circularity
- ✗ Reduce waste
- ✗ Help build a sustainable future

In short, successful programs and messaging

- Minimize the number of steps required
- Eliminate unnecessary decisions
- Create a single, clear call-to-action
- Focus on directives instead of concepts

Why this matters

Consumers are more likely to participate when they clearly understand what is expected. Ambiguous or inconsistent instructions and competing messages create uncertainty that can prevent action.



KEY LEARNING



Consumers don't always need more information—they need a clear next step. The simpler the action feels, the more likely people are to adopt it and continue participating over time.

3

VISIBLE INFRASTRUCTURE AND CUES AT KEY DECISION POINTS ENABLE ACTION

Consumers rarely make decisions in ideal conditions—we're busy, multitasking and often navigating competing priorities. As a result, participation depends heavily on if the desired behavior fits naturally into the places people already visit and the routines they already follow.

Successful programs recognize that behavior change does not happen through messaging alone. Participation increases when consumers encounter visible infrastructure and cues that make the desired behavior easy to notice, understand and act upon.

Whether it is a reusable bag display near checkout, a return bin in a public space or clearly marked refill stations, infrastructure serves as both a participation tool and a behavioral cue. It makes participation easier while reinforcing that the behavior is possible, expected and normal.

While reminders can increase participation, the most effective programs focus first on creating environments that support action. **Visible infrastructure, clear prompts, and thoughtful operational design help consumers participate without needing to remember complex instructions or change established routines.** In successful programs, consumers do not need to deliberate over what to do because the environment itself guides them toward the intended action.

Examples of effective behavioral infrastructure

- Accessible reuse, refill or collection stations
- Return bins that are easy to find and use
- Consistent and recognizable fixtures across participating locations and high-traffic areas

The strongest programs identify the moments and places where consumers make choices and ensure the desired behavior is supported in those moments.

Common decision points

- At home through social media
- In the local community

- In the parking lot and at store entry and exit
- In-store at point of purchase
- In apps and/or marketing communications

Why this matters

Most consumer choices are shaped by what is immediately visible and available. Programs that rely on messaging alone often struggle to translate awareness into action. Participation increases when the desired behavior is supported by visible infrastructure and reinforced at key decision points, making it easier to perform and easier to repeat.



CASE STUDY: THE POWER OF COORDINATED CUES ACROSS TWO CITIES



Our Consortium to Reinvent the Retail Bag partnered with some of the largest retailers in the U.S. to [test behaviorally informed strategies for reducing single-use bag waste in Denver, Colorado and Tucson, Arizona](#). The initiative focused on making reusable bag use more visible and easier to act on within existing retail environments. **But rather than relying solely on in-store interventions, the campaign enabled and supported consumers throughout their entire shopping journey.**

Customers encountered reminders at home through social media ads, on the way to stores through billboards, inside stores through signage and staff prompts, and throughout their communities through coordinated messaging and retailer participation. **By embedding participation cues into the community as well as existing retail infrastructure, from store**

entrances to checkout counters, the program made reusable bag use more visible, accessible and top of mind at key decision moments.

Through coordinated in-store signage, clear staff prompts, out-of-store marketing campaigns and retailer-wide activation, the program reduced single-use plastic bag transactions by 5% across more than 375 stores and 160 retailers, equivalent to eliminating an estimated 9.5 million bags annually if scaled across the two markets.

The program demonstrated that participation increases when the retail environment is intentionally designed to support the desired behavior. Consistent cues, visible prompts and point-of-purchase infrastructure helped consumers act on their intentions when shopping decisions were made.

Moreover, the campaign's success in a city with a bag fee (Denver) and a city with no fee (Tucson) suggests that well-designed infrastructure and cues can drive participation regardless of whether legislation is in place.

KEY LEARNING



Consumers are most likely to act when participation is supported by visible infrastructure and reinforced by repeated cues throughout the customer journey.

4

SOCIAL NORMS OUTPERFORM ENVIRONMENTAL APPEALS

Our work designing behavior change interventions at city-scale has shown that people are heavily influenced by what they see others doing. While many consumers care about waste reduction, environmental benefits alone rarely drive widespread behavior change.

We have found that participation increases when a behavior feels visible, familiar and socially accepted. In other words, people are more likely to change their behavior when it feels normal.

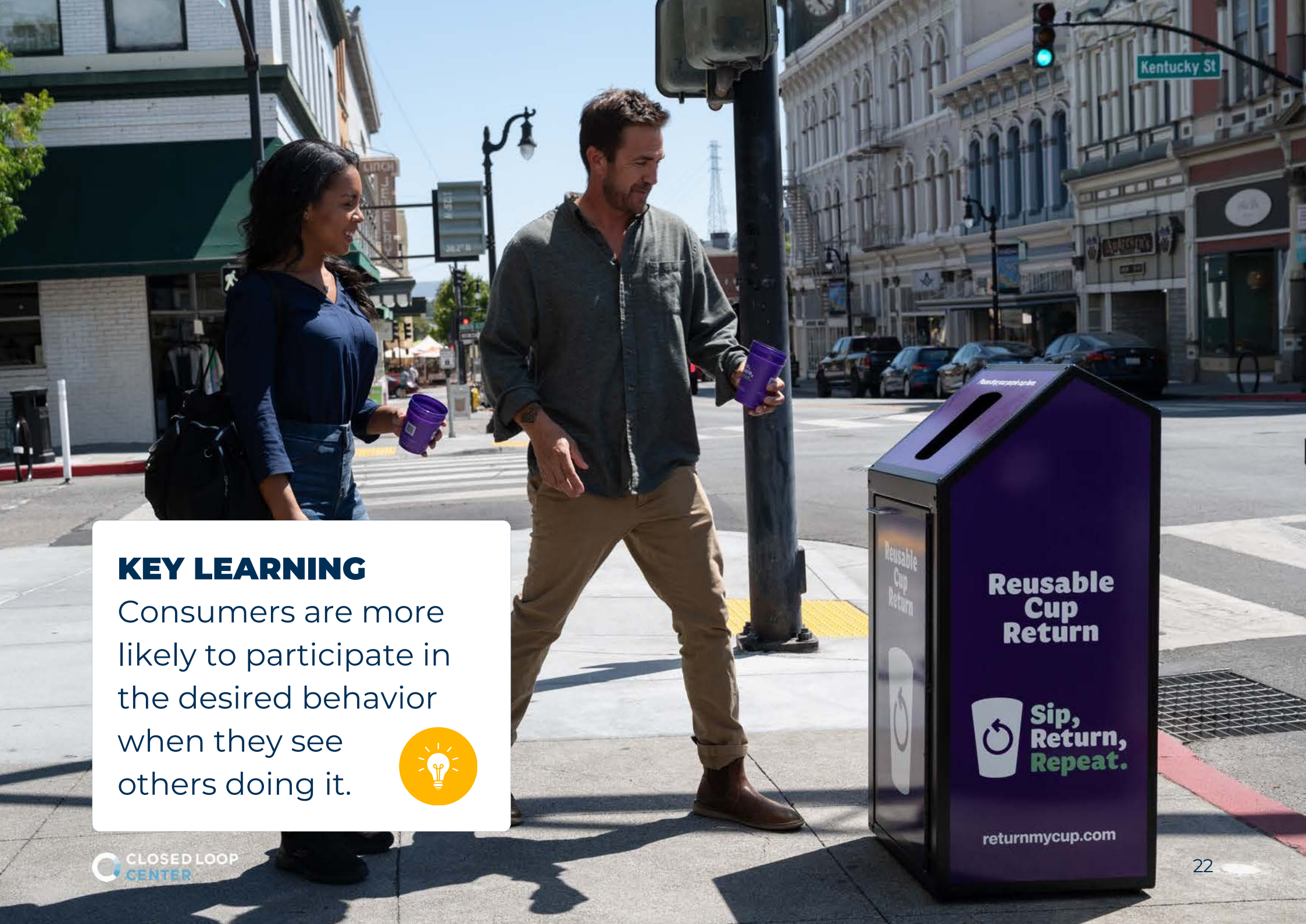
Successful programs intentionally create social visibility by activating entire communities, rather than individual locations, and reinforce participation across multiple touchpoints. When consumers repeatedly encounter something in daily life, they begin to view it as part of the expected experience rather than a niche

sustainability action. Lasting behavior change happens when the desired action feels both socially expected and naturally embedded into daily routines.

Why this matters

Most consumers are not actively evaluating the environmental benefits of every purchase decision. Instead, they often rely on social cues. Seeing others participate and noticing that a behavior is common or expected within a community can influence behavior as much as, or more than, environmental messaging alone.





KEY LEARNING

Consumers are more likely to participate in the desired behavior when they see others doing it.



5

INCENTIVES CAN SPARK PARTICIPATION, BUT CONVENIENCE SUSTAINS IT

We have found that financial incentives, such as discounts, rewards, fees and charges have varying effects on behavior change. While incentives can motivate action, they are not always reliable drivers of lasting behavior change.

Across our citywide initiatives, incentives have proven most effective when they are part of a broader behavior change strategy that combines convenience, visibility, social norms and clear guidance.

Among financial incentives, fees and charges often influence behavior more effectively than rewards or discounts, although they can be more challenging to implement. Importantly, financial incentives are not the only way to motivate behavior. Convenience, recognition and positive social norms can often be equally or more effective.

Why this matters

Incentives are additive, not transformative. While fees or discounts can increase participation, they rarely do the heavy lifting on their own. Our research suggests incentives are most effective when they complement other proven drivers of behavior change.

Effective incentive tactics:

- Pair discounts or rewards with staff engagement
- Implement fees or charges where/when operationally and politically feasible
- Leverage non-financial incentives, such as convenience, recognition and social norms



KEY LEARNING

Lasting behavior change is rarely driven by financial considerations alone. Consumers respond to a combination of financial, social and practical motivations.



THE PATH FORWARD

ACCELERATING CONSUMER PARTICIPATION IN CIRCULARITY AT SCALE

Nearly a decade of real-world testing has shown what it takes to drive participation in circular systems. As policy tailwinds and industry collaboration continue to grow, now is the time to translate these insights into action and scale the solutions that work.

NOW IS THE TIME TO APPLY AND SCALE THESE LEARNINGS

Consumers are ready, but the experience must enable participation

The findings in this report reinforce a clear takeaway: consumers are ready to embrace more circular behaviors when the right options are available and intuitive. The challenge is not convincing people to change, but designing experiences that make sustainable choices visible, convenient and easy to adopt.

The opportunity now is to apply these learnings at a larger scale, particularly as packaging policies create new demands for consumer participation across the U.S.

Policy momentum is accelerating change

California is emerging as a critical proving ground for the next generation of recycling, reuse and return systems. The state combines ambitious policy, significant population density, a high concentration of retailers and foodservice

operators, and one of the country's most consequential Extended Producer Responsibility (EPR) for packaging laws: SB 54. By 2032, the law requires producers to reduce single-use plastic packaging and foodservice ware by 25%, with a portion of these reductions coming specifically from reuse and refill systems. As the world's fifth-largest economy, California's actions carry significant implications for brands, retailers and consumers. **These policy tailwinds make consumer participation more than a sustainability objective: it is increasingly becoming a business and compliance imperative.**

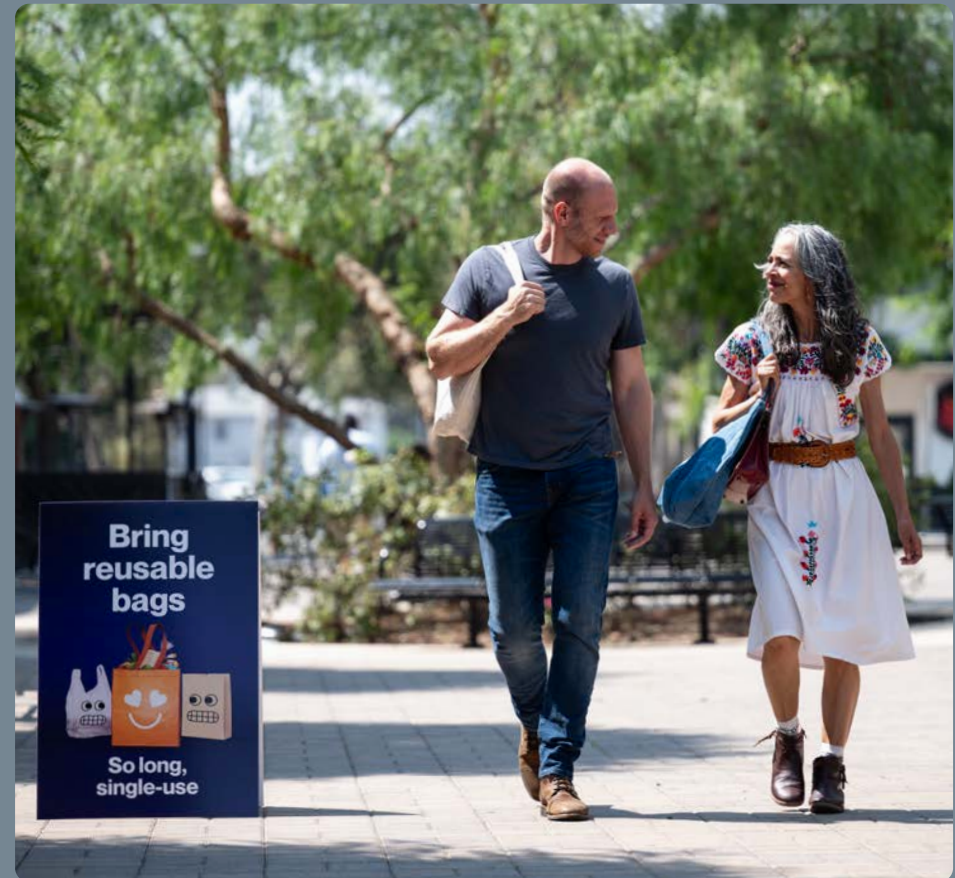
Designing for participation is now a business imperative

Whether the goal is to encourage reuse, refill, recycling or waste reduction, the lesson is the same: citywide participation must be designed. Organizations that make the desired behavior visible, intuitive and convenient will be best positioned to meet regulatory requirements, strengthen customer engagement and accelerate the transition to a more circular economy.

COLLABORATE WITH US

The Closed Loop Center continues to advance circularity across reduction, reuse and recovery. **Our Reuse Cities™ Initiative is a multi-brand and cross-sector collaboration to scale reusable packaging systems.** Starting in Southern California, the program will launch as a citywide initiative that builds reuse behaviors with consumers and reduces the costs of reuse for businesses seeking to comply with statewide packaging regulations. We're working with local leaders, national brands, cultural venues, retailers and independent businesses to make reuse a new reality for millions of people.

In addition, we continue to design and implement consumer behavior campaigns that encourage people to use the bags and cups they already own. We also work with our partners to design for behavior change across a range of circularity challenges, from electronics recycling and textile recovery to improving participation in new collection and recovery systems.



Interested in learning more or partnering with us on consumer behavior change?

Get in touch at
closedloopcenter@closedlooppartners.com

A THANK YOU TO OUR PARTNERS

The market research and city-wide activations featured in this report were made possible through our industry collaborations with partners across the value chain.

About the NextGen Consortium

The NextGen Consortium, managed by Closed Loop Partners' Center for the Circular Economy, is a multi-year consortium that addresses single-use foodservice packaging waste by advancing the design, commercialization and recovery of sustainable foodservice packaging alternatives. The Consortium brings leading brands, industry experts and innovators together to reimagine foodservice packaging, increase access to recycling and accelerate sustainable and circular solutions to reduce waste. Starbucks and McDonald's are the founding partners of the Consortium, with The Coca-Cola Company and PepsiCo as sector lead partners. Wendy's, Yum! Brands, Toast, Delta, Keurig Dr Pepper and Avery Dennison are supporting partners. The World Wildlife Fund (WWF) is the environmental advisory partner.

About the Consortium to Reinvent the Retail Bag

The Consortium to Reinvent the Retail Bag, managed by Closed Loop Partners' Center for the Circular Economy, is a multi-year collaboration across retail sectors that aims to eliminate single-use bag waste by scaling tested and proven reduction strategies spanning consumer behavior, operational procedures, recovery and policy. Target, CVS Health and Kroger are strategic leads of the Consortium, with Walmart, Dollar Tree and Meijer as supporting partners.



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