Recycling Online

Recycling in public, part 2

by Roger Guttentag

Last month's column reviewed the various online information resources on public space recycling, with a focus on communities around the U.S. that have ushered in efforts using some known best practices. These case studies made it clear there is much more to creating a successful public space recycling program than simply placing containers in the appropriate places.

This month I'd like to draw attention to the behavioral and design foundations that are required for creating a public space program that recovers the correct target materials while avoiding problems like excess contamination.

Perhaps the best place to start is B.J. Fogg's Behavioral Model. Stanford University's Fogg does a nice job of clearly laying out the three key stages that must be accomplished in order to achieve a desired behavior – motivation, ability and triggers. The first one, motivation, is a principal focus of recycling outreach and education activities. The goal of creating ability, meanwhile, is to make it as easy as possible for people to actually do what you want them to do. However, nothing will happen unless effective behavioral triggers are employed to elicit the desired action. This is where understanding the behavior and design elements affecting a user's interactions with a public space program is crucial. A handful of research efforts described in various places online offer more details to industry professionals.

Learned behaviors run deep

The America Recycles Day site has a collection of academic papers that investigate how bin design, signage and other strategies translate into effective recycling behavioral prompts. Three papers in particular are worth perusing: "It Matters a Hole Lot," "Color, Cognition and Recycling" and the Keep America Beautiful / George Washington University bin survey. The key findings of these papers were presented in Alec Cooley's Indiana Recycling Coalition 2015 conference presentation (which is also available online). The presentation outlines the following points:

- Specialized container lids can reduce contamination rates and provide visual clues regarding what materials are acceptable
- Container color can serve as an effective behavioral trigger. Research showed either blue or green work well as visual signals that a container is for recycling, and residents also tend to associate gray with trash
- Users typically associate round containers with trash, and square or rectangular ones are more likely to be thought of as recycling receptacles

This research reveals that our habits are responses to learned behavioral triggers. In the past, users were taught all unwanted materials go into trash receptacles, which have certain consistent attributes. Establishing effective public space recycling requires the creation of new signals that users can easily understand, recognize quickly and respond to correctly.

Moving design into action

Understanding the behavioral issues that are involved in getting users to respond appropriately to a recycling collection container is but one element within a larger challenge of how to incorporate recycling into a public space. Also critical to consider is the user experience, the needs of the staff that service these containers and the nature of the public space that the containers are going to be placed within. This design process is now starting to be used by municipalities in partnership with businesses and

Web Address Directory

Alec Cooley – Presentation at Indiana Recycling Coalition conference	tinyurl.com/Cooley-Public
America Recycles Day – Public Space Recycling Resources – Academic Research	tinyurl.com/ARD-Resources
Andreas Eiken – Master's of Design Thesis	andreaseiken.com/masters-design
B.J. Fogg's Behavioral Model	behaviormodel.org
Landscapeforms – Central Park Conservancy Recycling System	tinyurl.com/Landscapeforms
Metro Vancouver – Recycling Bin Design	tinyurl.com/Vancouver-Public
Society for Experiential Graphic Design – Central Park Conservancy Recycling System	tinyurl.com/Central-Park-Public

nongovernmental organizations.

For example, the Central Park Conservancy (CPC) in New York, with funding assistance from Alcoa Foundation, undertook a project in 2012 to develop a recycling system for Central Park based on a new collection receptacle design. The project involved installing 700 containers in the iconic park. A short video describing the work can be found on the Society for Experiential Graphic Design website (the project received the society's merit award in 2014). According to the CPC, the new system increased the collection of targeted recyclables by over 30 percent. Additional details on the collection container design specifications can be found on the Landscapeforms site.

Another interesting design effort occurred in Vancouver, British Columbia. Metro Vancouver in and Emily Carr University joined together for a two-year collaboration, described briefly in a video on the Metro Vancouver site and discussed in much greater detail in a 2015 thesis report written by Andreas Eiken for a master's of design degree. The report is definitely worth reading: The initiative provides a great example of how multiple program stakeholders worked as a team to address two salient questions confronting any public space program – reducing contamination and simplifying service for collection staff. Particularly notable is the way Eiken examines the question of sightlines to determine if a user in motion through a public space can recognize easily enough whether a container is meant to collect recyclables.

The trouble with 'drag and drop'

Public space recycling is often approached on a simplistic "drag and drop" basis. Program leaders identify what spaces are to be serviced, drop a collection container next to a trash receptacle, and attach a sign that says it's intended for recycling. The process is simple and quick to implement, but these steps are often subject to serious problems like excessive contamination.

Public spaces, by virtue of how they are used, have a lot going on simultaneously. The collection system that is used must attract the attention of people who are bombarded with a wide range of competing messages and distractions and then elicit the correct behaviors. And all this has to happen, on the behavioral level, within a span of several seconds. In addition, systems must be easy to service and prevent unintended uses.

As the research cited in this column indicates, certain design elements can be leveraged within a larger framework to achieve a desired civic response (recycle instead of dispose) and allow civic employees to efficiently collect material.

Hopefully, as more communities decide to include public space recycling in their waste reduction toolboxes, they will invest the time and resources needed to integrate the technical, behavioral and aesthetic requirements to create programs that work as though they were actually designed with public spaces in mind.

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