

How to Recycle?

Citizen Engagement through Toronto's Garbage & Recycling Datasets

Design Concept

The *How T.O. Recycle* mobile application is all about revitalizing recycling efforts in the city of Toronto. Research has identified that determining which waste receptacle an item belongs in remains a significant obstacle for many people, an obstacle that prevents them from recycling. In order to overcome this issue, our application endeavours to provide simple, fast, and entertaining answers to recycling-oriented questions, thereby dispelling people's frustrations and apathy towards recycling.

Key Concepts

Novelty & Gamification

Crowdsourcing

Social Responsibility

Awareness

Building on top of existing datasets, we aim to create a robust and every-growing database that identifies how any given item can be disposed of or recycled. We propose a game that builds users' knowledge of how to recycle products, while giving them the opportunity to enlist the crowd in filling in gaps in the dataset through photo submission and commentary.

Design Tool: Personas



"Luke is someone who believes strongly in recycling, and already does, but does not have all the answers."



"Shelly is on the fence about recycling. She is someone who wants to recycle where she can, but can't have it eat up too much of her time."



"Mike is reluctant to recycle, since it all ends up in the garbage anyway, but could be swayed with enough persuasion."

Game
Users drag and drop items into bins, or towards the question mark for information about where it should go.

Statistics
Quick, accessible and digestible guides on recycling information is displayed about the City of Toronto.

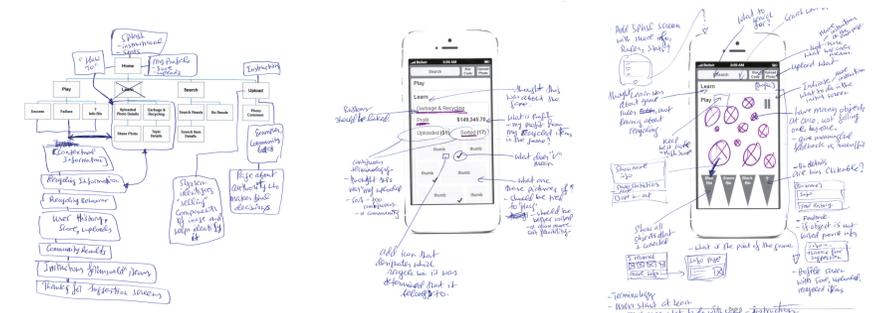
Item Photo Submission
If the dataset doesn't have information about an item, the user can submit a photo.

User Profile
Shows user-specific information, such as scores and recently submitted items that may have been identified.

Testing Methodology

To test our concept, we built a low-fidelity paper prototype that demonstrated the design direction of the application components. The main purpose of this artefact was to facilitate a "common language" between the participants and ourselves, the designers, while creating a "horizontal concept" (Rudd et al, 1996) focused on demonstrating the entire scope of features we were looking to make available.

Proposed UI Changes



We completed seven rounds of testing with a variety of participants, with each round providing additional insight into our design. Detailed observation, note taking, and simulation of the interface revealed insights into participant's ideas about recycling, as well as their habits, and helped us learn which elements were successful, which were not, and what we might have missed.

Datasets

- Solid Waste Pickup Schedule
- Solid Waste Management Programs
- Solid Waste - Recycled Material Sales Revenue
- Solid Waste Daytime Curbside Collection Areas

