Solar Recycl-o-Sort

“Working for a Bluer World”

Presented By:
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2.009 Mockup Review
October 18th 2007
Recycling Facility Updates

• Acceptable Plastics
  – Caps ➔ Indifferent
  – Labels ➔ Yes
  – Mixed Plastic Types
    • Shredded ➔ No
    • Compacted ➔ No
Customer Contract

• Product Description
  – Solar powered sorting and compacting recycling bin for aluminum, plastic, and glass bottles

• Intended Customers
  – Residential areas, parks, retailers, and schools
  – Recycling facilities (end processors)

• Market
  – Curbside recycling industry
    • Cambridge DPW distributed 4,300 recycling bins in 2006
## Meeting Owner & User Needs

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# Meeting the Facilities’ Needs

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Key Challenges

- Liquid spills & trash
- Paper cup vs. plastic bottle
- Distributing recyclables after material detection
- Array of shapes and sizes of recyclables
Sketch Model

- Detect Aluminum
  - Conductivity
- Glass vs. Plastic
  - Deformation of plastic
- Key Issue to Address:
  - Automation
Designing the Sorter & Distributor

Features

• Simple distributor
• Removes small pieces of trash
• Reasonable size
• LCD display
Solar Recycl-o-Sort Mockup

- Distribution
- Spills & small trash
- Redundancy
- Shapes and sizes
- Low material costs (~ $125)
Future Work

• 3/4 key challenges tackled
• Mechanical frame for electrical components
• Moving forward:
  – Automation
  – Compacting
  – Paper vs. Plastic:
    • Light through plastic
    • Force threshold
Customer Responses

• **WasteCap**
  - “It sounds like an excellent solution to a problem that lot of major establishments have.”
    - Stephen Green
      *Chairman of the Board & Acting Director*

• **Codman Square**
  - “Finally, all of the ‘litter’ on our streets can be seen as recyclables! This machine will go with our anti-littering campaign. This is so exciting!”
    - Cynthia Loesch
      *Director of Community Organizing at FAMILY, Inc.*