

## Solar Recycl-o-Sort Product Contract Team Blue

**Product Description:** A solar powered sorting and compacting recycling bin for aluminum cans, glass and plastic bottles

**Intended Customer:** Retailers, initially in Codman Square

**Market:** Curbside recycling programs

	Customer Need	Product Attribute	Engineering Specification
<b>Owner Interaction</b>	One pickup per week	Storage capacity	Holds > 100 bottles and cans (AP, CL, ND)
	Affordable unit	Price	Cost of unit ≤ \$1000 (AP, CL, ND)
	Low Maintenance	Maintenance frequency	Maintenance 3-4 times a year (AP, CL, ND, DW, EC)
<b>User Interaction</b>	Easy for average adult to remove recyclables	Bag weight	Weight < 30 lbs/bag (AP, CL, ND)
	Simple to use by people of all demographics	Learning time	Learning time < 10 s (AP, CL, ND)
	Promotes recycling	Invites use	40% increase in volume of recyclables in tests (AP, CL, ND)
	Fun and educational	User enthusiasm	User rating ≥ 4 out of 5* (AP, CL, ND)
	Visually appealing	Attractiveness	User rating ≥ 4 out of 5* (AP, CL, ND)
	Easily accessible by a child	Height	Bin height < 50" (DW, EC)
	Fits on a sidewalk and allows enough room for a wheelchair	Cross-sectional area	Area of bin ≤ 36"x36" (AP, CL, ND)
<b>Operating Conditions</b>	Operational in rain and snow storms	Outer shell material	Stainless steel (AP, CL, ND)
	Operational in extreme temperatures	Operating temperature	-18 F to 104 F (AP, CL, ND, DW, EC)
	Operational under high-wind conditions	Wind resistance	Can withstand velocities ≤ 100 mph (DW, EC)
	Processes cans and bottles quickly	Cycle time	Time between sorting, compacting, and acceptance of next bottle < 10 s (AP, CL, ND)
	Requires reasonable amount of electricity to operate	Power consumption	Power needed < 3 W continuously for 6 hrs (DW, EC)
	Will not tip over upon impact	Stability	Withstands 600 N impact by 200 lb cyclist cycling at 15 mph (AP, CL, ND, DW, EC)

\*1: Completely uninterested

5: Extremely enthusiastic