## Business Case: **The GreenBin**

**DATE: 2/3/21**

**PROJECT NAME:The GreenBin**

**SUBMITTED BY: Bernard Milaj, Brady Esplin, Gabriel Sudyka**

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**DATE APPROVED: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

### **Executive Summary:**

Problem: Recycling Contamination caused by single-stream recycling

Resolution: A on-site sorting machine to keep the different recycling streams pure and marketable as raw materials to China.

### **Problem:**

Problem: Sorting out recycling materials is time consuming and too labor intensive for the average citizen.

Resolution: Sell a product to Waste Management Corporations to sort the recyclable materials for them. This approach is good for the consumer by delivering lower-cost consumer goods, good for the environment by removing waste from potential landfills, good for the Waste Management Corporations by allowing them to sell raw materials to China.

### **Analysis:**

China will no longer accept recycling materials with more than 0.5% contaminants

* https://en.wikipedia.org/wiki/Operation\_National\_Sword

This significantly drops the amount of solid waste that was previously sold by the US to China as raw materials for recycling and manufacturing. By “purifying” the solid waste into its own categories the amount of contaminants are reduced allowing the material to be sold again.

* https://e360.yale.edu/features/piling-up-how-chinas-ban-on-importing-waste-has-stalled-global-recycling

The Project Team is named Kiger Mustang and consists of Bernard Milaj, Brady Esplin, and Gabriel Sudyka.

### **Finances:**

**Project Budget**

Personnel Resources - $200,000

Software and Licensing - $140,000

Hardware - $70,000

Testing - $50,000

Promotional Materials - $40,000

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Total Cost - $500,000

### **Possible Options:**

* Persuade China to accept contaminated recycling and sort and clean it on-site.

This is a high level goal, at the range of government intervention and far outside the scope of the team.

* Accept Single-Stream Recycling and sort before shipping.

This is the current method in production. It is costly to the Waste Management Corporations and ineffective as 95% of the recycling is burned or buried in landfills.

* Turn Single-Stream Recycling into Multi-Stream Recycling on-site.

This is the proposed Project. This option will result in a cleaner stream of recycled materials that can be further cleaned and compressed into large blocks of material that can be shipped to China for use as raw materials in manufacturing.

### **Recommendation:**

The GreenBin is the best option as the other options are either far out of scope of this team or are currently in use and not as effective as The GreenBin could be.

Risks:

* Potential disruption of mechanism during prototype demonstration.
* Reception of the public to change in recycling methods.
* High price of the product will be a risk for the project.