Crusher Trike
Purple A
Technical Sketch Model

Power:
Operated by one person

Speed:
# bottles per day

Desired Capacity:
~200 lbs per load
Technical Sketch Model Demo
Benchmarking

- **Metro Pedal Power**
  - No compaction
  - 300-400lbs with electric assist
  - $4200-5600, customizable

- **Collection Truck**
  - Expensive, diesel powered
  - Limited by terrain
  - Carries 4000lbs;
Market

• Targets: Nicaragua, Nigeria, India

• El Rama, Nicaragua
  – Waste collection tax revenue: $4,000
  – Waste collection expenditure: $21,000
  – 15-20% of waste is plastic bottles

• Current wastepicker wage: <$127/month
  – Pick up 70 kg bags; 6-8 bags/week
  – Squeezing bottles is significant effort
Customer Needs

• Provides desired technology for existing organizations
  – Wecyclers
  – Recycling in Nicaragua
• Collects and compacts simultaneously
  – Low cost
  – Time efficient
• Easily replaceable components for low-tech municipalities
Next Steps

• User testing on various terrains
• Develop pedal powered system
• Develop shredder system