



OFFTAKE & MARKET DEMAND

Waste management success and the transition to a circular economy depend on a city's ability to put materials back to productive use. Doing so might require the city to work together with the private sector (e.g., waste management companies, processors, recyclers) and the social sector to better link the supply and demand for recyclable materials. With the increasing global focus on strengthening recycling, new opportunities have opened for cities to attract funding, expertise, and other support globally. Ensuring that there are strong and consistent offtake opportunities for recycled content enables further investment in upstream dimensions of the supply chain, thereby strengthening the full circular flow.

KEY ACTIONS:

- Secure offtake agreements for all compostable and recyclable materials recovered
- Create public-private partnerships to grow demand for recovered materials
- Support creation of ethical and transparent supply chains to help meet the needs of offtakers



RETHINKING RECYCLING ARGENTINA IN BUENOS AIRES

COORDINATING WITH VALUE CHAIN PARTNERS TO BOOST DEMAND FOR LOW-VALUE PLASTICS

SITUATION	<p>Low-value plastics, such as packaging (PP), shopping bags (LDPE), or yogurt cups (PS), have proven challenging to recycle. In the City of Buenos Aires, these low value plastics make up 20-50% of the plastic waste collected by the city, yet the majority of that waste is sent to landfills (3,000-8,000 tons per year).</p> <p>A disconnect between supply and demand lies at the root of this challenge. Due to their smaller size, lighter weight and higher level of contamination, more effort is required from waste workers to separate these materials than other plastic types. Waste workers argue that the market price for these materials does not justify their separation efforts. Meanwhile, recyclers in Greater Buenos Aires argue that they have invested in the machines and installed capacity to recycle these low value plastics yet can't find sufficient and reliable supply of materials.</p>
ACTION	<p>Together with our partners, the Alliance to End Plastic Waste and Amiplast (recycler for LDPE and PP), Delterra established a productivity improvement program and small incentive fund to boost the separation and transport of low-value plastics in the 16 sorting centers of the City. Our efforts targeted three key levers:</p> <ul style="list-style-type: none">• Address productivity bottlenecks. In all sorting centers observed, over 80% of the waste workers are dedicated to sorting 20% of the recyclable waste in kilograms (albeit highest in \$/kg). Through our initiatives, we incentivized sorting centers to increase the number of waste workers targeting the most voluminous materials (e.g., low-value plastics) that would otherwise go to rejection waste• Prioritize volume over quality at the sorting center. Through short term pilots, we tested the amount that a sorting center can collect if it maximizes volume of LDPE and PP over cleanliness or quality. To enable maximum recovery of these materials, a team of polymer experts from the recycler trained waste workers on identifying LDPE and PP, improving their sortation effectiveness.• Trace data from collection to recycling. Together with Empower.eco, we introduced a digital solution to trace data from the collection route to the recycler. This can be shared with the brands that bring the plastics back into productive use. The blockchain system allows for two-way verification to ensure that data is accurate. Next, we will be tracking QR codes at each step to facilitate inventory management and planning
RESULT	<p>We discovered that although price per kg of low-value plastics is lower than PET and HDPE, the volume that can be collected quickly makes up for it. At the largest sorting center in Buenos Aires, these initiatives helped boost volumes recycled by 140%, increasing from 30 to 70 tons of LDPE separated per month. At the second largest recycler, volumes increased by 50% and could have grown further if not for limited conveyor belt space. So far, we still require a financial incentive to help demand meet supply, but over time, we believe this incentive can be phased out by increased synergies of scale and efficiency.</p>



DIMENSION: OFFTAKE & MARKET DEMAND

BUILDING AN OFFTAKE MARKET FOR ELECTRONIC WASTE IN BRAZIL¹⁴

SITUATION

In 2019, Brazil was identified as the fifth largest producer of electronic waste globally, producing more than two million tons of electronic waste per year. At that time, less than 3% of the electronic waste was recycled and a significant portion of the population had never heard of waste collection and disposal locations for electronic products. While there may have been a lot of waste, without the presence of offtakers, there was minimal opportunity for Brazil to divert this waste out of landfills.

ACTION

In 2020, to address this gap in the waste management system, the Brazilian federal government:

- Defined standards to enforce their existing National Policy for Solid Waste, requiring that manufacturers, importers, distributors and resellers of electronics products and their parts create and implement a reverse logistics system, allowing consumers to return their electronic waste through collection points specific for e-waste
- Passed a bill that created fiscal incentives for the recycling industry
- Created a support fund (Favorecicle) and an investment fund (ProRecicle) for recycling projects
- Instituted deductions from income taxes for money spent on recycling projects, with a limit of up to 1% of total income taxes for companies and 6% of total income taxes for individuals

In effect, the implementation of this policy and the associated economic incentives requires that companies be responsible for the waste associated with their products, thereby creating an offtake market for collected electronic waste.

RESULT

The Brazilian government has set near-term targets for this policy, aiming to have 17% of electronic products and parts collected and properly recycled by 2025. To date, more than 1,900 collection points have been installed across the country, with more sites anticipated by 2025 based on the number of inhabitants in each municipality. By 2025, more than 400 Brazilian cities will have electronic waste collection points, enabling citizens to responsibly dispose of their used electronics, thus minimizing the amount of landfill disposal needed.

