



## GENERATION & SOURCE SEPARATION

Convincing households and businesses to correctly separate their waste in accordance with local waste segregation streams (e.g., recyclable, residual and organic waste) can significantly help drive the transition to a circular economy. The generation and source separation dimension includes all communications and education efforts that take place to change waste disposal habits of community members. In cities with a less developed waste management system, efforts to target waste generators and incentivize source separation are likely minimal or non-existent, both for households and businesses. In the best examples, communities leverage multiple approaches to engage citizens, such as ongoing education campaigns or digital tool integration, which helps to instill source separation practices as a norm within the community. Furthermore, communities with mature waste management programs also rely on targeted efforts to change the behavior of 'big generators' (e.g., large businesses or community organizations), as they often generate a significant portion of the overall waste stream.

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### KEY ACTIONS:

- Foster a culture of empowered recyclers
- Aim for new habits, not just awareness
- Engage commercial customers differently from residents



# RETHINKING RECYCLING ARGENTINA IN OLAVARRÍA

## *DEVELOPMENT AND RAPID TESTING OF FIVE PILOT PROGRAMS TO IMPROVE RECYCLING PARTICIPATION*

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### SITUATION

Olavarría is a mid-size Argentinian city of around 120,000 inhabitants. It is clean, well-maintained and family-friendly, with a modern infrastructure, a very industrial culture and a small-town feel – a place where neighbors know and recognize one another. Most residents, however, were accustomed to simply leaving their mixed waste on the curb every day, with recycling rates at less than 1%. When interviewed, residents said they wanted to do their part to adopt more modern practices, but also demanded that the municipal government take responsibility for centralizing the collection of recyclables.

### ACTION

Delterra, in partnership with the municipality, established GIRO, or Gestión Integral de Residuos de Olavarría (Integrated Waste Management of Olavarría). To drive recycling participation, we:

- Conducted a three-month research phase using human-centered design, and devised cultural and behavioral insights that became the backbone of our design process
- Ran a series of five behavior change pilots to identify the most effective interventions that drove participation at the best possible return on investment
- Developed a resident activation blueprint comprising top-down elements (e.g., mass media campaigns, social media outreach, community events), digital interventions (e.g., a chatbot to answer common recycling queries), and bottom-up activity (e.g., door-to-door visits, waste tags for correct and incorrect separation)
- Supported the city to draft ordinances of municipal solid waste regulations for both households and big generators, requiring them to separate their waste into three streams and dispose of each waste stream on the correct pick-up day
- Developed a monitoring and maintenance strategy to track participation levels and detect any changes in participation trends, with targeted interventions in the case that participation was to decline, ensuring high participation rates with minimal effort and resources

### RESULT

Today, among the proportion of households with access to a pilot program of recycling and compost collection services, nearly 50% support the program and consistently separate their recycling (participation for compost is closer to 30%). The per household cost of achieving these results was 50% lower in the final pilot compared to our first pilot. Our work in Olavarría cuts across many of our Six Dimensions and in 2023, collection services are on track to be available to the city's full population of 120,000 people.





# GLOBAL CASE STUDY: GENERATION & SOURCE

## IMPROVING CITIZEN PARTICIPATION IN SAN FERNANDO, PHILIPPINES<sup>12</sup>

### SITUATION

The City of San Fernando is one of the busiest cities in Pampanga, a province in Central Luzon, Philippines. It is divided into 35 villages or barangays and is home to more than 300,000 people, which easily quadruples during daytime.

Waste management in the Philippines is governed by a national law called the Ecological Solid Waste Management Act of 2000 or Republic Act 9003 (RA 9003), which puts the prime responsibility of waste management on the barangay, including segregation, collection, and treatment. Despite a series of trainings for the barangays and the introduction of supporting business regulation, San Fernando struggled to enforce compliance, with open waste dumping and burning remaining prevalent, and recycling rates low.

### ACTION

In 2011, San Fernando formed a partnership with Mother Earth Foundation (MEF), an organization that actively promotes Zero Waste. Soon after, when the new administration, led by Mayor Edwin Santiago, took over in 2013, waste management became a key priority for the city.

- An intensive public information, education, and communication (IEC) campaign for residents was launched, including education in schools and businesses
- A novel concept was introduced: a TV show called 'Win-win for all'. The show goes live every Friday and is hosted by a local artist. Every episode, the hosts make surprise visits to unsuspecting households from the week's chosen barangay to check if they do proper waste separation, with five winners being awarded PHP 2,000 (USD 39.21) each if they pass the inspection
- A Plastic-Free Ordinance was introduced in 2014 to phase out single-use plastic bags in businesses, with enforceable penalties; this alongside the introduction of a policy of 'no separation, no collection' for households and businesses alike, has significantly reduced waste going to landfill

### RESULT

The city has now covered all 35 barangays and has reported 93% compliance with recycling regulation, with 85 fully functional material recovery facilities (MRFs) located in barangays, private subdivisions, schools, health care facilities, public markets, and business establishments. As of 2018, the city's waste diversion rate rose from 12% to 81%, and they plan to increase that to 91% by 2025. Furthermore, the city only spends PHP 34.6M (USD 677,404) annually on waste diversion, compared to PHP 70M (USD 1.4M) in previous years.

