

Creating new income opportunities for communities in Nigeria by decentralising plastic waste processing

In our Insights Series, TRANSFORM shares successes and learnings from our projects to:

- Help the SME and entrepreneur community gain knowledge and learn from our projects
- Showcase to funders what can be achieved through impact-led initiatives

PROJECT AT A GLANCE:

EXPANDING LOCAL PLASTIC PROCESSING THROUGH MICRO-RECYCLING PLANTS



Chanja Datti is a Nigerian startup that decentralises plastic waste processing with its Micro-Recycling Plants (MRPs) strategically located near waste collection points. With TRANSFORM's support, Chanja Datti began operating its first MRP in Giri and installed a second MRP in Jabi, reducing plastic waste and creating economic opportunities for local communities in Abuja.

Find out more

Collaboration is key to scaling impact enterprises. TRANSFORM has captured lessons from over a decade of experience supporting impact enterprises into a playbook, a practical 'how-to' guide for public, private and non-profit leaders seeking to build and manage successful public-private partnerships. [Learn more here.](https://www.transform.global)

www.TRANSFORM.global

We
TRANSFORM
Lives

THE CHALLENGE

Traditional waste collection in Nigeria often involves transporting large volumes of plastic over long distances to centralised processing facilities. This increases fuel use, raises costs and contributes to emissions, while also making it harder to maintain the quality of collected materials due to contamination, UV degradation and moisture build up during transportation.

THE INNOVATION

Chanja Datti addresses this challenge by decentralising plastic waste processing through Micro-Recycling Plants (MRPs) located close to waste collection points. These small-scale facilities allow plastic to be sorted and processed near where it is collected, reducing the need to transport large volumes of loose bottles over long distances.

The plants process around 650 kg of polyethylene terephthalate (PET) plastic each day and turn collected bottles into small plastic flakes that can be used by manufacturers to make new products.



THE IMPACT

With support from TRANSFORM, Chanja Datti began operating its first MRP in Giri and installed a second MRP in Jabi, both in Abuja, Nigeria. This helped increase collection from nearby businesses and institutions such as hotels and restaurants.

By introducing local processing, the MRPs created opportunities for collectors and aggregators (many of whom are young people and women) to earn additional income from generating semi-raw materials for recycling. The project engaged more than 2,200 waste workers and empowered over 250 women across participating communities.



WHAT'S NEXT?

Chanja Datti plans to further strengthen operations at its two existing MRPs, while demonstrating their commercial viability ahead of expansion to additional locations. It is also exploring tiered incentive programmes for aggregators, continuing capacity building for staff and informal waste workers, and assessing the use of hybrid solar energy systems to reduce reliance on diesel-powered operations.

INSIGHTS:

ESTABLISHING DECENTRALISED MICRO-RECYCLING PLANTS IN LOCAL COMMUNITIES



1. LOCATE MRPs CLOSE TO WASTE SOURCES TO STRENGTHEN LOCAL COLLECTION PARTNERSHIPS

Before the MRPs were installed, collecting plastic from nearby businesses was more difficult because materials had to be transported longer distances before processing.

After the MRP in Jabi, Abuja, became operational, Chanja Datti began collecting plastic from nearby waste-generating institutions such as hotels, eateries, churches and quick service restaurants. Locating processing capacity closer to where waste is generated helped strengthen relationships with local suppliers and increased the volume of plastic collected within surrounding communities.

2. SHARE THE COMPANY VISION WITH AGGREGATORS TO BUILD PARTICIPATION IN RECYCLING ACTIVITIES

Aggregators did not initially understand how MRPs could benefit them.

Chanja Datti worked with aggregators, many of whom were women, to explain how the MRP model could allow them to participate more directly in recycling activities and generate additional income by producing semi-processed materials. Communicating this longer-term vision helped aggregators understand their role beyond collection and supported engagement with the decentralised processing approach.

3. ENSURE ACCESS TO LOCALLY AVAILABLE TECHNICAL SUPPORT FOR SPECIALISED RECYCLING EQUIPMENT

When technical issues arose in the MRPs, support depended on technicians travelling from outside Nigeria.

As specialist support was not immediately available locally, resolving equipment issues sometimes required waiting for technicians from South Africa to travel to sites. This highlighted the importance of developing locally available technical expertise to reduce downtime and support more efficient operation of decentralised recycling facilities as the model expands.



4. FACTOR IN ADDITIONAL TIME FOR GOVERNMENT APPROVAL PROCESSES

Permits were required before MRPs could be installed, and approval timelines were sometimes longer than expected.

Chanja Datti worked closely with government authorities to secure permissions for installing MRPs in new communities. To support future expansion, Chanja Datti is also exploring how permissions can be coordinated more directly with communities, alongside government oversight, to help streamline the process.

5. BUILD TRUST WITH COMMUNITIES BEFORE INTRODUCING NEW RECYCLING INFRASTRUCTURE

Some communities were initially cautious about the project because of previous negative experiences with earlier recycling initiatives.

In some locations, communities had worked with recycling actors in the past who did not continue their activities as expected, which made residents hesitant to engage with new programmes. Chanja Datti addressed this by engaging directly with community members to explain how the MRPs would operate and what benefits they could bring, helping to build trust early.



TRANSFORM is an impact accelerator that has united corporates, donors, investors and academics to support visionary enterprises across Africa and Asia between 2015 and 2026. Together, we have tested and scaled new market-based solutions to build inclusive, sustainable economies, empower marginalised communities, and drive climate-resilient growth.

By combining grant funding, business insight and research, TRANSFORM has advanced innovative business models to help solve global challenges. The initiative has been led by Unilever, the UK's Foreign, Commonwealth and Development Office, and EY.

Having delivered its intended outcomes, TRANSFORM concludes in 2026, leaving a strong legacy of more resilient enterprises and insights to inform future collaborations.