ASM GLOBAL

Digitalization and Innovation

COMMUNITY BASED DIGITAL SOLUTIONS - BREAKTHROUGHS IN PRACTICE
CIRCULAR ECONOMY FORUM 2025, ADB MANILA

www.asm-recyclx.com

Introduction

Digitalization is redefining sustainability practices

Focus: Circular Economy, Plastic Credit Systems, EPR Compliance

Key Technologies: Smart Ledgers, IoT, AI, Digital Marketplaces

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Why digitalization matters

Support for global and regional sustainability targets such as SDGs and Zero Waste to Nature commitments.

Complexity

Increasing complexity of global waste and resource management systems and proliferation of regulations on waste management

Transparency

Need for transparency, traceability, and accountability in material flows especially for circularity claims

Efficiency

Push towards scalable, cost-effective, and efficient solutions that can be applied across different geographies.

1

Digital Traceability Platform

2

Smart Ledger for EPR and Credit Systems

3

IoT & Smart Sensors integration

4

AI & Advanced Analytics for provenance

5

Digital Marketplace integration

Our digital innovation pillars

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Inclusiv Platform

01

Digital Traceability

Enables end-to-end tracking of plastic material from post-consumer recovery to circularity

02

Smart Ledgers for EPR Credit

Creates immutable and tamper-proof records of waste recovery and credit generation

03

IoT Integration

Enhances Material Recovery Facilities (MRFs) efficiency by tracking throughput and contamination rates

04

AI & Advanced Analytics

Uses predictive modeling to forecast plastic waste generation hotspots and recovery rates

05

Digital Marketplace Integration

Promotes competitive pricing, supply-demand matching, and efficiency in resource utilization.

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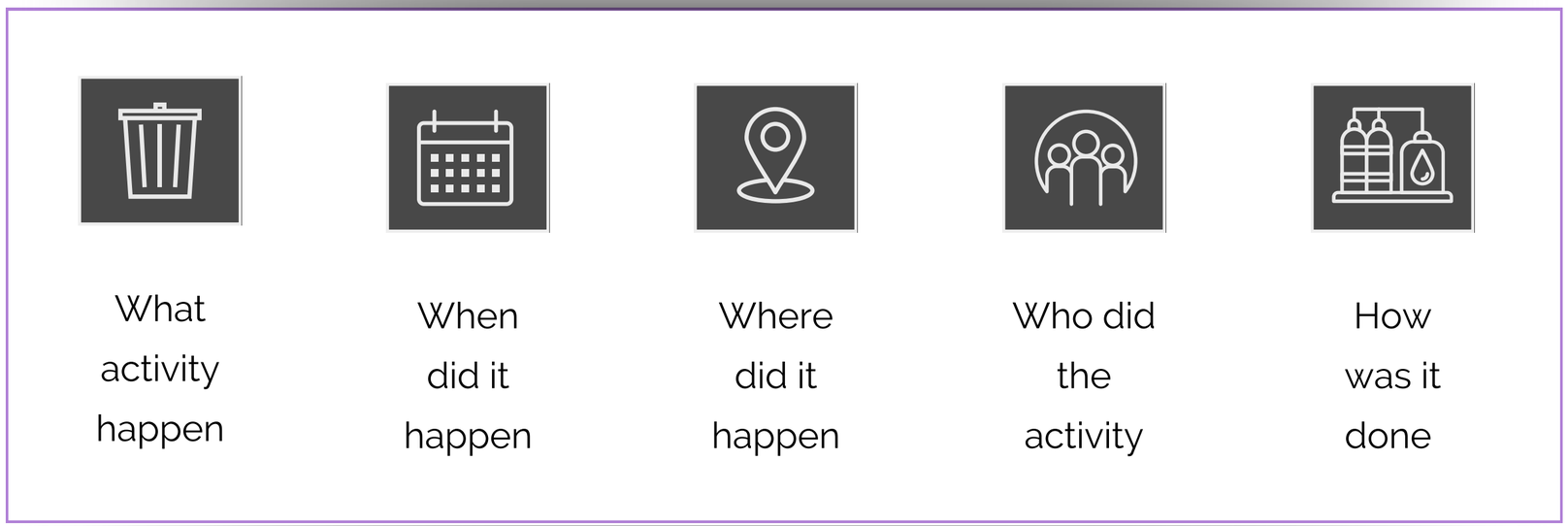
How it works

We capture critical data at each stage viz. origin, processing, manufacturing etc and store it in a progressive ledger and updated using SMART Ledger system



Typical data block on automated ledger

- Material tagged at origin
- Mobile app captures transactions
- AI models flag anomalies + compute impact
- Dashboards for compliance, reporting, credit claims

Case study

A Class 1 municipality in the Philippines operates a plastic recovery program through schools, community centers, and city hall. While initial collection and segregation are in place, plastics are handed over to largely unregulated junk shops, resulting in no visibility or traceability of materials post-collection. This lack of monitoring prevents the city from participating in the national EPR (Extended Producer Responsibility) program, missing opportunities to generate plastic credits, attract private sector funding, and contribute to national recycling targets.

Initial challenges

Often face challenges such as fragmented data, lack of interoperability, manual reporting, and limited visibility across informal and decentralized value chains.

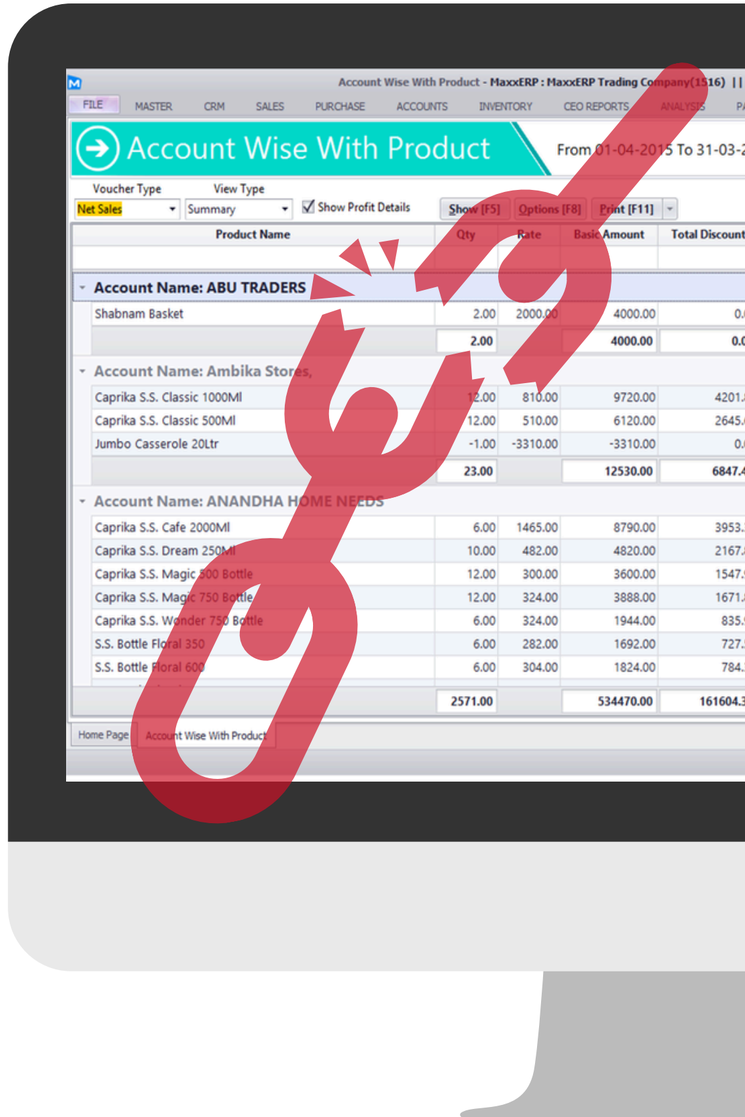
01 Households rarely practise source segregation

02 Informal sector drives recovery, but lacks visibility

03 Cities are investing in MRFs but loses track of materials

04 Collection data does not meet plastic credit standards

05 Brands struggle to meet their EPR obligations



Platform implementation

Training and on ground deployment support was provided with a focus to keep the adoption simple yet robust

Digital CoC

The activities from collection to recycling are recorded on the digital platform and updated using built in smart ledger system

Stakeholder registry

Creates unique digital identity of every stakeholder with built-in KYC and due diligence frameworks

EPR credits management

Generates plastic credits when the regulatory requirements are met, creates a wallet to retire credits to legit buyers

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Digital circular economy

Our solution has helped create a circular economy for the waste management operations

Traceability

Establishes a digital documentation from collection to recycling

Analytics

Highlights waste hot spots, leakage points, prescribes location for trash booms

Credit Marketplace

Helped sale of cerified credits to obliged entities and PROs to comply with RA 11898

IoT Integration

Integrated the organic composter for realtime monitoring and data collection

Creating sustainable impact

Finance Unlocked

1 Million PHP

Methodology Followed

RA 11898

Plastic Upcycled

700,000 Kgs

Audit & Assurance

CPA Verification

Brands Engaged

Source segregated

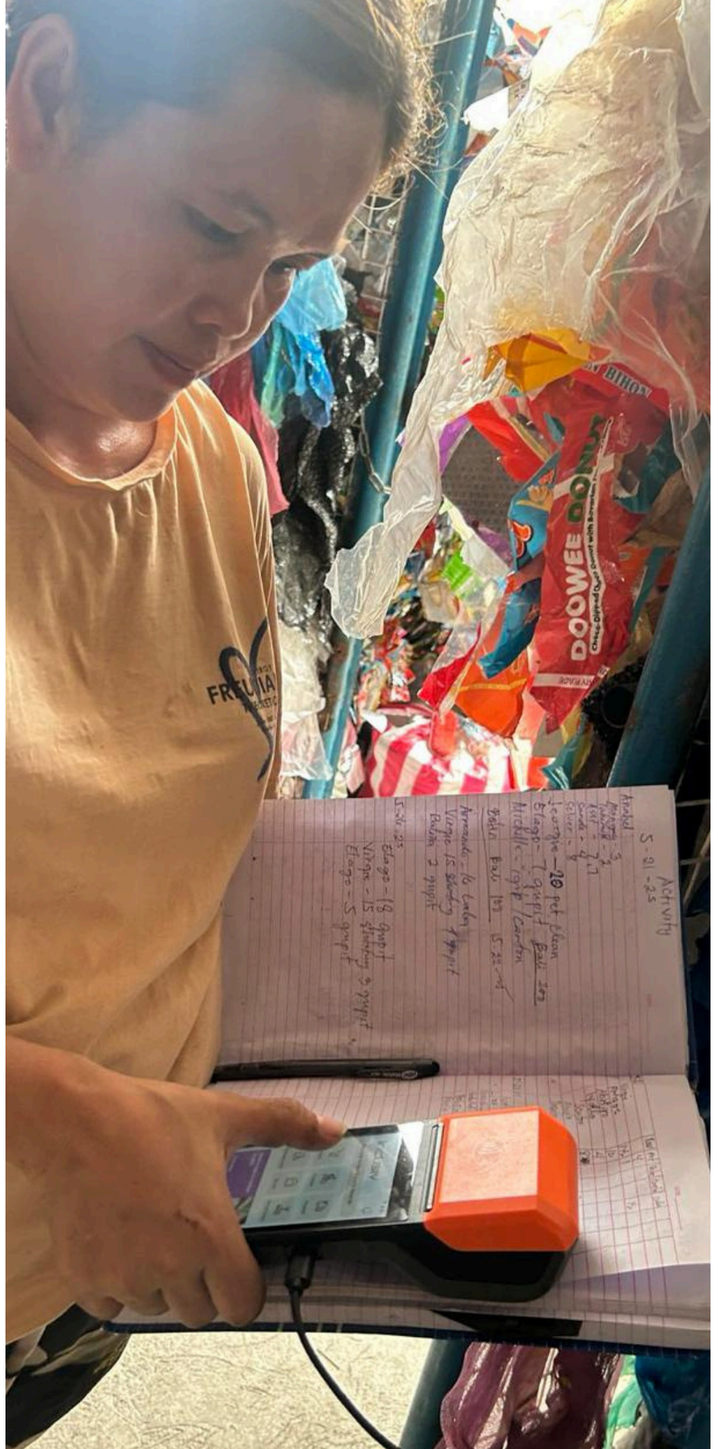
1,000,000 Kgs

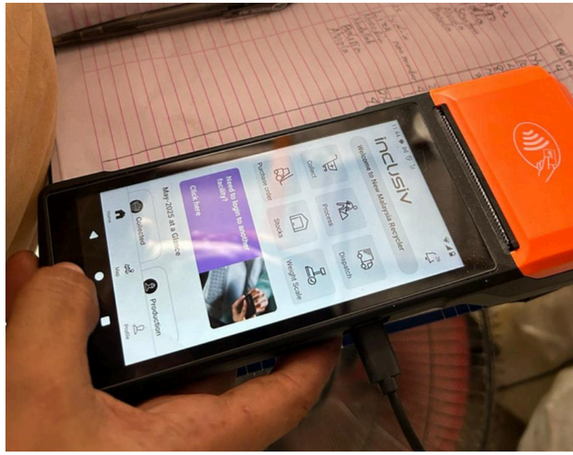
Leadership speak

Joscell Vistan Cajase
Mayor
Municipality of Plaridel

Feb 2025

I am confident that this waste management platform will not only yield financial savings but also contribute to a cleaner, healthier, and more sustainable Plaridel.





Proven across the world

Product trusted across 35+ countries

Technology empaneled by UN

UN environment programme | CTCN UN Climate Technology Centre & Network

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