



WASTE
EXPERTS

We
promote

Reduce, Reuse
Recycle, Recovery

28 JULY 2022

3th GENERAL ASSEMBLY FOR ACCP: Kigali (Rwanda) experience to improve waste Management System

A shift from:

- Classic** System to
- Modern** System Toward
- Smart** System

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UN HABITAT
FOR A BETTER URBAN FUTURE



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ROLE OF GOVERNMENT FOR WASTE MANAGEMENT



Rwanda waste management policy framework

-**After 1994** (the genocide year), Rwanda started its journey of strategic country reconstruction and country development in almost all sectors.

-**For waste management sector**, Rwanda is now guided by different Policies, laws and regulations:

- Rwanda Environmental Policy 2003
- Rwanda Environment Law 2018.
- National sanitation policy 2016
- Rwanda Integrated Solid Waste Management Strategy 2022
- E-waste management Policy 2015
- Environmental Health Policy 2008
- Regulations for solid waste collection & Transportation
- Regulations for Solid waste recycling
- Regulations for landfill management
- Guidelines for Covid-19 used face masks disposal



Kigali -Waste Evolution from 1994 (after genocide)

Kigali waste management is evolved over the last 10 years as follow:

- **Prior to 2010**, there was no national policy or harmonized regulatory framework addressing solid waste management. NGOs, Associations & privates were undertaking SWM activities, with limited financial & technical resources
- By gradual changes, Rapid urbanization, changing city boundaries, the emergence of new institutions over time and environmental emergencies have shifted how waste collection is undertaken and regulated up to now.
- **At present**, SWM is managed linearly. Overall waste generated is collected and disposed to landfill with little formal recycling of in-organic waste, and with little waste reprocessing of organic waste.



Country Ambitious Targets by 2024

- 40% of solid waste collected and recycled countrywide
- 80% of domestic waste recycled, reused or disposed of properly in urban areas.
- 50% of households sorting waste
- 50% of the generated e-waste recycled and turned into usable materials



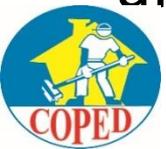
Waste management strategies (among others)

1. Ambitious **Target**: 80% of domestic waste to be recycled by 2024
2. Decision to **Shift** from Classic System to Modern System toward Smart System and from Linear to Circular Economy by changing the current landfill into a Resource Recovery Center for waste processing
3. Decision for Total **privatization** of waste activities (from collection to Disposal) through PP & PPP models and the City remains for supervision, control and enforcement.
4. Rwanda decided to go for **IWMS** as a sustainable way for solid waste management (strategy is in place from 2022 to achieve 2024 target)
5. Start a compulsory **sorting from the source** program for the entire Kigali coupled with a vast waste education campaign (from 2022)
6. Kigali introduced a **Smart Waste Management strategy** (inclusion of ICT) to get data about waste generation, collection and treatment



Current challenges & Proposed solutions

- 1. Waste data:** we need a systematic collection of waste data
- 2. Skills upgrading:** we need to match the government requirements for waste services with the capacities of waste value chain management (upgrade skills for waste generators, private operators, local administrators)
- 3. Landfill :** Kigali City need to upgrade the current landfill to a Sanitary or engineered Landfill (Tender under process)
- 4. Extended Producer Responsibility:** Rwanda need to enforce this strategy to apply the Polluter Pays Principle
- 5. Big rate of collection VS low rate of Recycling:** once the No2 and N04 are applied, we should get CLEAN WASTE and recycling opportunities will emerge



ROLE OF PRIVATE SECTOR IN KEEPING THE CITY CLEAN, GREEN AND SMART



COPED Business Model (WM Process)

Impact of IRESPONSIBLE MANAGEMENT of waste on our Environment



Soil pollution



Water pollution



Air pollution



COPED Business Model (WM Process)

1st STAGE :1999-2019(years of IWM value chain development)

1. PRE-COLLECTION

- ✓ Waste Standards development
- ✓ Waste Education development

2. COLLECTION & TRANSPORTATION

- ✓ Separate Collection
- ✓ Separate Transportation

3. TREATMENT

- ✓ Organic waste composting
- ✓ Inorganic waste separation for Recycling industries

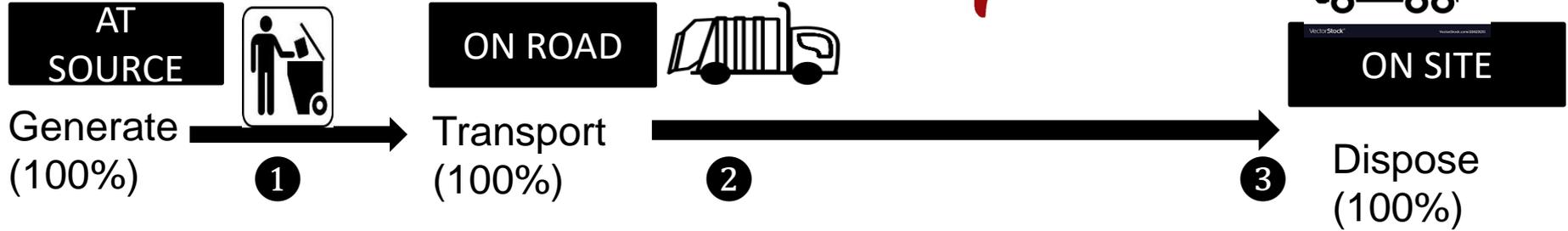
4. DISPOSAL

- ✓ Safe disposal of residues
- ✓ Safe disposal of Hazardous wastes

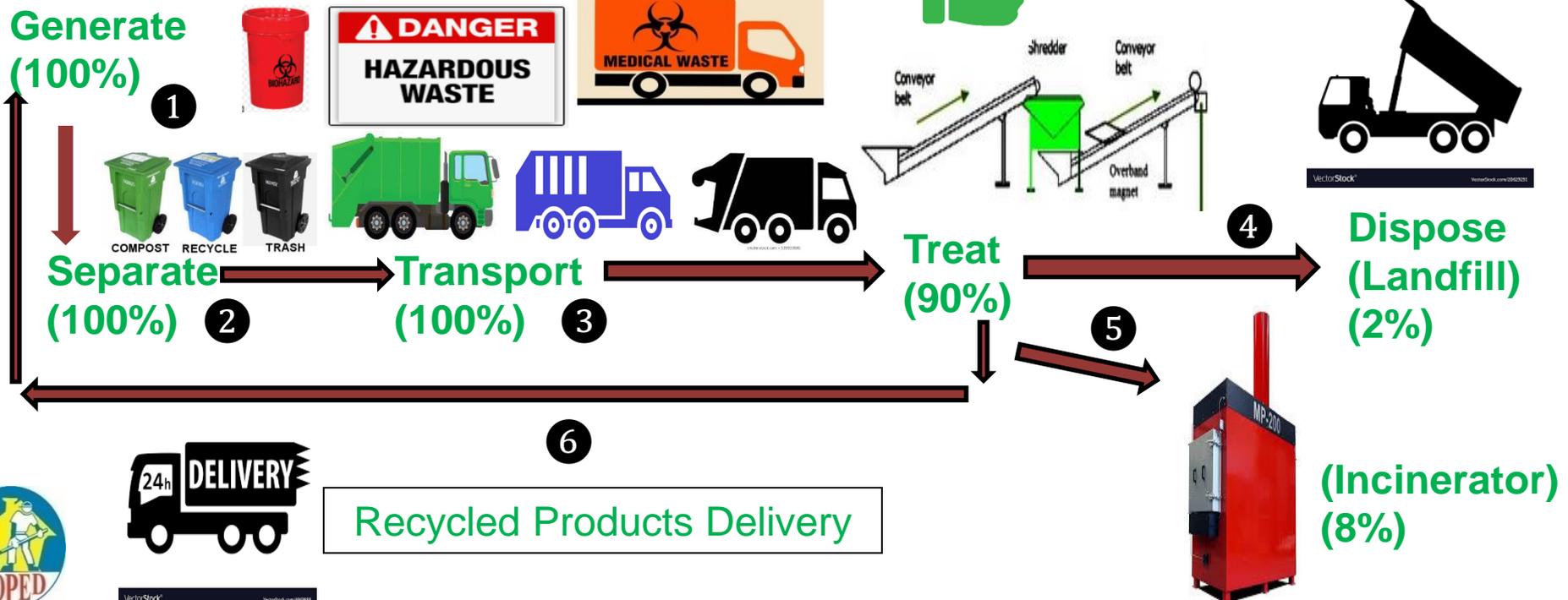


2nd STAGE : 2020-2025 (years of Circular Economy Promotion)

In a Linear Economy approach



In a Circular economy approach



Selective collection in Residential areas



← 2015



← 2021 →



Selective collection in Commercial & Special areas

1. For **Commercial** waste from

- Office building
- Big institution
- Shopping malls
- Banks & Insurance Co.
- Hotels & Apartments
- Bars & Restaurants
- Etc.

Commercial Waste Truck



Commercial Waste Bin

2. For **Special** premises:

- Healthcare waste
- Industrial Waste
- E-Waste
- Toxic waste
- Radio active waste
- Construction Waste



Special Waste Bin

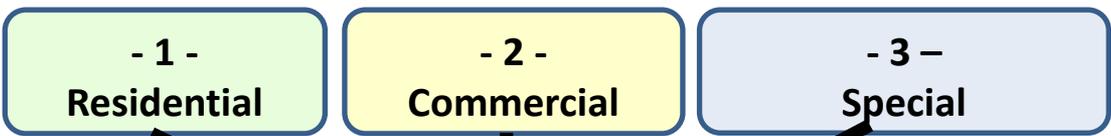


3. For **Liquid waste** service



Change a Dumpsite/Landfill into a Recycling Center

1 – Basic separation (at source)



2 – Advanced separation (on site)



3 – Raw material



4 – Treatment Centers



5 - Final Products



COPED initiatives with focus on **organic waste valorization**



COPED initiatives with focus on **Briquettes for cooking**



COPED initiatives with focus on **volume reduction for inorganic waste**



COPED initiatives with focus on **volume reduction for inorganic waste**

Bailer machine



Plastics bottles



Cartons



Shredder machine



Raw material



Briquetting machine



COPEP Hybrid Solution for Smart City – Full Service Package (5 in 1)

1. Proper Waste Education (Pre-collection)

- Proper waste Sorting
- Proper waste Separation
- Proper waste Storage



2. Smart Waste Transportation (Collection)

- Smart Truck/Bins
- Smart Separation
- Smart Collection



3. Pre-treatment

- Advanced waste separation
- Resources Recovery
- Volume reduction



4. Treatment & Waste Disposal

- Recycling applications
- Hazardous waste treatment
- Incineration / Energy recovery
- Residues / Rubbish disposal

5. City beautification

- Road cleaning
- Trees Planting
- Green spaces creation



WE ARE CHANGE AGENTS

We change the LOOK, people change BEHAVIOR

**Murakoze,
Thank You,
Merci,**

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