

سرك
SIRC



الشركة السعودية للاستثمارية لإعادة التدوير
Saudi Investment Recycling Company



شركة مصنع مصب البلاستيك
MASAB PLASTIC FACTORY CO.

قيادة الاقتصاد الدائري

Leading The Circular Economy

Owned by
صندوق الاستثمارات العامة
Public Investment Fund

MASAB PLASTIC FACTORY COMPANY

Plastic Recycling

MASAB is SIRC's execution arm for all plastic recycling activities in the Kingdom

Holding
Company



Plastics



Overview

- Year of establishment: 2016
- Headquarters: Al Kharj, KSA
- SIRC ownership: 60%
- Year of Acquisition: September, 2022
- Objective: To act as SIRC's execution arm for all Plastics recycling activities in the Kingdom



MASAB is one of the largest PET recycling facilities in KSA, located in Al Kharj

MASAB overview

Description

- Plastic recycling company established in **2016** specializing in **PET recycling**
- Produces **PET** and **HD flakes** and recently expanded into **PS flakes**

Location and key figures

Largest PET recycler in KSA

Ambitions for expansion



Total factory area:
15,000 m²



Total building area:
8,000 m²



Total recycling capacity:
36,000 t p.a.



Output products



PET green color flakes



PET Light Blue Flakes



PET Mix Color Flakes



HD Flakes



PET white color flakes

MASAB has developed a strong value proposition with the support of SIRC and its subsidiaries

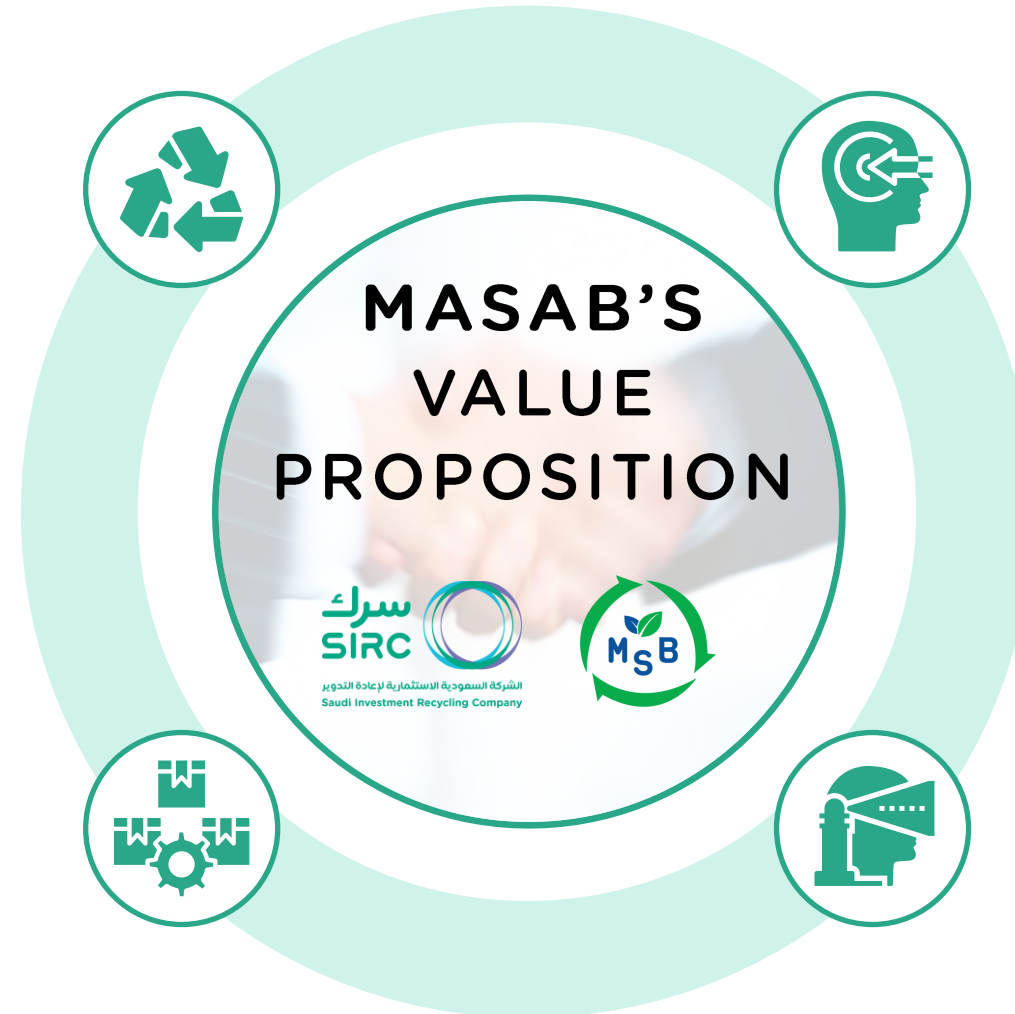
MASAB's value proposition

Advanced recycling technologies:

State of the art technologies in flakes and bottle sorting

Supply chain integration:

Deep integration into the Kingdom's plastic waste supply chain through SIRC and its subsidiaries



Local expertise and market insights:

Unmatched local expertise and market insights in the Kingdom

Visionary leadership and long-term commitment:

Mission of uplifting the entire plastic recycling sector in the Kingdom

MASAB's partners

Technology partners



Commercial partners



MASAB's mission became to uplift the plastic recycling sector in KSA

MASAB Mission and Vision



Mission

To **uplift** the **Plastic Recycling Sector** in the Kingdom of Saudi Arabia

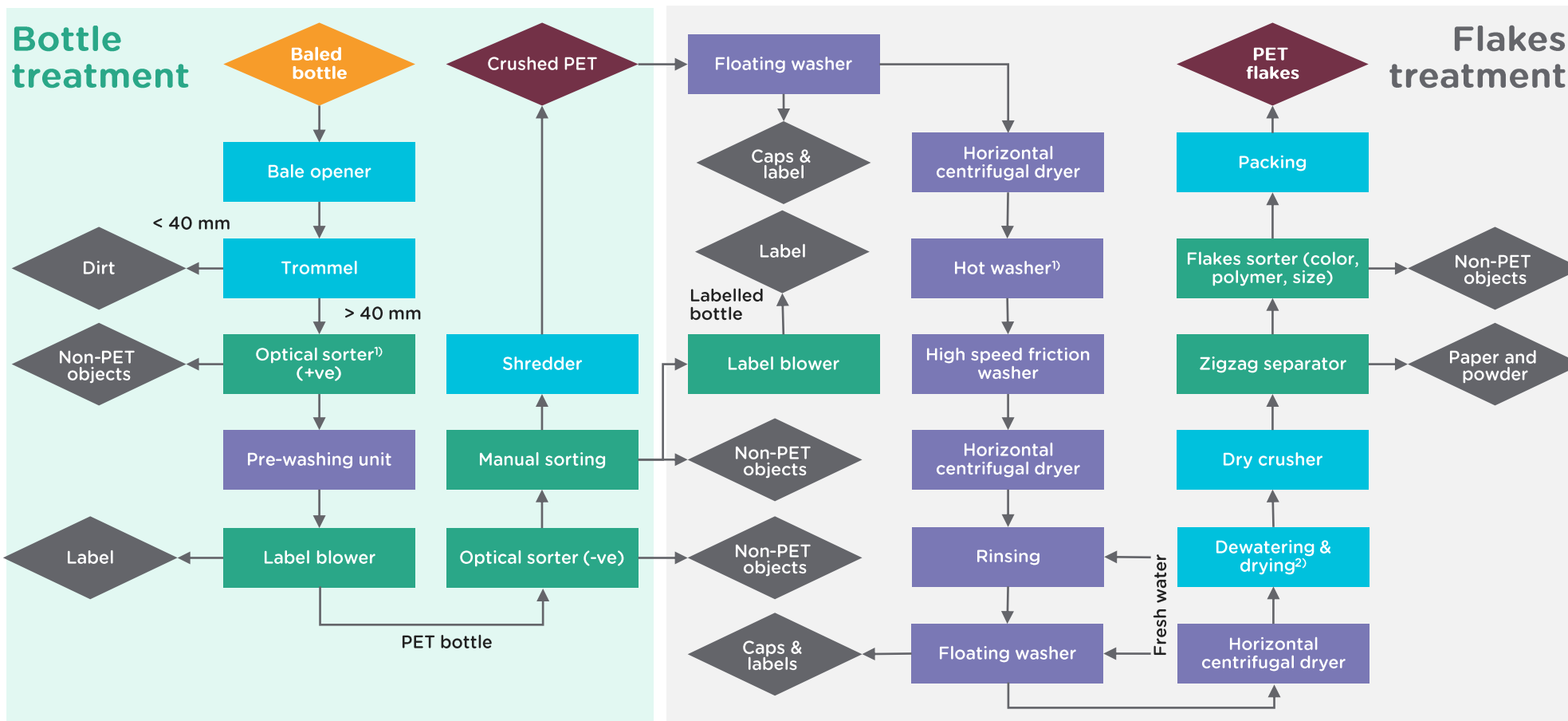
Vision

To be a **leading contributor** in driving the Kingdom's **circular economy vision** related to **plastics**

B. Recycling Process

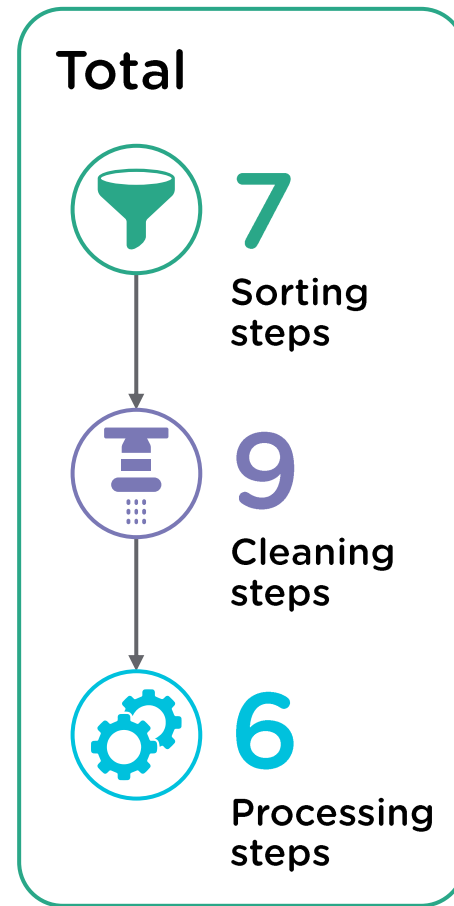
MASAB produces and sells hot washed PET flakes

MASAB plastic factory washing process flow chart



1) Using caustic soda and detergent under 85°C for 5-15 mins; 2) Dry material up to < 0.07%

Source: MASAB, Roland Berger



Recycling equipment (1/7)

Bale Opener

1



Rotating blades that open up bales of PET bottles

Bottle Trommel

2



Removes dust, dirt, sand, stones and other impurities having diameters less than 40 mm

Positive Bottle Sorter

3



NIR Technology to Eject PET Bottles

Recycling equipment (2/7)

4

Pre-washing



Uses hot water to remove dirt and facilitate the label removing process

Label removal



Removes labels from bottles

5

Negative bottle sorter



NIR Technology to Eject PET Bottles

6

Recycling equipment (3/7)

Manual bottle sorting

7



Using manual labor to remove

Crushing process

8



Crushed bottles to flakes

Output of Stage 1



Pre-processed flakes

Recycling equipment (4/7)

Pre-washing

9



To remove Polyolefins (caps, rings, labels) from PET flakes

De-watering

10



To remove dirt from material before hot washing

Hot washing

11



Using hot water, caustic soda, and detergent to remove odor, dirt and glue

Recycling equipment (5/7)

Friction washing

12



To remove dirt, glue and chemical water after hot washing using high speed friction washer

De-watering

13



To remove the chemical water from the material to be easier for rinsing

Rinsing

14



Using fresh water to remove chemical and dirt from the material

Recycling equipment (6/7)

Follow rinsing process

15



Using 2 sets of floating washers to remove Polyolefins and chemicals from material

De-watering and drying

16



To remove water and dry up the material to less than 0.07% water content

Size reduction and powder removing

17



Using fresh water to remove chemical and dirt from the material

Recycling equipment (7/7)

Auto flakes sorting

18



Using automatic flake sorter to
remove non-PET flakes

Output of Stage 2



Processed flakes sorted
by color and size

C. Initiatives and Expansion Plans

MASAB deployed RVMs and collected close to 155 k plastic bottles so far

RVM achievements to date



1) Includes material from RVMs deployed at events such as WTTTCO, PIF event, KACST event, etc. ...; 2) Partners that provide rewards to participating customers

MASAB expanded into PS flakes recycling, taking in PS cups from the Two Holy Mosques

Overview of The Two Holy Mosques PS cup waste opportunity

Overview

Masab is looking to collect and process **Polystyrene (PS) cup waste** from **The Two Holy Mosques**



Current state

- Generation of around **400 tons/month of PS cups waste**
- Sold to the market as is without further processing, or landfilled



Envisioned opportunity

- Masab to take in **entire PS waste** from The Two Holy Mosques
- Masab to **shred PS waste** into flakes and sell it to off-takers
- Masab to potentially **pelletize PS flakes**



Additionally, MASAB is looking to expand into Bottle-to-Bottle and Polyolefins recycling

MASAB's plans for expansion

Bottle-to-bottle recycling

1



MASAB is currently assessing the **feasibility** of expanding its facility into **bottle-to-bottle recycling**

Polyolefins recycling

2



MASAB is currently **developing** the opportunity with **international potential recycling partners**

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Thank You