



# Session: Material Recovery Facilities and Material Recovery Centres - Way Forward

**Experiences with SPB Technology**

Manish Kothari

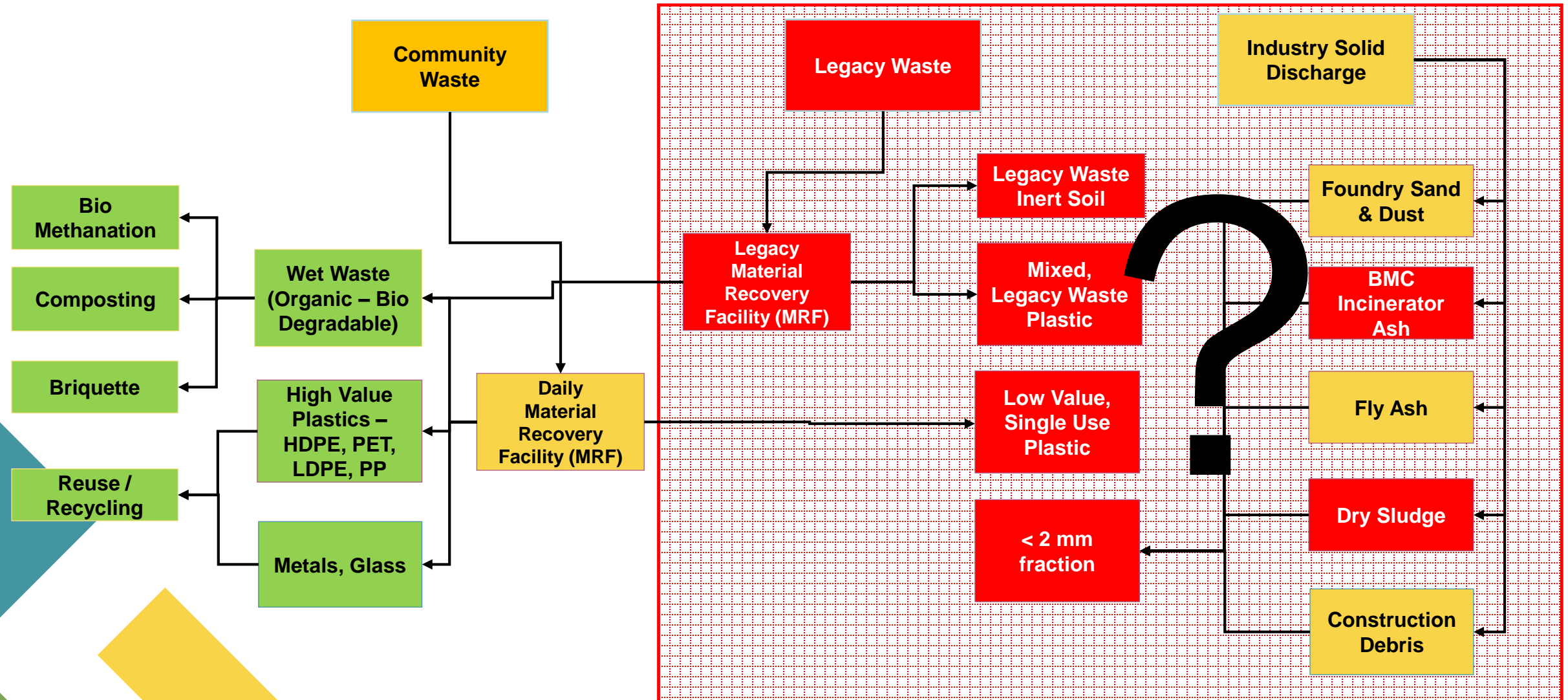
Rhino Machines Pvt. Ltd.

10<sup>th</sup> January, 2024

Event: CEE 40 Conference

Venue: CEE, Ahmedabad

# Challenges in Solid Waste Management



Recycled



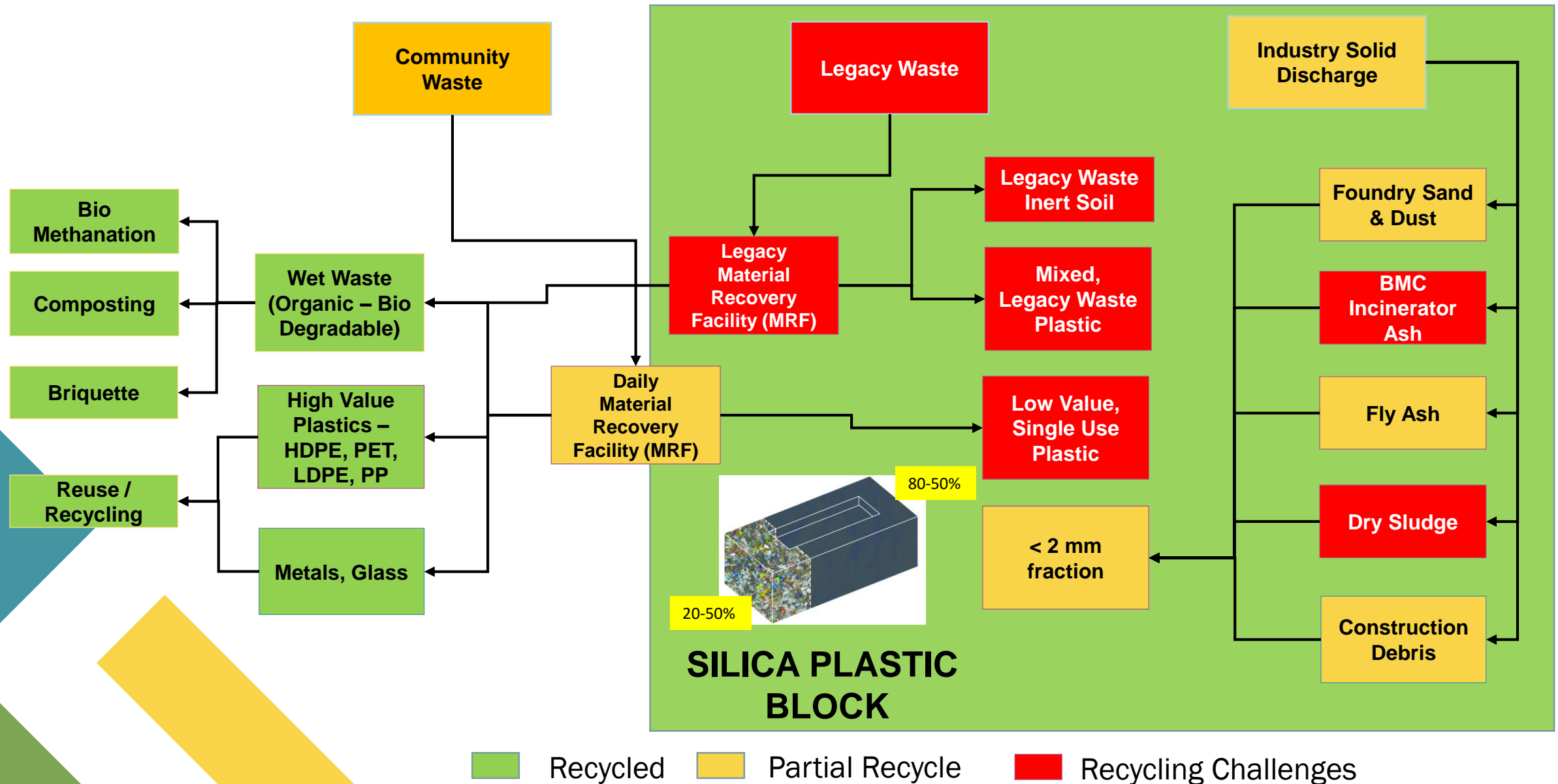
Partial Recycle



Recycling Challenges

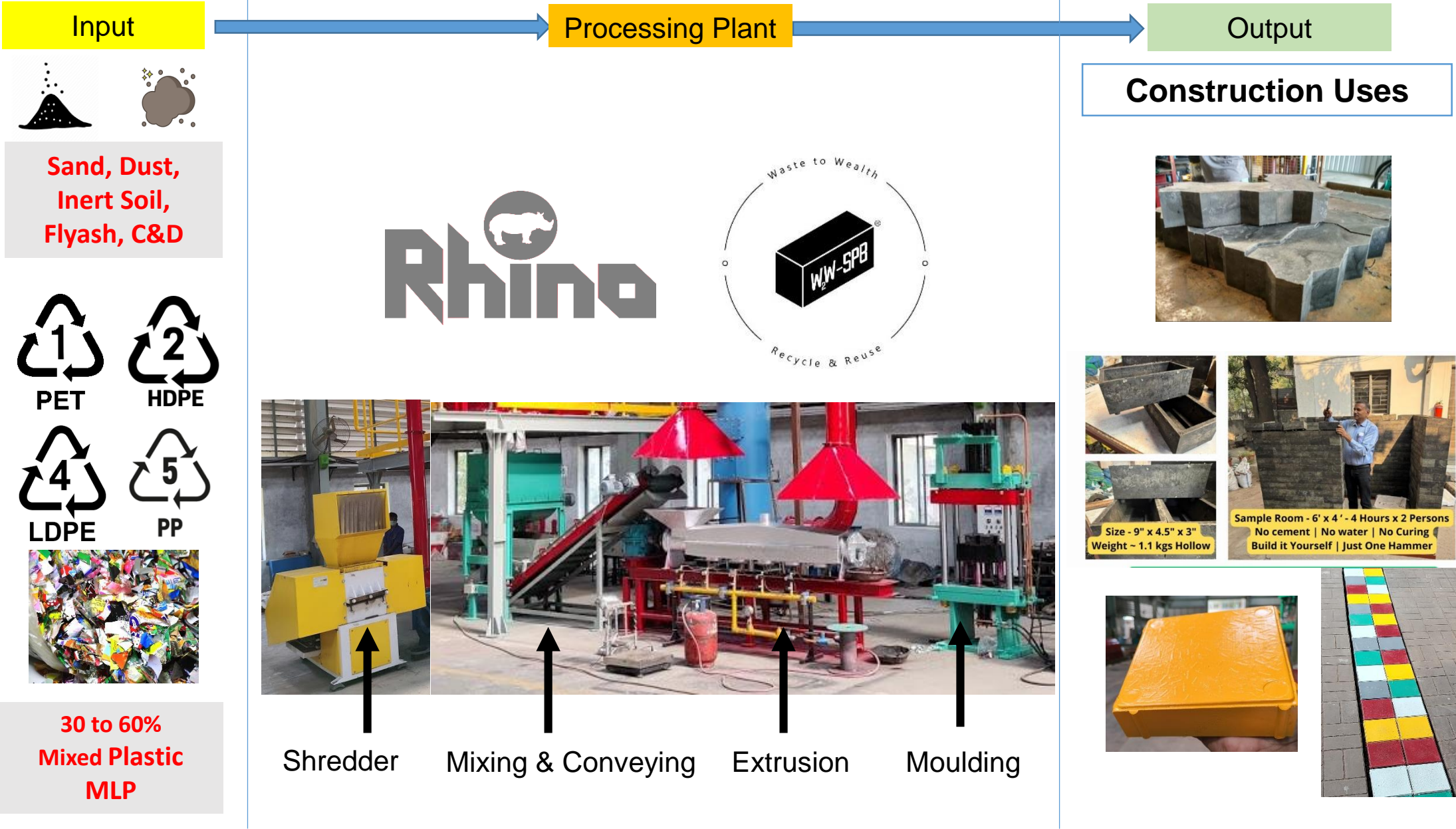
# Silica Plastic Block

## Solution for unaddressed MRF / Legacy Waste





# Silica Plastic Block – From Waste to Value







## SPB Interlocking Paver Blocks - 9"

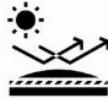
Composite mix of plastic waste and Industry Silica Waste to replace traditional material with green material by using wasted resources



Moisture Resistant



Termite Resistant



UV Resistant



Frost Resistant



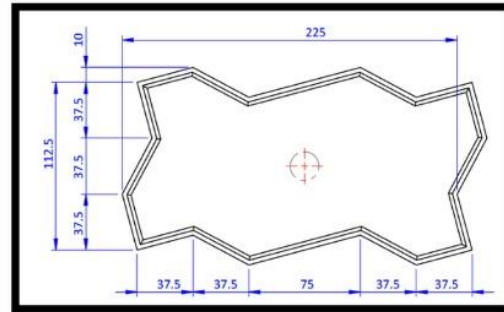
Abrasion Resistant



Carbon Negative



Machinable



Composition : 30 to 60% LVP , 40-70% CND <2mm waste

Thickness	40 mm	50 mm
Compression Strength N/mm <sup>2</sup> as per IS 15658:2021 (varies with plastic composition)	20-25	25-30
Water Absorption	0.2 - 0.3 %	
Suggested Application	Light traffic	Medium Traffic
Weight per pc (kgs)	1.7	2.1
Avg nos per square feet	3.6 Nos	

Ecofriendly, Sustainable, Durable and Reusable Products



## SPB IB9 - Interlocking Brick 9"

An **ECO FRIENDLY** alternative to **RED CLAY BRICK**



2.5 Times Lighter

Unbreakable

50% Plastic / 50% Industry Waste

Reusable, Recyclable

No Pollution

Uses Clean Energy

Easy Assembly



Sample Room - 6' x 4' - 4 Hours x 2 Persons  
No cement | No water | No Curing  
Build it Yourself | Just One Hammer

Pre-Engineered Sustainable Construction Solution



Moisture Resistant



Termite Resistant



UV Resistant



Frost Resistant



Abrasion Resistant



Carbon Negative



Machinable



# Democratization & Decentralization in Low Value Plastic Waste Management



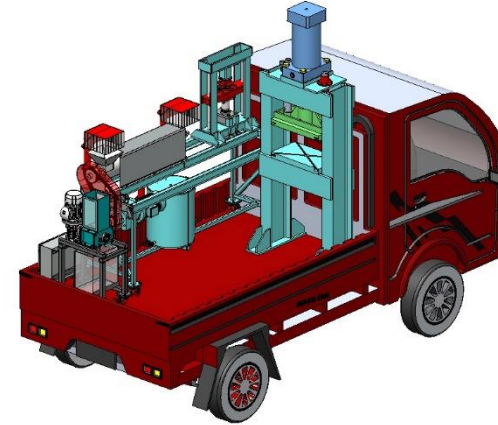
## Decentralized Plastic Collection & Shredding



Plastic Contributors		Contribution in Kg
1.	Grand Total	4,714.4
2.	Concept Biotech	2,585
3.	Parul University	735
4.	Earth Rakshak	399.72
5.	NDDB Colony	150
6.	Gopalpura School	143.4
7.	Uniplanet Stores	134.03
8.	Vulcan Engineering	99.17
9.	Tornavmata Primary School	90.16



Measure &  
Recognize Contribution  
Democratize Plastic  
Waste Management



## Decentralized Production

- Local Waste,
- Local Production
- Local Consumption
- Involve Community



## Centralized Production

- Aggregated Waste,
- Centralized Production,
- Distributed Consumption
- Formal Employment





**Thank you for the  
Opportunity**

Manish Kothari  
Rhino Machines Pvt. Ltd.