

SUSTAINABLE PACKAGING · PM INVESTIGATION

THE PLASTIC WAIT.

- SHIVAM DENGLA

Technically solved. Nobody moves first.

22,000

TONNES OF
PLASTIC WASTE
PER MONTH - FOOD
DELIVERY ALONE,
INDIA

Every order arrives sealed in plastic, inside plastic, taped with plastic. The compostable alternative already exists. The sachet is still here. Why?

What I was really asking.

-
- 01 If compostable packaging exists, why is plastic still the default?
 - 02 Who benefits from keeping the current system locked in place?
 - 03 Why did India's 2022 plastic ban collapse within three months?
 - 04 What would actually force the first mover to move?
-

Plastic solves real problems.

Five reasons the format stays locked in.

01 **Barrier performance**

Oxygen, moisture and light kept out - unmatched at scale.

02 **Unit cost**

20–50% cheaper than any certified sustainable alternative.

03 **Sunk machinery**

Existing lines and minimum order quantities lock in the format.

04 **The sachet economy**

Rs 85,000 Cr/yr keeps FMCG affordable at Rs 1–5 price points.

05 **Thin infrastructure**

India recycles just 8% of plastic - the system, not the material.

It creates worse ones.

57%

OF SACHETS ARE
MULTILAYER -
UNRECYCLABLE BY
ANY PROCESS ON
EARTH

- **The Unrecyclable Sachet**

Multilayer laminate - no commercial process can recover it.

- **The Infrastructure Void**

Compostable packaging still lands in landfill - near-zero composting.

- **The Greenwashing Tax**

Unverifiable eco-claims punish the brands that actually move.

- **The Enforcement Gap**

The 2022 ban: 85% fewer complaints by 2023 - not less pollution.

What if unrecyclable packaging just didn't exist?

TODAY - THE BROKEN LOOP

- ① Cost-led design
- ② Cheap virgin plastic
- ③ Used, discarded
- ④ Hand-sorted
- ⑤ Landfilled

INSTEAD - A CIRCULAR LOOP

- ① Compostable mandate
- ② Bagasse, mono-material
- ③ Collected back
- ④ Composted, recycled

WHO MOVES FIRST - AND WHAT FORCES THEM?

Six ways to break the coordination lock.

01

Drop-in Bagasse

Same format, zero petroleum

02

Mono-Material Films

Recyclable at scale

03

Platform Mandate

One memo, 5M orders

04

EPR With Teeth

Make non-compliance expensive

05

Refill & Reuse

The model that worked

06

Compostable Films

The hardest problem

Drop-in, recyclable, or mandated.

01

Drop-in Bagasse

Same format, zero petroleum

Swap plastic cutlery and containers for sugarcane bagasse. India is the world's #2 producer.

ECOWARE & CHUK SUPPLY QSR ·
RS 3-7/ORDER

02

Mono-Material Films

Recyclable at scale

Replace multilayer laminates with single-polymer films that mechanically recycle.

AMCOR & UFLEX PRODUCE
TODAY

03

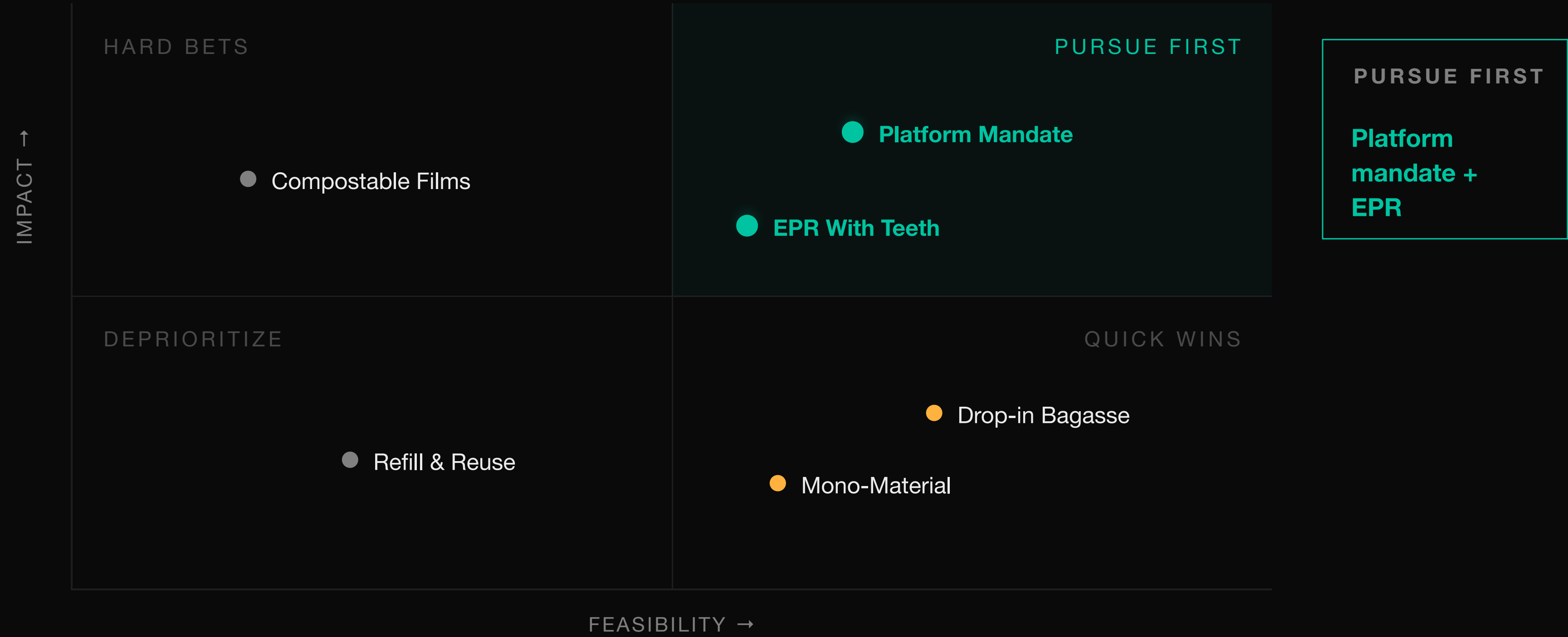
Platform Mandate

One memo, 5M orders

Zomato or Swiggy mandate eco-packaging as a listing requirement, premium absorbed in order economics.

FASTEST PATH TO SCALE

Not all ideas are equal.



The shortlist, scored.

OPTION	IMPACT	COST	SCALE	SUSTAIN.	ADOPTION
Platform Mandate	●	●	●	●	●
EPR With Teeth	●	●	●	●	●
Drop-in Bagasse	●	●	●	●	●
Mono-Material	●	●	●	●	●

● STRONG ● ADEQUATE ● WEAK

Platform Mandate + EPR With Teeth

The technology exists. The cost delta is Rs 3–7 per order. The only missing ingredient is a player with the market power to make the switch non-optional.

COST	Rs 3–7 per order Brands pay ~1% of COGS more; at scale, less.
BEHAVIOR	Zero consumer change The platform switches; the customer orders the same.
TIMELINE	Mandated in six months No new technology or regulatory process required.
LEVERAGE	Algorithmic listing control Non-compliant restaurants can be deprioritised.

WHY NOT THE OTHERS	
Drop-in Bagasse	<i>food service only</i>
Compostable Films	<i>no composting yet</i>
Consumer Education	<i>fails at checkout</i>
Voluntary Pledges	<i>too slow</i>

FIRST MOVER - **ZOMATO / SWIGGY**, THE PLATFORMS THAT CONTROL DISCOVERY

A three-phase pilot to de-risk fast.

0–6 months

Platform Proof

Bengaluru, 200 top restaurants
Ecoware / CHUK preferred suppliers

Track volume, churn, complaints

KILL CONDITION

Churn > 8% or volume –5%

6–18 months

Policy Pressure

Platform-level EPR obligations
Close the certificate loophole
Pilot composting, PPP model

TARGET

30% of city orders

18–36 months

Category Reset

National rollout, all categories
Fund India-made compostable film
Formalise ragpicker cooperatives

SUCCESS

50% non-plastic · 10k registered

India, 2035.

HORIZON 1

2025 – 2027

Platform mandates break the coordination lock; EPR 2026 adds real enforcement; ragpicker cooperatives are registered as verified recyclers.

HORIZON 2

2027 – 2031

India-made compostable films reach cost parity; the Rs 1 sachet survives, redesigned; bagasse becomes a Rs 5,000 Cr export industry.

HORIZON 3

2031 – 2035

The #2 sugarcane producer becomes the largest exporter of compostable food packaging; the ragpicker economy is formalised and paid.

Sustainable packaging was never a cost problem. It was a coordination problem - waiting for someone with the power to move first.