

It's a Multi-material Circular World

95% of plastic packaging
material value

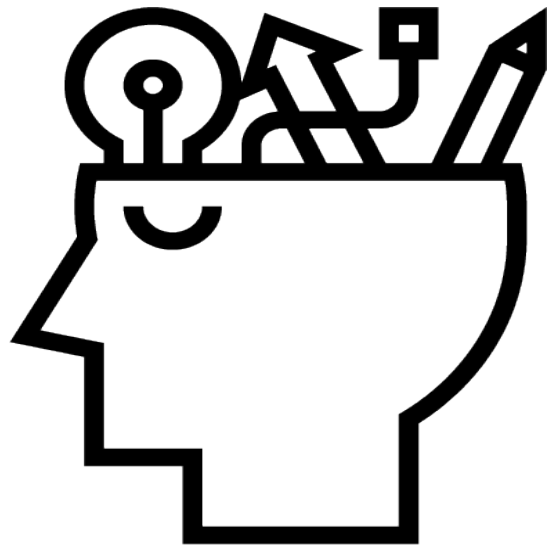
or

USD \$80–120 billion annually
is lost from the global economy



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Design for circular plastics



Many types of plastics do, by the nature of their design and polymer type, end up in landfill, incineration or leaked into the environment ending up in oceans.

- Single use sachets, lids, candy wrappers
- Multi-material packaging
- Polystyrene and expanded polystyrene
- Fast-food packaging



Next Generation Cup Challenge

Footprint creates cups, lids and straws that are fully formed fiber-based solutions, with an aqueous-based coating that is recyclable and compostable.



At Colombier doesn't use plastic as a cup line but a water based, recyclable and compostable coating.



SoluBlue material is made from 100% food grade ingredients derived from plants.



The future of packaging



Fiber Technology

Footprint fiber technologies are unmatched in the fiber industry. Fully biodegradable, compostable and recyclable, our solutions are designed to protect the environment.



Print Technology

Footprint's direct print capabilities deliver revolutionary brand differentiation and cost savings by allowing our customers to ditch wraps and print direct.



Barrier Technology

Our barrier technologies eliminate the need for plastic liners. Our integrated barriers provide oil, water, and oxygen for a wide range of applications.



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The future of packaging

Notpla Liner

Water proofing and grease proofing cardboard takeaway boxes.

Our latest product is tackling the problem of lined cardboard, usually coated with plastic made from oil or corn, both non sustainable.

We've developed a coating made from Notpla for the food takeaway industry. It's natural, biodegradable and even repulpable.

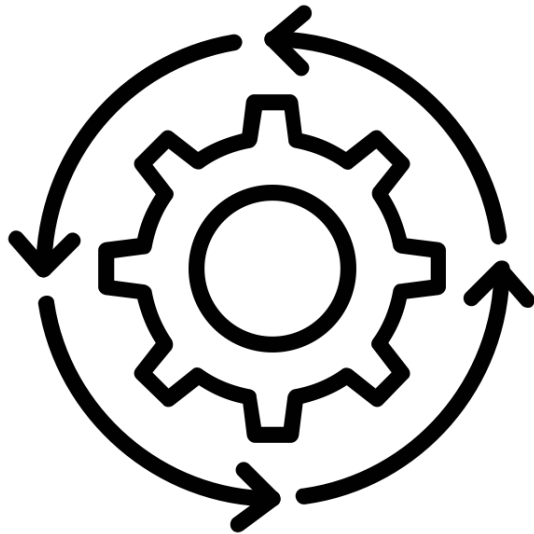


Ooha single use beverage sachet



The primary business model is to lease the machines and sell cartridges of materials to co-packers and event organisers, enabling them to produce and sell fresh Oohos containing drinks or sauces as desired.

Reusable plastics



Design plastic packaging for a minimum number of re-use or rotations in a re-use system – alternative product delivery system.

Refillable packaging is becoming increasingly attractive that are part of alternative product delivery systems.



Algramo – refillable systems



The business model is very simple: Algramo fills the machines, installs them for free in small neighborhood stores, and splits the profit evenly with shopkeepers.

Local Melaka Example



Reusable Plastic Containers



The Economics of Recyclable Plastics

1. Recyclable plastics is US\$72 per ton extra than virgin plastics.
2. Brand owners, increasingly under pressure to use recyclable plastics (or close the loop) will pay 5% extra
3. “The real challenge is to open up large markets and contracts to recyclers who will invest in modern technology on a large scale to supply the resins to recycle back into products. This will also align product designs into concepts that are truly recyclable economically. We should be supporting a "Recycling Grey" as a badge of sustainability rather than promoting packaging from beach plastics.”

Human Behaviour



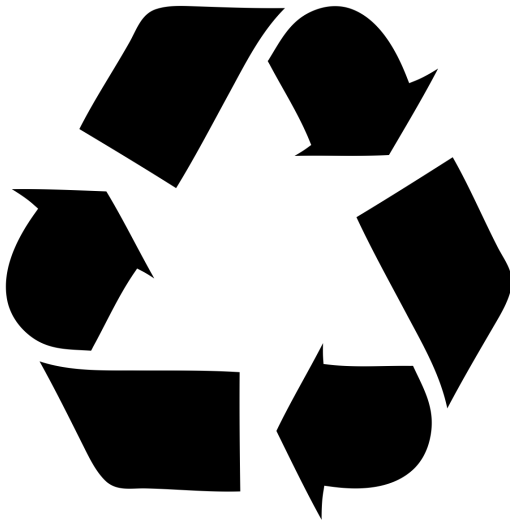
Recyclable Resource Collection



Visit Recyclable Resource Recovery – Circular Economy Asia website

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National Resource Recovery Policy



1. There are many small scale recycling initiatives that need to be aligned to a national program, which includes common language, circular outcomes and information.
2. Separation-at-source must be enforced.
3. Use of technology to offer choice for consumer engagement and data collection can provide accurate information for public / private partnerships for investment and improvement over time.



New Industries – New Resources



The Melaka River Walkway is an important asset to Melaka's tourism industry yet maintenance costs are high. Reprocessed plastics planks means no rot, splinter, seasonal painting or termite infestation + a 25 year guarantee.

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Products from Reprocessed Plastics



DECK FRAMING & DRAINAGE



COMPOSITE DECKING



DECK RAILING



DECKING & RAILING DUOS



OUTDOOR LIGHTING



FURNITURE, PERGOLA &
OUTDOOR KITCHENS



FENCING



COLLECTIONS



Arcelik AS

The Grundig vacuum cleaner is made from recycled electrical/electronics plastics, Arcelik AS.



RECYCLE PLASTIC CAN BE USED FOR MAKING HIGH VALUE PRODUCTS LIKE

introducing a world first... **100% Recycled Plastic**

BOTTLES TO CARPET PROCESS

- 1 Collect and sort more than 10,000 plastic bottles each year
- 2 Bottles are crushed into PET chips
- 3 The PET chips are washed and dried

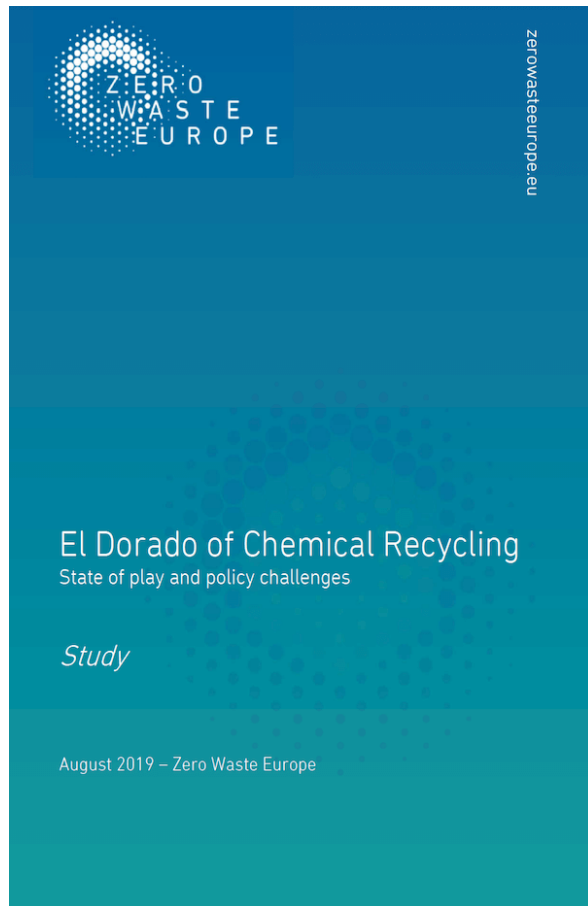
FLOOR
Dacron® Fiber & backfill are bonded into beautiful long-lasting carpet

rPET One Bottle = One Case
Made from 100% PET material | Borebody also made | Available for iPhone 6/7/8

ALL HANGERS OF LONDON BLACK PLASTIC HANGERS ARE MADE FROM RECYCLED MATERIALS

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Chemical Recycling



1. Mechanical recycling for separated plastics
2. Only for degraded, contaminated and complex plastics
3. Not for plastic-to-fuel processes
4. Promote reduction for plastics and plastics that can be reused.
5. Innovation into plastic material design
6. Promote human behaviour change to dispose of recyclable resources responsibly – to guarantee reprocessing.
7. Verification to ensure only processes with a lower carbon footprint than the production of plastic from virgin feedstock can be classified as chemical recycling.

Why A Sense of Urgency?

1. Sustainability & circular systems is now becoming a demand driven industry yet there is a enormous lack of supply.
2. Food & beverage industry, tourism, fashion, automotive, aerospace – not just for circular plastics.
3. Transition to circular business is a step-by-step process, yet basic risk reduction research is still necessary.
4. Collaboration with prospective customers is vital in these early days in becoming a circular economy.
5. Unless a company changes – high probability of bankruptcy



START
RIGHT
NOW
TODAY!!



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The Nine Steps



**Towards a
Circular Business**

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The Asia Plastics & Packaging Agreement

A roadmap for a
sustainable and circular
plastics and packaging
industry

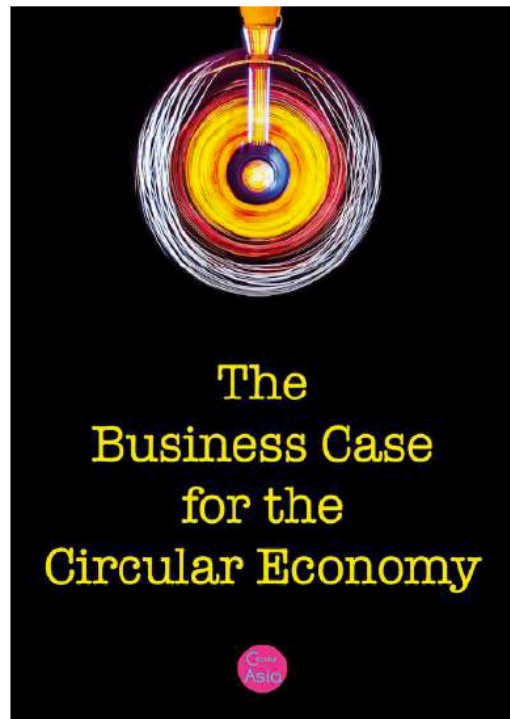


Redefining
Recyclable Resource Recovery
Collection Systems
For Asia



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