



DESIGN FOR SUSTAINABILITY

Presented by:

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Malaysian Plastics Manufacturers Association
(MPMA)

MALAYSIA'S PRIVATE SECTOR: INNOVATION AS A DRIVER TO TACKLE MARINE PLASTICS

Economic Research Institute for ASEAN and East Asia (ERIA)

23 NOVEMBER 2021



ABOUT MALAYSIAN PLASTICS MANUFACTURERS ASSOCIATION (MPMA)

MPMA is the official voice of the Malaysian plastics industry, representing its members and the industry in Government interaction, spearheading the plastics industry's growth.



Established in 1967, MPMA has over 700 members across Peninsular and East Malaysia.

MPMA represents 60% of plastics manufacturers, accounting for 80% of the country's total production of plastic products.

MPMA'S ACTIVITIES FOR MEMBERS AND THE INDUSTRY

MPMA PLASTECH MONTH 2021
 STAYING RELEVANT: THE POWER OF TECHNOLOGY

2 NOVEMBER to 2 DECEMBER 2021 | VIRTUAL CONFERENCE

PLATINUM SPONSOR: monitor ERP SYSTEM

GOLD SPONSORS: BOBST, Miliken Reifenhäuser, WINDMÖLLER & HÖLSCHER, PETRONAS

SILVER SPONSORS: ARBURG, SYSPRO

BRONZE SPONSORS: AUTODESK, bm, Husky

OTHER SPONSORS: Rockwell Automation, OMASOFT, TORAY

<p>CIRCULAR ECONOMY NOVEMBER 25 2021</p>	<p>FLEXIBLE PACKAGING NOVEMBER 16 & 23 2021</p>	<p>MATERIALS TECHNOLOGY NOVEMBER 9 2021</p>	<p>MOULDING UPDATES NOVEMBER 11 & DECEMBER 2 2021</p>	<p>RECYCLING TRENDS & TECHNOLOGIES NOVEMBER 30 2021</p>	<p>SMART MANUFACTURING NOVEMBER 2 & 18 2021</p>
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<p>Speaker Title Borouge Plc Ltd</p>	<p>Speaker Title Miliken Chemical</p>	<p>Speaker Title Toray Plastics (Malaysia)</p>	<p>Speaker Title Identitu Advanced Materials (Malaysia) Sdn Bhd</p>	<p>Speaker Title Autodesk</p>	<p>Speaker Title Arburg Plc Ltd</p>	<p>Speaker Title Solvay Specialty Polymers Japan K.K.</p>
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Industrial Skills Framework for the Malaysian Plastics Industry

Focus: Injection Moulding Sector

In collaboration with:

AN ADVANCED PLASTICS RECYCLING INDUSTRY FOR MALAYSIA

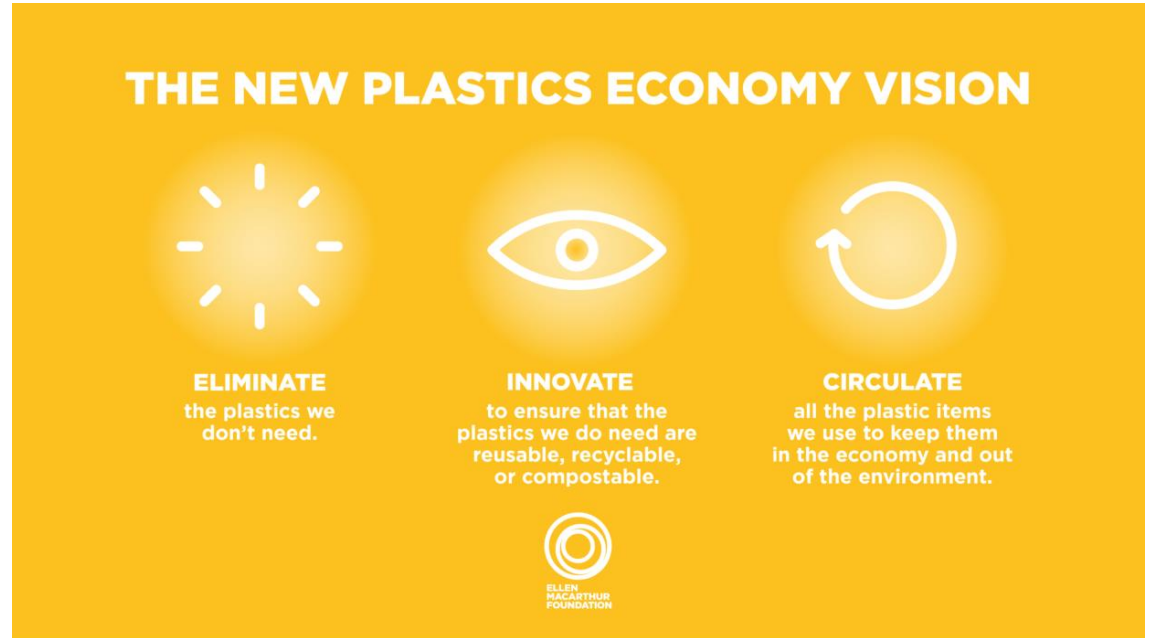
A WHITE PAPER BY

IN COLLABORATION WITH

THE FUTURE: NEW PLASTICS ECONOMY

The **New Plastics Economy** by the Ellen MacArthur Foundation outlines a global vision for **plastics to never become waste**.

In simpler terms, efforts should be made to retain plastics in the supply chain – **move from a linear to circular system**.



Source: Ellen MacArthur Foundation (<https://ellenmacarthurfoundation.org/>)



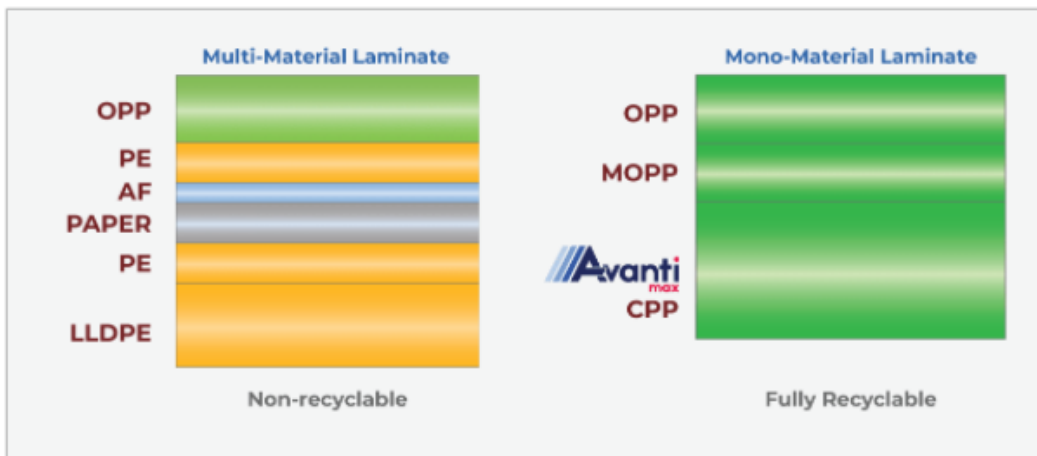
INDUSTRY'S ACTIONS

DAIBOCHI BERHAD

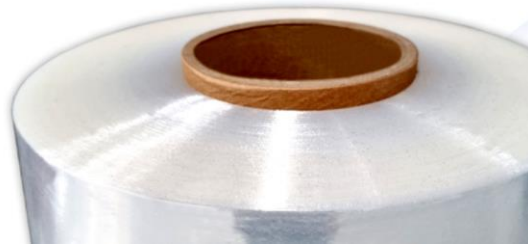
(a member of Scientex Group)

Mono-Material Laminate Packaging

The following is an example of a commercialised packaging solution which converted a Multi Material Laminate (non-recyclable) into a Mono-Material Laminate (fully recyclable) which will subsequently carry the number 5 recycling symbol of Polypropylene (“PP”). This conversion was the first of its kind in Malaysia.



THONG GUAN INDUSTRIES BERHAD



Sustainability is inevitable so let's strive to close the loop together. Send your film wastes back to us so we can give them life again as new films.

It's not rocket science. Just talk to us.



High-quality recycled machine film



Sustainable (with 30% recycled content)



High containment force



No easy snapping



Carbon reduction



Load Safety



SEKOPLAS INDUSTRIES SDN BHD

GARBAGE BAGS



For Home Solid Waste Segregation

Strong & Sturdy ReMAX
 HDPE Semi-Transparent Garbage Bag
 Made from 30% Recycled Plastic
 For Home Solid Waste Segregation




enviropilus
 Eco-Friendly, Oxo-Degradable Garbage Bag



This Eco-Friendly Oxo-Degradable garbage bag will undergo oxidative degradation upon dispose. The degradation process is triggered by heat, sunlight (UV) and mechanical stress.

ept
 totally degradable plastic additives
 TDPA Supplied by EPI
www.epi-global.com



DIYOU FIBRE (M) SDN BHD

Recycled Polyester Staple Fibre

turning bottles into fibre!

Made from 100% post consumer PET bottles. It can be used to manufacture almost anything sustainable, from the bed to aerospace.

STEP 1



PET Bottles

Post consumer plastic bottles collected

STEP 2



AI Sorting

AI Technology used to sort different types of colours and material

STEP 3



Extrusion

Sorted bottles are crushed, washed and extruded

STEP 4



Recycled Polyester Staple Fibre

Cut into different length

Types of Fibre

- Hollow Conjugated
- Hollow Conjugated Siliconized
- Hollow Fibre
- Solid Fibre

Recycled Plastic Pellets

Waste recycled, recovered and re-engineered!

Made from 100% post consumer bottles and plastics. Plastics are recovered and re-engineered into materials for constructions and plastic molding industries.



PET Bottles

Post consumer plastic bottles collected



AI Sorting

AI Technology used to sort different types of colours and material



Flakes

Sorted waste are crushed and washed



Recycled Plastic Resins

Flakes extruded into resins

Types of Recycled Resins

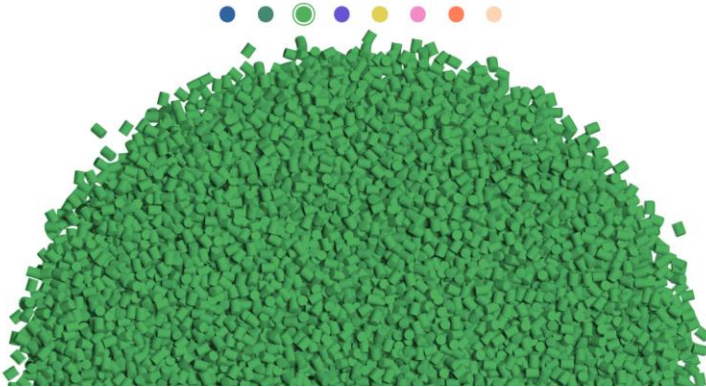
- HDPE
- LDPE
- PE/ PP
- PP
- ABS
- HIPS

Smart Plastics

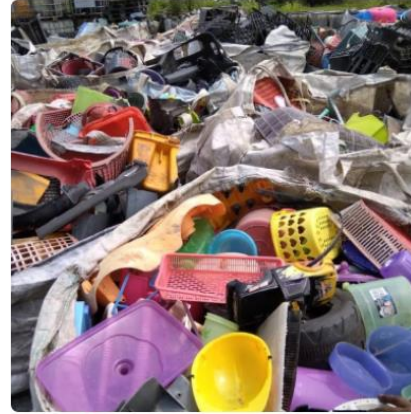
Smart plastics is our customisable material made out of recycled plastics. Not only are they just as good, if not better than newly manufactured plastics, they are also designed to save cost, time, waste, and most importantly, our ocean.

Many colours, many features
We do not produce one-size-fits-all plastic. Our recycled plastics are fully customisable to fit all sorts of applications.

Faster, better, greener
We employ greener production processes in comparison to manufacturing using newly manufactured plastic. Since this is done through a single, streamlined supply chain, it saves production cost too.



We offer smart plastic materials sourced from two types of recycled plastics.



PLASHAUS™

Post-consumer recycled plastics

Plashaus is our trademarked smart plastic product, made out of generic recycled plastics collected from other sources before they end up in the landfill or the ocean.



PLASHAUS™
Ocean

Ocean-bound plastics

Plashaus Ocean is made out of sourced from plastic that are at high risk of entering the ocean if not collected in time, which includes shoreline, rivers, banks or landfill.

CONCLUSION

The choice **moving forward** for the plastics industry is to produce sustainable plastics – either **recyclable or compostable**.

End-of-life / waste management solutions and **consumer education** have to be developed and strengthened **concurrently** to reap the benefits of sustainable plastics.





THANK YOU

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