Close the Loop
GROUP

Create - Recover - Reuse

2023 Introduction

ctlgroup.com.au

Close the Loop GROUP
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Our Story

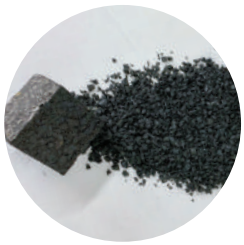
Innovative packaging services provider O F Packaging and circular economy-focused Close the Loop merged and subsequently listed on the Australian Stock Exchange (CLG) on December 2, 2021.

Forming Close the Loop Group, the merged entity provides a unique market offering that focuses on sustainable solutions across the supply chain, from the manufacture of packaging and recycled products, through to the management of take-back programs and material recovery processing.

The Group recycles complex items that would otherwise go to landfill, such as printer cartridges and other print consumables, cosmetics, batteries, eye-wear, e-waste, and post-consumer mixed soft plastic waste.

Close the Loop Group Pillars

Close the Loop Group work within our four key pillars to ensure we always represent the core values of our business.



Innovation

Our Group has a long history of developing market-leading innovation, which continues to drive our business with continuous investment in R&D across both packaging and resource recovery.

We are not afraid to push boundaries while providing tangible, real solutions.

Environment

As a business focused on circular economy ideals, environment and sustainability are fundamental to our Group DNA.

This underpins our entire brand, as we continue to improve our business footprint while assisting clients and industry to do the same through new recycling and recovery initiatives.

Service

We believe that a great team is essential to great business, and through our experienced staff we're committed to a high level of service for our clients.

Our Group also services the greater community through education & training initiatives, in addition to the positive sustainability outcomes we provide the community.

Transparency

Close the Loop Group adopt a high level of transparency across our production and recovery processes.

This includes our quality assurance procedures, certifications, traceability and chain of custody agreements.

Close the Loop Group hold ourselves to a higher industry standard, which in turn fosters trust in our business.

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Our Business Group

Close the Loop Group contains 14 individual business units across both the packaging and resource recovery space.

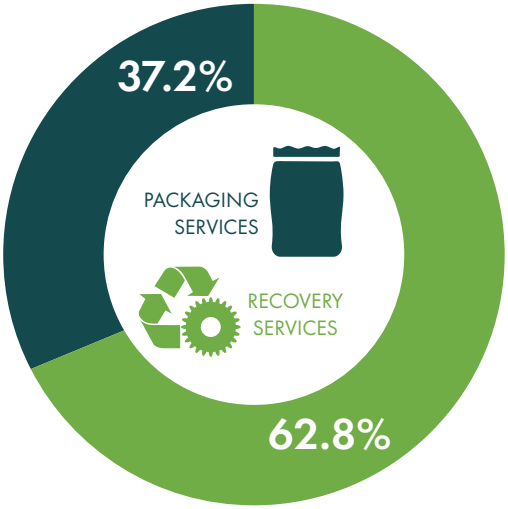
RECOVERY

Close the Loop has locations in Belgium, the United States, and Australia, operating as three of these units.

In Plas Recycling are a post-industrial recycler based in the United States.

ISP Tek are a computer refurbisher in the United States.

O F Resource Recovery are a paper and cardboard recycler based in Australia.



PACKAGING

O F Pack, O F Flexo, The Pouch Shop, Inno Bagclosures, Alliance Paper, Crasti & Co and Oceanic Agencies are packaging and product supply business units based in Australia.

Foster Packaging offer packaging services and supply in South Africa.

Close the Loop Packaging manage packaging supply in the United States and Europe, but under the Close the Loop division.

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How we Close the Loop

TURNING post-consumer soft plastics into roads.

WINNING awards for our sustainable packaging innovation.

CONVERTING clients to sustainable packaging to meet 2025 targets.

AUDITING our zero waste to landfill brand promise through Close the Loop.

COLLABORATING with clients on take-back programs for hard to recover products.

WORKING with government on a cosmetics recycling feasibility study.

INNOVATING through constant research and development.

EDUCATING everyone we can, wherever we can.

INVESTING in the circular economy.

Our Recent Recognition

PIDA AUSTRALASIAN PACKAGING INNOVATION & DESIGN AWARDS 2022
SUSTAINABLE PACKAGING DESIGN OF THE YEAR - REUSE/REFILL GOLD WINNER

PIDA AUSTRALASIAN PACKAGING INNOVATION & DESIGN AWARDS 2021
FOOD PACKAGING DESIGN OF THE YEAR GOLD WINNER

WORLDSTAR WINNER 2022 — WORLD STAR FOR PACKAGING — WPO WORLD PACKAGING ORGANISATION

WORLDSTAR WINNER 2022 — WORLD STAR FOR PACKAGING — WPO WORLD PACKAGING ORGANISATION

PIDA AUSTRALASIAN PACKAGING INNOVATION & DESIGN AWARDS 2021
DOMESTIC & HOUSEHOLD PACKAGING DESIGN OF THE YEAR GOLD WINNER

PIDA AUSTRALASIAN PACKAGING INNOVATION & DESIGN AWARDS 2021
SAVE FOOD PACKAGING DESIGN OF THE YEAR HIGH COMMENDATION - RETAIL

2021 Diamond Winner
The Packaging Innovation Awards
brought to you by DOW

PIDA AUSTRALASIAN PACKAGING INNOVATION & DESIGN AWARDS 2021
LABELLING & DECORATION DESIGN OF THE YEAR GOLD WINNER

PIDA AUSTRALASIAN PACKAGING INNOVATION & DESIGN AWARDS 2022
SUSTAINABLE PACKAGING DESIGN OF THE YEAR - REUSE/REFILL GOLD WINNER

2021 Gold Winner
The Packaging Innovation Awards
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Organisations, Education & Training

Close the Loop Group is heavily involved in the education and training arena, highlighting the opportunities and addressing challenges of packaging and resource recovery.

The Australian Institute of Packaging (AIP)

As proud sponsors of the AIP, we have multiple people within of our Group who are registered as members. Some of our team are involved in the formulating and hosting of flexible packaging training course sessions through the organisation.

Australian Packaging Covenant Organisation (APCO)

Through O F Packaging, we're engaged with APCO and committed to the National 2025 Waste Targets.

We complete annual reporting, and provide assistance to clients on their own reporting requirements and moving towards more recyclable packaging materials.

O F Packaging are also founding signatories of the ANZPAC Plastics Pact.

Client Training Sessions & Presentations

We believe that continued progression towards better sustainability outcomes for packaging requires the sharing of information and collaboration of those involved throughout the supply chain.

Close the Loop Group offer clients tailored innovation and training sessions, focused on sustainability options for the manufacturing and recovery of particular product lines, as well as general market information across the manufacturing and recycling areas.

Following on from these sessions, we continue to engage with clients on innovation projects in the sustainability space, assisting with R&D to get product into the market. We perform joint marketing initiatives and industry presentations with clients who wish to highlight their sustainability goals and achievements.

Other Key Organisation Memberships & Affiliations

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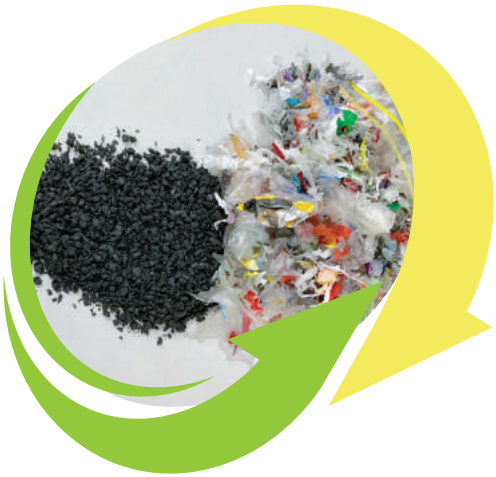
Recycling soft plastics and making circular products with Close the Loop

In Australia alone, more than 300,000 tonnes of soft plastic is dumped into landfills every year.



Soft plastic packaging often contains multiple different plastic types in order to function throughout the supply chain and offer optimal protection and performance for various products and food items.

However the use of mixed plastics creates trouble at end of life, as separation of these materials incredibly difficult. This means that most recyclers cannot process these mixed soft plastic materials.

Close the Loop are leading the way on the recycling of soft plastics, utilising this complex waste stream for use in new value-add products such as TonerPlas® and rFlex®.

Drop Off
Empty soft plastic packaging is taken back to participating locations by consumers

Collection
The soft plastic materials are bailed & then delivered to Close the Loop for processing with Zero Waste to Landfill

Sorting & Processing
The soft plastics are sorted and shredded at Close the Loop to be processed into new products locally

TonerPlas®
is made from reclaimed toner powder + post-consumer soft plastics. It is added to asphalt for improved road performance.

rFlex®
is made from recycled plastics and used for injection moulding and forming into new products (such as trolleys and baskets).

ZERO WASTE TO LANDFILL · BRAND PROMISE ·

Close the Loop are involved in the take-back and recovery of hard to recycle products, from printer cartridges through to cosmetics and batteries. We are not just recycling products, but providing key end-markets for the materials we collect to ensure feasibility and cohesion with circular economy ideals.

Close the Loop are proud to offer an independently - audited Zero Waste to Landfill Brand Promise, ensuring that no materials received through our take-back initiatives are ever sent to landfill.

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Recycled content, circular products by Close the Loop

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Recycle- Ready Packaging

MONO-POLYMER POUCHES & FILMS

Packaging made from a single plastic*material such as the following:

Low Density Polyethylene (LDPE)

Linear Low Density Polyethylene (LLDPE)

High Density Polyethylene (HDPE)

Polypropylene (PP)

Biaxially-Oriented Polypropylene (BOPP)

*These can also be used in combinations if within the same polymer family

PACKAGING FORMATS	PERFORMANCE CAPABILITIES
Stand Up Pouch	Pasteurisation
Flat Pouch	Freezer- Safe
Flat Bottom Pouch	Liquid Products
Quad Seal Pouch	Vacuum Sealing
Spout Pouch	Microwave- Safe
Rewind/Roll Film	Modified Atmosphere
Side Gusset Bag	High Barrier

BENEFITS

- Economical for various markets
- Rigidity & reseal-ability
- Contributes to the 'Circular Economy'
- Versatile across performance & storage conditions
- Available in a variety of packaging formats
- Available in high barrier (specs below)

Recycle-ready Mono-polymer PE and PP packaging formats are in-line with Circular Economy for Flexible Packaging (CEFLEX) standards and the Australian Packaging Covenant Organisation (APCO) Sustainable Packaging Guidelines (SPGs).

APCO AUSTRALIAN PACKAGING COVENANT ORGANISATION

CEFLEX A CIRCULAR ECONOMY FOR FLEXIBLE PACKAGING

HIGH BARRIER RECYCLABLE- Pack Cycle

Utilising a specialty rigid mono-polymer structure, Pack-Cycle has been created to simplify flexible packaging, increasing the ability to recover post-consumer flexible plastic resources while maintaining a high gas barrier.

SPECIFICATIONS

	Unit	Specification	Test Method
Available Thicknesses	micron	70 - 250	ASTM D374
Residual Solvent Rate	mg/m2	≤ 5.0	BS6455: 1984
Water Vapour Transmission Rate (WVTR)	g/m2/24h	≤ 4.0	ASTM E96
Oxygen Transmission Rate (OTR)	ml/m2/24h	≤ 3.0	ASTM D3985
Seal Strength	N/15mm	≥ 20.0	ASTM F2029
Pressure Test	50kg*1min	No Leakage	GB/T 10004
Drop Test	1.2m*3times	No Leakage	GB/T 10004

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Recycled Content Packaging

MADE FROM RECYCLED CONTENT

We're advancing our capabilities with recycled content packaging films, with a focus on both Post-Industrial Recycle (PIR) and Post- Consumer Recycle (PCR) options. A key focus of the group is a completely Australian-sourced, Australian-made packaging supply chain producing PCR recycled content films and bags ideal for non-food applications.

BENEFITS

- Closing the loop of recycling by re-using materials that have been diverted from landfill.
- Recycled content in packaging is vital for achieving global waste targets and is a key consideration for future packaging design legislation

CHALLENGES & LIMITATIONS

- Made-from recycled content packaging is still a developing sector, with challenges surrounding not only the pliability and strength of recycled materials, but also strict food safety standards for packaging materials limiting the use of recycled content to certain sources, percentages and applications.

- O F Pack have been developing this area of sustainable packaging, and can offer a selection of high percentage recycled content packaging for non-food contact applications.

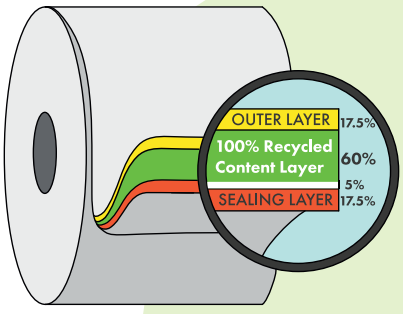
- Using recycled content in comparison to virgin materials is typically more expensive at this time, due to the limited supply of quality recycled content available that can meet standards for re-purposing into packaging products.

As processing technology and the market expands however, the above challenges will begin to reduce.

REC-FLEX 60/65 FILM- O F FLEXO

This 100% Polyethylene [PE] film is a three layer co-extrusion that allows for a 100% recycled content core layer that constitutes approximately 60-65% of the total structure volume.

The internal core is trapped between the two 20% virgin material layers to ensure optimal sealing and performance, while eliminating recycled content contact with product.



REC-FLEX 60/65 FILM

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Compostable Packaging

COMPOSTABLE PACKAGING

Packaging made from materials that break down in a specified time frame and contribute to soil structure, including materials such as the following:

Polylactic Acid (PLA)
Polybutylene Succinate (PBS)
Cellulose
Paper

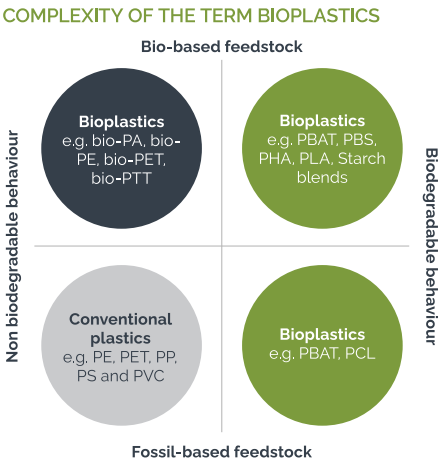

Table provided by the Australian Packaging Covenant Organisation (APCO) in "Considerations of Compostable Plastic Packaging"

LIMITATIONS

- Materials may begin to breakdown prior to disposal, reducing performance
- The majority of consumers do not have access to appropriate composting facilities
- Compostable materials are not applicable for all packaging requirements (Retort etc.)
- Vast confusion in the market between bio-degradable, home compostable and industrial compostable
- Products do not break down properly in landfill or natural environments
- Compostable packaging is costly in comparison to recyclable or conventional material

BENEFITS

- Materials break down in short period of time (generally up to 6 months)
- High film clarity available
- Compostable zipper closures also available
- Ability to combine multiple compostable materials together for added benefit
- High barrier films are available for certain applications

AUSTRALIAN CERTIFICATION FOR BIO-PLASTICS & COMPOSTABLE FILMS

Whilst there are other well-known standards used globally for specifying compostability (including EN13432:2000), certification in Australia requires materials to be reviewed by the Australasian Bioplastics Association (ABA) in order to conform to specific standards associated with testing for ecotoxicity and earthworm survival.
Materials can be certified for Home Composting (AS 5810-2010) or Industrial Composting (AS 4736-2006)
The ABA sets it's own fees and timeframes for the certification of all new packaging, and use of the above logos.

At this stage, the compostable industry is mostly unregulated, however O F Packaging can provide clients packaging meets multiple international standards for either Industrial Composting, or Home Composting.

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