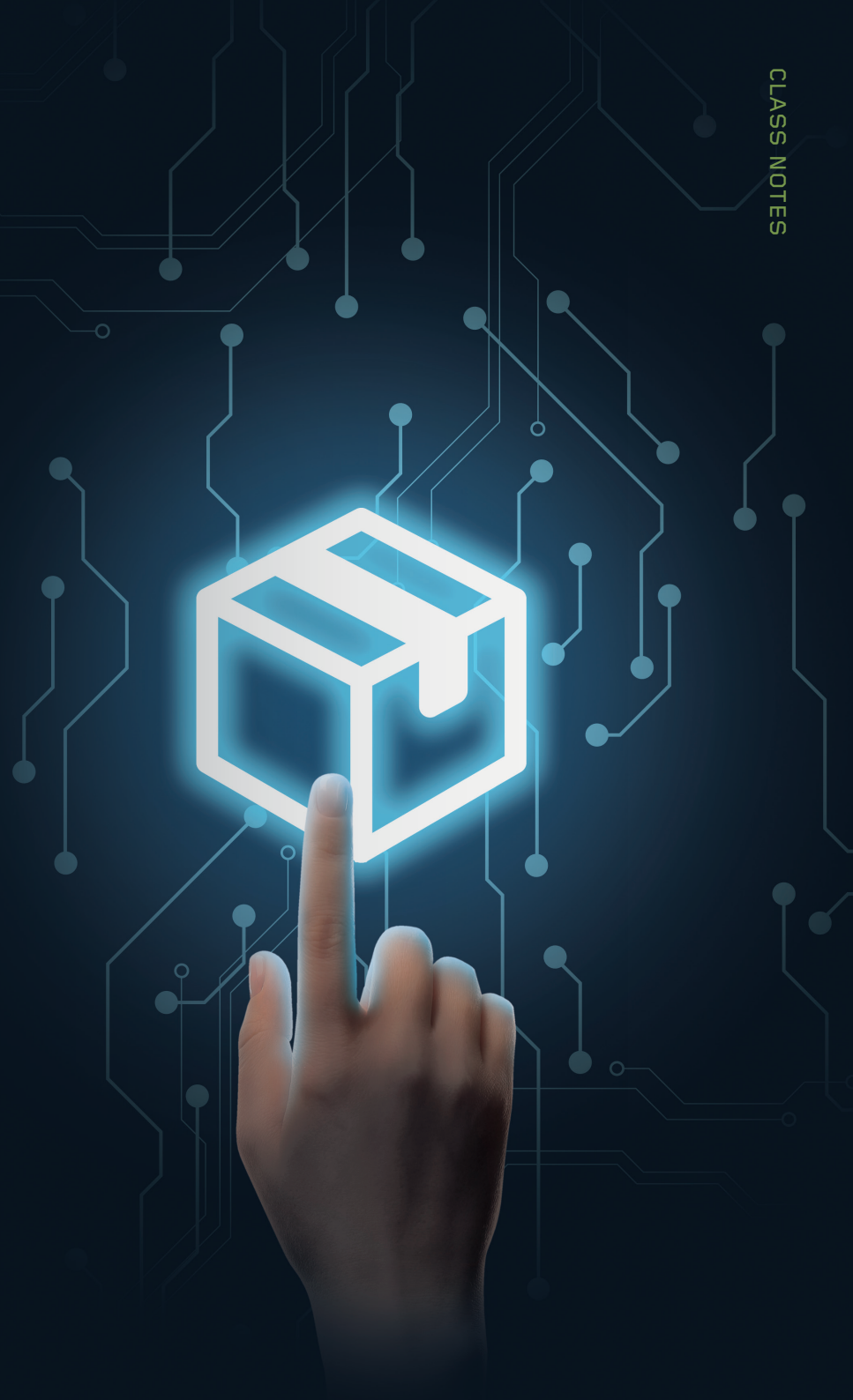
CLASS NOTES

PACKAGING

what we need to know for the future of sustainable packaging



INTRODUCTION

The Australian Packaging Covenant Organisation is a national Not-For-Profit organisation, leading the development of a circular economy for packaging in Australia and with COAG alliance for New Zealand.

When APCO talk about packaging, we are talking about primary, secondary and tertiary packaging made from paper and fibre, glass, metal, wood, compostable materials and of course, plastic – and more recently, a return to reusable packaging, which is re-emerging as an exciting option in the packaging market.

APCO is primarily responsible for supporting industry that places packaging materials into the Australian market, to meet the regulatory obligations outlined in the National Environment Protection Measure for used packaging materials – which we fondly refer to as 'the NEPM'.

The NEPM outlines compliance and reporting obligations for all businesses that put packaging on the Australian market.

Business can choose to meet their obligations in each state and territory.

APCO has a clear vision on how to deliver a circular economy for packaging and we focus on three key areas:

1. Designing for circularity – to make sure that packaging entering the system is optimised for recovery and recycling, composting – where appropriate – or reuse

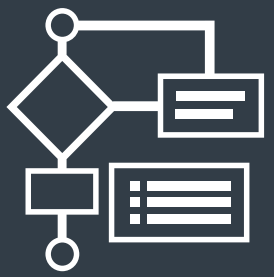
2. Improving collection and recycling systems – to support that recovery and transfer for reprocessing

3. Expanding markets for used packaging materials – to ensure there is demand for the material that is captured and reprocessed... Really, there's no point collecting it if there's no one at the end of the pipe to buy it!

KEY FOCUS AREAS OF APCO AND FOR INDUSTRY TO CONSIDER

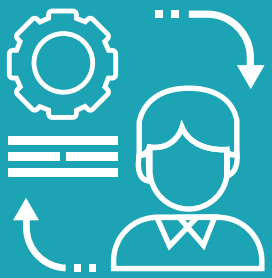
PACKAGING DESIGN

We help organisations to create packaging that is reusable, recyclable or compostable in the Australian waste and recycling system.



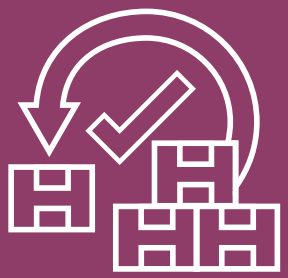
SYSTEMS

We help organisations to create the operational systems and capacity building required to make their packaging more sustainable.



EDUCATION

We drive the education required to empower businesses, stakeholders and their communities to change their approach to packaging.



MATERIAL CIRCULARITY

We support the technological and market-place initiatives required to develop commercially viable outputs and end markets for recycled material.

COLLECTIVE IMPACT FRAMEWORK

THE FIRST OUTCOME IS PACKAGING DESIGNED FOR CIRCULARITY, THIS IS SUPPORTED BY 5 STRATEGIES:

- Reduce packaging through design and innovation
- Phase out problematic and unnecessary single use plastic packaging
- Increase the proportion of reusable packaging
- Design for material recycling
- Design for compostability

These strategies support achievement of 3 of the targets, which is to achieve 100% of packaging being reusable, recyclable or compostable. So will phasing out problematic and unnecessary single use packaging. APCO has identified that around 12% of packaging is currently not recyclable or has poor recyclability – we need to eliminate, reduce and/or redesign all of the packaging formats in this category.

Design for material recycling – is also critically important to achieve the 50% recycled content target for packaging. Design for material recycling will help to ensure that packaging can be collected, effectively sorted and then reprocessed into material that meets quality and performance standards for new packaging.

THE SECOND OUTCOME IS IMPROVED COLLECTION AND RECYCLING SYSTEMS, THIS IS SUPPORTED BY FOUR STRATEGIES:

- Standardise kerbside collection systems
- Expand drop-off and take-back systems for packaging
- Improve the infrastructure for sortation and recycling
- Educate households and businesses to source separate effectively

These support several targets. Just looking at the 70% target for plastics, for example, we know that an increased focus on design is really important, but while 75% of plastic packaging is already recyclable only 16% was actually recycled in 2017-18. Strategies to increase the rate from 16% to 70% will include standardising what can and can't be collected at kerbside to minimise consumer confusion, providing more drop off and take back systems that can supplement the kerbside system, expanding plastics reprocessing capacity in Australia, and making sure that households and businesses know how to recycle. Our data shows that a lot of recyclable material is thrown into a landfill bin rather than recycled.

OUTCOME THREE IS EXPANDED MARKETS FOR USED PACKAGING, SUPPORTED BY TWO STRATEGIES:

- Increase recycled content in packaging
- Increase the use of recycled packaging materials in other products and civil construction

The framework has a strong focus on recycled content to achieve the new, higher target for 50% average recycled content across all packaging. Not all used packaging can go back into packaging, however, so we also need a concerted effort to grow end markets in other products and civil construction.

Soft plastics are a case in point. We know that with current technologies the ability to process these materials back into packaging is extremely limited, for technical and food safety reasons. Innovation will make this more feasible in future, but at present we need to support other value-added markets, such as asphalt additives to extend the life cycle of roads.

1.1 Reduce packaging through design and innovation

1.2 Phase out problematic and unnecessary single-use plastic packaging

1.3 Increase the proportion of reusable packaging

11.4 Design for material recycling

1.5 Design for compostability where appropriate

2.1 Standardise kerbside collection systems

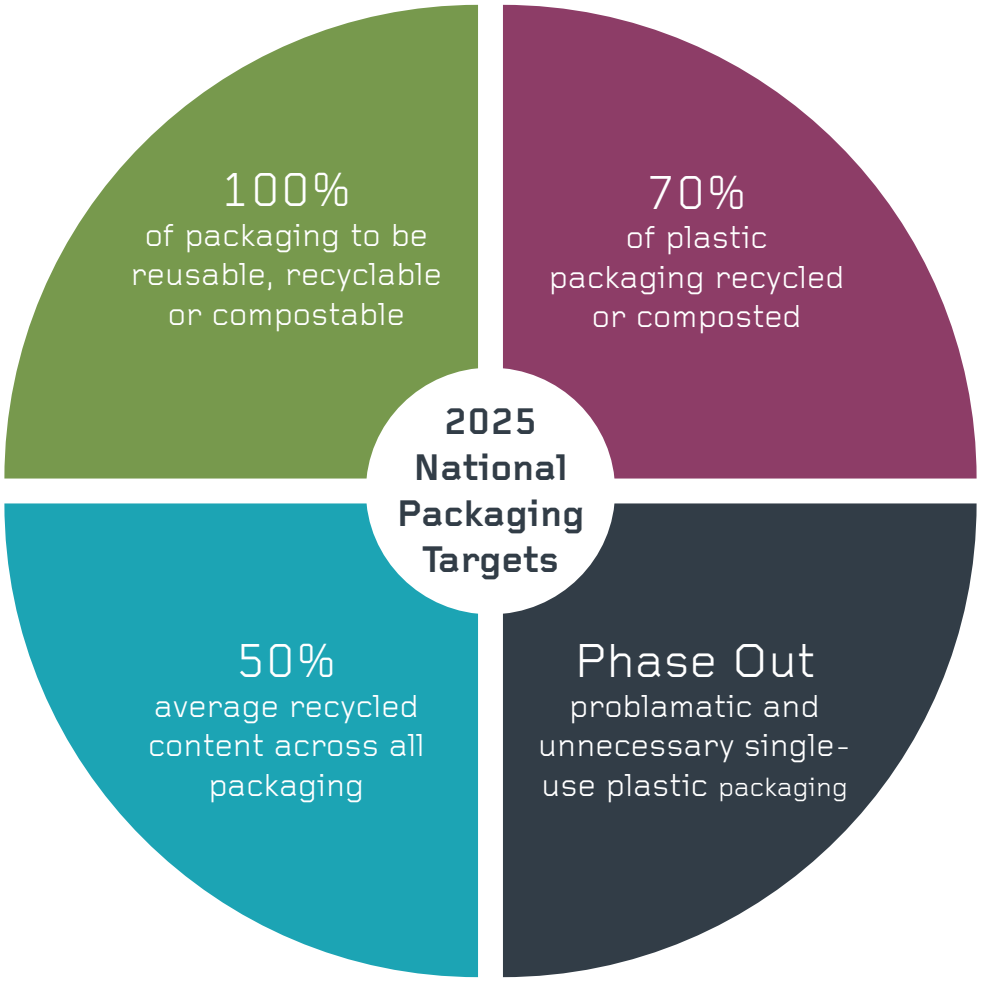
2.2 Expand drop-off and take back systems for packaging

2.3 Improve the infrastructure for sortation and recycling

2.4 Educate households and businesses to source separate effectively

3.1 Increase recycled content in packaging

3.2 Increase use of recycled packaging materials in other products and civil construction



2025 PACKAGING TARGETS

Around 2016, the world started waking up to the impacts of plastic pollution on the natural environment and more specifically, the marine environment – we were bombarded with images of marine animals becoming entangled in plastic bags and discarded fishing nets, turtles with straws stuck in their beaks, large pelagic fish and cetacean marine mammals washing up dead on beaches, with stomachs full of discarded plastic, it was highly confronting.

Sir David Attenborough was talking about the issues, the Queen was talking about the issues, the UN were talking about the issues and a crescendo of voices from the global community started asking difficult questions about packaging. Then the issue got very real, when China told the world that it would no longer be a dumping ground for the world's waste packaging and closed their doors on imported waste in a move that has become known as the China Sword policy.

This drove real and rapid change and as all these catalysts came together, virtually every developed nation on earth that had happily been shipping its garbage off-shore to be processed in emerging economies, had to re-think how they were going to manage the growing mound of waste – it was no longer an out-of-sight-out-of-mind situation.

Given that global litter indices pointed to packaging being a major culprit in the marine plastic pollution debate, the Australian Government decided it had to do something about domestic packaging waste and in partnership with APCO, endorsed a set of National targets aimed at improving all aspects of packaging on the Australian market.

SUSTAINABLE PACKAGING GUIDELINES SUIT PAPER AND FIBRE PACKAGING SOLUTIONS

The Sustainable Packaging Guidelines the first step in the packaging sustainability journey.

We also provide access to an Annual Reporting / Action Planning tool, to aid in meeting compliance obligations outlined in the National Environment Protection Measure, and these guidelines are reinforced with a huge suite of resources, to ensure that business is fully equipped to make informed decisions on their packaging choices.

1 DESIGN FOR RECOVERY

2 OPTIMISE MATERIAL EFFICIENCY

3 DESIGN TO REDUCE PRODUCT WASTE

4 ELIMINATE HAZARDOUS MATERIALS

5 USE RECYCLED MATERIALS

6 USE OF RENEWABLE MATERIALS

7 DESIGN TO MINIMISE LITTER

8 DESIGN FOR TRANSPORT EFFICIENCY

9 DESIGN FOR ACCESSIBILITY

10 PROVIDE CONSUMER INFORMATION ON SUSTAINABILITY

Q&A

When we add a plastic or foil sheeting or film to some fibre-based solutions, it reduces the recyclability of the product. However, there is food and beverage legislation that requires this sheeting. Is APCO looking at other, especially across food and beverage, legislation, that may restrict customers changing to other substrates?

This is a space that is in some ways somewhat loosey goosey around edges, but in other ways also restrictive. As we get closer to 2025, these are some of the nuances we need to address, because these barriers are starting to raise the heads as people go down this path and try to do the right thing, these are some of the finer points we need to look at. Our tech advisory committees are looking more closely at these issues and how to navigate through, its a big exercise to create regulatory change. The more we know the more we can help, so please talk to us, APCO memberships are a good option, we have great tiered membership levels that will suit most businesses, so you can be part of the story and be a part of the change. We need to keep having these conversations, across industry and government.

The paper industry has a really strong modern environmental record, coupled with illegal logging legislation across Australia and New Zealand, our packaging is recyclable, can be compostable and in most instances align with the 2025 targets outlined. Is there recommendation to move from plastics to fibre-based products, given the renewability, recycleability, compostability credentials of paper?

APCO is prescriptive, what we try to do is provide information for people that need to make decisions. The application of alternatives to plastic are desirable, certainly, however what we don't want to see is people moving to complex solutions that are less recyclable or effective. You would be better looking at plastics that are recyclable within the current infrastructue so we know that they have a circular life to it. We are trying to fill those gaps at the moment and we've just done a large pulpability trial looking at what the impact of polymer coatings and wet-strength additives can be in terms of recycling. We are going to publish reports shortly so that people can see what those impacts are when moving to fibre-based alternatives. There are so many places where fibre can be used when moving away from plastics.

The more we know the more we can help.

I have heard that a large percentage of our recycleable rubbish collected by councils etc are ending up in landfill. Is this fact or fiction?

It very much depends on the materials. In the case of paper and fibre, the answer is no, because we have fantastic recovery systems in place for paper and fibre, from the household and also it is one of the key materials collected from B2B recycling. We have an average 60% recycled content in paper and fibre packaging these days, so this works well. Some the challenges we see in this space are polymer coatings and wet-strength additives that are being put into fibre to make them behave like plastic, and that causes them to not be recyclable. There are trials in place with these innovation materials that are causing problems in terms of yields and recovery and reducing efficiencies of recycling. So the challenge we are seeing in that space is that people are moving away from plastic, so the experimentation with alternate products is creating other issues, so perhaps a little counter-intuitive result there. Metal is generally going offshore, as we don't have a lot of metal recycling locally, however there is a market for it offshore, and metal is not included in export bans. Glass is well recycled here, with about 70-80% recycled through CDS schemes and glass separation programs coming through councils. Plastics have some issues, and we're trying to improve there. PET plastics go through container depot schemes, and going straight back into bottles here in Australia, so that is proving to be a perfect circular economy. We see a lot of stuff in the media, but they are sometimes not up to speed with what is actually going on in the background.

I have tried to explore compostable paper and fibre ranges for a print project, however they were much more expensive and the customer, albeit wanting to use a compostable solution, rejected the idea on price. Do you think these substrates will become more economical as these initiatives become more prevalent?

One of challenges we face there is that compostables are going to require infrastructure. Based on advice we've gathered, food applications are really the only place compostables should be used. We can't capture large amounts of compostable material against the amount of organic waste that we capture, because you need about an 80/20 ratio. So if they reach that balance, then anything else gets discarded, it either goes off into other processing and often ends up in landfill. This may change over time, however, for now, compostables can really only be used for food packaging. What we've seen in the UK is an enormous move towards reducing food waste, that the need for food waste collection in some councils has reduced to the point where some councils have cancelled that service. So they are unable to achieve that compostable/organic balance and this has become more and more difficult. When we start to see economies of scale click into place, compostables become more feasible. It's hard to predict which way it will go. AUS + NZ consumers are very aware of and want more compostables and fibre products and are demanding better outcomes, so as we continue to evolve, compostable papers will become more volumous, more readily available and with greater economies of scale.

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