

REVIEW OF THE **2025 NATIONAL PACKAGING TARGETS**

FINAL REPORT >



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Disclaimer

The Australian Packaging Covenant Organisation (APCO) and the contributing authors have prepared this report with a high-level of care and thoroughness and recommend that it is read in full. This report is based on generally accepted practices and standards at the time it was prepared. The method adopted, and sources of information used are outlined in this report, except where provided on a confidential basis. This report has been prepared for use by APCO, and only other third parties who have been authorised by APCO. APCO and the contributing authors are not liable for any loss or damage that may be occasioned directly or indirectly using, or reliance on, the contents of this publication. This report does not purport to give legal or financial advice. No other warranty, expressed or implied, is made as to the professional advice included in this report.

1. Executive summary

The findings presented in this report were based on data and consultation on the 2025 National Packaging Targets (2025 Targets), undertaken by the Australian Packaging Covenant Organisation (APCO) with industry and governments in October and November 2022.

Key finding 1:

While the 2025 National Packaging Targets are driving a transformation in packaging in Australia, they are not on track to be met by 2025, with the Target of recycling or composting 70% of plastic packaging presenting the biggest challenge.

Actions to deliver significant progress by 2025 include:

- Accelerating improvements in design, which will impact up to 479,000 tonnes of packaging.
- Fast-tracking a system for the collection of household soft plastics, impacting up to 336,000 tonnes.
- Expanding business-to-business (B2B) recycling, impacting current gaps of up to 89,000 tonnes of flexible LDPE and 734,000 tonnes of corrugated cardboard.

Key finding 2:

While the 2025 National Packaging Targets continue to be a catalyst for a circular economy for packaging, it is necessary to establish consensus on post-2025 goals to enable long-term investment and innovation.

Industry has made considerable improvements to packaging to meet the 2025 Targets. Governments have supported action towards the targets, including through single-use plastics policy, consumer education about recycling and substantial co-investment in recycling infrastructure. Continuing challenges for industry include cost, competitive risk, hard-to-recycle items, recycling capacity, limited access to high quality recycled content, inconsistent policy, poor data to support decision making and measure impact, and uncertainty about future outcomes.

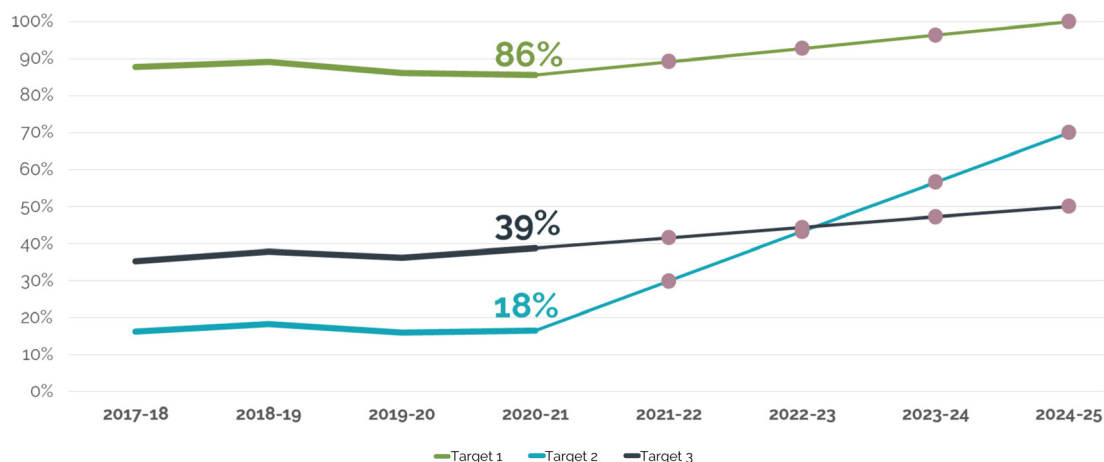


Figure E1: Existing performance and trajectory for performance against the 2025 Targets.

Key finding 3:

Collaboration and cooperation between industry and government, across the entire packaging system, is critical to overcoming barriers to progress.

The focus under the current co-regulatory framework has been on packaging design, however, achieving circularity in the packaging system is a broader outcome. Directed effort is needed to strengthen collaboration and coordination between all industry sectors and across all tiers of government in the immediate term, and through a reformed regulatory framework that has the support of industry as a whole from 2025.

In this document, 'regulation' and 'regulatory reform' mean government intervention within the scope of reform options set out in the 2021 report on the review of the National Environment Protection (Used Packaging Materials) Measure 2011.

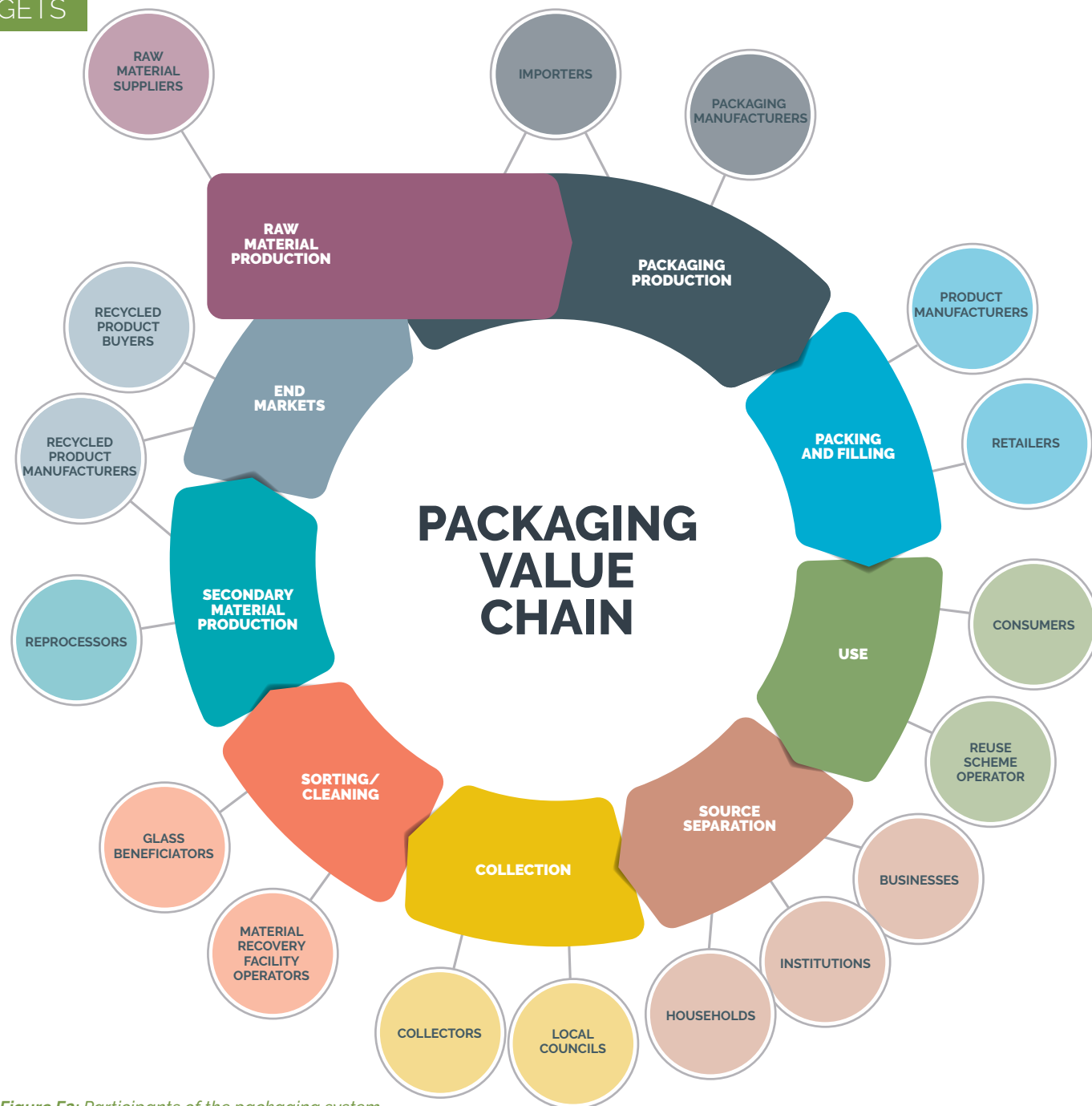


Figure E2: Participants of the packaging system

Key finding 4:

Urgent and synchronised policy and programmatic action is needed to address the crucial deficiencies in the circularity of essential packaging materials and formats.

APCO will work with all system participants on roadmaps for key materials, addressing the issues listed in Table E1.

Table E1 Priority actions needed to drive effective, whole-of-system action towards a circular economy for packaging in Australia.

OUTCOME AREA	ACTION REQUIRED	KEY ROLES FOR SYSTEM PARTICIPANTS
Design	Establish clear standards requiring design for packaging reduction and circularity through: <ul style="list-style-type: none"> - the Sustainable Packaging Guidelines (SPGs), and - circularity evaluation. 	<p>APCO – Strengthen the SPGs and circularity evaluation tools to be regulation-ready.</p> <p>Packaging Sectors – Overcome technical and cost barriers to, and implement, packaging reduction and circular design; work with APCO to enhance and align SPGs and evaluation tools with recovery systems.</p> <p>Recovery sectors – Work with APCO to ensure SPGs and evaluation tools align with recovery systems.</p> <p>Governments – Evaluate co-regulatory options for mandating design standards.</p>
Use	Incentivise avoidance, reuse and correct disposal of packaging by users through: <ul style="list-style-type: none"> - nationally consistent consumer education and incentives, and - measurable and reported targets for business-to-business recycling. 	<p>APCO – Work with packaging sectors to expand coverage of the Australasian Recycling Label (ARL), work with industry and governments on data insights into, and interventions to impact, user behaviour.</p> <p>Packaging sectors – Apply the ARL, support consistent consumer education.</p> <p>Recovery sectors – Work with APCO to ensure the ARL aligns with recovery systems; contribute to consistent consumer education.</p> <p>Governments – Evaluate options for incentives and targets; support and undertake consistent consumer education.</p>
Collection	Establish an efficient and comprehensive national collection framework for packaging that includes: <ul style="list-style-type: none"> - nationally harmonised kerbside recycling, - large-scale national collection of flexible plastics, - effective and accountable extended producer responsibility (EPR) for non-kerbside materials, - reusable, compostable and away-from-home collection pathways, and - market-relevant data collection and publication. 	<p>APCO – Work with governments and the recovery and packaging sectors to evaluate options to optimise efficient collection pathways for packaging materials and formats.</p> <p>Packaging sectors – Design and deliver effective and accountable EPR for non-kerbside materials; increase use of B2B recycling services.</p> <p>Recovery sectors – Implement national standards for collection systems, support evaluation of the economic feasibility of expanding the range of materials collected at kerbside.</p> <p>Governments – Establish an efficient and comprehensive national collection framework for packaging, including national standards for collection systems.</p>
Reprocessing	Invest in reprocessing infrastructure to address remaining capacity gaps to 2025, including for flexible plastics (401,000 tonnes), rigid polypropylene (84,000 tonnes) paper and paperboard (1,109,000 tonnes), and formats including tubs, trays and punnets (PET & PP 82,000 tonnes).	<p>APCO – Develop investment-relevant data insights on capacity gaps and barriers to investment.</p> <p>Packaging sectors – Co-invest in recovery / reprocessing infrastructure.</p> <p>Recovery sectors – Evaluate options and invest in reprocessing capacity.</p> <p>Governments – Incentivise investment (including through co-investment) in reprocessing capacity.</p>
End Markets	Accelerate the development of markets for all material streams, including through: <ul style="list-style-type: none"> - incentives and targets to drive demand for recycled packaging materials, - traceability and technical standards, and - whole-of-system data collection and insights. 	<p>APCO – Develop and support market enablers including standards, specifications and information.</p> <p>Packaging sectors – Overcome technical barriers to recycled content, meet recycled content targets.</p> <p>Recovery sectors – Implement standards and specifications and support data collection processes.</p> <p>Governments – Evaluate co-regulatory options for incentives, targets, standards, recycled content traceability and data collection.</p>

2. Introduction

Packaging in Australia

Packaging is a significant manufacturing industry in Australia. Of the 6.74 million tonnes of packaging placed on the market (POM) in Australia in 2020-21, 58% was manufactured in Australia from locally sourced or imported materials. The total cost of the packaging system has been estimated at \$10-12 billion at the production stage and \$2.6 billion at the recovery stage.

Since the 2025 National Packaging Targets (the 2025 Targets, Figure 1) were established in 2018, the amount of packaging POM in Australia has continued to increase at a greater rate than population growth. The amount of packaging per person has increased from 222 kilograms in 2017-18 to 262 kilograms in 2020-21, with the greatest growth in flexible plastics (see Appendix 1) and is projected to grow further to 268 kilograms in 2024-25. The recycling rate for packaging has increased over the same period from 49% to 56% and investment by industry and governments is rapidly increasing our recycling capacity. However, strong action is needed urgently across the entire packaging system to reduce and deal effectively with packaging waste and accelerate progress towards the 2025 Targets and a circular economy for packaging.



Figure 1: The 2025 National Packaging Targets.

About this report

This report takes as its starting point two critical foundations, that:

1. the 2025 Targets are a key tool in achieving the larger, overriding objective of a circular economy for packaging (noting that establishing the case for a circular economy is beyond the scope of the report), and

2. a crucial need, appetite and opportunity exist not just for incremental improvement, but for systemic reform of the framework of the packaging system in Australia, through action following the review of the National Environment Protection (Used Packaging Materials) Measure 2011 (NEPM) and the Australian Packaging Covenant and aligned government and industry action.

Based on those foundations, the report sets out a call to action for all participants in the packaging system. The actions proposed respond directly to the review's key findings that:

- the Targets will not be met by 2025,
- longer-term vision is needed to guide action,
- collaboration is needed across the entire packaging system, and
- strong and coordinated interventions are needed on essential material streams.

The report has been developed by the Australian Packaging Covenant Organisation (APCO) for consideration by Australia's Environment Ministers. In 2020, Ministers asked APCO to review Australia's progress towards the 2025 Targets in 2022, and whether the 2025 Targets remain appropriate. Terms of reference for the review are available in Appendix 1, and detail of the consultation process to inform the review is provided at Appendix 2.

3. Call to Action

The clear message from the analysis and consultation undertaken for this review is that strong action, well beyond the scope and magnitude of that undertaken to date, is required to create the strategy and market conditions essential to create a circular economy for packaging.

Between now and 2025, action is needed to accelerate progress towards the 2025 Targets. Beyond 2025, actions, interventions and policy clarity and certainty are needed both to make up any shortfall in performance against the Targets, and to further drive the transition to a circular economy for packaging.

Table 1 sets out actions APCO will take between now and 2025, to address the gaps and challenges identified through this review. The key strategic priorities are roadmaps for key material streams, which will inform coordinated, system-wide action to improve design, recovery and end markets to 2025 and beyond, improvements to data and information systems to better inform action, and the development of an industry vision for the packaging system to 2030. Other actions address the development of APCO's capability and engagement across the system, and enhancements to APCO's program delivery and support for resolution of problems and barriers to action.

While the actions set out in Table 1 will accelerate progress towards the Targets, the effectiveness of industry action to deliver a circular economy will be enhanced through regulatory reform. APCO's perspective on the need for regulatory reform* was set out in the [Collective Impact Report](#) published by APCO in 2021, and [Costs and Incentives for a More Circular packaging System](#), an Accenture report commissioned by APCO in 2021.

A [review](#) of the co-regulatory framework, commissioned by the then Department of Agriculture, Water and the Environment, identified shortcomings in the framework and made recommendations for its reform. The Commonwealth and State and Territory Environment Ministers committed to reforming the framework for packaging at the Environment Ministers Meeting in October 2022, with the reformed framework to be in place by 2025. Table 2 sets out the priority, system-wide actions that APCO has identified, through this review, to be taken within the context of the reformed, post-2025 framework. These actions are set out according to:

1. Who is best placed to take the action, including:
 - APCO.
 - Industry, including:
 - Packaging sectors (materials providers, packaging manufacturers, brand owners and retailers).

- Recovery sectors (waste management companies, material recovery facility operators and reprocessors).
- Governments (Commonwealth, State/Territory and Local).

2. The stage of the system impacted by the action, including:
 - Design of packaging, including packaging formats and selection of materials.
 - Use of packaging by consumers and businesses, including purchase, reuse and disposal.
 - Collection and sortation of used packaging through kerbside and other consumer services, and commercial waste collection services.
 - Reprocessing of sorted materials into useable materials.
 - End markets for recycled packaging materials, including recycled content in packaging and non-packaging items.

*In this document, 'regulation' and 'regulatory reform' mean government intervention within the scope of reform options set out in the 2021 [report](#) on the review of the National Environment Protection (Used Packaging Materials) Measure 2011.

Principles for government intervention

In proposing the actions set out in Table 2, APCO recognises that decisions about the future co-regulatory framework rest with governments and will consider factors beyond the current review. However, the following principles to underpin action towards a circular economy have emerged clearly from the review:

1. The level of ambition in supporting the circular economy transition for packaging should recognise that circular economy has become a significant strategic objective for companies and governments.
2. Packaging circularity needs to align with other sustainability objectives, including reducing greenhouse gas emissions throughout its lifecycle.
3. Wherever possible, the circular transition should be market-driven.
4. Where market enablers such as infrastructure and standards do not exist and will not otherwise be delivered in a timely and efficient way, these should be fast-tracked to support market development.

5. A co-regulatory model, which strikes a balance between industry-led action and effective government regulation, is essential. However, the existing model needs strengthening, with greater ability to address market failures including:
 - o Externalities, including the downstream impact of poor packaging design, and poor disposal decisions by consumers and businesses.
 - o Information asymmetries arising from poor and incomplete data, insufficient and inconsistent education of consumers, and poor traceability of materials.
 - o Free-rider problems, including those associated with extended producer responsibility (EPR) schemes collecting packaging waste placed on the market by non-participants, and early movers paying to overcome technical barriers to design with public good outcomes.
 - o Failure of an effective market to form for recycled plastic packaging, due to poor enabling components and investment certainty for both producers and users of recycled material.

6. Regulatory options, which may include, amongst others, strengthened obligations and penalties, targets, standards, modulated fees or incentives by government under a reformed co-regulatory framework, should be evaluated having regard to:
 - o Minimising cost to the economy and community.
 - o Recognising the importance of global supply chains and markets.
 - o Avoiding detrimental trade impacts.
 - o Avoiding perverse lifecycle impacts for packaging.
 - o Avoiding detrimental impacts including on community health and safety and food waste.
 - o Encouraging industry leadership and innovation.
 - o Eliminating free riding.

REVIEW 2025 NATIONAL PACKAGING TARGETS

Table 1 Actions that APCO will lead from now to 2025.

DELIVER STRATEGIC PRIORITIES WITH SYSTEM-WIDE IMPACT.	ACTION	IMPACT
	Develop and implement roadmaps for key material streams with whole-of-system industry and government agreement.	Bringing together key sectors in more effective collaboration will enable the identification and coordinated action towards system-wide outcomes for material streams. For example, developing a pathway for the recovery of flexible plastics (of which 93% were sent to landfill in 2020-/21) will require coordinated collection (B2B and household), recycling and end market development, which is beyond the capability of any one sector.
	Improve data quality transparency and completeness to deliver information and insights to support decision-making by the packaging and recovery sectors, governments and investors.	Informed decision-making enables a more aligned and efficient system. For example, where packaging design is better informed and more responsive to recovery systems and end markets. This action will improve the timeliness, completeness and quality of APCO's data, and better integrate with system wide data sources, e.g. on recycling pathways and capacity.
	Develop an agreed, whole-of-system industry vision for a circular packaging system by 2030, in collaboration with governments and industry.	This action will aim to identify the most effective outcomes and objectives to drive action towards a circular economy by 2030, providing businesses with clarity and confidence to plan and invest in packaging solutions and infrastructure with longer term impact.
STRENGTHEN SYSTEM ENGAGEMENT AND CAPABILITY.	ACTION	IMPACT
	Drive system transformation through a strengthened Collective Action Group (CAG).	A more effective forum for whole-of-system participation to deliver the strategic priorities identified above.
	Engage and build capability of industry to improve sustainable outcomes in the packaging supply chain through working groups and communities of practice.	Supports the technical capability of APCO Members to achieve the 2025 Targets within their businesses.
	Work with governments to reduce free riders.	Governments are working together, with APCO's support, to improve compliance and enforcement processes under the current co-regulatory framework. This will address the competitive disadvantage perceived by APCO Members, better enable APCO to hold under-performing Members to account and increase the number of companies working towards the 2025 Targets.
	Build technical capability and improve delivery of technical support to brand owners to support the circular economy transition.	Greater technical capability and resourcing will enable APCO to better support APCO Members to achieve the 2025 Targets.

REVIEW 2025 NATIONAL PACKAGING TARGETS

Table 1 Actions that APCO will lead from now to 2025.

ENHANCE PROGRAM DELIVERY AND TECHNICAL PROBLEM SOLVING.	ACTION	IMPACT
	Enhance ARL impact and integrity.	This action will accelerate uptake and public awareness of the ARL, increasing recoverable packaging design, improving consumer recycling behaviour and reducing contamination in recycling streams. This project will also improve alignment of the ARL Program with recovery systems and strengthen its governance.
	Support industry delivery of reuse and avoidance models through upstream innovation.	Increase in B2B reuse in the short-term works to support significant shifts to reusable packaging in the longer term. On average, every kilogram of quantified reusable packaging systems avoided the use of 16 kg of single-use packaging in 2020-21.
	Support designing out problematic materials	Move 479,000 tonnes of packaging into the 'good recyclability' category. ¹
	Support harmonised single-use plastics policy alignment and phase-out.	Brand owners have clarity over nationally acceptable and recoverable packaging design. Supports with phasing out non-recoverable materials.
	Inform and support phase-out of PFAS and other chemicals of concern through the Action Plan to Phase out PFAS in Fibre-Based Food Contact Packaging and further work on PFAS and other chemicals.	Removal of contaminants from composting and recycling streams.
	Support increased recycling of B2B packaging.	Address key material gaps including in key B2B setting where 89,000 tonnes of LDPE and 734,000 tonnes of corrugated cardboard is lost to landfill.
	Address barriers to compostable packaging through convening industry stakeholders and scoping development of a Compostable Packaging Roadmap.	Clarify pathway for over 7,000 tonnes of compostable packaging.
	Clarify 2025 Target definitions and timings.	Enabling focus on material gaps with higher impact on progressing to the 2025 Targets.
	Support engagement of APCO Members with international supply chains.	Enable better recovery outcomes for the 38% of packaging in 2020-21 that is imported into Australia.

¹ See Appendix 2

Table 2 Post-2025 priority actions that APCO considers are needed to drive effective, whole-of-system action towards a circular economy for packaging in Australia.

OUTCOME AREA	IMPACT REQUIRED	ACTIONS	KEY ROLES FOR SYSTEM PARTICIPANTS
Design	The Sustainable Packaging Guidelines (SPGs) and circularity evaluation tools are strengthened and applied by all businesses, eliminating any perceived competitive disadvantage for companies prioritising recoverable packaging design. Packaging design is clearly aligned with recoverability and end market outcomes , enabling brand owners to make confident, long-term investments in packaging design.	Establish clear standards requiring design for packaging reduction and circularity through: <ul style="list-style-type: none"> the SPGs, and circularity evaluation tools. 	<p>APCO – Strengthen the SPGs and circularity evaluation tools to be regulation-ready.</p> <p>Packaging sectors – Overcome technical and cost barriers to, and implement, packaging reduction and circular design; work with APCO to enhance and align SPGs and evaluation tools with recovery systems.</p> <p>Recovery sectors – Work with APCO to ensure SPGs and evaluation tools align with recovery systems.</p> <p>Governments – Evaluate regulatory options for mandating design standards.</p>
Use	<p>Consumers are incentivised and educated to source separate packaging at home or away from home, via clear and consistent labelling and/or financial or other incentives.</p> <p>Increased business recycling to address key material gaps in B2B setting.</p>	Incentivise avoidance, reuse and correct disposal of packaging by users through: <ul style="list-style-type: none"> nationally consistent consumer education and incentives, and targets for business-to-business recycling. 	<p>APCO – Work with packaging sectors to expand coverage of the Australasian Recycling Label (ARL), work with industry and governments on data insights into, and interventions to impact, user behaviour.</p> <p>Packaging sectors – Apply the ARL, support consistent consumer education.</p> <p>Recovery sectors – Support consistent consumer education.</p> <p>Governments – Evaluate options for incentives and targets; support and undertake consistent consumer education.</p>
Collection	<p>A nationally consistent and comprehensive collection framework will enable more effective and efficient labelling and education, enable more effective design for recovery, decrease contamination in recovery systems and maximise recovery. Coordinated decision-making on which materials would be most economically collected through kerbside will ensure the most effective and efficient framework.</p> <p>High performing EPR schemes implemented by industry for materials not widely accepted at kerbside, including EPS.</p>	Establish an efficient and comprehensive national collection framework for packaging that includes: <ul style="list-style-type: none"> nationally harmonised kerbside recycling, large-scale national collection of flexible plastics, effective and accountable EPR for materials not widely accepted at kerbside, reusable, compostable and away-from-home collection pathways, and market-relevant data collection and publication. 	<p>APCO – Work with governments and the recovery and packaging sectors to evaluate options to optimise efficient collection pathways for packaging materials and formats.</p> <p>Packaging sectors – Design and deliver effective and accountable EPR for non-kerbside materials, increase use of B2B recycling services.</p> <p>Recovery sectors – Implement national standards for collection systems; support evaluation of the economic feasibility of expanding the range of materials collected at kerbside.</p> <p>Governments – Establish an efficient and comprehensive national collection framework for packaging, including national standards for collection systems.</p>

Table 2 Post-2025 priority actions that APCO considers are needed to drive effective, whole-of-system action towards a circular economy for packaging in Australia.

OUTCOME AREA	IMPACT REQUIRED	ACTIONS	KEY ROLES FOR SYSTEM PARTICIPANTS
Reprocessing	<p>Reprocessing capacity scoped and established for remaining capacity gaps, including in:</p> <ul style="list-style-type: none"> flexible plastics (currently 493,000 tonnes), rigid polypropylene (109,000 tonnes) paper and paperboard (1,109,000 tonnes), and formats including tubs, trays and punnets (PET & PP 82,000 tonnes). <p>Technology innovations for return to food-grade packaging need to be scaled.</p>	<p>Invest in reprocessing infrastructure for:</p> <ul style="list-style-type: none"> Flexible plastics. Rigid polypropylene. Paper and paperboard. Key formats including tubs, trays and punnets. 	<p>APCO – Develop investment-relevant data insights on capacity gaps and barriers to investment.</p> <p>Packaging sectors – Co-invest in recovery / reprocessing infrastructure.</p> <p>Recovery sectors – Invest in reprocessing capacity.</p> <p>Governments – Incentivise investment (including through co-investment) in reprocessing capacity.</p>
Markets	<p>Long-term demand for recycled materials, underpinned by regulatory intervention where necessary, increasing the value of the material and creating market pull through.</p> <p>Cost of recycled packaging materials is competitive with virgin packaging materials.</p>	<p>Accelerate the development of markets for all material streams, including through:</p> <ul style="list-style-type: none"> regulatory incentives and targets to drive demand for recycled packaging materials, traceability and technical standards, and/or whole-of-system data collection and insights. 	<p>APCO – Develop and support market enablers including standards, specifications and information.</p> <p>Packaging sectors – Overcome technical barriers to recycled content, meet recycled content targets.</p> <p>Recovery sectors – Implement standards and specifications, support data collection processes.</p> <p>Governments – Evaluate regulatory options for incentives, targets, standards, recycled content traceability and data collection.</p>

4. Key finding 1

While the 2025 National Packaging Targets are driving a transformation in packaging in Australia, they are not on track to be met by 2025, with the Target of recycling or composting 70% of plastic packaging presenting the biggest challenge.

Overall performance against Targets 1, 2 and 3 from 2017-18 to 2020-21 is summarised in Figure 2, along with a theoretical required trajectory from 2021-22 for these Targets to be achieved. While we expect significant improvement by 2025 (see information on individual targets below), clearly there will be a shortfall. Progress towards Target 4 (the phase-out of problematic and unnecessary single-use plastic packaging) is excluded from Figure 1 as it is more difficult to measure. Target 4 is discussed on page 19.

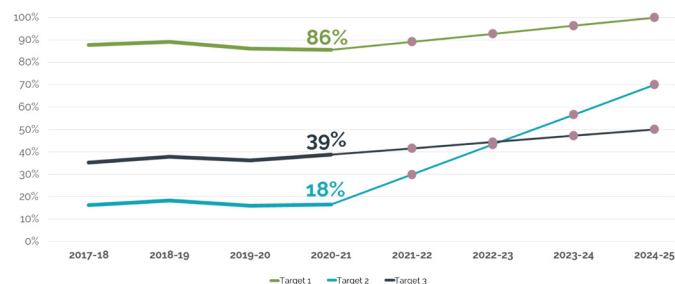


Figure 2: Existing performance and required trajectory for performance against the 2025 Targets.

Despite the slow progress towards the Targets to date, the packaging system has undergone significant change. The amount of packaging POM increased by 21% from 2017-18 to 2020-21, with recovery increasing by 41% over the same period (Figure 3). The recovery rate was 56% in 2020-21. Reduced packaging to landfill resulted in the avoidance of around 2.2 million tonnes of CO₂-equivalent emissions in 2020-21.

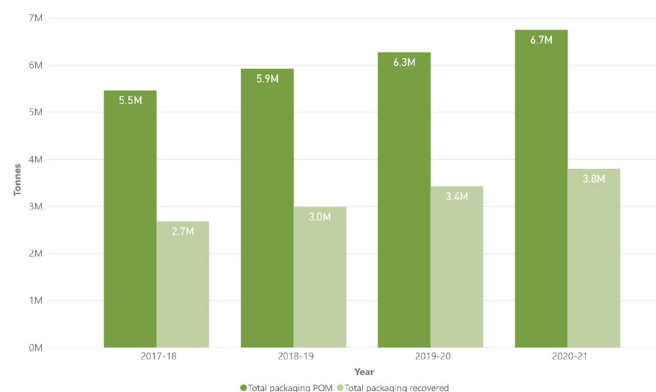


Figure 3: Packaging recovery from 2017-18 to 2020-21.

Figure 4 shows losses at each major stage of the packaging system. The biggest loss is from recyclable packaging being disposed of directly to landfill, accounting for almost a quarter of all packaging. Non-recyclable packaging and material disposed to landfill from collection and recycling processes also account for significant material losses. Coordinated and collaborative action is needed at all stages of the system, with all sectors and government stakeholders developing and working to agreed roadmaps for key materials.

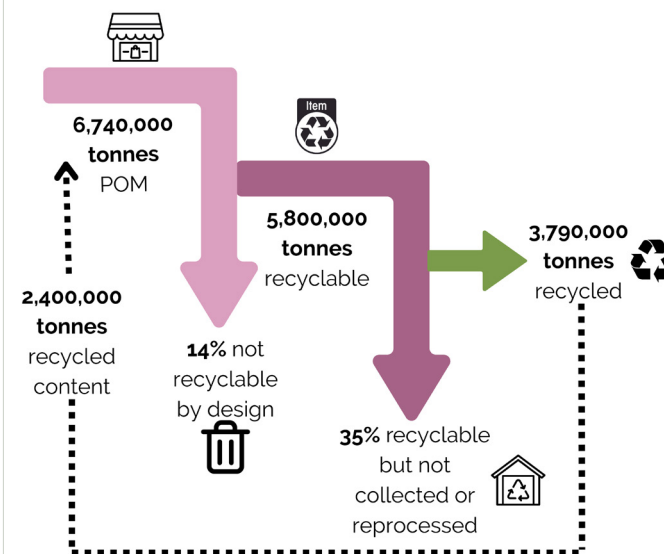


Figure 4: Packaging material flows for 2020-21

2 Recovery includes material recycled or composted, measured at the out-going gate of the secondary processing facility for the use packaging. It excludes energy recovery.

Target 1 – 100% of packaging to be reusable, recyclable or compostable

In 2020-21 the estimated percentage of packaging with 'good recyclability' was 86%, with 5% considered 'not recyclable'. The remainder was classified as having 'poor [limited]' (6%) or 'unknown' recyclability (2%). Good recyclability by material type is provided in Figure 5.

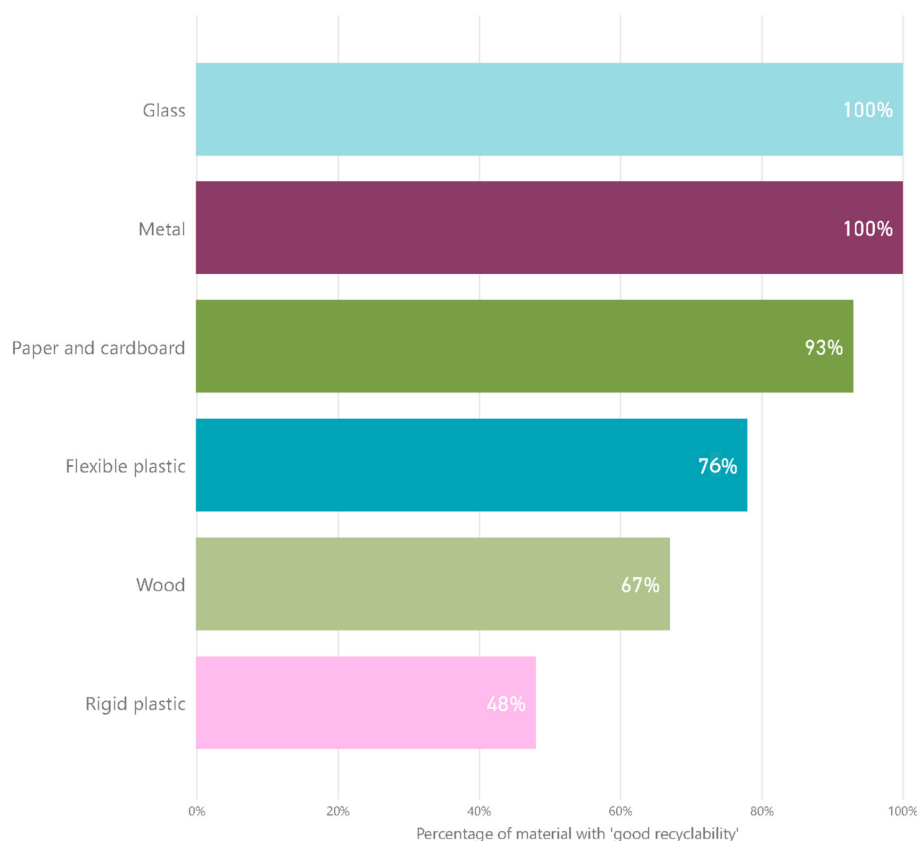


Figure 5: Good recyclability classification by material type for 2020-21.

There were 7,000 tonnes of certified compostable packaging and 3,792,000 tonnes of non-certified biodegradable fibre-based packaging POM in 2020-21, however there is currently no national pathway for the collection of compostable packaging in kerbside collection. Initial discussion with stakeholders indicates regulatory barriers stemming from key issues including contamination of recycling and composting material flows, concern about the presence of chemicals including PFAS, compatibility with composting infrastructure and lack of consumer education.

Additionally, there were 200,000 tonnes of reusable packaging inputs in 2020-21, the majority of which is made up of reusable timber pallets. Reusable packaging systems avoided the use of 2.6 million tonnes of single-use packaging in 2020-21. The Ellen MacArthur Foundation estimates that 20 percent of plastic packaging could be reusable (an estimated 236,000 tonnes in 2020-21), however the market for reusable packaging in Australia has not been well-tested thus far.³

The gap to Target 1 was around 944,000 tonnes (or 14%) in 2020-21. Increased recyclability can be achieved either through design changes or downstream changes to recovery systems. Based on current and planned initiatives, a maximum additional 479,900 tonnes of packaging could transfer into the 'good recyclability' category by 2025, increasing the good recyclability rate to about 94% (see Appendix 5).

³ Ellen MacArthur Foundation, 2017. The New Plastics Economy: catalysing action. Available at: https://emf.thirdlight.com/file/24/sjZ_pROsOpYQYjsj6Q1sQoXxc/The%20New%20Plastics%20Economy%3A%20Catalysing%20action.pdf

Target 2 – 70% of plastic packaging recycled or composted

In 2020-21 the recovery rate for plastic packaging was 18%. Historical and required recovery by rigid/flexible classification is provided in Figure 6.1 and 6.2 respectively. Recovery was higher for rigid plastics, at 26%, than for flexible plastics at 7%. PET, HDPE and EPS have the highest recovery rates (see Figure 15), reflecting more mature recovery pathways and markets (in C&I collection for EPS).

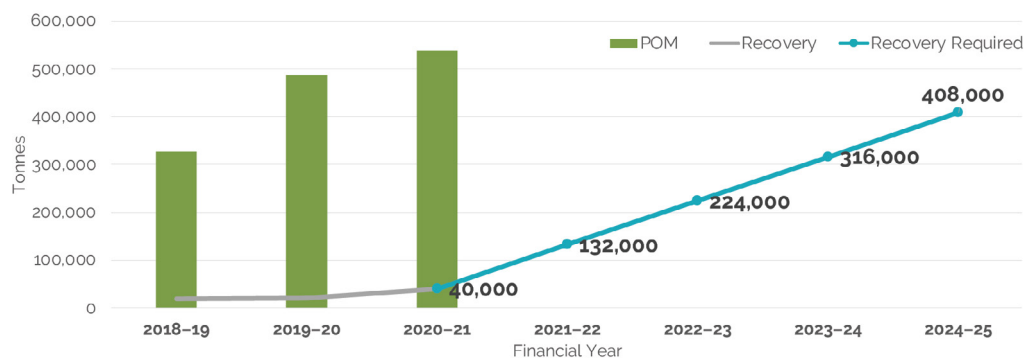


Figure 6.1: Historical and required progress to Target 2 for flexible plastics.

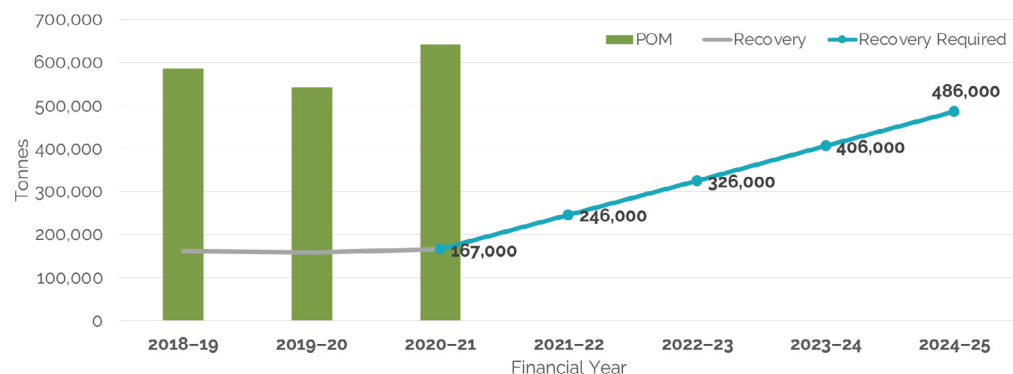


Figure 6.2: Historical and required progress to Target 2 for rigid plastics.

Losses at key stages of the system for plastics are presented in Figure 7. Based on current, funded and underutilised reprocessing capacity, plastic recovery could reach 46% by 2025. Attaining this level of recovery will depend on expanded collection and markets. Exclusion of compostable packaging from recovery in most jurisdictions impacts contribution to this Target.

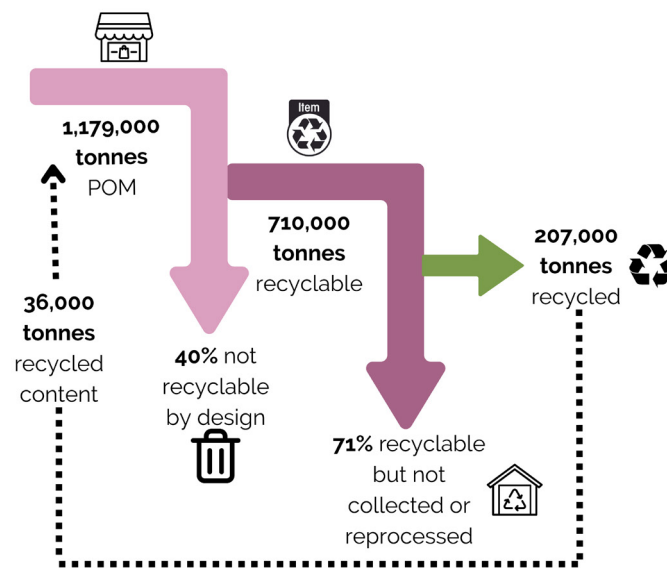


Figure 7: Plastic packaging material flows for 2020-21.

The impact of the availability of collection and recovery systems on assessments of recyclability, including for flexible plastics, is discussed under *Design* in Section 6 of this report.

Target 3 – 50% average recycled content across all packaging

Figure 8 shows recycled content in four material streams from 2017-18 to 2020-21 and the theoretical required trajectory from 2021-22 to achieve the material specific recycled content targets by 2025.

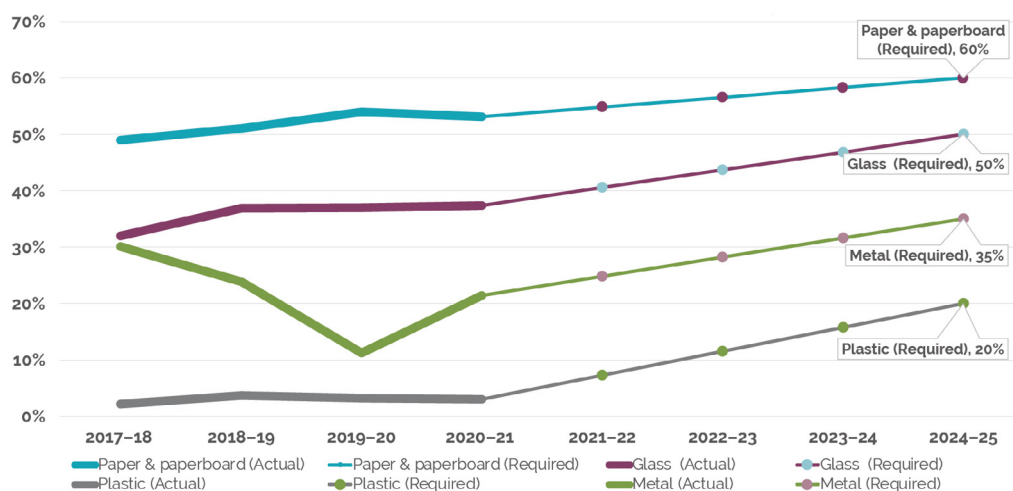


Figure 8: Historical and required progress to Target 3 by material type.

Based on current data, material specific recycled content targets for glass and PET will be met, due to strong demand for recycled content and expansion in reprocessing capacity. **The biggest challenge is for other plastics, where considerable barriers remain to the production of food grade and non-food grade recycled content.** While anecdotal evidence indicates latent demand, price sensitivity remains unclear.

As metal used in packaging manufacturing is purchased through well-established commodity markets, measuring recycled content is difficult.

The focus of the Target is currently on post-consumer recycled content. Some stakeholders identified that the exclusion of pre-consumer recycled content fails to incentivise the recovery of waste from manufacturing processes.

Target 4 – Phase out problematic and unnecessary single-use plastic packaging

Table 3 Priority single-use plastics POM between 2019-20 to 2020-21⁵

PRIORITY ITEM	2019-20 (TONNES)	2020-21 (TONNES)	% CHANGE 2019-20 TO 2020-21
Single-use HDPE shopping bags	200	100	-49%
Rigid PS	17,100	17,200	1%
EPS	22,700	29,000	28%
PVC	16,900	14,800	-12%
Oxo-degradable plastics	2,100	800	-64%
Plastic tableware	25,200	13,200	-48%

2020-21 saw a 28% reduction in priority single-use plastic packaging, measured against the 2017-18 baseline. Further work is needed to enable robust monitoring of progress against this Target. Work is needed to clarify the scope of materials and formats covered, the circumstances in which each material and format is or is not problematic, and the range of potential actions that could address its problematic nature. Work is also needed to more clearly define key terms, establish timeframes for phase-outs, and establish reporting and oversight processes.

APCO's **Action Plan for Problematic and Unnecessary Single-use Plastic Packaging** lists the following items for immediate action:

- **Lightweight shopping bags:** Substantially reduced through regulatory and industry action.
- **Fragmentable plastics:** Substantially reduced by industry and government action, with bans in place or planned.
- **Business-to-consumer expanded polystyrene:** Industry-agreed roadmap in place to support phase-out.
- **Rigid PVC:** Significantly reduced due to industry action.
- **Opaque PET bottles and rigid packaging with carbon black:** industry action underway.

The Action Plan also identified the following items for future consideration: problematic multi-material laminate soft plastics, heavy weight shopping bags, pumps and trigger packs, small caps and closures, and coloured PET.

This Target is supported by **bans** on single-use plastics in some states and territories.

⁵ These estimates are subject to a large accuracy range and high year-on-year reporting volatility.

5. Key Finding 2

While the 2025 National Packaging Targets continue to be a catalyst for a circular economy for packaging, it is necessary to establish consensus on post-2025 goals to enable long-term investment and innovation.

APCO Members have reported considerable action that will support the transition to a circular economy for packaging, and that the 2025 Targets are a key driver. Actions that Members have undertaken include:

- Reducing and light-weighting packaging.
- Implementing packaging reuse models.
- Phasing out problematic and unnecessary single-use plastic packaging.
- Redesigning packaging to improve recoverability.
- Increasing recycling of business-to-business packaging.

Examples of Member action are provided in Box 1.

Overwhelmingly, those Members consulted consider that the 2025 Targets remain appropriate and should not be changed. However, feedback is that a longer-term vision will better support the case for investment to overcome technical and other barriers to redesigning packaging, retooling manufacturing lines and incorporating recycled content.

Factors inhibiting effective action include:

1. Lack of an effective regulatory 'stick' to support the case for action.
2. Uncertainty about the continuation of the co-regulatory framework and the nature of outcomes and obligations beyond 2025.
3. Lack of consistency in government policy that relates to the 2025 Targets, e.g. on single-use plastics and compostable packaging.
4. Lack of an overarching strategy and integrated framework for Australian recycling.
5. Regulatory constraints e.g. for pharmaceuticals, veterinary chemicals.
6. Lifecycle trade-offs i.e. recyclability / total environmental impact.
7. Disproportionate effort to address small items and materials with niche applications with no currently recoverable alternatives.
8. Reduced functionality of alternatives, e.g. for shelf life, food waste.
9. Competitive disadvantage for early movers from non-participants and those that choose to delay action.

10. Technical capability, staff and other resourcing, particularly for SMEs.
11. The 2025 Targets do not take into consideration all 10 Sustainable Packaging Principles of the SPGs e.g. designing to reduce product waste, using renewable materials and eliminating hazardous materials.

Feedback from APCO Members indicates that some gain considerable value in utilising APCO's tools and resources and from participation in APCO working groups and projects (see Appendix 4). Many Members are also seeking from APCO a higher level of support for their actions towards the 2025 Targets than it currently has the resources to provide. To support the needs of Members and an acceleration of industry and government effort towards the 2025 Targets, APCO will need to review its capabilities and services.

REVIEW 2025 NATIONAL PACKAGING TARGETS

Two broad measures are available for APCO's effectiveness in engaging industry in action towards the targets. APCO's number of Brand Owner Members has increased by 255% from 857 Members the beginning of 2018 (prior to establishment of the 2025 Targets), to 2187 Members at the beginning of 2023 (see Appendix 2). The overall performance of Members against the core criteria of the Packaging Sustainability Framework, based on Members' reports to APCO, have increased from 2018 to 2021, particularly amongst large Members,

A constraint on APCO's resourcing and effectiveness, and on the willingness of APCO Members to take action, is the misperception that the current framework is voluntary. This misperception arises in part because of a lack of action by governments to enforce participation under the NEPM (some jurisdictions, notably Victoria and South Australia, are now working to redress this.)

The impacts of the lack of enforcement are:

- Competitive disadvantage to APCO Members. Many Members that participated in the consultation process for this review emphasised that they face competitive disadvantage both from free riders who are not held to account by governments and from underperforming APCO Members, and that this makes it more difficult to establish the case for ambitious action.
- APCO's resourcing to support active Members and ability to hold underperforming Members to account are both reduced.

Box 1: APCO Member actions towards the 2025 Targets.



Elimination of single-use plastics

Officeworks has eliminated EPS from its own-brand products, including in all furniture products through redesigning to 'right-size' packaging and replacing EPS with cardboard for technology products.



Reuse model

Zipform Packaging worked to design the rPump that incorporates a reusable pump and connector. The rPump addresses two of the outcomes of Our Packaging Future - 'packaging design for circularity' and 'expanded markets for used packaging', which are critical to achieving the 2025 Targets.



Recycled content

Natures Organics uses pellets of Australian recycled waste plastics to mould and blow all the bottles for its nine brands of liquid products. Nearly all of the 43 million bottles the company produces a year, across a range of 130 products, are made from 100% recycled plastic - and every bottle is 100% recyclable.

6. Key Finding 3

Collaboration and cooperation between industry and government, across the entire packaging system, is critical to overcoming barriers to progress.

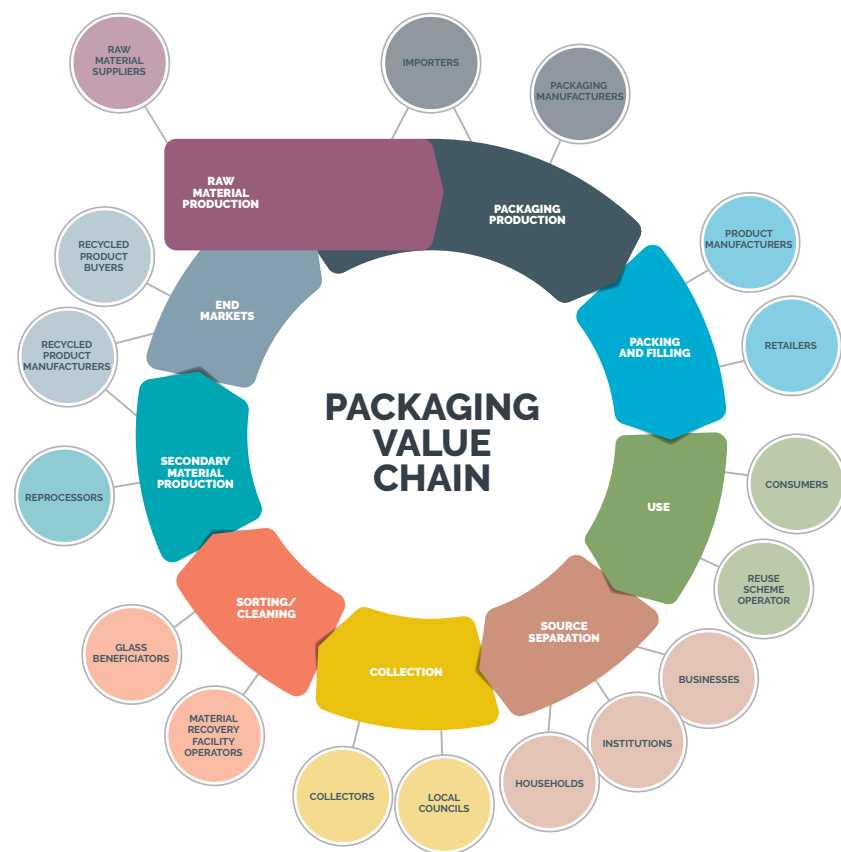


Figure 9: Participants of the packaging system.

Packaging circularity requires active engagement and coordination to drive effective change across the packaging system. Many industry sectors and other participants influence outcomes (see Figure 9) and their actions have impacts at other stages of the system.

The focus under the current co-regulatory framework – and of APCO's Membership – has been primarily on the design stage of packaging (packaging production & packaging and filling stage in Figure 9). Compliance with regulatory obligations under the framework have not been enforced by all governments, and it does not provide for the delivery of key components of an effective system, including:

- Standards for recyclability agreed by all sectors.
- Harmonised kerbside recycling with input and output standards.
- Output standards for reprocessing infrastructure.
- Incentives for use of recycled content.
- Incentives for packaging avoidance, reuse and correct disposal by users.

In the absence of a broader regulatory framework which is effectively enforced by governments, to support change to the system and provide incentives to industry to change, cross-sector facilitation will continue to proceed at a slower than required pace.

APCO has implemented a Collective Impact framework, elaborated in [Our Packaging Future](#), to facilitate system engagement, including processes and bodies such as the Collective Action Group (CAG). The Collective Impact framework has had insufficient impact to date in driving the system transformation needed to achieve the 2025 Targets. APCO is reviewing and resetting its engagement processes and bodies; however, the success of Collective Impact as a driver for change is likely to be constrained in the absence of effective regulatory and economic measures supporting action across the packaging system.

The following sections address the gaps and challenges in achieving the 2025 Targets at five stages of the system, from design through to end markets for recycled materials.

Challenges requiring cross-sectoral collaboration and alignment include:

Design

Design for recovery depends not just on the intrinsic qualities of the packaging, but on the availability of recovery systems. There are three key criteria in determining 'good' recyclability:

- there are effective, widely available collection systems in place for the packaging,
- the packaging can be readily sorted into material streams and causes no significant issues for reprocessors, and
- there is a well-established end market for the recycled material.

Packaging that is not designed for recycling can cause problems for collection and recovery systems, including disposal costs, fouling of equipment and contamination of recoverable material streams.

Changing the design of packaging, including sourcing, selecting and testing materials, designing and testing formats, testing the compatibility of materials with existing equipment, and implementing labelling changes, can take several years and incur considerable cost. Transitioning to new packaging materials or formats may also require investment in new packing equipment.

Uncertainty about current and future recovery systems, including for recycling and composting, makes it difficult for brand owners and packaging manufacturers to identify the most appropriate materials and formats and justify investments in new packaging equipment.

The recent suspension of the REDcycle Program highlights the dependency of design on effective collection,

reprocessing and end markets. In the absence of the program, the household flexible plastics that it previously recycled became effectively non-recyclable until such time as collection and recycling are resumed.

Differences between jurisdictions, e.g. on single-use plastics bans and compostable packaging, increase the difficulty of developing suitable alternatives. Overly prescriptive policies may stifle innovation.

A narrow focus on design for recycling may lead to perverse outcomes for the overall lifecycle impact of packaging. Similarly, there are some materials and formats for which there are unlikely to be cost-effective recovery pathways, and for which the only solution will be to design them out.

End markets

Packaging manufacturers and brand owners face higher costs and lack of financial incentive to use recycled materials. While some businesses indicate that a latent demand for recycled content is not being met due to unavailability of high-quality materials (including food grade rigid and flexible plastics), the price sensitivity of this demand has not been tested.

There are considerable technical challenges and long lead times needed to overcome them. Market enablers such as traceability and material standards and specifications are lacking.

The lack of certainty around demand in the absence of any regulatory underpinning, and the technical challenges to producing high value materials, is identified as a barrier to investment in reprocessing capacity.

Reprocessing

While there has been significant recent investment in reprocessing capacity, capacity shortages remain for some materials, including where low volumes make reprocessing unviable.

Quality and consistency of material streams for reprocessing is required.

Collection

Lack of price signal to drive collection and sortation even where there is demand for the material in end markets, e.g., EPS, PP, thermoform PET, oversized and small items, in some cases leads to these items being classified as not recyclable.

Lack of coordinated decision-making on which materials would be most economically collected through kerbside

Use

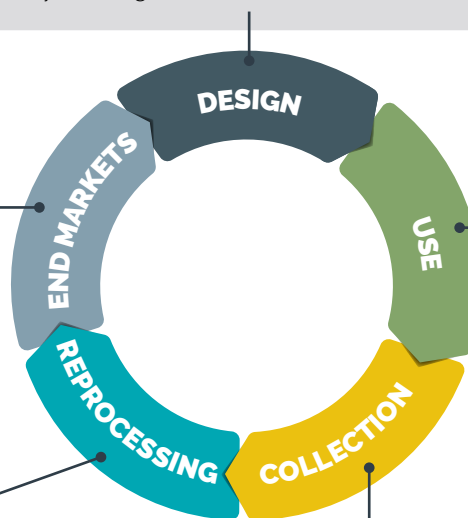
Complexity of packaging, inconsistency in kerbside systems, insufficient use of ARL and fragmented public messaging hinders consumer recycling.

Lack of an incentive for consumers to sort and recycle most materials results in lower recovery rates than CDS, where there is a financial incentive.

Consumer confidence in recycling has been damaged due to crises arising from incomplete and fragile recycling systems, including, most recently, suspension of the REDcycle Program.

Absent or insufficient incentive for B2B recycling result in substantial quantities of high-quality material such as corrugated cardboard and LDPE wrap being sent to landfill.

or alternative systems, and lack of an EPR framework for non-kerbside materials, risks entrenching inefficiencies in the establishment and operation of collection and sortation systems, in the design of packaging for recycling through these systems and in the incorporation of recycled content to support end market pull through.



7. Key Finding 4

Urgent and synchronised policy and programmatic action is needed to address the crucial deficiencies in the circularity of essential packaging materials and formats.

This section presents an analysis of critical gaps and challenges for key material streams. Where we have provided figures for estimated recovery rates for 2024-25, this has been calculated taking into account current material recovery facility (MRF) base capacity, spare capacity and planned capacity where disclosed. Considerable new recycling capacity will be available by 2025, as a result of substantial investment by industry and governments.

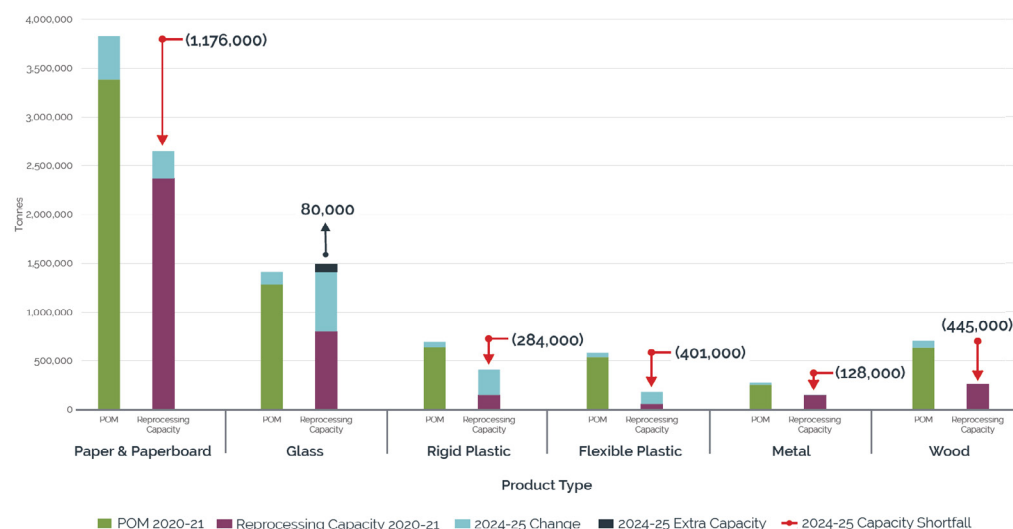


Figure 10: Estimated capacity shortfalls at 2024-25 per material.

Plastics

Plastics are a highly varied and complex group of materials and present many of the most significant challenges for packaging circularity. Compared to other material streams, there is not currently a well-developed market for recycled plastics. Considerable work is needed not only to drive supply and demand, but also market enablers such as standards and technical specifications, and technical capabilities to produce and use recycled materials.

In addition, the high diversity of plastic materials and rapid innovation in materials and formats to deliver functionality desired by markets creates further challenges for sortation and reprocessing systems.

Progress is being made, however, including investment in reprocessing capacity (see Figure 11).

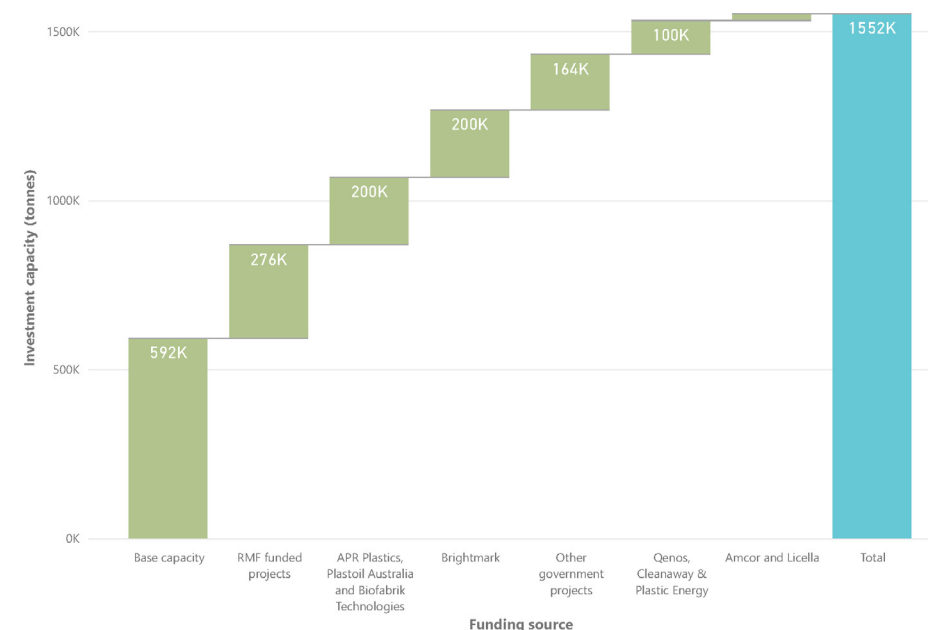


Figure 11: Potential investment in reprocessing capacity for plastics by 2024-25.⁷

⁷ only confirmed funding in this figure is included in 46% projection on pp.18

Flexible Plastics

A total of 538,000 tonnes of flexible plastics were POM in 2020-21. Projected POM in 2024-25 is 583,000 tonnes. The most used material is LDPE, of which 34% is used in B2B settings (including pallet wrap and bags) and 66% is used in B2C settings. A breakdown of collection and recovery gaps for flexible plastics is provided at Appendix 6.

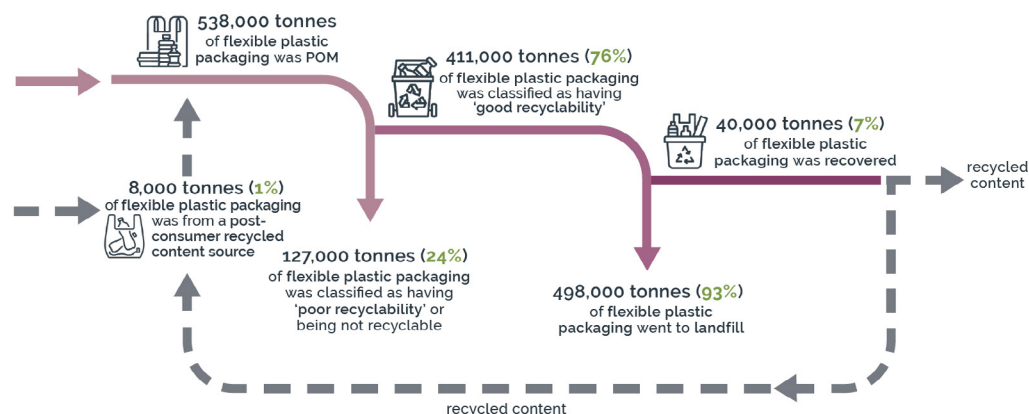


Figure 12: 2020/21 material flows of flexible plastic packaging.

Design

Key recyclability format gaps are PET and PVC flexible formats (34,000 tonnes) and PP labels (13,000 tonnes). Flexible formats identified as 'other' including composite materials provide advanced functionality (e.g. longer shelf life, reduced food waste) but are currently not recyclable (69,000 tonnes).

Use

Sorting and returning by consumers at home is limited by confusion and inconvenience. B2B recycling is constrained by knowledge, cost and practicality.

Collection

Absence of large-scale collection and sortation of household soft plastics. B2B collection of large quantities of clean, B2B soft plastics, such as pallet wrap, is available but has limited take up. Of the 104,000 tonnes of C&I LDPE wrap on market in 2020-21, 83,000 tonnes were sent to landfill.

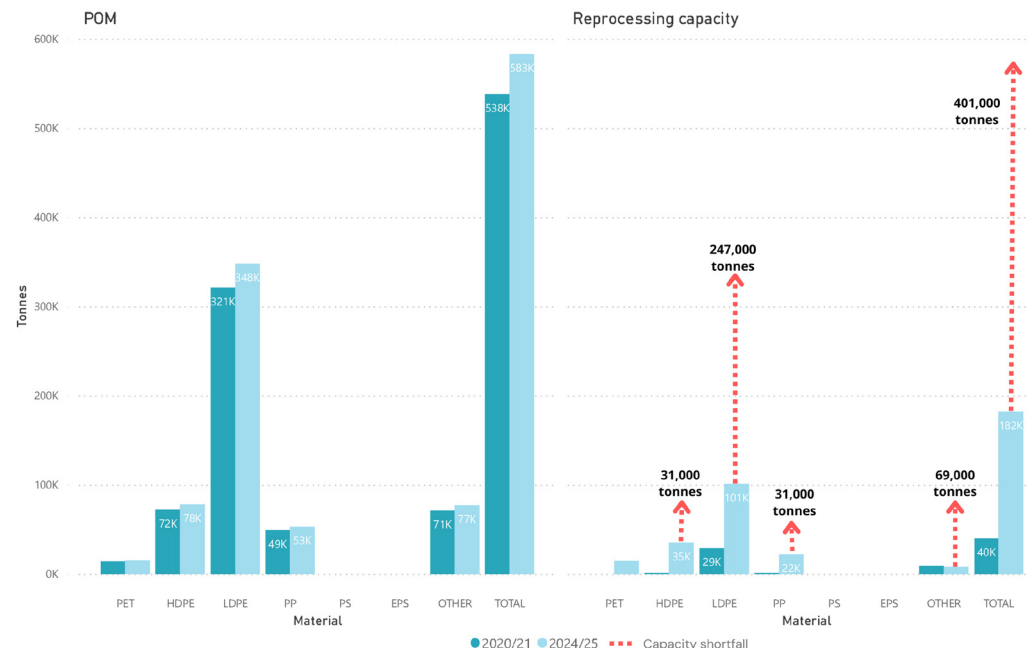


Figure 13: Estimated current and projected figures for flexible plastic packaging.⁸

Reprocessing

Overall, an estimated 401,000 tonnes of reprocessing capacity are needed for flexible plastics by 2024-25 (see Figure 13). Advanced recycling solutions for hard-to-recycle plastics will support this capacity gap, with some coming online in the coming years (see Figure 11).

LDPE film had a capacity shortfall of 292,000 tonnes in 2020-21. This is estimated to drop to 247,000 tonnes by 2025. Given flexible LDPE is estimated to be 98% recoverable by design, this demonstrates a high-capacity gap in both collection (absence of large-scale collection), reprocessing (absence of scaled technologies) and end markets (high cost to customer and lack of supply of food grade feedstocks).

End markets

Flexible plastics has a target of 10% recycled content for 2025. In 2020-21, 1% of flexible packaging was from a post-consumer recycled content source. Return to food and non-food packaging is constrained by technology and supply. The National Plastics Recycling Scheme (NPRS) is under development to return flexible plastics to packaging. Significant non-packaging uses include use in roads, the construction industry and small infrastructure.

⁸ PVC not included due to confidentiality considerations.

Rigid Plastics

A total of 641,000 tonnes of rigid plastics were POM in 2020-21. Projected POM in 2024-25 is 694,000 tonnes. Key materials are HDPE, PP and PET. A breakdown of collection and recovery gaps for rigid plastics is provided at Appendix 7.

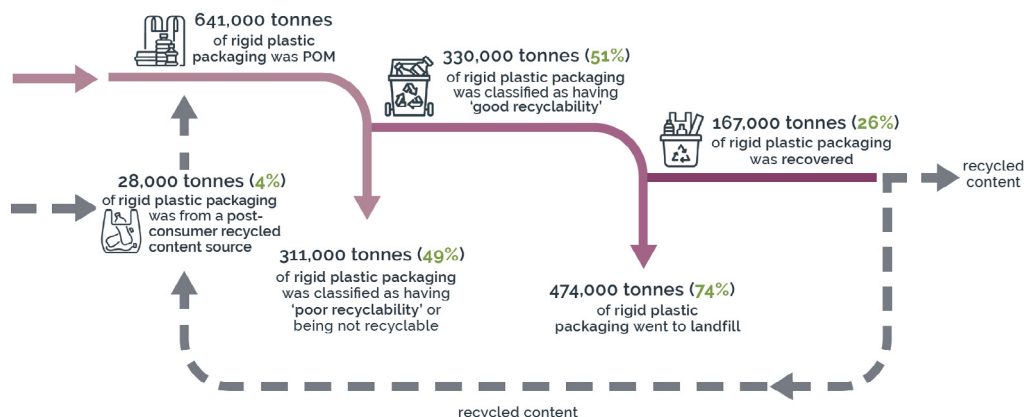


Figure 14: 2020-21 material flows of rigid plastic packaging.

Design

A key recyclability gap is PET and PP tubs, trays and punnets (78,000 tonnes) due to limited collection. While design may be part of the solution, an end market would pull the material through the system. Other design challenges include mixed materials and colours used in packaging, closures and labels impacting the sortation and end market value. This is the case with HDPE with a recoverable by design gap of 33,000 tonnes in 2020-21.

Use

Higher recycling rates for container deposit schemes (CDS) compared to municipal solid waste (MSW) materials, highlights lack of financial incentive, inconsistent messaging and complexity for households.

Collection

Widespread CDS and MSW coverage for high value materials (PET and HDPE bottles), less for thermoform PET and other materials including tubs, trays and punnets (TTP) formats, LDPE and PP bottles or jars.

⁹ PVC not included due to confidentiality considerations.

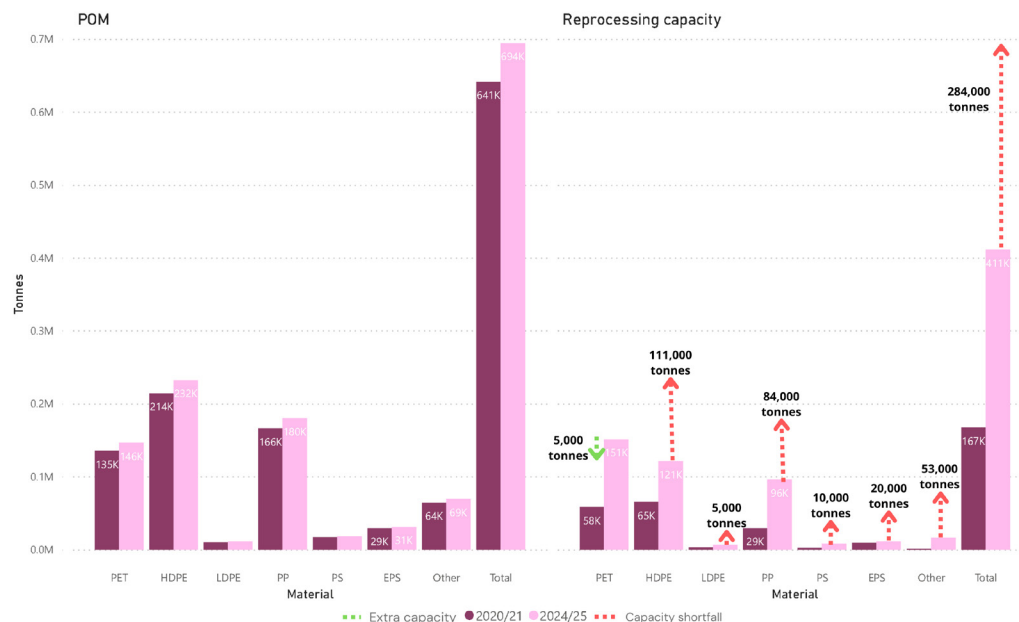


Figure 15: Current and projected figures for rigid plastic packaging.⁹

Reprocessing

PP is a key challenge, with a gap of 137,000 tonnes in 2020-21 and a projected gap of 84,000 tonnes in 2024-25. Key issues here include a lack of sorting and reprocessing of TTP formats, as well as limited end markets.

End markets

PET has a recycled content target of 30% for 2025, while HDPE and PP have targets of 20%. Currently PET has a post-consumer recycled content average of 11%, while HDPE and PP have 3% respectively. Demand for recycled PET for packaging exceeds supply as export bans take effect prior to planned reprocessing capacity coming online. There is a strong market for recycled HDPE. Significant anecdotal evidence suggests a latent demand for food-grade PP and thermoform PET, with supply the constraining factor. For many rigid plastics, the cost of virgin material versus recycled materials is not comparable.

Paper and paperboard

Figure 16 shows material flows, recyclability, recovery and recycled content for paper and paperboard in 2020-21. A breakdown of collection and recovery gaps for paper and paperboard is provided at Appendix 8.

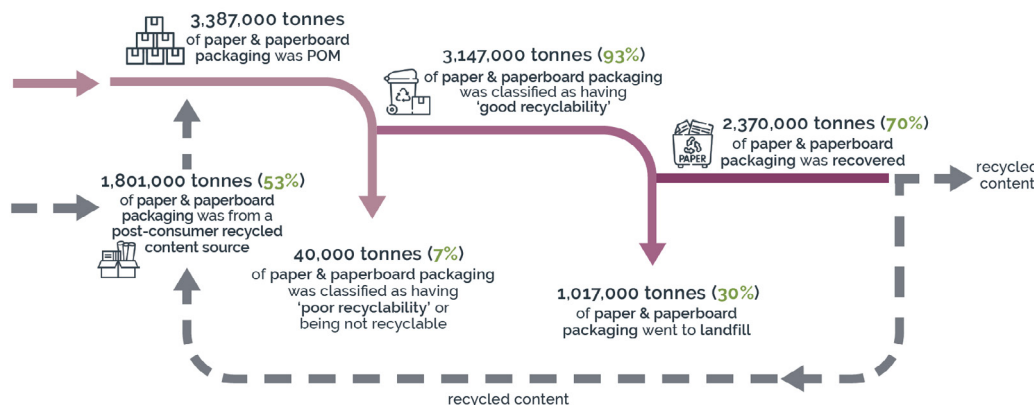


Figure 16: 2020-21 material flows of paper and paperboard packaging.

Design

93% of paper and paperboard packaging was classified as having good recyclability in 2020-21. A key recyclability gap is mixed paper packaging formats (226,000 tonnes including kraft paper and polymer coated paperboard), with solutions including redesign and increased sortation and reprocessing capability. Planned new reprocessing capacity in Western Australia, Victoria and South Australia may assist by providing recovery pathways for some materials.¹¹

Use

Current gaps include recycling ambiguities for food contaminated paper packaging (reuse, paper recycling or composting) including packaging consumed away from home such as paper and plastic foodservice packaging, which require new collection systems.

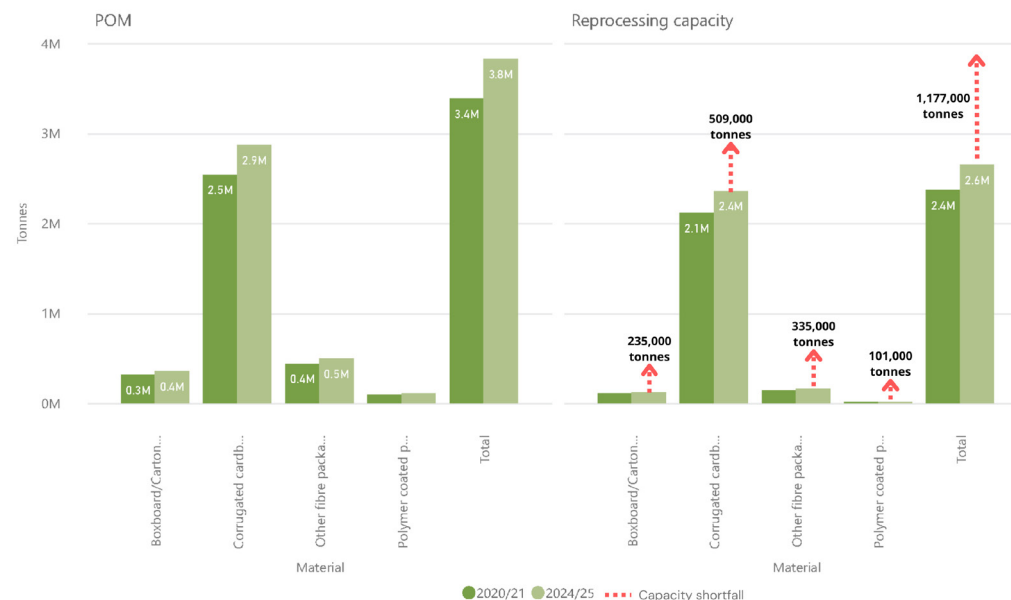


Figure 17: Current and projected figures for paper and paperboard packaging.

Collection

There is a lack of sufficient sortation technology for some materials that have latent end market demand now or in the near future, including over-sized and very small paper and paperboard items. While the 76% of corrugated cardboard used in B2B settings generally has well-established collection pathways, 38% (734,000 tonnes) was lost to landfill in 2020-21.

Reprocessing

Reprocessing capacity is anticipated to be 2,718,000 tonnes by 2025, including 254,000 tonnes of new capacity, leaving a shortfall of 1,109,000 tonnes against projected POM. Some packaging materials and components are collected and sorted but lost in reprocessing due to low pulpability.

End markets

End markets are well-developed, with demand exceeding supply. Of the 3,387,000 tonnes of paper and paperboard POM in 2020-21, 53% was from post-consumer recycled sources, 15% from pre-consumer recycled sources and 32% from virgin materials. The 2025 recycled content target for paper and paperboard is 60%.

¹¹ ACOR, 2022. Australian Recycling Infrastructure Capacity and Readiness (Plastic and Paper). Available at: https://www.acor.org.au/uploads/2/1/5/4/21549240/220623_acor_infrastructure_readiness_report_june_2022_-_updated.pdf

Glass

Figure 18 shows material flows, recyclability, recovery and recycled content for glass packaging in 2020-21.

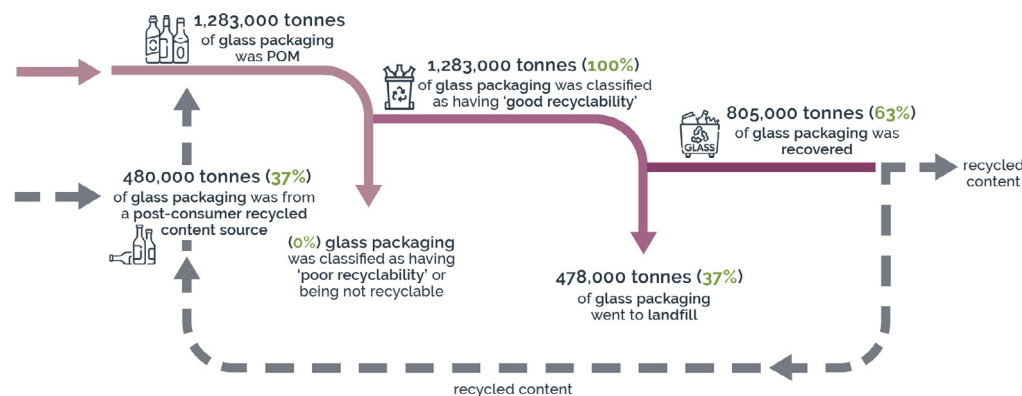


Figure 18: 2020-21 material flows of glass packaging.

Design

Glass has been estimated to have a 100% good recyclability rating, however more granular data is required to account for dark glass and leaded glass used in some niche applications.

Use

With only 63% of glass recovered in 2020-21, the biggest opportunity is in increased separation and recycling by businesses and households. The extension of CDS to all jurisdictions by 2023, as well as the potential expansion of CDS scope to include wine and spirit bottles, is expected to increase recovery of glass packaging by providing a financial incentive to consumers.¹²

Collection

Breakage and losses in the collection and sorting system result in significant quantities of glass going into lower value applications in civil construction.

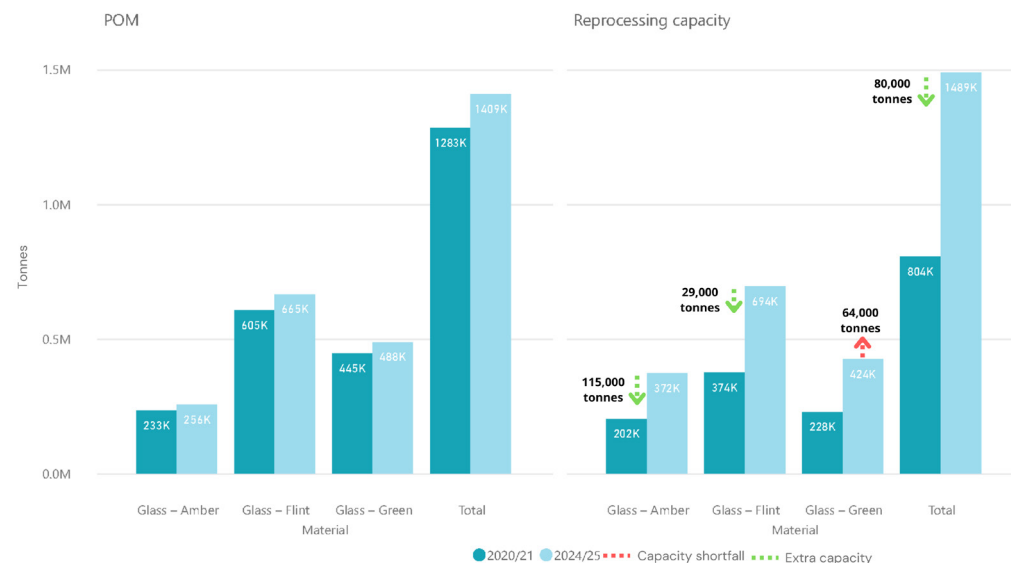


Figure 19: Current and projected figures for glass packaging.

Reprocessing

Investments in beneficiation capacity are underway, and the introduction of additional CDS, both of which will increase the availability of clean, colour sorted glass suitable for container manufacturing.

End markets

There is currently an insufficient supply of high-quality recycled feedstock, however, the recycled content target for glass (50%) is likely to be met by 2025 due to post-consumer recycled content commitments from the two container manufacturers, extension of CDS nationally, the introduction of a separate kerbside bin for glass in Victoria, and new reprocessing capacity. In 2020-21 the post-consumer recycled content average for glass was 37%.

¹² See discussion on this issue in SA Government (2021), Improving SA's Recycling makes sense discussion paper. Available at: <https://yoursay.sa.gov.au/cds-review>.

Metal

Figure 20 shows material flows, recyclability, recovery and recycled content for metal packaging in 2020-21.

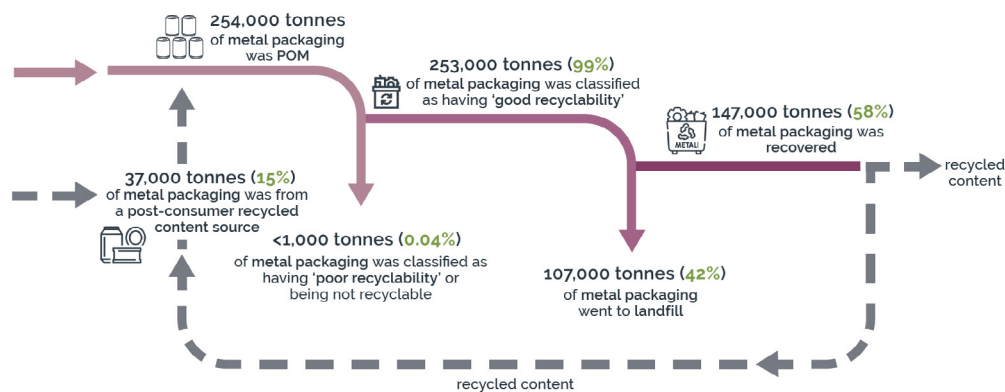


Figure 20: 2020-21 material flows for metal packaging.

Design

Metal packaging is estimated to have a 99.7% good recyclability rating, with closures having a lower rating ('limited recyclability') owing to losses in the sorting process.

Use

The main opportunity to increase the recovery rate is to change consumer behaviour, i.e., to encourage increased source separation and recycling of non-beverage aluminium (tubs, trays and wrap) and steel cans.

Collection

Aluminium and steel containers between 150 millilitres and 3 litres are accepted in all CDS nationally. Additionally, state EPAs are currently consulting on the expansion of material scope into CDS where size thresholds of 150 millilitres may be removed and additional metal containers including juice cans may be included.

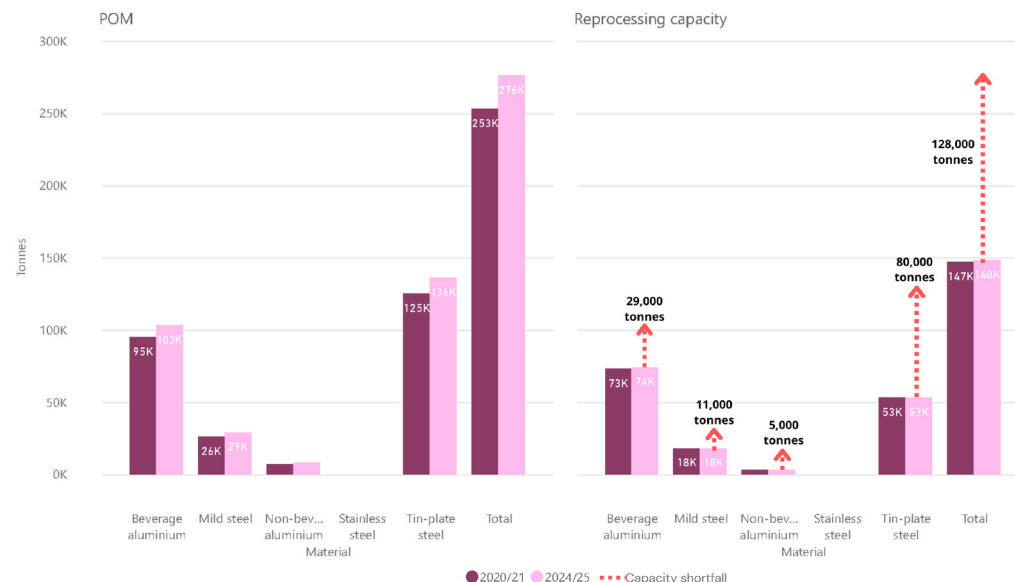


Figure 21: Current and projected figures for metal packaging.

Reprocessing

In 2024-25, it is projected that the total amount of metal packaging POM will be 276,040 tonnes. However, reprocessing capacity is anticipated to be 148,109 tonnes which constitutes a shortfall of 130,000 tonnes, which is significant when 100% of metal packaging has good recyclability.

End markets

In 2020-21, metal packaging had a post-consumer recycled content average of 15%, with a 2025 recycled content target of 35%. Metal packaging is exported for recycling due to the lack of local capacity, and strong global demand. Most metal packaging is imported, so the potential to use locally produced recyclate is limited. Only around 7% of recovered metal packaging is known to be put back into packaging applications. This is a consequence of the large international markets for aluminium and steel scrap, and the relatively small contribution of scrap metal packaging to these markets.

Wood

Figure 22 shows material flows, recyclability, recovery and recycled content for wood packaging in 2020-21.

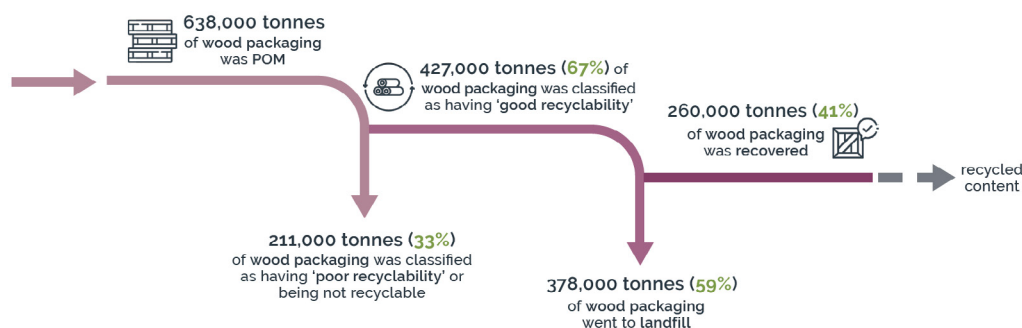


Figure 22: 2020-21 material flows for wood packaging.

Design

Wood was estimated to have a 67% good recyclability rate in 2020-21. The largest gap in recyclability is for manufactured wood pallets and bins, i.e., medium density fibreboard (MDF) and oriented strand board (OSB). These are unable to be recycled in organics recycling facilities due to the adhesive content. There may also be opportunities for increased reuse.

Use

Most wood packaging (99.8%) POM is used in B2B settings, with 34% used in transport, postal and warehousing settings, 22% in manufacturing, and 13% in construction. Wood packaging is the most reused material in the packaging space in 2020-21.

Collection

All identified recovery of wood packaging in 2020-21 was through commercial and industrial (C&I) collections.

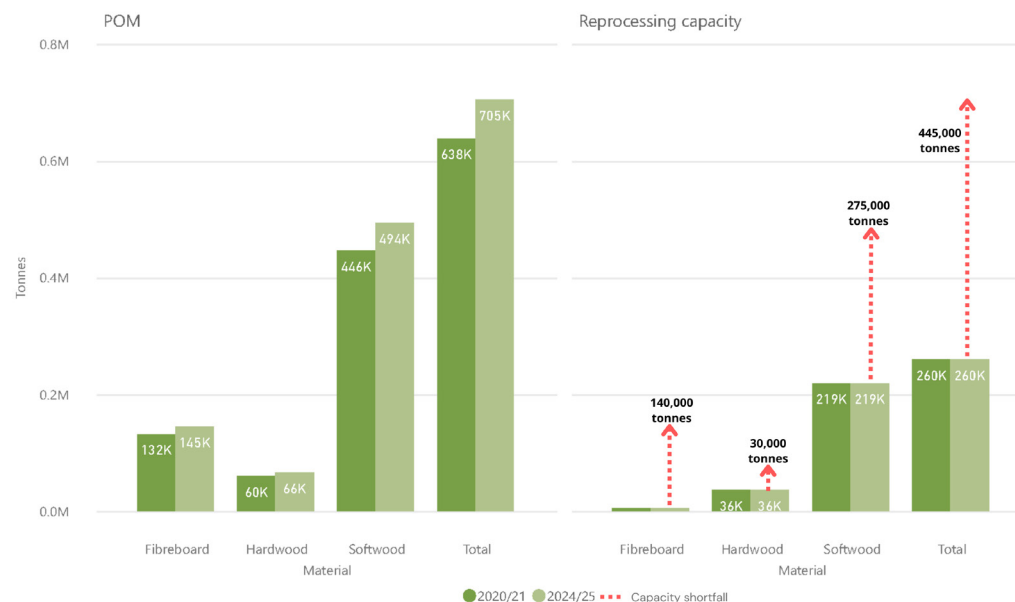


Figure 23: Current and projected figures for wood packaging.

Reprocessing

The opportunities to increase recovery of wood packaging include increased collection of hardwood and softwood distribution packaging for recovery in organics recycling facilities to produce mulch and establishing a reprocessing system and end markets for manufactured wood products (MDF and OSB).

End markets

Wooden pallets at end-of-life are often turned into mulch or compost. There is currently no recycled content in wood packaging. The only potential for closed loop recycling is for fibreboard, but the feasibility of this is unknown.

8. Conclusion

Since the 2025 Targets were established in 2018, Australia's packaging system has changed substantially.

For many companies, sustainability, recyclability and recycled content have become key priorities in packaging design, alongside functionality, cost and marketing. Annual reports to APCO are increasingly showing examples of packaging redesigned to reduce overall weight, phase out problematic single-use plastics, incorporate recycled content and to be 'recycle-ready'. Reuse models are now common in B2B packaging, particularly for pallets and crates.

As confidence in markets for recycled materials has grown, investment in new and improved reprocessing capacity has increased. Greater attention is now focused on producing the high-quality materials demanded by markets. More used packaging is being collected, losses in sorting systems are being reduced, and the total recovery rate is increasing year on year.

Consumers are more engaged in packaging sustainability than ever before. Governments have implemented policy and regulation on single-use plastics, recycling and circular economy, and co-invested in recycling infrastructure.

There is still, however, a lot more to be done. This report addresses not only the progress that has been made to date and the challenges faced, but provides a pathway to reach the 2025 Targets through whole-of-system collaboration and coordination. The participation of all industry sectors and governments is critical. Agreement on a pathway forward, particularly through roadmaps for key material streams and in co-designing a vision for a circular economy to 2030, will maximise our chances of success.

During the consultation process for this review, APCO informed Members and stakeholders that it would consult further on the development of a strategic statement to guide the acceleration of action to 2025. This process will commence in early 2023.



Appendices

Appendix 1

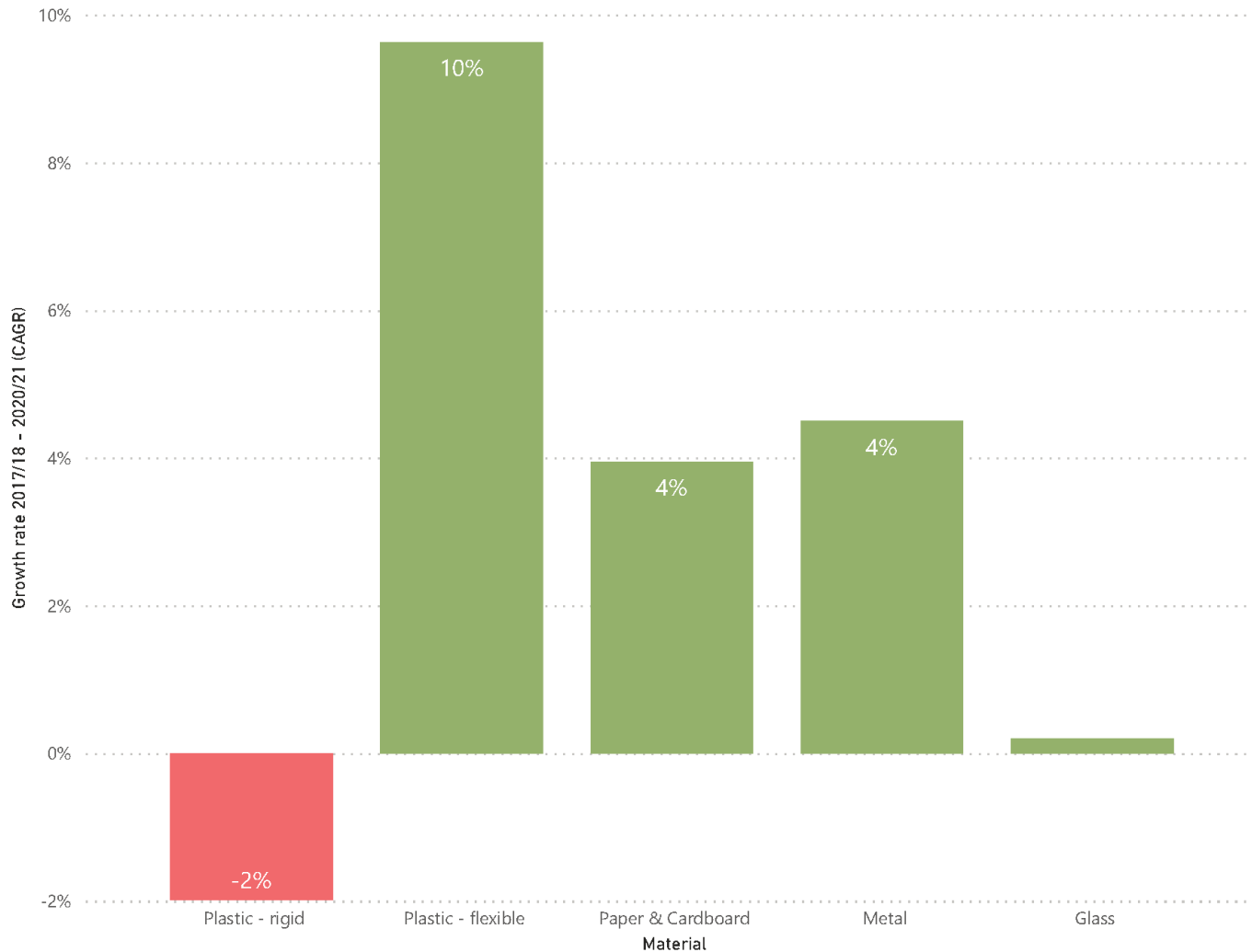


Figure 24: growth rate of packaging materials POM (excluding wood) from 2017-18 to 2020-21.*

*data is limited in determining the factors impacting the growth rates.

Appendix 2 – APCO Membership statistics

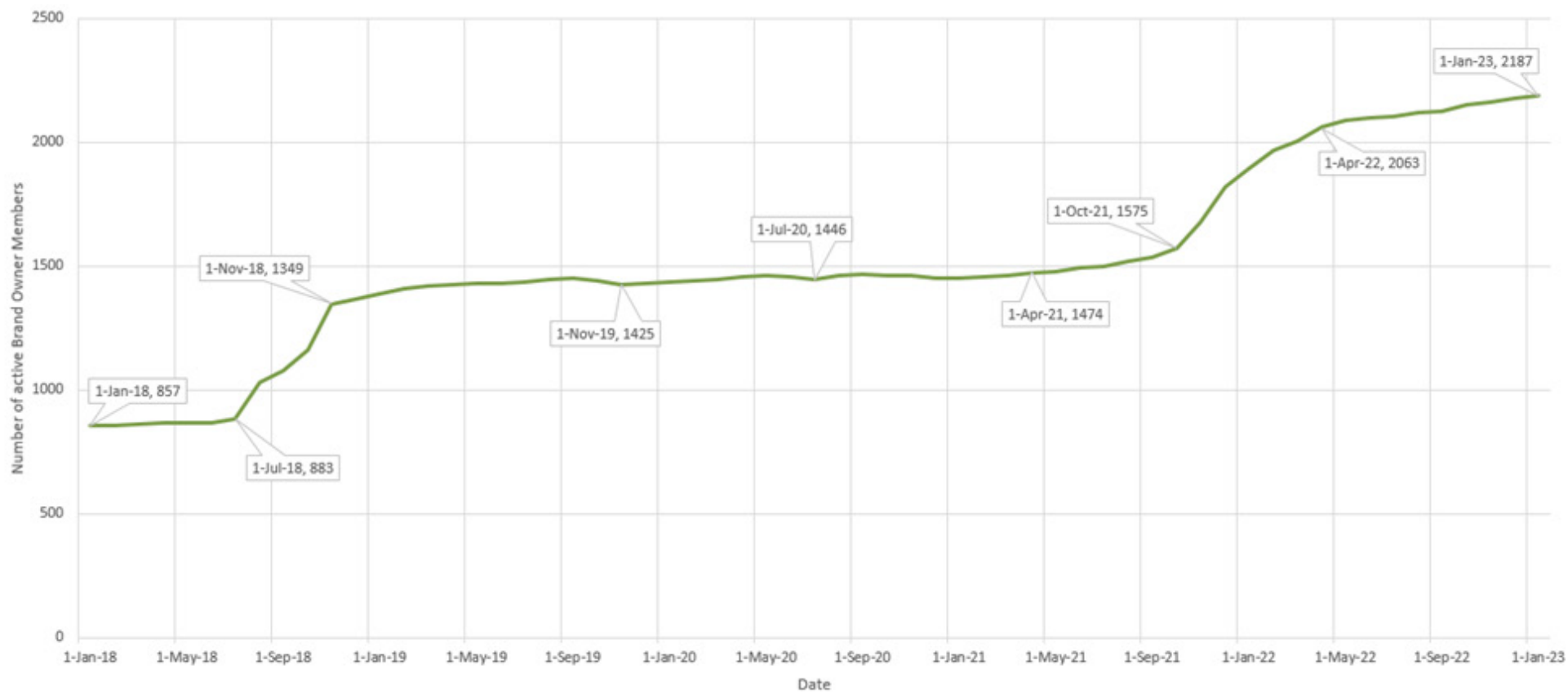


Figure 25: Active APCO Brand Owner Members 1 January 2018 to 1 January 2023.

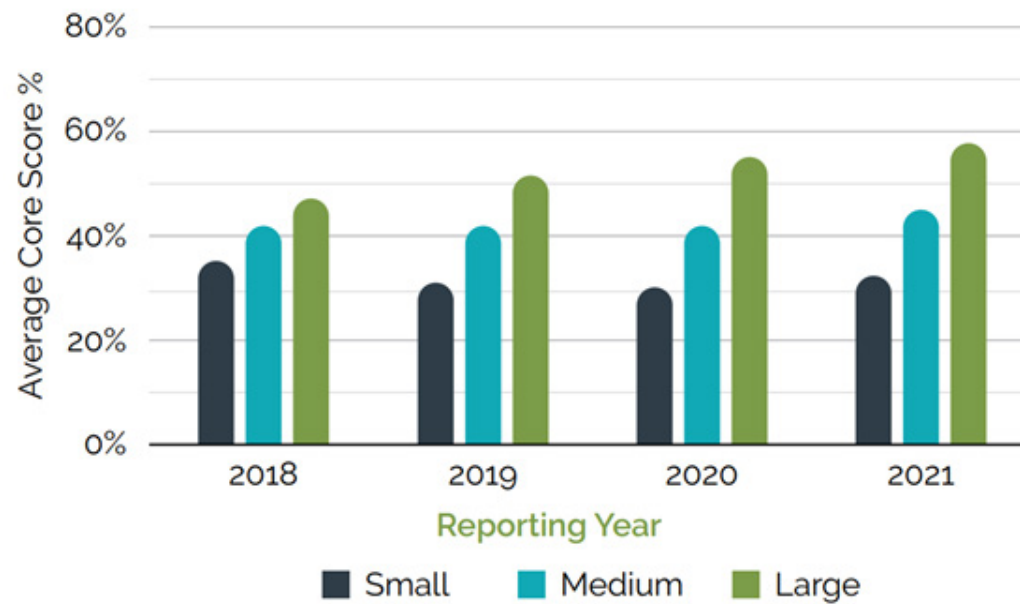


Figure 26: APCO Brand Owner Member average reporting score for core criteria of the Packaging Sustainability Framework from 2018 to 2021, based on Member size.

Appendix 4 – Consultation process

Consultation to inform the review of the 2025 National Packaging Targets was undertaken in October and November 2022 and included:

- Forums conducted by APCO online and in-person in Brisbane, Sydney, Melbourne, Adelaide and Perth, with a total of approximately 500 participants.
- More than 50 one-on-one meetings conducted by APCO with Members and stakeholders.

- Independent consultation by Arcadis (see Table 4), on behalf of APCO, to gather further input to the review, which included:
 - o 2 stakeholder workshops.
 - o 12 structured interviews.
 - o An online survey with 180 survey responses.

Table 4 A summary of the findings from the Arcadis consultation for the 2025 Targets review.

CRITICAL GAP	ISSUE / CHALLENGE	IMPACTS AND COMMENTS
<p>Insufficient perspective and action as a cohesive, aligned packaging system.</p> <p>There are gaps in delivery of the collective impact model around most aspects:</p> <ul style="list-style-type: none"> • Common agenda. • Continuous communications. • Backbone organisation. • Mutually reinforcing activities . 	<p>Lack of a coordinated, national policy and legislative framework guiding state and territory actions around packaging and addressing all segments of entire packaging value chain.</p> <p>Greater efforts to improve harmonisation, with collective input into the agreed approaches.</p> <p>The definitions and standards that underpin the 2025 Targets lack clarity and specificity, in some cases (e.g. “recyclable”)</p>	<ul style="list-style-type: none"> - Limited buy-in from all stakeholders to a cohesive approach to the circular economy transition. - Disparate actions by states and territories increases uncertainty and cost to business. - Limits alignment and buy-in across the value chain. - Reduces confidence in potential solutions, inhibiting investment across the chain. - Uncertain alignment to ACCC green claim requirements.
<ul style="list-style-type: none"> • Measuring results consistently. 	<p>The Australian Recycling Label (ARL) is broadly valued as a clear label to inform packaging design and educate consumers.</p> <p>However, the underpinning tool, the Packaging Recyclability Evaluation Portal (PREP) is seen as opaque, not sufficiently aligned to recovery sector practices and improvements, and limited by its restriction to APCO Members. Some calls for development of an agreed, open source and transparent framework to define and specify recyclable, reusable, compostable etc.</p> <p>Members largely value the annual reporting, however there is low confidence in published progress data and limited feedback loops on the impact of initiatives undertaken.</p> <p>Challenges include:</p> <ul style="list-style-type: none"> - Lack of access to other datasets to provide a rigorous systems view (e.g. annual recycling data from states and territories). - Limited transparency on data processes. - Uncertain alignment other dataset (e.g. National Waste Report). 	<ul style="list-style-type: none"> - Uncertainty and (perceived) errors in assessment are a significant frustration for stakeholders across the full chain. - Adds cost, time and risk to packaging innovation. - Inhibits investment in recycling infrastructure. - Limits alignment and buy-in across the value chain. - Limits coverage to APCO Members only. - Uncertain alignment to ACCC green claim requirements. - This could also make it easier for SMEs, although may still require a streamlined pathway. - PREP provides a possible basis for a standardised assessment framework. - Uncertainty about overall progress and specific gaps. - Limiting confidence and investment in initiatives to target specific gaps in progress.

REVIEW 2025 NATIONAL PACKAGING TARGETS

CRITICAL GAP	ISSUE / CHALLENGE	IMPACTS AND COMMENTS
<ul style="list-style-type: none"> Measuring results consistently. 	<p>Lack of engagement and activation of consumers regarding household recycling and public place litter behaviours. Significant feedback on the need for a national consumer campaign, albeit recognition that state and territory regulatory setting are a challenge to coordinated messaging.</p>	<ul style="list-style-type: none"> Capture rates of recyclable packaging remain below optimum levels. Contamination levels remain high.
<p>Partial coverage of brand owners and retail allows free riders, which limits participation and poses risks to active Members that ultimately slows progress on the 2025 Targets.</p>	<p>Participation in the co-regulatory scheme has been limited by:</p> <ul style="list-style-type: none"> Commercial barriers (higher costs). Technical knowledge. Low regulatory pressure to meet the Targets. Minimal reputational risks for SMEs. General inertia, given the effort required to change any system. <p>Imported packaging (filled and empty) is difficult to capture under the 2025 Targets unless imported by APCO Members.</p>	<p>The absence of any mandatory measures has limited coverage. Solutions suggested included:</p> <ul style="list-style-type: none"> specified recycled content percentage by packaging material / format, and mandatory APCO Membership for minimum sized companies (e.g by packaging on market each year). <ul style="list-style-type: none"> Limits coverage of the market, including in the growing direct-to-home delivery sector Undermines confidence that all packaging will be recyclable
<p>2025 Targets structure is generally suitable for a circular economy (i.e. design, recycling rate, end markets), however the individual targets are poorly specified.</p>	<p>Significant feedback was received on the targets, including:</p> <ul style="list-style-type: none"> Poor definition of the Targets. The absence of sub-targets per major material / format aligned to delivery pathway to achieve. <p>The Targets do not provide any prioritisation or interim targets on the path to 2025. Some calls for interim targets (potentially aligned to business investment cycles) that lead to more ambitious long-term Targets to drive system change.</p>	<p>Reform feedback included:</p> <p>Target 1:</p> <ul style="list-style-type: none"> 100% is not achievable, amend. Remove compostable. Introduce an exemption process for packaging that has defined higher order requirements (e.g. meet TGA standards). <p>Target 2:</p> <ul style="list-style-type: none"> Sub-targets by plastic packaging type (e.g. flexibles vs rigid). <p>Target 3</p> <ul style="list-style-type: none"> Consider mandatory recycled content targets at material level, as an industry average . Consider removing the focus only on post-consumer content. <p>Target 4</p> <ul style="list-style-type: none"> Define "unnecessary". <p>Limited near-term traction for the Targets as less engaged companies are able to avoid early-mover risks by pushing activity to the back end of the 2018-25 period.</p>
<p>APCO as the backbone organisation.</p>	<p>APCO has been significantly re-established in recent years as a strategic organisation. However, the current entity structure as a membership organisation creates potential for conflict of interest and uncertainty around functions, governance and engagement.</p> <p>Only a handful of APCO Members are from the recycling sector, while consultation for this report had limited participation from the recycling and local government sectors.</p>	<ul style="list-style-type: none"> The model has hampered effectiveness in engaging outside the Membership base, although other factors cited related to specific personnel rather than the structural issues. Limits APCO resources. Dilution in focus due to competing priorities and functions.

CRITICAL GAP	ISSUE / CHALLENGE	IMPACTS AND COMMENTS
APCO as the backbone organisation.	APCO processes are slow, it is under-resourced and has limited practical industry experience.	<ul style="list-style-type: none"> - Working Groups were cited as cumbersome and inefficient. Calls for a reform to decision-making processes and more active facilitation to maintain focus on progress. - Limited ability to develop focused initiatives and take them through to delivery. - Potential for marginalisation of APCO as a delivery entity for the 2025 Targets. - Failure to attract and retain Members, and for ongoing participation from supply chain partners.
Need to build confidence in the quality of recovery streams and in the certainty of end markets	<p>The Recycled Content Traceability Standard is required to provide confidence in the chain of custody, with an agreed approach across the value chain. It will need to be developed in partnership with all stakeholders.</p> <p>Need funding to support investment in recovery of non-core packaging materials</p>	<ul style="list-style-type: none"> - Required to increase confidence in quality of recycled content. - Supports ACCC green claim requirements. - Engages the whole chain in a systems perspective. - May preferences domestic sources over imported, supporting the circular economy in Australia. - Additional support is needed to incentivise investment, given smaller volumes are available to support business cases.
Material/Format: Flexible plastics	Flexibles are major fraction of the plastic packaging market, with the biggest gap in recycling rate. With significant processing capacity in the pipeline, the key challenge is collection. There is significant support for the proposed voluntary EPR scheme in order to support collection, processing and end markets, which are currently too constrained across the value chain.	
Material/Format: Polypropylene (PP)	Growing demand for recycled PP, with volumes currently being imported due to insufficient domestic reprocessing – but also limited global supply. There is a need to grow all aspects of the value chain to de-risk investment.	
Material/Format: Reuse targets	<p>Reuse models are a higher order outcome than recyclable or compostable options as they retain the inherent value in the form of the product. They are also more disruptive to mainstream models and so less likely to be deployed, with the primary focus to date being in B2B applications.</p> <p>There were mixed views on the potential for reuse, but one proposal to consider an individual reuse target, with realistic (longer) implementation timeframes.</p>	<ul style="list-style-type: none"> - Support for higher order packaging models, although this need to be tempered by lifecycle considerations. - Potential to more explicitly tie reuse to Target 4 on unnecessary and problematic single-use plastic packaging.

Raw material suppliers

77% rated APCO as 'high impact' for investigating specific packaging options

68% rated APCO as 'high impact' for reviewing materials/packaging against requirements of the 2025 Targets

Other actions driven by the 2025 Targets include:

- Introduction to recyclable and compostable products
- Support for recycling projects and research
- Consultation with product manufacturers to use recycled material content

Product manufacturers & retailers

68% rated 'high impact' by reporting to APCO annually

55% rated APCO as 'high impact' for introducing at least one new packaging format to meet 2025 Target requirements

Other actions driven by the 2025 Targets include:

- Adding the ARL to all packaging
- Collaboration with suppliers to eliminate non-recycled material content
- Partnerships and collaboration with other industries
- Increased alternative/recycled content packaging formats

Recycled product & packaging manufacturers

67% rated APCO as 'high impact' by reviewing the 2025 Targets and developed a detailed plan

83% rated APCO as 'high impact' for engaging with other actors in the packaging value chain around the 2025 Targets to collaborate

Other actions driven by the 2025 Targets include:

- Reuse innovation in materials
- Collaborating with brand owners
- Establishing closed loops with suppliers
- Improvement of material efficiency

Collectors and local government

33% rated APCO as 'high impact' by reviewing the relevance of the 2025 Targets for existing or future operations/contracts

33% rates APCO as 'high impact' by reviewing collection contract specifications to 2025 Target requirements

Other actions driven by the 2025 Targets include:

- Product stewardship
- MRF upgrades
- EPS processing equipment
- Further consumer education

Figure 27: Summary of the results from the 2025 Targets Survey conducted by Arcadis with APCO Members.

Appendix 5

Information in the table below is drawn from APCO's Packaging Material Flow Analysis 2019-20 and analysis undertaken for this review by the Institute for Sustainable Futures.

Table 5 New initiatives underway or planned that are likely to impact the 100% reusable, recyclable and compostable 2025 Target.

PACKAGING FORMAT	QUANTITY WITH LIMITED OR NO RECYCLABILITY 2019-20 (TONNES)	NEW INITIATIVES UNDERWAY OR PLANNED	ASSUMED IMPLICATIONS FOR 2024-25 RECYCLABILITY	MAXIMUM POTENTIAL IMPACT IN 2025 (TONNES PA) ¹
Bag or pouch	127,200	Implementation by Brand Owners of the April 2022 APCO Soft Plastics Standard to drive design for recycling and phase out PET and PVC bags Expanded recovery systems for compostable packaging Investments in paper sorting capacity	28,000 t of PET bags replaced with LDPE and PP bags 2,000 t of PVC bags replaced with LDPE and PP bags Recyclability classification for compostable plastic bags increases (1,500 t) Recyclability classification for kraft paper bags increases (93,000 t)	124,500
Bottle or jar	12,800	Bans on single use plastics – phase out of PVC Sorting PP in MRFs	3,000 t of PVC bottles replaced with PET, HDPE and PP bottles 4,000 t of PP bottles/jars have increased recyclability classification	7,000
Carton or box	73,500	Recovery system for polymer coated paperboard (PCPB) aseptic and gable top cartons National Plastics Plan phasing out EPS, EPS Action Plan, improved recovery systems for B2B EPS	52,000 t of PCPB cartons or boxes with recyclability classification in line with old corrugated containers (OCC) 320 t of EPS cartons or boxes with recyclability classification in line with OCC	52,320
Closure or label	41,900	Proposed APCO Soft Plastics Standard to be launched in 2022 to drive design for recycling – phase out PVC labels	800 t of PVC labels replaced with HDPE, LDPE and PP closures/labels	800
Tableware	87,600	Bans on single use plastics (non-compostable) Recovery systems for PCPB cups Expanded recovery systems for compostable packaging	2,000 t PP; 13,000 t PS; 2,500 t EPS replaced with paperboard 35,000 t of PCPB has recyclability classification in line with paperboard tableware 6,000 t of compostable plastic tableware has recyclability classification in line with paperboard	58,500
Tub, tray or punnet (TTP)	118,600	Better sorting of TTPs in MRFs. Product stewardship scheme for PP plant pots	80,000 t of PP and 22,000 t of PET TTPs has increased recyclability classification in line with PP/PET bottles	102,000
Plastic wrap	38,300	Implementation by Brand Owners of the April 2022 APCO Soft Plastics Standard to drive design for recycling and phase out PET and PVC wrap Expanded recovery systems for soft plastics Expanded recovery systems for compostable packaging	4,000 t of PET; 9,000 t of PVC wrap has recyclability classification in line with LDPE wrap 23,000 t of PP wrap has recyclability classification in line with LDPE wrap 1,800 t of compostable wrap has recyclability classification in line with LDPE wrap	37,800
Mixed paper formats	199,800	Expanded recovery capacity for mixed paper packaging formats (including kraft paper and liquid paperboard) e.g.: Suez/WA (100,000t); Visy/Vic (95,000t); NAWMA/SA (40,000t) ¹⁴	190,000 t of mixed paper has increased recyclability classification in line with OCC/paperboard	190,000 (235,000 total capacity)

1. These numbers are the quantity PoM for each material and therefore indicate maximum potential impact. There is insufficient information to forecast the exact impact.

14 Supported by grants from the [Recycling Modernisation Fund](#)

Appendix 6

Information in the table below is drawn from APCO's Packaging Material Flow Analysis 2019-20 and analysis undertaken for this review by the Institute for Sustainable Futures.

Table 6 Performance gaps by material and format – flexible plastics, 2019-20.

FORMAT	QUANTITY POM (TONNES)	SECTOR / APPLICATIONS	COLLECTION RATE (%)	RECOVERY RATE (%)	MAIN BARRIERS
LDPE bag or pouch	179,656	Food, grocery, misc. goods	1%	<1%	Limited end markets.
LDPE wrap	68,171	Mostly supply chain (pallet wrap), some consumer	18%	16%	Low value.
PP bag or pouch	55,596	Food, grocery, misc. goods	0.5%	0.5%	Limited end markets.
HDPE bag or pouch	54,493	As above	0.5%	0.5%	Limited end markets.
PET bag or pouch	28,573	As above	0%	0%	No end market.
PP wrap	26,742	Distribution chain – strapping and banding	7%	6%	Limited end markets.
LDPE shopping bag	16,266	Retail – heavyweight bags	1%	0%	Low value.
PVC wrap	9,655	Homewares, multi-laminated bags and pouches	0%	0%	No end market.
HDPE shopping bag	4,403	Retail – lightweight bags	1%	0%	Low value.
PET wrap	4,231	Distribution chain – strapping and banding	0%	0%	Low value, mixed materials.
Total	511,969		7%	3%	

Appendix 7

Information in the table below is drawn from APCO's Packaging Material Flow Analysis 2019-20 and analysis undertaken for this review by the Institute for Sustainable Futures.

Table 7 Performance gaps by material and format – rigid plastics 2019-20.

FORMAT	QUANTITY POM (TONNES)	SECTOR / APPLICATIONS	COLLECTION RATE (%)	RECOVERY RATE (%)	MAIN BARRIERS
HDPE bottle or jar	175,711	Food (e.g. milk), personal care, laundry products	30%	28%	Low source separation by consumers. Mix of materials, colours.
PET bottle or jar	106,943	Food, grocery, personal care, pharmaceutical	47%	46%	As above.
PP tub, tray or punnet	93,282	Food (e.g. yoghurt, takeaway containers), plant pots, pharmaceutical	14%	13%	Not sorted by most MRFs.
PET tub, tray or punnet	22,153		47%	27%	Not sorted by most MRFs.
EPS – other components	18,302	Moulded components for electrical and electronic products and other delicate products for void fill and cushioning. Some tubs and trays e.g. fresh produce.	34%	22%	Low value, high cost to collect. Not accepted in kerbside.
PS tableware	13,328	Food service	19%	17%	No collection from C&I. Not accepted in kerbside.
PP barrel or drum	12,419	Paint pails, food ingredients etc	32%	19%	Product residue / hazards.
HDPE tube or cartridge	10,064	Caulking/adhesives etc	2%	2%	As above.
Bioplastic tableware ¹⁵	5,874	Food service, takeaway containers	29%	1%	Limited C&I collection infrastructure nationally. Varying acceptance in kerbside FOGO.
LDPE bottle or jar	5,681	Pharmaceutical etc.	38%	36%	Not sorted in MRFs.
PP bottle or jar	4,910	Natural health supplements	18%	13%	Not sorted by most MRFs.
Total rigid plastic packaging	543,820		17%	13%	

¹⁵ Only packaging that is certified to AS 4736 is compostable through kerbside and commercial collection services. It is not clear whether all of the packaging included as placed on market in 2019-20 was certified to the standard.

Appendix 8

Information in the table below is drawn from APCO's Packaging Material Flow Analysis 2019-20 and analysis undertaken for this review by the Institute for Sustainable Futures.

Table 8 Performance gaps by material and format – Paper and paperboard 2019-20.

FORMAT	QUANTITY POM (TONNES)	SECTOR / APPLICATIONS	COLLECTION RATE (%)	RECOVERY RATE (%)	MAIN BARRIERS
Old corrugated containers (OCC) carton or box	2,512,600	Mostly distribution chain (C&I) , online shopping, misc. consumer goods	84%	79%	Insufficient incentive for MSW/C&I to source separate; reduced market for mixed paper/card.
Paperboard / cartonboard – carton or box	296,750	Food, grocery, general consumer goods, food service etc	37%	36%	As above.
Other fibre packaging – other component rigid	98,420	Moulded fibre protective packaging – EEPs, eggs etc., composite cans	15%	15%	Lack of collection systems; low value (reduced market for mixed paper/card).
Other fibre packaging – bag or pouch	94,781	Retail, C&I bags (raw materials etc)	15%	15%	As above.
Other fibre packaging – wrap	79,990	Unknown	25%	22%	As above.
Other fibre packaging – tub tray or punnet	54,050	Egg cartons, fresh produce trays, food service etc	25%	25%	As above.
PCPB carton or box	52,650	Milk and juice cartons, aseptic cartons for beverages and other foods	11%	5%	Lack of collection systems; low value; poor recyclability at reprocessors.
PCPB cups	35,134		0%	0%	Lack of collection systems.
Other fibre packaging – carton or box	23,150	HWS, moulded fibreboard, some kraft void fill	30%	22%	Lack of collection systems; low value (reduced market for mixed paper/card).
Paperboard / cartonboard tableware	19,250	Food service	36%	0%	Limited acceptance in source separation systems for recycling or composting in food service nationally. PFAS contamination a concern in composting industry. ¹⁶
Other fibre packaging – tableware	5,552	Food service	0%	0%	As above.
Total paper packaging	3,272,327		70%	66%	

¹⁶ It is understood that packaging suppliers have already started to remove PFAS-containing products from their range ahead of the release of APCO's action plan for PFAS in fibre-based packaging (forthcoming in 2022)

References

Accenture (2021). Costs and incentives for a more circular packaging system. Available at: <https://documents.packagingcovenant.org.au/public-documents/Costs%20and%20Incentives%20For%20a%20More%20Circular%20Packaging%20System>.

ACOR, 2022. Australian Recycling Infrastructure Capacity and Readiness (Plastic and Paper). Available at: https://www.acor.org.au/uploads/2/1/5/4/21549240/220623_acor_infrastructure_readiness_report_june_2022_-_updated.pdf

APCO (2021). Australian Packaging Consumption & Recycling Data 2019-20. Available at: <https://documents.packagingcovenant.org.au/public-documents/Australian%20Packaging%20Consumption%20And%20Recycling%20Data%202019-20>, p. 70.

APCO (2021). Collective Impact Report. Available at: <https://documents.packagingcovenant.org.au/public-documents/APCO%20Collective%20Impact%20Report>.

APCO (2021). Packaging Material Flow Analysis 2019-20. Available at: <https://documents.packagingcovenant.org.au/public-documents/Packaging%20Material%20Flow%20Analysis%202019-20>.

APCO (2023). Australian Packaging Consumption & Recycling Data 2020-21.

Matthews Pegg Consulting (2021). Review of the co-regulatory arrangement under the National Environment Protection (Used Packaging Materials) Measure 2011. Available at: https://www.agriculture.gov.au/sites/default/files/documents/independent_review_of_the_upm_nepm_and_the_australian_packaging_covenant_-_final_report_-_september_2021.pdf.

SA Government (2021). Improving SA's Recycling makes sense discussion paper. Available at: <https://yoursay.sa.gov.au/cds-review>.

Further information



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