APCO PROJECT PROPOSALS 2019

AUSTRALIAN PACKAGING COVENANT ORGANISATION

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1. INTRODUCTION

In 2018 APCO convened five working groups to investigate barriers and opportunities to improve the recovery of five 'problematic' packaging materials: glass, polymer coated paperboard (PCPB), soft plastics, biodegradable and compostable packaging, and expanded polystyrene (EPS). The groups worked to establish a shared understanding of the problem and to identify projects to be undertaken by stakeholders in the packaging value chain to support achievement of the National Packaging Targets for each material category.

These projects have been reviewed, prioritised and combined with other initiatives to develop a list of projects for implementation in 2019. The intention of the paper is to open these projects for consultation with key stakeholders to secure support and funding.

2. BACKGROUND

2.1 Unpacking problematic packaging materials

In early 2018 APCO invited Members and other stakeholders to join one of five working groups on problematic packaging materials. Over 80 representatives were appointed from across the value chain and all levels of government.

2.2 Scope

The packaging materials and formats covered by each working group are shown in Table 1.

Table 1: Packaging materials covered by the working groups

Working group	Scope
Glass	All glass packaging including packaging for food, beverage, pharmaceutical and cleaning products
Polymer coated paperboard	Gable top containers, aseptic containers, hot cups, cod cups, other takeaway containers, cartons for refrigerated storage at home, composite cans, fresh produce boxes, glassine
Soft plastics	Retail shopping and produce bags, consumer bags, pouches and film, commercial and industrial film (stretch and shrink wrap) and bags, agricultural film (bale wrap, cotton film, mulch film) and grain bags, building films used to protect items such as timber, plasterboard, bricks, etc.
Biodegradable and compostable packaging	Biodegradable and compostable plastics packaging, paperboard packaging with a compostable plastics coating, paper/cardboard packaging contaminated with food waste and therefore suitable for organics recycling
Expanded polystyrene (EPS)	All foamed plastic packaging including EPS, expanded polypropylene (EPP) and expanded polyethylene (EPE). Single-use food packaging, consumer fresh produce packaging e.g. trays, B2B loose fill 'peanuts', moulded dry bulky food packaging, specialist applications e.g. for temperature-controlled packaging

2.3 Outcomes

Each working group produced two documents:

- A gap analysis that summarises the problem, vision, strategies and project opportunities
- A report on modelling solutions through potential project opportunities.

A webinar on the outcomes of this work for each material will be available in April 2019.

2.4 Key themes

Key themes that emerged from the problematic packaging material working groups include:

- The need for **more accurate and detailed data** on packaging consumption and recycling

- Suggestions for **reduction or elimination** of problematic and unnecessary packaging
- Additional resources to support sustainable **packaging design** and procurement
- **Consumer education** on packaging reduction and correct recycling
- The need for targeted **industry education** on packaging design, procurement and recycling
- Collection and recycling **infrastructure gaps** and lack of **local end markets**
- **Government procurement** to support end market development

3. PRIORITY PROJECTS FOR 2019

Priority projects for implementation in 2019 are summarised in Table 2 with further details provided in Attachment 1. The individual projects aim to support the achievement of the National Packaging Targets by addressing packaging design, consumer engagement, recovery systems and end markets (Figure 1).

Figure 1: Projects linked to targets

Table 2: Priority projects for 2019

Theme	Project	Description	Implementation Period	APCO Working Group
Data analysis & strategic planning	1. Packaging Baseline data	1.1 Packaging consumption and recycling	Q1 2019	NPTI
		1.2 Infrastructure mapping	Q1 2019	NPTI
		1.3 Economic analysis of alternative collection systems and end markets	Q2 2019	NPTI
	2. Public statements on specific materials	Public statements on outcomes of previous 5 working groups (Gap Analyses and Action Plans)	Q1 2019	NPTI
	3. White paper on problematic and unnecessary packaging	Paper to identify target products/materials and build the case for phase-out	Q2 2019	NPTI
	4. Options to standardise recycling systems	Modelling strategic options to facilitate achievement of the 2025 NPT	Q1 2019	NPTI
Packaging design	5. Resources to support the Sustainable Packaging Guidelines	5.1 Quick Starts: (i) recovery pathways, (ii) glass, (iii) polymer coated paperboard (PCPB), (iv) EPS, (vi) PET, (vii) labelling	Q2 2019	Design
		5.2 Design for soft plastics packaging (build on CEFLEX)	Q2 2019	Design
		5.3 Design for compostable packaging	Q4 2019	Design
		5.4 Wine packaging guidelines	Q2 2019	Design
	6. Food service packaging guidelines	Engagement workshops, guidelines & case studies	Q2 2019	Design
	7. Compostable packaging label	New label to align with ARL	Q3 2019	Design
	8. Recycled content label	New label to align with ARL	Q2 2019	Design
	9. Life cycle assessment (LCA) guide	Database and guidelines	Q2 2019	Design
Consumer education	10. Consumer education	How to recycle – including ARL	Q1 2019	Systems & Education
Industry engagement	11. Analysis of problematic packaging materials	Trials to investigate specific issues	Q2 2019	Systems & Education
	12. Pulpability trials	Trials to investigate pulpability of polymer coatings, non-wood fibres etc	Q2 2019	Systems & Education
	13. Packaging supply chain training	Training in collaboration with AIP on PSF – including SPG, PREP/ARL	Q1 2019	Systems & Education
	14. Models for phase out of	Working with Boomerang Alliance on council / community	Q1 2019	Systems & Education

	single use plastics	case studies to reduce/replace plastics		
Collection & processing	15. Composting trials	Trials to test compostability of different certified materials under various conditions	Q3 2019	Systems & Education
	16. Regional model for soft plastics recycling	Working with Plastic Police to evaluate and promote a regional collection and market development model	Q2 2019	Systems& Education
	17. Remote/regional waste collection partnerships	Workshop on potential partnership-based solutions to packaging waste collection in remote and regional Australia	Q3 2019	Systems & Education
Procurement	18. Government procurement of recycled products	Guide on buying recycled including case studies and technical information	Q1 2019	Materials Circularity
	19. Supply chain procurement of recycled plastic products	Case studies with APCO members to identify end market opportunities for soft plastics	Q2 2019	Materials Circularity
	20. EPS collection and end market pilot	Working with EPSA to document and share a model to collect and reuse EPS in waffle pods	Q3 2019	Materials Circularity
	21. Sustainable Packaging Information and Resource Interactive Terminus (SPIRIT)	Resource to help industry and government make sustainable purchasing choices	Q2 2019	Materials Circularity
	22. Innovation Hub	Driving innovation in Australia to address the future of sustainable packaging	Q1 2019	Materials Circularity

NPTI = National Packaging Targets Implementation

4. ATTACHMENT 1: APCO PROJECT PROPOSALS

4.1 Project 1.1: Consumption and recycling data

4.1.1 Summary

Detailed packaging consumption and recycling data will be analysed to benchmark performance against the national packaging targets. Building on the Materials Flow Analysis (MFA)[1] completed in 2018. This project will address specific data gaps identified by the five working groups for problematic materials and in the MFA report.

4.1.2 Objective

- To provide baseline data for the national packaging targets

4.1.3 Deliverables

- White paper on baseline data and information gaps to support national packaging targets
- Updated white paper with baseline data, milestones towards targets, proposed monitoring system

4.1.4 Details

The following data gaps have been identified:

Consumption

- Total consumption of packaging in Australia including imports (empty packaging and packaging with products), by material type and by sector (domestic, C&I, agriculture, construction etc)
- Plastic packaging by polymer type and by rigid/soft plastics, use of oxo-degradable (and other fragmentable), biodegradable and compostable packaging
- Polymer coated paperboard by material composition (including wax vs. polymer layers, type of paper, presence of wet strength additives etc), sector (at home, away from home)
- Estimated average recycled content in packaging (tonnes and %), by material type
- An estimate of the quantity of packaging that could *potentially* be manufactured from a compostable material (e.g. food packaging that is currently non-recyclable in a conventional material recycling system), and relative to the forecast quantity of waste organics
- Forecasts for consumption by material type to 2025

Recycling

- Total amount of packaging recycled (see specific categories in the MFA report), broken down by material types and by channel (kerbside, CDS, C&I etc)
- Recovery of compostable packaging through either material recycling or organics recycling
- Market destination for collected material including recycling technologies and end markets
- Forecasts for recycling by material type and by channel to 2025

Waste

- Data characterising the packaging waste stream that is not being collected (e.g. litter, leakage to the residual stream)

4.1.5 Next steps

1. Project brief developed and approved by National Packaging Target Implementation Working Group

[1] Institute for Sustainable Futures (2019), Characterising the material flows through the Australian waste packaging system, Report to APCO, Sydney

2. In principle funding commitments obtained from interested parties
3. RFT for providers issued

4.2 Project 1.2: Infrastructure mapping

4.2.1 Summary

Map the existing infrastructure for collection, sorting and recycling packaging including location, materials handled, and capacity. Specific information gaps have been identified by the five working groups for problematic materials and the MFA report to inform infrastructure planning. The project will be undertaken in collaboration with jurisdictions and recycling industry partners, building on previous work[2].

4.2.2 Objectives

- To identify significant infrastructure gaps that need to be addressed to meet the national packaging targets
- To inform decisions about the design and procurement of packaging including the role of compostable packaging

4.2.3 Deliverables

- Report with specific, targeted recommendations for collection and recycling infrastructure by material and by jurisdiction

4.2.4 Details: information to be collected and analysed

- Council collection acceptance of materials
- Materials Recovery Facilities (MRFs): location, capacity, sorting capabilities, materials processed (e.g. glass sand), end markets
- Material recycling facilities (paper, glass (beneficiation, glass making, engineered products), plastics, metals): location, capacity, materials processed, end markets
- Organics recycling facilities (composting, other): location, capacity, materials processed, whether they accept compostable packaging (and which types/specifications), any regulatory or other barriers to accepting compostable packaging
- Drop-off and processing facilities for packaging collected through container deposit/refund schemes
- Drop-off points and collection services for waste EPS: location, capacity, materials processed, end markets
- Drop-off points and collection services for soft plastics: location, capacity, materials processed, end markets
- Public place recycling services for mixed packaging (e.g. council services, institutions), cafes/hospitality (e.g. coffee cups) etc

4.2.5 Next steps

1. APCO to collaborate with government and recycling industry partners to prepare a more detailed project brief
2. In principle funding commitments obtained from interested parties
3. Request for Proposals sent to consultants

[2] For example Department of Environment and Energy (2018), Analysis of Australia's municipal infrastructure capacity, Australian Government, Canberra

4.3 Project 1.3: Economic analysis of alternative collection systems and end markets

4.3.1 Summary

Undertaken concurrently with project 1.2, this project will undertake an economic analysis of alternative collection systems and end markets for specific materials to identify opportunities for improved quality (e.g. source separated glass) or capacity (e.g. glass fines). Combining several specific information requirements identified by the five working groups for problematic materials to inform infrastructure planning.

4.3.2 Objectives

1. To engage with local government and other stakeholders in the recovery chain to identify opportunities to improve the quantity and quality of collected glass through potential changes to collection and sorting systems
2. To understand the system-wide costs and benefits of alternative collection systems for particular materials and the financial costs and benefits to individual stakeholders in the recovery chain
3. To identify investment opportunities by providing greater clarity around costs and benefits of alternative collection channels and end markets

4.3.3 Deliverables

- A report with specific, targeted recommendations for collection infrastructure and end markets by material and by jurisdiction including:
    - Cost/benefit and business case for each option (i.e. the circumstances and cost/price points that would make them viable)
    - Any additional costs and who would pay, including potential cost shifting
    - How any additional net costs could be met, e.g. Council contracts, government grants etc.
    - Recommendations for pilot projects or national roll-out

4.3.4 Details: per material

Glass

The project will investigate the feasibility, costs and benefits of strategies such as:

- Compaction limits on commingled collection vehicles
- A separate bin for kerbside collection of glass – currently in place in some New Zealand councils
- A separate bin for commercial and multi-unit residential collection of glass – currently in place in much of Europe
- Drop-off systems (e.g. Suburban bottle banks) - being trialled in Ipswich (QLD) in 2018
- Expanded deposit/refund schemes, e.g. To include wine and spirit bottles
- Changes to the infrastructure and systems at MRFs and beneficiation plants to reduce breakage and contamination
- Beneficiating glass from CDS collections where these are not already colour sorted.

The project would consider:

- Costs of any additional infrastructure e.g. bins, new equipment in MRFs
- Impacts on operating costs at every stage of the recovery chain (e.g. number of collection vehicles and bin lifts, staffing levels, reduced repair and maintenance costs at MRFs if glass is collected separately, impact of reduced glass collection on total MRF operating costs)

- Availability of space in homes and multi-unit dwellings for an additional bin
- Impacts on yield, value and demand for collected glass in different end markets (containers/sand/roads etc)
- Impacts on contamination levels (existing commingled bins and/or any additional systems)
- Consumer participation and behaviour and implications for consumed education programs

Polymer coated paperboard

A number of different collection and recycling systems are being implemented or explored including:

- Collection: commingled kerbside collection, source separation in quick service restaurants (e.g. for cups), container deposit schemes and local council resource recovery facilities (e.g. for some liquid paperboard packaging)
- Recycling: back into paper, as mixed plastics products (e.g. kerbing); as composite products (e.g. structural panels); composite cans with steel ends back into steel; as activated carbon (research by UNSW SMaRT Centre); as compost; as energy or diesel.

The evaluation would investigate:

- Recovery levels in MRFs, building on the Cleanaway trial in Perth (planned for Q1 2019)
- Percentage of material recovered under each scenario
- Financial costs and benefits at every stage of the recovery chain
- Other business benefits e.g. customer service
- Trade-offs, e.g. between wet strength and recyclability
- Commercial feasibility.

Expanded polystyrene (EPS)

The goal is to reduce EPS going to landfill via increased collection networks that could include:

- Local government resource recovery centres
- Mobile collection units that compact for efficient transport
- Large retailers or home centres providing drop-off for customers or back loading after delivery
- Collection of EPS with electrical and electronic waste (E-waste Arrangements)
- Local Government collection of EPS from residents with other problem wastes, e.g. mattresses
- Waffle pod manufacturers collecting EPS from council resource recovery centres (Project 18)
- Kerbside collection with other recyclables and sorting at a Materials Recovery Facilities (e.g. the Lismore model)
- Drop-off at other community centres e.g. clubs and schools.

This project will investigate why some collection systems have or have not worked in the past (learning from experience e.g. negative cost issue) to avoid repeating the same mistakes. This project will look at how these projects were designed, implemented and identify areas for improvement.

Issues to be considered include:

- Overall costs and benefits of each alternative, including environmental costs of transport to a distant drop-off point (EPS is 99% air) non-financial benefits (e.g. service for customers or ratepayers). Thresholds for collection that make them economically viable – with the business case to also include environmental, social and other benefits
- Operational and logistical requirements and constraints, e.g. staffing, energy, space requirements, traffic management etc associated with drop-off services. The costs and benefits of on-site compaction compared to collection of loose EPS.

- Impacts on consumer convenience and participation
- End markets for the collected EPS.

Soft plastics

At present there are many different models for collection and sorting for household soft plastics, with different funding models, end markets and levels of consumer engagement. These include:

- Retail drop-off (either shopping bags only or mixed household)
- Council drop-off e.g. at resource recovery centres
- Schools drop-off
- Post-back, e.g. through TerraCycle
- Kerbside collection (recyclables or organics).

An expanded collection system for household plastics will require a mix of these systems, linked to criteria such as:

- End markets and their quality requirements
- Stakeholder support, e.g. willingness of councils and MRF operators to collect and sort soft plastics
- Costs and benefits of different systems.

The aim of this project is to investigate the costs and benefits of the different approaches, where cost is added or saved in the process, and the circumstances in which each model might be appropriate and effective. In some cases, a combination of different models might be appropriate.

To explore the kerbside collection option, which is currently in place in at least 5 municipalities, it will be important to understand MRF operating requirements and constraints, levels of contamination, and available end markets for mixed soft plastics. Soft plastics are already received my most MRFs as a contaminant and need to be managed.

4.3.5 Next steps

1. APCO to engage with government and industry stakeholders to confirm scope (including potential need to extend the project beyond these identified materials), lead organisation and potential funding

4.4 Project 2: Public statement on specific materials

4.4.1 Summary

In 2018, each of the APCO Working Groups prepared a gap analysis and project opportunities to improve recovery of five specific problematic materials: glass, polymer coated paperboard, soft plastics, expanded polystyrene (EPS) and biodegradable and compostable packaging. This project will disseminate the outcomes of these processes to a broader audience.

4.4.2 Objectives

- To disseminate the outcomes of the work undertaken in 2018 on five problematic materials
- To inform other initiatives being undertaken by industry and government to address the same materials

4.4.3 Deliverables

- Five short documents summarising the conclusions and strategies for each material (2-3 pages each), published on APCO's website with the supporting documents

4.4.4 Details

Each document will include a summary of the problem, initiatives currently underway and proposed strategies to improve recovery.

4.4.5 Next steps

1. APCO to draft the documents
2. Working Group to approve statements
3. Publication on the website and via media (March 2019)

4.5 Project 3: White paper on problematic and unnecessary packaging

4.5.1 Summary

One of the National Packaging Targets states that '*Problematic and unnecessary single-use plastic packaging will be phased out through design, innovation or introduction of alternatives*.' Several packaging materials or formats were identified by the working groups for consideration under this target, including oxo-degradable plastics and expanded polystyrene takeaway food packaging. As a first step, APCO will prepare a paper for consultation on proposed definitions for this and products or materials that could be phased out.

4.5.2 Objectives

- To propose definitions of 'problematic', 'unnecessary' and 'single use' to support the target and align with the global approach
- To identify specific packaging materials, formats or applications that may be considered 'problematic' and 'unnecessary'
- To seek input from key stakeholders in industry, government and the community on the definitions and potential strategies to achieve the target

4.5.3 Deliverables

- Release of a white paper to standardise the national approach to the target, identify products/materials and build the case for a phase-out of certain products/materials – *for consultation*

4.5.4 Details

The paper will build on existing initiatives such as:

- Consultation by the South Australian government on single use plastics
- Proposed bans on single-use plastic items such as plates, cutlery, straws, balloon sticks or cotton buds in the European Union from 2021

Proposed contents:

- Rationale for the target
- Background – local and international initiatives
- Proposed definitions
- Products or materials that could be considered for a phase out, with rationale

APCO Working Groups on problematic materials identified two potential candidates for phase-out i.e.: expanded polystyrene food service packaging and oxo-degradable plastics.

The European Parliament has banned single-use items for which affordable alternatives exist: cutlery, cotton buds, straws and stirrers; oxo-degradable plastics and expanded polystyrene beverage cups.

4.5.5 Next steps

1. APCO to prepare a draft paper for review by the National Packaging Targets Implementation Working Group
2. Final paper to be disseminated for consultation with broader industry and government
3. Public release of white paper to guide the national approach

4.6 Project 4: Options to standardise recycling systems

4.6.1 Summary

Building on the data collection from Project 1, undertake a strategic analysis of the current kerbside recycling system to identify opportunities for improved recycling systems across councils to improve consistency and recycling rates.

4.6.2 Objectives

- To identify the options for a standardised recycling system across councils, including how packaging materials such as soft plastics and EPS should be recovered
- Understand the costs and benefit of different options and any policy implications
- Engage key stakeholders on the opportunities and potential benefits of standardised recycling systems in meeting the NPT and waste reduction targets.

4.6.3 Deliverables

- Report on strategic options for standardising recycling systems across municipalities

4.6.4 Details

Poor recycling practices (e.g. contamination in recycling bins and disposal of recyclable materials) is partly caused by differences between councils on what can be recycled in the 'yellow bin'. In addition to the standard recyclables, some councils are adding new materials such as soft plastics. Consistency across the Australian kerbside collection, sorting and recycling system will enable greater transparency and clearer directions for industry and government to achieve the 2025 National Packaging Targets. An analysis is essential to determine the feasibility and opportunities.

Building on the results of Project 1, this project will consider the strategic options for further development and standardisation of municipal recycling systems. This will involve:

Phase 1: Stakeholder consultation

The aim of this stage will be to reach agreement on:

- key trends and infrastructure gaps in municipal recycling
- preferred options to manage each of the key packaging types, i.e. kerbside collection, drop-off, CDS etc
- what a standardised system might look like

Phase 2: Analysis of options

A short list of options will be selected for further analysis based on the stakeholder consultation developed. Each of the options will be analysed to investigate:

- costs and benefits
- impacts on stakeholders including residents, councils, waste management companies and recyclers
- potential contribution to the NPT

Phase 3: Report and further consultation

The draft report will be used as the basis for further consultation with key stakeholder groups

4.6.5 Next steps

1. Complete Project 1 – data collection, infrastructure mapping and economic analysis of specific materials

2. Consult with industry and government stakeholders to prepare a project brief

3. Confirm lead organisation and funding

4.7 Project 5: Resources to support the Sustainable Packaging Guidelines

4.7.1 Summary

APCO's Sustainable Packaging Guidelines (SPG) are being updated in 2019. The reports from the five working groups on problematic materials included proposals for material-specific guidelines ('Quickstarts'), some of which have already been drafted. The need for additional resources will be reviewed in 2019.

4.7.2 Objectives

- To provide members with additional resources to support implementation of the SPG
- To provide targeted advice on specific materials

4.7.3 Deliverables

- A decision support tree: a guide to choosing the most appropriate recovery channel (reuse, material recycling or organics recycling)
- A guide to labelling for disposal or recycling
- Material-specific guides to design for recycling glass, polymer coated paperboard, expanded polystyrene, PET, compostable packaging.

Details

Name	Description	Status / timing
1. Decision support tree	Developed in collaboration with the Biodegradable and Compostable Packaging Working Group. Purpose is to guide decisions on which recovery pathway is most appropriate for a particular packaging type (material recycling or organics recycling/ composting).	In draft – publish Q2 2019
2. Quickstart: Guide to design for recycling Glass	Developed in collaboration with the Glass Packaging Working Group. Purpose is to provide a quick reference to the best strategies for glass packaging to improve recycling. Responds to feedback from members that they want more direction on packaging materials. A supplementary resource that does not replace the SPG and PREP.	In draft – publish Q2 2019
3. Quickstart: Guide to design for recycling Expanded polystyrene (EPS)	Developed in collaboration with the EPS Packaging Working Group. Purpose is to provide a quick reference to the best strategies for EPS packaging to improve recycling. Responds to feedback from members that they want more direction on packaging materials. A supplementary resource that does not replace the SPG and PREP.	In draft – publish Q2 2019

4. Quickstart: Guide to design for recycling Polymer coated paperboard (PCPB)	Developed in collaboration with the PCPB Packaging Working Group. Same purpose as above. There are a number of uncertainties about the recyclability of PCPB, wet strength additives and non-wood fibres. Further testing is required, and a research project has been proposed by the Working Group (see Project 11).	In draft – publish Q2 2019
5. Quickstart: Guide to design for recycling PET	Developed in collaboration with industry experts. Purpose is to provide a quick reference to the best strategies for PET packaging to improve recycling. Responds to feedback from members that they want more direction on packaging materials. A supplementary resource that does not replace the SPG and PREP.	In draft – publish Q2 2019
6. Quickstart: Guide to design for organics recycling	Purpose is to provide a quick reference to the best strategies to design packaging that should be recovered via organics recycling. To be determined following other project outcomes (Project 1.1 and 14)	To be developed Q4, 2019
7. Information on compostable packaging materials	To overcome confusion about the different materials on the market. Will provide a guide to material categories, their general properties, how they behave in different environments (e.g. composting, anaerobic digestion, landfill, in water etc), potential product applications etc.	To be developed Q4, 2019
8. Quickstart: Guide to labelling	Purpose is to provide a quick reference to common labels for disposal or recycling. Responds to confusion among industry regarding the purpose and requirements of different labels.	To be developed Q4, 2019
9. Quickstart: Guide to design for recycling soft plastics	Purpose is to provide a quick reference to the best strategies for soft plastics to improve recycling. Will build on international guidelines currently being developed by CEFLEX.	To be developed Q2, 2019
10. Wine packaging guidelines	Proposed by the Wine Industry Working Group, supported by APCO.	To be developed Q2, 2019

4.7.4 Next steps

1. Existing drafts to be reviewed by the APCO Technical Advisory Committee (TAC) and Design Working Group and then published on APCO's website and shared with industry
2. PCPB Quickstart to be updated after completion of Project 11
3. Guides to compostable packaging to be prepared after completion of Project 14

4.8 Project 6: Food service packaging

4.8.1 Summary

The food services sector uses one of the highest proportions of single-use packaging. The APCO working group reports for PCPB, EPS and biodegradable and compostable packaging included strategies targeting this sector to encourage reduction, reuse and recycling. This project will engage the food services sector to produce case studies and procurement and recycling guides to address single use, problematic/unnecessary and compostable packaging applications.

4.8.2 Objectives

- To encourage a reduction in the use of problematic and unnecessary packaging in the food services sector
- To assist businesses in the food services sector to reduce reuse, shift to more recyclable (mechanical and organics recycling) packaging and establish collection/recycling initiatives for packaging consumed on-site.
- Inform the food services industry of the key considerations when shifting to compostable alternatives

4.8.3 Deliverables

- Engagement workshops with stakeholders from across the supply chain and government
- Case studies that demonstrate successful outcomes (building on Project 13)
- Guidelines for packaging procurement and recycling in the food services sector

4.8.4 Details

Workshops with representatives from different sectors will be held with the aim of sharing information and seeking input to project design. Stakeholders include Quick Service Restaurants, shopping centre landlords (e.g. Westfield), event managers, food delivery business (e.g. Uber Eats), associations (e.g. Restaurant and Catering Australia and Australian Organics Recycling Association), organics recyclers, local councils and the packaging supply chain.

A literature review and stakeholder interviews will be used to identify best practice examples of reduction, reuse or recycling in food services, e.g.:

- Compostable packaging, including at large outdoor events, in food courts, universities, offices and quick service restaurants. The review would analyse a range of practices including elimination of non-compostable packaging (e.g. straws), use and performance of compostable food service packaging, waste collection systems, consumer engagement and feedback, and organics recycling and end markets
- Different systems for collection and recycling of coffee cups, e.g.
    - The Cleanaway/packaging manufacturer cup collection and sorting trial in Perth (Q1 2019)
    - Simply Cups e.g. 7-Eleven/Closed Loop cup collection and recycling (plastics stream)
    - RecycleMe™ Detpak/Shred-X/Australian Paper cup collection and recycling (paper stream)
    - Biopak composting programs with cafes and events
    - The Barangaroo development (Sydney) and their specification of compostable packaging

The literature review and interviews will inform the development of case studies and 'how to' guides that demonstrate different approaches, describe the entire material journey from consumption to production of end-products, and strategies for success. Collection and recycling case studies will include:

- How the initiative works
- Costs and benefits
- Consumer participation
- Contamination levels (liquids/other materials)
- Technical recyclability and end markets
- The extent to which they achieve highest potential resource value

- Lessons learned including opportunities for sharing infrastructure.

The case studies will target specific audiences, e.g. local councils, event managers, quick service restaurants, shopping centres (food courts), food delivery businesses etc.

4.8.5 Next steps

1. APCO to plan engagement workshops to scope and plan the project
2. Finalise project brief and funding source
3. Engage a consultant to undertake the project

4.9 Project 7: Compostable packaging label

4.9.1 Summary

Suppliers, recyclers and consumers are confused about the correct disposal of biodegradable and compostable packaging. This is aggravated by false or misleading claims, but there is also a general lack of awareness about the behaviour of different materials in organics recycling facilities, on land (e.g. as litter) or in the marine environment. This project will develop a new packaging label to advise consumers about appropriate disposal or recovery of certified compostable packaging.

4.9.2 Objectives

- Develop a consistent national labelling system to educate consumers about how to dispose or recycle their compostable packaging
- Reduce the amount of compostable packaging contaminating the material recycling stream

4.9.3 Deliverables

- A compostable packaging label integrated into the APCO Australasian Recycling Label (ARL) program (strategic deliverable)

4.9.4 Details

There is no consistent labelling system for compostable materials. Certified compostable materials can use the Australasian Bioplastics Association (ABA) seedling logo, but this is not designed to educate consumers about end of life disposal or recycling. The ARL does not yet cover compostable packaging.

This project will be informed by other activities including processing trials (Project 14) and a new Australian Standard for *Labelling of plastics which can be processed in microbial treatment*, which is currently being prepared with the support of the National Retail Association (NRA) and the Australian Bioplastics Association (ABA). APCO will seek to support their work and ensure it is adequately communicated to the whole supply chain.

Similar work is being undertaken elsewhere, e.g. the Bio-based and Biodegradable Industries Association (BBIA) in the UK is working on a product labelling scheme. One option for Australia is to extend the ARL to include compostability (e.g. How2Compost in the US)[3].

Other initiatives that could be considered include:

- A consistent colour for acceptable bags in FOGO collections. A bright green colour is already accepted by some councils and organics recyclers, and a specific pantone colour could be identified and promoted. A similar initiative was implemented by Seattle Public Utilities in the US

[3] http://www.how2compost.info/

- Bin labelling and signage to encourage correct source separation.

The project will involve extensive stakeholder engagement to seek agreement on consistent labelling on packaging, FOGO bags and collection bins and signage. It will learn from case studies (Project 6), e.g. on consumer recycling behaviour, levels of contamination and best actions to engage consumers.

The packaging labelling system would need to be supported by a consumer education campaign, which could include identification and recovery of compostable plastics as well as the broader challenge of contamination in organics collections.

4.9.5 Next steps

1. APCO to hold consultative meetings with key stakeholders including the Australasian Bioplastics Association (ABA), the Australian Organics Recycling Association (AORA), the Australian Food and Grocery Council (AFGC) and government (including the Australian Competition and Consumer Commission (ACCC)) to seek their input to the project
2. APCO to consult with international partners on their experience with composting labels (e.g. US) or planned initiatives (e.g. UK)

4.10. Project 8: Recycled content label

4.10.1 Summary

One of the national packaging targets is *30% average recycled content will be included across all packaging by 2025.* This project will develop recycled content labelling capacity within the APCO labelling program. Consumer research will be undertaken to understand consumer perceptions of recycled content in packaging as well as labelling options.

4.10.2 Objectives

- To develop a standard labelling system that indicates the percentage of recycled content in packaging
- To improve consumer awareness about the use of recycled material in packaging
- To encourage brand owners to use more recycled content in packaging

4.10.3 Deliverables

- A recycled content packaging label integrated into the APCO Australasian Recycling Label (ARL) program

4.10.3 Details

At present there is very little transparency about the use of recycled content in packaging. The 30% national packaging target will encourage packaging suppliers and brand owners to find out how much recycled content they currently use, and to increase this to the optimal level.

This could be supported by a national recycled content packaging label to inform and engage consumers.

There is no standard label at present apart from the variation of the Mobius loop that contains a number showing the percentage of recycled material (see ISO 14021), but this is not commonly used. Some brand owners include a statement about recycled content on their packaging or in other marketing material.

4.10.4 Next steps

1. APCO to hold consultative meetings with key stakeholders including brand owners, packaging manufacturers, recyclers, government (including the ACCC) to seek their input

2. APCO to consult with international partners on their experience with recycled content labels or planned initiatives.

4.11 Project 9: Life cycle assessment guide

4.11.1 Summary

APCO has received feedback from Members that they would like more guidance on life cycle assessment (LCA) approaches for packaging. The project requires further consultation to identify the most appropriate tools or other resources to meet Member needs. Opportunities include a database of existing packaging-related LCAs and/or a high-level guide to use and interpretation of LCAs.

4.11.2 Objectives

- To promote the use of LCA and other life cycle thinking tools to support the design or procurement of sustainable packaging
- To assist Members to understand which life cycle thinking tool is most appropriate to meet their particular needs

4.11.3 Deliverables

- LCA resource developed for Members

4.11.4 Details

Member needs for LCA resources will be determined through further consultation, but could include:

- A database of existing (public) LCAs that provide generic information, e.g. on the impacts of different materials
- A guide to LCAs including how to interpret them, what they can tell you, what they don't cover, when you might consider commissioning an LCA, available tools (PIQET, SimaPro, Gabi, Ecodex etc).

4.11.5 Next steps

1. APCO to invite Members and LCA practitioners to a workshop in April that would:
    - Share information on available tools
    - Share the experiences of Members who have used LCAs, and lessons learned
    - Seek their input on the most appropriate tools or resources for APCO to develop
2. Consolidate feedback to inform approach and gauge costs

4.12 Project 10: National Consumer Education Campaign

4.12.1 Summary

The aim of this project is to develop a consistent national approach to consumer education on reducing, reusing and recycling packaging. Consumer engagement and education will be vital to achieve increased recycling rates and reduced contamination in recycling and composting systems. The 2018 Working Groups recognised that for consumer education to be successful, consistent messaging is required from all organisations and institutions.

4.12.2 Objectives

- Reach agreement between key industry and government agencies on the need for consistent messaging on recyclability and the best approach to achieving this
- Work in collaboration with Project 4 to guide consistency of messaging
- Support the ARL by extending recyclability messaging to away from home recycling, reduction and reuse behaviours.

4.12.3 Deliverables

- Consumer research – to gather information gaps and track consumer behaviours towards reducing, reuse, recycling and the ARL.
- A research paper on proposed common messaging to be used by all brands, waste industry, NGOs, government, etc.
- A lead organisation/institution selected to monitor consistent recyclability messaging
- A national consumer education campaign to educate consumers on the purpose/benefits of packaging, how to consume responsibly and how to 'recycle right'.

4.12.4 Details

Three categories of messaging have been identified:

- Responsible consumption – avoiding single use packaging where possible and the environmental benefits of avoidance (reduce and reuse)
- The purpose and benefits of packaging – educating consumers of the role packaging plays in reducing food waste, protecting products and ensuring accessibility
- How to 'recycle right' – supporting the ARL for consumer packaging and extending to away from home recycling. This will also be vital for educating consumers on the recovery of certified compostable packaging.

This project will entail engagement across industry, government, NGOs and communities to research previous education campaigns on recycling, identify existing or planned communication campaigns and develop a strategy/proposal for a national campaign.

4.12.5 Next Steps:

1. In principle funding commitments and stakeholder participation commitments obtained from interested parties

4.13 Project 11: Analysis of recyclability of problematic packaging formats

4.13.1 Summary

To support the ongoing accuracy of the Packaging Recyclability Evaluation Portal (PREP) trials will be undertaken to determine the ability of problematic packaging materials to be correctly sorted and recovered through Material Recovery Facilities (MRFs). This will be done in consultation with the waste and recycling sector to identify any issues that prevent particular items from being effectively separated and recovered. This will inform recyclability thresholds and parameters to be included in the PREP tool and in turn, inform design changes to ensure packaging is recycled.

4.13.2 Objectives

- To engage with the waste and recycling sector to reach agreement on how to improve the recyclability of specific packaging formats through changes in design or sorting processes

4.13.3 Deliverables

- Stakeholder agreement on issues impacting material sorting in MRFs, for example polymer coated paperboard (PCPB) and glass (linking to material format, size, rigidity, labelling etc).
- A series of trial reports on recyclability parameters and thresholds for key problematic packaging materials. Materials to be selected by the Technical Advisory Committee in collaboration with APCO Members and the waste and recycling Sector.
- Design guidelines for problematic packaging materials reflect the results of the trials.

4.13.4 Details

To continue to develop industry understanding on the behaviour of packaging through the Australian waste and recycling system, trials need to be undertaken on packaging materials and formats that are considered problematic from a recycling perspective. This is also vital to allow APCO, through the TAC, to evaluate new and emerging packaging materials and their impact on recyclability. Collaboration is key to understand each sector's barriers and opportunities and ensure transparent dialogue to inform investment decisions in design and recycling technology.

The APCO Material Flow Analysis (MFA) report[4] recommended better data describing MRF operating efficiencies for individual material streams to inform a priority strategy for investment and/or clarify the extent to which diverting kerbside collections to CDS collections is beneficial.

Specific issues to be addressed in response to the work of the 2018 Working Groups are outlined below for glass and polymer coated paperboard (PCPB).

Glass

Fixed labels, particularly those that cover a high percentage of the container, inhibit crushing and colour sorting. Some brand owners, e.g. in the pharmaceutical sector, are limited in the changes that they can make due to regulatory requirements for labelling and concerns over counterfeiting in international markets.

The project will involve:

1. Research into the current fate of different types of glass packaging in Australia (e.g. pharmaceutical grade), including the impact of labelling on sorting and recycling
2. Research into alternative packaging designs, labelling and adhesive technologies that may improve recovery rates
3. Research into alternate contaminant scanning technology in MRFs to support improved sorting and recovery of glass with labelling
4. Recommendations for packaging design and labelling systems to increase recovery, including alternate label and adhesive technologies that meet design, marketing, regulatory and brand specifications, to be incorporated in the SPG Quickstart for glass

PCPB

In combination with Project 12, the aims of this project are to:

- gain a better understanding of the behaviour of PCPB packaging in the recovery chain (where the different formats end up e.g. mixed paper, corrugated containers, plastics, steel, aluminium), and how contamination of different streams with PCPB affects cost and value
- reach agreement on the design parameters and thresholds that would enable PCPB to be recovered with the paper stream (locally and exported).

The project design will be finalised in consultation with MRF operators and paper mills. This will include identifying the different MRF technologies (including the new Cleanaway MRF in Perth) and the equipment required to adequately sort these materials.

4.13.5 Next Steps:

1. APCO to engage with key recycling industry associations to reach agreement to collaborate

[4] Institute for Sustainable Futures (2019), Characterising the material flows through the Australian waste packaging system, Report to APCO, Sydney

2. APCO TAC and Systems and Education Working Group to prepare a more detailed project brief on initial problematic packaging materials to be tested
3. Reach agreement on scope and funding arrangements for trials
4. Engage a consultant to manage the trials and prepare a report on outcomes
5. Update all APCO resources to incorporate learnings, including the Sustainable Packaging Guidelines and PREP.

4.14 Project 12: Pulpability trials

4.14.1 Summary

This project involves a series of trials to investigate the pulpability (percentage of fibre recovered) of current and emerging types of fibre packaging. It was identified by the Working Groups and Technical Advisory Committee for PREP as a priority due to the lack of industry agreement on the recyclability of many fibre-based packaging products, including coffee cups, liquid paperboard containers, composite cans and newly emerging non-wood fibre packaging. An increased understanding of paper packaging recycling is vital as we see a shift in the market away from plastics and need to ensure that paper alternatives are sustainable.

4.14.2 Objectives

- Establish an agreed industry threshold for pulpability to inform design for recycling for fibre-based packaging
- Gain an increased understanding of the impacts the following items have on paper recycling:
    - Non-wood fibres (bagasse, wheat straw, etc)
    - Polymer linings (polymer type, thickness and single vs double linings)
    - Wet strength additives or other
    - Food and oils/grease residue
    - Inks, glues or other adhesives
- Reach Industry agreement on design guidelines for fibre-based packaging
- Inform consumer education on best practice recycling for fibre-based packaging.

4.14.3 Deliverables

- Pulpability and contamination thresholds added to PREP to inform the recyclability classification of fibre-based packaging – informing the ARL and consumer education
- Agreement on the design parameters for key fibre-based packaging formats to be considered recyclable, integrated in the SPG Quickstart for PCPB

4.14.4 Details

This project will build on related trials that will take place in early 2019, including:

- A coffee cup recycling trial in Perth with Cleanaway and Grinders to determine the behaviour of coffee cups in a MRF and the impact of the materials on the export market for mixed paper
- Detpak's RecycleMe™ coffee cup project with Australian Paper, which is seeking to recycle coffee cups into other paper products in Australia

APCO will complete a literature review of global approaches to paper recycling. APCO will engage international and local paper mills or institutes to identify the most appropriate pulpability testing protocol to determine the percentage of fibres that must be recovered for a packaging item to be considered recyclable. Independent lab testing will need to be undertaken in addition to research by packaging manufacturers.

The project report will be disseminated to all interested industry sectors and stakeholders. The outcomes will inform the recyclability parameters in PREP (ultimately informing the ARL), packaging design guidelines for industry, and priorities for industry and government investments in MRFs and paper mills.

4.14.5 Next Steps

1. APCO to complete consultation with local industry experts and global stakeholders investigating similar issues
2. APCO to collaborate with the paper recycling sector to develop the project brief
3. In principle funding commitments obtained from interested parties

4.15 Project 13: Packaging supply chain training

4.15.1 Summary

The aim of this project is to improve awareness in the packaging industry about the packaging recycling ecosystem and promote greater collaboration between the packaging and recycling sector. It builds on an existing training program offered by the Australian Institute of Packaging (AIP). The training will provide brand owners with strategies to improve the recyclability of their packaging, including ways to influence their packaging suppliers.

4.15.2 Objectives

- Phase 1 will aim to improve industry awareness and understanding of packaging recyclability and promote greater transparency and collaboration between the packaging supply chain and the recycling industry.
- Phase 2 will aim to educate industry on packaging sustainability more broadly, including using renewable resources, incorporating recycled content, optimising size, etc.

4.15.3 Deliverables

- Training models to be delivered through the AIP to support the use of the Packaging Recyclability Evaluation Portal (PREP), Australasian Recycling Logo (ARL), Sustainable Packaging Guidelines (SPG) and the Packaging Sustainability Framework (PSF)
- A plan for additional training on packaging sustainability for the packaging supply chain to be delivered by APCO and key partners

4.15.4 Details

The project will involve:

Phase 1: Training needs analysis

- Stakeholder engagement (APCO/AIP and Members) to confirm training needs
- Confirm appropriate delivery organisation(s)
- Confirm appropriate delivery mechanisms, e.g. short courses, face to face or on-line webinars (e.g. the Sustainable Packaging Coalition in the US provides both face-to-face and on-line modules)

Phase 2: Implementation

- Prepare training materials
- Promote to target audiences including a range of staff in manufacturing companies and importers (product development, procurement, marketing etc)
- Rollout the training program(s)

Phase 3: Evaluation

- Evaluate feedback from participants and redesign the training course as required

4.15.5 Next Steps

1. APCO to survey Members on the training needs
2. APCO to reach agreement with AIP and any other applicable stakeholders on roles and responsibilities
3. APCO to approve curricula and training materials
4. APCPO to ensure industry engagement and ongoing review of content

4.16 Project 14: Models for the phase out of single-use plastics

4.16.1 Summary

Building on the Plastic Free Communities work completed by Boomerang Alliance in Noosa (QLD), Byron Bay (NSW) and Bassendean (WA), APCO is seeking to co-deliver a model for communities and local councils to support the phase-out of problematic and unnecessary single-use plastics. This project will facilitate the appropriate shift away from single-use plastics by ensuring all stakeholders are informed of the most sustainable alternatives, are engaged and educated on the process and are tracking their achievements to articulate their contribution to the National Packaging Targets.

4.16.2 Objectives

- Reduce the environmental impact of plastic packaging by delivering a methodology that guides communities to phase out problematic and unnecessary plastic packaging
- Demonstrate clear outcomes by ensuring data collection and monitoring progress in phasing-out single-use plastic items in communities
- Ensure that alternative delivery methods or packaging formats used by communities and businesses do not result in adverse environmental impacts.

4.16.3 Deliverables

- A methodology/model for the phase out of single use plastics in Australian communities
- Data collection and monitoring framework for tracking the elimination of problematic and unnecessary packaging.

4.16.4 Details

A three-year funded Plastic Free Places program, including working with identified communities in all States and Territories will include:

- Direct engagement with cafes, food outlets, markets and key events
- Advice, materials and direction to switch practices
- Involving key stakeholders (government, business and community organisations) in each community
- Profiling in media and social media
- Collection of data on performance to articulate and track impact
- Establishment/expansion of relationships with packaging manufacturers, distributers and the waste collection industry
- Maintaining dialogue with Commonwealth and State Governments
- Achieving and reporting on reductions in single-use plastics annually

- Consolidating the program, behaviour and practice changes and adding other identified sectors with likely significant disposable single use plastics footprints (eg. restaurants, hotels and other accommodation, schools and other institutions)
- Adding other problematic plastic packaging to the program (as agreed by partners)
- Trialling and proving collection services for products from target sectors
- Establishing regional commercial composting services accessible to each community
- Producing a comprehensive resource guide for other communities to replicate and ensure consistency across Australia.

4.16.5 Next Steps

1. Agreement finalised with Boomerang Alliance
2. Scope, roles and deliverables confirmed with all involved parties
3. Set up of program Q2, 2019

4.17 Project 15: Composting trials

4.17.1 Summary

The aim of this project is to demonstrate that certified materials can be successfully processed in various types of organics processing facilities in compliance with relevant Australian standards (Industrial Composting Australian Standard AS 4736–2006) and regulations. Processing trials will provide the organics recycling industry with the confidence it needs to accept these materials in their facilities.

4.17.2 Objectives

- Demonstrate that certified compostable packaging can be successfully processed in organics recycling facilities in Australia
- Facilitate a transparent dialogue between the packaging industry and the organics recycling industry to build trust and acceptance of acceptance of certified compostable packaging
- Identify and address any restrictive government regulations and exemption
- Inform design guidelines for compostable packaging

4.17.3 Deliverables

- Data on the compostability of all types of certified compostable packaging material types in the most common organics recycling processes in Australia
- A model/test protocol that could be duplicated in other jurisdictions if required.

4.17.4 Details

- Stage 1: A literature review and stakeholder consultation will identify all of the available organics recycling technologies and their combinations, as well as relevant regulations, standards, test protocols and emerging issues (e.g. PFAS chemicals in take-away food packaging). Research will also identify the main compostable material categories that will need to be tested. The results of previous biodegradation and composting trials in Australia and overseas will also be reviewed to inform the trial design. The testing protocol will be developed in consultation with all state and territory jurisdictions to ensure that all relevant regulatory issues are considered.
- Stage 2: Using the test protocol, a range of certified compostable packaging materials will be tested at organics recycling facilities representing the major processing technology categories and combinations. Testing will cover both physical degradation and chemical compounds remaining in end products. Data will be collected to support the inclusion of compostable packaging in organics applied to land.

Testing could be undertaken in NSW as all variations of organics processing facilities are available within a 200km radius of Sydney and NSW also has the most restrictive regulations for organics applied to land. Tests could simultaneously be undertaken in other states, depending on interest from the relevant government agencies and industry stakeholders. Testing will take around 6 months, with each one lasting at least 12 weeks as aligned to the standards (more time may be required). The protocol will be reaffirmed or adapted based on the results.

- Stage 3: A communications campaign will be developed to disseminate the results to organics recyclers, environmental regulators and other key stakeholders.

We note that there are several other projects currently underway that will inform this project including: the South Australian trial of compostable produce bags at supermarkets & NSW EPA/CSIRO research into the behaviour of differing compostable bags through FOGO.

4.17.5 Next Steps

1. APCO to engage with Australian Bioplastics Association (ABA), Australian Food and Grocery Council (AFGC) and Australian Organics Recycling Association (AORA) on the scope, project design and roles/responsibilities
2. APCO to investigate similar international initiatives (EU,UK and USA)
3. APCO to consult with the organics industry at AORA conference in May
4. Confirmation of funding and lead organisation

4.18 Project 16: Regional model for soft plastics recycling

4.18.1 Summary

Regional collaborations between businesses, local council, schools and communities are an effective way to build local engagement, end markets and processing capacity. The benefits can include:

- reduced transport costs by processing waste materials locally rather than sending them long distances to recyclers, and by selling the manufactured products to local organisations, e.g. local councils and large organisations in the region
- stronger commitments from organisations to 'buy recycled' if they know they are supporting local development and jobs
- community engagement and education across all ages

This project involves working with Plastic Police®, a program developed by Cross Connections, to evaluate and promote a regional collection and market development model for soft plastics. Plastic Police® is currently operating in the Hunter Region of NSW and in 2019, will be running a small pilot engagement project with the support of NSW EPA. The EPA-funded project allows for further expansion of the program, following the success of initial trials and the development of the program over the past 3 years.

The high level of interest from stakeholders and new processing facilities announced or in the planning stage in the Hunter Region, provide an opportunity to evaluate and trial alternative markets for soft plastics. This knowledge will help to inform market development and infrastructure initiatives for soft plastics.

4.18.2 Objectives

- Provide support to Cross Connections and program participants /stakeholders to evaluate and report on the program outcomes
- Provide an opportunity for this program to be deployed in other regions if applicable

- Support development for regional recycling of soft plastics

4.18.3 Deliverables

- An evaluation report on the program's outcomes and relevance to other regions and materials
- A documented model that if proven to be viable will be promoted to local councils and other stakeholders across Australia

4.18.4 Details

Phase 1: Project design

- Agree project scope and secure project partners and funding

Phase 2: Research and evaluation

- Document and evaluate the results of the Plastic Police regional model: its outcomes, strengths, and comparison with other traditional models
- Investigate opportunities to expand the program model in other regions (metropolitan and non-metropolitan)

Phase 3: Dissemination

- Promote project results through publications and events in collaboration with stakeholders
- Hold targeted events in other regional areas with a strong interest in adapting the approach to meet their own needs.

4.18.5 Next Steps

1. Confirm project objectives and scope
2. Identify project partners

4.19 Project 17: Remote/regional waste collection partnerships

4.19.1 Summary

A collaborative approach to addressing the significant waste and resource recovery issues faced by regional and remote Australian local councils.

4.19.2 Objectives

- Assist in improving the low recycling rates in regional and remote Northern Australia
- Facilitate collaboration between local governments, businesses and communities to identify opportunities

4.19.3 Deliverables

- Workshop to identify practical solutions to the problems of waste collection and processing in Northern Australia and regional areas

4.19.4 Details

Facilitate a workshop on packaging and other waste collection systems in remote and regional areas in Northern Australia. The workshop would be held in a Northern Australian location e.g. Darwin or Townsville in 2019.

The workshop would focus on identifying practical solutions to the problems of waste collection and processing in Northern and regional Australia through a collaborative forum with government, product stewardship and waste management organisations and local industry.

The workshop output would be a small number of proposals for manageable projects that aim to involve stakeholders in working towards possible solutions. It is expected that the project proposals would address matters such as:

- Opportunities and barriers to solid waste collection, aggregation and reverse logistics
- Opportunities and barriers to recycling, composting, reuse and end use of waste materials in remote and regional areas
- Support for local government, business and community-led programs such as phase-outs of single use plastics
- Pilot projects to trial identified solutions

4.19.5 Next Steps

1. Confirm project objectives and scope
2. Identify project partners

4.20 Project 18: Government procurement of recycled products

4.20.1 Summary

The aim of this project is to encourage and support federal, state and local government agencies to invest in buy back arrangements for recycled products. Increased collection and recycling of materials will require support from government agencies and other large organisations through their procurement of recycled products.

4.20.2 Objectives

- Support and encourage government procurement by providing agreed definitions, guidelines and product information
- Support local innovation and manufacturing for recycled packaging materials

4.20.3 Deliverables

- Guide on buying recycled products
- Technical information on recycled products

4.20.5 Details

Two of the 2018 Working Groups (glass and soft plastics) identified this as a priority. While the intention is for this project to focus on government procurement of recycled products in general, initial proposals for glass and soft plastics are outlined below.

Glass

The NSW EPA is currently working with Roads and Maritime Services on options for the use of recycled glass in various road layers. There is significant scope for the government to act as a leader in glass sand procurement, with action filtering through to councils and through the supply chain. Government can play a role in connecting the supply chain and ensuring collaboration occurs, leading to a high-quality supply to meet growing demand.

APCO will support and encourage government procurement of engineered glass products by working with partners in local, state or the federal government. This will include a partnership with the NSW EPA to share their approach to glass procurement and the outcomes of the EPA/RMS project with other jurisdictions.

The use of recycled glass in building and construction can support sustainability programs linked to Green Star, NABERs and the Infrastructure Sustainability Council of Australia (ISCA) rating systems.

Phase 1: Project design

- Engage with stakeholders in government and the glass recycling industry to confirm the project objectives, scope and approach

Phase 2: Background research

- Develop a database of products that could utilise recycled glass
- Identify policies within federal, state and territory government agencies that align with this project by promoting or requiring procurement of recycled materials (e.g. waste, circular economy, sustainable procurement etc)

Phase 3: Partnership projects

- Promote existing procurement initiatives in government (e.g. the NSW EPA/RMS project and similar work on other states), for example through workshops and case studies
- Identify partners in government that would be interested in collaborating to increase procurement of recycled glass by:
    - Identifying potential sources of demand for engineered glass products
    - Integrating a preference for recycled products in procurement processes
    - Engaging relevant staff (procurement, engineers etc) and seeking their input

Phase 4: Dissemination

- Share the outcomes of the project through regular workshops, participation in local government and procurement conferences, and published case studies.

Soft plastics

Phase 1: Research

Research will be undertaken to:

- Identify the range of existing products and end markets that utilise recycled soft plastics, particularly 'problematic' formats such as multi-layer laminated materials that cannot go back into packaging. This will include a review of previous/current trials, e.g. for soft plastics in roads
- Identify any research already being done by government agencies to support increased procurement of recycled products identify opportunities for government organisations to collaborate with supply chain partners and recyclers to innovate and develop products with recycled content
- identify barriers to procurement that need to be addressed in specific product applications, e.g. through restrictive standards
- consider alternative financial models that consider life cycle costs, e.g. timber pathways have a much shorter lifespan that recycled plastics, and plastics in asphalt extend the life of roads.

Phase 2: Integrate in procurement

- Knowledge sharing: disseminating the results of Phase 1 through procurement networks and associations

Phase 3: Dissemination

The outcomes will be promoted through written case studies and events, with key government and institutional networks

4.20.6 Next Steps

1. APCO to engage with government on objectives, scope and APCO role
2. APCO to explore links to other state level activities – ownership of resources (council contracts), National Waste Policy, State government procurement groups.

4.21 Project 19: Supply chain procurement of recycled plastic products

4.21.1 Summary

This project will support and encourage procurement of recycled products and materials within the packaging supply chain by undertaking research and pilot projects. It will support the national packaging target of *30% average recycled content across all packaging by 2025*, although the aim is to promote the purchase of any product containing recycled packaging. APCO and its Members can play a strong role in promoting end markets for recycled packaging through both 'closed loop' initiatives (back into packaging) as well as general procurement. The initial focus is on plastics, particularly soft plastics and mixed plastics.

4.21.2 Objectives

- Identify products that could potentially include recycled content or an increase in recycled content
- Facilitate partnerships across the packaging value chain to support sustainable local or global technologies; working with them to innovate and incorporate recycled material

4.21.3 Deliverables

- Workshops and industry consultation on collection and recycled content opportunities
- Case studies with APCO Members on procurement of recycled plastic products

4.21.4 Details:

Phase 1: Research

Research will be undertaken to:

- Identify the range of existing products and end markets that utilise recycled soft plastics, particularly 'problematic' formats such as multi-layer laminated materials that cannot go back into packaging. This will include a review of previous/current trials.
- Identify any research already being completed by industry or government to support increased procurement of recycled packaging/products. Identify opportunities for collaboration with local manufacturers, supply chain partners and recyclers to innovate and develop products with recycled content.
- Identify barriers to procurement that need to be addressed in specific product applications, e.g. through restrictive standards

Phase 2: Integrate in procurement

- Knowledge Sharing: Disseminating the results of Phase 1 through APCO Membership, key stakeholders in the value chain, procurement networks and associations

Phase 3: Dissemination of information

The outcomes will be promoted through written case studies and events. Case studies will include detailed information on collection systems, recycled products, and how they are being used within organisations. The products identified in this project will also be shared through Project 21.

Existing examples include Plastic Police, where businesses report monthly on what they collect and what they buy back as recycled products, KFC's partnership with Closed Loop, Coles and Woolworths buying back products through REDcycle, and Kathmandu's use of recycled PET in clothing.

4.21.5 Next Steps

1. APCO to gather input from key stakeholders e.g. REDcycle, Plastic Police, Plastic Forests, Close the Loop, Newtecpoly etc to have input to the project brief
2. APCO to engage with plastic recyclers to identify a range of existing products that utilise recycled plastics
3. APCO to complete project brief and obtain commitments from interested parties

4.22 Project 20: EPS collection and end market pilot

4.22.1 Summary

Expanded Polystyrene Australia (EPSA) is working with waffle pod manufacturers and local councils in Melbourne to develop a project that involves:

- Aggregation of EPS at local council resource recovery centres
- Collection by manufacturers after deliver of products, i.e. back loading, to optimise transport efficiency
- Local re-use of collected EPS in waffle pod manufacturing.

Several waffle pod manufacturers are interested in using recycled content EPS in their products. This is a new market with the potential to absorb significant quantities of clean EPS. If successful, the pilot could be extended to other cities.

4.22.2 Objectives

- Increase local end markets for recycled EPS in the building industry
- Increase recycling rates for EPS through collaboration between local councils and EPS manufacturers

4.22.3 Deliverables

- Report on the outcomes and learnings from the Melbourne pilot
- Create an implementation strategy to deliver the model in other metro areas

4.22.4 Details

The Melbourne trial is being developed through collaboration between EPSA and the Metropolitan Waste and Resource Recovery Group (MWRRG). The project will involve:

- Phase 1: Project design – participating local councils and manufacturers confirmed; project plan, budget and funding finalised
- Phase 2: Implementation of the trial over 6 months
- Phase 3: Dissemination - results documented in a case study for dissemination to key stakeholders

4.22.5 Next Steps

1. Confirm EPSA and APCO partnership
2. APCO, EPSA and MWRRG to finalise project brief with key stakeholders
3. Obtain commitments from interested parties

4.23 Project 21: SPIRIT – Sustainable Packaging Information and Resource Interactive Terminus

4.23.1 Summary

The intention of the SPIRIT is to provide industry with a resource to help them identify packaging formats that are made with sustainable materials, including recycled content, or that provide a more sustainable alternative to single-use plastics. This will help to drive end markets for recycled products and educate the supply chain on the available options to support a more circular economy.

4.23.2 Objectives

- Assist the packaging supply chain to identify packaging made from sustainable materials and alternatives to single-use plastic packaging
- Identify products manufactured from recycled packaging materials to drive local end markets

4.23.3 Deliverables

- Online access that allows industry and government to search for sustainable packaging options
- Industry education on the opportunity to improve the sustainability of their packaging or purchasing choices.

4.23.4 Details

- The format of this project could include an interactive online marketplace that displays:
- packaging that has been evaluated as 'recyclable' through PREP
- compostable packaging that has been certified compostable against an accepted industry standard (linked to certification details)
- packaging containing recycled content
- products manufactured from recycled packaging materials
- alternatives to single-use plastics (e.g. reusable, compostable).

Initial steps will involve a desktop audit and literature review of other similar platforms that are available and analyse their costs and benefits. This project will be dependent on information gathered from Projects 6, 14, 18 and 19.

4.23.5 Next Steps

1. APCO to initiate desktop audit and engage key stakeholders

4.24 Project 22: Innovation Hub

4.24.1 Summary

This ongoing project will drive innovation to assist the transition to a circular economy for packaging in Australia. APCO will support innovation by monitoring and sharing new developments and opportunities and by collaborating with research and development organisations.

4.24.2 Objectives

- To identify and disseminate information on innovative technologies and business models that reduce the environmental impacts of packaging through design, reuse or recovery
- To support innovation by collaborating with research organisations and businesses directly contributing to this objective

4.24.3 Deliverables

- Collaborative projects with research organisations (e.g. UNSW Sustainable Materials Research & Technology (SMaRT) Centre) and global partnerships (e.g. Ellen Macarthur Foundation)
- A 2019 event to identify innovations in materials, business models or recovery technologies and discuss how they could be implemented in Australia

4.24.4 Details

The scope of this project will include:

- Consideration of a partnership with the UNSW SMaRT Centre to link Members with research on new processing technologies and end markets for problematic packaging materials
- Engagement with key stakeholders to identify innovative technologies or solutions that are not generally well known
- A 2019 event to share local and international innovations with potential application in Australia

4.24.5 Next steps

1. APCO to consult with research organisations and government agencies that support innovation to identify existing initiatives and R&D projects