Opportunities in the circular economy

Ai Group submission to the Productivity Commission

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Executive Summary

Ai Group welcomes the opportunity to respond to the Productivity Commission's inquiry into Australia's opportunities in the circular economy (CE).

Australia has great potential to implement and benefit from CE. However, there are also significant logistical and societal challenges to overcome for the benefits to be fully realised.

Key messages from our submission include:

- CE principles have existed for some time and businesses do not always think of their activities in this context.
- Suitable metrics will need to suit the context of the products/materials.
- Previous work on product stewardship should be leveraged while key stakeholders are engaged, and momentum is present.
- A number of challenges to implementing CE exist.
- Policy cohesion is key to governments enabling CE and driving change.
- The role of consumer education cannot be understated, as without consumer demand CE products and services being implemented will not succeed.

Circular economy success stories and measures of success

Comments on member activity

Companies have been implementing CE strategies for some time without focusing on the label. This includes:

- manufacturers and brands that have authorised repairers and supply replacement parts
- vehicle brands that have service divisions or manufacture genuine parts for repairers
- retailers and brands that participate in product stewardship
- food manufacturers that use recyclable packaging and recycled content in packaging
- diverting co-product from end-of-life (EOL) pathways to new value-added product manufacture
- servitisation models such as equipment hire companies, on-demand digital services and ride-share companies.

More members have begun to implement CE in various ways depending on their business type.

One packaging manufacturing member has removed colourants from their bakery product range to make it more recyclable. They acknowledged that they expected the phase out of colourants and chemicals such as carbon black will be a part of doing business, as we progressively improve our resource recovery efforts.

Another packaging member leases business-to-business (B2B) packaging to companies, receives their packaging back, washes, sanitises and pallets them for shipment out to the next customer. Any of their packaging that is too damaged to repair is sent for recycling into new packaging for their system.

Other members are diverting unsalable, edible food products to food rescue organisations, rather than sending them to EOL treatment or using reusable packaging solutions in B2B situations.

Metrics

Metrics will range depending on the nature of the material and its possible diversion pathways.

Organic products could be measured by volume or weight diverted from lower-order outcomes – such as landfill or composting - to higher-order outcomes – such as food donation or co-product use – dependant on where in the supply chain the material arises.

While material diverted from landfill is currently used for technical materials – inorganic products that are used rather than consumed - we could become far more nuanced in our approach. [1] Metrics for technical cycles should also consider material efficiency, energy efficiency, repairability.

1 Ellen MacArthur Foundation, The technical cycle of the butterfly diagram, May 2022, https://www.ellenmacarthurfoundation.org/circular-economy-diagram, accessed 01/11/2024

One way to assist in achieving metrics around technical products could be digital product passports, but this will need significant uplift in traceability understanding and process implementation, as well as significant investment in all businesses along the supply chain.

For all products, there will be social benefits to diverting them from EOL treatment to higher-order outcomes. These benefits are not easy to directly measure and – much like societal benefits from emissions reduction – there will be less certainty to the figures.

Priority opportunities to progress the circular economy

Packaging reform

The federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) has recently consulted on their proposed options for reform of packaging regulation. This category is inherently skewed to single-use due to its primary purpose being the protection of products.

If Australia can get the reform process and resultant system right, we would be able to increase our circularity for this category immensely. There are challenges that any reform will face, and the system will need to be both ambitious and realistically achievable and implementable.

Product Stewardship for electronic and electrical goods

DCCEEW has previously been working on a national product stewardship scheme for small electrical and electronic equipment (SEEE), as well as small-scale solar items, which stakeholders from all aspects of the product lifecycle were engaged in.

SEEE is a source of valuable materials – including precious metals and various minerals – as well as problematic ones, such as plastics that contain necessary but difficult to recycle fire retardants.

The previous work by DCCEEW should be leveraged to introduce product stewardship for SEEE while stakeholder goodwill and momentum are still present.

International developments – modular building and deconstruction

Recycling – and to an extent reuse – of construction and demolition waste already occurs in Australia at the highest rate of any stream.[2]

Modular construction (or prefabrication) is one method being used overseas – and to an increasing degree in Australia – to approach the challenge of reducing the waste generated and embodied carbon in built environments,[3] as well as addressing other supply chain and social issues. In modular construction components or sections of building are manufactured to specification off-site and are assembled on-site.

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[2] The Department of Climate Change, Energy, the Environment and Water, Blue Environment Pty Ltd, National Waste Report 2022, accessed 1/11/2024

[3] T Forman, F Pomponi and R Saint, 'Extended abstract: A Streamlined Assessment of Whole Life Embodied Carbon in The Valentine, Gants Hill, Redbridge, UK & Ten Degrees, George Street, Croydon, UK', September 2021, accessed 1/11/2024

The use of precision machinery in fabricating these buildings means they are more material efficient and generate less waste in the construction phase.

Deconstruction is also being implemented as a way to minimise material sent to resource recovery. Deconstruction requires businesses to disassemble buildings in a way that minimises damage to the components so they may be reused in the same form. It uses more manual labour than demolition, but also yields more reusable materials.

Hurdles and barriers to a circular economy

Lack of detailed knowledge

Many businesses, particularly small-to-medium enterprises (SMEs), lack the inhouse expertise to contextualise circular economy for their business.

Certain concepts within CE may be easier for them to apply to their situation – such as material efficiency which can generate cost savings, in reducing waste sent to treatment or landfill.

Other CE concepts – such as servitisation of products – are complex and need time and investment to initiate and implement successfully.

Lack of customer demand

Businesses looking to implement more circular business practices can find that while public sentiment is supportive of CE principles, customer demand is not sufficient to sustain a change in business model.

Europe has several companies that lease consumer electronics to general consumers, rather than selling them. This includes products such as mobile phones, headphones and laptops.[4] This has become one way of enabling customer access to newer, more expensive technologies, where they would otherwise be out of reach.

Companies have attempted to replicate this model in Australia in the past, only to find customers were not subscribing in large enough numbers to make the model viable for the long-term.

Potential for regrettable substitution

Some companies are looking to eliminate problematic chemicals from their products as part of their strategies for better environmental outcomes. This is not always straightforward, due to the technical requirements the current chemicals fulfill.

As an example, per- and polyfluoroalkyl substances (PFAS) as a class of chemicals has a diverse range of uses, including:

- grease proofing packaging

[4] Grover Österreich GmbH, 2024, https://www.grover.com/at-en/audio-and-music/headphones - accessed 1/11/2024

- personal protective equipment for high temperature applications
- weatherproofing outdoor wear

Many global companies have been working to eliminate PFAS and other problematic chemicals from their applications.

Without sufficient time to thoroughly research and develop alternatives, they run the risk of changing to chemicals that may end up being no better – or even worse – for the environment and human health than the current chemicals.

Access to and uptake of recycled content (RC)

There are many barriers to uptake of RC and can include:

- Materials can have vastly different price-points for virgin and recycled alternatives.
- Technical limitations to the amount of RC that can be included.
- Availability of suitable RC for the application in question

One member has highlighted that while they are using RC in their packaging, they have reached the upper bounds of how much RC they can incorporate before product protection qualities are negatively impacted.

The availability of RC for specialist applications such as food or pharmaceutical packaging is an issue for some sectors.

One packaging manufacturer has pointed out the delineation of pre- and post-consumer RC will negatively impact the embedded carbon in their product. They recycle polymer in-house from offcuts and malformed products, which under the national recycled content traceability framework, would not be acknowledged as RC.[5] They would have to send waste offsite, and have it recertified to HACCP (Hazard Analysis and Critical Control Point, a food safety certification system) for it to qualify under the framework.

Governments' role in the circular economy

Government policy cohesion

Governments have a significant role in driving growth in the CE. A key part of this is their role in developing policy that allows and encourages CE to occur.

Issues arise when new policy does not consider other existing work. For CE to succeed in Australia, governments must work collaboratively and create a cohesive policy environment that considers the interoperability of all policies that impact circular business models, products and materials.

[5] The Department of Climate Change, Energy, the Environment and Water, National framework for recycled content traceability, December 2023, accessed 06/11/2024

Prioritisation of higher-order R-strategies through policy and procurement[6]

Public procurement is a significant lever governments can use to uplift CE development and give signals for private investment.

Australian governments of all levels are working to do this within their capabilities, be it with recycled content in infrastructure, or more recently with the Federal Government's Environmentally Sustainable Procurement (ESP) Policy and framework.

However, as seen with the federal ESP work, governments are just starting to think about how they can preference higher R-Strategies such as reuse, repair and refurbishment of existing items – rather than just focusing on recycled content and recyclability – wherever possible. This needs to be embedded within decision-making processes, if government is going to be a positive influencer for CE.

Consumer/ general public education

Governments have an advantage in driving education of consumers and the general public about CE principles and how they can adopt CE behaviours.

Governments can act as a centralised communicator for the issue and drive understanding without creating consumer fatigue or misunderstandings from too many voices imparting their interpretations.

State Governments can bring CE into educational settings, to help young consumers understand how their choices impact the environment and others.

Local governments can, and to some degree are, helping to drive grassroots action within their communities to embrace repair, resale and reuse of products.

The government's role in helping to fund business adaptation and resource recovery

Government can help businesses to transition to new models, change the way they make things and help develop resource recovery by funding activities that drive growth in CE. We acknowledge governments have been doing this, but the scale at which we need to initiate change means financial support will be key to the CE playing its role in our decarbonisation journey to net-zero by 2050.

[6] PBL Netherlands Environmental Assessment Agency, Circular economy: Measuring innovation in the product chain (English translation of the report 'Circulaire economie: Innovatie meten in de keten'), 2017, Figure 2.1

About Australian Industry Group

The Australian Industry Group (Ai Group®) is a peak national employer organisation representing traditional, innovative and emerging industry sectors. We have been acting on behalf of businesses across Australia for 150 years.

Ai Group and partner organisations represent the interests of more than 60,000 businesses employing more than 1 million staff. Our membership includes businesses of all sizes, from large international companies operating in Australia and iconic Australian brands to family-run SMEs. Our members operate across a wide cross-section of the Australian economy and are linked to the broader economy through national and international supply chains.

Our purpose is to create a better Australia by empowering industry success. We offer our membership strong advocacy and an effective voice at all levels of government underpinned by our respected position of policy leadership and political non-partisanship.

With more than 250 staff and networks of relationships that extend beyond borders (domestic and international) we have the resources and the expertise to meet the changing needs of our membership. We provide the practical information, advice and assistance you need to run your business. Our deep experience of industrial relations and workplace law positions Ai Group as Australia's leading industrial advocate.

We *listen* and we *support* our members in facing their challenges by remaining at the cutting edge of policy debate and legislative change. We *provide solution-driven* advice to address business opportunities and risks.

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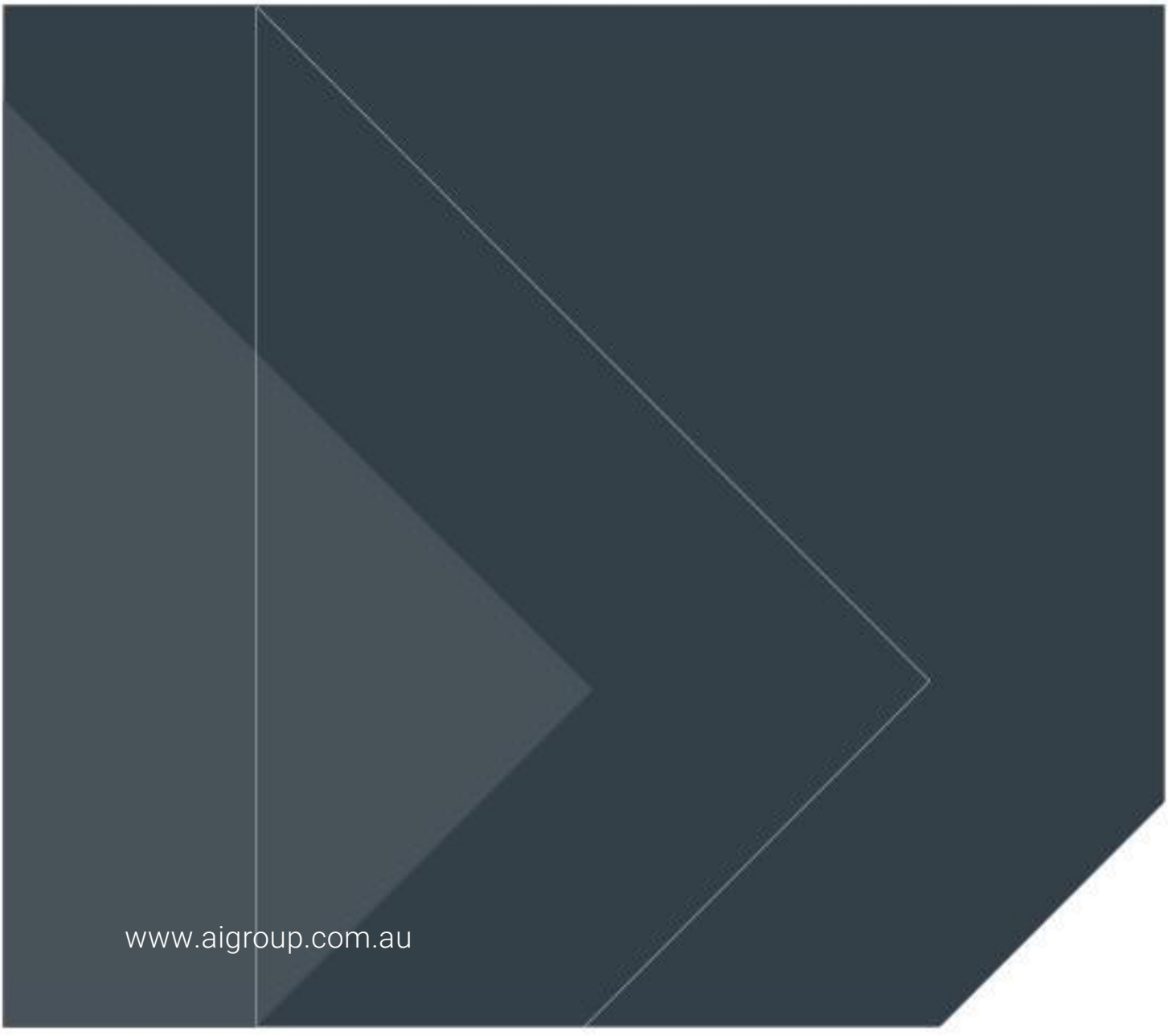

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