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## **Submission to the Productivity Commission's Inquiry into "Opportunities in the Circular Economy"**

### **Introduction**

Members of ResiLoop, a recently established product stewardship scheme, are pleased to have this opportunity to contribute to the Productivity Commission's inquiry into opportunities in the circular economy.

ResiLoop has been designed and launched by the resilient floorcoverings industry to enable a circular future for floorcoverings in Australia with a compelling business case. ResiLoop's ambition is to garner widespread support for a product stewardship scheme to recover and recycle increasing volumes of floorcovering waste. Resilient flooring includes a range of sheet and tile products predominantly made from vinyl and calcium carbonate, rubber and linoleum. Australia consumes 25-30 million square metres a year of these products, over 90% of which are imported.

Members of the industry commenced discussing the need to develop onshore recycling capability and capacity as the Government started developing regulation to restrict the export of plastic wastes. From 1 July 2022, plastic wastes can only be exported that have been sorted into a single resin or polymer type and they have undergone some processing in Australia such as granulation. In addition, around the same time, amendments to the Basel Convention, to which Australia is a signatory, added further requirements for the export of PVC-containing wastes. These measures have impeded existing company take-back schemes which for some years, were sending recovered waste back to manufacturing plants in Europe and the US.

The resilient floorcovering industry is represented by the Australian Resilient Flooring Association (ARFA). ARFA's members include Australia's only local manufacturer and leading global suppliers, all with strong corporate commitments to advancing the sustainability and circularity of their products.

Below, we provide ResiLoop as a case study from a business perspective on the opportunities and challenges of a circular economy and commentary on the opportunities and challenges the Circular Economy presents in Australia and potential measures of progress.

### **Case Study**

ResiLoop is a new voluntary, industry-supported product stewardship scheme in Australia. It was initiated by the members of ARFA securing a National Product Stewardship Investment Fund Grant in 2022, that enabled the sector to rapidly commence and conduct research into design of an initiative to increase local recovery and recycling and develop a circular future for floorcoverings in Australia. The funding enabled the project team to complete a global scan of resilient flooring initiatives and recycling technologies, a material flows analysis, reprocessing trials with industry partners, modelling of funding approaches, and a waste recovery pilot. Extensive stakeholder engagement was conducted during the project with all parts of the value chain and key stakeholders, here and overseas. This work led to the release of a scheme design document and roadmap to implement it. Commitment and seed funding from 15 Founding Members – product suppliers – was secured, enabling the scheme under the governance of ResiLoop Limited to commence on 1 September 2024.

Resilient floorcoverings are durable products with first-use spans of up to 35 years. ResiLoop estimates that there are over one million tonnes of resources in resilient floorcoverings in use in Australia today. Every year about 5-6% of those resources end up in the waste stream.

ResiLoop's approach is intended to contribute to the transition towards a circular economy by fostering improved product design, promoting product durability and reuse, minimising waste and supporting and enabling product recovery and recycling so as to retain resources in continued productive use. An effective product stewardship scheme is just one, but an important, component of a circular economy. The contribution from a scheme like ResiLoop includes:

- Encouraging a reduction in waste generated by fostering durability, good maintenance and repair to encourage retention in use for longer
- Incentivising the phase out of restricted chemicals and designing future products for recycling
- Recovering and recycling more waste
- Reducing leakage by diverting waste from landfill and retaining materials in productive cycles.



### **Financial impact**

ResiLoop is funded by a product levy per square metre of in-scope products supplied by the members. This funds the collection of waste from relevant product streams and delivery to an end manufacturer. A significant share of the funding is allocated to research and development of new end markets and recycling capacity. The imposition of a product stewardship levy is a vital step towards product suppliers internalising in the product cost some of the currently externalised costs of the product's end of life. Although the cost is passed through to the end consumer, this is an improvement in material efficiency and so should not be viewed as a detriment. The Australian Competition and Consumer Commission (ACCC) acknowledges in its publicly available response to ResiLoop's application for authorisation that implementing a product levy may produce a public detriment to the extent that the levy results in higher prices for consumers, however it considers that ResiLoop's levy is unlikely to materially impact competition, as the likely price increases will represent a minimal proportion of the total retail cost of resilient flooring for consumers (ACCC Draft Determination & Interim Authorisation of ResiLoop's Application (Authorisation number: AA1000675), 16 August 2024). The ACCC considers that the ResiLoop scheme is likely to result in some public benefit due to the levy-included prices of members' resilient flooring products being more reflective of their full social cost. Nevertheless, there is concern by some suppliers that the levy will reduce their market competitiveness, overlooking the market opportunity engaging in the circular economy offers.

### **The business case for voluntary schemes**

At this stage of its development, the ResiLoop scheme is deliberately voluntary and only its members' product wastes are collected, which helps counter the 'free-rider' issue. Current members account for about 30% of the resilient floorcovering market in Australia. Additional members will nevertheless be required to support the ongoing investment necessary to develop onshore recycling capability at scale to address the total waste volume each year. One new member has been secured since the scheme launched. ResiLoop's purpose is to develop a compelling business case which would see other market-dominant suppliers join. This will take collaboration and cooperation of a range of stakeholders – e.g. policy-makers, regulators, standard-makers, specifiers, builders, contractors, retailers – to develop the necessary market incentives that will compel producers and suppliers to take responsibility for the life cycle of their products and to internalise the external costs of their products' waste. Without such a business case, 'free-riders' may undermine the process and schemes may require regulation.

Attached is a summary of factors ResiLoop identified to encourage businesses to participate in a voluntary product stewardship program.

### **Economic & environmental benefit**

ResiLoop will be contributing to economic growth and productivity through its investment in research and development of recycling capacity and end markets for materials. As there is very little local existing manufacturing of resilient flooring products, ResiLoop's goal is to partner with a wide range of manufacturers to encourage innovation and develop new products suitable for the recovered materials, boosting employment and manufacturing capacity. In addition, we intend to contribute to expansion of reprocessing (such as sorting, shredding, granulation and micronisation) capability and capacity in Australia.

Rather than importing virgin materials, such as polymers, from overseas, reusing recovered materials available locally will shorten cycles of material use, improving resource efficiency. Our existing manufacturing partner, Think Manufacturing, has designed and developed a product specifically to use the recovered ResiLoop materials, replacing imported virgin materials and reducing the embodied carbon of the product. Investment in a new extrusion line has occurred.

An effective, industry-supported product stewardship scheme is seen as delivering broad community benefit by reducing landfilling of waste, and specific value across the industry by fostering collaboration along the entire supply chain. It will not only address the landfill impact from waste, but create a circularity mindset that will be welcomed across the marketplace. Economically, it will stimulate innovation and job opportunities, while reducing reliance on fossil-fuel resources by using post-consumer material.

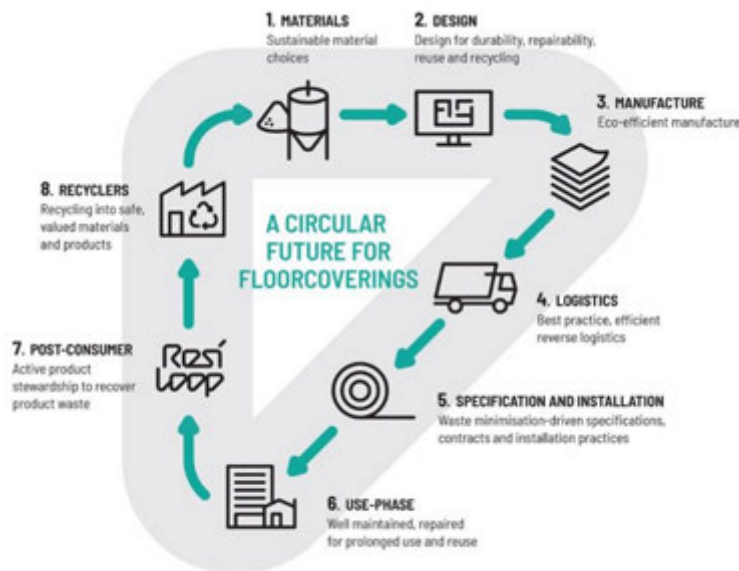
Construction and demolition waste in Australia presents significant opportunities for circulating material value through recycling and avoiding carbon emissions related to manufacture of virgin building materials as well as existing disposal processes. In Sweden, a Life Cycle Assessment of the recovery and recycling of resilient flooring waste found that 2 tonnes of carbon equivalent emissions could be saved through the recycling of 1 tonne of vinyl flooring instead of sending it to waste for energy recovery, the usual disposal route in Sweden for resilient flooring (*Separate collection and recycling of PVC flooring installation residue in Sweden – A system assessment*, IVL Swedish Environmental Research Institute, Nov 2019). According to this LCA, 900kg of that CO<sub>2</sub>-e saving is related just to the replacement of virgin materials. PVC or vinyl is a 'low carbon' plastic – only 38% of its molecular weight is carbon compared to 86% for polyethylene. Manufacturing PVC products also consumes lower energy than other common plastics yet it is estimated that for every kilogram of virgin PVC avoided through use of recycled PVC, 2 kg of carbon is saved (Source: VinylPlus.eu).



Currently in Australia, flooring waste is often deprioritized in favour of other common Construction & Demolition waste, such as concrete, wood, and metal, which are far higher in volume, easier to recycle and have higher values in recycling markets. New approaches to diverting flooring waste from landfill are required and ResiLoop hopes to influence this.

A successful ResiLoop scheme will assist participating product suppliers achieve environmental performance certifications, improve compliance performance in building or project rating tools like Green Star, and/or provide a competitive advantage to them in the market. In addition, it may reduce the disposal costs incurred by parts of the supply chain who currently bear the financial burden of waste disposal.

ResiLoop identified the following producer responsibility aspects to influence efficiency and circularity.



### Opportunities to improve material productivity and efficiency

The principles of Circular Economy necessitate the bringing together of consumption patterns, product design, business models and environmental impact – all of these need to be addressed and work in tandem. Together they offer opportunities to improve material productivity and efficiency and reduce environmental and social impacts.

Recovering waste for recycling enables materials to stay in productive use for longer, ideally maintaining the highest possible value for as long as possible, avoiding the extraction of virgin materials and associated carbon impacts. Recycled content can substantially lower the carbon footprint of new products and materials. However, managing waste and advancing recycling is only one aspect of developing the circular economy. Other equally important actions include:

- Reducing over-consumption
- Improving product quality and durability, slowing the cycle
- Enabling product reparability and reuse
- Changing product ownership business models such as introducing products-as-a-service
- Encouraging transferability of product information through concepts like 'product passports' that facilitates reuse, recovery and recycling
- Valuing recycled content and the procurement of verified recycled content products
- Increasing the cost of disposal to landfill or other waste management options
- Reducing the use of raw/virgin materials
- Ensuring equality of standards between imported and locally made products

The challenge is that the current economic business paradigm encourages year on year increased consumption and lowering of product values due to competitive pressure, which leads to cheaper, inferior inputs and quality, which in turn, leads to reduced product durability and increased waste, impeding the material cycle. It is not sufficient for Australia to invest in recycling capacity without addressing a range of other impediments, when local manufacturers still have to compete in the global market. Imported products need to be held to the same circular economy standards as locally made products.



Government plays a critical role in setting the agenda and timeline for the transition to a circular economy and providing underpinning measures to enable the transition. This includes

- Supportive measures for industry to implement practical R&D initiatives, de-risking financial and operational risks for the trials required for innovation in using recycle feedstocks, in designing new products, piloting new production processes or scaling up initiatives.
- Encouraging small scale SME solutions as well as large – availability of options in every State offers potentially more efficiencies than one large scale solution in one location.
- Leading by example: government purchasing power and procurement policies can help drive and shape the circular economy, helping to encourage product stewardship and underpin investment in new reprocessing facilities and product manufacture. The Commonwealth's Environmentally Sustainable Procurement Policy and Reporting Framework is a step in this direction and a number of State policies are also successfully influencing the take up of recycled content products.
- Continued support for the development and promotion of industry product stewardship initiatives and the business case that underpins them. The NPSIF grant was instrumental in moving the resilient floorcovering sector from talk to action. There is also a need for measures to be available to address 'free riders', requiring particularly the dominant suppliers to a market who choose not to participate in industry schemes, to implement equivalent, open and transparently reported initiatives to contribute to the effort or else make equivalent financial contributions to an existing scheme.
- Continued effort to address 'greenwashing'. Companies are increasingly responding to market interest in the circular economy by making unsubstantiated claims or providing little or no accountability to claims. For example, companies claiming to have take-back programs that have yet to demonstrate material is being, or will actually be reused/recycled.

#### **Challenges in Australia to meet circular economy goal**

- Inadequate infrastructure at scale in Australia at present to collect, sort and reprocess waste materials and a small manufacturing base for reuse of large quantities of imported materials.
- Large continent and relatively low population present logistic efficiency challenges. Particularly challenge to recover from regional and remote regions cost effectively.
- Poor data availability– ABS import data is inaccurate and unreliable; insufficiently granular data on waste streams to identify specific product waste volumes
- The cost of recovery and processing versus the low market value of some recycle.

#### **Measures and indicators**

Potential measures and indicators of the transition to a circular economy in Australia may include:

- Total consumption of materials/resources p.a. (renewable/non-renewable)
- Material Flows Analysis including measurement of waste flows and destinations
- Virgin material extraction for domestic use and export
- Use of domestically produced recycle feedstocks in new products
- Value or volume of products re-used, re-purposed and/or repaired
- Average life-time use of key product categories to measure improved durability, reparability

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# The Business Case for Product Stewardship

Product Stewardship is a sustainable business approach that extends a company's responsibility for the entire lifecycle of its products. It provides a very practical response to implement ESG objectives at the product level. Participating in an industry-wide product stewardship scheme can yield numerous business benefits for companies, including:



## **Brand Reputation and Customer Loyalty:**

Demonstrates a strong commitment to environmental responsibility, enhancing brand image.

Appeals to environmentally conscious consumers, fostering loyalty and positive perception.



## **Compliance and Risk Mitigation:**

Demonstrates good governance and supports compliance with environmental regulations /standards, reducing legal and regulatory risks.

Proactively addresses potential product-related liabilities, safeguarding the company's reputation.



## **Resource Efficiency and Cost Savings:**

Encourages resource-efficient product design, reducing material consumption, carbon emissions and waste.

Potential for cost savings through optimized recovery processes and material reuse.



## **Innovation and Market Leadership:**

Influences innovation in product design and manufacturing processes to meet specific ESG and corporate sustainability goals.

Positions the company as a market leader in sustainable practices, attracting environmentally conscious customers.



## **Supply Chain Collaboration:**

Encourages collaboration with suppliers and partners to create a closed-loop supply chain.

Strengthens relationships with stakeholders by promoting shared responsibility for sustainable practices.



## **Circular Economy Advances:**

Provides a direct pathway to operationalise circular economy objectives by promoting product reuse, recycling and responsible disposal.

Supports reducing dependence on finite resources, contributing to long-term business sustainability.



## **Government and Stakeholder Relations:**

Responds to government policies and frameworks on product stewardship and the circular economy.

Improves relationships with stakeholders by demonstrating a proactive approach to environmental responsibility and addresses concerns and expectations regarding environmental impact.



## **Market Access and Consumer Preferences:**

Builds access to markets with stringent environmental regulations by complying with product stewardship requirements.

Aligns products with evolving consumer preferences and expectations for sustainable and responsibly produced goods.



## **Long-Term Cost Management:**

Mitigates future costs associated with waste management, cleanup and environmental damage.

Provides certainty and positions the company to adapt to changing regulatory landscapes without major disruptions.



## **Employee Engagement and Talent Attraction:**

Fosters a positive corporate culture, attracting environmentally conscious employees.

Enhances employee morale and engagement through participation in sustainability initiatives.

In summary, pro-active participation in an industry-wide product stewardship scheme aligns with global sustainability goals and provides tangible business benefits. Supporting a national product stewardship scheme is a strategic move that positions companies as genuine and responsible stewards of the environment, contributing to both environmental and business success.