

Product Stewardship Centre of Excellence

Submission to CEMAG



**Product
Stewardship
Centre of
Excellence**

Product Stewardship Centre of Excellence

28 April 2023

www.stewardshipexcellence.com.au



Overview

- What does an Australian Circular Economy look like in 2030 from a product and packaging lens?
- Circular Design and Consumption of Products
- About the Centre
- Product stewardship in Australia
- Benefits and Effectiveness of Product Stewardship
- Product Stewardship Gateway

What does an Australian Circular Economy look like in 2030 from a product and packaging lens?

A. Change resource input mix

- Shift resource input ratio from predominately virgin non-renewable resources to recovered or renewable resources by either making virgin non-renewable resources more expensive than recycled or renewable resources and/or rewarding use of recovered and renewable resources – e.g. European Virgin Plastic Tax – makes recycled plastic price competitive, Australian Oil Product Stewardship Act pays benefits to reprocess based on quality of recovered oil.

B. Reduce rate of resource consumption

- Increase product durability and repairability. Focus on product classes with high embodied carbon (e.g. electronic and electrical equipment, Solar systems, building products, furniture – commercial and domestic, carpet, vehicles, tyres, mattresses).
- Set minimum design standards for repair (Productivity Commission Right to Repair, ACCC Product and Consumer Laws).
- Reward and promote repairability using a product labelling e.g. France Repairability Index.
- Make repairing more accessible and affordable (access to parts, and repair manuals, training eg Ifix It, Apple Self Repair, Repair Cafes, licensing requirements for electricians)
- Avoid single use products and packaging (State legislation banning single use and problematic plastics, national EPS stewardship scheme)

C. Increase recovery of materials from products and packaging

- Make products and materials from renewable or recycled sources – focus on products / packaging made in Australia, charge customs duty on imported products and packaging that do not meet criteria
- Require that materials used to make products must either be recyclable or compostable and do not contain hazardous substances; if not charge penalty – e.g. advance disposal fee
- Help business and consumers recycle products and packaging – education, accessibility, financial rewards (e.g. CDS) and higher landfill fees, ban export of unprocessed waste

Circular Design and Consumption of Products

What are the three top pain points

- Manufacturers / brands not specifying for durability, repairability, recycled or renewable materials.
- Engineers / designers not prepared to use recycled materials in manufacturing or construction even though materials meet specifications.
- Ease of importing cheaper products, lower quality, more hazardous materials that can be purchased directly online.

What are the top 3 factors inhibiting greater circularity in Australia?

- Lack of level playing field for businesses to change product design and use, early adopters of CE principles in business models are often commercially disadvantaged unless there is a clear market advantage (See *Evaluating Benefits and Effectiveness of Product Stewardship Summary Report, May 2023*)
- Lack of financial incentives for businesses to drive change (See *Evaluating Benefits and Effectiveness of Product Stewardship Summary Report May 2023*).
- Lack of consumer and business knowledge to engage (See *Evaluating Benefits and Effectiveness of Product Stewardship Report Summary May 2023*).

What are the disruptors, trends and emerging conditions we need to factor in?

- Cheap overseas products
- Demand for non-renewable resources for renewable energy sector

Circular Design and Consumption of Products

Of the following levers, where are the top solutions

Product stewardship is where the primary responsibility for managing and minimizing the environmental and human health impact of the products and packaging across the whole life cycle from development to disposal rests with those businesses that place products and their packaging on to the market (e.g. manufacturers, importers, brands and retailers).

Taking responsibility for product stewardship actions across the lifecycle for products and packaging provides businesses a practical pathway to systematically transition their business to a circular economy.

The Centre in association with consortium partners ISF, UTS undertook an evaluation of the benefits and effectiveness of product stewardship and EPR. For product stewardship initiatives (either collective or individual) to be effective

High levels of industry or business investment and participation is essential to realise the benefits of product stewardship. IN most cases this was achieved where some form of *government regulation* was in place to prevent competitive disadvantage or free riding. Other levers such as government financing and procurement, skills, knowledge and innovation, and market instruments also assist in addressing free riders (see the PSCOE White paper [Overcoming Free-Riders: Strategies to maximise industry participation – September 2021](#) for more specific strategies)

The evaluation also identified four additional characteristics of effective product stewardship:

- **Clearly defined objectives**— Measurable environmental, social, and economic performance indicators demonstrate benefits and allow for continual assessment of the effectiveness.
- **Good governance**—This includes defined roles and responsibilities and ensures transparency through public reporting
- **Use of financial incentives**—to drive behaviour change of businesses, consumers, repairers, collectors, sorters, and recyclers
- **Effective marketing**—leading to high awareness and increased user participation.

Circular Design and Consumption of Products

Recommendations to improve the effectiveness of product stewardship

[Benefits and effectiveness of Product Stewardship \(Dec 2022\)](#)

Increase product stewardship action at production and consumption to enable a circular economy

Increasing the focus on production and consumption activities will enable and contribute to a circular economy by promoting and supporting emerging initiatives and their activities that can address potentially adverse impacts and/or promote positive outcomes associated with the production and consumption product lifecycle stages. This includes avoiding and preventing waste generation through sustainable product design, the elimination of unsafe chemicals and hazardous substances, and encouraging increased product durability, upgradeability, modularity and repairability.

Local, State, Territory and Commonwealth Governments; Good Design Australia; Product Stewardship Centre of Excellence; Collective schemes; Industry; Consumer NGOs; Australian Repair Network

Improve the effectiveness of existing product stewardship initiatives (e.g. promote government accreditation, increase marketing, awareness and accessibility, consistency in reporting and regulation where appropriate)

Improve the effectiveness of existing product stewardship initiatives in delivering their objectives by:

- government leveraging current regulatory frameworks, procurement and the accreditation process of voluntary initiatives.
- product stewardship organisations and businesses increasing investment in marketing, user awareness and accessibility
- product stewardship organisations and businesses improving data collection and reporting.

Commonwealth Government; Collective Schemes; Individual Business Initiatives; NTCRS arrangements; Product Stewardship Centre of Excellence

Improve businesses, industry associations and local government knowledge and adoption

Provide education, training, masterclasses and comprehensive professional development on product stewardship principles and practices for businesses, industry associations and local government, to improve knowledge, and support implementation of product stewardship practices by businesses and local government across the product lifecycle and supply chains. This includes business participation in collective schemes either as a member or user of services, and local governments can further support product stewardship action through procurement.

Commonwealth Government; Product Stewardship Centre of Excellence

Implement regulatory and non-regulatory approaches to effectively address industry free-rider issues in existing and emerging collective schemes

Implement regulatory and non-regulatory approaches to effectively address industry free-rider issues in existing collective schemes e.g. for tyres and mattresses; and emerging collective schemes, e.g. for plastics in agriculture, clothing textiles, oil container, cosmetics. (See PSCoE White Paper -

Local, State, Territory and Commonwealth Governments; Product Stewardship Centre of Excellence; Collective Schemes; Business Initiatives

Support the design and establishment of new and emerging initiatives

Support the design and establishment of new and emerging product stewardship initiatives by:

- providing financial, regulatory and specialist advice during initiative design and establishment.

Commonwealth Government; Collective Schemes; Individual Business Initiatives; Product Stewardship Centre of Excellence

Circular Design and Consumption of Products

Innovations, examples of excellence / Key information (incl. research)

White Papers

- [Addressing the Barriers: A needs assessment of product stewardship in Australia – July 2021](#)
- [Overcoming Free-Riders: Strategies to maximise industry participation – September 2021](#)
- [Product stewardship and chemicals of concern: Challenges and strategies – September 2022](#)

Practice Notes

- [The Potential of Leasing as a Product Stewardship Strategy – August-2021](#)
- [Australian Competition and Consumer Commission Authorisation – February 2022](#)

Case Studies

- [Good360 Australia](#)
- [Telstra Smart Modem 3](#)
- [Aqvet product stewardship with **drum**MUSTER](#)
- [MobileMuster: An industry-led voluntary product stewardship scheme](#)
- [bassike: Certified carbon neutral organic jersey product line](#)
- [IKEA Australia Buy Back Program](#)
- [Bata PVC Gumboot Recycling Program](#)
- [Adidas Terrex Infinite Play Rental Program](#)
- [Rip Curl Wetsuit Take-Back Recycling Program](#)
- [Paintback: The responsible solution for unwanted paint & packaging](#)
- [Fairview Ecoloop ACP recycling initiative](#)
- [Mandated Product Stewardship: The case of used oil](#)

Product Stewardship Gateway

<https://gateway.stewardshipexcellence.com.au/>

Webinars – recordings and presentations

- [Benefits and effectiveness of Product Stewardship \(Dec 2022\)](#)
- [Product Stewardship Regulation in Australia \(Dec 2022\)](#)
- [Stewardship of chemicals and hazardous substances](#)
- [The art of logistics for product stewardship initiatives \(Jul 2022\)](#)
- [Funding product stewardship initiatives \(May 2022\)](#)
- [Local government and product stewardship \(March 2022\)](#)
- [ACCC authorization for product stewardship schemes \(Sep 2021\)](#)
- [Government accreditation of industry & business led product stewardship initiatives \(June 2021\)](#)
- [The value and role of product stewardship in Australia \(Apr 2021\)](#)

Excellence Awards <https://stewardshipexcellence.com.au/awards/2022 – Winners>

- Collective Scheme – Return and Earn, NSW CDS
- Individual Business or brand (large)– Dulux Trade
- Individual Business or brand (SME) – Fairview
- Digitalisation for product stewardship – Remondis Australia
- Emissions reduction through product stewardship - BioPak

[2021 – Winners](#)

MobileMuster, Bata Shoe Company, Big Bag Recovery, ReCollect

About the Centre



**Product
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Our vision is for the wide-scale adoption of product and material stewardship principles into business models that reduce waste generation and create positive environmental and social outcomes via good design, improved resource productivity and sustainable reuse.



Support, Resources & Services

Our Vision is for the wide-scale adoption of product and material stewardship [principles into business models that will reduce waste generation and create positive environment and social outcomes via good design improved resources productivity and sustainable reuse

Mentoring

Networking

Webinars

Awards

Newsletter

Resources – white papers, practice notes, case studies



Research and Advisory Support

Scheme and
program design

Stakeholder
engagement

Applied industry
research

Business case
development

Product stewardship



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Definitions & Concepts

Product stewardship

- Approach for managing and reducing the **environmental and human health impacts** of products and materials
- **All life-cycle stages** in focus: design and production, consumption and post-consumption
- **Primary responsibility with producers and retailers**
- Aligned with **circular economy principles** and **waste hierarchy** – i.e. designing out waste and pollution, keeping products and materials in the economy, regenerating natural systems etc

Circular Economy Principles

- Designing-out waste and pollution
- Keeping products and materials in the economy
- Regenerating natural systems
- Decarbonising the economy
- Positive social and cultural dimension

Extended Producer Responsibility

“An environmental policy approach in which a producer’s responsibility for a product is extended to the **post-consumer stage** of a product’s life cycle”*, especially for the take-back, recycling, and final disposal of the product.

- shift some financial burden of waste management from local government (i.e. taking account of externalities)
- incentivise producers to reduce resources, use recycled materials, and improve product design to reduce waste

* OECD (2016), Extended Producer Responsibility: Updated Guidance for Efficient Waste Management, OECD Publishing, Paris.

Objectives of product stewardship

Reducing environmental and human health impacts across the life-cycle

Environmental

- Avoid/reduce chemicals of concern & pollution
- Reduced water & energy consumption
- Reduced consumption of non-renewable / non-recyclable resources
- Emissions reduction, carbon neutral/net zero commitments
- Resource recovery
- Building natural capital

Social

- Ethical / sustainable supply chains
- Easy to access services
- Education & awareness
- Building community /social capital

Economic

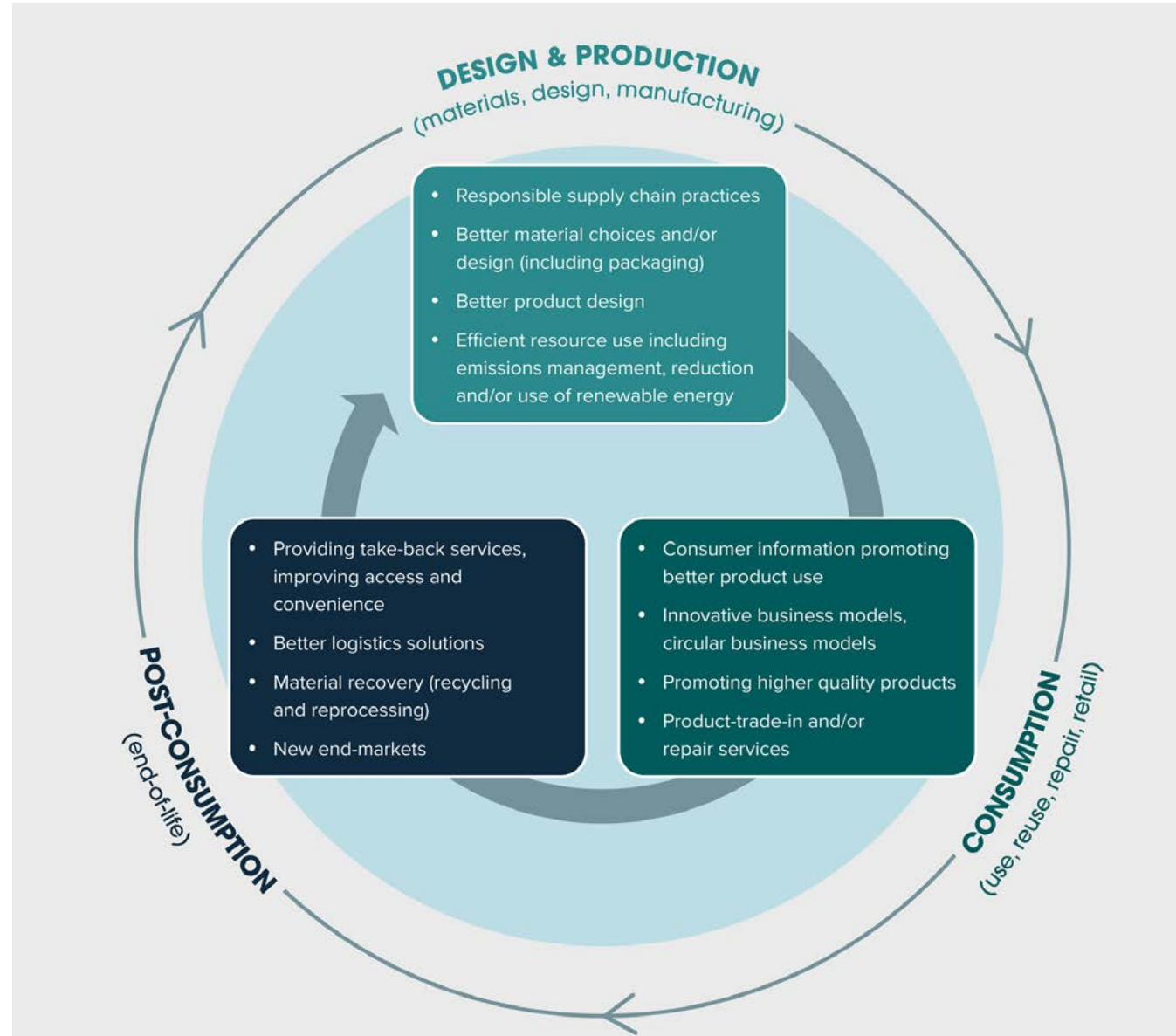
- New market creation
- Improved access to existing markets
- Job creation
- Innovation
- Rural and regional development

Organisational

- Transparent governance and risk management
- Financially sustainable
- Socially inclusive
- Environmentally responsible
- Safe working environments

Actions across the life-cycle

Reducing environmental and human health impacts across the life-cycle



Evolution of Product Stewardship in Australia

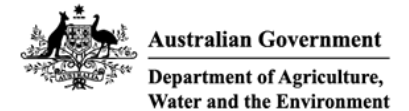
- Used predominately to address pollution, waste & litter issues generated by products and packaging

- **Government Regulations**

- Ozone Protection and Synthetic Greenhouse Gas Management Act 1989
- NSW Waste Avoidance and Reduction Act 2001
- Product Stewardship (Oil) Act 2001
- National Environmental Protection (Used Packaging Materials) Measure (2001)
- Product Stewardship Act 2011
- Recycling and Waste Reduction Act 2020
- Various state container deposit regulations

- **Business uptake**

- Voluntary individual and collective approaches



Ministers Priority List

2013-14	2014-15	2015-16	2016-17	2017-18	2020-21	2021-22	2022-23
Waste architectural and decorative paint							
End-of-life handheld batteries (less than 2kg in weight) ¹	End-of-life handheld batteries (less than 5kg in weight)		Batteries (all)				
Packaging (and subsets of packaging such as consumer packaging and beverage packaging)							
End-of-life air conditioners with small gas charges							
End-of-life refrigerators with small gas charges							
			Plastic microbeads and products containing them				
			Photovoltaic systems				
			Electrical and electronic products				
			Oil containers				
					Child car seats		
						Clothing textiles	
						Problematic and unnecessary single use plastics	
							Mattresses
							Plastics in health-care products
							End-of-life tyres



Current Activity

2022 ACTIVITY

- **83** collective schemes and individual business initiatives currently operating
- **16** collective schemes in development
- **31** product or material classes covered by product stewardship initiatives
- **Two** industry-led voluntary initiatives accredited by the Australian Government
- **Government** announced plans to develop a regulatory product stewardship scheme for solar panels and household electronics

2020 ENVIRONMENTAL BENEFITS

- **19** initiatives collected more than **336,000** tonnes of waste televisions, computers, mobile phones, machine lubricants, printer cartridges, tyres, beverage, paint, and agricultural and veterinary chemical containers for recycling
- **33** initiatives have established over **12,000** collection and drop off points.¹



Collective action



Collective schemes addressing industry wide challenges

- Work collectively
- Share costs
- Create new businesses
- Improved environmental and social outcomes

Voluntary

Mandatory

Co-regulatory



Individual action



Individual business initiatives

circular design, reuse, repair, sharing and take back



- Differentiate in market place
- Meet consumer expectations
- Stewardship across the supply chain
- Design better products
- Create new businesses opportunities
- Improved environmental and social outcomes
- Maintaining flexibility to evolve and respond without regulation
- Brand reputation

Benefits & Effectiveness of Product Stewardship



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Evaluating Benefits & Effectiveness

- First comprehensive evaluation of the benefits and effectiveness of product stewardship activity in Australia.
- This study is part of the National Waste Policy Action Plan 2019 - ***Action 3.3 - to evaluate the effectiveness of product stewardship and extended producer responsibility activities across the country, to help inform future efforts***

Effectiveness is defined by how well product stewardship initiatives meet their objectives to minimise environmental and human health impacts of products and materials throughout the whole lifecycle

Evaluating Benefits & Effectiveness

The assessment of the benefits and effectiveness used five new data sets:

1. Analysis of publicly reported environmental, social and economic performance data for ~106 product stewardship initiatives
2. Surveys of 601 Australian businesses
3. Survey of 1001 Australian residents
4. Survey of 89 local governments
5. Interviews with 60 product stewardship actors or experts

Main outputs

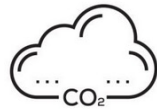


- The Product Stewardship Gateway (Dec 2022)



- Reporting on the effectiveness of product stewardship initiatives, opportunities to improve effectiveness (May 2023)

Types of Benefits



Environmental include eliminating hazardous materials, conserving resources and materials, preventing and reducing waste, and reducing greenhouse gas emissions



Social include improved workers' health and safety across the supply chain, and increased accessibility to repair services or collection points for recycling



Economic include job creation, upskilling, reskilling, and creating new markets for recovered materials.

Effectiveness characteristics

High levels of industry or business investment and participation is essential for realising these benefits

Four additional characteristics:

- **Clearly defined objectives**— Measurable environmental, social, and economic performance indicators demonstrate benefits and allow for continual assessment of the effectiveness.
- **Good governance**—This includes defined roles and responsibilities and ensures transparency through public reporting
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Product Stewardship Gateway



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What

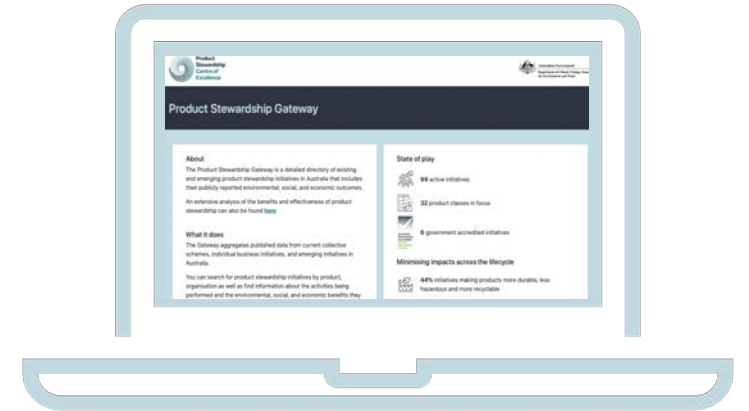
Database of existing and emerging product stewardship initiatives (100+) capturing publicly reported data on objectives, activities and environmental, social & economic benefits

Why

- Understand benefits of product stewardship
- Increase awareness and knowledge of product stewardship activity
- Evaluate effectiveness
- Identify opportunities to learn and improve

Primary audience

- Government (at all levels)
- Manufacturers, brands, importers, retailers
- Product stewardship organisations and service providers
- Researchers



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