



4-5 APRIL, 2018

# INTERNATIONAL STEWARDSHIP FORUM

RADISSON BLU PLAZA HOTEL | CIRCULAR QUAY, SYDNEY, AUSTRALIA

## Issues and Options Paper June 2018

### SUPPORTED BY



Australian Government

Department of the Environment and Energy

### FORUM PARTNERS



### CHATHAM HOUSE SPONSOR



### GOLD SPONSORS



### SILVER SPONSORS



# International Stewardship Forum 2018

## Issues and Options Paper

Produced by



The Global Product Stewardship Council (GlobalPSC) is an independent, not-for-profit forum for product stewardship development and a resource for information on product stewardship policies and programs across the world.

Members span producers, product recovery organisations, reprocessors, NGOs and governments at federal, state/provincial and local levels.

Our vision is to facilitate the development and implementation of effective product stewardship schemes globally.

[www.globalpsc.net](http://www.globalpsc.net)

PO Box 755  
Turrumurra NSW 2074 Australia

[info@globalpsc.net](mailto:info@globalpsc.net)

June 2018

We greatly appreciate the contributions of Dr Helen Lewis in the preparation of this report.



# Contents

---

Executive Summary .....	iii
Key insights to guide product stewardship .....	iii
Implications for Australian policy .....	iii
Introduction .....	1
Case studies .....	1
A note on language .....	1
Insights .....	2
1. A systems approach: product stewardship needs to be considered within a more holistic circular economy framework .....	2
2. Priority materials: circularity requires a particular focus on plastics and broader consideration of risks and hazards .....	4
3. Principles not prescription: there is no single operating model that will be effective and efficient in all circumstances .....	6
4. It's not just about regulation: Governments can support product stewardship in many different ways .....	10
5. Working together: shared responsibility requires clarity on the roles, responsibilities and business case for each stakeholder group .....	13
6. Designing circularity: design for environment is critically important and requires more focus .....	15
7. Innovation and entrepreneurship: Sustainable end markets must be identified and supported .....	17
Implications for Australian policy .....	20
Conclusions: where to from here? .....	23
Attachment 1: International Stewardship Forum program .....	24
Attachment 2: Participants in the Chatham House discussion .....	28

## Executive Summary

---

The International Stewardship Forum was held in Sydney from 4-6 April 2018. With over 130 participants and 13 international speakers, the Forum provided a unique opportunity for participants to gather practical insights from product stewardship and extended producer responsibility (EPR) programs across a broad range of products and substances.

The Forum involved two days of presentations and discussion, followed by a workshop on the final day with select stakeholders to discuss the key learnings and implications for Australian Government policy.

This paper provides an overview of many of the issues, ideas and solutions raised by participants over the three days. It is structured in three sections:

- the global economic and policy context and some of the risks and opportunities that this presents
- nine high level insights that can guide the design and implementation of product stewardship policies and programs
- the implications of these insights for Australian policy, including the current review of the *Product Stewardship Act 2011*.

### Key insights to guide product stewardship

Presentations and discussions over the three days covered a wide range of topics and ideas. Some common themes emerged and these have been grouped under seven key insights:

1. **A systems approach:** Product stewardship needs to be considered within a more holistic, circular economy framework
2. **Priority materials:** Achieving circularity requires a particular focus on plastics and broader consideration of risks and hazards
3. **Principles not prescription:** There is no single operating model that will be effective and efficient in all circumstances, but there are common elements that need to be included
4. **It's not just about regulation:** Governments can support product stewardship in many different ways
5. **Working together:** Shared responsibility requires clarity around the role, responsibilities and business case for each stakeholder group
6. **Designing circularity:** Design for environment is critically important and requires more focus
7. **Innovation and entrepreneurship:** Sustainable end markets must be identified and supported

### Implications for Australian policy

One of the objectives of the Forum was to draw on local and international experiences to identify opportunities to improve the implementation of product stewardship within Australia. The Chatham House workshop on the third day helped to synthesise some of the key learnings from the presentations and to identify potential directions for Australian policy. These are summarised below.

Objective	Recommendations and Options
<p><b>A more strategic, national approach</b></p>	<p>Development of a national, cross-jurisdictional roadmap for product stewardship, with a 3-5-year timeframe, that:</p> <ul style="list-style-type: none"> <li>• provides a clear vision for action reflecting circular economy principles and including ambitious targets such as zero waste to landfill</li> <li>• reframes product stewardship as an economic opportunity linked to innovation, business growth and job creation</li> <li>• shifts the focus from ‘waste management’ to ‘resource recovery’, with a clear signal that waste to energy is lower down the resource recovery hierarchy because it leads to loss of raw materials</li> <li>• recognises additional non-environmental goals or benefits including health and safety, job creation, etc</li> <li>• clarifies the role of product stewardship in supporting a circular economy - for example by facilitating shared responsibility for circular design, recycling and market development for recycled materials - and how it can complement other policies and tools</li> <li>• provides a clear framework for identifying product priorities, building on the current consultative <a href="#">process</a> for a national strategy to manage environmental impacts from products</li> <li>• outlines the responsibilities of all levels of government to support product stewardship. For state and territory governments - who have statutory responsibility for waste - this could include harmonising regulations for waste management, health and safety, and product stewardship, where appropriate. The roles and responsibilities of the Australian Government to support the states should also be clarified</li> <li>• includes a commitment by all levels of government to support product stewardship through procurement of buildings, infrastructure, products and packaging with recycled content</li> <li>• supports a ‘Centre for Excellence’ in product stewardship that would engage in research and knowledge sharing to promote and facilitate best practices</li> <li>• includes a more efficient system for timely collection and reporting of waste and recycling data. While the National Waste Report does this to some extent every two years, a more efficient reporting system (e.g. through an on-line/shared portal) could be considered. More promotion and continued refining of the data to match changing needs would also be useful</li> <li>• is developed in consultation with, and has the support of, relevant stakeholders</li> <li>• commits to publicly report on progress of the Meeting of Environment Ministers’ product stewardship work plan</li> </ul>
<p><b>Improving product stewardship policy including the <i>Product Stewardship Act</i></b></p>	<p>Revisions to the Product Stewardship Act and its implementation to:</p> <ul style="list-style-type: none"> <li>• develop an agreed definition of product stewardship that is understood by key players such as local government</li> <li>• shift the objectives from waste management to a circular economy, product management, generating value and economic outcomes</li> <li>• acknowledge other non-environmental drivers and benefits, e.g. jobs, innovation, health and safety, etc</li> </ul>

	<ul style="list-style-type: none"> <li>• work with producer responsibility organisations (PROs) to ensure that design considerations are included in schemes where appropriate</li> <li>• redefine ‘product’ to allow for broader or alternative interpretations, for example to cover a group of materials (e.g. plastics) or services</li> <li>• clarify what ‘shared’ responsibility really means – who is involved and what are their obligations</li> <li>• broaden the scope of liable parties to include other industry stakeholders, for example retailers, as well as government (e.g. for procurement)</li> <li>• allow for outcomes that cut across products or arrangements, e.g. allowing for co-collection or other forms of collaboration between PROs to achieve economies of scale or other improved outcomes</li> <li>• clarify when product stewardship is the best approach to address product impacts, and when other policies or regulations might be more appropriate</li> <li>• facilitate a national, consistent approach to stewardship arrangements, which applies to voluntary and regulatory approaches</li> <li>• include targets that are reflected in regulations</li> <li>• allow for a wide range of regulatory and voluntary models</li> <li>• in co-regulatory programs, allow for single producer responsibility organisation (single-PRO) models that ensure competition at the service level (collection, sorting, recycling etc) rather than between Arrangements (unlike the National Television and Computer Recycling Scheme, which established competition at the PRO level)</li> <li>• require all Arrangements to have supply chain transparency: the fate of collected materials must be tracked and monitored to ensure that high standards are being met</li> </ul> <p>Changes to the system for identifying and managing priority products to:</p> <ul style="list-style-type: none"> <li>• ensure that the prioritisation process is evidence-based (e.g. by analysing stocks and flows) with transparency about the process for products getting on or off the list</li> <li>• consider a more proactive approach that undertakes broader analysis of product impacts to identify priorities, rather than waiting for someone to take action</li> <li>• address new and emerging waste streams e.g. PV cells</li> <li>• introduce a more transparent timeframe and process for action on priority products (including if there is no action within the time frame, how is it escalated?)</li> <li>• include plastics as a broad category that cuts across multiple products. This would allow for a systematic approach that addresses urgent ecological priorities (e.g. marine litter), in line with international developments</li> </ul> <p>Increased resourcing to the Department of the Environment and Energy (DoEE) to ensure effective implementation and enforcement, which could include:</p> <ul style="list-style-type: none"> <li>• increased budget allocations to the Product Stewardship Unit within DoEE</li> <li>• payment to DoEE for enforcement to be built into PRO fees, a system that is currently used, for example, by the Californian Department of Resources Recycling and Recovery (CalRecycle) and the Ontario Resource Productivity and Recovery Authority</li> </ul>
--	---

	<ul style="list-style-type: none"> <li>improved transparency and sourcing of advice from experts and other stakeholders to inform product stewardship decision-making and policy development, as intended in the Act's creation of the (subsequently disbanded) Product Stewardship Advisory Group</li> </ul> <p>Better promotion of product stewardship to stakeholders including consumers</p> <ul style="list-style-type: none"> <li>develop a single, strong, compelling brand for product stewardship</li> </ul>
<p><b>Improving the National Television and Computer Recycling Scheme (NTCRS)</b></p>	<p>Revisions to the NTCRS regulations, including to:</p> <ul style="list-style-type: none"> <li>broaden the scope beyond TVs and computers, with a preference for all waste electrical and electronic equipment (WEEE, similar to the EU and British Columbia models). Consideration could be given to excluding products where electronics is not the main purpose (e.g. some toys, wearables, Internet of Things)</li> <li>allow for reuse and refurbishment to be included in targets</li> <li>base targets and reporting on improved data that captures all waste flows, including illegal flows and products recovered through unofficial (non-Arrangement) channels</li> <li>improve coordination between Arrangements through the introduction of a clearing house or coordinating body that would: <ul style="list-style-type: none"> <li>allocate collection responsibilities between Arrangements to improve coverage and efficiencies</li> <li>coordinate marketing to improve messaging to consumers</li> <li>ensure that standards are being met by all Arrangements</li> </ul> </li> <li>develop more ambitious standards, aligned to international standards such as WEEELABEX</li> <li>recognise the role of social enterprises</li> <li>utilise the knowledge and experience of the WEEE Forum and their Knowledge Toolbox</li> </ul>

## Introduction

---

The International Stewardship Forum was held in Sydney from 4-6 April 2018. With over 130 participants and 13 international speakers, the Forum provided a unique opportunity for participants to gather practical insights from product stewardship and extended producer responsibility (EPR) programs across a broad range of products and substances.

The Forum was designed to maximise discussion and interaction between local and international representatives. It involved:

- two days of presentations and panel discussions (Attachment 1: International Stewardship Forum program)
- a final day of discussions with select stakeholders (Attachment 2: Participants in the Chatham House discussion) to reflect upon the Forum presentations, identify key insights, and help map out a way forward for product stewardship in Australia. These discussions followed a modified Chatham House Rule to encourage openness and information sharing (participating organisations have been identified for transparency, but key points have not been attributed to particular individuals or organisations)<sup>1</sup>.

The Forum was designed and structured to help inform the Australian Government's 2018 review of the *Product Stewardship Act 2011* (the Act).

This paper provides an overview of some of the issues, ideas and solutions that were raised by participants over the three days. It is structured in two sections:

- high level insights into the design and implementation of effective product stewardship policies and programs
- the implications of these insights for Australian policy, including the current review of the Act.

## Case studies

Unless otherwise stated, comments and examples attributed to presenters are from presentations made during the first two days. Case studies are used throughout, with hyperlinks to published sources where available.

## A note on language

During the Forum, the terms 'extended producer responsibility' (EPR) and 'product stewardship' (PS) were both used by different speakers, often interchangeably, or with similar meanings. EPR is often used to refer to regulated take-back programs, particularly in the European Union (EU) and North America, while 'product stewardship' in an Australian context encompasses voluntary as well as regulated programs.

In this paper both terms are referenced in relation to specific presenters, although there were no consistent definitions. 'Product stewardship' is used as the more general or holistic term. A more consistent interpretation across both terms was sought by participants.

## Insights

---

The first two days of the Forum were structured around a series of presentations and panel discussions, with the presentations intended to provide relevant context for the broader discussions. The topics included an overview of the international landscape for product stewardship and EPR and their practical implications for Australia, best practice policies and programs, the business case for product stewardship, strategies to engage business and consumers, and opportunities to drive product stewardship within the new circular economy framework.

Through a series of modified Chatham House discussions on the third day, participants explored some of the insights they had gained from the presentations. While these were numerous and extensive, a number of common themes emerged. These are summarised below under seven key insights, supported by case studies and observations from the earlier presentations.

### 1. A systems approach: product stewardship needs to be considered within a more holistic circular economy framework

#### The insight

There was general consensus that product stewardship needs to be repositioned within a broader sustainability and circular economy framework that goes beyond recycling at end of life.

The circular economy model, driven by leading organisations such as the European Commission and Ellen MacArthur Foundation, provides a coherent and rational framework for sustainable development. Issues that have previously been viewed as purely environmental concerns – such as resource conservation and recycling – are reframed as important economic or commercial issues. Resource conservation and waste, seen through this lens, are linked to economic inefficiency, access to raw materials and national security. For businesses, the circular economy provides a framework for assessing risks and opportunities associated with environmental trends such as climate change or plastic pollution.

A national circular economy strategy, with long term goals and targets, would help to drive and motivate more ambitious product stewardship programs while encouraging innovation. Some of the implications for product stewardship include:

- The need for stretch goals and targets linked to circularity and sustainability
- Shifting the focus away from negative concepts such as waste, and towards positive goals such as resource management, economic growth, innovation and entrepreneurship
- Linking product stewardship to core business drivers such as access to raw materials and market opportunity
- Integrating the resource recovery hierarchy more explicitly in product stewardship by including a wider range of strategies such as product-to-service, durability, reuse, remanufacturing or shared consumption models.

#### Case studies

The idea of a 'circular economy' is starting to drive innovation in government policy and corporate strategy. Caroline Lambert from the EU Delegation to Australia explained how the EU's Circular Economy Package will leverage the full gamut of policy tools, from regulation through to standards, to transform the European economy from a linear to a circular model. The drivers for change include a recognition that economic development is based on the unsustainable extraction and use of resources, and that resource efficiency and recycling would not be sufficient to achieve true sustainability.

The [EU action plan for a circular economy](#) includes:

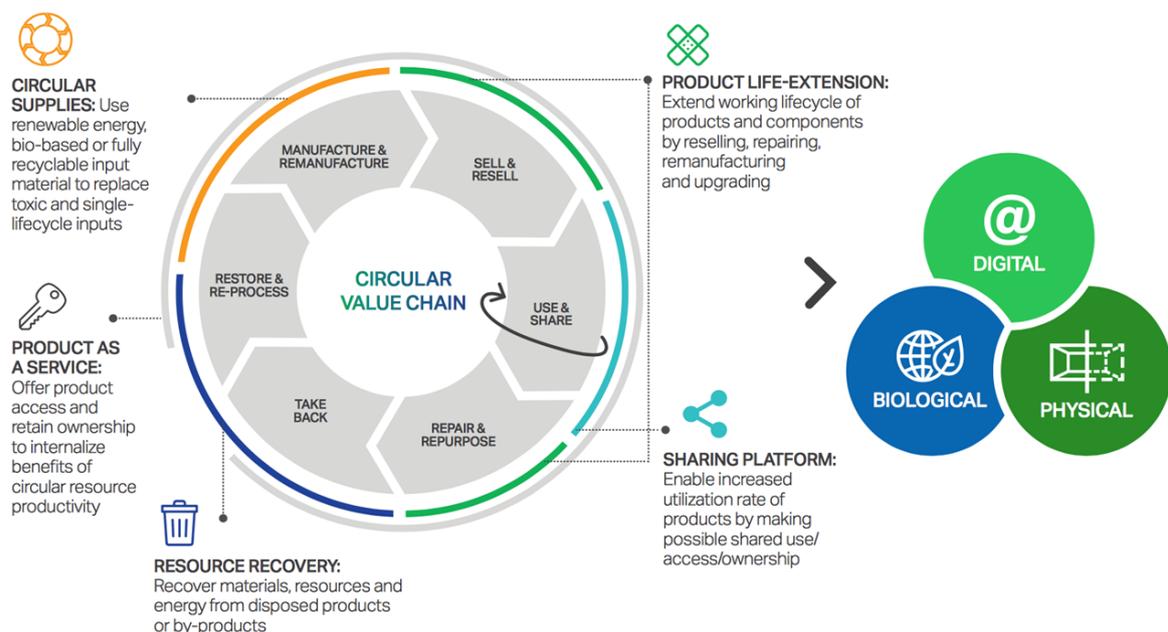
- measures to regulate planned obsolescence, durability, reparability and recyclability through the Ecodesign Directive
- ambitious recycling and landfill targets for member states, including a maximum of 10% of waste disposed to landfill by 2030
- inclusion of circular economy principles in public procurement, such as durability and reparability.

A number of industry and consumer initiatives to drive a more circular economy were also presented. CEO of Sustainable Business Australia (SBA), Andrew Petersen, noted that ‘the optimism and momentum behind the circular economy is energizing’, creating an opportunity to accelerate transformation to a more sustainable world. The ‘linear’ economic model poses serious risks for businesses — and they know it. These include the obvious procurement issues associated with diminishing resources and growing demand; but companies, particularly publicly listed ones, also need to consider wider financial, reputational and regulatory concerns

SBA is working with the [World Business Council for Sustainable Development \(WBCSD\)](#) to provide tools to encourage the transition to circular business models. These include guides for CEOs and practitioners and an online ‘Marketplace’ to facilitate business to business reuse of secondary resources. The CEO Guide describes five emerging business models for a circular economy (

Figure 1).

Figure 1: Five business models and three disruptive technologies



Source: Andrew Petersen, presentation to the International Stewardship Forum, 5 April 2018

Other presenters illustrated the practical potential of these business models.



Dr Kate Ringvall from IKEA Australia explained that, while ‘doing more with less’ has always been integral to the business, they are now working towards a vision called [‘Circular IKEA’](#). Local initiatives include a partnership with Soft Landing to take back and recover used mattresses from customers, and a trial takeback scheme for used sofas (see case study below). These illustrate the potential for companies to take a leadership role in resource recovery and product life extension.

Another business model identified by the WBCSD was ‘sharing platforms’ that enable increased utilisation of products. Andrea Chmielinski from Steward Wise presented a number of examples from Canada that demonstrate how sharing platforms are being used to deliver value for consumers while reducing environmental impact. One of these was the [Toronto Tool Library](#), which shares 7,000 tools between more than 2,500 members. This overcomes the inefficiency of tool ownership for many consumers, with the average tool used for only 13 minutes before disposal.

#### **Case study: IKEA furniture recycling**

A trial takeback program in Sydney, supported by the NSW Office of Environment and Heritage, has highlighted some of the challenges involved when products are not designed for end of life. IKEA sofas are designed for a 25-year life and can be easily disassembled for recycling. IKEA is accepting other brand sofas from customers, however, and many of these are difficult to take apart because glues and staples have been used to overcome other weaknesses in the design.

The company’s next venture is to trial a takeback scheme for any IKEA furniture at its Tempe store, to investigate opportunities to remanufacture, repair or resell furniture returned by customers.

## 2. Priority materials: circularity requires a particular focus on plastics and broader consideration of risks and hazards

### The insight

Achieving a circular economy is particularly problematic for plastic products for many reasons, including: the sheer quantity being consumed; their durability and visibility in the litter stream; the wide diversity of applications, polymers and additives that make recycling a challenge; and their reliance on non-

renewable resources such as oil and gas. A focused, systematic and coordinated approach will be needed to transition the plastics industry to more sustainable and circular business models.

Most EPR regulations and product stewardship programs focus on specific products such as packaging, e-waste / waste electrical and electronic equipment (WEEE), mobile phones or used chemical containers, rather than their constituent materials. Risks and hazards have regularly been considered when prioritising or developing these approaches. There is a growing body of evidence, however, that plastics present environmental and social risks that need to be considered more holistically. A number of government bodies, NGOs and companies are therefore starting to focus on plastics and the role that shared responsibility initiatives can play in addressing both global and local challenges. These include marine litter, health and environmental impacts of additives, recyclability, end markets for collected plastics, and transition from fossil-based to more renewable sources.

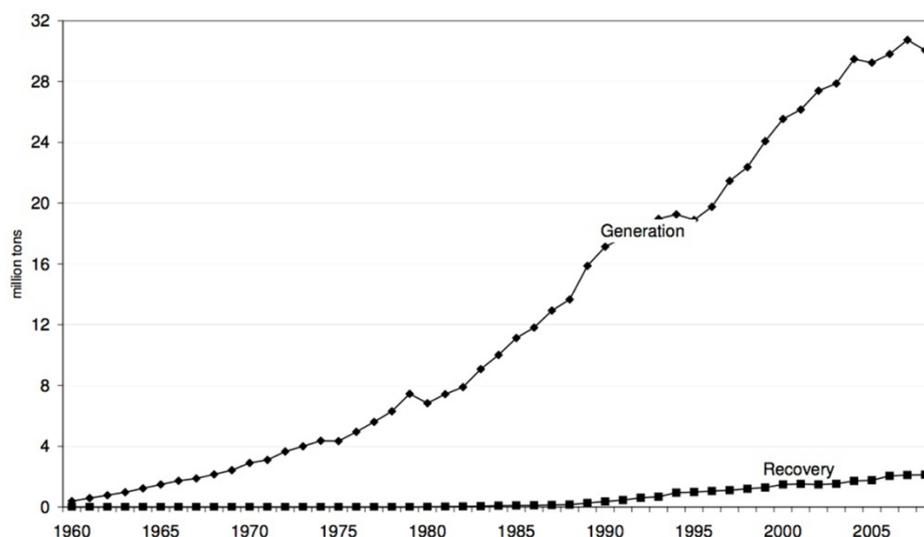
### Case studies

A number of presentations highlighted growing concern and an increasing number of measures to mitigate the environmental impacts of plastics. Caroline Lambert reported that the EU's Circular Economy Package includes a strategy for plastics, including marine litter, and a more ambitious target for the recycling of plastic packaging.

Doug Woodring from Plasticity Forum and the Ocean Recovery Alliance presented data on the growing gap between plastics generation and recovery (Figure 2). He argued that brands have a critically important role to play in reducing plastic waste, for example by increasing recycled content, improving recycling programs, using less plastic packaging and reducing supply chain waste, developing new designs and introducing new materials.



Figure 2: Plastics generation and recovery, 1960-2008



Source: Doug Woodring, presentation to the International Stewardship Forum, 5 April 2018

Andrew Petersen from SBA noted that marine debris is a serious problem for companies. Every year, 800 million tons of plastics leak into the ocean, and if this trend continues there will be more plastic in the ocean than fish in the sea by 2050. Much of this rubbish can be traced back to its origin through brands and logos. Businesses want to address this issue and close the loop on plastics to address marine debris and to retain its value in the economy.

Laveen Dhillon from the Vinyl Council of Australia presented their product stewardship program, which has a unique focus on the life cycle of a polymer (polyvinyl chloride or PVC), from the composition of the resin through to recovery of products at end of their life (see case study).

#### **Case study: PVC Stewardship Program**

The [PVC Stewardship Program](#) was launched in 2002 as a voluntary industry initiative. It now has more than 45 signatories from across the supply chain. The program addresses the full life cycle of PVC, with 15 measurable commitments and targets organised around 5 key themes. These are: best practice manufacturing, resource efficiency, safe and sustainable use of additives, energy and greenhouse gas management, and transparency and engagement. Recent initiatives to improve markets for recycled PVC include the implementation of a recycling program for PVC products in hospitals, and development of new products from PVC coated polyester fabric.

### 3. Principles not prescription: there is no single operating model that will be effective and efficient in all circumstances

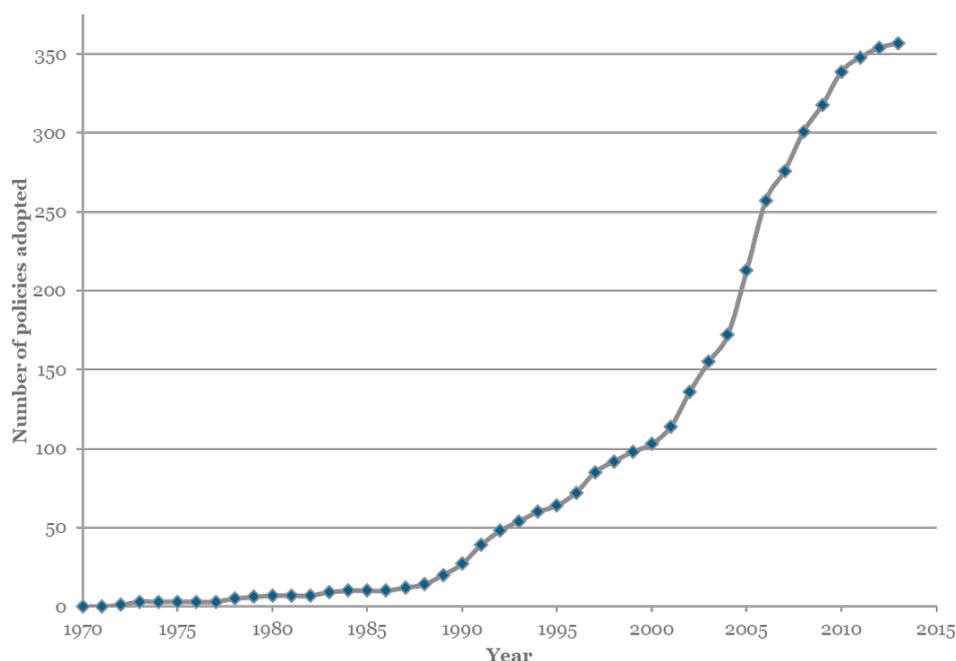
#### The insight

There is no single operating model that will be effective and efficient in all circumstances. Factors that need to be considered in choosing the most appropriate models include the problem definition, local politics and legislative frameworks, geography and industry motivation. The product stewardship program could be run by one producer responsibility organisation (PRO), or by multiple PROs competing with each other. There are also different models for governance, allocation of responsibilities, how programs are funded, collection systems and so on. Nevertheless, there are some common elements that need to be included in program design, including clear objectives and targets and flexibility to adapt to changing circumstances.

Research presented by Peter Börkey from the OECD's Environment Directorate highlighted a growing number of EPR initiatives (Figure 3). Most OECD countries have introduced EPR schemes for particular product categories. At least 384 systems were in place globally by 2014, two-thirds of which had been implemented since 2001. During Q&A and discussion sessions, it was agreed that Australian policy makers and industry groups working to establish a new product stewardship initiative don't need to 'reinvent the wheel'. They can draw on a rich body of existing research, case studies and experiences from around the world.



Figure 3: Cumulative adoption of EPR programs



Source: Peter Börkey, presentation to the International Stewardship Forum, 4 April 2018

More information:

OECD (2016) [Extended producer responsibility, updated guidance for efficient waste management](#), OECD Environment Directorate

### Case studies

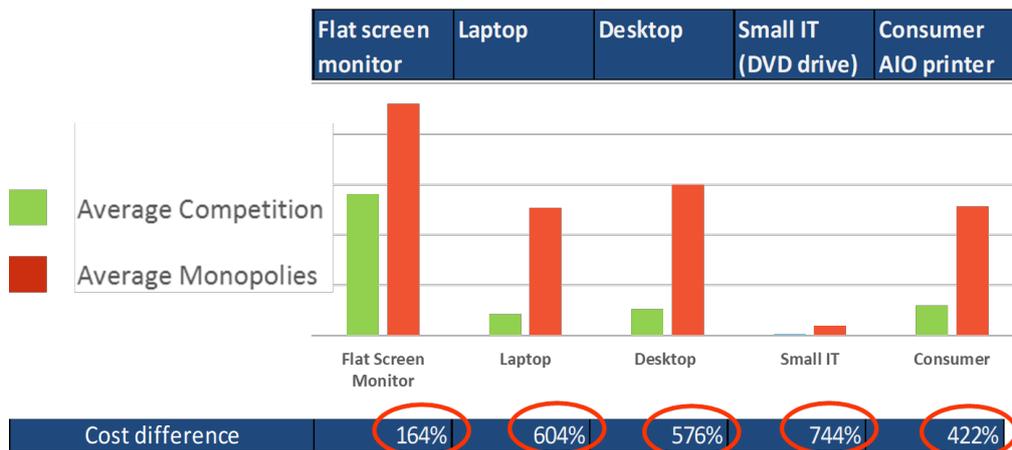
In 2016, the OECD updated its [guidelines on EPR](#), which were originally produced in 2011. One of the core observations in the original document, i.e. that there is ‘no single “right approach” when designing EPR systems remains valid. Solutions need to be found depending on the specific objectives to be achieved and taking account of the economic, political and cultural context (OECD, 2016, p. 32).

Peter Börkey from the OECD identified three models for EPR programs, each with their own advantages and disadvantages:

- Multiple PROs allow for competition and by doing so may reduce costs and encourage innovation. However, transaction and administrative costs may be high, and this model may not be optimal where markets are small and where a single PRO might generate economies of scale. The costs of government oversight may also be higher
- A single PRO is able to achieve economies of scale, but there is less competitive pressure to reduce costs or innovate
- Government-run programs, which are less common, allow for stronger oversight of financial flows and implementation, and may be appropriate where industry is not mature enough to organise and manage their own governance system. Similar to a single industry PRO, there is less opportunity for cost optimisation and innovation.

This topic attracted much comment and discussion. Mark Dempsey, UK Sustainability Manager for HP, argued that competitive systems, which are becoming more common in Europe, result in lower costs and higher collection rates (Figure 4). Steve Claus from Green Crossroads agreed that there needs to be competition in the delivery of services (collection, sorting and recycling), but not at the PRO level. In Germany, for example, the packaging scheme started with a single PRO, but after the Government introduced competition the quality of recycling services fell.

Figure 4: Economic costs of competitive and monopoly systems



Source: HP benchmarking November 2012

Source: Mark Dempsey, presentation to the International Stewardship Forum, 5 April 2018



The National Television and Computer Recycling Scheme (NTCRS) in Australia allows for multiple PROs, but there may still be scope for greater collaboration to reduce inefficiencies. Outgoing CEO of the Australia New Zealand Environment Platform (ANZRP), Carmel Dollisson, argued that with a big country and small population, efficiency would improve with shared collection, logistics and awareness building.

The potential for greater coordination between multiple PROs was the subject of discussion throughout the Forum. There appeared to be general support for action in three areas: allocation of collection areas (discussed further under NTCRS below), coordinated communications and maintenance of standards

Governments in Canada had adopted the monopoly (single PRO) model. Andrea Chmielinski from Steward Wise reported that each province has only one scheme for each material. While the cost may be higher than could otherwise be achieved through a competitive model, it has benefits such as being 'agnostic about growth'.

Another distinction in governance is between 'for profit' and 'not for profit' (NFP) PROs. Carmel Dollisson noted that 'ANZRP is the only not-for-profit NTCRS arrangement, established by industry for industry with the sole purpose of providing a sustainable arrangement for liable parties to meet their product stewardship legislation obligations'.

The NFP model was supported by some of the other speakers. Cynthia Dunn from the California Department of Resources Recycling and Recovery (CalRecycle) reported that EPR legislation requires PROs to be NFP.

The methodology for calculating and collecting fees from industry also varies widely. Steve Claus noted that under the Fost Plus packaging scheme in Belgium, industry pays 100% of collection and recycling costs, but in other schemes costs are shared between industry and local government. Michelle Carvell from Lorax Compliance used a variety of case studies to highlight significant differences between fees, which vary according to factors such as product and packaging type, scope, definitions and recycled content.



Developing countries have their own challenges. Steve Claus, who provides advice on EPR programs in Africa and South America, identified some of the challenges as uncontrolled dump sites, a lack of legal frameworks, health issues and the lack of household waste collection services

Through the three days of the Forum, participants identified some of the factors that contribute to a successful EPR or product stewardship program. These include:

- clear objectives for each product category – what do we want to achieve?
- waste reduction targets that go beyond recycling, for example to incorporate issues such as reuse
- a focus on outcomes, with a robust reporting framework
- flexibility to accommodate product innovation or other changes in the market
- regular reviews to update or improve schemes
- equity of access between metropolitan and regional/rural areas
- establishing public trust through communication and transparency
- a level playing field between importers and local industry, i.e. any scheme needs to cover imports and ensure that local industry is not disadvantaged.

## 4. It's not just about regulation: Governments can support product stewardship in many different ways

### The insight

Governments have many different roles that they play to support product stewardship. Regulation may be appropriate depending on the circumstances, but Governments can also facilitate voluntary schemes. In addition to practical support, for example through financial assistance or pilot projects at the early stages of scheme development, they can also 'nudge' industry towards voluntary stewardship using the power of persuasion or threats of regulation if voluntary action is not forthcoming. In Australia at least, voluntary initiatives can be as effective as regulated EPR schemes, but governments must be willing to escalate to regulation if and when required. Governments can also provide support through their procurement activities.

Government involvement is critical to help maintain a level playing field and high standards, but there is no single approach that is always appropriate. The question is not whether a regulatory or voluntary model is best; rather, what is the right mix of government involvement and market forces to achieve desired outcomes for a particular product being targeted?

### Case studies

Forum presentations and panel discussions covered a broad range of models for government engagement, from the more regulated EPR schemes in Europe and Canada through to voluntary industry-led programs in Australia. There is no 'right way' as each program has to respond to specific needs and circumstances.

Cynthia Dunn reported that mandatory schemes are preferred in California because voluntary programs have not been particularly successful. In some cases, voluntary initiatives over several years have been followed by industry calls for regulation to address anti-trust and free rider issues (e.g. paint and mattresses). More recently, CalRecycle has been trying to establish an EPR program for packaging but had been unable to get industry support. In 2015, they invited industry to put forward ideas for a voluntary approach but did not receive substantive responses. As a result, California is now moving forward with plans for regulation.

Cynthia Dunn reported that mandatory schemes are preferred in California because voluntary programs have not been particularly successful. In some cases, voluntary initiatives over several years have been followed by industry calls for regulation to address anti-trust and free rider issues (e.g. paint and mattresses). More recently, CalRecycle has been trying to establish an EPR program for packaging but had been unable to get industry support. In 2015, they invited industry to put forward ideas for a voluntary approach but did not receive substantive responses. As a result, California is now moving forward with plans for regulation.



Features of EPR regulation in California (their 'legislative checklist') include:

- a tiered definition of manufacturer/producer
- funding should be internalised; not used for penalties
- goals – clear, meaningful, set by government
- stewardship organisations should be non-profit
- plan and annual report requirements
- oversight and enforcement – including cost reimbursement to the state oversight agency.



Chris van Rossem from the Canadian Stewardship Services Alliance commented that most schemes in Canada, for example for e-waste and printed paper and packaging (PPP) are regulated, and there is now very little debate about whether voluntary or regulated schemes are better. In his view, 'the EPR train has left the station'. Liam O'Keefe from Tyre Stewardship Australia (TSA) commented that the TSA model is unique when compared to other schemes around the world. Unlike other schemes, which are regulated, TSA is entirely voluntary.

Case studies that were presented from Australia represented the full spectrum:

- Regulation: Carmel Dollisson explained how the ANZRP PRO (TechCollect) enables brands to meet their obligations under the Product Stewardship Act and the NTCRS
- Co-regulation: Brooke Donnelly, CEO of the Australian Packaging Covenant Organisation (APCO) highlighted the unique status of the Packaging Covenant, where brand owners can elect to be a member of APCO or be regulated under state or territory legislation based on the National Environment Protection Measure (NEPM) for Used Packaging. Their goals and strategic plan are determined in close collaboration with Government and they have strict reporting requirements.
- Voluntary: Liam O'Keefe from Tyre Stewardship Australia (TSA) and Janelle Wallace from Soft Landing Product Stewardship highlighted two very different models, for used passenger tyres and mattresses respectively:
  - TSA is funded by a levy on used tyres, with funds used for development of new markets; audit and accreditation; and promotion and engagement
  - Soft Landing Product Stewardship is funded by manufacturers and retailers, plus an additional fee charged at retail for collection and recycling. Members can choose whether or not to pass this fee on to consumers.

Peter Brisbane, Director Stewardship and Waste at the Australian Department of Environment and Energy, cautioned participants to avoid 'leaping into a conversation' about voluntary or regulatory schemes too early. He suggested a more systematic approach that started by defining the problem, understanding the supply chain and other stakeholders, looking at options, and then designing the best operating model.

Peter Brisbane noted that regulatory schemes are very resource intensive and difficult to adapt to changing circumstances. The Department is interested in exploring other ways that they can support and energise action, without going 'product by product'. The Department is also working with other jurisdictions to develop a framework for identifying those products that are highest priorities (the [Product impact management strategy](#) is open for consultation).





The idea of escalation was mentioned by several presenters. Voluntary initiatives can be a positive way to start because if industry is involved from the beginning, and see themselves in control, they are likely to be more

engaged and motivated. A credible threat of regulation can help, however. Cheri Scholtz, CEO of PET Recycling Company (PETCO) in South Africa, referred to the mandatory levy on plastic bags as a ‘burning platform that woke up the PET sector’. Money from the bag levy goes into government revenue, with very little allocated to environmental causes. It was introduced with no collaboration or negotiation with industry and has increased from 3 cents to 8 cents a bag since its introduction in 2003. Fearing a similar approach to PET beverage containers, the industry decided to be proactive and develop a bottle recycling scheme that would work without regulation.



Rodrigo Leiva Neumann, Gerente of Valoryza in Chile, provided extensive case studies of product stewardship and EPR in Latin America, including the Brazilian Sectoral Agreement for Packaging and its approach of Shared Product Responsibility. Latin American countries are relatively new to EPR, and progress has been slow over the past 10 years as collaboration and trust among stakeholders are still weak. Effective inclusion of waste pickers and international organisations will be critical issues.

Product stewardship schemes, regardless of whether they are voluntary or regulated, can also be supported by complementary policies. These include:

- ‘Green procurement’ policies: Governments could be a sophisticated purchaser of environmentally improved products or suppliers committed to takeback programs, and measures the environmental benefits generated by their procurement program
- Landfill levies that can improve the economics of recycling
- Tax incentives, e.g. for recycled content products
- Funding for research and development
- Networking and facilitation: The NSW Government’s Sustainability Advantage program and its support for the new Product Stewardship Cluster is an example of successful facilitation, helping to ‘connect the dots’.



During the Chatham House discussions participants agreed that the focus should be on the outcomes that stakeholders wish to achieve, and this can then drive the design of the most appropriate model. There was also a view amongst many of the Forum's industry speakers that government's role is to determine the desired outcomes and then to allow industry to work out how best to get there.



## 5. Working together: shared responsibility requires clarity on the roles, responsibilities and business case for each stakeholder group

### The insight

Product stewardship is generally based on the principle of 'shared responsibility' but putting this into practice can be difficult. Product systems involve many different actors within complex systems of production, consumption and recovery, and each can play their part. During the design of any product stewardship policy or program, it is important to:

- identify all of the stakeholders with an interest in, or ability to influence, the desired outcomes
- understand the drivers or business case for each stakeholder group, and how this can help to guide the engagement process
- define the role and responsibilities of each group in achieving the policy or program outcomes.

### Case studies

Given the complexity of product systems it is perhaps not surprising that the list of stakeholders can be quite long. One of the lessons from Equilibrium's child car safety seat recovery pilot was that stakeholders can be much broader than initially thought. According to Nick Harford, the project needed to engage or consider numerous stakeholders including original equipment manufacturers (OEMs), retailers, local government, mothers' groups as a source of information, transport departments because of the link to road safety, hire car companies (hiring out child safety seats) as well as others.

The stakeholder mapping and engagement process was seen by many participants as a critical success factor. Issues raised included:

- producers and other industry stakeholders need to be engaged 'early and often'
- waste and recycling industries have capacity and expertise that are underutilised
- it is important to establish public trust by demonstrating transparency and accountability
- consumer engagement and education are essential because consumers are the ones that have to return products for recycling - messaging should be as simple as possible and harmonised between various schemes

- local government should be engaged early in the process as a key stakeholder. Consistency across local government areas is required for national schemes to be effective
- strong leadership is required from the federal government
- industry and NGOs increasingly understand the value of collaboration to achieve shared outcomes.

The stakeholder mapping process also needs to analyse the drivers or business case for each group. One of the trends that emerged from many of the presentations was a shift towards a much wider range of objectives and targets. While the original objectives of many early product stewardship schemes related to waste and recycling, more recent initiatives are likely to have social as well as environmental goals. The following examples were presented at the Forum:

- Soft Landing Product Stewardship collects and recycles used mattresses, but Janelle Wallace commented that this is just a means to the end for the social enterprise that manages the program. Their primary purpose is job creation for workers who have experienced disadvantage in the workforce.
- The South African organisation for PET bottle recycling (PETCO) was originally driven by the need to improve recycling but it also generates enormous social value. CEO Cheri Scholtz reported that around 60,000 people earn an income from PET recycling that keeps them out of poverty.
- The French EPR law for medical ‘sharps’ was driven by a fear of infectious disease transmission through accidents involving used sharps in waste sorting facilities. Laurence Bouret from stewardship organization DASTRI reported their recovery program has also ‘changed lives’ by making disposal of sharps much easier for home care patients. Similarly, John Harris, formerly of Eli Lilly and Company, highlighted the need for more ‘patient-based’ outcomes in sharps programs.
- Nick Harford noted that Equilibrium’s child car safety seat recycling pilot was originally conceived as a way of recovering seats for recovery at end of life, but another important benefit identified along the way was to ensure that seats are not used or reused beyond their statutory safe use period.

Many of these objectives or outcomes can be described as ‘co-benefits’. Understanding and promoting the multiple benefits of stewardship programs, and repositioning them as a source of value, can help to build support amongst stakeholders. The different drivers and benefits for each stakeholder group must be understood and considered to optimise participation and effectiveness.



The business case for industry stakeholders needs particular attention as these are the group that will generally have to provide funding. Andrea Chmielinski from Steward Wise shared some Canadian research that identified four common types or stages in the journey towards corporate social responsibility (CSR):

- cost and risk reduction, which is where most Canadian businesses are at

- realising competitive advantage by engaging in sustainability, including through product stewardship. This could include access to recycled raw materials
- protecting or enhancing reputation by developing programs based on long term vision and commitment
- synergistic value creation based on a good understanding of customer needs and interests.

There must be a motivating force for industry players, regardless of whether a program is voluntary or regulated.

The importance of collaboration and partnerships between stakeholders was another theme that was reinforced throughout the Forum. A number of industry stewardship organisations have collaborated successfully with external groups. Close the Loop, for example, has partnerships with Planet Ark to market their toner cartridge recycling program to consumers, and with Downer EDI on applications for their Toner Pave product in asphalt. Peter Tamblyn commented that Close the Loop ‘has no choice NOT to collaborate, as circular economy solutions don’t work without it’.

Another identified opportunity for collaboration was between PROs. One of the issues raised during the Forum was potential for inefficiencies in logistics, management and marketing: ‘we don’t want to establish a separate infrastructure for each product’. Harmonisation or cooperation between product stewardship schemes could occur by developing a common face to consumers, or by sharing logistics where this makes sense.

## 6. Designing circularity: design for environment is critically important and requires more focus

### The insight

One of the original objectives of EPR was to drive improved design for recycling by making producers financially responsible for recovery at end of life. Research by the OECD and others has found that while EPR has helped to improve recovery rates, the impact on design for environment has been relatively limited. There is a need to place renewed emphasis on product and packaging design and its potential to reduce environmental impacts at every stage of the product life cycle. Achievement of a circular economy will require strategies that go well beyond design for recycling. These are likely to include, for example, design for durability, repair, remanufacturing, product to service and shared consumption.

### Case studies

Peter Börkey from the OECD observed that while EPR has delivered successful outcomes, including increased recovery rates, reduced waste disposal and a reduced financial burden on the public sector, particularly for packaging, it has failed to deliver incentives for better design. This is despite the fact that design was originally at the heart of EPR.

This view was reinforced by Pascal Leroy, Secretary General of the WEEE Forum, who noted that the WEEE Directive has had a negligible impact on design. While there are some good examples, the implementation of

EPR through collective, rather than individual, responsibility has eliminated any feedback loop to design.



There were some positive examples, however. Brooke Donnelly from the Australian Packaging Covenant Organisation (APCO) reported that all APCO members have an obligation to review packaging using the Sustainable Packaging Guidelines. The new PREP Design Tool and Australian Recycling Label, which are being provided to members to help drive design for recycling, allow companies to check whether or not a package can be recycled, and if not, how recyclability can be improved through design changes. Some participants suggested that the range of plastics should be reduced and standardised to support recycling.

IKEA provided good examples of design for environment that have been driven by the company's corporate goals for CSR, rather than regulation. While their furniture is designed for recycling, furniture made by other companies is not. This makes any broadly targeted takeback program more difficult and costly.

Many participants acknowledged that individual producer responsibility schemes such as IKEA's are a more effective way of influencing design. Under most collective producer responsibility schemes, all liable parties pay the same fees regardless of how easy or hard their products are to recycle. Producers would have a greater incentive to design for recycling if fees were modulated according to design characteristics.

Variable pricing schemes tend to increase administrative costs, however, because of the need to calculate the true costs of recovery for individual products and to charge accordingly. Blockchain technology may have potential in the future to track products to support more efficient variable pricing.

Variable fees can also be used to encourage other positive design features, such as the use of recycled material. Michelle Carvell from Lorax Compliance provided examples of packaging EPR schemes in France and Canada that recognise recycled content through 10% and 20% discounts on fees, respectively.



A number of alternative or complementary policies were also suggested as a way of incentivising design for environment. These included regulations that target design more directly, such as the EU's Ecodesign Directive and Essential Requirements for Packaging. Under their Circular Economy Package, the EU will require all products placed on the European market to be repairable.

Other options that were raised included:

- mandatory levels of recycled content
- tax incentives for products containing recycled material
- promoting dialogue between producers and recyclers to stimulate design for recovery.

Better data collection and reporting may also help to drive positive change. Doug Woodring from Ocean Recovery Alliance presented their Plastic Disclosure Project, which encourages companies to treat plastics like any other valuable resource by measuring, managing and reporting on their use. It encourages solutions to minimise impact, for example by increasing recycled content, improving recycling programs, using less plastic packaging and reducing supply chain waste, developing new designs or introducing new materials. The Plastic Disclosure Project promotes the benefits of voluntary engagement by brands, including customer engagement and reputation.



Producers and distributors in Australia have limited influence over product design where manufacturing is undertaken in other countries, particularly for complex products such as electronics. Potential solutions include international advocacy for better product design for products imported to Australia and strategies to influence global supply chains.

A common theme throughout the Forum was the need for design considerations to go beyond recyclability. Product stewardship initiatives should promote strategies higher up the waste hierarchy, including waste reduction and product life extension through design.

## 7. Innovation and entrepreneurship: Sustainable end markets must be identified and supported

### The insight

One of the critical success factors for any recycling program is the need to have sustainable end markets for collected materials. Despite this, many product stewardship initiatives have focused on collection and recycling with insufficient attention to market development. Innovation and entrepreneurship need to be encouraged and supported to achieve shared value outcomes and to ensure that recycling is driven by 'market pull' as well as product stewardship. Equally important is the need for full traceability in supply chains to ensure that all stakeholders, including those involved in collection, sorting and reprocessing, meet recognised sustainability standards.

### Case studies

There was general recognition that more attention needs to be paid to market development to ensure that recovery programs are environmentally and financially sustainable. This issue has been thrown into sharp relief by the Chinese Government's recent restrictions on the import of certain waste material intended for use as raw materials (the 'National Sword' policy). Mentioned by several presenters, these restrictions include lower thresholds of 0.5% impurities for both paper and plastics, which many collected recyclables are unable to meet. This has had a large impact on international markets for scrap plastics and paper, and disruptions in the Australian recycling industry.

The broader issue, which has been highlighted by Chinese policy, is that recycled materials need to meet quality specifications in end markets. Steve Claus from Green Crossroads reported on his experience with Fost Plus, the packaging stewardship program in Belgium. Fost Plus members pay the full costs of

collection and sorting and receive any benefit from trading high quality materials. Their kerbside collection model delivers higher quality raw materials than comingled systems because there are three separate bins: one for glass, one for paper, and one for the 'light fraction'.

A common theme throughout the Forum was the need for markets to be identified early (i.e. prior to collection) to provide market pull and to ensure there are sustainable outlets for collected materials. PETCO in South Africa only contracts with recyclers who have an end market in their value chain. They also make sure that recyclers are contracted within a price range that enables them to operate when prices are down, as they are at the moment in response to the Chinese restrictions. Cheri Scholtz from PETCO noted that processing into soft drink grade resin, which can be incorporated back into new PET bottles, represents the most sustainable use of collected bottles. This solution effectively 'closes the loop' in a cycle where the material is never lost and recycled again and again in a potentially infinite loop.

Case studies from a number of PROs highlighted the importance of allocating some of the collected fees towards R&D:

- Liam O'Keefe, Market Development Manager for Tyre Stewardship Australia noted that TSA does not fund collection and recycling, instead supporting markets through accreditation, promotion and engagement, and investment in R&D. Research funding provided by TSA is dedicated, early-stage through to proof-of-concept research and development for the utilisation of end-of-life tyres
- The Vinyl Council of Australia's stewardship program has undertaken various pilot projects, including for coated fabrics and hospital products. Stewardship Manager Laveen Dhillon reported that the hospital recycling program was initiated in 2009 as a pilot in collaboration with staff at a Melbourne hospital. Today it operates in around 138 hospitals and healthcare facilities in Australia and New Zealand collecting IV bags, face masks and oxygen tubing, and is being replicated in a number of countries overseas.
- Paintback collects paint and paint packaging. Chief Executive Karen Gomez reported that there is scope to improve Australian treatment solutions. Thus, they are investing in R&D with companies and research institutions to release more value and move to markets higher up the resource recovery hierarchy.

Numerous examples of innovation were presented during the Forum. One example that was developed without government support was TonerPave™, a new asphalt developed by Close the Loop in collaboration with Downer. The key ingredient is a modified toner polymer, using toner recovered from printer cartridges. This ingredient improves the performance of the asphalt with a 23% smaller carbon footprint. Peter Tamblyn, Sales and Marketing Manager Asia Pacific for Close the Loop, reported that they are now working with another PRO, REDcycle, to incorporate soft plastics. This is a 'world first' innovation, with the soft plastics adding additional value to the product.



The Smart Materials and Recycling Technology (SMaRT) Centre at University of New South Wales was presented as an example of innovation in recycling technology and market development. Vaibhav Gaikwad from the Centre explained that they work in partnership with companies such as TES, Nespresso and Moly-Cop to turn waste from one company into a resource for another.

The SMaRT Centre's innovative 'microfactory' technology can be located near the source of waste materials to avoid unnecessary transport and to provide local jobs. On 3 April, the GlobalPSC arranged site visits for several sponsors and international speakers to the world's first e-waste microfactory at the SMaRT Centre the day prior to its launch, in addition to touring WEEE processor TES's Sydney plant.



There was considerable discussion about the role of government in supporting market development. Funding for R&D and commercialisation can often help during the early stages, and it was suggested that both industry and government should be prepared for some projects to fail. A culture of innovation and entrepreneurship needs to be encouraged and supported.

A number of speakers suggested that governments can play other vitally important roles, including:

- through their procurement of goods and services, e.g. by specifying buildings, infrastructure, products or packaging with recycled content
- by facilitating changes in procurement standards, where appropriate, to allow the use of recycled materials. Daniel Tartak, CEO of BINGO Industries, mentioned that they separate mixed waste streams to recover usable materials, but sometimes face 'push back' from government agencies on meeting standards for end markets. Peter Tamblyn from Close the Loop noted that VicRoads has been purchasing the same asphalt 'recipe' for 55 years, whereas local councils are more willing to innovate and try new materials.

## Implications for Australian policy

The following recommendations are based on the Chatham House discussions. While not explicitly endorsed by participants in this format, they draw on the notes presented by working groups to the plenary.

Objective	Recommendations and Options
<p><b>A more strategic, national approach</b></p>	<p>Development of a national, cross-jurisdictional roadmap for product stewardship, with a 3-5-year timeframe, that:</p> <ul style="list-style-type: none"> <li>• provides a clear vision for action reflecting circular economy principles and including ambitious targets such as zero waste to landfill</li> <li>• reframes product stewardship as an economic opportunity linked to innovation, business growth and job creation</li> <li>• shifts the focus from ‘waste management’ to ‘resource recovery’, with a clear signal that waste to energy is lower down the resource recovery hierarchy because it leads to loss of raw materials</li> <li>• recognises additional non-environmental goals or benefits including health and safety, job creation, etc</li> <li>• clarifies the role of product stewardship in supporting a circular economy - for example by facilitating shared responsibility for circular design, recycling and market development for recycled materials - and how it can complement other policies and tools</li> <li>• provides a clear framework for identifying product priorities, building on the current consultative <a href="#">process</a> for a national strategy to manage environmental impacts from products</li> <li>• outlines the responsibilities of all levels of government to support product stewardship. For state and territory governments - who have statutory responsibility for waste - this could include harmonising regulations for waste management, health and safety, and product stewardship, where appropriate. The roles and responsibilities of the Australian Government to support the states should also be clarified</li> <li>• includes a commitment by all levels of government to support product stewardship through procurement of buildings, infrastructure, products and packaging with recycled content</li> <li>• supports a ‘Centre for Excellence’ in product stewardship that would engage in research and knowledge sharing to promote and facilitate best practices</li> <li>• includes a more efficient system for timely collection and reporting of waste and recycling data. While the National Waste Report does this to some extent every two years, a more efficient reporting system (e.g. through an on-line/shared portal) could be considered. More promotion and continued refining of the data to match changing needs would also be useful</li> <li>• is developed in consultation with and has the support of, relevant stakeholders</li> <li>• commits to publicly report on progress of the Meeting of Environment Ministers’ product stewardship work plan</li> </ul>

**Improving product stewardship policy including the *Product Stewardship Act***

Revisions to the *Product Stewardship Act* and its implementation to:

- develop an agreed definition of product stewardship that is understood by key players such as local government
- shift the objectives from waste management to a circular economy, product management, generating value and economic outcomes
- acknowledge other non-environmental drivers and benefits, e.g. jobs, innovation, health and safety, etc
- work with producer responsibility organisations (PROs) to ensure that design considerations are included in schemes where appropriate
- redefine 'product' to allow for broader or alternative interpretations, for example to cover a group of materials (e.g. plastics) or services
- clarify what 'shared' responsibility really means – who is involved and what are their obligations
- broaden the scope of liable parties to include other industry stakeholders, for example retailers, as well as government (e.g. for procurement)
- allow for outcomes that cut across products or arrangements, e.g. allowing for co-collection or other forms of collaboration between PROs to achieve economies of scale or other improved outcomes
- clarify when product stewardship is the best approach to address product impacts, and when other policies or regulations might be more appropriate
- facilitate a national, consistent approach to stewardship arrangements, which applies to voluntary and regulatory approaches
- include targets that are reflected in regulations
- allow for a wide range of regulatory and voluntary models
- in co-regulatory programs, allow for single producer responsibility organisation (single-PRO) models that ensure competition at the service level (collection, sorting, recycling etc) rather than between Arrangements (unlike the National Television and Computer Recycling Scheme, which established competition at the PRO level)
- require all Arrangements to have supply chain transparency: the fate of collected materials must be tracked and monitored to ensure that high standards are being met

Changes to the system for identifying and managing priority products to:

- ensure that the prioritisation process is evidence based (e.g. by analysing stocks and flows) with transparency about the process for products getting on or off the list
- consider a more proactive approach that undertakes broader analysis of product impacts to identify priorities, rather than waiting for someone to take action
- address new and emerging waste streams e.g. PV cells
- introduce a more transparent timeframe and process for action on priority products (including if there is no action within the time frame, how is it escalated?)
- include plastics as a broad category that cuts across multiple products. This would allow for a systematic approach that addresses urgent ecological priorities (e.g. marine litter), in line with international developments

	<p>Increased resourcing to the Department of the Environment and Energy (DoEE) to ensure effective implementation and enforcement, which could include:</p> <ul style="list-style-type: none"> <li>• increased budget allocations to the Product Stewardship Unit within DoEE</li> <li>• payment to DoEE for enforcement to be built into PRO fees, a system that is currently used by CalRecycle and the Ontario Resource Productivity and Recovery Authority</li> <li>• improved transparency and sourcing of advice from experts and other stakeholders to inform product stewardship decision-making and policy development, as intended in the Act’s creation of the (subsequently disbanded) Product Stewardship Advisory Group</li> </ul> <p>Better promotion of product stewardship to stakeholders including consumers</p> <ul style="list-style-type: none"> <li>• develop a single, strong, compelling brand for product stewardship</li> </ul>
<p><b>Improving the National Television and Computer Recycling Scheme (NCRS)</b></p>	<p>Revisions to the NTCRS regulations, including to:</p> <ul style="list-style-type: none"> <li>• broaden the scope beyond TVs and computers, with a preference for all WEEE (similar to the EU and British Columbia models). Consideration could be given to excluding products where electronics is not the main purpose (e.g. some toys, wearables, Internet of Things)</li> <li>• allow for reuse and refurbishment to be included in targets</li> <li>• base targets and reporting on improved data that captures all waste flows, including illegal flows and products recovered through unofficial (non-Arrangement) channels</li> <li>• improve coordination between Arrangements through the introduction of a clearing house or coordinating body that would: <ul style="list-style-type: none"> <li>○ allocate collection responsibilities between Arrangements to improve coverage and efficiencies</li> <li>○ coordinate marketing to improve messaging to consumers</li> <li>○ ensure that standards are being met by all Arrangements</li> </ul> </li> <li>• develop more ambitious standards, aligned to international standards such as WEEELABEX</li> <li>• recognise the role of social enterprises</li> <li>• utilise the knowledge and experience of the WEEE Forum and their Knowledge Toolbox</li> </ul>

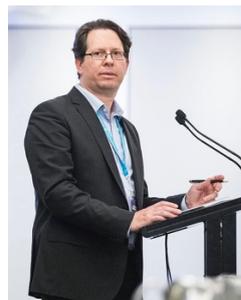


## Conclusions: where to from here?

---

The Forum provided a useful opportunity for brands, recyclers, PROs, NGOs and governments to learn from the experiences of others. It highlighted the fact that Australian policy makers and PROs do not need to ‘reinvent the wheel’—we can learn from organisations that are active in product stewardship in Australia and other parts of the world. This can be achieved through direct interaction at events such as this, and by accessing a rich evidence base including research reports, case studies and tools that have been developed elsewhere. These highlight the strengths and weaknesses of different models; provide inspirational examples; and allow individuals to make connections that lead to productive partnerships or collaborations.

The positive feedback from participants about the value they gained from the Forum, including new knowledge and personal connections, has reinforced the value of these types of events. The Global Product Stewardship Council is now developing more regular international events, to be run in collaboration with some of the organisations who participated in the Forum.



The issues distilled in this paper will be used to inform Australian Government policy and the current review of the *Product Stewardship Act 2011*. The Department of the Environment and Energy is actively seeking input from industry, governments and the general public to ensure the Act is effective and delivering the best outcomes for business and the environment, and the International Stewardship Forum allowed the Department to access a broad range of local and international expertise. The findings and recommendations of the review will be provided to the Minister for Environment and Energy in mid-2018.



## Attachment 1: International Stewardship Forum program

### **Day 1 - Wednesday, 4 April**

#### **9:00 Product Stewardship and Extended Producer Responsibility (EPR) Overview**

**Moderator: Russ Martin, CEO of GlobalPSC**

Welcome, GlobalPSC intro and overview of event themes to address throughout:

- Overview of international landscape and practical implications for Australia
- Best practice policies and programs
- The business case for product stewardship (corporate perspective)
- Engagement and facilitation
- The future of product stewardship: issues and opportunities (incl. circular economy)

**James Tregurtha**, Acting First Assistant Secretary, Environment Standards Division of Department of Energy and the Environment

**Peter Börkey**, Principal Administrator – Environment Directorate of OECD on outcomes from the OECD’s research and discussions into international EPR models and updated OECD guidelines on EPR.

**Pascal Leroy**, Secretary General of WEEE Forum on EPR for waste electrical and electronic equipment (WEEE), particularly in Europe.

**Cynthia Dunn**, Supervising Senior Environmental Scientist, EPR Unit of California Department of Resources Recycling and Recovery (CalRecycle) on state-based product stewardship and EPR across a range of product types and voluntary or regulatory considerations in the US.

**Steve Claus**, Business Developer & Advisory Manager of Green Crossroads on different missions with regards to packaging and WEEE in Africa and on the latest status on EPR in Colombia and Argentina.

Speakers' talks will be lengthier than in subsequent sessions in order to provide relevant context for attendees.

#### **11:00 Product Stewardship and EPR (Cont'd)**

**Moderator: Dr Tony Wilkins, Executive Director Environment of NewsMediaWorks**

**Cheri Scholtz**, CEO of PET Recycling Company (PETCO) in South Africa on South Africa’s approach to plastics in the environment (including marine environment), voluntary industry initiatives, social benefits of recycling and product stewardship.

**Andrea Chmielinski**, Principal of Steward Wise and former Environmental Specialist, Regulatory Affairs for Canon Canada on producer perspectives to Canada’s approach to WEEE. Harmonisation of different provincial programs. Transparency and accountability through public reporting.

**Michelle Carvell**, Chief Operating Officer of Lorax Compliance Ltd and GlobalPSC Board member on examples of varying costs to place products on the market under different EPR schemes.

**Laurence Bouret**, Déléguée Générale of DASTRI, the French EPR program for sharps, on European EPR approaches, including unintended consequences of prescriptive approaches and difficulties of keeping pace with technological developments under EPR, as well as harmonisation / reporting issues.

**Rodrigo Leiva Neumann**, Gerente of Valoryza in Chile and GlobalPSC Board member on EPR in Latin America.

Speakers' talks will be lengthier than in subsequent sessions in order to provide relevant context for attendees.

### 1:30 Voluntary or regulated? Understanding the Pros and Cons of Different Models

**Moderator: Dr Helen Lewis, Adjunct Professor of Institute for Sustainable Futures UTS and Author of *Product Stewardship in Action***

**Peter Brisbane**, Director, Stewardship and Waste of Australian Department of Energy and the Environment

**Cynthia Dunn**, Supervising Senior Environmental Scientist, EPR Unit of CalRecycle

**John Harris**, former Global HSE Product Stewardship Coordinator for Eli Lilly and Company on voluntary and regulatory considerations from an industry perspective and a national, voluntary industry initiative for sharps in the US.

**Chris van Rossem**, Director, Technical Advisory Services at Canadian Stewardship Services Alliance (CSSA), GlobalPSC Board member and formerly International Institute for Industrial Environmental Economics (IIIEE) at Lund University

**Michelle Carvell**, Chief Operating Officer of Lorax Compliance Ltd and GlobalPSC Board member

**Liam O’Keefe**, Market Development Manager of Tyre Stewardship Australia and Churchill Fellow

**Brooke Donnelly**, CEO of Australian Packaging Covenant Organisation (APCO)

Facilitated Panel Discussion and Q&A

### 3:30 Electronics / WEEE / Batteries

**Moderator: Rose Read, Chair, Battery Industry Working Group and Chief Executive Officer at MRI PSO (DropZone)**

- Lengthy and expensive process to get in place in Australia, led to development of the Act
- Focus on electronics (‘traditional’ EPR models) and National Television and Computer Recycling Scheme (NCRS)
- Public policy drivers to address WEEE and related items
- Key issues from ANZRP White Paper, including refurbishment / reuse.
- Supply chain security and verification

**Carmel Dollisson**, TechCollect CEO on ANZRP White Paper and issues/opportunities with NCRS.

**Pascal Leroy**, Secretary General of WEEE Forum on EPR for WEEE, particularly in Europe.

**Mark Dempsey**, UK Sustainability Manager of HP Inc.

**Andrea Chmielinski**, Principal of Steward Wise and former Environmental Specialist, Regulatory Affairs for Canon Canada on EPR for WEEE, particularly in Canada.

**Phill White**, Founder of BlockCycle on a transparent ecosystem for material flows, powered by Blockchain technology.

**Mayor Douglas Chipman**, Vice President of Australian Local Government Association, President of Local Government Association of Tasmania and Mayor of Clarence City Council

Facilitated Panel Discussion and Q&A

## Day 2 - Thursday, 5 April

### 9:00 Enabling Innovation – Circular Economy and Design for Environment

**Moderator: Andrew Petersen, CEO of Sustainable Business Australia**

- Product stewardship and the Circular Economy
- Business case / commercial opportunities
- Circular Economy, reuse / refurbishment, broader supply chain issues are often overshadowed by traditional focus on end of life and recycling, yet can offer great opportunities to reduce environmental impacts
- Circular Economy principles and practical examples in action

**Caroline Lambert**, EU Delegation to Australia on the EU Directive on Circular Economy and waste policy.

**Dr Kate Ringvall**, Country Manager Sustainability Retail of IKEA on construction and demolition (C&D) waste and mattresses.

**Jacque Fegent-McGeachie**, Global Director - Sustainability & Corporate Social Responsibility Strategy & Communication of Kimberly-Clark on plastics and microbeads.

**Glen Winkler**, State General Manager, South Australia and Northern Territory of Telstra on the role of technology in enabling a Circular Economy.

**Andrea Chmielinski** on voluntary and grassroots Circular Economy models in Canada.

Facilitated Panel Discussion and Q&A

### 11:00 Prioritising 'Non-traditional' or Emerging Products

**Moderator: Russ Martin, CEO of GlobalPSC**

- Prioritising products / materials / approaches to be addressed, including objectives and criteria of the Act
- Items that don't fit the 'traditional' product stewardship / EPR models – sharps, unwanted medicines, child car seats, problem plastics (especially ocean plastics), etc.
- Developing policies and programs that meet objectives while allowing for / promoting innovation and changing products / materials

**Laurence Bouret**, Déléguée Générale of DASTRI

**Doug Woodring**, Founder of the Plasticity Forum and Ocean Recovery Alliance

**John Harris**, former Global HSE Product Stewardship Coordinator for Eli Lilly and Company

**Alison Carmichael**, General Manager of Agsafe Ltd

**Toni Riley**, Project Manager of Return Unwanted Medicines Project

**Nick Harford**, Managing Director of Equilibrium

**Karen Gomez**, Chief Executive of Paintback

**Laveen Dhillon**, PVC Stewardship Manager of Vinyl Council of Australia

Facilitated Panel Discussion and Q&A

### 1:30 Optimising Collection and Processing

**Moderator: Pete Shmigel, CEO of Australian Council of Recycling**

- Market development and reprocessing needs
- Getting recovered materials in sufficient quantities and to appropriate standards
- Decentralised reprocessing models
- Fostering reprocessing capacity and end use markets in Australia and Asia Pacific

**Daniel Tartak**, CEO of BINGO Industries

**Peter Tamblyn**, Sales & Marketing Manager Asia Pacific of Close the Loop, with operations in the US, Belgium and Australia, on product innovation and the need for reprocessing and market development to help create and ensure demand for recovered materials.

**Alvin Piadasa**, Managing Director of TES Australia and New Zealand on reprocessing and need for high standards.

**Cheri Scholtz**, CEO of PET Recycling Company (PETCO)

**Vaibhav Gaikwad** of SMaRT Centre at University of New South Wales on development of innovative domestic WEEE reprocessing technologies and micro-factories.

**Damien Giurco**, Professor of Resource Futures and Director (Innovation) of Institute for Sustainable Futures, University of Technology Sydney on the Wealth from Waste initiative.

Facilitated Panel Discussion and Q&A

### **3:30 The Future of Product Stewardship: Issues and Opportunities**

**Moderator: Russ Martin, CEO of GlobalPSC**

- Helps draw together lessons from other sessions and sets context for exclusive invitation-only Chatham House discussions the following day
- Engaging all stakeholders, including consumers and NGOs
- Practical, collaborative approaches to implement product stewardship and removing barriers to such initiatives

**Moderators to highlight major themes from earlier sessions**

**Paul Klymenko**, CEO of Planet Ark

**Jayne Paramor**, Deputy Director of Boomerang Alliance

**Doug Woodring**, Founder of the Plasticity Forum and Ocean Recovery Alliance

**Cheri Scholtz**, CEO of PET Recycling Company (PETCO)

**Janelle Wallace**, General Manager, Soft Landing Mattress Product Stewardship Scheme

Facilitated Panel Discussion and Q&A

## Attachment 2: Participants in the Chatham House discussion

---

The following organisations participated in the workshop on Day 3:

ACT Government  
Adaptation Environmental Support Pty Ltd  
ANZRP / TechCollect  
Apple  
Australian Battery Recycling Initiative  
BINGO Industries  
Boomerang Alliance  
CalRecycle  
Canon Australia Pty Ltd  
Close the Loop  
CSSA - Canadian Stewardship Services Alliance  
DASTRI  
Department of the Environment and Energy  
Environmental Compliance Solutions  
GlobalPSC  
Green Crossroads  
Helen Lewis Research  
HP Inc.  
Infoactiv Group  
Institute for Sustainable Futures UTS  
Lorax Compliance Ltd  
NewsMediaWorks  
NSW OEH Sustainability Advantage  
Ocean Recovery Alliance  
OECD  
Paintback Ltd  
PETCO - PET Recycling Company  
Planet Ark  
Soft Landing Mattress Product Stewardship Scheme  
Steward Wise  
Sustainability Victoria  
Telstra  
TES Australia  
Tyre Stewardship Australia  
Valoryza  
WEEE Forum

---

<sup>i</sup> This states that ‘When a meeting, or part thereof, is held under the **Chatham House Rule**, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed’ (<https://www.chathamhouse.org/chatham-house-rule>). In the interest of transparency, organisations involved have been listed while comments have not been attributed to individuals or to their organisations.