

Product Stewardship Centre of Excellence Comments on Interim Report Overview

On the first sub-point of the first key point on page 1:

Circular activities should also include complete dematerialisation and the transformation of products into services whereby waste is prevented and avoided from the outset.

On outdated or inconsistent regulations in the second sub-point of the second key point on page 1:

In addition to outdated or inconsistent regulations, the Centre believes that the complete lack of appropriate product stewardship regulations has been a major barrier to adopting circular economy opportunities.

On regulations for newer or less widespread technologies in the third key point on page 1:

It is also important to update regulations to level the playing field for environmental and sustainability product standards across industries i.e. durability, repairability, material used i.e. renewable, recovered, regenerative materials, and recyclability.

On the Australian Government's inclusion of higher-risk products and/or higher-value waste streams in product stewardship schemes in the fourth key point on page 1:

Australia's current approach to product stewardship schemes has been to focus on higher-risk and/or higher-value waste streams. These are the primary criteria that influence what goes on the Minister's List. The primary issue here is the lack of Australian government leadership, coordination and its Regulatory Impact Statement process. Not on how products are prioritised.

When considering and applying effective product stewardship the Australian Government should be ensuring all products that are placed on the market are "stewardship ready" i.e a product is made from materials that are renewable or recovered and can be easily composted or recycled; the product is durable and can be easily and affordably repaired and reused extending its life, the product can be freely recycled by consumers.

Picking 'winners' simply based on the risk or value of the waste stream is contrary to the three circularity principles, is end of pipe / reactionary rather than being preventative and precautionary.

Product stewardship goes well beyond schemes based on collective action by producers to fund the take back and recycling of end of life products

On the current government policies in place to support the circular economy on page 4:

Other policies that should also be discussed here are product specific policies and laws that regulate energy and water use of products, set standards for product safety and

consumer law - i.e. Australian Consumer Law impacts repair of products, Product Safety and Fair trading regulations nationally (ACCC) and at a state level impact product design.

A circular economy needs to be viewed through both a material and product lens. As households and businesses buy, make and sell products not materials.

On the focus on material weight in circular economy indicators on pages 4 and 5:

A circular economy needs to be viewed and measured through both a material and product lens. As households and businesses buy, make and sell products not materials.

On the opportunities for government to address barriers to circularity on page 5:

Please refer to the Centre's recently published white paper attached-

'Investing in Intelligent Regulation: The economic benefits to government of regulated product stewardship' published December 2024.

On government reducing unnecessary regulatory frictions or burdens on page 5:

Not all regulation is burdensome, rather it creates a level playing field for business and certainty for investment..

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On priority opportunities in the vehicles sector focusing on reuse and recycling of vehicle components on page 6:

A big challenge in recycling vehicles is dealing with the plastics in vehicles, which has increased substantially and is not being dealt with

On priority opportunities in the electronics sector focusing on recovery and recycling of materials on page 6:

Small electronics (many contain batteries) and large household appliances / airconditioning (many contain large amounts of plastic that is not being recycled, or use GHGs which aren't being recovered).

On some existing regulations and policies favouring linear processes on page 7:

Another regulatory barrier to circularity is the current Australian Consumer Law requirements around returned goods, repair and warranties. Many returned electronic and electrical products are being landfilled or recycled rather than being repaired and reused.

On regulatory changes balancing environmental and economic risks and benefits on page 7:

The Centre agrees for balance however the interim report generally overlooks the unintended negative outcomes resulting from unregulated and voluntary initiatives that seek to be more circular. Perverse outcomes and unintended consequences resulting from 'regulation' seems to be selectively applied when government resist regulatory intervention, yet the same lens is typically not applied to the development and funding of voluntary and unregulated initiatives, especially in relation to product stewardship schemes. We encourage and would ask that the Productivity Commission applies the 'unintended negative outcomes in a consistent manner.

We also refer the Commission to look at the benefits of well designed regulation in our recent white paper:

'Investing in Intelligent Regulation: The economic benefits to government of regulated product stewardship' published December 2024.

On intergovernmental coordination to harmonise regulations on page 8:

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On coordination and collaboration between stakeholders to enable circular economy opportunities on page 8:

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On the high set-up costs of mandatory product stewardship schemes and the scope for the Australian Government to actively coordinate stewardship for high-value products and higher-value waste streams on page 10:

The higher set-up costs noted in the report fails to account for the total cost and benefits to government, the public, the environment and the economy of well designed mandatory schemes as mentioned in comments earlier on this document. This includes a substantial increase in material recovery over a short period of time, removal of hazardous gases, and substantial private investment that is stimulated as a result of mandatory / regulatory schemes as demonstrated by the regulated schemes for Used Oil, the TVs and Computers (NTCRS), Ozone depleting gases and the state/ territory based beverage container schemes (CDS/CRS). In most cases business investment has been easily more than 10 times the costs to government in setting up and ensuring compliance.

The Centre notes again that the interim report generally overlooks the unintended negative outcomes resulting from un-regulated and voluntary initiatives that seek to be more circular. Perverse outcomes and unintended consequences resulting from 'regulation' seems to be selectively applied when government resist regulatory intervention, yet the same lens is typically not applied to the development and funding of voluntary and unregulated initiatives, especially in relation to product stewardship schemes. We encourage and would ask that the Productivity Commission applies the 'unintended negative outcomes in a consistent manner.

We also refer the Commission to look at the benefits of well designed regulation in our recent white paper:

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Please also refer to the attached Summary Report published by the Centre and UTS in May 2023 –

"Evaluating product stewardship benefits and effectiveness"

On small electronic products not being included in the National Television and Computer Recycling Scheme (NCTRS) on page 10:

The Centre strongly support s the Interim Report's view that the recommendation from the PC's 2021 Right to Repair inquiry that the NTCRS should include reuse and repair within annual targets

On better visibility of product repairability and durability on page 11:

The Centre strongly supports better visibility on product durability and repairability through mandatory product labelling which can inform consumers a drive product redesign by manufacturers and brands. The initial focus of such labelling or repairability indexes should focus on consumer electronics, small and large appliances. Such labelling and the required standards should be aligned with relevant directives and laws from the European Commission such as the Ecodesign for Sustainable Products Regulation (ESPR), and be backed with Digital Product Passports to ensure transparency and the required information for all actors across the product lifecycle.

On Australia's current circular economy indicators being highly aggregated and weight based on page 11:

A circular economy needs to be viewed and measured through both a material and product lens. As households and businesses buy, make and sell products not materials. Indicators also need to look at the change in the durability of products over time, and carbon emissions of products over time, plus a measure of repair activity and also business models that focus on leasing.

On the reform directions and information requests of Chapter 4 on page 13:

The obvious gap for action is addressing the fit outs and replacement of fit outs in commercial buildings — hundreds and thousands of tonnes of furniture and fittings are adding substantially to the C&I waste stream.

On reform direction 4.1 on page 13:

Agree in principle with the reform direction. *The problem however is that existing standards often fail to acknowledge recycled materials or how they may be integrated with virgin materials. Suffice to say the recycled product should meet or exceed the physical and chemical properties to perform the task. Roads for example have undergone extensive testing and trialling across Australia in multiple states with funding from Tyre Stewardship Australia and state governments and in multiple local governments, incorporating tyre derived rubber crumb, and soft plastics into the asphalt mixes. They have universally either performed superior or the same as existing normal asphalt mixes, yet the design requirements have not changed in the main, reasons, included risk of environmental damage from rubber and plastic nanoparticles, health risks from heating of mixes and so -on. If tyres are OK for running on top of asphalt, and asphalt remains a solution for road-making with all its incumbent VOCs, it would seem it should be relatively low risk being incorporated into the asphalt mix. Tyre Stewardship Australia has done research, monitoring and reporting on these issues, yet we still have resistance to change, a patchwork of acceptance and lack of specification for recycled content in procurement contracts.*

Harmonisation of road making standards across the country would be a useful outcome, with if necessary, modifications based on climactic conditions or intensity of use. This would make it easier to adhere to standard(s), make it easier to achieve compliance, improve road-wear performance. It would also provide a substantial market for post consumer rubber crumb and soft plastics.

Performance vs prescriptive, the view is generally these need to be performance based. However should there be extra benefits from incorporating recycled content (in addition to performance) these should be preferred

On reform direction 4.2 on page 14:

This is a worthwhile exercise. *The problem has been that procurement policies are managed by Treasury departments, whereas it's the environment department which is usually encouraging the change. Large procurements are usually also undertaken for infrastructure projects by other (non-environment) departments based on treasury requirements and risk mitigation rather than reference to environmental performance.*

The Victorian example has happened largely (if not entirely) because the former Level Crossing Removal Project Chief Operating Officer was strongly influenced by Sustainability Victoria and EPA Victoria and the COO went on to lead Major Road Projects Victoria, and took the learnings with him. This is a rare event, and unlikely to be repeated. Other states have programs to encourage local suppliers and building capacity in-state, however these have as yet not led to programs to encourage or require the use of recycled materials.

Often the excuse for not building in recycled content is the ability of the market to supply, especially for very large projects, however this perception also goes untested, ie the market often isn't given the opportunity to respond, even in part (for example if the project requires 300,000 tonnes and they can supply say 30,000).

The benefits of a 'one-stop shop' for recycled materials especially in infrastructure projects, this information could be managed nationally and service all states and territories rather than having one in each state. Such a site might also share template procurement contracts, template design criteria, guidelines and national standards. In addition a site such as this might house template contracts which give rise to better performance in household recycling collection, materials sorting and reprocessing thus giving rise to better quality recycled materials. This could also see material savings by councils for their communities.

Suppliers might also benefit say if there was an accreditation system which would allow supply across Australia. Accredited suppliers might also be able to augment each-other's contracting if there was say a shortage of recycled material.

On information request 4.3 on page 15:

Agree in Principle. *Whilst unaware of any restrictions in this regard, its likely traditional building techniques are used simply because builders are familiar to building in this way. The assumption is that it is cheaper to build in prefab form, this may or may not be the case, in any event the market will largely dictate this. However planning regulations might consider the modularity of building design to limit waste, enable more prefabrication and reduce build times. Such regulation and design codes could flow on to design for disassembly. Developers are largely disinterested in design for disassembly, that's someone else's job in say 40 years time. To make them responsible would appear to add upfront design costs which will be fought. The only way to overcome this reality is to make it a mandatory requirement, OR for government to only occupy new buildings where this is incorporated. This worked for green star rated buildings.*

On information request 6.3 on page 19:

Free-riding is a major barrier for the current voluntary textile and clothing product stewardship schemes to be effective.

Preference would be either for a co-regulatory or mandatory scheme that sets producer (i.e. brand retailer) obligations, defines governance model including roles and responsibilities of brands, retailers, government, repairers, and recyclers; sets performance and reporting obligations.

Please see the PSCoE's white paper on Overcoming Free-Riders: Strategies to maximise industry participation – September 2021

Threats of mandating a scheme is ineffective in getting businesses and retailers to join as illustrated by current voluntary schemes for Tyres, Bedding, Batteries and Clothing.

Government accreditation of schemes is ad hoc, and lacks transparency. The the Act doesn't spell out what schemes need to do to be compliant. There is no legal requirement for businesses or retailers to join an accredited scheme. There is no publicly reporting of performance or outcomes of independent auditing of accredited schemes. The government doesn't promote these schemes or the accreditation label, nor does assist the schemes in improving their environmental performance. industry participation and investment. The Minister does not use the Act to call our free riding. Few if any loose accreditation.

The primary way to improve effectiveness of accredited voluntary schemes is to address the free rider issue by requiring businesses and brands within the product class to either join the existing accredited voluntary scheme or to establish their own accredited scheme that performs and reports to the same level as the accredited scheme. This would be done by modifying the current RAWR Act.

The other ways to improve effectiveness of accredited voluntary schemes for the Australian Government to standardise the environmental, social and governance performance requirements - see the PSCoE Report Data and Reporting Guidelines for Product Stewardship Schemes – July 2024 . The Australian government should publish the agreed performance of each accredited scheme alongside the annual performance of that scheme year on year.

Australian government to incorporate into government procurement assessment criteria - supplier participation in accredited voluntary scheme.

Australian government and where appropriate staet / territory government to prioritise investment in accredited voluntary schemes to accelerate system / supply chain changes, infrastructure development, facilitate collaboration and coordination, accelerate development of design, standards, certification of training modules etc.

ACCC authorisation and re-authorisation to enable businesses to collaborate to establish and run a voluntary scheme cause never-ending submissions, consultation, doing and froing, tying up the scheme in this single administrative process for about a year or more, while it is trying to ruin the scheme. Once an authorisation is granted there should simply be a routine annual reporting requirement to maintain the authorisation, unless there are legitimate complaints lodged.

Mandated schemes significantly, reduce the administrative burden for both government and business maintaining voluntary accreditation and ACCC authorisation. This is true of ALL schemes not just clothing and textiles.

On information request 8.1 on page 21:

The WA Government led an investigation into National Options for End of Life Tyres in 2024, this was tabled at the Environment Ministers Meeting in Dec 24 and answers the majority of these questions.

We refer you also to the Centre's response to this discussion paper National Project on Options for Endof- Life Tyres – Oct 24.

We also recommend you seek advice from Tyre Stewardship Australia (TSA). One of the advantages of having a 10 year old scheme with all its flaws is that it has the data and the experience to answer very detailed questions. Without the TSA this information request could not be answered at all in any robust or meaningful way

On reform direction 8.2 on page 21:

Agree this is an opportunity for the Australian Government.

Factors to consider in developing such a scheme include the tightly held technologies employed by EV manufacturers and the intelligence that can be gained from failing batteries means that most EV manufacturers will want their batteries recovered and returned to their own facilities, for data capture, and for refurbishment or recycling at plants, ideally located overseas near places of manufacture i.e. overseas.

Digital passports, regulations regarding safety and performance of new and used batteries, and standards for transport are all sensible requirements of any scheme. Questions remain however on the scope of such a scheme (e.g. would it include all mobility batteries such as scooters, electric wheelchairs and / or grid scale battery installations?).

The NSW Government is currently in the process of developing a battery stewardship scheme under their new Product Lifecycle Responsibility Act in the absence of a Commonwealth commitment.

State based product stewardship schemes (e.g. container deposit/return schemes) while very effective can be problematic for product importers/ manufacturers as there will likely create a patchwork of compliance requirements across Australia.

It is understood that the NSW Government is committed to developing a scheme and supporting regulations that can be easily replicated in other state and territories.

*There are recycling opportunities however as detailed in this report from 2021.
<https://www.greenindustries.sa.gov.au/resources/lithium-ion-battery-recycling-opportunities-in-sa-2021->.*

The Battery Stewardship Council produced a discussion paper on EV batteries following consultation with industry on this matter in 2023 and 2024 - Electric Vehicle Battery Stewardship

Consultation Paper arising from industry submissions in 2023.

On recommendation 9.1 on page 22:

The PSCOE strongly supports this recommendation. It should align where possible and beneficial with European Commission directives, regulations and initiatives eg. Ecodesign for Sustainable Products Regulation.

On recommendation 9.2 on page 22:

The PSCOE strongly supports this recommendation. It should align where possible and beneficial with European Commission directives, regulations and initiatives eg. Ecodesign for Sustainable Products Regulation.

On information request 9.1 on page 23:

A new report on repair is being developed for Green Industries South Australia (GISA) which attempts to identify policy interventions for governments. A final draft could be provided by GISA.

The Queensland Government prepared a Draft Eproducts Action in 2024 that includes details on barriers to repair and actions to address them draft E-Products Action Plan (PDF, 2 MB)

The NSW Government is in the initial stages of preparing a Repair and Reuse Strategy.

On reform direction 9.3 on page 23:

The PSCOE strongly supports this recommendation.

On information request 9.2 on page 24:

The biggest barrier is the lack of a Circular Economy Act at a national level setting out Producer responsibility requirements. Without such nationally stepped out requirements for all products, an ad hoc, piecemeal approach means that there's NO

- public faith in labelling*
- repair,*
- compliance costs and industry is safe from any enforcement,*

- tackling of free riders,
- standards or guidelines
- need for better design

As a result, Australia risks being the dumping ground for products unable to meet EU and other requirements. This in turn means the recycling and waste industry will need to cope with more problematic wastes, the public will be exposed to more health risks, landfill disposal will grow again, and we add more toxic materials to our environment.

There have been a number of National reviews on the NTCRS that answer many of these questions by DCCEEW. There has also been substantial work undertaken more recently by DCCEEW on establish a product stewardship scheme for small electronics - see Wired for Change etc.

The Queensland Government has also prepared a Draft E-products Action in 2024 draft E-Products Action Plan (PDF, 2 MB)

The Victorian Government has also completed E-waste Material Flow Analysis Report Victorian e-waste material flow analysis (pdf, 4.6 MB)

On reform direction 9.4 on page 24:

Agree entirely it would be most useful for the Government to release its plans for such a scheme ASAP. Time is of the essence as the problem is growing very quickly.

In relation to the below, large format grid scale should have take back, repair and recycle requirments as part of all contracts. Compensation I'd suggest for good PV systems should be up to a negotiation in the market, with a proviso that it MUST be checked with a compliance certificate from a licensed electrician? That license should be recognised in all states. Collection points should be as a minimum all waste transfer stations. Australian industries involved in current and future manufacturing might benefit, however its too early to say as there are very few of these, and the quality of the recycled material is largely unknown. Early intervention might include standards of manufacture, reliability and repairability labelling, direct investment in collection and processing of PV, training of the electrical trades, open access to technical data and repair manuals.

On information request 10.1 on page 25:

Agree in part. Australia has a poor track record in harmonising state based regulations. Lack of harmonisation has held back opportunities and slowed Australia's circularity journey. Unlike the EU, there is no agreed mechanism or process to achieve these harmonisations. The EU has a systematic process that encourages harmonisation and also introduces sanctions for non harmonisation. This is in a climate of different languages, countries, parliaments and systems. Australia should be able to adopt a similar process to deliver the same /similar evidence based approach with a less complex background to deliver such harmonised systems.

Individual states have had to show leadership in various circular economy aspects for many years, in part due to the Commonwealth choosing to do nothing other than act as a national chair for meetings to discuss such issues, but not act. The resultant competitive federalism has given rise to innovation but has delivered a fractured and less evolved system of regulation, policy and compliance. Whilst innovation needs to be encouraged, perhaps enabling various states to lead but if successful (after a set period of time and agreed assessment), have these become a harmonised regime within say 3 years. Plastic bags ban was a classic example which began in 2009 in SA, but took years and years for it to be adopted nationally, similarly with the bans on single use plastics, beverage container deposits, and we will likely see it again with NSW efforts on product stewardship for batteries.

An institutional body was in fact established in the past to help achieve national harmonisation - The National Environment Protection Council (NEPC) and associated NEPC Service Corporation, the Act has never been repealed, and the Ministers apparently meet when needed. The Committee comprises Chief Executives of EPAs. However it largely found it difficult to find agreement/ compromise, and no powers to force adoption or enable consistent uptake. It used a project management approach with consultation, cost benefit analyses and other evidentiary supports to deliver National Environment Protection Measures (NEPMs) which included Packaging and its Covenant, Chemicals management, Air Quality and the first National Waste Policy. It hasn't delivered an annual report since 2018/19 <https://www.nepc.gov.au/projects>. It could be argued that it was poorly resourced, had no powers and was not universally supported by all states across all agendas, and especially where states had to introduce their own legislation and commit to enforcement actions with no resourcing to reflect and enable nationally agreed objectives. It might be asked why it still exists, what has it done in 7 years.

There are a plethora of inconsistent regulations from state to state, too many to list here. It would require a week's worth of analysis to list them all. Everything from definitions, to compliance approaches and levels of fines to non compliance vary state to state. Even the approach to increases to fines are inconsistent.

Political grandstanding (we won't adopt this approach because its from the opposite political side), changes from one government to the next, fears of losing a particular seat or seats because it affects one industry or another have also made harmonisation largely impossible. 'No new taxes' and 'no new regulation', or 'no more costs' are often a catch-cry which then effectively locks down one state or another ie whoever makes these commitments. Why has Queensland introduced a deposit on wine and spirit bottles but SA hasn't? Because Queensland doesn't have an extensive wine industry. Another reason for lack of harmonisation is that this has been the province of Environment Ministers who need their respective Cabinet approvals to be able to agree to any changes which affect their respective states. Often they would not gain cabinet approval, or hadn't sought approvals to agree to or enable reforms.

The regulatory environment isn't that complex, compared to other jurisdictions.

It would be more appropriate to establish a CE Statutory Authority that would be responsible for intergovernmental coordination between national, state and territory jurisdictions various agencies eg planning, environment, industry infrastructure etc. as well as be responsible for implementing the National CE Framework, including product stewardship regulations, accreditation, product standards, business engagement, collaboration, training, consumer education etc. As well as administer government funding to support CE implementation

On information request 10.2 on page 27:

Some States (eg SA and Vic) have agencies (statutory authorities) to assist in this process, but not all. Its often left to the regulator to enable partnering, when this isn't the regulator's core role. Their (SA and Vic) funding comes from hypothecating part of the solid waste levy.

Confusion often results when a regulator which also administers grant processes has to sanction a licensed operator whilst also administering a grant. These conflicts aren't easily resolved in a single agency, and are separated in the case of Vic and SA (SV and GISA). Such organisations also directly fund industry bodies and provide grants to enable circular economy implementation. These have been relatively successful – in environmental, financial and economic, social and community outcomes. Funding for regional and remote opportunities can also be effected through such granting and strategic planning to enable regional approaches, from landfill rationalisation to building local (place- based) capabilities for circular economy activities. The government can also help fund consultancy services to deliver business outcomes.

On information request 10.3 on page 28:

Agree in principle with challenge based funding models especially for research and development organisations and universities. Linking industry and universities has been problematic and remains so. The reasons are multiple:

1. Research is often tied to Doctoral (PhD) research program and take a long time to complete (3-6 years). Businesses need outcomes in say 1-2 years, universities don't work in these time frames.

2. ARC and related research grants follow the researcher from institution to institution as they choose different career options. This makes accountability difficult as other priorities intervene on the lead researcher at a new institution.

3. The research can follow unhelpful paths depending on supervisor / PhD interests and subsequently results in non-commercial outcomes.

4. There's a lack of government direction toward universities to focus on resolving known industry problems, and tying funding and monitoring research performance of these.

5. In terms of examples, there are very few. Most of these aren't yet commercial and whilst there has been investment, they are yet to deliver on the promise. Part of this is due to researchers becoming chief executives and or externally recruited chief executives trying to become technology experts. Blending these capabilities and expectations whilst beginning a startup and then moving to scale up often proves a bridge too far.

6. Philanthropic and private investment is relatively limited in Australia unlike the USA. This investment is needed to scale technology. To gain access to international investment often proves difficult because of Australia's relative remoteness, and less trusting mind set by Australians. Australian startups focus on non-disclosure rather than being more openly sharing ideas, and accepting assistance for say significant equity in the firm. This stems from a lack of experience in moving good ideas to scale (chicken and egg scenario).

There have been several companies established through linking research with private equity and support. GISA funded Innovyz program in Adelaide with regard to Circular Economy and around 10 businesses have succeeded, probably from an initial field of 50 or more applications. They are still young businesses and are finding it difficult to achieve scale.

Indigenous knowledge is primarily in the realm of land management, not technology development. As such this has been the main focus however, there may be opportunities to tap into indigenous understanding of fundamental systems approaches and respecting the environment.

ESG reporting and focus is at this time still too new, and hasn't grasped circular economy principles to the extent that it could. As data is collected, and experience gained it's hoped that CE outcomes will become more commonplace and broadly adopted.

Insurance is a problem for any new venture if it's outside the experience of the insurer. Secondly with climate change firmly in the view of insurers, the focus is moving more towards risk mitigation. For established enterprises in the recycling sector it's difficult to get insurance at a feasible premium due to battery fires, arson, and illegal operators that reflect badly on the sector.

On reform direction 10.4 on page 28:

Agree completely. Much of this is already happening, but could be accelerated through improved planning regulations, easier approvals and less regulatory burdens. Most government grants are set up for assisting businesses with new technology etc but very few focus on community capability, and improving access to circular initiatives like

repair. These can be overcome by having grants to establish and assist Men's Sheds and Maker's Spaces, repair cafes etc etc.

The barriers to doing this are primarily linked to the fact that treasuries don't allow organisations to spend all of the collected waste levy funds to help establish the needed infrastructure. Levies are co-opted to fund EPA regulatory operations, climate change initiatives, reallocated within government or left 'unspent' as book entries offsetting expenditure in other portfolio areas.

Place based circular economy activities – there are a few, Bega Valley, and Tonsley, to name 2. Some more are listed in the recent CEMAG recommendations report to Minister Plibersek.

Indigenous knowledge might be most relevant in remote communities, however there are indigenous corporations based on precincts developing native plant nurseries, indigenous food and related activities and opportunities.

On reform direction 10.5 on page 29:

Agree completely. *Circular economy measure need to be internationally consistent and added to as they are developed, especially in the EU. International comparisons are invaluable to enable comparisons and where extra effort might be required. The CSIRO has applied these measures to establish Australia's circularity rate. Nationally and internationally consistent data collection and analysis are imperative.*

The ABS is probably a good start, linked with CSIRO, linking materials flows, energy, population, consumption and production data with economic and employment data to build a more complete picture and with the ability to analyse gaps, pressure points, resilience building, and research and education needs.

In terms of framework, measuring what matters is a good start, maybe start here and add to it. Many of the parameters are common and it would be unwise to build yet another framework unless its proven inadequate without doing so. The use of AI would assist in analysis and presenting in dashboards.

Time-frames- depends on who's responsible. It should be the Commonwealth and it should be done inside 2 years, borrowing heavily from international examples. Updates should be every 2 years, with a 5year major strategy review focussing on what needs to be done over the next 5 years. These should be legislated so there's accountability, in a Circular Economy Act (refer recommendation 4 CEMAG).

Australian Government to standardise the environmental, social and governance performance requirements for product stewardship approaches - see the PSCoE Report Data and Reporting Guidelines for Product Stewardship Schemes – July 2024 .