Circular Australia

Response to Australian Productivity Commission's Circular Economy Review

Addressed to

Commissioner Joanne Chong and team

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Submission from:

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About Circular Australia

Circular Australia is an independent, national body working to transition Australians, governments and businesses to a circular economy by 2030. Our expertise, programs and partnerships drive change, measure impact and accelerate the circular economy transition.

Circular Economy definition

The circular economy decouples economic growth from the consumption of finite resources, designing waste out of the system. It is based on three principles:

1. Design out waste and pollution at every stage of production, use and end-of-life.
2. Keep products and materials in use at their highest possible value.
3. Regenerate natural systems and enhance biodiversity including water, food, organics recycling, the removal of toxic waste and tree planting

We support an Australian circular economy that matches environmental goals with social ambitions.

Summary

Circular Australia (CA) thanks the federal Government for enabling the Productivity Commission to undertake this critical inquiry into circular economy, resource efficiency and productivity in Australia.

Without key reforms to design out waste and pollution, value secondary resources, catalyse new circular markets and regenerate natural systems Australia will not achieve its Net Zero commitments or advance the economy to thrive in a resource and carbon constrained future.

Our advice is outlined in 14 recommendations on page 8, with more detailed reasoning in the responses to individual questions throughout the submission. Our advice reflects:

- Work by our Circular Australia Taskforce members and community of practice including:
    - **Finance & Investment Taskforce** whose members include key Australian Banks and investment firms.
    - **Precincts and Infrastructure Taskforce**
    - **Industry Taskforce** both with members including peak bodies, private sector, research organisations and governments.
    - **National Circular Economy Council** with State and Territory government members
- Findings from our Australian Circular Economy Forum 2023 and 2024
- Input from CA CEO Lisa McLean who is a Member of the CE Ministerial Advisory Group advising Hon. Minister Tanya Plibersek

Productivity & Circular Economy

There is strong evidence that building a circular economy will improve productivity and drive more sustainable economic growth for Australia. Analysis by Circular Australia shows circular economy initiatives can improve productivity and be part of the solution to more cost-effective living in the long run[1] and this builds on national and international evidence:

- A 2020 KPMG study estimates implementing circular economy initiatives in the Food, Transport and Built Environment sectors alone will lead to an economic benefit of $23 billion to Australia's GDP by 2025, and $210 billion to GDP by 2048. Most of these benefits come from more energy efficient buildings, followed by reduced food waste and better use of space in new buildings, and more efficient use of water.[2]

- A 2015 McKinsey study on the impacts of circular economy initiatives in Europe estimates that undertaking circular economy initiatives in the transport, food and building sectors

[1] https://circularaustralia.com.au/wp-content/uploads/2020/11/the-circular-economy-opportunity-in-NSW.pdf
[2] https://kpmg.com/au/en/home/insights/2020/05/potential-economic-pay-off-circular-economy-australia.html#:~:text=billion%20GDP%20boost.-,KPMG%20estimates%20that%20a%20circular%20economy%20could,a%20%2423%20billion%20GDP%20boost.&text=The%20transition%20to%20a%20circular,high%2Dresource%2Defficiency%20future.

alone can drive down average household mobility costs 60-80%, food costs by 25-40%, and housing costs by 25-35% percent by 2050.

- Implementing targeted circular economy levers and reducing waste at the household level brings real cost savings. In 2017–18, NSW households paid $1.3 billion in municipal waste charges. The average NSW household pays $391 in annual council waste charges, and these costs are estimated to reach $642 by 2035–36, totalling $2.5 billion statewide.

- Research commissioned by Green Industries SA indicates that adoption of a circular economy in South Australia could create up to 25,700 jobs by 2030 (21,000 jobs through materials efficiency initiatives, and 4,700 jobs through energy efficiency and renewable energy initiatives) and reduce greenhouse gases by 27%, equivalent to 7.7m tonnes of CO2.

Material consumption in Australia has more than doubled over the past 40 years. In 2018-19, Australia generated over 75 million tonnes of waste and it has the 4th lowest rate of material productivity in OECD. Australians consume the equivalent of 4.6 planets.

Improving resource efficiency generates jobs - the European Commission estimates each percentage point increase in resource efficiency in the EU can generate between 100,000 and 200,000 additional jobs.[3] Circular economy provides a successful economic framework to improve resource efficiency by designing out waste and pollution and enhancing manufacturing, repair and recycling.

The COVID and post-COVID economy has highlighted the immense value of the local manufacturing sector, as global shocks to economic activity, border controls and logistics have led to massive supply chain disruptions globally. But supply chain resilience relies not just on the best local manufacturing facilities with the best technologies. What happens when the flow of input materials — such as critical metals, plastics and other petrochemicals – is disrupted or lost to landfill? The circular economy can be the key to not only building up Australia's manufacturing self-sufficiency, but our materials sufficiency. For example:

- Fifty percent of Australia's exported waste is metal. Each year, we send over $2 billion worth of metal waste offshore for recycling. This includes scrap heavy metals and discarded wiring and e-waste, for example. In 2019-20 alone, Australia exported over $350 million worth of waste copper, $150 million of waste gold and platinum, and $15 million of waste nickel.[4]
- These are critical minerals and high-tech metals are essential to Australia and the world's renewable energy transition: batteries, solar power systems.
- Thriving local recycling industries in critical materials can potentially offer more secure and sustainable access to input materials. This is particularly important where finite — and valuable – raw materials are involved, such as copper, nickel and lithium. With sufficient critical mass, recycling materials can not only mitigate the economic and

[3] Resource Productivity and the Circular Economy: The opportunities for the UK economy, 2018.
[4] https://circularaustralia.com.au/key-sectors-that-will-catalyse-the-australian-circular-economy/

environmental costs of mining virgin materials, but also increase the productive lifecycles of materials already in circulation.

Building onshore circular infrastructure with metrics

The federal government's $15B National Reconstruction Fund (NRF) with its requirements on circular economy, sustainability, regional development and national security[5], is a welcome critical step for Australia in building circular economy capabilities and systems. The NRF can unlock circular economy infrastructure and solutions to drive new products and resources from otherwise landfilled, incinerated or exported waste streams. The NRF will be essential to facilitate landmark circular economy financing. Without clear circular definitions and metrics embedded in the Sustainable Finance Strategy and key government project funds - financing and investment will struggle to qualify as circular.

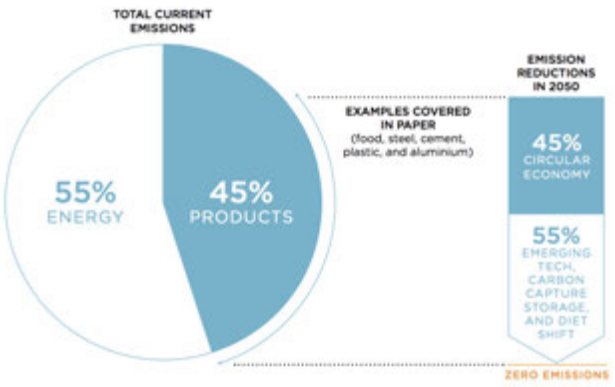
Circular Australia recommends circular economy definitions and metrics be included in Treasury's Sustainable Finance Strategy, funds such as the The Clean Energy Finance Corporation (CEFC), the National Reconstruction Fund (NRF) across its seven priority areas of the Australian economy, and Climate Change Authority

Net Zero & Circular Economy

Circular economy is essential to Australia achieving Net Zero. CA commends the government for embedding circular economy requirements in the sectoral decarbonisation plans - recognising the critical role of circularity in achieving Net Zero.

Even in a fully renewable energy system, ongoing high consumption, a lack of circular design, engineering, recycling and manufacturing will still drive high emissions. Forty-five percent of all emissions are associated with the way we make and use products, materials and food see Graphic 1 below. These overlooked emissions represent almost half of the Net Zero challenge and require circular solutions.

Graphic 1. Completing the Picture: Circular Economy Tackles Climate Change, Ellen MacArthur Foundation



[5] https://www.minister.industry.gov.au/ministers/husic/media-releases/15bn-national-reconstruction-fund-open-business

Embodied carbon emissions of materials used in Australia account for 10-15% of GHG emissions or 30-50 million tonnes of CO2 per year. Food waste alone in Australia represents 3% of our annual GHG emissions. Banned materials — glass, plastics, tyres, paper & cardboard - represented 32 percent, or 1.5 million tonnes, of the total 4 million tonnes of waste going to landfill every year. This has ignited momentum for investment in recycling infrastructure. However the export bans only touch the surface of the Australian opportunity. Looking beyond our exported waste, there is an even more significant onshore opportunity for materials recovery and emissions reduction five times the size of the waste export market - in the 20 million tonnes of materials that go to landfill every year in Australia.[6] Without the circular economy, Australians' consumption will continue to increase and with it fossil fuel dependency.

Mandatory disclosure and reduction targets for Scope 3 emissions and embodied carbon will be essential to achieve Net Zero. Companies and organisations reducing embodied carbon should be rewarded in a circular economy. Incentives should be provided for practices that reduce embodied carbon such as dematerialising, design for disassembly and 'product as a service' where the residual value of the asset is retained by the business. **Circular Australia recommends financial support for social enterprises, repair and reuse networks at the forefront of building circular markets to transition to the circular economy.**

Economic levers

In successful circular economies, governments are using subsidies, carbon emissions trading schemes, taxes and Extended Producer Responsibility (EPR) to incentivise circular behavioural change. All three of these levers should be robustly considered to improve the relative price of circular goods and services and incentivise key changes to behaviour. Research by Circular Australia[7] found the current use of fiscal policy in Australia to drive a circular economy is extremely limited and warrants exploration for its potential to drive both businesses and consumers towards CE activities.

In the short-term, Circular Australia recommends the Australian Government consider tax incentives for businesses donating their excess (unsold), non-food goods to registered charities or community organisations,. This could be an extension to the proposed Food Bill before the Senate this year. Longer term tax reform will be essential and achievable as circular economy markets grow.

Innovation & Regulatory Reform with Circular Precincts

One hundred years plus of linear policy, legislation, regulation, market drivers and business models in Australia make it challenging for circular economy innovators to reach financial viability and scale in Australia.Business and policy makers in Australia and globally are increasingly seeing circular precincts as effective ways to build local and regional circular economies. In precincts, it is possible to create new circular

[6] https://circularaustralia.com.au/key-sectors-that-will-catalyse-the-australian-circular-economy/
[7] Rapid Review: Taxation and Fiscal Policy for a Circular Economy

business models to share, repair, remanufacture and process secondary resources, while innovating and collaborating. More must be done by the federal government to enable collaborative innovation between industry and regulators.

CA's recent report *Circular Precincts: Activating place-based circular economy in Australia* brings together decades of expertise from Australian placemakers and Circular Australia's *Precincts and Infrastructure Taskforce* Members, many of whom are leading the circular transition. It demonstrates how essential precincts are to Australia's transition to a circular economy, creating physical spaces for businesses to integrate sustainable infrastructure, such as renewable energy systems, waste management facilities, recycling, repair, remanufacturing, reuse solutions, low-carbon transport and green spaces. But importantly, stimulating economic growth, creating jobs and new sustainable products and services, while supporting liveable and sustainable communities. Circular precincts also provide opportunities to utilise First Nation's unparalleled knowledge and expertise, including how to Care for Country.

The report found strong demand from stakeholders for more circular precincts, funded by government and industry and coordinated by an independent governing body to progress Australia's circular economy transition. It emphasises the need for sandboxing where industry and researchers can safely work with Environmental Protection Agencies (EPAs) and other regulators on novel ways to reuse, remanufacture and recycle secondary resources.

Precincts can also be the incubators of new circular economy markets particularly in regional Australia - creating scaffolding for new circular businesses, products and services.

CA recommends leveraging precincts to catalyse new circular markets to deliver the 2030 circular economy targets, showing Government can make big inroads by supporting circular precincts to align with renewable energy agendas and major projects such as the Olympics. Experience has shown there are a number of important steps to consider in creating successful and thriving circular economy precincts.

Recommendations

1. **Expand the scope of the Sustainable Finance Strategy to include:**
    a. circular economy in the taxonomy, disclosures and sustainable bonds -including the development of Sovereign Bonds with Circularity targets.
    b. circular economy in the taxonomy, disclosures and sustainable bonds including Sovereign Bonds with Circularity Targets
2. **Ensure circular economy definitions and metrics are able to be adopted by the Clean Energy Finance Corporation (CEFC) and the National Reconstruction Fund (NRF) across its seven priority areas of the Australian economy.**
3. **Reference circularity sustainable consumption and production throughout the key government policies** in relation to climate mitigation and productivity.
4. **Leverage precincts to catalyse new circular markets to deliver the 2030 circular economy targets**, showing Government can make big inroads by supporting circular precincts to align with renewable energy agendas and major projects such as the Olympics
5. **Financial support for social enterprises and reuse networks** building the infrastructure required to transition to a Circular Economy
6. **Eco-modulation incentives for businesses to utilise organic materials** such as organic cotton, recycled materials including recycled fibre, and avoid harmful materials/ virgin fibre.
7. **Taxes on undesirable activities** such as appropriately taxing fast fashion or low-quality clothing
8. **Removing GST for repair-based businesses**
9. **Supporting and expanding the scope of product stewardship**
10. **Expanding requirements and restrictions on imports and exports** such as banning or reducing export of textile waste, rPET
11. **Investing in waste infrastructure** for textile sorting, recycling (polyester, cotton, and mixed fibre compositions, increased Container Deposit Depots or Reverse Vending machines
12. **Educational initiatives** including textile repair workshops for the community or in schools, campaigns for Container Deposit Scheme
13. **Enabling standardisation and traceability with nationally aligned approach on material and product passports, and eco-labelling**, starting with textiles, concrete, steel.

Responses

1. Circular economy success stories and measures of success

1.1. Circular Economy business approaches

CIrcular Australia's member organisations successful in driving circular outcomes have leveraged best practice CE business approaches including:

a. **Dematerialsing:** EG: Cement and steel are the two most significant sources of embodied carbon emissions in construction - switching to lightweight 'fitments' over conventional steel results in a 25 to 33 per cent reduction in carbon emissions per tonne of fitments. Replacing cement with supplementary cementitious materials or replacing concrete and steel with cross laminated timber reduces embodied emissions
b. **Design for Repair & Disassembly:** Designing products to ensure the residual value of assets can be harnessed is a successful circular approach. Using secondary materials can create circular economy markets in Australia. EG Extracting critical minerals embedded in waste streams where 90-100% of materials can be recycled from photovoltaics, wind and energy storage infrastructure.
c. **Product as a Service (PaaS):** PaaS business models allow customers to access products and services for a recurring or one-off fee. PaaS encompasses rental, leasing and subscription business models. PaaS businesses can eliminate the need for customers to make large upfront investments - lowering the barrier to entry for customers while removing the waste burden. While the manufacturer retains ownership of the product and the residential value, enabling resource efficiency, maintenance, and extended product lifespan.
d. **New products from 'waste streams':** EG circular water solutions are seeking to recycle more water while generating new products such as biochar from waste water.

Circular Australia's circular economy business snapshop:

Altogether Group	Big Technology Consulting	Hydraloop	Positive Futures Advisory	Tonkin
Anvarta	CEVCO	Koskela	ReLove	Toy Library
Arup	Coca Cola	Mercer	Rosella St	Winning
ASFI	FootprintLab	MinterEllison	SIMPLEHub	Woolworths
	Forward Thinking Design	Officeworks	Sircel	WorkbenchX
Aurecon	G1 Asset Management	Optimise Energy	Sydney Water	Wormtech
BC Consulting	GHD	OzHarvest	Talis Consultants	WSAA (Water Services Australia)
BCSDA	Giftbee / Token Gifts	PIPA	The Infrastructure Collaborative	XFrame
Bendigo Council	Good360	Polestar	The Stable Group	

See responses from a Circular Australia survey on the PC Inquiry in Appendix 1 p 24

1.2. CASE STUDY: Australian Water Association

Materials and Resources intrinsically linked in a circular economy

We would like to call out the definitional distinction you make between 'materials' and 'resources' (Similar to the OECD (2024a), we define 'materials' as including metals, non-metallic minerals (industry and construction minerals), fossil fuels and biomass (such as wood and food). This is distinct from the definition of 'resources', which includes energy and water resources alongside materials, and gives rise to the related ideas of resources productivity and efficiency.

While your "Opportunities in the Circular Economy" paper specifically asks about 'materials productivity', our view is that materials and resources are intrinsically linked and need to be considered in a more holistic way. Water is a vital component in processes like recycling and material transformation. Similarly, embodied water needs to be factored into any materials reprocessing as is embodied carbon. Wastewater products are also valuable inputs for agricultural reuse, building and construction materials, energy generation and emerging products such as bioplastics and biofuels.

Some examples include:

- The wastewater that is generated from materials processing can be treated to various levels of water quality for reuse in irrigation and industrial processes, reducing reliance on freshwater sources.
- Closed loop systems in manufacturing processes are a great example of circularity where water is reused in manufacturing processes, enhancing efficiency and minimising waste.
- There are opportunities to advocate for incentives for water reuse in industrial applications which will encourage greater investment in water-efficient technologies and a stronger focus on the need for integrated water and resource management which will drive better circularity outcomes.
- Materials processing can involve investment in new innovative technologies that will minimise resource inputs and enhance water recycling and recovery processes. For example, solutions like advanced filtration, membrane bioreactors, and smart water management systems.
- Wastewater products such as biosolids have significant potential to be transformed into new products such as biochar, bioplastics and be key inputs to building and construction materials.
- Many water utilities across the country are producing biomethane from biosolids and reusing within their plants or exporting to the energy grid. There is still widespread use of biosolids for land application.
- The Australian water industry is leading examples of circularity through their utility operations. For example, Logan Water has pioneered an Australian first; a facility which transforms human waste, or biosolids, into renewable energy and a sustainable product called biochar. Biochar contains nutrients like those found in commercial slow-release fertilisers; making it great for healthy soil and plants. Biochar can also be added to soil, asphalt, concrete and bricks to sequester carbon for thousands of years. The biosolids gasification facility destroys chemicals in biosolids like persistent organic pollutants, and micro and nano-plastics. It will reduce carbon emissions by about 6,000 tonnes a year.
- Logan Water will no longer pay contractors about $1.8M a year to truck 34,000 tonnes of biosolids from Loganholme Wastewater Treatment Plant (WWTP) 300km to the Darling

Downs agricultural area for disposal. Operational cost savings and carbon credits will return almost $1M a year to the City of Logan, and a new revenue stream is being created from biochar sales.

- Australian universities are also driving innovative research into new solutions to promote greater circularity and reduce material and resource use. For example the University of Technology, Sydney has developed a technology called Green Genie to address waste management, resource recovery, and sustainable practices. It demonstrates circular economy principles by effectively transforming waste into valuable resources, reducing environmental impacts, and promoting sustainability. Water plays a vital role in the processes involved, from facilitating anaerobic digestion to enabling nutrient recycling. Green Genie captures and converts carbon dioxide into algal biomass, which can be used for biofuel production, chemicals, bioplastics, fertiliser and agricultural feed products. *https://www.uts.edu.au/research-and-teaching/partner-us/green-genie-carbon-capture-magic-algae/practical-applications*

In conclusion, we would like to reiterate the need to consider both materials and resource elements of circularity in a more holistic way to ensure our national approach to developing Circular Economy Frameworks and Principles is fully integrated and reflects the true circularity of the opportunities we have. This will drive improved economic and environmental benefits for Australia. About The Australian Water Association https://www.awa.asn.au/about

2. Priority opportunities to progress the circular economy

As explored in CSIRO's *Australia's Circular Economy Comparative and Competitive Advantages*[8], there are low-carbon circular economy opportunities ahead for Australia based on our comparative advantages, ready to be harnessed. Circular economy also has an important role in reducing emissions in hard-to-decarbonise sectors, increasing resource productivity and decreasing supply chain and climate risks for business. However, the current circularity rate in Australia remains at 4% 1 and there remain significant barriers to implementation – it is challenging to implement circular solutions in a largely linear economy. These very real barriers to industry achieving circularity in Australia, are both economy-wide and value chain-specific. Circular Australia is preparing a new report on *Circular Economy Markets* for release in November 2024. The report will explore these barriers through five value chain case studies. It will outline opportunities and a path forward to unlock circularity for Australian industries: to decouple Australian industry performance from resource consumption, enhance and maintain the value of our materials and products, and capitalise on our competitive advantage.

The five case studies selected to road test with industry participants include:

1. Lithium-ion batteries for mobility.
2. Polyethylene terephthalate (PET) bottles for beverages.
3. Green steel for the built environment.
4. Low carbon concrete for the built environment.
5. Textiles for fashion, upholstery and other goods.

[8] https://research.csiro.au/circulareconomy/australias-circular-economy-comparative-and-competitive-advantages/

For each value chain case study, the following process was undertaken.

- Map the current value chain to identify major sources of lost value
- Generate a possible 2035 value network to outline future opportunities for Australian industry
- Interrogate barriers and success stories to develop recommendations to enable circular transitions across these case studies and broader industry in Australia.

Across these markets, Circular Australia has identified key areas for government to address outlined in the Recommendations on page 8. These include :

- **Eco-modulation** incentives for businesses to utilise organic materials (e.g. organic cotton), recycled materials (e.g. recycled fibre) and avoid harmful materials (e.g. virgin fibre).
- **Taxes on undesirable activities:** EG appropriately taxing fast fashion or low-quality clothing
- **Removing GST for repair-based businesses**
- **Supporting and expanding the scope of product stewardship**
- **Expanding requirements and restrictions on imports and exports**
- **Consider bans to reduce export of textile waste, rPET**
- **Investing in waste infrastructure** such as textiles sorting and recycling (polyester, cotton, and mixed fibre compositions), increased Container Deposit Depots or Reverse
- **Mobile/ vending machines to harvest secondary resources** in suburbs that do not have convenient access and locations with high traffic
- **Educational initiatives:** repair workshops for the community or in schools, campaigns for Container Deposit Scheme
- **Enabling standardisation and traceability** with a nationally aligned approach on material and product passports, and eco- labelling, including for textiles, concrete, steel, etc.

3. Hurdles and barriers to a circular economy

Circular business approaches are constrained by a system that prioritises short-term outcomes and is naturally risk-averse. Governments are not activating the considerable economic opportunities circular economy businesses and precincts provide. While some governments are beginning to include embodied carbon reduction measurement and benefits in business cases in precincts for example, the broader benefits of circularity such as improved resource productivity, additional residual value of assets, reduced capital investment, job creation, innovation and, benefits to nature are currently not being enabled.

The following barriers are highlighted by Circular Australia's members.

- Limited awareness and understanding of circular economy among stakeholders
- Silos across governments and industries
- Challenges in building relationships and collaboration between stakeholders
- Lack of engagement, awareness, and participation from stakeholders due to cultural barriers and dominant narratives
- Insufficient flexibility within environmental approval codes to manage waste differently
- Limited education on circular economy concept for stakeholders, particularly in the procurement space

- Challenges in overcoming vested interests, political hurdles, and traditional ways of operating in sectors and industries
- Lack of consideration for all inputs and outputs in the design processes, leading to flaws and potential problems later on
- Challenges in navigating regulatory frameworks and obtaining approvals for circular initiatives
- Overemphasis on growth models and a lack of recognition for the importance of circularity in achieving sustainable outcomes
- Need for clearer economic cases and incentives to drive circularity at various scales, from local to regional and national levels
- Lack of awareness, education, and incentives for businesses to adopt circular practices
- Limited resources and funding to support circular initiatives and overcome resource constraints
- Difficulty in attracting investment and financing for circular initiatives, particularly in regional areas
- Lack of structured plans and guidelines for transitioning to circularity in various sectors and industries, leading to uncertainty and reluctance to invest
- Limited coordination, collaboration, and innovation within the building industry, hindering the adoption of circular practices
- Limited leadership and framing of circular economy at the national, state, and local levels
- Challenges in balancing commercial interests, regulations, and policies in achieving circularity
- Overemphasis on growth models and lack of recognition for the importance of circularity in achieving sustainable outcomes
- Challenges in transitioning established urban and infrastructure frameworks to support circularity
- Lack of specific clauses and regulations around circularity in procurement and waste management processes
- Challenges in demonstrating the commercial reality and market viability of sustainable and circular practices
- Difficulty in changing established urban spaces and infrastructure to support circularity
- Lack of set standards for circular economy practices in certain environments, such as hospitals
- Need for guidelines and benchmarks that promote circularity in design and construction processes
- Technical challenges and opportunities in adopting new technologies for sustainable construction
- Limited remanufacturing capabilities within Australia, leading to the export of recycled materials
- Accounting rules that do not enable a circular economy, as they fail to account for the value of maintenance, continuation, and revaluation
- Challenges in balancing product availability and market development
- Difficulty in obtaining data and information on the recycling and reuse of materials, hindering decision-making and transparency
- Limited visibility and knowledge about the recycling and transformation of recycled materials
- Challenges in measuring and benchmarking the amount of waste generated and its destination
- Need for improved data collection and measurement systems to support decision-making and transparency
- Technological barriers and opportunities in harnessing digital technologies for a circular economy

- Cultural barriers and resistance to change in existing governance systems and decision-making processes
- Lack of awareness and understanding of the business case and opportunities for circularity in regional economies
- Complexity and interdependencies in driving circularity in place-based approaches, requiring innovative strategies and coordination among stakeholders

4. Governments' role in the circular economy

Circular Australia believes the policy, legislative and regulatory reforms recommendations by the CEMAG (currently being finalised) should be adopted in total by the federal government to better enable the pursuit of circular economy activities. In addition we recommend the following:

4.1. Economic levers

In successful circular economies, governments are using subsidies, carbon emissions trading schemes, taxes and Extended Producer Responsibility (EPR) to incentivise circular behavioural change. All three of these levers should be robustly considered to improve the relative price of circular goods and services and incentivise key changes to behaviour. Circular Australia recommends The Australian Government could offer tax incentives for businesses donating unsold, non-food goods to registered charities or community organisations. Longer term tax reform will be essential and achievable as circular economy markets grow.

Research by Circular Australia found the current use of fiscal policy in Australia to drive a circular economy (CE) is extremely limited and warrants exploration for its potential to drive both businesses and consumers towards CE activities. CA's rapid review *Rapid Review: Taxation and Fiscal Policy for a Circular Economy* provides a description of the basic structure of the tax system in Australia, followed by a review of the literature defining the various dimensions of a CE and the transition to a CE with the aim of highlighting some possible policy approaches. Key points include:

- To enable the paradigm shift proposed in CE literature, a corresponding fundamental change will be required in the architecture of the tax system.
- In developing circular fiscal policy, it is important to distinguish between resources flowing through the economy and fixed assets and infrastructure that facilitate that flow.
- The design and location of infrastructure highlights the importance of a geographic or spatial dimension and opens the possibility for targeted, locality-specific fiscal policies.
- CE fiscal policy should be applied at three different levels—the micro (product) level, the meso (precinct/local neighbourhood) level, and the macro (state or national) level. Micro-level policies that focus on individual industries or resources should be complemented by meso- and macro-level policies that seek to manage the economy of a region more holistically.
- The transition of our trading partners to a CE will impact demand for Australian resources and therefore will likely have a substantial impact on Australian export income.
- As the Australian economy is structured differently from resource importing economies, the pathway to a CE for Australia will be unique to the Australian context. Consideration needs to be given to the distinctive characteristics of the Australian economy, including large distances, long supply chains and significant dependence on resource extraction and export.

- Striving for shorter supply chains - connecting local producers with local consumers and relying less on international trade - increases local resilience and economic prosperity, reduces energy use, waste, and pollution
- Meso-level strategies related to cities and precincts should engage with strategic town planning and property development, providing fiscal incentives for the delivery of circular infrastructure.
- Reducing overall demand (the preferred end of the waste hierarchy) and reducing production from virgin materials is critical for enabling a successful transition to a CE.

  Having identified these possible avenues, a review of the international literature related to fiscal policy then explores possible policy settings to drive a CE. Key themes arising from this literature include the following:
- Several studies highlight the need for fundamental tax reform to drive a CE in shifting the focus of taxation away from income and towards consumption, in particular consumption of non-renewable resources
- Subsidies and charges should be redirected to support investment and uptake of CE activities and practices. For example, the current tax breaks for fossil fuels should be removed to level the playing field between renewable and non-renewable energy providers. Similarly, road user charges for low-emissions and zero emission vehicles are limiting uptake of these.
- With a reduction in the flow of resources, the tax base of governments will need to progressively shift towards taxing wealth, land and assets or the usage of land and assets. For example, through taxes on the unimproved value of land and taxes on wealth to enable an equitable transition.
- To encourage the shift away from polluting assets such as fossil fuel power stations, there are proposals to spread the depreciation of these assets over their lifetime to reduce the value of these assets from tax write-offs
- Given that the CE implies shorter supply chains and increased local resilience, attention should be given to increasing local economic activity in regional towns and villages. Local circular economic activity in regional NSW can be supported by fiscal policies that support decentralisation—incentives encouraging people to move from the cities to the regions.
- R&D tax concessions need to be much more accessible to a wider range of enterprises including small start-ups
- Tax holidays may be considered for specific circumstances, but need to be used judiciously
- Expanding patent box tax incentives could be considered for CE along with incentives for CE technology investment
- Differential adjustments to GST/VAT can be used to drive business decisions, for example to choose reused or recycled materials. Reductions in GST/VAT have also been used to influence consumers to adopt CE practices such as repairing rather than replacing, or to increase public rather than private transport use.
- There are problems with this approach if taxation is not harmonised over different jurisdictions, and firms may shift their operations
- Experience in Sweden has shown that reducing GST/VAT on repair is not sufficient to ensure greater uptake for all product types. Such an approach must be incorporated with a range of other policy measures including awareness raising, regulation, product guarantees, greater labelling and information on reparability
- Waste levies are a foundational fiscal policy in use in Australia and elsewhere
- A progressive waste hierarchy linked waste levy has been proposed in Sweden, with a similar system in South Korea. Initial assessment of the Swedish example suggests a waste hierarchy based tax scheme needs to be carefully designed.

  In the final section, we discuss the application of international experiences in the Australian context at all three levels of government, to identify specific opportunities for fiscal reform. Some key, specific recommendations include:
- At the Commonwealth level, reforms to the GST and resources tax have significant potential to drive change.

- At the state level, in conjunction with major tax reform, there are opportunities to reduce or remove payroll tax and increase land tax and mining royalties. Transport related levies are fairly well aligned with the circular economy in encouraging public transport and service use over private transport, but could be further tailored.
- At the local government level, strategic town planning, including land use and infrastructure planning, could be designed to enable the delivery of circular economy precincts. For this to be successful, they would need to be harmonised with the local Council costs and income from rates, fees and charges
- Fiscal policies will need to be accompanied by other policy instruments, so may be most usefully considered as part of a policy package

4.2. Financial incentives

4.2.1. Establish a framework for sustainability-related financial disclosures

Mandating disclosure standards for circular economy is very important to tackle green washing and provide clear best practice to enhance understanding of circular economy in organisations. This can also streamline reporting and remove uncertainties for investment vehicles and finance organisations. Both mandatory and voluntary disclosure are welcome levers to catalyse the emerging circular economy in Australia. There is strong evidence that larger companies with a higher degree of financial leverage and profitability, provide more circular economy information in their sustainability reports.

Awareness of the circular economy among investors and in the financial sector generally is still low. A common definition, common criteria, and common metrics for circular economy will tackle the many barriers to the circular economy transition. **As Australia embarks on the development of its sustainable finance taxonomy, we have an opportunity to build on the lessons learned in the EU and accelerate the development of circularity at the beginning of the taxonomy design process so that Australia can embed and incentivise the adoption of waste hierarchy principles, measurable thresholds, and requirements and mechanisms that foster wider supply-chain collaboration with a focus on the underlying objective qualitative criteria that is necessary for the taxonomy to be used by financial institutions in the construction of new financial products and investments.**

4.2.2. Support credible net zero transition planning

Scientifically sound definitions and taxonomies that are globally comparable and harmonised will be critical in driving effective growth of circular finance to enable the transition to a more circular economy.

Standardisation of circular economy definitions, metrics and practices for the finance sector are critically important to prevent “greenwashing” and ensure that appropriate circular business models and projects are financed. Incorporating circular measurement into corporate reporting and accounting frameworks, like International Sustainability Standards Board (ISSB), is also critical to drive the transition to the circular economy in Australia and globally. Gold standard approaches are essential if Australian organisations are to make meaningful progress to a sustainable economy. ISSB is driving credibility and transparency and importantly assisting companies to both avoid climate-related risks and leverage opportunities.

Circular Australia member organisations have expressed their willingness for regulation to derisk and standardised approaches to circular economy. IFRS S1 and S2 would provide a welcome standardised disclosure approach for Australian investment vehicles and help accelerate circular understanding, projects and investment.

The circular economy is an economic framework tackling key climate and climate related challenges - biodiversity loss, consumption, climate and nature. CA supports the adoption of the circular economy framework and the application of its principles in the transition planning for Net Zero. nature and resource use. Enhancing target setting and transition planning is also essential to achieve a CE by 2030.

4.2.3. Investment Labelling

There are multiple institutional private markets strategies that would benefit from a sustainable investment product labelling regime - with specific reference to circular economy. Many existing strategies have an explicit circular economy focus for their idea generation /alpha sourcing differentiator. The number of these types of funds are growing for example: Closed Loop Partners, Circularity Capital, Candriam, and Lombard Odier, together with listed equity strategies e.g. BlackRock. Some of those are targeting multiple industry sectors and others have more narrow focus areas such as Lombard Odier's Plastic Circularity Strategy. There are also many broader sustainability themed strategies across public and private markets that include circular economy elements. This presents an excellent opportunity to apply a specific sustainable investment product labelling regime capable of making a wide ranging impact. There is also now an increase in nature-positive strategies being proposed for example: New Forests. It will also be important to capture this element of circular economy when referencing examples as well as reinforcing a materials and recycling economy.

An Australian labelling model can build off these existing approaches which reflect key developments in other markets as well as Australia. Ability to measure and categorise the impact of sustainable objectives or adherence to circularity principles in assessment for investment management decisions are critical to driving circular economy investment. Investment in metrics and a taxonomy on circular economy principles would help drive this investment, opening up additional opportunities for sustainable funds to assets that are circular in nature. Circularity principles for inclusion in sustainable asset classes should be ambitious and evidence based. Incorporating circular economy principles as an important solution contributor to the climate change and nature/biodiversity challenges as part of the Sustainable Finance Taxonomy development. Circular economy should not be a separate topic to be considered because the systemic risks are connected, circular economy aims to address common root causes, and the Taxonomy is an important opportunity to realise this in a timely way.

4.2.4. Identifying and responding to potential systemic financial risks

Government and regulators can further contribute to marketwide understanding of systemic sustainability related risks by expanding the focus to linear versus circular economic frameworks. In a linear 'take make waste' model, consumption outstrips the ability to curb emissions, resources needed for the renewable energy transition are wasted and dependence on fossil fuels is exacerbated. By broadening the focus to include a circular economy, government can improve their understanding of systemic risks - many of which are caused by the linear economic

approach. CA research demonstrates the importance of understanding linear risks and identifies five typologies of risks including market, operational, business, legal and reputational risks:

- Linear risks are the risks a business is exposed to as a consequence of following the conventional 'take-make-waste' linear economic model and not moving towards a circular economy. Ignoring these external risks could have severe implications on business models which could be value destroying, and current approaches to risk management often overlook risks associated with linear business models.
- Five typologies of risks have been identified in the literature which include market, operational, business, legal and reputational risks. These include risks from future resource shortages and associated impacts on prices, restricted access to supply chains due to geopolitics and trade wars and their impact on market dynamics.
- Investors and lenders are exposed to linear risks through the businesses in their portfolio that continue to operate using linear business practices. These risks may negatively impact business assets, and subsequently devalue the investment and/or loan. They run the risk of stranded assets, i.e. assets that have suffered from unanticipated or premature write-downs or devaluations.
- Businesses, and thus by extension their banks and investors can insulate themselves against linear risks by adopting circular approaches. This can be a business opportunity for the finance and investment sector, however they need to embed circularity in their operational and strategic processes. Assessing and measuring linear risks in financial decision making is important for de-risking finance for circular approaches
- A few organisations have developed approaches and matrices to help businesses and financiers to identify and assess linear risks. These function as guides to understand risk across business practices or value chains.
- However, most conventional risk assessment and disclosures do not comprehensively address linear risks. Additionally, there are no metrics to quantify these risks.
- Challenges in correctly evaluating linear risks include the lack of historic track records to value them into business models, unpriced externalities both negative ones like linear risks and positive ones like the benefits of circular propositions, unfamiliarity with circular knowledge, lack of metrics particularly for non-financial impacts and the lack of a common language to inform stakeholders. Linear risk can be mitigated by adopting a proactive approach to stimulating circular business practices
- Financiers and businesses are increasingly recognising the value circular solutions bring. Research shows that circular strategies can curb investment risk and drive superior risk-adjusted returns. Primarily European banks and pension funds have already recognised the importance of the circular economy and started embedding it in their planning processes.
- The finance and investment sector can manage linear risks by improving their risk assessment frameworks to better balance linear and circular risks and opportunities as well as focus on the longer term. They can also support businesses they invest in or lend to in the transition to a circular economy with appropriate financial structures and technical advice.
- They also play an important role in raising awareness through dialogue with clients, helping them identify linear risks and transition to more circular solutions. They can require greater transparency through reporting and disclosure of linear risks from businesses they invest in or lend to. This will encourage businesses to build capacity, understanding and skill to ensure that linear risks within their portfolios or operations are appropriately identified, evaluated and addressed.

Government has an important role to drive understanding of the systemic risks associated with exposure to legacy linear risk assets by supporting research and development into both metrics to measure circularity, as well as research into alternative technologies and systems that promote circular business practices.

4.2.5. Addressing Data and Analytical Challenges

A key priority to ensure data-related initiatives underway are tailored to meet the needs of firms and investors - is the development and application of circular economy metrics. Metrics, like taxonomy, are fundamental to create a common language and method to identify sustainable business practices.

The federal Government through the Minister for the Environment Hon. Tanya Plibersek and her Circular Economy Ministerial Advisory Group (CEMAG) are developing a framework for circular economy to achieve the 2030 target with business. This framework will require metrics and indicators to enable the setting of targets and measuring outcomes.
CA has developed Australian Circularity Metrics including a user-friendly Circular Economy Metrics Guide developed in partnership with State and local governments, industry and researchers to understand the best metrics for Australia.

Measuring the circular economy in the Australian context is essential to enabling a safe and speedy transition to the new zero carbon zero waste future by 2030. The development of an Australian circular economy metrics guide is urgently required to assist governments, organisations and businesses set targets and measure progress towards a circular economy. Australia can learn from other jurisdictions which have already developed strong metrics to measure progress to a circular economy, without reinventing the wheel. Research by Circular Australia demonstrates there are many established and relatively new metrics that can be used to measure the transition to a circular economy. These metrics have applications at different scales and can reflect different goals and perspectives, with various strengths and weaknesses which warrant exploration. Metrics help make it possible to measure job creation, develop new business cases for circular solutions, and monitor the gaps that need to be closed as we progress to a circular economy by 2030.

Funding the development of this research into a Guide in consultation with State and Territory governments, researchers, government and industry should be a key priority to fill this sustainability data gap. The guide will allow organisations and governments to set circular economy ambitions and measure progress while also inspiring action to design out waste and GHG emissions. Importantly, a Circular Economy Guide will catalyse action and commitment to achieve Australia's 2030 circular economy target.
In addition to helping make visible new opportunities for investment, this work would identify key policy, technology, and data gaps, and lay the groundwork for accelerated development of technical criteria for circular economy objectives in the Australian taxonomy as it becomes a priority in the development of the taxonomy.

4.2.6. Issuing Australian sovereign green bonds

The development of Sovereign Bonds with Circularity targets would be an important step in leading the global market on circular economy finance. Government is well-placed to lead in developing this exciting new financial instrument leveraging the successful model used to catalyse the Green Bond market in Australia in 2004.
Development of these bonds will provide a template for other circular economy based bond issuance and provide Government with additional levers to issue bonds with sustainability

targets. This will significantly open up sustainable funding opportunities for Treasury , sending a powerful message to the market on circular economy. This will be well received by CA members.

4.2.7. Catalysing sustainable finance flows and markets

In the same way the NRF is supporting the scaling up of sustainable investment in Australia, CEFC also has a pivotal role. It can provide catalytic funding to sponsor landmark transactions in the move to a Circular Economy. In particular, CEFC managed funds such as Australian Recycling Investment Funds can establish core investments in circular infrastructure and projects, and similar to carbon projects in the past, would stimulate wider financing by other financial institutions of structures, assets and business practices that promote circular economy.
The Dutch Roadmap Circular Finance 2030 (February 2022) identifies the these type of landmark deals as pivotal in paving the way for driving Circular Economy Finance.
"Gaining experience by closing landmark deals and fine-tuning circular propositions for financing a company that explicitly pursues circularity and applies at least one new element of circular finance constitutes a landmark deal. Insights gained from the experience—like how best to measure circularity, how to weigh risks and opportunities and how financiers can structurally use this information—can be shared with the sector. This will produce standard and publicly available documentation to spur future deals."
The success of the CEFC and NRF in landmark circular economy deals like this for example, is conditional on the development of circular economy taxonomy and metrics. Available data and metrics to identify and measure circularity of assets and projects are essential. They provide knowledge of impact of circularity on carbon and other climate co-benefits including nature and biodiversity. Not having this is a key barrier.

4.2.8. Position Australia as Global Sustainability Leader

There is strong evidence that building a circular economy will improve productivity and drive more sustainable economic growth for Australia. Analysis by Circular Australia (formerly NSW Circular) shows circular economy initiatives can improve productivity and be part of the solution to more cost-effective living in the long run and this builds on national and international evidence:

> *Material consumption in Australia has more than doubled over the past 40 years. In 2018-19, Australia generated over 75 million tonnes of waste and it has the 4th lowest rate of material productivity in OECD. Australians consume the equivalent of 4.6 planets. Improving resource efficiency generates jobs. Circular economy also provides a successful economic framework to improve resource efficiency by designing out waste and pollution and enhancing manufacturing, repair and recycling.*

Circular economy is essential to Australia achieving Net Zero. CA commends the government for embedding circular economy requirements in the sectoral decarbonisation plans - recognising the powerful role of circularity in achieving Net Zero. Even in a fully renewable energy system, ongoing high consumption, a lack of circular design, engineering, recycling and manufacturing will still drive high emissions. Forty-five percent of all emissions are associated with the way we make and use products, materials and food. These overlooked emissions represent almost half of the Net Zero challenge and require circular solutions.

Australia needs to align with global finance initiatives already underway in the circular economy. Globally, there are currently 12 taxonomies in place and at least a further 15 under development, including:

- The EU Sustainable Finance Taxonomy lists circular economy as the the fourth of six environment objectives.- this was introduced Q1 2023.
- The UK Sustainable Finance Taxonomy reflects the same six EU sustainability objectives of which circular economy is fourth
- South Africa's Sustainable Finance Taxonomy has adopted the same six EU sustainability objectives of which circular economy is fourth
- More than 300 signatory banks representing almost half of the global banking industry have signed the Six Principles for Sustainable banking
- Both the EU and the International Capital Market Association (ICMA - who set voluntary standards for the Green Bond Principles (GBP) and have been guided by the work of the EU) released working papers in 2021 focussed on screening criteria and reporting metrics for circular projects.

The circular economy framework also directly enables eight Sustainable Development Goals.

Circular Economy directly enables 8 SDGs:	Circular Economy indirectly enables 2 SDGs:
• 6 Clean Water & Sanitations • 7 Affordable & Clean Energy • 9. Industry, Innovation & Infrastructure • 11. Sustainable Cities & Communities • 12 Responsible Consumption and Production • 13. Climate Action • 14 Life Below Water • 15 Life on Land	• 1. No Poverty • 2. No Hungry

Graphic 2: Sustainable Development Goals

The circular economy is a near &long-term goal for the Australian economy globally and in the region. Australia is behind the EU, Japan, China and Canada in activating a circular economy. There are substantial opportunities for Australia to be a world player developing new solutions and supporting our local neighbouring economies as well as participating in the global economy. In fact Australia can leapfrog solutions for example, green hydrogen, steel, aluminium, sequestration, critical minerals from waste streams, circular solar panels, and batteries. The circular economy is a framework that not only tackles carbon reduction and resource depletion but it also supports the regeneration of the natural environment including biodiversity loss, water supply and security.

APPENDIX 1 Circular Australia Survey Responses

As invited by the PC the following contributions are not formal submissions and reflect views from CA's members and community of practice.

Information	**ICare** Head of Procurement Strategy and Policy Myla Bulaon	**University of Sydney** Sandra Loschke Associate Professor	**Snowy Monaro Regional Council Education** Engagement Officer Aimee Moy	**Golf Ball Recycling** Director John Harrington www.golfballrecycling.com.au	**Retreasure Co** Raja Dhanapal Supply Chain	**General**
What are your circular economy success stories and measures of success?	I advocated for the use of SMART@UNSW green ceramics to public sector agencies to utilise discarded textiles and retired government uniforms. Outcome was a policy for construction procurement encouraging a % materials to be used in the built environment to be circular.	Unlike in the EU, (in Australia) very little is mandated or incentivised, particularly in the building industry, apart from few CE principles that are already addressed in existing sustainability measures such as SBRS	Community empowerment to reduce waste, shop second hand, and increase their knowledge on the ever changing industry	Golf Ball Recycling Pty Ltd to keep end of life golf ball and accessories out of landfill. GBR has released a strategy to create Golf Australia's first circular economy sport.	I started the Circular Economy model (in 2018) reusing small elastic bands in my business and expanded to other products. Based on this idea we reduce waste management and procurement cost to the business.	
What is Australia's overall potential to move to a more circular economy, as well as how best to monitor progress and measure success?	We are still far from catching up with the Dutch government and other countries in Europe. We have barriers to product specification and the cost is still prohibitive.	The EU is leading the way, which puts Australia in the unique position to learn from them as a late adopter.	it feels fairly unachievable and segmented to those who are interested in sustainable practices, or those that can afford to invest circularly. Without significant financial gain there is no incentive. Reporting becoming mandatory (and this) will increase measurables.	Australia's population is small... We are an innovative (sustainable) nation. Our potential to reach circularity 2030 is high as long as government supports the banning of single use plastics... and synthetic chemicals such as Montreal! Measure progress through site audits &	Compared to the recycle reuse concept, (circular economy) will give more benefit to Planet, People and Profit (3P). We have huge potential for (the circular economy) concept.	

				CRM data sharing.		
What are the priority opportunities to progress the circular economy?	Closing loops and slowing loops. Australia is now adopting the repair and re-use culture for personal materials, but not yet in the most impactful sectors like construction and health equipment.	Start with sectors that have the biggest impact: Introducing circular building and renewing ageing buildings to extend their lifecycle.	Supply chains cover several sectors, if some in each can prove success in changing their supply chain and offer a framework there may be more uptake - more investments made into stewardship and take-back programs. Low income receive repair rebates, as this is the hard to entice market.	Industry collaboration, steered by a circular charter.	Everyone has some underutilised assets or products from the business or home. We have huge potential for a CE business models	Reduction of chemicals in the food production industries (to remove) contamination of the water systems (improving productivity)
How could Aboriginal and Torres Strait Islander knowledge be valued, in ways that protect Indigenous cultural and intellectual property, to identify and develop these opportunities?	Their culture of being one with the earth and "take only what you need" is something we can adopt to consumption habits.		Sharing a love and protection of land and country. We do it because it ensures our environment is cared for now and many more tomorrows, it isn't the next generations problem, it is ours. No more out of sight out of mind mentality.	Through sharing and understanding the relationship with land, sky and sea through mountains and rivers. Celebrating historical events and relationships, such as the Germany migrates and Aboriginal communities in SA.	40 Years before our seniors all followed circular economy concept. Due to global competition and industry change we all forget about the earth. The Aboriginal and Torres Strait Islander they all believe the 5 natures and elders , I am sure circular economy will give value to the owner of this land.	Valuing Indigenous knowledge cultural and intellectual property is essential. Opportunities exist in knowledge of natural and materials lifecycles and ecosystems regeneration and management should be identified and leveraged.
Information on specific opportunities	The engineered stone issue has not been fully resolved and we are still importing	Australia has done very little and we cannot participate in	How can we make it feasible to bring back "made in Australia" for more items (onshore	The exporting and importing of second hand golf balls.	The risk the government giving incentives to recycle	

and risks for Australia resulting from international developments, including circular economy policy.	materials from overseas when we can create green ceramics in Australia from networked supply.	new market sectors, technological advancements, CE knowledge sharing etc unless we join global CE initiatives.	manufacturing)		only not for other types of CE model (Like Reuse no incentives).	
What are the hurdles and barriers to a circular economy?	Definitely cost and attitudes but most importantly the product standards we are required to adhere to when developing specification for procurement . We can't specify alternatives because the standards are old and not supportive of emerging materials.	Education - most professionals do not know what this is or why it matters.	number one hurdle is cost, number two hurdle is attitude. "why bother when there is no immediate benefit to me" mentality	Lack or regulation on what goes to landfill.	The government need to promote via print and television media about Circular economy. This will give more knowledge to the people about CE. In schools we need a subject like Climate change and sustainability.	Lack of buy-in Green-washing is the biggest barrier. A significant portion of the industry exaggerates or lies about their environmental credentials, thereby creating an inflated impression of what's profitably achievable, whilst simultaneously undercutting those who are genuinely trying to improve their environmental performance. more expensive than linear economy systems, if a simpler option (yet wasteful) is available people will use this one
What is the role of the	Government need to amend policies and support innovative	Mandate, incentives, educate, control.	Make decisions and mandate, don't wait	Set down legislation and ban recyclable	The government is the primary change	It has its place (government) but if

Government in the circular economy?	companies to implement circularity to democratise it, and allocate budgets to agencies for circular economy adoption and implementation.		for independents to lead the way and don't express goals with no tangible way of reaching them and completely isolating business and local government	items going to landfill. Police the littering of golf balls in public waterways beaches and public land space.	maker . They need to provide incentives for various CE model .	you want things to happen the private sector has to lead Government can use its procurement to incentivise the circular economy. Government can and should fund large infrastructure beyond the risk and (un)profitability that the private sector would accept. Governments could also enforce environmental standards, but this must not occur without also providing proverbial carrots;a stick-only approach would likely fail. legislate a ban on single use takeaway item (including compostable items), education from primary school, support financially reuse and repair centre in all LGAs, convene cross sector collaboration
What is the extent to	Majority of it hinder CE. For example I approached the	Most policies are not controlled - building	They are completely overwhelming thus	Allowing Plastic including golf balls to		The high expense of Australian standards

**which current policies or regulations hinder the pursuit of circular economy activities? **	Department of Education Infrastructure Division to use alternative materials but they said they can't because those materials can't be evaluated according to Education standards.	waste is not controlled. No-one knows for sure because it is not controlled by Council's who are under resourced.	evoke feelings of being unachievable	be dumped in landfill bins. A waste management policy would support recycling.		is problematic. Despite their de facto role as quasi-legislation, the standards are only available via expensive one-off payments or a similarly expensive subscription. Many stakeholders are therefore unfamiliar with the standards and some instead rely on superseded versions. Non-compliance is far more prevalent than it could or should be.
What are the benefits, costs, risks and implementation issues associated with current or potential policy or regulatory changes that aim to address barriers to circular economy activities?	The costs relate to supply and demand. If the regulations are not changed, only a handful organisations can implement.					

What actions could governments take to facilitate Aboriginal and Torres Strait Islander roles in progressing the circular economy?				Education in schools on historical relationship between all Australian's and how sporting fields such as golf courses can be the class room		Seeking Knowledge from this community about CE and truth telling