Re: Submission to the Productivity Commission on Opportunities in the Circular Economy

Thank you for the opportunity to provide feedback on *Opportunities in the Circular Economy*. Zero Waste Victoria (ZWV) is a community organisation dedicated to empowering individuals and communities to reduce waste through sustainable practices. As an advocate for the community, ZWV offers a space for people to exchange ideas, seek advice, and access resources that promote waste reduction and circular economy solutions. Our strong connections to the community provide valuable insights into the challenges and successes experienced by individuals and small businesses striving to minimise waste.

We would like to thank the government for calling this inquiry and considering responses not only from industry and professional experts but also from the community. Many individuals, organisations, and small businesses within our community are already integrating circular economy practices into their daily lives, going to great lengths to enable sustainability by valuing resources and diverting waste from landfills.

We also recognise that small businesses and many community groups often lack the resources, time, or confidence to make submissions. Nevertheless, these organisations are actively implementing innovative and sustainable practices that exemplify the principles of the circular economy. While some larger businesses may highlight their barriers, many small and medium-sized businesses, social enterprises, and community groups are overcoming hurdles and providing practical solutions that deserve more attention.

Product Stewardship or Extended Producer Responsibility (EPR) schemes are crucial elements of the circular economy, yet they often focus predominantly on recycling. We need stewardship models that consider the entire lifecycle of products and packaging, with greater accountability and transparency. These models must ensure genuine circularity rather than shifting the responsibility for waste management onto the recycling industry, especially for products that are difficult to recycle or contain harmful chemicals.

For an effective transition, a circular economy must prioritise refuse, rethink, reduce, reuse, repair, refurbish, repurpose, and remanufacture, before resorting to recycling and recovery. While government policies often reference this type of hierarchy, in practice, there is a tendency to default to recycling. This focus on recycling risks undermining public trust and delaying meaningful progress towards sustainable resource use within the circular economy.

Repair, reuse, and remanufacture activities are often carried out by small businesses, yet the value of their contributions to the circular economy is frequently underestimated or overlooked. Unlike recycling, there is no central body for reporting these activities, and their economic impact is often underreported in circular economy models. Although data on jobs and economic activity from recycling is readily available, information on reducing waste through reuse, repair, and repurposing is often neglected. This is partly because these activities are driven by small businesses and also volunteers, many of whom rely on unpaid efforts. These contributions prevent substantial waste from going to landfill, and foster genuine circular economy practices that deserve greater recognition.

As a result, there is comparatively little data on the economic impact or the amount of materials diverted from landfills and kept in circulation through circular economy practices compared to recycling. We hope this inquiry considers these insights and the challenges of quantifying this data, especially in light of the overemphasis on recycling in this context. While recycling is undeniably important, it should not overshadow or preference other vital circular economy activities.

Circular economy practices must also incorporate environmental accountability from design through to disposal. Presently, there is little incentive for manufacturers, importers, or distributors to address the environmental impacts of their products, leaving eco-conscious businesses and consumers to bear additional costs for energy, water, and chemical considerations. A model that emphasises full lifecycle responsibility best supports extended producer responsibility and circularity.

Zero Waste Victoria envisions a future where everyone uses the planet's resources responsibly, and together we minimise waste. We advocate for catalysing change among communities, businesses, and governments to make responsible resource use and waste avoidance an integral part of everyday life.

ZWV welcomes the opportunity to represent the community in the Productivity Commission's inquiry on circular economy opportunities. On behalf of Zero Waste Victoria and the community we represent, we look forward to furthering discussions and contributing to Australia's progress in circular economy initiatives.

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1. Australia's Circular Economy Potential

Australia's potential to transition to a circular economy is immense. By prioritising actions such as rethinking, refusing, reducing, reusing, repairing, refurbishing, repurposing, and remanufacturing, we can significantly enhance recycling outcomes while minimising resource use and waste. Shifting the focus away from recycling as the primary solution toward upstream interventions ensures more sustainable economic, environmental, and social benefits.

A key challenge, however, lies in the availability and accuracy of data. Current circular economy metrics heavily emphasise waste, recycling, and material flow, while overlooking critical contributions from repair, reuse, remanufacture and secondhand economies. These activities play a pivotal role in preventing items from entering the waste stream, yet they remain underrepresented in national reporting. Addressing this gap is essential for fostering a comprehensive and effective transition to a circular economy.

Actionable Hierarchy for a Circular Economy

1.1. Refuse

- Advocate for waste elimination at the design stage to prevent unnecessary resource use.
- Mandate that manufacturers eliminate non-essential and excess packaging.
- Promote consumer behaviours that prioritise refusing single-use or short-lived non-essential products, such as disposable cutlery and glow sticks.

1.2. Reduce

- Incentivise resource-efficient production processes through financial offsets or grants.
- Establish mandatory design standards ensuring products are repairable and can be disassembled at the end of their lifecycle.
- Implement widespread consumer education campaigns on the benefits of reducing consumption and choosing sustainable alternatives.

1.3. Reuse

- Expand programs supporting reusable packaging systems in both customers bringing their own refillable containers and manufacturer led.
- Invest in and normalise borrowing libraries (e.g., for toys, tools, and household goods) to reduce the need for single-use or limited use purchases.
- Expand and spotlight second-hand markets by fostering partnerships with local businesses and community organisation driven initiatives.
- Incentivise reusable cups, crockery, cutlery and containers in the hospitality and events sectors

1.4. Repair

- Invest in vocational training programs to build a skilled workforce for repair industries, ensuring access to affordable and high-quality repairs.

- Encourage vocational training focused on sewing and mending skills to prolong textile lifespans.
- Support initiatives that provide affordable repair services.
- Fund community-led initiatives such as repair cafés, community education and make DIY repair resources widely available.
- Introduce mandatory repairability labelling on consumer goods to empower informed purchasing decisions.
- Ensure affordable and accessible spare parts through regulation or subsidies, enabling easier repairs to reduce the likelihood of discarding items due to unavailable or overpriced components

1.5. Refurbish and Remanufacture

- Develop infrastructure and supply chains to support refurbishment of electronics, appliances, and furniture.
- Collaborate with manufacturers to integrate refurbishment processes into product lifecycle management at the design stage.
- Create financial incentives, such as grants or consumer rebates, to encourage businesses to engage in remanufacturing.
- Incentivise fashion brands to prioritise refurbished or remanufactured clothing lines.

1.6. Repurpose

- Support community-driven programs that promote creative upcycling of materials into new products.
- Highlight successful models, such as upcycling workshops or local businesses specialising in repurposing, to inspire broader adoption.

1.7. Recycling and Recovery

- Emphasise recycling as the last resort, prioritising refuse, reduce, reuse, repair, and remanufacture to minimise waste generation and resource use.
- Mandate manufacturers, importers, and distributors to take full responsibility for their products across the entire lifecycle, including end-of-life management, through Extended Producer Responsibility (EPR) schemes.
- Strengthen recycling systems by regulating packaging materials to eliminate harmful chemicals, such as PFAS, that compromise human health and recyclability.
- Improve transparency and accountability in material recovery processes, ensuring clear reporting on recycling outcomes to build public trust and participation.

Australia's shift to a circular economy requires robust infrastructure, incentives, and collaboration across sectors. By embedding refuse, reduce, reuse, repair, and other high-value circular practices into daily operations, Australia can reduce waste, support local economies, and ensure a sustainable future.

2. Information request 1: Circular economy success stories

2.1. Case Study: GoodSercle

GoodSercle specialises in collecting and refurbishing whitegoods, significantly reducing landfill waste while making a meaningful impact on individuals and communities. Their initiative demonstrates the potential for circular economy practices to deliver both environmental and social benefits.

- Good Sercle retrieves unwanted or end-of-use whitegoods from households.
- Skilled technicians refurbish these appliances to a high standard, ensuring compliance with quality and safety requirements.
- Restored white goods are made available to individuals and families at an affordable cost.
- Over 4,800 families have gained access to affordable whitegoods, enhancing their quality of life and well-being.
- Over 45,000 tonnes of CO2 emissions have been abated through reduced energy consumption and waste diversion.
- More than 250 metric tonnes of e-waste have been diverted from landfill, with products reused instead.

GoodSercle participates in the Victorian Energy Upgrade (VEU) Program to lower greenhouse gas emissions and collaborates with Sustainability Victoria to upgrade high-energy-efficient fridges and freezers for small businesses.

This case study highlights how circular economy practices, such as refurbishment and reuse, not only mitigate environmental impacts but also create equitable opportunities for community development. GoodSercle's achievements exemplify the broader benefits of integrating sustainability into business and community practices.

2.2. Case study: Birkenstock shoes - design for repair

Birkenstock's are designed to be repaired. Their workshop keeps an average 3713 pairs out of landfill each year. By maintaining and repairing your Birkenstocks, you can greatly extend the life of your shoes.

Almost all Birkenstock styles can be repaired to extend the life of the shoe

- Resoled, if the toe piece comes unstuck it can be reglued, repaired or replaced.
- If the cork footbed cracks or crumbles it can be patched and mended.
- Buckles which are corroded or are broken, can be replaced.
- They can even be repaired if a puppy chews them.
- Worn shoes can be kept in use by retaining the original upper shoe with straps and buckle and replacing the cork footbed with liner and sole.

Birkenstock have their own workshop in Clifton Hill, Victoria. But also have authorised repairers throughout Australia which makes repair more accessible. This can greatly

extend the life of shoes, which is kinder for both the environment and your wallet.

2.3. Case Study: Shoe Repair

While countless shoes end up as waste, many are repairable, extending their lifespan significantly. For example, a pair of boots I have owned for nearly 20 years has been re-soled multiple times, with the zip and stitching replaced as needed. Similarly, numerous other shoes have been repaired over time. These efforts, often carried out by small businesses, exemplify waste reduction by keeping materials in circulation and out of landfills. Yet, such contributions remain underrepresented in metrics assessing the circular economy, despite their undeniable impact.

2.4. Case Study: Patagonia

Patagonia exemplifies sustainability with a commitment to durable, repairable products, aiming to reduce waste and promote responsible consumption. As they say, "*One of the most responsible things we can do as a company is to make high-quality stuff that lasts for years and can be repaired, so you don't have to buy more of it*."

- Patagonia designs garments to last and provides resources like tutorials on their website for DIY repairs on items ranging from Patagonia gear to everyday household objects such as vacuum cleaners and bicycles.
- The Worn Wear Repair Hub at Patagonia's Sydney store offers free repairs for Patagonia products and affordable services for other brands. Customers can also drop off or post items to any Patagonia store for repairs.
- Patagonia is transitioning to preferred materials, including organic and regenerative organic cotton, and recycled fibres like polyester and nylon, reducing raw material dependence and carbon emissions.
- In 2023, their Reno, Nevada repair centre serviced 63,000 garments, with countless additional DIY repairs inspired by their resources.

This commitment to repair and sustainability highlights how businesses can lead by example in fostering a circular economy.

2.5. Case Study: Country Road – Circularity in Fashion

Country Road, through the work of Miriam Borcherdt and her PhD project "RE-kin-DLE," explores the potential of circular design by remanufacturing unsold garments to drive sustainability in fashion. This approach demonstrates how high-quality design can align with circular economy principles.

- Remanufacturing is not feasible for all garments, as low-quality items do not justify redesign costs.
- Country Road products, designed for longevity, make remanufacturing a viable strategy.

- This process repurposes unsold past-season items, reducing reliance on raw materials—a rare but impactful practice in the industry.
- Recycling garments remains challenging due to mixed materials, trims, zips, buttons and labels, highlighting the need for alternative approaches.

Circular systems emphasise lifecycle responsibility. Through remanufacturing, garments can re-enter the design and retail phases, supporting a sustainable and circular future for fashion.

2.6. Case Study : Recover and High-Value Textile Recycling

The textile industry is resource-intensive, requiring significant water, land, and energy, particularly for producing virgin cotton. For example, one kilogram of virgin cotton consumes over 13,000 litres of water. In contrast, recovered cotton requires no additional water, farming, or dyeing, and produces no extra greenhouse gases. Transitioning to recycled fibres is a critical step in reducing environmental impact and advancing circular economy practises

Recover has pioneered textile recycling for over 70 years, focusing initially on post-industrial waste. Leveraging decades of R&D, they now produce upcycled yarns comparable to virgin fibres in quality, cost, and reduced environmental footprint. Collaborating with Circle Economy, Recover explores scalable, closed-loop systems to address various textile waste streams, including post-consumer materials. Key initiatives include projects with Reblend, Reshare, and G-Star, aiming to establish replicable models for high-value recycling

Recover's advancements highlight the feasibility of closed-loop textile recycling, reducing dependency on virgin resources and minimising environmental degradation. The company aims to further extend its expertise to pre- and post-consumer waste, enabling a continuous cycle of fibre reuse. These efforts align with broader goals of fostering systemic change in the industry and achieving long-term sustainability

For more details, visit the full case study at Circle Economy: Closing the Loop with Recover

2.7. Case Study : The WUP Shop - Wonderful Upcycling Program (WUP)

The WUP Shop thrives on the dedication of its passionate volunteers, who are the driving force behind its success. They transform discarded fabrics into unique accessories and household items, showcasing both creativity and resourcefulness.

This initiative boldly challenges the norms of the fashion industry, proving that sustainable practices can yield stylish, environmentally responsible creations. By fostering community connections, the WUP Shop exemplifies how upcycling can inspire a shift towards a more inclusive and sustainable fashion future.

2.8. **Case Study: The Clothing Exchange**

The Clothing Exchange, founded by Kate Luckins in Melbourne in 2004, has evolved into a national initiative promoting sustainable fashion through garment swapping. They host regular events across Australia.

- Reduces the environmental and social impacts of the fashion industry by encouraging sustainable wardrobe updates through swapping instead of buying new.
- Provides a thrifty, eco-friendly alternative to traditional shopping, saving money and the planet.
- Hosts public events, as well as corporate swap and charity fundraisers.

Zero Waste Victoria partnered with The Clothing Exchange in 2023 and 2024 for free community activities at the Zero Waste Festival. The Clothing Exchange also provides event services with varying fee structures.

2.9. **Case Study : Community clothes swaps**

Zero Waste Victoria hosted a clothes swap that was featured on the *War on Waste*. This event highlighted the environmental impact of excessive consumption by showcasing an accessible way to participate in the circular clothing economy. Attendees could refresh their wardrobes by exchanging items they no longer needed. Over 150 people participated, with some swapping brand-new items, still bearing tags (approximately 10% of the clothes). Attendees were limited to bringing up to five items in good condition to ensure managing the excess was feasible.

The Central Ringwood Community Centre further contributes to reducing textile waste by organising a monthly sustainability day that features a clothes swap. This initiative keeps clothes in circulation by encouraging participants to bring unlimited items in good, wearable condition. By fostering a culture of reuse, the event helps extend the lifespan of garments, reduces landfill contributions, and highlights actions in combating textile waste.

These volunteer-driven initiatives empower communities to keep textiles in circulation, reducing landfill waste and promoting sustainable consumption habits. They underscore the effectiveness of local actions in addressing global sustainability challenges through practical, community-oriented solutions.

2.10. **Case Study : Moon Rabbit cafe**

Moon Rabbit is a cafe and training site in Preston. They’re moving toward zero waste and training young people for the future.

Some of the measures they take to reduce waste include:

- No disposable takeaway cups. BYO mug, borrow a pre-loved mug or glass jar from their collection, or purchase a Moon Rabbit reusable cup.
- Don't offer plastic takeaway containers. Encourage customers to BYO containers
- Serve food and drinks in ceramic plates and cups with proper cutlery to customers who dine in at the café.
- Customers can refill their own water bottles at Moon Rabbit for free.
- Use a Food Waste Dehydrator to convert unavoidable food waste into nutrient-rich organic fertiliser. In turn, this fertiliser goes to our garden beds and the local community for garden plots & community gardens.
- Coffee is delivered in large, refillable tins by Padre Coffee, which are returned for reuse.
- Leftover drinking water is used to water plants.
- Catering services can be delivered 100% waste free.
- They take reusable containers to Preston Market to purchase cheese and meat.
- Fruit and veg are delivered in cardboard boxes, which are returned to suppliers, and they're working to eliminate any produce arriving in plastic packaging.
- Wash and air-dry laundry – tea towels, cleaning cloths and bread bags – on site to conserve energy.

Moon Rabbit is an example of an environmentally sustainable social enterprise café. Leading by example Moon Rabbit instils sustainability practices whilst serving top-quality food and beverages

2.11. Case Study: Green My Plate

Green My Plate is a sustainable service committed to eliminating single-use food packaging at events, effectively minimising waste. They provide reusable crockery, cups, mugs, and cutlery to food and beverage vendors, managing the washing and recirculation process.

For smaller events, Green My Plate also offers the option to hire reusable items, supporting the principles of reuse and reducing reliance on single-use items that require recycling.

This innovative business highlights the potential for reuse-focused solutions to foster sustainable practices and reduce environmental impact, genuinely supporting a circular economy.

2.12. Case Study: Schulz Organic Dairy

For over five years, Schulz Organic Dairy has been supplying milk in refillable glass bottles across retail outlets. In 2018, they launched a successful Pozible crowdfunding campaign to upgrade equipment for glass bottle production.

Nearly 1,200 supporters from around Australia contributed to the campaign, including myself. This community backing enabled Schulz to produce and deliver 5,000 glass bottles of milk per week—surpassing their initial target of 3,000 per week. This is an example of a community's strong desire to transition to a more circular economy.

Since launching in Victorian retailers in 2019, Schulz has prevented 7.6 tonnes of plastic from entering landfill in the first year alone. To date, they have saved over 44 tonnes of plastic from waste.

Schulz has experimented with various lid materials as part of their ongoing research, including peel-back, aluminium, and even steel lids. For now, recyclable plastic lids remain the best option, though there are challenges: many local councils do not accept these lids in household recycling. Schulz hopes either to develop a recyclable alternative or to see more councils offer recycling options.

This glass bottle model dramatically reduces the use of virgin materials by favouring reuse over single-use plastic. Interestingly, while this model feels innovative today, it’s a return to an older practice from a time when milk was routinely delivered in refillable glass. This approach exemplifies how we can learn from the past to establish more sustainable systems.

With the recent installation of new bottling machinery, Schulz has boosted production efficiency, enabling them to expand glass bottle distribution. They are also continuously exploring options to enhance the durability of glass bottles and innovate new closure solutions.

2.13. Case Study : FTD Circular – Redefining the Built Environment with Circular Economy Principles

FTD Circular, developed by Forward Thinking Design (FTD) in collaboration with Ilimaf and Hardcat, is a groundbreaking initiative enabling organisations to integrate circular economy principles into the built environment. Focusing initially on fitout and de-fit processes, FTD Circular expands its impact to all aspects of construction and demolition, transforming them into material asset banks.

This innovation includes comprehensive training, consultancy services, digital tools and a supplier directory. These tools facilitate tracking, tracing, and maintaining materials, ensuring maximum resource efficiency and environmental sustainability.

Australia's construction and demolition sector contributes approximately 45% of the country’s annual waste. Traditional methods prioritise disposal over reuse or repurposing, leading to significant environmental degradation. FTD Circular addresses these challenges by redesigning waste-generating processes and promoting circularity to minimise waste and embodied carbon.

The project’s methodology revolves around:

- Empowering stakeholders with the expertise to adopt circular practices.
- Providing visibility across the lifecycle of materials for better decision-making and ESG (environmental, social, and governance) reporting.
- Maximising the value of materials through reuse, recycling, and upcycling initiatives.

FTD Circular exemplifies how a data-driven, circular economy approach can revolutionise the built environment. By fostering collaboration and leveraging digital tools, the project not only reduces waste but also enhances stakeholder value and ESG performance.

For more information, visit FTD Circular's website

2.14. Case Study : Repair Cafés

Repair Cafés are volunteer-run initiatives where community members bring broken items to be repaired, often learning how to fix them themselves. This movement has gained momentum in Australia as part of a broader effort to reduce waste, save resources, and foster community connections.

- Waste Reduction: Divert repairable items from landfills.
- Community Engagement: Provide a space for learning and collaboration.
- Skill Development: Empower individuals to gain repair skills and confidence.
- Sustainability: Reduce consumption and environmental impact by extending the lifespan of goods.

Repair Cafés usually operate monthly in various community spaces. Volunteers with diverse repair expertise handle items such as clothing, small appliances, furniture, and bicycles. Attendees actively participate in the repair process, ensuring it is an educational experience. The service is free, supported by donations, and often complements other sustainability initiatives, like tool libraries and workshops.

At the Zero Waste Festival 2024, a one day event, there were 72 items brought in, 65 of them were repaired, saving approximately 58 kg from heading to landfill.

The Challenges repair cafes face are

- Volunteer Recruitment: Sustaining a pool of skilled volunteers can be challenging.
- Space and Funding: Finding venues and financial support for tools and materials requires ongoing effort.
- Awareness: Expanding the visibility of repair cafés is essential to growing their impact.

Repair Cafés exemplify grassroots efforts, collectively preventing thousands of kilograms of waste from entering landfills annually, by repairing instead of disposing and replacing.

3. Information request 2: Priority opportunities to progress the circular economy

3.1. Packaging plays a critical role in the consumer experience, ensuring products are protected, convenient, and visually appealing. However, excessive and poorly designed packaging creates significant environmental challenges. Much of the packaging produced today is neither reusable nor recyclable, or it is excessive, contributing to resource waste and pollution.

As highlighted in the *2024 Reform of Packaging Regulation Consultation Paper*, packaging is often designed with a focus on aesthetics, durability, and product preservation, with limited consideration for its end-of-life impacts. This approach prioritises short-term convenience over long-term sustainability, leaving consumers and waste management systems to address the environmental burden.

3.1.1. Reusable packaging

Reuse and refill systems must take precedence over recycling to transition to a circular economy, following the core principles of avoidance, minimisation, and reuse. While recycling remains a vital component of waste management, the focus should shift towards reuse where possible, as this provides a more sustainable long-term solution. By prioritising reuse, we reduce reliance on new resources, cut down on waste, and increase material lifespan—achieving true circularity.

If the packaging industry continues to prioritise recycling without expanding reuse and refill systems, we risk undermining public trust and the efficacy of circular economy initiatives. Relying too heavily on recycling can create a false sense of sustainability, when it is only one part of a broader solution.

Moreover, while large manufacturers and retailers often point to challenges in implementing reuse and reduction practices, smaller businesses are proving that localised, low-waste systems are not only feasible but also economically viable. These businesses are leading the way, demonstrating that sustainable practices can be both environmentally and financially effective. By investing in reuse infrastructure and policies that support these efforts, Australia can unlock the full potential of a circular economy.

3.1.1.1. Case Study

Case Study [The Source Bulk Foods]() has over 50 stores across Australia. They pride themselves in the packaging waste which their customers have helped save from landfill by buying from their bulk dispensers. They encourage customers to bring their

own refillable bags and bottles when shopping in store.

3.1.1.2. Case Study The Full Pantry is a family business, established in 2004. Their mission is simple – to provide affordable, healthy bulk whole food to families and to care for our beautiful blue planet.

3.1.1.3. Apples & Sage is a supermarket with 2 stores in Melbourne which in addition to pre-packaged goods, has dispenser options which enables customers to refill their containers with selected items.

3.1.1.4. The Hub Bulk & Bare Food Store - “all food and liquid is sold free of packaging. We provide paper bags for those who need them and we can sell you a glass bottle or jar if you need one, but we encourage you to bring your own containers (BYOC).”

These are examples where consumers can take packaging back to the retail store to refill in preference to single-use package options.

3.1.2. Beverages

Reusable glass bottles were once the standard for soft drink packaging, and their effectiveness and sustainability remain unmatched, even after decades of reliance on single-use plastics. As we face increasing environmental challenges, it's clear that returning to reusable systems could significantly reduce waste.

An opportunity lies in integrating refillable glass bottles into the existing Container Deposit Scheme (CDS). Rather than simply recycling bottles, the scheme could evolve to facilitate their return to manufacturers for cleaning and refill. This model not only extends the lifecycle of packaging but also aligns with circular economy principles by reducing the demand for raw materials and the energy-intensive recycling process.

3.1.3. Wine industry

Some boutique wine producers and retailers are pioneering sustainability initiatives by encouraging consumers to return their containers, usually to the original point of sale. This practice not only reduces waste but also fosters a closer connection between consumers and producers. By reusing wine bottles, these businesses can minimise the environmental impact associated with manufacturing, recycling or transporting glass.

Expanding this model across the broader wine industry (or other industries) could significantly contribute to the circular economy. With the right infrastructure, such as bottle collection networks or deposit schemes similar to those used for other beverages, the reuse of wine bottles could

become a standard practice.

3.1.3.1. Case Study Rewine - "Customers can buy our wines, then bring the bottle back to be refilled in store"

3.1.3.2. Case Study Glou - "Work directly with sustainability-focused winemakers to source wines from across Australia straight from barrel to you in refillable bottles or lightweight KeyKegs. This means not only is waste reduced but transport weight is near-halved, reducing emissions"

3.1.3.3. Case Study Oak and Young - "Our main focus is our refillable bottle program with 20 rotating wines on tap." Bring me back. Fill me up, Take me home. That's our motto.

3.1.4. Cleaning and Personal Care Products

Cleaning products are perfectly suited for in-store refill systems, where customers can bring their own containers to restock essential items like dishwashing liquid, laundry detergent, and surface cleaners. This model eliminates the need for single-use plastic packaging, reducing waste and environmental impact. By eliminating the need for new packaging, businesses can also save on production and logistics costs, which may benefit both consumers and manufacturers.

Personal care items such as shampoo, conditioner, liquid soap, and deodorant are also ideal candidates for refill systems. Many businesses are introducing innovative models, such as closed-loop or subscription services, where customers receive products in reusable packaging that they return for refill. Expanding these practices on a larger scale could revolutionise consumer habits, embedding sustainability and circularity into daily routines and reducing reliance on disposable packaging.

3.1.4.1. Case Study Dr Planet - supplies Castile Soap. They provide an option for refills by the customer in select grocery stores. They also reuse the bulk wholesale packaging.

3.1.4.2. Case Study Roving Refills - Eco-friendly detergent refills with BYO containers. Helping to save the planet one refill at a time.

3.1.4.3. Case Study The Dirt Company - has a motto " *Wash like the world depends on it*." They provide revolutionary, refillable laundry essentials eliminating single-use plastic.

3.1.5. **Recyclable packaging**

Packaging design is often driven by convenience, aesthetics, or marketing appeal, with little consideration for end-of-life management. This "design for disposal" approach relies heavily on the waste industry to manage the aftermath, leading to the depletion of virgin resources and contributing to environmental degradation. Many types of packaging are problematic, either because they are not recyclable in current systems or lack a viable market for their material.

To support circular economy goals, packaging should be intentionally designed with recyclability in mind. If a package cannot be recycled back into packaging within the existing infrastructure, and if no feasible market or practical use exists for its material, it must be redesigned. This ensures not only compatibility with current systems but also promotes genuine circularity. Such redesigns prioritise sustainable materials, facilitate the creation of closed-loop systems, and reduce dependence on virgin resources.

3.1.6. **Minimising packaging**

Many products are excessively packaged for marketing purposes, often to create an illusion of added value. For instance, items may be encased in layers of plastic, cardboard, or filler materials to appear larger or more luxurious, contributing to unnecessary waste and resource use.

- Cosmetics and personal care where small items like lipsticks or creams are often encased in multiple layers of plastic or cardboard.
- Electronics like headphones, chargers, or USB drives are often packaged in oversized plastic clamshells or boxes with excessive padding.
- Online retail where small items are frequently shipped in disproportionately large boxes filled with bubble wrap, paper, or air pillows.
- Garments are often wrapped in plastic bags and then placed in additional packaging, even for single-item purchases.
- Perfumes and jewellery often come with elaborate boxes, padding, and even secondary outer packaging to enhance presentation.
- Gourmet food and gift products: Gift baskets or luxury food items, particularly and Christmas and Easter tend to use excessive containers and packaging.

  Reducing overpackaging would improve recyclability and reduce reliance on virgin materials with less wasteful packaging.

3.2. Repair opportunities

Repair is one of the most powerful yet underutilised opportunities within the circular economy. By prioritising repair, we can extend the lifespan of products, conserve valuable resources, and dramatically reduce waste that would otherwise end up in landfills. This not only supports sustainability but also offers significant economic benefits by creating jobs, fostering innovation, and empowering local communities. Repair systems can provide a lasting solution to the throwaway culture, promoting a shift towards a circular economy where products are designed for longevity, repairability, and reuse. Embracing repair as a standard practice offers a tangible way to reduce our collective environmental impact while creating new opportunities for both businesses and consumers.

3.2.1. Encouraging Local Repair Businesses

Small repair businesses play a crucial role in keeping items in use, whether through repairing shoes, electronics, clothing, or household items. Supporting these businesses with grants, subsidies, or reduced operational costs can enhance their ability to thrive and serve communities.

3.2.2. Repair Education, Vocational Training, and Job Creation

Fostering a repair economy not only contributes to sustainability but also creates opportunities for education and job growth. Repair programs can be integrated into vocational training, offering individuals the skills needed to maintain, refurbish, and extend the life of products. These programs can also provide a pathway to skilled jobs in sectors like electronics, textiles, and appliances. By incorporating repair into educational curriculums, we can equip the workforce with vital skills that support the transition to a circular economy. Furthermore, a strong focus on repair will boost local economies by creating sustainable jobs in repair industries and small businesses. Offering incentives and support for repair-based enterprises can spark innovation and entrepreneurship, contributing to both environmental and economic resilience.

3.2.3. Skill Development and Repair Culture

Investing in community workshops and education programs to teach repair skills can empower individuals to fix their belongings, fostering a culture of reuse. Repair cafés and similar initiatives are excellent models for building repair-friendly communities.

3.2.4. Manufacturer Responsibility

Legislation mandating manufacturers to design products for repairability, provide spare parts, and offer repair documentation can remove significant barriers to repair. This is in line with global "right-to-repair" movements. Which was considered by the Productivity Commission's *Right to Repair Inquiry* in 2021.

3.2.5. Incentives for Consumers

Rebates for repairing items instead of replacing them can incentivise sustainable consumer behaviour. For example, programs could reward customers who choose to repair their electronics or appliances.

3.2.6. Metrics and Recognition

Measuring the environmental and economic impact of repair activities and incorporating these metrics into broader circular economy models will highlight the value of repair. Recognition programs for repair-friendly businesses and initiatives can further promote adoption.

Repair is a practical and impactful approach that aligns with the principles of reducing, reusing, and remanufacturing before resorting to recycling or disposal, making it a critical pillar of the circular economy.

3.3. Textiles and Fashion

The fashion industry, often identified as one of the most resource-intensive sectors, holds immense potential for advancing the circular economy. By focusing on sustainable design, responsible production, and mindful consumption, the fashion industry can reduce waste, lower carbon emissions, and shift towards a model that prioritises repair, reuse, and recycling. The transition to circular fashion involves embracing strategies like upcycling, recycling materials, and fostering a culture of slow fashion, which can create economic, environmental, and social benefits. While challenges such as overproduction, fast fashion, and waste management persist, these obstacles present unique opportunities to innovate and transform the industry for a more sustainable future.

3.3.1. Design for Longevity and Circularity

Promoting sustainable fashion design that emphasises durability, repairability, and recyclability is essential. Policies encouraging the use of materials that can be recycled into new textiles or other products can minimise waste at the end of a garment's life cycle.

3.3.2. Incentivising Circular Business Models

Supporting business models like clothing rental, subscription services, and take-back schemes can reduce demand for new garments while offering consumers greater flexibility. Government incentives and industry collaboration can help scale these models.

3.3.3. Education and Awareness Campaigns

Raising awareness about the environmental impact of fast fashion and the benefits of adopting circular economy principles can drive consumer behaviour change. Campaigns should focus on reducing overconsumption and valuing quality over quantity. This could also be emphasised in school curriculums.

3.3.4. **Textile Recycling Infrastructure**
Developing robust systems for textile collection and recycling is critical. Many textiles end up in landfill because recycling infrastructure is inadequate or non-existent. Investment in advanced recycling technologies, such as fibre-to-fibre recycling, can help close the loop.

3.3.5. **Repair, Reuse, and Resale Initiatives**
Encouraging repair and reuse of clothing through repair cafés, workshops, and skill-sharing initiatives can keep textiles in circulation longer. Expanding resale markets, such as thrift stores and online platforms, promotes reuse while creating economic opportunities.

3.3.6. **Producer Responsibility and Policy Measures**
Implementing extended producer responsibility (EPR) schemes for the fashion industry can ensure that manufacturers are accountable for the full lifecycle of their products. Policies that mandate transparent supply chains, sustainable material use, and waste reduction targets are essential for systemic change.

4. **Information request 3: Hurdles and Barriers to a Circular Economy**
While the potential of a circular economy is vast, several significant hurdles stand in the way of its widespread adoption. These challenges include economic, logistical, and regulatory barriers, as well as a lack of infrastructure and consumer behaviours. Additionally, issues like inconsistent regulations, lack of clear incentives, and insufficient investment in innovation further impede progress. Overcoming these barriers requires collaborative efforts from governments, businesses, and communities to create systems and policies that support circular practices at every stage of product life cycles.

4.1. Packaging Reuse

4.1.1. Reusable packaging systems often require higher initial investments in infrastructure (e.g., collection and cleaning facilities) and logistics compared to single-use packaging.

4.1.2. Businesses may perceive reusable systems as risky, fearing consumer pushback due to inconvenience.

4.1.3. There is limited standardisation in reusable packaging, making cross-industry adoption difficult.

4.1.4. Many businesses lack access to information on the long-term economic and environmental benefits of reusable packaging systems.

4.1.5. Long supply chains can make it difficult to implement scalable reuse systems.

4.1.6. Consumers are often unaware of existing reuse schemes, leading to low participation rates.

4.2. Repair

- **4.2.1.** A culture of disposability and planned obsolescence undermines repair as a practical choice.
- **4.2.2.** Many products lack repair-friendly design, with restrictive intellectual property laws limiting access to repair manuals and spare parts.
- **4.2.3.** Non-disassemblable materials, like certain plastics, often lead to damage during repair attempts, rendering items unusable.
- **4.2.4.** Premature obsolescence drives unnecessary consumption, amplifying environmental harm
- **4.2.5.** Limited training and professional repair skills reduce the availability of effective repair services.
- **4.2.6.** Consumers often lack the knowledge or confidence to carry out simple repairs themselves
- **4.2.7.** Weak right-to-repair laws and limited access to affordable spare parts further impede repair efforts by making it not economically viable.
- **4.2.8.** Manufacturers seldom ensure availability of spare parts, which should be mandatory for repairable goods, especially electronics.
- **4.2.9.** Collaboration between manufacturers and third-party repair services is rare, leaving consumers with fragmented options.
- **4.2.10.** Current standards do not require products to be designed for their full lifecycle, including repair, upgrades, and recycling.

4.3. Fashion

- **4.3.1.** Fast fashion trends encourage consumers to prioritise quantity over quality, making them less likely to engage in repair, reuse, or recycling.
- **4.3.2.** Businesses may fear that shifting to sustainable practices could alienate their core customer base or reduce profitability.
- **4.3.3.** Circular fashion practices, such as using sustainable materials or investing in take-back schemes, may involve higher upfront costs for businesses.
- **4.3.4.** The price of secondhand or repaired items may not reflect the perception of value among consumers.
- **4.3.5.** A lack of regulations mandating extended producer responsibility (EPR) for textiles means businesses face no strong incentive to adopt circular practices.
- **4.3.6.** Limited education on sustainable alternatives and circular business models hinders broader adoption.
- **4.3.7.** Coordination across the fashion supply chain—from design to disposal—is weak, making circular practices difficult to implement.

Addressing these barriers requires a multi-stakeholder approach, including policy interventions, financial incentives, consumer education, and stronger collaborations across industries and communities.

5. Governments' role in the circular economy

Despite the significant potential for advancing circular economy practices, several barriers remain that hinder progress. These include inconsistent regulations that fail to promote the reuse of packaging across industries, as well as the lack of extended producer responsibility (EPR) schemes, particularly in sectors such as packaging, textiles, and manufacturing. Additionally, existing economic structures often favour linear models, prioritising cheap, single-use products over repairable, durable alternatives. To overcome these challenges, governments have a critical role in creating an enabling environment for the circular economy to thrive. Not only through robust regulations and financial support, but also by fostering collaboration and knowledge-sharing across sectors and communities.

5.1. Review and address regulatory barriers that may hinder the implementation of reuse systems with consumers reusing their containers to provide businesses with greater flexibility to adopt sustainable practices. Eg. South Australia Civil Liability (BYO Containers) Amendment Bill 2022 - which gives customers the option to bring their own reusable containers without public liability risks to the business. This legislation is in place to support a greater uptake of reusables Reference to Bringing your own container no longer risky for businesses

5.2. Packaging should be designed with recyclability and sustainability in mind. It is essential to eliminate harmful chemicals, particularly those of concern, like PFAS, which can impair recyclability and pose risks to human health and the environment. Any materials or additives that hinder the recycling process or contribute to environmental harm should be phased out of production entirely. Manufacturers must prioritise materials that are recyclable, reusable, or biodegradable while also ensuring they are safe for both the environment and human health.

In addition to recyclability, reducing excessive packaging is critical. Many products are unnecessarily over-packaged, which increases waste and resource use. Minimising packaging to the essential amount needed for product safety and integrity should become a standard industry practice. This can include promoting the use of reusable and refillable systems to further reduce waste generation.

These priorities are currently being addressed in the Reform of Packaging Regulation Consultation led by the DCCEEW (Department of Climate Change, Energy, the Environment and Water). However, the importance of driving these changes through policy and industry collaboration cannot be understated.

5.3. To enable repair and extend the life of products, the government should mandate design standards that address planned obsolescence. Products that cannot be reasonably repaired, such as those that are difficult to disassemble or that require extensive effort to replace components like batteries, should be prohibited

from manufacture and distribution within Australia. These design flaws, such as non-removable batteries or sealed units, are intentional barriers to repair and contribute to built-in obsolescence, limiting the product's lifespan and forcing consumers to replace items unnecessarily. By mandating that products be designed for repairability, the government can promote sustainability and reduce waste, encouraging a circular economy.

5.4. A disposal cost should be embedded at the point of sale, particularly for products that lack accessible or feasible repair options. Every manufactured product incurs an environmental cost, which multiplies if the item cannot be repaired or recycled. By introducing a disposal fee, manufacturers and consumers alike would be motivated to prioritise sustainable design principles that enhance repairability and extend product lifespans. This approach not only encourages responsible consumption but also fosters a systemic shift towards sustainable production lifecycles. Moreover, mandating design considerations that encompass the entire production lifecycle, from creation to disposal, should become a regulatory standard.

5.5. By regulating the production and use of single-use products, Australia can mitigate their environmental footprint, discourage overconsumption, and drive innovation towards more sustainable and circular alternatives.

5.5.1. **Case Study: Single-use Disposable Products**
Single-use disposable products, such as glow sticks, exemplify items designed for brief, one-time use before being discarded. Made from materials like plastics, glass, and filled with questionable chemicals, glow sticks are not recyclable. After use, these products either end up in landfills or, in the worst-case scenario, polluting ecosystems. Despite the environmental harm caused by these products, there are no current restrictions or approvals regulating their importation, manufacture, or distribution in Australia.

Many products like glow sticks cater to short-lived desires, and while they provide temporary satisfaction, their environmental consequences endure long after they are used. These items can be considered frivolous luxury items, and more sustainable alternatives should be prioritised.

5.5.2. **Regulatory changes are essential** to manage and ultimately avoid such products. Government should consider implementing stronger regulations on single-use or limited-use items, such as introducing restrictions on their import, manufacture, and sale. This could include mandatory eco-design standards that reduce waste generation and encourage manufacturers to provide more sustainable alternatives. In addition, implementing clearer guidelines around product labelling could empower consumers to make informed choices and avoid products with unnecessary environmental impacts.

5.6. There should be standards to require Australian companies to manufacture, import or sell only products that are designed with the whole product life-cycle in mind, taking into consideration upgrade, repair and sustainable recycling.

5.7. Subsidies or financial incentives for businesses adopting circular practices (e.g., those using recyclable or reusable packaging, or offering repair services) would encourage uptake and ease financial burdens on small businesses.

5.8. Education curriculums that focus on circular economy principles should be integrated into vocational training, particularly in sectors like repair, fashion, and packaging design. Providing businesses and individuals with the knowledge and skills necessary for repair work (e.g., technical and practical skills for fixing textiles, electronics, or packaging) is critical. With a skills gap in areas like repair and refurbishment, targeted training programs are needed to support these industries.

5.9. Governments can facilitate partnerships or collaborations between businesses, and/or organisations to advance circular initiatives, particularly those that address packaging reuse, textile waste, and repair.