



CircularEconomyAsia

ABN: 99 234 005 090

28 October 2024

Opportunities in the Circular Economy Call for Submissions

Problem

The circular economy is not a waste management system nor a solution to waste management.

It is a materials management system. The collection and reprocessing of materials is significantly different from a recycling system that is a subset of waste management.

A secondary raw materials industry will struggle to maximise the value of materials under a waste management system.

Problem

One of the biggest barriers to a secondary raw materials industry is the downcycling of materials. Often the main reason is contamination. For example: The metals industry claims some ferrous and non-ferrous metals are 'infinitely' recyclable and while this claim may be true, what is more important is maintaining the integrity of reprocessed steel and other metals.

"The main problem with secondary steel production is that the scrap being recycled may be contaminated with other elements, including copper. The concentration of copper adds up as you add more scrap metals to be recycled, and when it goes above 0.1 weight percentage (wt%) in the final steel product, it will be detrimental to the properties of steel." (Source: '[This new way to recycle steel could reduce the industry's carbon footprint](#)' by Safa Jinje, June 11, 2024)

Information Request 1

There are a number of circular businesses emerging on the Australian landscape.

For example, one company, Packamama, packages wine in flat, recycled PET. The benefits of reduced logistic costs are obvious. However, as most plastics contain chemical additives to

provide them with certain properties, these chemical additives are not removed during mechanical recycling. There is a significant amount of controversy around plastics and rPET. There are two options:

1. Federal government regulation on harmful chemicals in all types of materials, including plastics.
2. The preferred option is for increased transparency on the composition of materials including the chemicals used to give materials the properties that provide their functionality.

The composition of materials and products is an emerging trend, partly driven by the EU developing regulations to implement Digital Product Passports and the growing consensus that governments and consumers must know what is the the products they buy and use.

Businesses adopt circular economy principles because it is more profitable for them to do so. Or they see a gap in the market that can be filled by a circular business. Basically, there is no difference between a circular economy business and a linear business. What should be different, and what is still in its infancy is that most circular businesses do not yet fully understand how they are positioned within a circular system.

Example: Scrap Metal Collection and Recycling - Sims Metal

Recently I visited Sims Metal in Kwinana, Western Australia to understand their operations better. My main area of focus is the development of a secondary raw materials industry by reducing contamination and improving the quality of metals produced from scrap. Sims Metal was very gracious in answering my many questions. The GM advised me they have a metal analyser to determine the composition of metals and alloys accurately to separate them accordingly.

Sims Metal is a large multinational scrap metal company and can afford this ' type of technology. Most smaller scrap metal companies cannot.

A few weeks later I attended the WA Mining Expo and, coincidentally spoke to a company that manufactures metal items for the mining industry. During my conversation with the owner of the SME, we ascertained his company has, in total, approximately, 15 different types of grades and metals from two metals - steel and aluminium.

Their current practice is to deposit all the scrap into one skip for paid collection by Sims, approximately every three months. I asked about the feasibility of 15 smaller bins to separate the metals into their grades and types. The owner answered 'Difficult but not impossible'.

In a standard response, the owner went on the defensive, stating his company already does their bit for the environment, which I was quick to dismiss. The incentive is not to 'save the environment', but rather an economic one. Sims buys and sells all different grades and types of metals at varying prices. The SME may be leaving money on the table. Currently, Sims buys mixed scrap and separates at their site to maximise their profits. However, how effective their separation system is unknown, thus adding to the risk of continued contamination.

There were three hurdles to cover:

1. The space and collection system to accommodate 15 smaller bins.
2. Staff training as suggested by the owner of the SME. Another company even suggested I may be required to discuss this additional task with union representatives.
3. Sims Metal modifying operational procedures to accommodate customers separating-at-source. The 'we have always done it this way' can often be the hardest barrier to cross.

Information Request 2

Supply Chain Engagement - Australia will never achieve its circular ambitions unless it engages its supply chain. This is an immensely complex task but certainly not impossible. Australia's Balance of Payments helps us understand our economic model more realistically and our starting point. The next step is to drill deep into the data available and pinpoint what data gaps exist to ensure our human and financial resources are wisely spent.

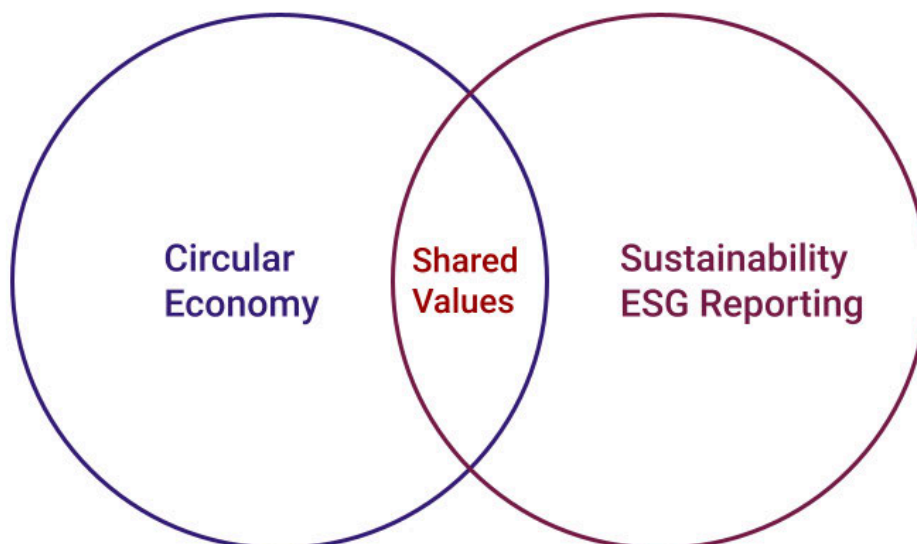
It also requires financial, business and economic modelling to ascertain how best to achieve the circular outcomes Australia desires. Government may provide the policy and regulatory framework but, ultimately, it is Australian businesses and consumers that will be left to embed circularity into their operations and daily lives.

Current Weaknesses - Many circular initiatives will be done by SMEs and here is where we must be careful not to fall into an obvious but avoidable trap. Recently, I attended the Victorian Waste Expo and Conference, and here is my analysis:

1. There were quite a number of businesses offering their waste management and recycling products. Unfortunately, not one mentioned how their business contributes to a secondary raw materials industry. Yes, there were some businesses offering solutions for the reprocessing of plastics but, in my estimation, buyers require more information, such as how it may fit into the Global Plastics Treaty, job creation, circular outcomes, emissions reductions and sustainable impact.

2. In contrast, the conference was dominated by sessions dedicated to the circular economy.
 - a. During one session, an audience member asked Suzanne Toumbourou, CEO Australian Council of Recycling, what happens to all the items collected from the successful Deposit Return Schemes? Suzanne spoke but did not answer the question.
 - b. One panellist proudly showed off his backpack made from police uniforms that have been repurposed into new items. This is all well and good except the design of the backpack makes it economically impossible to dismantle it to extract the materials for reuse or reprocessing at the end of its final use-cycle, thus consigning it to landfill. Circular design principles have not been considered.

Leveraging the Circular Economy Strengths - There is little consensus as to what the circular economy actually means besides the often-cited definition from the Ellen MacArthur Foundation. From my perspective, the circular economy is rooted in resource management and its historical roots lead me to this conclusion. The circular economy complements the ESG framework because it goes beyond the 'E' (environment) to the heart of human existence - our reliance on primary raw materials to sustain human life.



The circular economy cannot be all things to all people. The functions of the circular economy need to interact with sustainability and emissions reporting. Many circular economy professionals do not have the skills.

3. **Australia's Economic Model** - Australia exports its natural capital and creates jobs overseas. In return, Australia imports finished consumer goods. For many end-of-use-cycle items collected and reprocessed in Australia, it is highly unlikely many

new products will be manufactured in Australia. Therefore any secondary raw materials industry must also be connected to its overseas supply chain.

From my limited knowledge, it appears a lot of end-of-use-cycle items are being exported, such as plastics, tyres and metals for burning or reprocessing. Yet, we have very little knowledge about how overseas importers are using these items. We rely on the policy and regulatory landscape of countries that have very poor environmental records and financial resources to enforce what regulations exist.

Of course, it is beyond the Productivity Commission's interest to consider off-shore activities, however, how secondary raw materials are used or reprocessed is a collective responsibility.

Circular Design - So far, I have not discussed circular design principles, which really lie at the heart of the circular economy. A product's supply chain is the mechanism by which we can influence design changes. It must be understood that a manufacturer will be reluctant to re-tool a manufacturing process to accommodate design changes. Of course, this is dependent on the owner of the product who determines the design and owns the IP.

4. **Metrics:** There are a few approaches to measuring how circular a company is. I have not tested any so I cannot provide any comments. However, I have attempted to communicate to colleagues involved in the circular repair sector with the following information:
 1. You should consider setting up a robust referral system that provides Repair Cafes with revenue. Securing 5 ~ 15% commission from referrals is a normal business practice.
 2. The digitalisation of referral. You need a way to keep track of referrals. But more importantly, you need to keep track of repairs. Right at this moment, I don't know exactly the software you should use, but I know it's out there because I've seen it in use.
 3. You need to speak the language of big business, and you're not doing this. Big businesses do not care about community Repair Cafes; they care about data. Keeping track of referrals and having each repairer part of your ecosystem can begin tracking data on repairs. This will begin to clearly identify the design elements.
 4. Ultimately, you want to create jobs and skills training programs. Data generated from repairs and referrals will begin to pinpoint these gaps.

Generating and collecting data is the first step and the second step is knowing how to interpret the data for meaningful use. The lack of skills in interpreting data is a weakness across all kinds and sizes of companies, but particularly true in the circular economy.


5. **The Productivity Commission's 'Opportunities in the Circular Economy - Call for Submissions'** - continually refers to 'environmental and economic outcomes'. The circular economy is, in part, an economic model aimed at managing the natural capital of a country, the primary resources that humanity depends on for our lifestyles. Resource management should play a significant role in an economic system that contributes to positive environmental outcomes.

To date, ESG reporting comes from large companies which should include their environmental credentials. The Productivity Commission could refer to green and sustainability loans and how they can be accessed by circular economy companies that can demonstrate how their activities contribute to CO2 reductions and ESG reporting. Besides giving them access to capital, it is necessary to improve the skills of circular economy professionals.

What's the difference between recycling and resource recovery?

Recycling is an action

Resource recovery is an outcome requiring a strategy to fit an economically viable circular system



Circular Economy Asia
www.circular-economy.asia.org

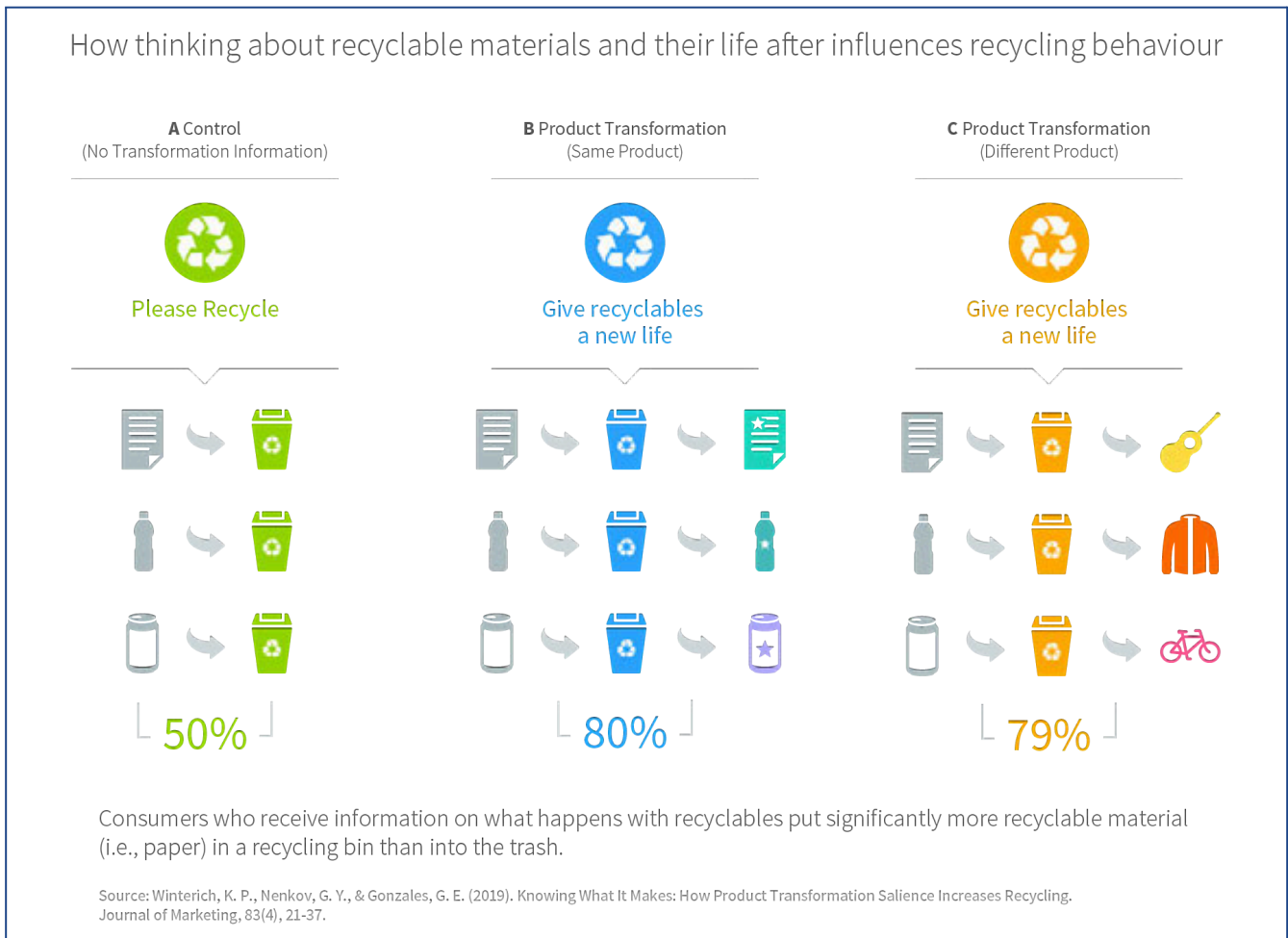
Once again, the circular economy cannot be all things to all people. It is not a set of principles to address human rights, environmental degradation (except to improve resource management) or social justice. These are well covered in ESG reporting and each company, regardless of size, is accountable for their actions to consumers, shareholders and other stakeholders.

6. **Communicating the circular economy** - Many circular economy enthusiasts believe that promoting the circular economy will, somehow, magically improve adoption rates from consumers through to businesses. I do not believe this is the right approach. In a paragraph above, Suzanne Toubourou, CEO Australian Council of Recycling, is missing out on a narrative that could promote the circular economy. Now it is highly likely that most uncontaminated plastics are exported. For example: in Malaysia, around 15 multinational companies established the [Malaysian Recycling Alliance](#) (MAREA) to improve recycling rates so member companies could meet their recycled

content targets. Unfortunately, they have not been successful and Dr. Casper Durandt Pr. Eng, Sustainability Director in Coca Cola for ASEAN and the Pacific and a board member of MAREA, told me he is now importing PET bottles so they can meet their targets. I suspect some of these PET bottles from Australia are ending up in Malaysia.

If these PET bottles are being exported and Suzanne Toumbourou knows, with the right approach, it could be a good news story for a circular system (please refer to the document 'Circular Economy Experience' - part of an online training course I have developed.)

Plus, it is well-researched that consumers positively respond to activities that value their actions, such as knowing the effort they are making to deposit an end-of-use-cycle results in reducing plastic waste.



Currently, we start the narrative with the circular economy and then struggle to explain what it means in practical terms. Consumers and businesses do not want theories or concepts.

My approach is to demonstrate an initiative, such as a Repair Cafe, and how it contributes to resource management and then end with "...this is the circular economy." It is a way of connecting a product or service to a narrative linked to a circular economy.

In summary: do not place the circular economy at the beginning of the narrative but at the end that is aligned with a product or service that becomes a tangible experience for the consumer, which in turn enables a business to leverage the activity for their own commercial interests.

7. Shifting end-of-use-cycle items from waste to commodities - It is imperative to put into place collection systems so we can apply standards for end-of-use-cycle items for both domestic and international reprocessing. It is imperative to shift from waste management to materials management and turn it into a commodity.

The OECD has produced an interesting video on how restricting the trade of primary raw materials does not work. This also applies to secondary raw materials once we can turn them into commodities.



Click here to watch the 2.52min video '[Trade in Raw Materials: Why Export Restrictions Don't Work](#)'

Information Request 3

The circular economy has been around for more than 10+ years, first made popular by the Ellen MacArthur Foundation, however, its history goes back far longer.

- The circular economy 'industry' is deeply fragmented. From 'purists' who believe recycling promotes waste and the only option is product-life-extension; to others who use the circular economy as part of their marketing strategy (see image below)

01 - THE PICTURE recirculate x BEMO

Meet The Circulars: the people shaping the future of fashion

73% of the recommerce sellers we surveyed also shop recommerce, participating in the full loop of circular fashion. We call them Circulars.

→ Young, Urban, High Income
Circulars are most likely to be under age 40, live in an urban setting, and have a higher income compared to other segments.

→ Seeking Circular Brands
More than any other segment, Circulars are likely to shop branded recommerce.

→ Frequently Refreshing Their Wardrobe
Circulars are the suppliers and the demanders of your recommerce platform - they are actively buying and selling and looking for brands to lead the way in a circular economy.



77%
of Circulars resell at least every 2-3 months

48%
of Circulars purchase with intentions to resell

89%
of Circulars would shop branded recommerce

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Buying second-hand clothes is not the circular economy. Buying second-hand clothes can only be considered circular when these clothes are part of a system that maximises the value of the materials at the final end-of-use cycle. Product life extension is only one way to reduce our reliance on primary raw materials but it has its limits.

We are stuck in a narrative of saving the environment and this narrative needs to evolve to one where we manage our natural capital and primary raw materials. We do not need to reinvent the wheel. Recycling for environmental reasons is well entrenched in our society, so we need to capitalise on this by moving consumers up the ladder towards resource management.

- Some people working in the circular economy have limited skills. They are not bad people and only want to contribute to positive actions towards a sustainable and circular world. This lack of skills reduces the credibility of circular practitioners in the business world, where it is needed the most.
- 99% of all the circular economy jobs are with government agencies, not the private sector. At this stage, it is highly unlikely the private sector will employ many circular economy specialists, so one option is to train sustainability professionals and demonstrate how the circular economy can be applied to their business or industry sector.

Some courses are available in Australia but once again the aim should be in the implementation of circular economy principles not teaching the concept.

- **Extended Producer Responsibility** - is becoming increasingly seen as the solution to tackle end-of-use-cycle products. [Seamless](#) is Australia's clothing product stewardship scheme.

Seamless will initially be funded by a 4 cent per garment levy paid by 'stewards' who are the clothing brands that become members of the scheme. This contribution is reduced to 3 cents for every garment that meets the eco-modulation criteria. If 60% of the market by volume sign up to the scheme, a funding pool of \$36 million will be raised per year to transform the industry. These funds will be invested in four priority areas:

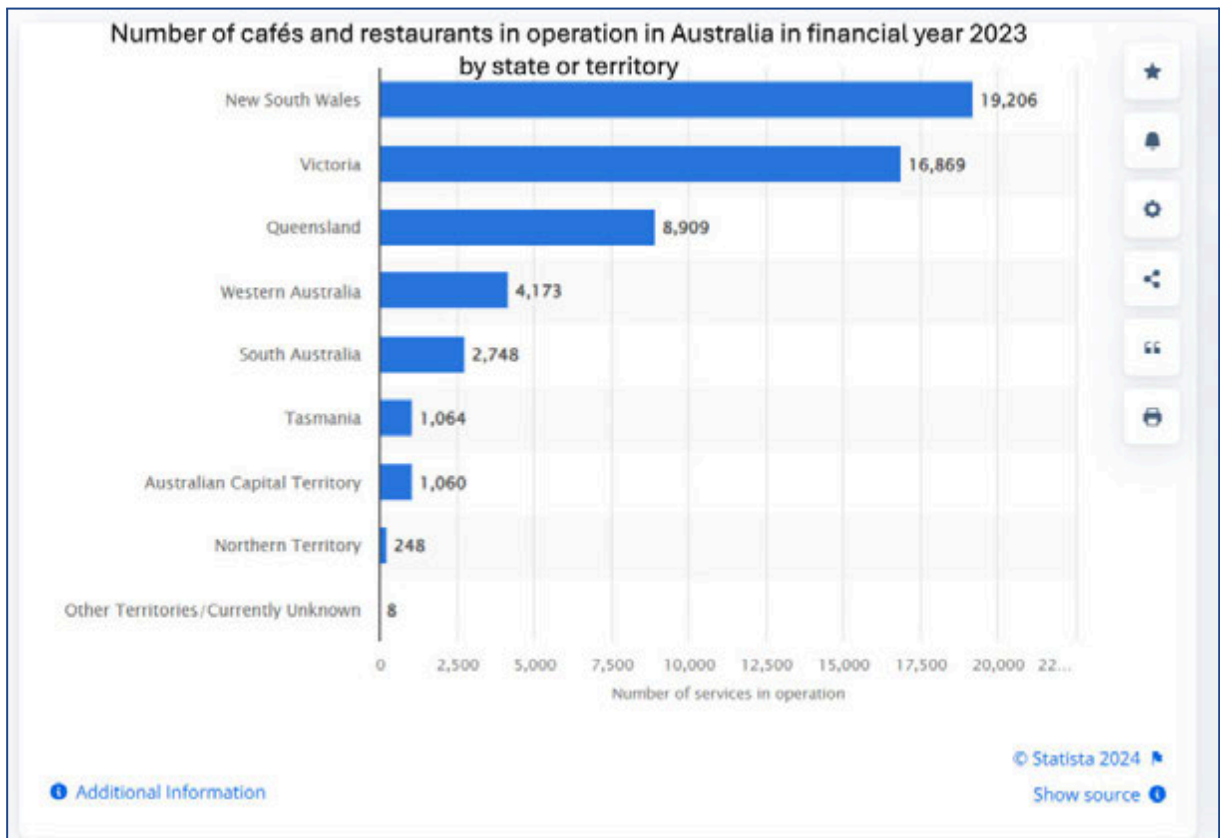
1. Circular design: incentivising clothing design that is more durable, repairable, sustainable and recyclable.
2. Circular business models: fostering new models for reuse, repair, rental, and services that prolong clothing life.
3. Closing the materials loop: expanding clothing collection and sorting practices for effective reuse and recycling.
4. Citizen behaviour change: encouraging changed practices around clothing acquisition, use, care, and disposal.

\$36 million per annum is a sizeable amount of funds to implement circular economy principles.

Information Request 4

To recap on the above points I am recommending:

- **Materials Management** - Reducing waste is a critical problem across the world. Current waste management practices will not achieve a secondary raw materials industry. The shift to materials management is the only way to begin valuing materials for reprocessing.
- **Stop Trying to Save The Environment** - We are stuck in a narrative that promotes 'saving the environment' when we should be evolving to resource management. A quantum leap yet one that still keeps us on the same path.
- **Product-Life-Extension** - Repair and reuse are obvious options to start product life extension. For example, according to [Smartscape](#) in Perth, as of 08 October, there are 1,242 Cafes in Perth; which is a 1.60% increase from 2023. Of these locations, 869 Cafes which is 69.97% of all Cafes in Perth are single-owner operations, while the remaining 373 which is 30.03% are part of larger brands. The average age of Cafes in Perth is 6 years and 10 months.



Source: [Statista.com](https://www.statista.com)

Starting with reuse in Australia’s cafe culture pitched around a slogan, that goes something like ‘Reduce waste. Manage resources’. It could also be complemented by a campaign to collect disposal coffee cups.

There are also a growing number of repairers springing up around cities but we not linking them to a narrative that repairing or extending the life of a product or garment is also a way to reduce waste and manage resources.

- **Green and Sustainable Finance** - Initiate programs to strengthen SMEs to tap into sustainable finance. Australian banks do offer sustainable and green loans.
- **Reduce Waste-2-Energy Incineration** - W2E directly competes with recycling and often incineration companies have deep pockets to lobby politicians. The Executive Director of The Waste and Recycling Industry of Western Australia, Michael Bobrowicz openly supports W2E. This may be a conflict of interest.

There is a place for W2E plants but given the emerging emergency around primary raw material and biodiversity loss, the focus should be on secondary raw materials management. My sources tell me the EU is currently investigating the negative impacts of W2E plants vis-a-vis resource management.

- **Innovation** - The constant message we hear is that collaboration is the only way to achieve our sustainable and circular goals. Here is one area in which circular economy professionals employed within government agencies can do more. Research networks not just from universities but also R&D departments within companies should be invited to participate.

Given the right approach, skills and data we can pinpoint more accurately a hierarchy of priorities to tackle. For example: A materials management approach to end-of-use-cycle products (aka waste) should unlock the biggest era of material innovation the world has ever seen.

- **Practical Stakeholder Engagement** - not just feedback, including all levels of society, from businesses, educational institutions, VC and start-up funding organisations, industry associations, consumer groups. 'Scale' is the new black

Time for a New Metric

On the following page is an infographic that explains the rationale behind a shift from waste management to materials management. By changing the metrics we also open the door to transparency, accountability and the opportunity to establish reprocessing industries in Australia even if it is limited.

It is impossible to continue using recycling statistics in a circular economy and as a measurement of how well we are managing our secondary raw materials. Recycling statistics are a farce with little meaning, especially if end-of-cycle items are being sent overseas for reprocessing.



It's Time for a New Metric

up to
40
per cent

The amount you can save when sorting the domestic waste.

25 kg

The amount of secondary raw materials the average household accumulates per month.

In 2021, there were approximately 9.994 million households in Australia.

This equals 249,850,000 kgs of potential secondary raw materials that could be recovered and reprocessed each month.

How many new jobs and investment does this equal?

Let's stop talking about how much a country recycles.

Let's start setting targets by measuring how much a country recovers and reprocesses reducing its reliance on primary raw materials.

Source of estimates: www.ecoservice.lt

About Adrienna Zsakay - CEO of Circular Economy Asia

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Attached:

1. My CV - for reference
2. Two online & in-house skills training courses I have developed. A third course is nearly completed
 - a. Resource Recovery Workshop
 - b. Circular Economy Foundation Course
3. Digital Product Passports - I am actively engaged with [Cirpass2](#) for the development of Digital Product Passports. It is a volunteer position

CIRPASS-2 is an Innovation Action project funded by the European Commission's Digital Europe Programme that will be ongoing from May 2024 until April 2027. The CIRPASS-2 project is led by CEA-List, the Digital Institute of CEA, a French research organisation with a mission of innovation for industry. To succeed, the project counts on a large consortium of organisations from all over Europe and beyond.

The Working Groups I am participating in are:

- User Access Rights
- Interoperability
- Unique Identification
- Standards



Resource Recovery Strategy - Part One

Circular Economy Experience

Overcoming Motivational Barriers to Resource Recovery

The efforts of your staff in a resource recovery program should be a worthwhile and valuable experience. For your resource recovery program to be successful, select only one or two types of resources to recover to start and make everyone an expert in those

specific resources.

Empower your staff with knowledge but do not overwhelm them with technical or detailed information. Keep your communication simple and accurate.

A Circular Economy Experience - Learning from McDonald's

- To start, select only one or two types of resources to recover. Your waste audit will give you an indication on the selection based on volume.
 - Make everyone an expert in those specific resources.
 - If you select plastics, ensure your communication is simple, bite-size and relevant to your staff's daily routines.
 - An education and training program
- aligning your resource recovery goals and targets, including circular and sustainability literacy will be the cornerstone of your success.
- Explore a range of different education and training options, such as employee-led "green" teams, online training, workshops, blended learning, mixed-media communications and performance incentives.

Resource recovery starts with the individual act of material choice and responsible disposal habits. Research shows that when people know what happens to their recycling they are motivated to do more.

Most people feel recycling happens behind closed doors and more detailed information can build their understanding and trust in the system. In addition, despite all the positive associations with recycling, there is little clarity as to why recycling is a good thing and what its benefits are.



In Japan, McDonald's partnered with the Ministry of the Environment to launch the Happy Meal toy recycling program - one of the largest efforts of plastic toy recycling to date. The McDonald's recycling program established visibility, trust and showed why recycling is a good thing.

In 2019, from February to May, toy recycling boxes placed in all 2,900 McDonald's Japanese restaurants. The program provided the opportunity for old plastic toys to be collected; children learned all about the importance of recycling; and the McDonald's brand enjoyed a fantastic PR boost.

In total, McDonald's collected 1.27 million toys, which were 'reborn' into 100,000 trays. Research showed 81% of mothers in Japan now believe McDonald's is concerned about the environment. This direct link between the action of recycling and the outcomes underpinned the success of the McDonald's initiative.

Therefore we need new ways that validates people's time and effort to resource recovery. A direct experience that produces a tangible result is one way to motivate people.

VERY HAPPY MEALS

HELPING PARENTS TEACH RECYCLING TO KIDS
 As one of the world's largest restaurant companies, McDonald's has the responsibility to take action on some of the most pressing social and environmental challenges in the world today. Using our "Scale for Good", McDonald's Japan wanted to put old Happy Meal toys to good use and show our commitment to reducing broader plastic waste in the world. The recycle program, a first-ever initiative, proved ideal for elevating the brand experience and getting our customers to participate in an environmentally responsible campaign.

Kids love Happy Meal Toys. But as the toys pile up, parents stress out. The toy recycle program offered a way for kids to feel better about saying goodbye to their old toys while giving parents a chance to share an important lesson in sustainability. By leveraging our nearly 3,000 restaurants in Japan, we optimized word of mouth and maximized participation. This story tells how kids are more willing to part with their old Happy Meal Toys when they can meet them again with a renewed smile! - Shaping a positive feeling towards our brand while helping the earth.

OVER 1.2MM TOYS RECYCLED
In just two months

OVER 100K GREEN TRAYS

NEARLY 3,000 MCDONALD'S RESTAURANTS IN JAPAN

WE CHANGED MINDS ACROSS JAPAN
 With Japan's Ministry of the Environment - we made major headlines, winning broad support from moms on social media. Surveys showed 81% of moms believed that McDonald's Japan is concerned about the environment. And 79% of them thought that McDonald's Japan contributes positively to the local community and society.

This tray contains about 10% materials recycled from Happy Meals Toys.

I was born from Happy Meal toys!
 多くはHappyセットのおもちゃから、生まれたいよ!

MCDONALD'S JAPAN SUPPORTS THE G20 OSAKA SUMMIT
 Working to reduce plastic waste in the world. This tray, made from recycled plastic, is just one small part of that effort.

100% MADE FROM HAPPY SET TOYS

リサイクルで生まれたトレイです



McDonald's

Keeping Play FUN & Helping to Protect the Planet

A New Ambition for More Sustainable Happy Meal® Toys

We have some **sustainable** news with a wholesome side of **FUN!** By the end of 2025, every Happy Meal toy around the world will be made from more renewable, recycled, or certified materials. This shift will result in an approximately

90% *reduction in use of conventional virgin plastic.

That's the same annual impact as if the entire population of Washington, DC eliminated plastic from their lives for a year. WOW, that's a lot of people!



We're already making progress. Since 2018, Happy Meal toy innovations from around the world, including the UK, Ireland and France have already resulted in a

30% reduction in conventional virgin plastic.

And in Japan we have restaurant trays made with 10% recycled Happy Meal toys!

*fossil-fuel based plastics against a 2018 baseline



Potential Barriers - It's a Material World

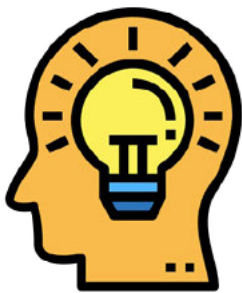
The McDonald's initiative in Japan provides a valuable experience for customers. As there is increased scrutiny around a company's actions or sustainability campaigns, here are a few details to review before considering a similar program.

- Many materials, especially plastics and toys, are made from a mix of materials and can contain toxic or harmful chemicals. These chemicals do not disappear when the material is reprocessed.
- How are you going to verify the

credentials of your campaign or resource recovery experience?

- Making a new product out of end-of-use-cycle products can be a good idea, except can the new product be reprocessed as well? Is your campaign working in a closed-loop system?
- In September 2021, McDonald's issued a press release stating they will be "Transitioning to more renewable, recycled, and certified materials..."

Experiential Learning for Stakeholders



Experiential learning is defined as "Experiential learning is the process of learning through experience, and is more specifically defined as 'learning through reflection on doing'". Even the Greek philosopher Aristotle wrote in 350BC "for the things we have to learn before we can do them, we learn by doing them".



References, Reading List and Links

McDonald's press release "[A New Way to Play: Introducing More Sustainable Happy Meal Toys](#)", by Jenny McColloch, Chief Sustainability Officer, published 21 September 2021

Portions of the text and the image: Corporate McDonalds '[Packaging & Waste](#)'

Icon: Knowledge and Ideas - from Smalllikeart - https://www.flaticon.com/free-icon/knowledge_2762403?k=1667825335537#

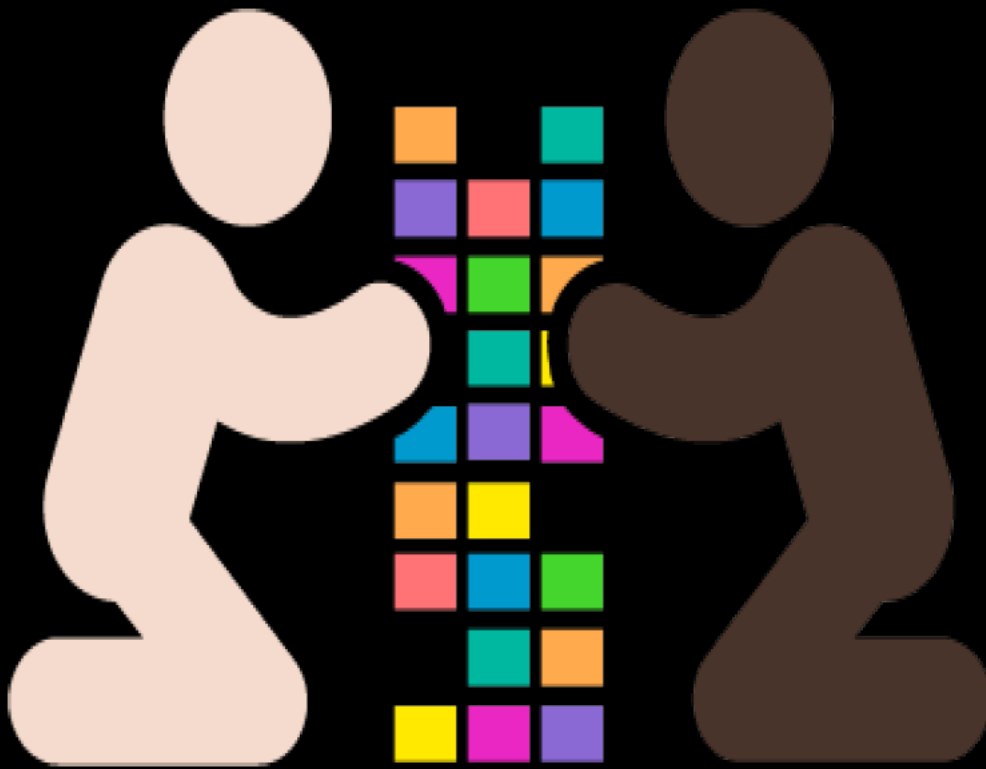
For more information

Visit our website - www.circulareconomyasia.org



Circular Economy Foundation Course

What You Need To Know



www.circulareconomyasia.org



Your journey towards
implementing a
circular system begins here

The Circular Economy Foundation Course

The Essential Skills Program



Circular Economy Asia
www.circular-economy-asia.org Logo image: The Nisus Project

Need to Know

Getting Started

Resource scarcity, biodiversity loss and climate change are the challenges of our times. The circular economy is a resource management tool.

For anyone to embrace the circular economy and implement the Circular Rs, we have to ensure the correct processes are in place.

The Circular Economy Foundation course focuses on three key aims:

1. The urgency of resource

management and resource efficiency.

2. The internal discipline and processes within a company to instil a culture of accurate reporting and data collection.
3. Transferring knowledge so learners can grasp the history, the science, the language and the tools to make informed choices and decisions regarding the circular economy.

Need to Learn

Standards

The course introduces two standards - ISO 14000 and Product Carbon Footprint. Establishing a culture of documentation and data collection will make it easier to meet standards.

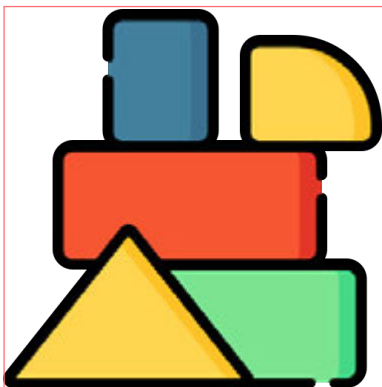
All size companies will need to permanently improve and maintain adequate documentation into the day-

to-day operations of their organisation.

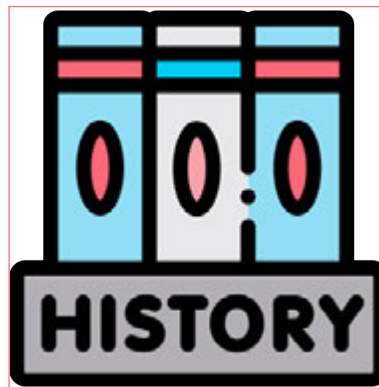
To ensure the quality of the circular system you establish requires record keeping, data collection and documentation.

The European Sustainability Reporting Standards (ESRS) - E5 Resource Use and Circular Economy will, eventually, become a methodology everyone can refer to. The primary objective of ESRS E5 is to specify disclosure requirements on material impacts, risks, and opportunities that arise from resource use and circular economy, as well as related policies, actions, and financial implications. The Circular Economy Foundation course introduces the basics of ESRS E5.

Course Outcomes and Modules



The building blocks for a circular system.



From the industrial revolution to the future.



The pieces that are part of the circular economy.

The course modules include:

0. Introduction to the learning outcomes.
1. The Circular Rs - The behavioural and economic functions of the circular economy.
2. History - A look at the past and a glimpse of the future.
3. Resource Management - The foundation of the circular economy
4. Closed and Open Loop Systems.
5. Materials - an introduction to chemicals, the Butterfly diagram and Cradle-to-Cradle®.
6. Circular and Eco-design
7. Circular Business Models - including case studies
8. Life-cycle Assessment - including an introduction to ISO 14040
9. Environmental Product Declarations
10. Circular Economy and Climate Change.



Resource Recovery Skills Training Course

Many people think the circular economy is a waste management tool. The Resource Recovery Strategy aims to change this perception by refocusing your attention on resources not waste.

We want participants to look beyond the bin. For the action of recycling to be of real value you will need to have a deeper understanding of where recyclables end up. In addition, during the process of developing a resource recovery strategy, the skills you will learn can be used for sustainability targets in general.

The Resource Recovery Course

- Course summary and the Sustainable Development Goals.
- ISO 14001 and Environmental Management Systems.

Participants will use the nine workshop cards to map out their strategy.

1. Introduction to Resource Recovery
2. Building your Circular Dream Team

3. Bins, Contamination and Collection Systems
4. Identifying Barriers and Enablers
5. Targets & Milestones
6. Promotion & Communication
7. Feedback & Evaluation
8. Staff Survey
9. Making Mistakes

****This is a fee-paying course****

For the Best Experience

- Please turn up 10 minutes before the scheduled time. The workshop starts exactly at the specified time.
- Participants are welcome to bring a laptop or desktop computer.
- Bring a pen and paper or use your digital notepad to take notes.
- This is a very interactive workshop.
- We often refer to the [Knowledge Centre](#) located on the [Circular Economy Asia](#) website.
- We value your feedback, do not be shy!
- Please no mobile phones. We require your full attention and mobile phones can be a distraction.



Resource Recovery Workshop Program



www.circulareconomyasia.org



What's the difference between recycling and resource recovery?

Recycling is an action

Resource recovery is an outcome requiring a strategy to fit an economically viable circular system



Need to Know

What is Resource Recovery?

Most of the items we use are made from primary raw materials, a finite, non-renewable resource. To live within our planetary boundaries, we must recover these resources for reprocessing so they can re-enter the supply chain as secondary raw materials for manufacturing into new products.

Resource recovery is a function of the circular economy. However, it is separate from recycling, an action

generally associated with saving the environment. The importance of resource recovery system cannot be understated.

This workshop provides participants with the basic skills to map out a strategy for a resource recovery program for their company so potential secondary raw materials retain the highest value and do not end up as waste.

Need to Learn

Standards

You may be wondering why ISO 14000 standards have been included in the Resource Recovery Skills Training course. Resource recovery will need to be permanently embedded into the day-to-day operations of your organisation. To ensure the quality of your strategy and the system you establish requires adequate documentation.

Please note: ISO 14000 has been included in this course to develop professional documentation skills.

In addition we refer to the European Sustainability Reporting Standards (ESRS E5) - *Resource Use and Circular Economy* to begin the process of mapping material flows and establishing other circular functions.

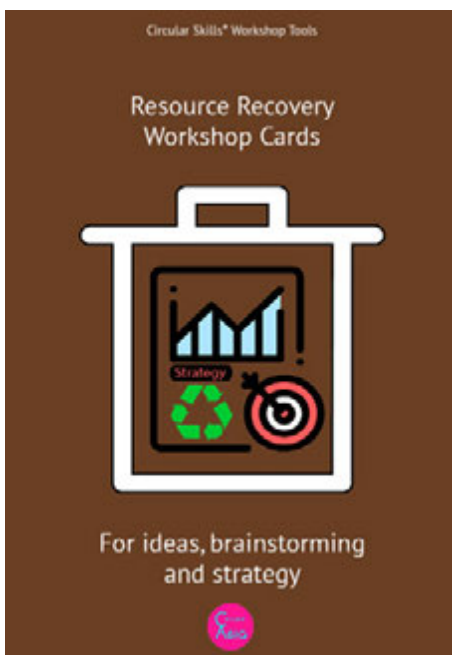
Modules & Workshop Cards

Participants will form teams and use cards especially developed for this skills training course.

The cards cover the basic skills most people require to map out a resource recovery strategy specifically for their company.

The order of the cards is irrelevant and will change from company to company dependent on their strategy.

The Resource Recovery Skills Training course is also available online. All in-person workshop participants will be asked to complete the online lessons and quizzes to receive their certificate.



Participants will use the nine workshop cards to map out their strategy. The card titles are:

1. Introduction to Resource Recovery
2. Circular Dream Team
3. Bins, Contamination and Collection Systems
4. Identifying Barriers and Enablers
5. Targets & Milestones
6. Promotion & Communication
7. Feedback & Evaluation
8. Staff Survey
9. Making Mistakes

At the end of the workshop, participants will have mapped out a strategy to implement a resource recovery program in their company.

For the Best Experience

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Sustainability reporting is becoming mainstream and not just for large or listed company's. Using the templates and setting up your documentation system for data collection will ensure your organisation is well on the way to sound reporting practices. We refer to the International Sustainability Standard Board (ISSB) and the European Sustainability Reporting Standards (ESRS E5) Resource Use and Circular Economy.

The Essential Skills™ Program



It is highly recommended to start with the Circular Economy Foundation course, part of the Essential Skills™ program, before progressing onto other courses.

Topics covered in this Essential Skills™ course are

- **Introduction** - To the course and the following standards: ISO 14000, ISO 59000, ESRS E5 - Resource Use and Circular Economy and Product Carbon Footprint
- **The Circular Rs** - The functions and tools to improve resource management.
- **History** - How we arrived here and what the future looks like.
- **Resource Management** - What you need to know.
- **Closed and Open Loop Systems** - Including examples.
- **Materials** - An introduction, including chemicals and Cradle-to-Cradle®.
- **Circular Design** - And Eco-design and ISO 14006 and ISO 14020.
- **Circular Business Models** - Types of circular economy business models and examples.
- **Life Cycle Assessment** - The basics of LCA and related ISO standards
- **Environmental Product Declarations** - What they are, why you should use them and ISO 14027 ~ 29.
- **The Circular Economy and Climate Change** - Reducing emissions