

CONNECTING
HEPBURN SHIRE'S
CIRCULAR ECONOMY

Circular Economy Stage 1 Project Report and Recommendations. Section 5

20 February 2023



Djaara Acknowledgement

This project took place on Djaara Country and the authors acknowledge the Dja Dja Wurrung People as the traditional owners and custodians of this land. We acknowledge and respect the ancient wisdom and stewardship of Djaara of the lands and waters for millenia. We acknowledge this Country was never ceded and pay respect to the Djaara Elders, past, present and future.

Hepburn Shire Council is on Dja Dja Wurrung Country.

Hepburn Shire Council acknowledges the Dja Dja Wurrung as the Traditional Owners of the lands and waters on which we live and work. On these lands, Djaara have performed age-old ceremonies of celebration, initiation and renewal. We recognise their resilience through dispossession and it is a testament to their continuing culture and tradition, which is strong and thriving. We also acknowledge the neighbouring Traditional Owners, the Wurundjeri to our South East and the Wadawurrung to our South West and pay our respect to all Aboriginal peoples, their culture, and lore. We acknowledge their living culture and the unique role they play in the life of this region.

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Project findings and recommendations



Key findings and recommendations

A comprehensive Data capture exercise of mapping the Resource Flows and Supply Chains across all sectors is required as a baseline to develop a Circular economy framework and fully activate a Circular Economy in Hepburn Shire. This data capture should be carried out in the next phase. There are several findings in this report that also support the concurrent identification of SME Clusters and the development of Physical 'Circular nodes' or Production/Processing/Technology/Infrastructure/Logistics Sharing and Resource Exchange hubs.

Circular Nodes will be driven by the ambassadors, early adopters, sustainable and organic producers, regenerative farmers, tourism and hospitality leaders, community members and their neighbours identified in this research. Circular Economy can boost local business and tourism, e.g. a survey carried out by AirBnB hosts in Hepburn Shire suggests it can lower running costs and improve the guest experience. To activate a Circular Economy you need both Policy change to guide behaviour and Bottom up activity driven by SME's and the Community. Many rural community members organically engage in these type of activities, with support they could expand circular economic development.

The piloting of the Circular Nodes detailed below could prove the infrastructure value of the circular economy to the wider community and thus be a catalyst for the wider adoption of CE practice. Breaking long established linear economy 'take-make-waste' consumer habits is a difficult task. Behaviour change, active infrastructure development with ambassadors and CE literacy development at this stage will be just as important as extensive data capture.

Circular Node Pilots - Recommendations.

- 1. Service Hubs - Refill Station Pilot, potential to partner with AirBnB Australia.**
- 2. Shared Technology, Resource Processing/exchange and Infrastructure Hub - Community Hub**
- 3. Resource Reclamation, Repair Hub and Tip-Shop 2.0**

Hepburn Shire CE Roadmap - Next Steps, Phase 1, Understand and Define

		Phase 1		Phase 2	
		Discovery →	Understand & Define →	Ideate & Validate →	Make & Test
Meso Level	Micro Level	Research. Artisan Ag. Hospitality & Tourism Case studies. CE Readiness Snapshot. Circular Strategies.	Resource Flow Data Capture - Community and business, extensive surveys/interviews. Local Circular Business Dev-CoDesign, Prioritise and Run Pilots.	Local Circular Business Accelerator, Iterative design and Testing. Resource Flow Data Maps validated.	Local Circular Business Accelerator initiatives. Rapid Action Projects. Demonstrate and test CE Knowledge / capability
	Community	Webinar and Workshops. CE Champions identified	Workshops CE Ambassadors. Community initiatives. (Pilots)	CE Opportunity Community CoDesign Clusters Circular Node expansion.	CE Knowledge Hub & Community CE Network expansion.
	Council Commerce	Research Existing Sustainability initiatives. institutions, networks & initiatives. Identify quick wins and potential pilots.	CE professional dev workshops. Collaboration with Sustainability Initiatives, Opportunities for CE in Hepburn Shire. (Pilots) Workshops CE Advocates Business initiatives. (Pilots)	Tip-Shop 2.0 Operational. Schematic map of CE initiatives and infrastructure. Supply chain collaboration mapping. SME Cluster and Circular Node design. Design Pilots.	Expanded CE Marketplace Ecosystem & Node Database. Infrastructure investment prioritisation. Design and Build Physical Circular Node Pilots. Test & Improve
Macro Level		Existing strategy and policy. ZNet. Building on Visions of resilience 2020	CE Framework research. Systems Level Circular Economy development. Regional supply chain mapping. CE Strategy planning.	Circular Economy Framework. development - MVP. CE Bridge Ballarat-Bendigo-Macedon LGAs CE Strategy Development	Hepburn Shire CE Framework actioned. Shire Doughnut Model & CE Activation programs
Regional Macro View		Collaboration with Djaara. Collaboration and Trade with other Local Government Circular Economies, CE Regional Strategy Development Regional LGA's, Macedon, Bendigo, Ballarat. Funding applications - State and Federal Government.			

Next steps - Phase 1 - Understand and Define

Part A - Define the Circular Economy Framework.

Circular Economy Model Framework inputs mapped at a whole of Shire level scale. Research. Surveys. Interviews. Workshops.

- Resource flows and supply chains for all sectors mapped.
- SME Clusters and Circular Nodes/Community Hub ideal physical locations identified.
- CE Ambassadors initiatives, Community and Business Workshops (Including Pilot co-design workshops)
- Hepburn Shire CE Literacy and Professional Development
- CE Framework research. Systems Level Circular Economy development.
- Macro - Regional supply chain mapping.
- Djaara Collaboration and Circular/Regenerative Economy Objectives Co-Design
- CE Strategy planning and CE Framework and Business Rules Definition.

Part B- Build Physical Circular Nodes - Pilots

Co-Design the Pilots with the communities that will drive them.

Circular Node Pilots - Recommendations.

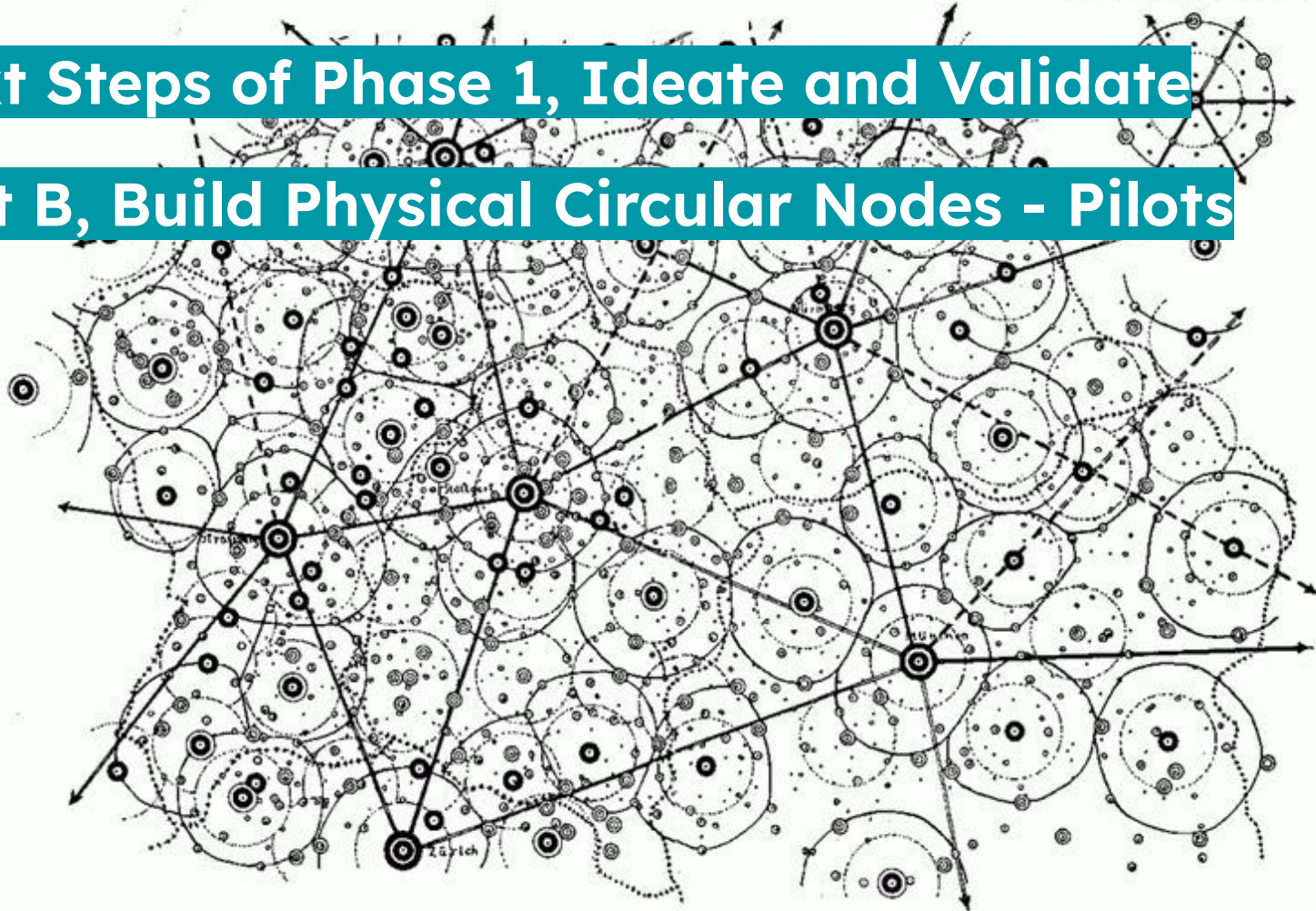
Service Hubs - Refill Station Pilot, potential to partner with AirBnB Australia.

Shared Technology, Resource Processing/exchange and Infrastructure Hub - Community Hub

Resource Reclamation and Repair Hub

Next Steps of Phase 1, Ideate and Validate

Part B, Build Physical Circular Nodes - Pilots



Recommendations. Circular Nodes - Pilot 1

Service Hubs - Accommodation Amenities Refill Station.

A macro finding that emerged from all 3 case studies is the idea of a local refill station - this type of business could be run as a social enterprise. It could offer refills for business and the wider community. The refill station finding supports the earlier Circular Nodes finding mentioned in the Case Studies summary, the identification of the need for a Physical Exchange Hub to enable circularity. Refillable containers and the provision of physical stations that enable refilling are of increasing importance and interest in Victoria. The planned phasing out of single use plastics in February 2023 in Victoria is a major driving factor.

A collective of AirBnB hosts in Hepburn Shire who are supported by the head of Sustainability at AirBnB in Australia, are interested in piloting an Amenities Refill Station in the Hepburn Shire. 1. A draft service flow has been mapped in the following Ecosystem Map. A potential stakeholder Hepburn Wholefoods could be a base for the refill station and wholesale supplier of Shampoo, Conditioners, Shower gels, Hand soaps, Skin products, Cleaning products, and other amenity refillables. If suitable, Hepburn Wholefoods could also consider positioning as a Container Deposit scheme destination as another source of income generation. Community, businesses, accommodation owners, etc, could drop wine/beverage bottles at the same time as refilling Amenities.

The ideal process would be for local AirBnB owners or their representatives to visit the refill station and pay via weight for refilling their containers. This could be at their desired frequency, once per week/ once per month etc. The thinking (and some discussion with local soap makers), is that local producers could make some of products locally and include local botanicals and ingredients, that could enhance the local guest experience.

1 Source: AirBnB now represents over half of the accommodation in the shire and owners are conscious of the pressure on affordable housing. A survey by AirBnB hosts in Hepburn Shire indicated that over 50% of owners with property 1 acre in size and over would place a second dwelling on their properties dedicated to local affordable housing if planning allowed. The lack of housing affordability reduces the feasibility of an equitable local economy. At the time of this report Hepburn Shire is working to ease housing affordability pressure across the shire and exploring a number of options.

Recommendations. Circular Nodes - Pilot 1

Service Hubs - Accommodation Amenities Refill Station.

The hospitality and tourism industry and local producers could explore a collective bulk manufacture, distribution and collection of a uniquely manufacture 'Hepburn bottle'. Visy manufactures a unique beer bottle currently for New Zealand that is shared by a number of brands. In the late 1800's Mineral water from the region was placed in torpedo shaped glass bottles that could not be stood upright (as long as the cork was wet it would maintain it's carbonation). Could we produce an eye catching Hepburn bottle range for ease of identification and refilling?



Another option is that a proven quality supplier of refill stations and amenities like EcoStore could be engaged. Or a combination of suppliers could provide the necessary volume and quality required. Other local producer refillables and wholesale supply chains could be considered, including locally made Alcohol and Beverages. To activate the pilot, Hepburn Shire could engage a Circular Economy Service Designer to co-design the service process with the stakeholders and develop a business model. Please note that this pilot is a recommendation only and no formal agreements between stakeholders have been reached.

Refill Station Pilot Circular Ecosystem Map



[Click here](#) to see the online version of this ecosystem map.





Example of a Refill station by EcoStore.

'Hey Melbourne Our newest refill station is here in Coles Local, Fitzroy! Save 5% off RRP and reduce plastic waste when you refill again and again.

We've made it easy for you. Just pick a 500ml or 1L refill bottle and select a product. Then fill under the tap and put on the matching sticker. When you're ready to pay, search "ecostore refill" at checkout.

If you're in the neighbourhood check it out for all your home, body and haircare needs. If you don't live near a refill station, we're working on it In the meantime we have bulk options online at [ecostore.com](https://www.ecostore.com) which help to reduce plastic waste. #coleslocal #ecostorerefill — at Coles (Fitzroy)

Recommendations. Circular Nodes - Pilot 2

Shared Technology, Resource Processing/exchange and Infrastructure Hub - Community Hub

The research has shown local food producers are well positioned to drive the development and operation of Physical Circular Nodes / Community Hubs. Several producers already share transport, through trade and backlogging for example - there is a huge opportunity to expand shared transport initiatives through resource flow and supply chain mapping. Physical Circular Nodes are a key enabler for shared transport initiatives.

Many local producer groups have been engaged in many of the strategies and elements of the Circular Economy organically for some time. Starting with the Hub for Premium Produce project, which morphed into the Artisanal Ag project. The Hepburn Food Hub project has had significant planning for the development of a physical location and it could potentially be a strong Circular Node pilot.

Being producers of food that supply their local communities they are also well positioned as ambassadors to drive larger circular activity and the further identification of SME Clusters and their circular enablement requirements. Community hubs inherently bring the value of the Social Economy into operations and governance. These merits include, at their most generic, the development of organisations that are concerned with social, societal, environmental and carbon reduction development, employing people inclusively, fairly and with dignity, in pursuit of the public interest, rather than financial return. ¹.

Shared Process and Production Technology & Equipment. Eg. Abattoir or Milk / Egg Pasteurization.

Resources/Resource Exchange and Shared Infrastructure.

Identification of Shared Supply Chains and Distribution Channels (for transportation efficiency for example)

Recommendations. Circular Nodes - Pilot 3

Resource Reclamation, Repair Hub and Tip-shop 2.0

A registered local Social Enterprise. Resourceful Hepburn, has skilled local people interested in developing a Resource Reclamation, Repair Hub and Tip-shop 2.0 at the Daylesford Transfer Station.

Resourceful Hepburn (RH) is a locally-focussed group formed with the express intent of starting a community enterprise to gather and sort 'waste' goods and materials to profitably repair, repurpose or remanufacture those materials into a form that can be utilised by the community. RH has also been part of a longer story of community engagement in resource recovery and circular economies, including contributions through the community reference groups for the Sustainable Hepburn Strategy.

Resourceful Hepburn's friends and partners include: Daylesford Community Op-Shop, Repair Café, Local Sustainability groups, Hepburn ZNET, Neighbourhood centres & houses, Local farmers/landholders, Men's sheds.

Resource Reclamation Pilot suggested next steps:

Resourceful Hepburn and HS Waste management team to identify communication pathways between community expectations and Transfer Station management practices that facilitate resource separation, recovery and re-sale.

- Scrap metal sorting, grading and sale to the community and broader scrap market.
- Tip-shop 2.0 - treating the material that people dispose of as valuable and displaying it for sale as such, with the aim of ensuring goods and materials are utilised for highest use and to the benefit of the enterprise.
- Resourceful Hepburn and Hepburn Shire to co-design a Resource Reclamation Road Map and to develop a MOU.

Conclusion

In a resource-constrained, climate constrained- future, the Circular Economy is the only economic framework enabling growth while tackling the consumption and climate crises. ^{1.}

In a report commissioned by the CSIRO, KPMG estimates that a Circular Economy in Food, Transport and the Built Environment together in Australia represents a potential economic benefit of \$23 billion in present value GDP by 2025. ^{2.}

This Circular Economy is a language and framework that is highly accessible despite political, religious, social, cultural or economic orientation. The Circular Economy can build further social equity and resilience for the region.

The findings of this report recognise the diversity of experience and expertise across the shire and it's many active groups that are already active in the interrelated Z-Net Transformation, Business Innovation, Circular Economy, Traditional Owner Leadership, Renewable Energy, Sustainability and Regeneration space. **Hepburn Shire has the potential to be a leading LGA in the transition to a National CE by 2030.**

The findings support the recommendation that early adopters and SME Clusters and Community groups that have the collaborative networks, experience and capability - be supported in the piloting of Circular Nodes in Hepburn Shire.

The author would like to thank the many contributors to this research and the people of Hepburn Shire.


1. Source: [WPC Unlocking the circular economy.](#)

2. Source: <https://kpmg.com/au/en/home/insights/2020/05/potential-economic-pay-off-circular-economy-australia.html>

Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has.

Margaret Mead



An aerial photograph of a large, three-story brick building with a red-tiled roof, identified as the Central Springs Inn. The building features numerous arched windows and a prominent corner sign. It is situated on a street corner with a sidewalk and a grassy area in the foreground. In the background, other residential buildings and trees are visible.

This project is dedicated to the memory of my father Mel Melotte who loved the twin towns, the bush, the region and the community.

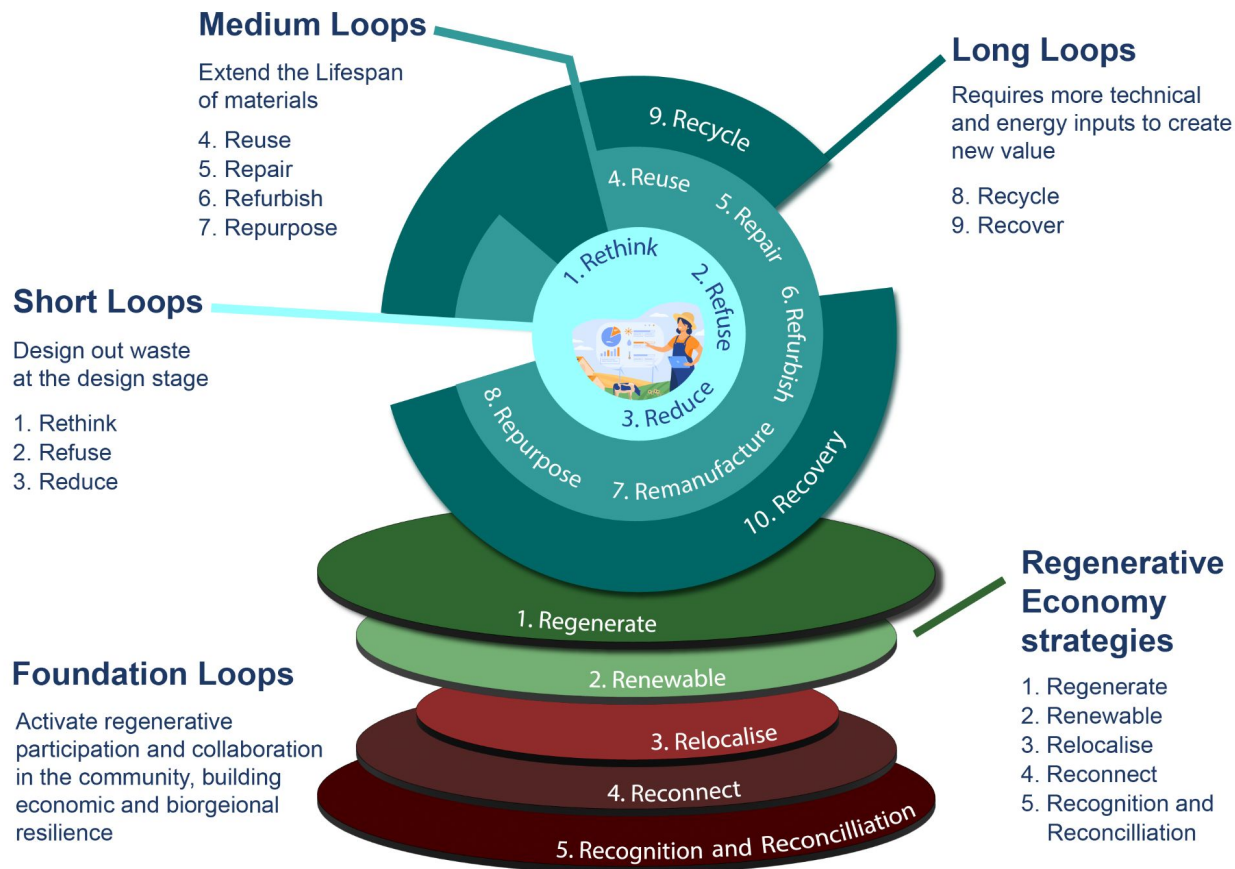
As a former policeman and hospitality & tourism pioneer in Daylesford, Mel was a strong believer in local trade, resourcefulness and innovation, community collaboration, diversity and social justice.

Damien Melotte, 12th December 2022.

Appendices



Connecting the Circular Economy in Regional Victoria



Cluster definition in this project

In this project the nature of our SME Clusters investigated the interrelated nature of food and produce made by the Artisan Agriculture / Farming communities for local residents and the and the Hospitality & Tourism sectors.

What is a Cluster?

Following the definition by Michael Porter a cluster is a geographical proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and externalities. 1.

Once a Cluster starts thriving it has the potential to influence surrounding cohorts and further driving Circular Transition.

The Danish paper “Clusters in the Circular Economy - Building Partnerships for Sustainable Transition of SMEs” survey over 200 Clusters across Europe and provides an ambitious view of Clusters, below.

How Clusters are Powering the Circular Transition?

- Clusters Building Bridges to Circular Knowledge
- Clusters Putting Circular Policy into Action
- Access to Circular Funding for SMEs
- Clusters and Sustainable Development Goals
- Circular Public Procurement Supported by Clusters

Source: <http://circularpp.eu/wp-content/uploads/2019/11/Clusters-in-Circular-Economy.pdf>

Social and Local Economy

Social Economy

At its most generic, the European Commission (2020) considers the SE to be concerned with social, societal, environmental and carbon reduction development, employing people inclusively, fairly and with dignity, in pursuit of the public interest, rather than just financial return.

https://ec.europa.eu/growth/sectors/social-economy_en

CE referencing 'Local economy' value creation in Regional UK - Circular Yorkshire

By creating a Circular Yorkshire, we aim to move our region from a linear economy (take, make, dispose) to a circular economy (where all waste and resources have a value) through this process, we can not only address the challenge of climate change, but we can also add value to the local economy, communities and people's lives. As the majority of existing circular initiatives are based in cities, the rural nature of our region provides an opportunity to become the UK's first circular region' (York and North Yorkshire LEP, 2020).

Technology hubs - Strategic Priority 3 of the LIS second draft in the Swindon and Wiltshire LEP (2020) also seeks to develop a multidisciplinary research centre to deliver sustainable technologies for a circular economy (page 13) in the context of a zero-carbon economy (page 10).

Circular strategies - Source document

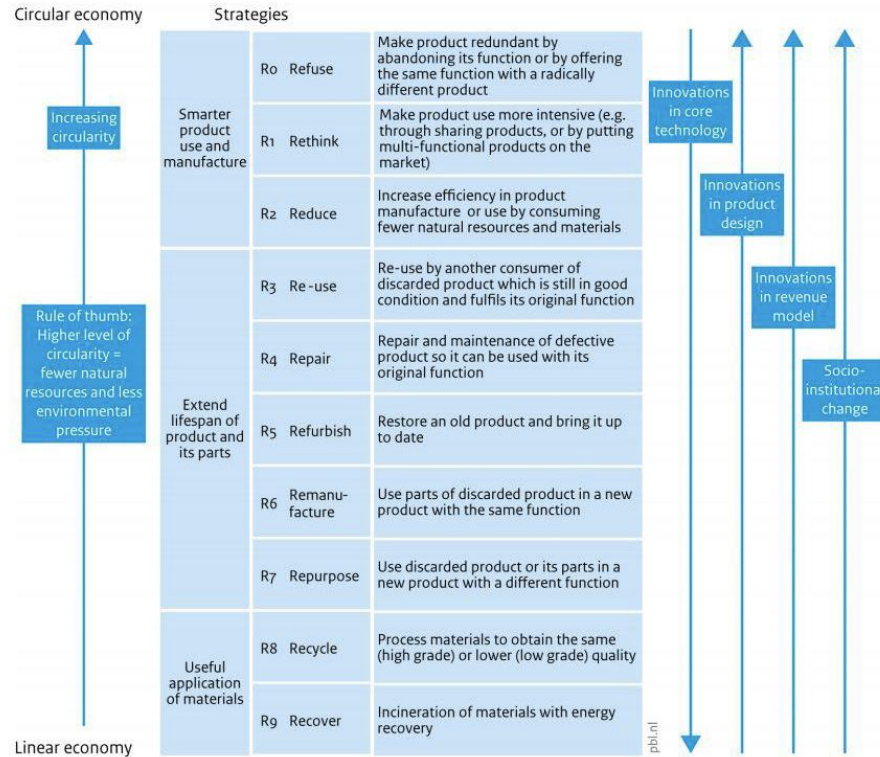


Figure 2.1. Circularity strategies in order of priority

Following their review of the 114 definitions extant at the time of their publication, Kirchherr et al. (2017) synthesise these definitions into their own: "circular economy describes an economic system that is based on business models which replace the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations." (Kirchherr et al. 2017: 224-225).

Regenerative design

Regenerative design is a process-oriented **whole systems** approach to **design**. The term "regenerative" describes processes that restore, renew or revitalize their own sources of energy and materials.

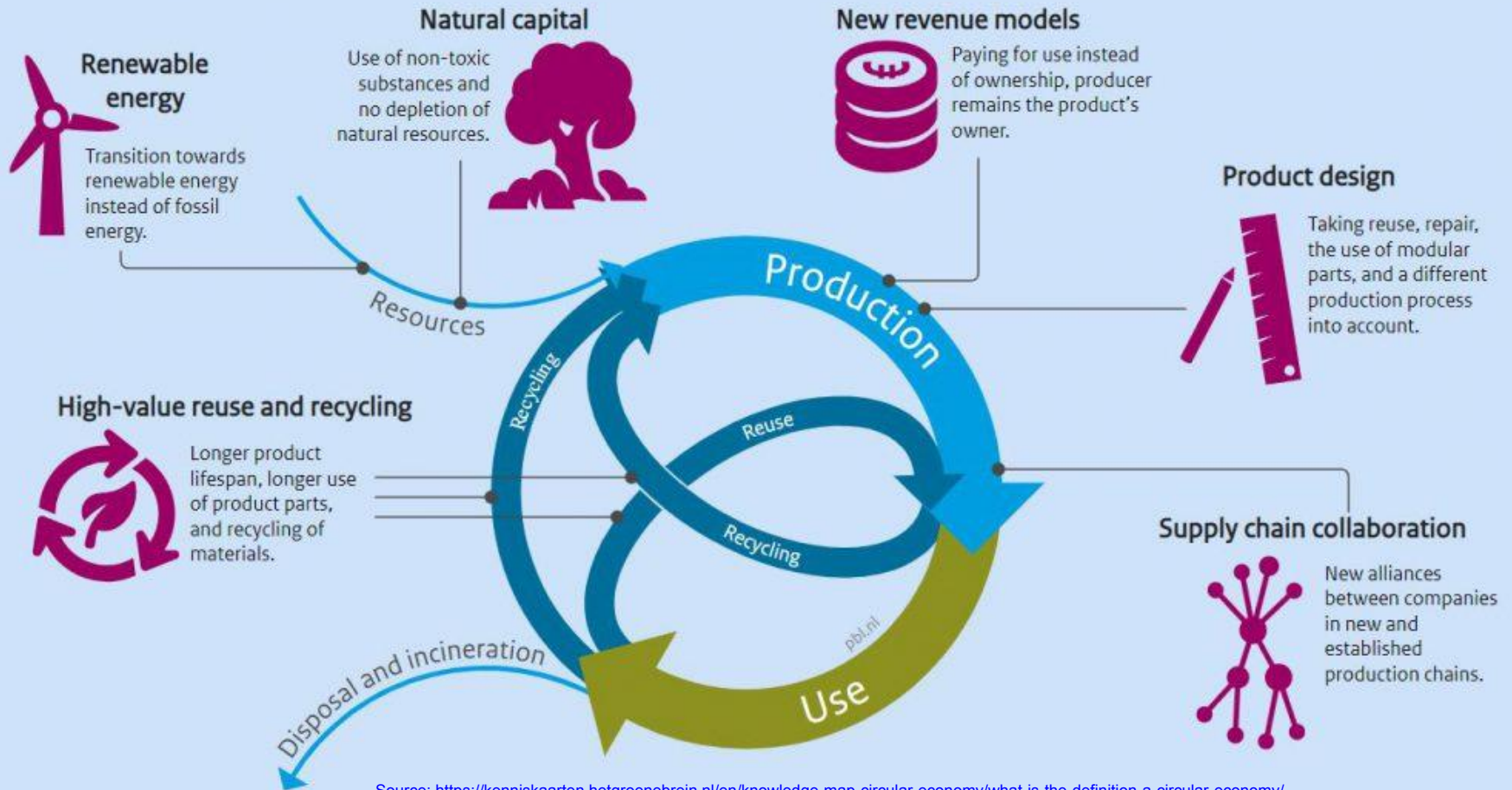
Regenerative design uses whole systems thinking to create **resilient** and equitable systems that integrate the needs of **society** with the integrity of nature.

Whereas the highest aim of **sustainable development** is to satisfy **fundamental human needs** today without compromising the possibility of future generations to satisfy theirs, the goal of regenerative design is to develop restorative systems that are dynamic and emergent, and are beneficial for humans and other species.

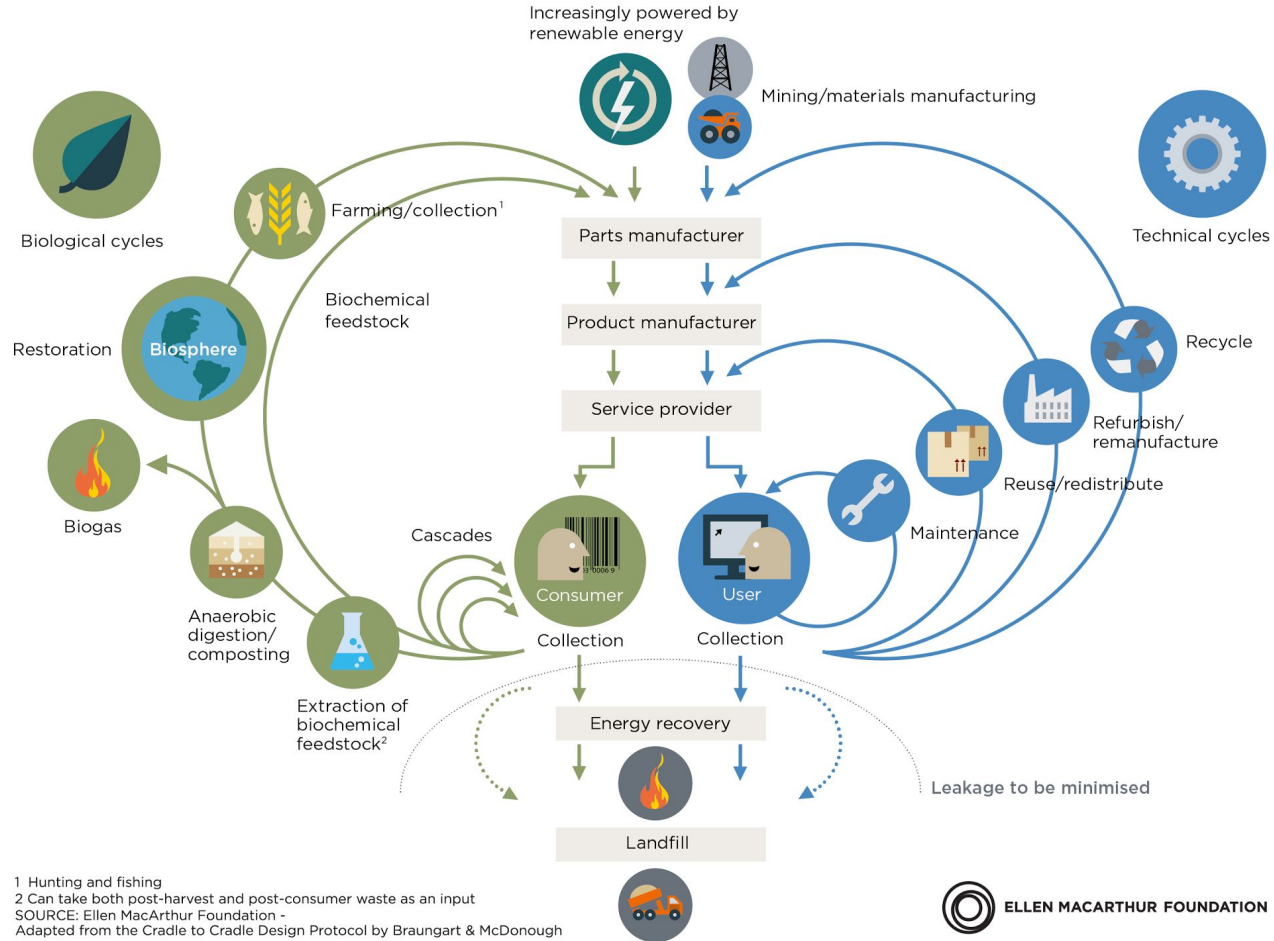
This regeneration process is participatory, iterative and individual to the community and environment it is applied to. This process intends to revitalize communities, human and natural resources, and society as a whole.

Source: https://en.wikipedia.org/wiki/Regenerative_design

Elements of a circular economy



CIRCULAR ECONOMY - an industrial system that is restorative by design



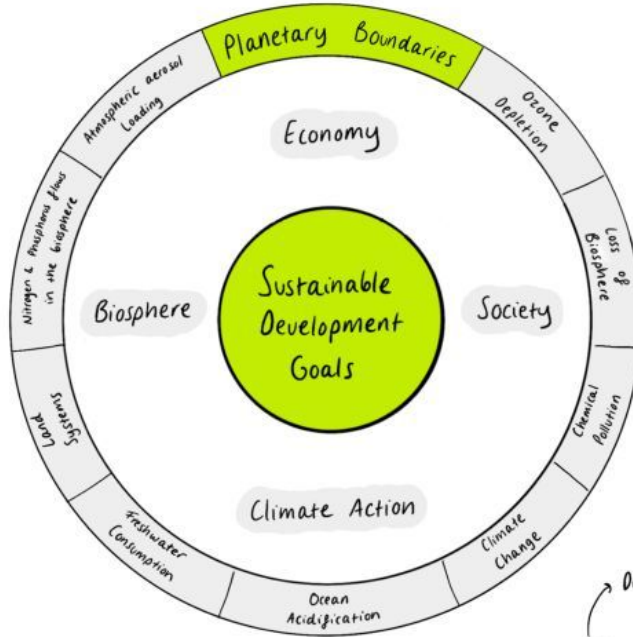
¹ Hunting and fishing

² Can take both post-harvest and post-consumer waste as an input

SOURCE: Ellen MacArthur Foundation -

Adapted from the Cradle to Cradle Design Protocol by Braungart & McDonough

Sustainability



Take → Make → waste

Linear Economy

Design
use ← Make

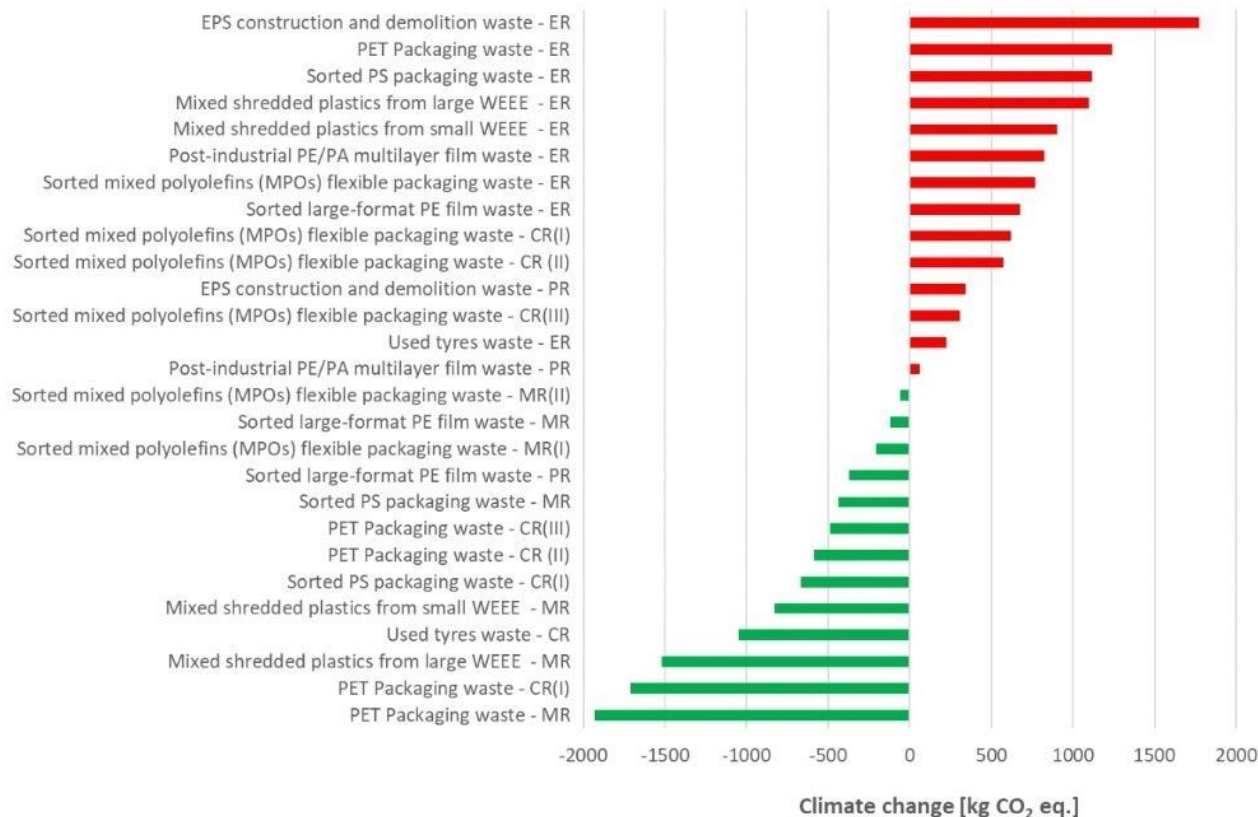
Circular Economy

Design
use ← Make
Regenerate

Regenerative Economy

Diagram by Elise Motalli from Pearson UK on illustrating the #newdesigncurriculum vision.

<https://lnkd.in/geDtKgWn>



The GHG emissions advantages of mechanical recycling (MR) over energy recovery (ER) for plastic waste.

<https://op.europa.eu/en/publication-detail/-/publication/bb91bc32-b19f-11ed-8912-01aa75ed71a1/language-en>

Figure 18. Summary overview of climate change associated with the management of 1 t of various plastic wastes. Negative values (green bars) represent net GHG savings, while positive ones (red bars) represent net GHG burdens. See Table 1 for a description of the different treatment scenarios/technologies. CR: chemical recycling; ER: energy recovery; MR: mechanical recycling; PR: physical recycling.

Doughnut Economics and the City Portrait

Using Kate Raworth's Doughnut economics model to create a City Portrait -recently created a methodology to help any city. It looks like this the 4 lenses.

We can create a Shire Portrait using the same model and customising it for our context, culture, conditions and environment.

The local transfer station - salvaged and recycled materials. Food networks, can we feed ourselves when not feeding tourists during a disaster?

Resilient community, Growth in quality of life and community, Regenerat ecology.

First Steps building community (Based on Circle Economy CE Hubs) Znet initiatives and website.

This project draws on global best practices from DEAL, the Doughnut Economics Action Lab, which shares learnings from other Local Governments in the creation of Circular Economy Frameworks.¹.

Figure 3 The four lenses of the City Portrait



1. Doughnut economics and creating city portraits. <https://doughnuteconomics.org/tools/14>

A photograph of two men smiling in a brewery. The man on the left is wearing a dark jacket over a green sweater. The man on the right is wearing a dark beret and a brown jacket. In the background, there are large copper brewing vessels and pipes.

Find this report online

Connecting the Circular Economy Participate Hepburn Project page.

<https://participate.hepburn.vic.gov.au/connecting-circular-economy-hepburn-shire>

CONNECTING HEPBURN SHIRE'S CIRCULAR ECONOMY

Project team members

Taryn Lane, Hepburn Energy taryn.lane@hepburnenergy.coop

Marie Lakey, Hepburn Energy comms@hepburnenergy.coop

Damien Melotte, Good human damien@goodhuman.com.au

Manny Pasqualini, Hepburn Shire mpasqualini@hepburn.vic.gov.au

