

Circular Economy Model Office Guide

The what, why and how of designing out
waste in office design and builds



Version 1.1

sustainable

BUSINESS NETWORK

Reshaping Profit



Access practical support



Pathway to Sustainability.

Your sustainability journey starts here. Our Pathway to Sustainability comprises practical resources, tools and guides to help your organisation become more sustainable.



WHY should my business become more sustainable?

HOW can my business become more sustainable?

Sustainability is good for business. By becoming more sustainable, businesses become more efficient, they use less resources, staff and stakeholder loyalty can increase, and in many cases costs can be reduced. Sustainability makes good business sense - for organisations of all shapes and sizes.

Yet sometimes sustainability can seem too hard, or too peripheral. Our Pathway to Sustainability explains in simple terms why your business should become more sustainable and how it can do so.

It includes practical resources, tools and guides to help you on your way.

Our Pathway isn't a straight road with checkpoints and an end goal. You can choose your own route on this journey. Wherever you are along it, you will be doing good for your business as well as for the environment and your community. We are always available to guide you if you get stuck in a jam or lost.

Start your Pathway to Sustainability here:



National Events.

Page 1 of 3

- FOODBOWL** **FoodBowl Open Days**
11 Mar 2015 to 12 Mar 2015 - Auckland
The FoodBowl will be opening its doors to the food & beverage sector and any other industry related personnel to its one-of-a-kind open days. [Read more](#)
- How kangaroos can save the world and more at Wellington Zoo**
17 Mar 2015 - Wellington
Network, collaborate and learn Sustainability 101 with the Crew at the Zoo - a practical opportunity to kick off your New Year sustainability goals with inspiring tips and tricks at an event on 17th March. [Read more](#)
- Catalyst R&D** **Long term thinking for long term success**
18 Mar 2015 - Bay of Plenty
We'll show you how to develop products and services with a long term vision, ensuring sustainable success. [Read more](#)

Promote your sustainable achievements



Lunchbox sort out and snack recipes with Munch Cooking

Commercial lawyer-turned-entrepreneur Anna Bordignon started the child-focused Munch Cooking website while raising three of her own. The website offers recipes, an online store stocking eco-friendly, child-focused products and a blog.



[Read more](#)

A warm welcome to our new members:



Promote your sustainable achievements

0:00 / 1:37 YouTube

Philips New Zealand Limited
[Read more](#)

Enviro-Mark Solutions Limited
[Read more](#)

☰ Member Categories ▾

sustainable BUSINESS DIRECTORY

Source Smart Solutions

A directory of members of the Sustainable Business Network. Want to find out about sustainability transparency? Read our [Directory User Guide](#)

Page 1 of 43 >

3R
REIMAGINEERS

3R Group Ltd
3R develops programmes to recycle or responsibly dispose of used products and packaging. From businesses with a specific waste issue to industry-wide projects looking at the full product life cycle, we are experts in product stewardship solutions.
[Read more](#)

Abilities Group

Abilities Incorporated
Contract services to industry: packaging, pricing, labelling, shrink wrapping, electro-mechanical assembly and recycling. Cardboard, Paper, End of life E-Waste and secure destruction.
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AECOM

AECOM
AECOM provides a blend of global reach, local
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Lead system changing projects



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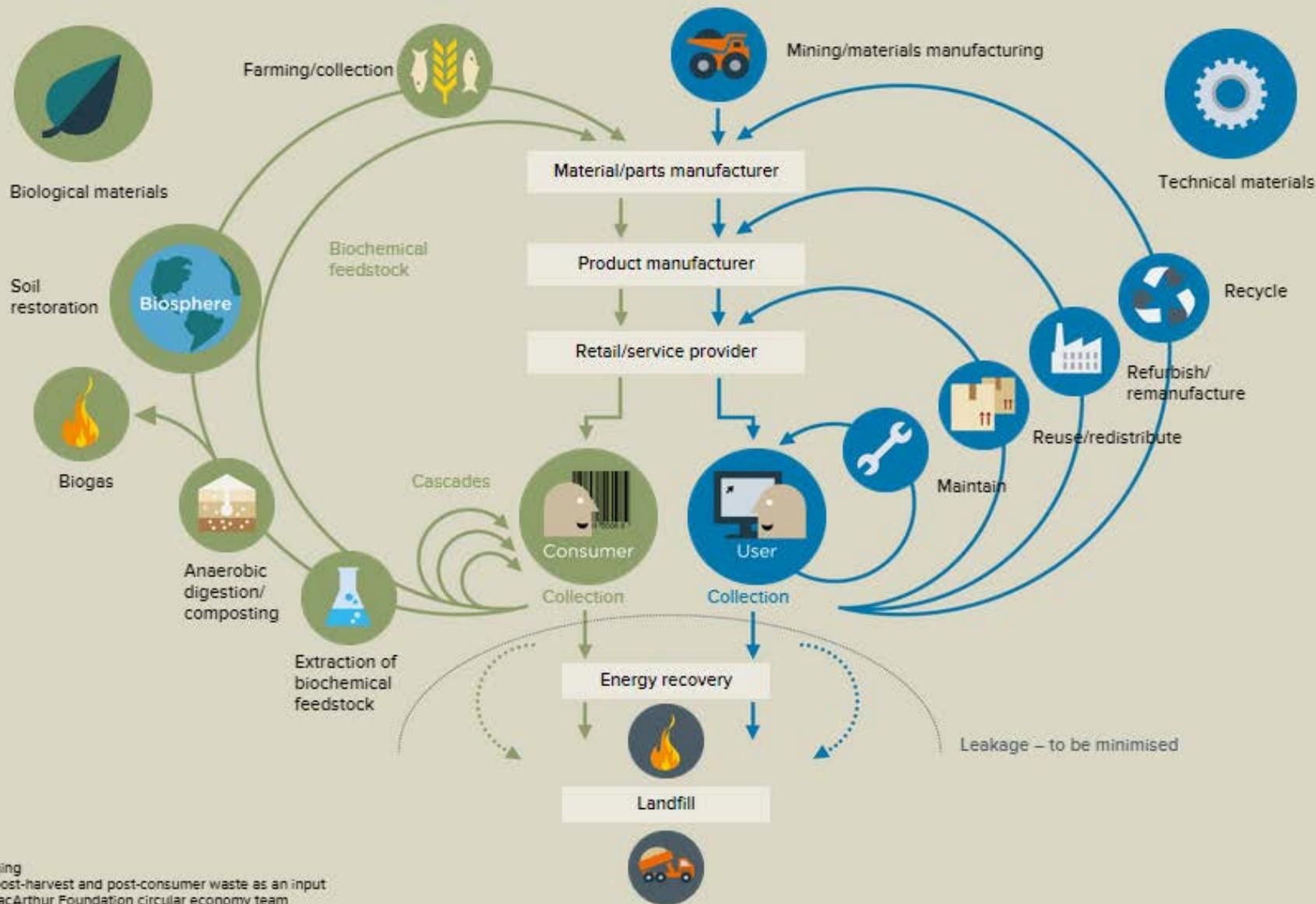


Version 1.1

Circular Economy Definition

A **Circular economy** is one where the lifecycle of materials is maximised, usage optimised and at the end of life all materials are reutilised.

THE 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 circular economy team

Why?

- Optimising use of all resources
- Decouple economic growth from resource use
- Create net positive impacts on the environment
- Create new jobs
- Drive innovation

McKinsey estimates shifting towards circularity could add \$1 trillion to the global economy by 2025 and create 100,000 new jobs within the next five years.



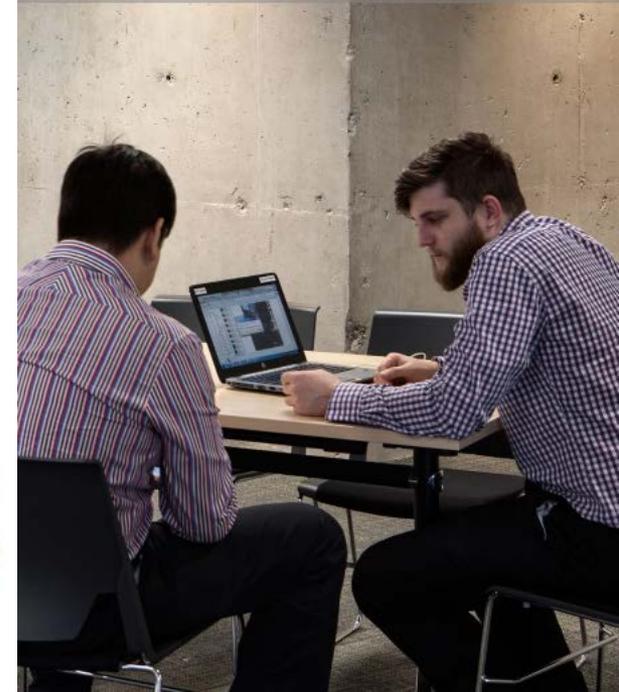
A Circular Economy Model Office (CEMO) aims to minimise waste created by the refurbishment and build of offices by using the principles of a circular economy.

It is a viable and more efficient alternative to the prevailing 'linear' (take - make - waste) model where tonnes of needless waste from office refurbishments and builds ends up in landfill sites around the country.

This Guide and associated Specification has been created by a cross-section of industry as a first step in making circular economy offices the norm as opposed to the exception.

Introduction

A circular economy is one where the lifecycle of materials is maximised, usage optimised and at the end of life all materials are reutilised.



Overview

The basic principles of a Circular Economy Model Office are:

- As many of the existing materials as possible are to be reused in the office fit-out.
- When new materials are required, the supplier must provide an end of life solution (excluding landfill) and the materials must meet minimum environmental standards.
- Waste generated must be diverted from landfill, either for re-use or recycling.





Stage 1 - Cataloguing and analysing existing materials

Materials that are currently available on site and are fit for purpose

Stage 2 - Design

The design principles that need to be employed to achieve a Circular Economy Model Office. This includes the selection of new materials

Stage 3 - Build

The processes and considerations that need to take place at the build stage as well as the 'how to's'

Stage 4 - Soft fit-out/furniture

The key considerations and 'how to's' for reusing furniture elements

Stage 5 - Review and evaluation

Measuring success

Existing materials matrix - overview

Circular Economy Model Office Guide



Site:

Category	Product	Reuse Options	Repurpose Opportunities	Recycle Options	
Flooring	Carpet Tiles	Particular areas in the floor tend to get worn - maximise the number of tiles that are reused by replacing non-worn ones from other areas of the floor.		Interface carpet tiles can be returned to Inzide Commercial for recycling into new tiles under their accredited products stewardship scheme	
		Steam clean			
	Carpet	Extend life by dyeing carpet		wool carpet can be used as a weedmat	wool carpet in the Auckland region can be fully recycled through the Flashbac recycling scheme run by Cavalier Bremworth – most usually for large scale commercial projects where replacement carpet is that
		Steam clean			
	Vinyl (PVC)	Can be Painted			
	Linoleum sheet	Can be restored			Non toxic - biodegradable
	Linoleum Tiles	When installed with releasable adhesive can be uplifted and reused			Non toxic - biodegradable
	Ceramic Tiles			Hard fill for landscaping	
	Wood	Remove and reuse		Panel Wall: cut to the proper height and install on walls as panel slats	North Shore Demolition
				Build furniture: table tops, cabinet, shelf, headboard,	Jacob Demo
Sand and oil or varnish		Place it around doors and windows as moulding or along the bottom edge of walls as a baseboard	The Timber Recycling Co		
Paint		Cabinet refacing/cladding:	Waste Wood Management (non treated wood)		
		Clad feature walls: To add texture	will re-sell or repurpose		
		Make Decorative objects: frames for mirrors/pictures, storage boxes, wood artwork.			
			Waste Companies diverting wood from landfill to fuel,-		

New materials matrix - project specific

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Site:

Category	Product	Quantity ordered	How does it meet the Manufacturing Content requirements?	How does it meet the Products in use requirements?	How does it meet the Product Stewardship and end of life recovery requirements?
Flooring	Carpet Tiles				
	Carpet				
	Vinyl (PVC)				
	Linoleum				
	Ceramic Tiles				
	Wood				
	Composite Wood				
Ceiling	Fibre Tiles				
	Metal Grid				
	Timber				
	Plasterboard				
	Wood Panels				
	Glass				

3 Product stewardship and end of life recovery

The product supplier must have in place a product recovery and recycling programme ensuring all major components (more than 5% by weight*) are re-utilised, downcycled or recycled.

*Note: This excludes electronic componentry.

See Appendix 2, Introduced Product Assessment Framework and Criteria for full details.

1 Manufacturing content

More than 50% by weight of the final product* must be sourced from either:

- Responsibly harvested or rapidly renewable sources, AND/OR
- Recycled content.

In addition, the product must not contain any banned substances.

*Note: This excludes electronic componentry.

2 Product in use

The product must meet low product emission standards for VOCs and formaldehyde.

Other considerations

- Select materials that have long life cycles so there will be fewer requirements for replacement.
- Consider leasing rather than purchasing products, which would create an incentive for the manufacturer or supplier to maximise the life cycle of the product.

Contributors to the CEMO Project and Guide 2015

- Adam Benli, Ali Dahroug, Andrew Walters - Auckland Council
- Alex Reiche - EnviroSpec
- Alex Shaw - MasterSpec
- Andrew Tu'inukuafe - Creative Spaces
- Clare Gallagher - New Zealand Green Building Council
- James Griffin - Sustainable Business Network
- Michelle Johansson - Jasmox/Johansson Group
- Robb Donzé - Inzide Commercial
- Simon Dodd - Warren and Mahoney

Circular Economy Model Office Declaration



Intent

- As much of the existing materials are to be reused in the office fit-out.
- All new materials used require an end of life solution (that excludes putting in landfill) as well as a minimum environmental standard.
- Waste generated must be diverted from landfill either being re-used or recycled.

Confirmation

This statement confirms that this room/building at _____

has achieved the following in the refurbishment/build:

_____ %/amount of original materials in situ where re-used
_____ % of new materials that have met the CEMO new product criteria
_____ %/amount of of materials were diverted from landfill

I confirm all materials from the project have been logged and tracked and that the above information is accurate.

Name _____
Role in project _____
Organisation _____
Signed _____
Date _____

The Circular Economy Model Office Guide.

Circular Economy Model Office



The Circular Economy Model Office is an initiative designed to minimise waste from office refurbishments and builds by using the principles of a circular economy.

A cross-section of the building industry has produced a simple but comprehensive guide on how to produce a Circular Model Office which you can download below.

The Guide demonstrates how the principles of the circular economy, which is a sustainable alternative to the 'take-make-waste' linear economy where the lifecycle of products is maximised, usage optimised and at the end of life all materials are fully re-utilised, are translated to the office refurbishment and build sector.

The Guide not only details the process but provides practical information about how materials can be reused and which organisations will help divert materials from landfills.

This is a world first.

We are now actively looking for the first case studies to put the Guide into practice and build our knowledge of the practical solutions with regards to reusing, repurposing and recycling materials around the country.

The Guide and appendices will be updated accordingly and in particular the Materials Matrix outlining solutions for materials is designed to be a live working document.

So which office wants to be the world's first Circular Economy Model Office?

Please contact james@sustainable.org.nz with potential sites.



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<http://sustainable.org.nz/the-circular-economy-model-office-guide/>

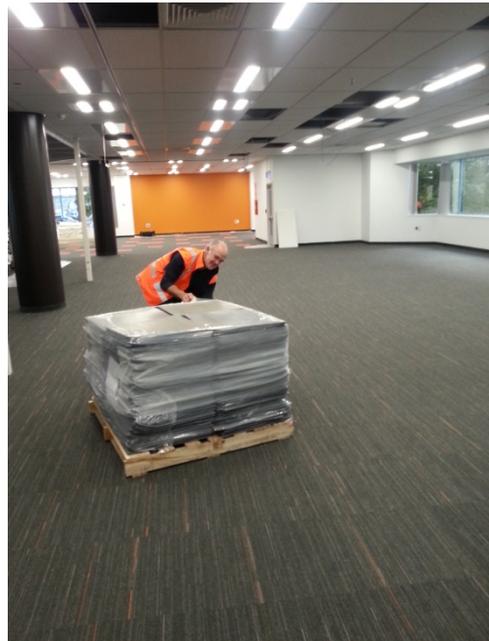
james@sustainable.org.nz



Westpac Dunedin returns



Container about to go to USA



Takapuna Library – last pallet of 3,000m2 getting ready to go.



The problem is getting it back in “**export**” format and correctly palletised



INZIDE
commercial



Efficiency

Saving energy on the lighting system, but also saving energy on systems integrated to make use of the sensors and data



Future-proof

Maintain, sustain, enhance, and integrate — not just today, but as technology evolves



Optimization

Use data-driven insights to optimize resource delivery and streamline building management workflows



Performance

Satisfy regulatory requirements, and optimize lighting for task, performance, and convenience

Facilitating a circular economy by

- greater efficiency, future proofing, optimisation and performance
- offering leasing options
- proactively looking for a lighting upgrade project to trial refurbishment process in NZ

Circular Economy Model Office



New project partner - washroom

Tork washroom dispensers:

Maximising lifecycle of materials

- Dispensers are designed to withstand vandalism, pilferage and wear and tear.

Usage optimized

- Dispensers feature consumption reduction function
- New Easycube technology reduces frequency of re-ordering/shipping orders

End of life materials are re-utilised

- Dispenser recycling partner in Auckland
- Currently working towards more options including repurposing dispensers



The Circular Economy Model Office Guide.

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Which office will be the world's first Circular Economy Model Office?

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