

Business Opportunities

In the Circular Economy

28th July 2022

Salisbury Community Hub
Adelaide
South Australia
Presented by:
Northern Economic Leaders

The Objective

To inform businesses how to make sound investments in creating new markets when designing-out waste



NEL

NORTHERN ECONOMIC LEADERS



PROGRAM

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About the Northern Economic Leaders

Northern Economic Leaders (NEL) is an apolitical business leaders' network that supports growth in northern Adelaide both socially and economically.

NEL provides a forum for leaders to share their collective knowledge, influence government policy and bring together firms to make northern Adelaide the best place in South Australia to run a business.

Operating as a group since 2007 and formalised to be an incorporated association operating regionally across northern Adelaide. This follows strong interest in having stronger business leadership in northern Adelaide and with the development of the Northern Economic Plan with a cross-government focus on northern Adelaide.

Welcome to Northern Economic Leaders (NEL) Circular Economy Forum. Our mission is to propel our State to be amongst the world's leaders in the growth of a sustainable economy.

Our business community's sustainability starts 'within our own backyard'. South Australia is recognised as a leader in adopting to a sustainable economy. The Circular Economy interfaces with local sustainability but is not well understood. It requires awareness raising, education, skills and training with regards to Circular Economy principles, practices and fundamentals.

At the very least, awareness and an improved understanding of the Circular Economy can assist in leading businesses to innovation, research & development and implementation of effective ways that minimise the extraction of our State's finite resources. With an improved knowledge of the Circular Economy, businesses are better equipped to assist in the reduction of the severe impacts of climate change. This also leads to enhancing management of our food security and product life cycle.

Redefining how South Australian businesses can better optimise food security, waste, recycling, energy, and water usage can enable a competitive advantage, that is more efficient and profitable. By facilitating this Circular Economy Forum you will be able to hear from a broad range of engaging and progressive specialists from diversified organisations that demonstrate and model the optimisation of waste, recycling, energy and water initiatives/practices.

This forum is the first step by NEL to educate and encourage collaboration that will promote, market and enable the local business community to take up new and/or re-shaped opportunities, making our State the hub for sustainable industries and lead the nation in Circular Economy R&D. *"The Northern Adelaide Region is perfectly placed to be at the epicenter for industries to up-cycle food and food waste, reuse, re-purpose, reconstruct and recycle products to close the loop on the unsustainable linear economy"*.

This Circular Economy Forum is designed to shine the light towards your sustainable future. NEL acknowledges and is most grateful to our Major Partner Green Industries SA; Gold Sponsor Aurecon; Host Partner City of Salisbury; our Silver Sponsors MEGT, City of Playford, BioBag, Powertech Energy; our Bronze Sponsor LMS Energy; our Food Sponsors SA Produce Markets, Bickfords, Barossa Fine Foods; Workshop Partners Fight Food Waste CRC, ASBN and our Media Marketing Partner Admotion Media. Thank you also to all the exhibitors.

On behalf of NEL, we look forward to your input/feedback on the day and to your continued support.

Franz Knoll
Chair of the Board – Northern Economic Leaders



~~A blank page.~~
Infinite possibility

So, what do you see?

In our world, every project starts life as a blank page. But look beyond the invisible, and you'll see the infinite. A thriving place with a purpose — a circular economy in the making. A place that leaves a legacy for the future.



The possibilities are, well, infinite as we bring ideas to life and co-create with our clients a better future for people and the planet.

In 2021, Aurecon ranked in The AFR/BOSS Most Innovative Companies list.

Aurecon is an engineering, design and advisory company, but not as you know it. We've reimagined engineering.

Our teams work with clients to design-out waste, keep assets at their highest value and regenerate nature. We help our clients thrive in a resource and climate constrained world.

www.aurecongroup.com



**Government
of South Australia**

Green Industries SA

Green Industries SA is the lead government agency enabling South Australian businesses and industry sectors to accelerate their sustainability and transition to a more Circular Economy.

We support businesses to extract the maximum value from materials while reducing resource use, helping them to become cleaner and leaner to improve profits and benefit the environment. We deliver funding for resource recovery infrastructure, Circular Economy market development, and direct support to businesses and industry to implement high-performing waste management systems that will shrink carbon and material footprints, while increasing outputs.

Visit our website to learn more: www.greenindustries.sa.gov.au

About the Circular Economy

A Circular Economy decouples economic activity from the consumption of finite resources. It is based on three principles, driven by design:

1. Eliminate waste and pollution
2. Circulate products and materials (at their highest value)
3. Regenerate nature

The Circular Economy is underpinned by a transition to renewable energy and materials. It is a resilient system that is good for business, people and the environment.

Circular Economy approaches are being adopted by businesses and governments around the world as a way to align both economic and environmental outcomes.

Waste and other negative environmental impacts are 'designed out' of economic systems, through buying better, providing more products as services, and capturing the value of materials that would otherwise be lost.

The Circular Economy is a \$210 billion opportunity for Australia alone, and one that can help businesses future-proof their operations, reduce spend on energy and waste, cut greenhouse gas emissions and more.

The independent business leaders' network, Northern Economic Leaders (NEL), brings together leading experts from government and industry in a unique forum.

The objective is to help businesses to create social and economic value through applying Circular Economy approaches.

Designed by business for business, the forum features:

- a program of expert speakers presenting the latest in Circular Economy concepts and applications
- peer-to-peer learning, with businesses and experts working on each others challenges
- tangible examples of the Circular Economy in action through business case studies

NEL is planning an ongoing series of training, workshops and site visits around the transition towards a Circular Economy throughout 2023 and beyond.



Aurecon is delighted to be part of this pioneering forum that brings together decision makers from different disciplines and organisation types to support Northern Adelaide's transition to a Circular Economy.

Circular Economy approaches consider how materials flow through the economy at the highest value, by design. Assets and products last longer, sometimes through re-purposing and reusing in different forms. Most importantly, natural systems are regenerated such that our economic systems are truly sustainable, rather than simply doing less harm.

The Circular Economy is also intrinsically linked to climate change: circular economies must be decarbonised. Decarbonised economies must be circular. These approaches are required for businesses – and all of us – to thrive in a resource and carbon constrained world.

At Aurecon, we bring ideas to life – imagining and co-creating with our clients a better future for people and the planet. My colleagues and I are looking forward to sharing our experiences and learning more about your projects, ideas, and challenges.

Jodie Bricout
Principal, Circular Economy
at Aurecon

7.30-9am	<p>Executive breakfast Breakfast welcome: Franz Knoll, Chair - Northern Economic Leaders (NEL) Managing Director Barossa Fine Foods</p> <p><i>Official key address & event launch:</i> Hon Susan Close MP, Deputy Premier, Minister for Climate, Environment and Water</p> <p><i>Keynote speakers - Circular Economy opportunities for South Australia</i></p> <ul style="list-style-type: none"> Jodie Bricout, Circular Economy Leader at Aurecon Dr Steven Lapidge, CEO, Fight Food Waste Ltd
9am	<p>Registration opens <i>Grab a coffee and get networking</i></p>
9.30am	<p>Event launch & Welcome to Country <i>Event welcome & introduction to MC, Jodie Bricout: by Franz Knoll, Chair NEL</i></p> <p><i>Welcome to Country: Cliffy Wilson</i></p> <p><i>Event launch key addresses:</i></p> <ul style="list-style-type: none"> Mayor Gillian Aldridge, City of Salisbury Mayor Glenn Docherty, City of Playford
9.50am	<p>Businesses opportunities in a Circular Economy From concepts to action, find out what the Circular Economy is, why it's so important and how it will benefit our state. <i>Keynote address:</i> Jodie Bricout, Circular Economy Leader at Aurecon <i>Followed by presentations and panel discussion with:</i></p> <ul style="list-style-type: none"> Professor Ian Overton, Chief Executive at Green Industries SA Michelle English, General Manager City Development, City of Salisbury Dr Steven Lapidge, CEO at Fight Food Waste Ltd
11-11.30am	<p>Networking break and expo</p>
11.30-12.30pm (Parallel sessions)	<p>Challenges, successes and outlook for the food and organics sector Australia is a standout producer of safe, high-quality food. We grow enough for 75 million people in a country with a population of 26 million, but we waste 7.6 million tonnes of this every year. Hear about the economic, social and environmental opportunities of preventing food waste, creating new and innovative products and collaboration across supply chains. <i>Speakers:</i></p> <ul style="list-style-type: none"> Claire Kneller – Executive Director, WRAP Asia Pacific & Head of the Voluntary Commitment at Stop Food Waste Australia Jonathon Middis – Innovation Manager, Fight Food Waste CRC Laurie Kozlovic – Managing Director, Woolworths 360 <p><i>In partnership with the Fight Food Waste CRC</i></p>

	<p>Challenges, successes, and outlook for the built environment How do we make our buildings and infrastructure last longer, design out construction waste, cut the impact of materials and shift supply chains? Join South Australian built environment professionals to highlight what opportunities are currently being realised, what more could be done and highlight barriers to overcome. <i>Speakers:</i></p> <ul style="list-style-type: none"> Ken Long, Chairperson, Adelaide Sustainable Building Network and South Australian Sustainability Lead for Built Environments, Mott MacDonald Deborah Davidson, Director, dsquared Consulting Jeff Robinson, Global Sustainable Design Expertise Leader, Aurecon Deborah Aukland, Senior Adviser, Department for Education, South Australia <p><i>In partnership with the Adelaide Sustainable Building Network</i></p>
12.30-1.30pm	<p>Networking lunch and expo</p>
1.30-2.30pm (Parallel sessions)	<p>Beyond materials: water and energy in the Circular Economy Water and energy are precious resources for any business. Besides the sheer operational cost, companies will increasingly need to design out waste and go renewable to ensure their social license to operate. Hear from experts and industry on how they are turning challenges into opportunities.</p> <ul style="list-style-type: none"> Dr Jayant Keskar, CEO, Enpro Envirotech Brad Carruthers, Area Manager Water Light Division SA, NT, Ecolab David Jones, Maintenance Engineer, Barossa Fine Foods Andrew Weller – CEO, Glaciem Cooling
	<p>Creating systems change through collaboration While the Circular Economy presents fantastic opportunities for businesses, they can't be achieved alone. In this session we will see how businesses are working with supply chains and regulators to get innovative products to market – bringing manufacturing back to South Australia – and look at the importance of skills.</p> <ul style="list-style-type: none"> Jodie Bricout, Circular Economy Leader, Aurecon Tiana Nairn, Group Manager Policy, LMS Energy Scott Morton, Director, Biobag World Australia Laurie Kozlovic – Managing Director, Woolworths 360
2.30-3pm	<p>Networking break and expo</p>
3-4pm	<p>From concepts to action Action learning with Gen Cother, Business Development Manager at the Action Learning Institute An absolute highlight of the forum, in this session you will participate in small group discussions, in the form of a 'superfast sample set meeting' to investigate an opportunity identified throughout the day. Participants will benefit from the 'fresh eyes' of outsiders, objective questioning, and the collective knowledge of the group. By the end of the session, participants will commit to a first action toward transitioning their business for the Circular Economy.</p> <p>Conclusions and next steps Franz Knoll Chair, Northern Economic Leaders, Managing Director, Barossa Fine Foods</p>

Guest Speakers



Hon Susan Close MP
DEPUTY PREMIER



Professor Ian Overton
CHIEF EXECUTIVE
GREEN INDUSTRIES SA



Jodie Bricout
CIRCULAR ECONOMY LEADER
AURECON



Franz Knoll
MANAGING DIRECTOR
BAROSSA FINE FOODS



Genevieve Cother
BUSINESS DEVELOPMENT MANAGER
THE ACTION LEARNING INSTITUTE



Dr Steven Lapidge
CHIEF EXECUTIVE OFFICER
FIGHT FOOD WASTE LTD



Dr Jayant Keskar
FOUNDING DIRECTOR AND CEO
ENPRO ENVIROTECH PTY LTD, AUSTRALIA



Michelle English
GENERAL MANAGER CITY DEVELOPMENT
CITY OF SALISBURY

Other Speakers/Moderators

Mayor Gillian Aldridge – City of Salisbury

Mayor Glenn Docherty – City of Playford

Ken Long – South Australian Sustainability Lead, Built Environments, Mott MacDonald & Chairperson, Adelaide Sustainable Building Network

Claire Kneller – Executive Director, WRAP Asia Pacific & Head of Voluntary Commitment, Stop Food Waste Australia

Jonathon Middis – Innovation Manager, Fight Food Waste CRC

Deborah Davidson – Director, DSquared Consulting

Brad Carruthers – Area Manager, Water Light Division SA/NT, Ecolab

David Jones – Maintenance Engineer, Barossa Fine Foods

Jeff Robinson – Global Sustainable Design Expertise Leader, Aurecon

Scott Morton – Director, Biobag World Australia

Tiana Nairne – Group Manager Policy, LMS Energy

Nick Roach – Associate Principal ARUP

Deborah Aukland - Senior Adviser, Department for Education, South Australia

Laurie Kozlovic – Managing Director, Woolworths 360

Andrew Weller – CEO, Glacem Cooling

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WORKSHOP PARTNER



We Print on Anything!

PRINT PARTNER

BIOBAG AUSTRALIA

BioBag Australia manufactures 100% compostable alternatives to traditional plastic bags. Certified to Australian standards, BioBag's compostable bags and ventilated kitchen caddies are supplied to households through metropolitan councils. Forward thinking supermarkets are also replacing single-use produce 'barrier' bags with compostable produce rolls. A Green Industries SA grant of \$500,000 has supported investment in the installation of equipment to enable increased production of bioplastic of up to 1,000 tonnes of compostable film per annum and associated works.

DOMICILIARY EQUIPMENT SERVICE

Domiciliary Equipment Service (DES) supports the needs of more than 15,000 South Australians requiring assistive technology equipment and home modification services. This equipment can be an expensive purchase with significant waiting times for people in need. DES has applied Circular Economy thinking to improve the provision of this equipment by using a service model (refurbishment and rental/loan) instead of a product supply model. This model is lowering costs, shortening equipment supply times and is more environmentally sustainable. A Circular Economy analysis funded by Green Industries SA shows the average life for disability equipment under the DES service model is 5.2 years, compared with just six months under a standard model.

MAKERSPACE ADELAIDE

Shared fabrication spaces such as Makerspace Adelaide enable the community to participate in a Circular Economy by learning about the ways we design, make, use and dispose of materials. From shared access to tools and equipment, to recovering and repurposing materials, to learning design, making and repair skills, these spaces enable people to develop Circular Economy literacy through education and practice. The open access workshop provides 3D printing, laser cutting and digital fabrication equipment. Makerspace Adelaide received a grant of \$300,000 under Green Industries SA's Shared Fabrication Program to assist with its relocation to new premises in Adelaide's city centre.

PRECYCLE

An innovative South Australian recycling initiative developed by Premier Insulation is Precycle, a service that removes and recycles discarded building materials from home construction sites. Green Industries SA's review showed an increase in landfill diversion of 76% for the Precycle process compared to 10% for a business-as-usual approach, and a reduction in the number of skip bin empties per house.

X-FRAME

X-Frame is a structural framing system designed to meet Circular Economy requirements. It is being piloted in South Australia with the support of Green Industries SA's partnership with Innovyz. The modular system enables buildings and office fit-outs to be constructed in a way that makes it possible to recover and reuse all building materials when the structure is no longer needed - dramatically reducing the amount of construction waste sent to landfill. The unique self-braced geometry means that the entire wall assembly, including all interior linings and external claddings, can be rapidly dismantled and recycled/reused.

HOLLA-FRESH

Horticulture company Holla-Fresh has embraced innovation, provided a boost for the regional economy, inspired new research and laid the groundwork to reduce its carbon footprint and bring tangible results for its business. Heat was one of its most important inputs, but it was also one of its most expensive and greenhouse gas intensive. What began with the company asking Green Industries SA for help in sourcing an alternative to its oil-fired boiler for heating its glasshouses, ended with pyrolysis, a renewable energy technology and a high-quality and lucrative by-product, biochar. In addition to reduced costs its process is now carbon negative. greenindustries.sa.gov.au

JEFFRIES GROUP

Jeffries Group's Buckland Park composting facility 30 kilometres north of Adelaide is helping South Australia maintain its nation-leading role in reducing organic waste to landfill. The custom-designed 'ROSS' (Recycled Organics Screening System) incorporates magnets and x-rays to detect and remove contaminants from mulch and compost products. A Green Industries SA grant of \$300,000 supported the installation of this state-of-the-art system. Jeffries Group invests in innovative solutions to improve its processing capabilities and to diversify to suit end markets. Development of a new pelletised organic fertiliser product was supported by a Green Industries SA grant of \$272,000.

PEATS SOILS & GARDEN SUPPLIES

Peats Soils & Garden Supplies invests in specialised infrastructure to increase the quality and quantity of compost processed from kerbside collected food and garden organics and other organic waste streams. Peats also add value through new product development including Peats Blend 437™ - a unique finally screened humus which has been further remanufactured into Peats Tailormade™ granules and pellets to allow easy application for landscape, broadacre and agriculture. Peats also extracts additional value from recovered organic material through anaerobic digestion, used to generate

bioenergy to supply electricity at its Brinkley facility. It has received grants of some \$750,000 from Green Industries SA.

SIMS METAL MANAGEMENT

After masonry, soil and organics, metals are the fourth greatest contributor by weight to South Australia's resource recovered materials. Most metals are sourced from the commercial and industrial sector. Sims Metal Management has received a \$500,000 grant from Green Industries SA for advanced metal sorters to increase the recovery of clean metals. The equipment, robots which sort residual metals, has been installed at Sims' National Beneficiation Plant at Wingfield in Adelaide. This investment will enable increased throughput and recovery of shredded metal. Sims estimates a diversion of 7,000 additional tonnes within the first full year of operation and 10 additional FTE positions.

NORTHERN ADELAIDE WASTE MANAGEMENT AUTHORITY

NAWMA operates world leading resource recovery and recycling centres in Adelaide's northern suburbs, a cornerstone of the Circular Economy in South Australia. It is established and owned by the City of Playford, City of Salisbury and Town of Gawler. With the Circular Economy at the forefront of its thinking, NAWMA continually invests in infrastructure to improve processes to extract the maximum value out of the household kerbside bin system and Resource Recovery Centre's to ensure there are end markets for recovered materials. NAWMA has received some \$2 million in grant funding from Green Industries SA to support the expansion and future proofing of its Materials Recovery Facilities. NAWMA recovers glass, plastics, metals, paper and cardboard, ready for secondary processing and input into procurement opportunities in South Australia.

RECYCLING PLASTICS AUSTRALIA (RPA)

RPA is South Australia's primary plastics reprocessor. RPA processes domestic, low-grade waste and turns it into plastic granules to be reprocessed into industrial products such as irrigation piping and bollards. It provides a solution to the mixed rigid plastic recovered from council kerbside collections, diverting it from landfill, creating jobs and stimulating economic activity - in brief, a genuine Circular Economy. In 2019 a loan of \$3 million from Green Industries SA boosted redevelopment of the Kilburn-based business into a world-class, export-ready facility. The loan is complemented by RPA's investment of \$9.5 million for advanced manufacturing and sorting equipment, including technology to turn plastic waste into high quality granules for interstate and overseas export. In 2020 RPA received further funding support with two grants totalling \$1 million for specialised equipment to support development of new markets for mixed plastics.

ADVANCED PLASTIC RECYCLING (APR)

APR is contributing to the Circular Economy by turning waste plastic and waste timber into valuable products for the building and construction industry. Its products are manufactured at the company's plant in Adelaide from post-consumer kerbside recycled plastic and postindustrial sawmill waste that would otherwise be sent to landfill. Its range of products can be found in parks, gardens and schools, by the side of the nation's roads and throughout the transport, mining and agricultural industries. The process is as environmentally friendly as the products. There are virtually zero emissions, a little steam is all that is produced. Little energy and water is needed because heat used to melt the plastic is largely generated by friction and the water comes from a closed recycled system. APR has received infrastructure grant funding of \$300,000 to support the development of its innovative business.

ELECTRONIC RECYCLERS AUSTRALIA (ERA)

Electronic Recyclers Australia (ERA) dismantles televisions and computers to recover valuable materials including silver, gold, copper, aluminium and palladium. It has received a grant of \$250,000 from Green Industries SA to support the expansion of processing and upgrade systems to increase sorting capacity.

ECOCYCLE

Ecocycle recovers and recycles mercury-containing waste using state-of-the-art equipment. It has received a grant of \$250,000 from Green Industries SA to install lamp processing equipment for light globes to extract metal (including aluminium and copper), glass and fluorescent powder (including mercury).

CDS SA

South Australia leads the world with its container deposit scheme, with cash paid for beverage containers. CDS SA is exporting world leading Circular Economy technology to simplify recycling of beverage containers. Its technology provides recycling facilities with the opportunity to improve productivity, improve customer relationships and provide secure, auditable product management. Green Industries SA provided a grant of \$300,000 to assist with the development of the automated vision sorting technology. It recognises deposit containers in any condition. It was developed in partnership with SAGE Automation, Macweld Industries and the University of South Australia in 2017-18 it anticipated the adoption of container deposit schemes interstate. Its foresight has proven correct with CDS experiencing strong demand with sales in QLD, WA and ACT.

See the Circular Economy in action at
www.greenindustries.sa.gov.au



Green Industries SA

Green Industries SA supports South Australian businesses and industry sectors to accelerate sustainable change and transition to a more circular economy.

Our Business Sustainability Program offers grants to South Australian businesses and industry sectors for projects that will help to accelerate sustainable change through improved materials and resource efficiency, better-practice waste management, leaner and cleaner production, and implementation of circular economy principles and practices.

Visit our website to learn more about the program: greenindustries.sa.gov.au/bsp-funding



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