



Implementing Circular Procurement in Local Government

Consider that 75% of all of the aluminum made since 1886 is still in use
William J O'Rourke

Anyone who believes in indefinite growth on a physically finite planet is either mad, or an economist
Sir David Attenborough

Circular public procurement is a powerful tool that city governments can use to shape the transition towards a circular economy. With public procurement accounting for 15-20% of global GDP and sub-national governments being responsible for almost 50% of procurement decisions, city governments have an important role in shaping local circular economies.

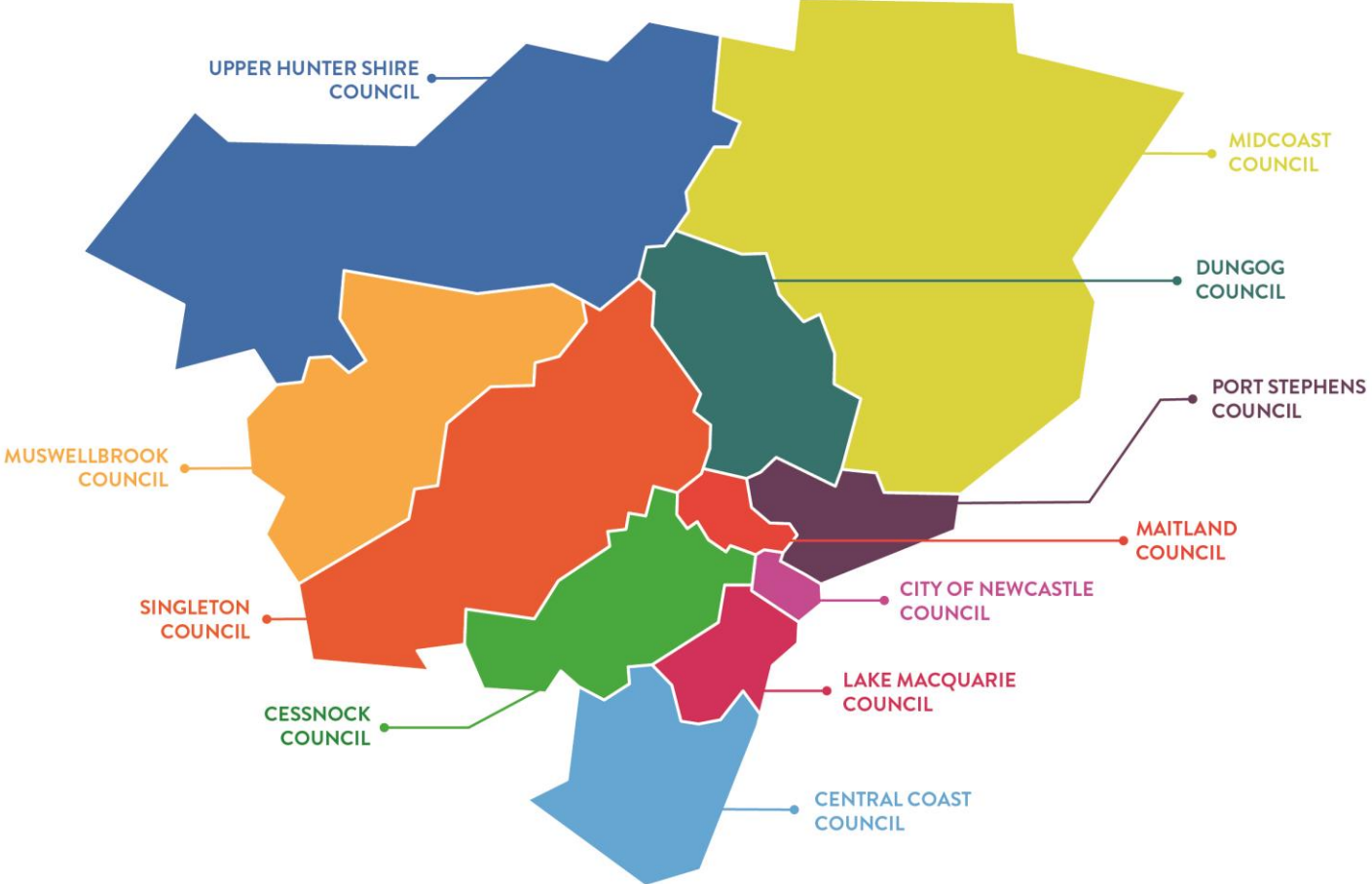
Ellen MacArthur Foundation

Waste and pollution are not accidents, but the consequences of decisions made at the design stage, where around 80% of environmental impacts are determined.
Ellen Macarthur Foundation

What I'll cover today

Project Context	<ul style="list-style-type: none">• Who We Are• The Project• Overview of Circular Procurement in Australia
Project Outcomes	<ul style="list-style-type: none">• Our Process• Key Findings• Tools Developed
Project Learnings	<ul style="list-style-type: none">• Product Selection• Cultural and Organisational Practices• Further Work Needed
Top Tips and Takeaways	

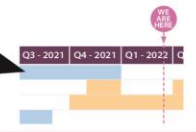
Hunter Joint Organisation



Our Circular Economy Program

The following implementation program shows new and in-progress initiatives described above as well as initiatives that have been completed in the last 6 months to capture the great progress in the region and guide the next 12 months of implementation.

CLICK ON THE TIMELINE TO VIEW DETAILED PROJECT INFORMATION



		Project Name	Q3 - 2021	Q4 - 2021	Q1 - 2022	Q2 - 2022	Q3 - 2022	Q4 - 2022	Ideas	Project Details
 Overarching		Circle City Scan								
		Circular Economy Engagement Program								
		Circular Economy Event Program								
		Circular Economy Framework and Policy								
		Other CE Working Groups								
		Prioritisation of Future Project Ideas								
 Regional Circular Economy Knowledge Hub		City of Newcastle 10yr Environment Strategy								
		Regional Education Program								
		Circular Classroom								
		Hunter Circular Economy School Workshops								Circular Metri
		Circular Economy Innovation Hub								
		Circular Economy Living Lab								
 Pivoting and Advancing Industry		Circular Economy Regional Website and Newsletter								
		Circular Economy Data and Analytics Project								
		Circular Economy Precincts								
		Hunter Biocircular – Organics Processing								Circular Rigid Hunter Circul Project Reuse of coal E-Waste Micr
		Circular Economy Think Tank								
 Driving Circular Markets		Circular Scenario Planning								
		Circular Economy Trading Platform								
		Circular Economy Procurement Program								
		Circular Economy in the Built Environment								
		Regional Circular Community Map - P1								Localised and Circular Food project
	Regional Circular Materials Map and Database - P1									
	Low Carbon Road Project									

Circular Economy Procurement Program

Hunter Joint Organisation

Local Government circular procurement analysis on current activities. Coordinate and educate councils on procuring circular products. Develop a joint procurement framework to scale circular procurement and markets.

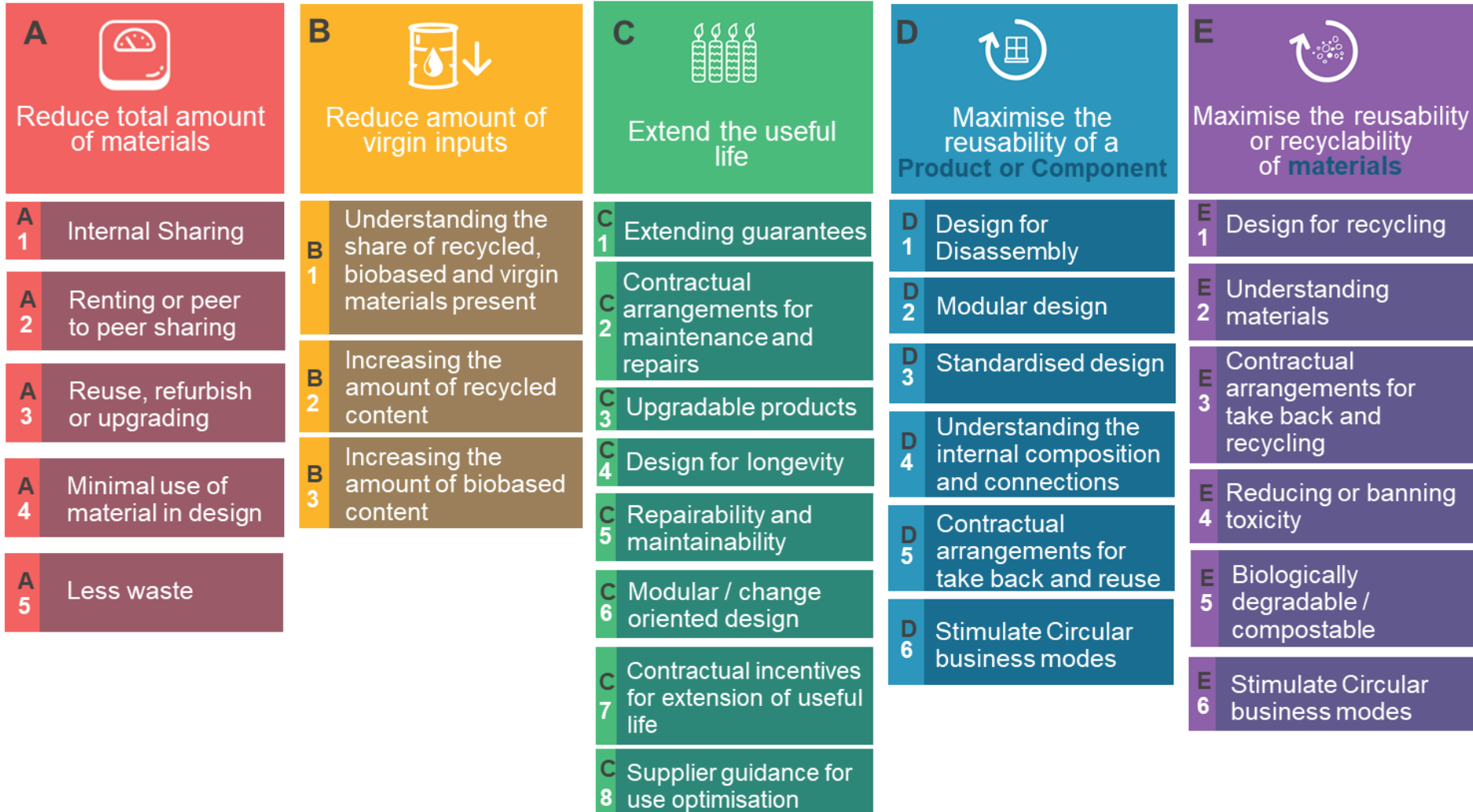
The Hunter Central Coast Circular Procurement Project



Consultants and Partners



What do we mean by Circular Procurement?



What's Driving Circular Procurement in Local Government

National

- National Waste Policy and Action Plan
- Recycling Modernisation Fund
- Australia's Long-term Emissions Reduction Plan
- Australian Circular Economy Hub
- Supply chain disruptions and price volatility

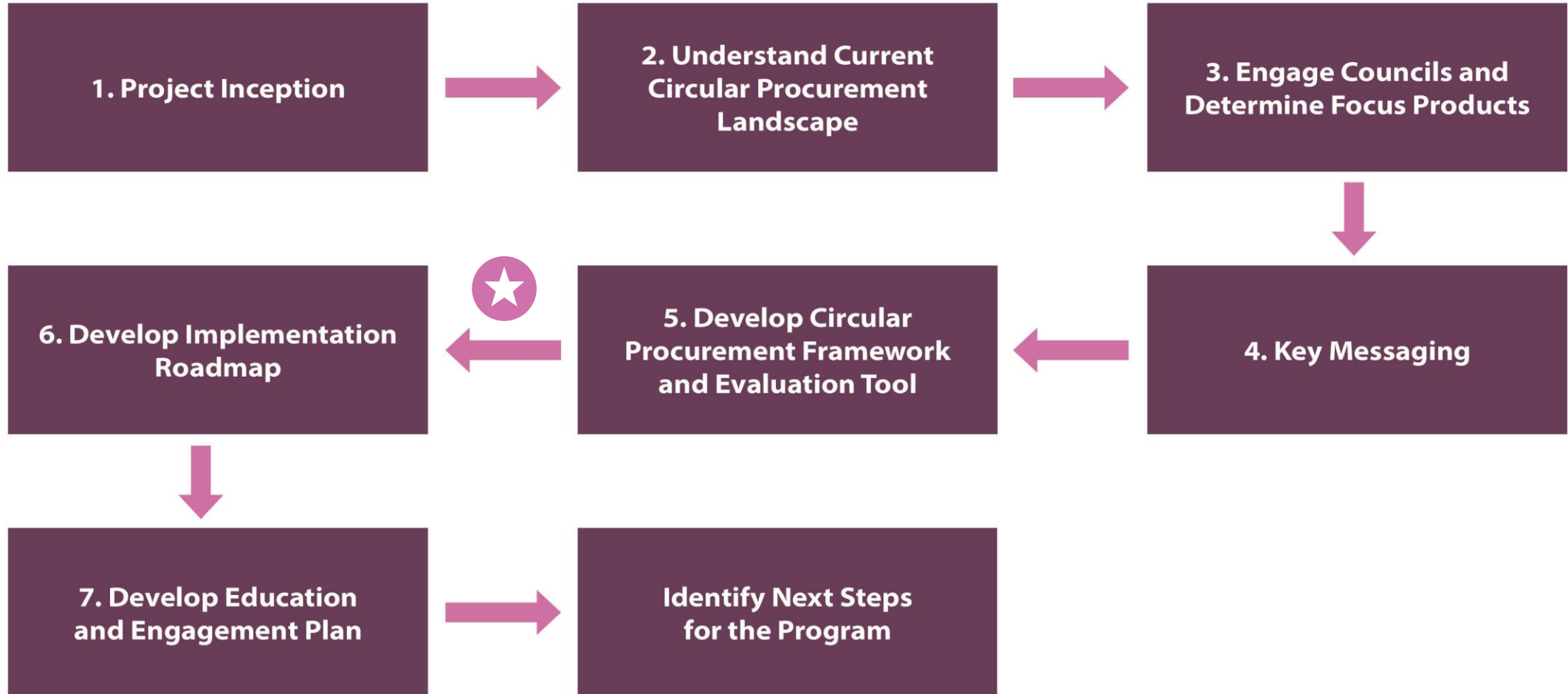
State

- NSW Waste and Sustainable Materials Strategy
- Sustainable Procurement Guidelines for Local Government in NSW
- NSW Circular Economy Policy
- NSW Plastics Action Plan
- Recycle First Victoria (driving innovation in VIC which can be leveraged in NSW)
- NSW Climate Change Policy Framework and Net Zero Plan
- Remanufacture NSW Fund
- NSW Circular

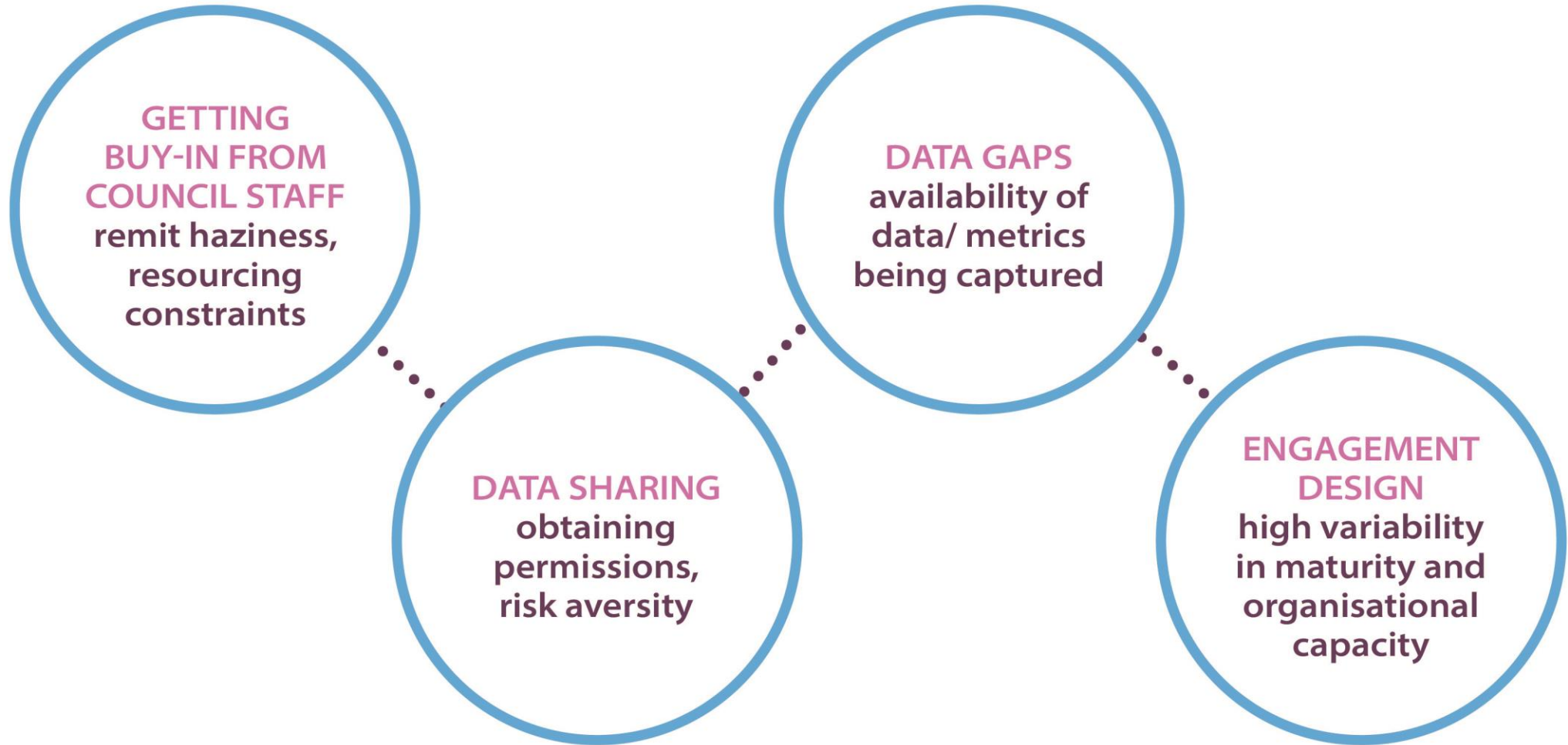
Regional / Local

- Lake Macquarie City Council's Circular Economy Policy
- City of Newcastle Environment Strategy (in development)
- Alignment with existing procurement priorities including sustainability, local procurement, value for money
- Strategic imperative to diversify and strength economy and job market

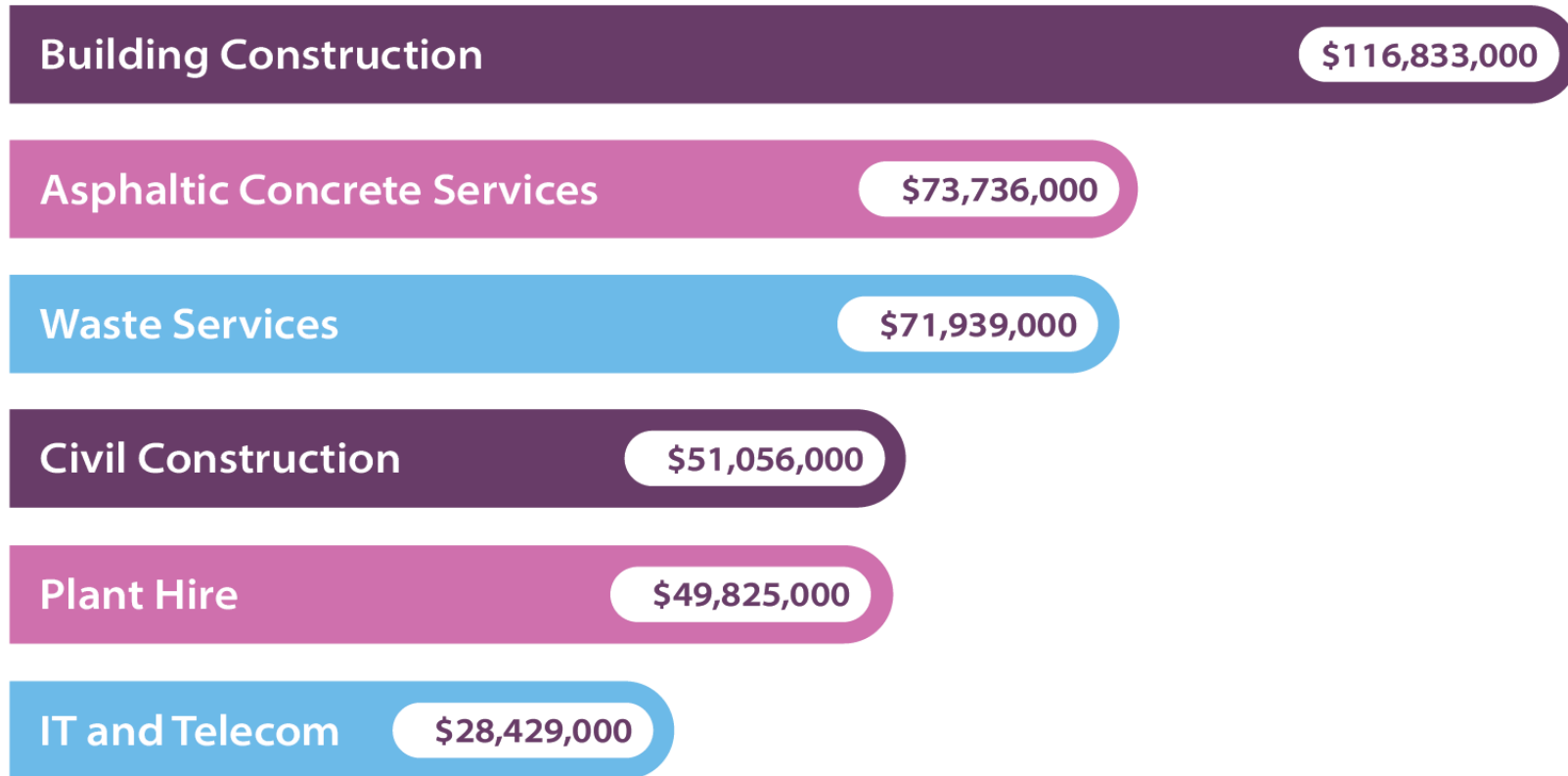
Project Process



Process Challenges

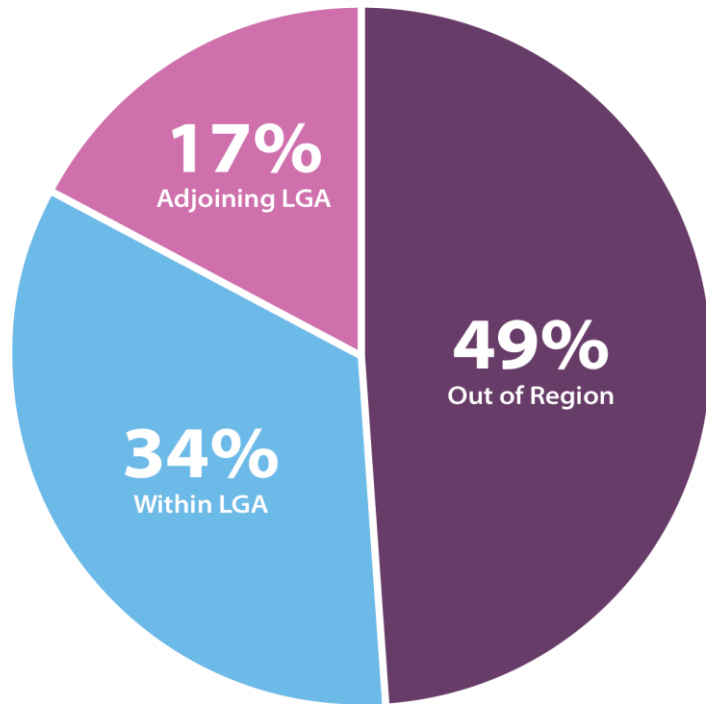


Key Findings - Council Spend Data



Key Findings – Supplier Analysis

Supplier Distribution



Supplier readiness

Large civil construction suppliers (including road services) already provide products with recycled content. Most of the medium and small suppliers (generally local suppliers) do not provide recycled content alternatives yet.



Key Findings – Barriers to recycled content procurement

Challenges	Description
Lack of Resources	Councils may lack the budget and staff resourcing to implement large circular procurement programs.
Product Performance	There is the perception that recycled products do not have the same performance over the lifespan of the product or asset as virgin materials.
Product Availability	More circular or sustainable alternatives may not be widely available in Australia.
Price	Sustainable or circular products may be more expensive
Culture	Internal pushback as circular procurement disrupts the business-as-usual way of doing things.
Knowledge	Setting up circular procurement processes requires knowledge of what is available in terms of circular products and services. There is a need for learning how to redefine contract criteria as circular.

Key Findings

Case Study 1: Lake Macquarie City Council

Building a footpath using recycled glass, sand and recycled plastic reinforcing

Project Description

Lake Macquarie City Council built a footpath using Greencrete made of 50% crushed glass sand and 100% recycled plastic to replace the steel mesh usually used in concrete. This reduced the requirement for virgin materials by one-third. This was the first time the material had been used in a footpath. Council now uses printer toner cartridges in civil works as well, through the use of Reconophalt.⁵

Design Considerations

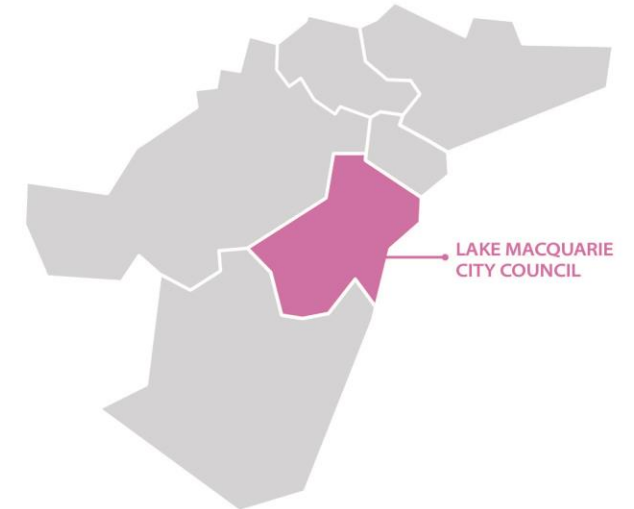
- Greenacre has high performance with much lower carbon impact than conventional concrete.⁶
- Reconophalt lasts longer and is less prone to deformation than traditional forms of asphalt.⁷

Budget Considerations

- Due to its resistance, Reconophalt's whole of life costs are significantly less compared to standard asphalt applied in the same application.⁷

End of Life

Industry knowledge indicates about 50% of Greencrete can be crushed and reused for future road construction.



LAKE MACQUARIE CITY COUNCIL



Key Findings

Case Study 2: City of Newcastle

Maintaining the health of city's garden beds using Biofilter soils made of 100% recycled materials

Project Description

Rain gardens are used to protect waterways from pollution in storm water runoff. The City of Newcastle was the first council to trial the use of biofilters for their rain gardens, which use 100% recycled materials including recycled glass instead of virgin glass and household compost instead of artificial fertiliser and clay.¹

Design Considerations

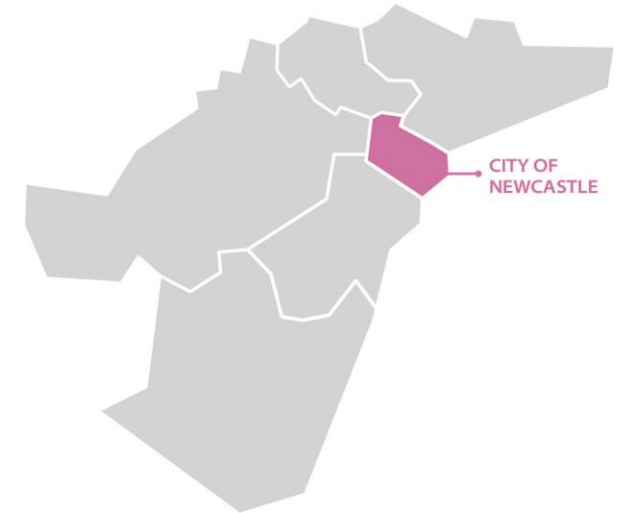
- The Biofilter alternative has a faster flow rate and is therefore more efficient.
- Biofilters requires less virgin resources, no fertiliser and have a higher resilience to weather conditions.
- The Biofilter material supports increased plant species and wildlife biodiversity compared to conventional rain gardens.
- Biofilters absorb more heat than conventional rain gardens, resulting in the cooling of streets in hot conditions.

Budget Considerations

- The Biofilter alternative has a higher cost-benefit than conventional sand filters and lower construction and maintenance costs.

End of Life

The Biofilter material can be reprocessed or composted at the end of its life.



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



14 LIFE BELOW WATER



15 LIFE ON LAND

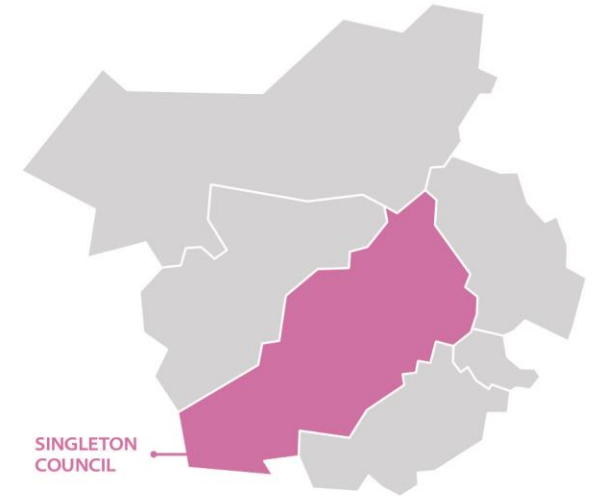


Key Findings

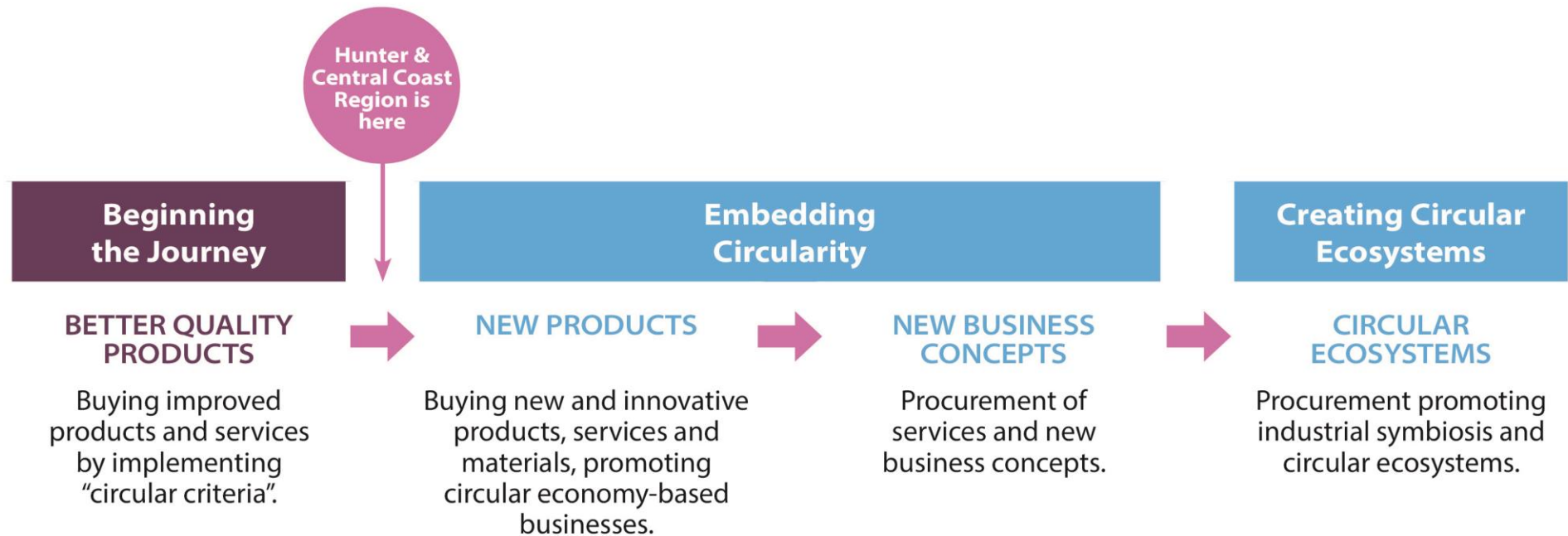
Case Study 3: Singleton Council

Recycled plastic used to build fences, garden beds and furniture

Project Description	Singleton Council partnered with Replas, an Australian mixed recycled plastic recycler and manufacturer, to build garden beds, community furniture and a fence for their golf course. The furniture is made of 90% recycled content, with the plastic coming from the soft plastics collected from Coles and Woolworths through the REDcycle program, car bumpers, hospital waste and pre-consumer plastic waste from commercial and industrial sources. ⁸
Design Considerations	<ul style="list-style-type: none">• Replas recycled plastic products are low maintenance and easy to install.• Replas can support in the creation of various types of Council projects and can take back products at the end of life.• Replas products are made with UV stabilisers which protect the recycled-plastic from sun damage.⁹
Budget Considerations	Replas recycled plastic products are cost effective and long-lasting (they last 40+ years).
End of Life	Replas' products can be reprocessed back into new Replas products.



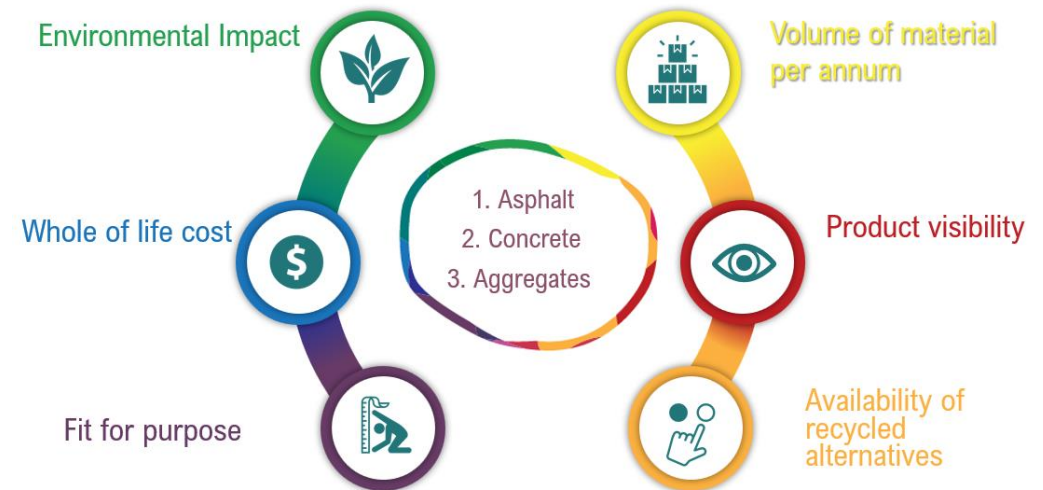
CE Procurement in our Region



Focus Products – Expanding procurement of recycled alternatives

The three products were selected for risk and opportunities analysis:

- asphalt,
- concrete, and
- natural aggregates.



Framework in Development – Guidance Document

Document Section	Description
Introduction	Circular economy principles and the region's focus on embedding circular procurement
Why Circular Procurement for Councils?	The benefits of circular procurement across environmental, economic and social outcomes
What is Circular Procurement?	Defines circular procurement and strategies that make products and services more circular
How to Implement Circular Procurement	Procurement system overview and circular intervention points at each stage
Councils' Circular Procurement Journey	Where are Councils at presently and what level of ambition could they be aiming for
Challenges and Opportunities for Councils	Common opportunities and challenges Councils face in implementing circular procurement
Focus Products	Recycled alternatives to asphalt, concrete and natural aggregates, and specific challenges and opportunities in their procurement
Evaluation Tool	Circular procurement evaluation tool objectives and design
Implementation Roadmap	Actions Councils can take to progress circular procurement, tailored to three maturity levels and presented on a timeline

Tool in Development – Evaluation Tool

Reference	Evaluation Criteria	Evaluation Sub-Criteria
A - ENVIRONMENTAL CRITERIA		
A1	ENVIRONMENTAL	Carbon
A2	ENVIRONMENTAL	Water
A3	ENVIRONMENTAL	Ecosystems
B - CIRCULARITY CRITERIA		
B1	CIRCULARITY	Recycled content
B2	CIRCULARITY	Resource optimisation
B3	CIRCULARITY	Recovery potential
B4	CIRCULARITY	Actual recovery
B5	CIRCULARITY	Longevity
B6	CIRCULARITY	Innovation & Technology
B7	CIRCULARITY	Material health
C - FINANCIAL CRITERIA		
C1	FINANCIAL	Lifecycle cost
C2	FINANCIAL	Reliability
C3	FINANCIAL	Ease of implementation
C4	FINANCIAL	Local availability & supply chain resilience
D - SOCIAL CRITERIA		
D1	SOCIAL	Safety
D2	SOCIAL	Compliance
D3	SOCIAL	Reconciliation
D4	SOCIAL	Local Economy
D5	SOCIAL	Engagement value
D6	SOCIAL	Diversity & inclusion
D7	SOCIAL	Supply chain human rights

Roadmap in Development – Implementation Roadmap

Will focus on:

- Tangible actions for Councils to embed circularity into their procurement processes
- Starting points for three different levels of maturity
- Target recycled content alternatives to 3 priority products

Actions on the roadmap will include:

- What needs to be in place
- What Councils should develop
- Which levers Councils can pull for success



Project Learnings – Cultural and Organisational Practices



Circular consumption challenges the conventional modes of meeting our needs, e.g. we don't need a lightbulb, we need light.



Deeply embedded linear mindsets in Councils outside staff with circular economy remit.



Requires interdisciplinary approach – across professions, organisational silos, and with suppliers.



Contracts generally serve one need, and do not encompass whole of life considerations.

Key Findings

Further work needed to embed new tools and practices.

Supply chain engagement.

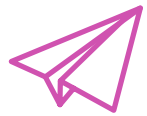
Capacity building programs.

Embedding evaluation criteria in tenders and contracts.

Ongoing knowledge/IP sharing between organisations.

Encouraging supplier/value chain collaboration.

Top Tips and Takeaways



Get started
– perfect time is now.



Start small
– build sophistication
and scale as you go.



Focus on relationships
first, then build systems
that support them.



Pilot, but don't forget
to evaluate!



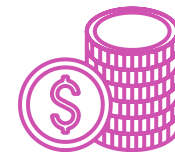
Harness the power
of procurement.



**Engage suppliers/
the market to come
up with solutions –
your requirements
are their sales growth
opportunities.**



**Stand on each
others shoulders –
leverage the experience
of peers / those that
have journeyed
before.**



**Look at your
funding mechanisms –
consider getting
partners to put
“skin in the game”**

Get in Touch



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