

# Sustainable Supply Chains

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## About Roads Australia

[Roads Australia](#) (RA) is the peak body for roads within an integrated transport system, representing an industry that contributes \$236 billion annually to the economy and supports 1.4 million jobs.

RA brings industry, government, and communities together to lead the evolution of Australia's roads, integrated transport and mobility.

RA's members include all of Australia's state transport agencies, road operators, major contractors, technical and strategic consultants, material suppliers, service and technology providers, and other relevant industry groups.

## Event Summary

165 people registered for the event to hear from the following speakers:

[Alexis Davison](#), Director Program Services and Engineering, [Major Road Projects Victoria \(MRPV\)](#)

[Steve Morriss](#), Head of Circular Economy, [Close the Loop](#)

[Sara-Rose Pogson](#), Unit Head Circular Economy, [NSW Office of Energy and Climate Change](#)

The panel discussion was sponsored by [Aurecon](#) and moderated by [Jodie Bricout](#), Principal, Circular Economy, Aurecon.

## Key Points

- New opportunities exist to rethink supply chains, growing the circular economy.
- Sustainable supply chain benefits include reducing waste to landfill, using less virgin materials, cutting greenhouse emissions, as well as improved social outcomes and economic efficiencies.
- Collaboration between government and industry is essential to supporting reused and recycled material use and other circular approaches.

## Questions to take away

- How can the benefits of sustainable supply chains be effectively communicated, measured and considered in the transport infrastructure industry?
- What further opportunities exist for circular economy knowledge and data sharing between jurisdictions and industry to increase sustainable procurement?
- How can industry and government collaborate to remove expansion barriers for sustainable supply chains?

## Rethinking supply chains

*“What can we do from the outset that thinks about the entire life cycle of assets and reduces the amount of materials that are used and the waste that is created?”*

- **Sara-Rose Pogson, NSW Office of Energy and Climate Change**

Decarbonisation and the journey towards net zero remains a challenging policy issue for the transport sector. While innovation and technological developments are central to achieving this outcome, there is an opportunity to build on the sector’s historical use of recycled materials and transition to a circular economy.

The broader policy discussion around decarbonisation is largely focused on how to deliver goods and services in a less carbon intensive manner. This view often skips over the opportunities that arise from more efficiently managing existing materials and establishing closed loop sustainable supply chains.

A sustainable supply chain for the transport sector refers to environmentally and socially responsible practices throughout the entire lifecycle of projects. It involves minimising negative impacts on the environment, communities, and resources involved in the construction, maintenance and operation processes while maximizing positive social and economic outcomes. A sustainable supply chain is about using resources efficiently and reducing emissions.

Developing sustainable transport supply chains is not just about improving the environmental impact of inputs or recycling existing materials.

There are significant efficiency gains to be made from future-proofing infrastructure and developing closed-loop supply chains to reuse materials today and tomorrow.

The transport infrastructure industry’s social license to operate can be enhanced through greater education of the opportunities unlocked by a circular economy and capturing the environmental and efficiency gains.

## Government’s role

Progressive policy settings for the transport sector are crucial to normalising circular economy principles across the industry, while driving innovation on the decarbonisation journey.

The [ecologiQ](#) program, developed by **Major Road Projects Victoria (MRPV)**, is frequently cited as a good example of government policy driving demand and providing education to encourage circular economy growth.

With a record investment in transport infrastructure in Victoria, policy settings and contracts have been developed across the program to utilise waste in major transport projects across the state.

The **NSW Office of Energy and Climate Change** is also supporting industry through the [NSW Waste and Sustainable Materials Strategy 2041](#), and [Circular design guidelines for the built environment](#), including a strong set of circular design strategies, encouraging higher value principles with strong relevance to the transport sector.

While government is often not involved directly in material procurement, the public sector can develop simple objectives and policy settings to advance the use of recycled and reused materials, incentivise capital investment, shape perceptions and alter specifications.

This includes a broader move to developing technical standards that are performance based rather than prescriptive.

## Collaboration

*“Having a policy that requires reporting is giving us a really rich data set to spark the thinking on where to focus our efforts next. EcologiQ’s objectives are essentially to drive the demand for products.”*

- **Alexis Davison, MRPV**

While acknowledging the role of government policy in supporting sustainable supply chains, ensuring policy operates as intended is only possible through close collaboration between the public and private sectors.

Incentivising the use of reused and recycled materials in contracts or including prescribed targets rewards organisations adopting circular economy principles.

However, with strong regional infrastructure pipelines in several states and the ever-changing innovative nature of the circular economy, sharing of data between sectors becomes increasingly important.

In Victoria, EcologiQ has developed an interactive pipeline projection, showing the potential for recycled material uptake, alongside a map of suppliers of recycled and reused materials, products and services for transport infrastructure projects.

With complex procurement challenges across the industry, streamlining this process and providing data and support to the private sector optimises the uptake of recycled and reused materials.

## Implementation examples

*“Creating local jobs where the waste is generated with local solutions is what we’re all about.”*

- **Steve Morriss, Close the Loop**

Through collaboration between the public and private sectors and progressive policy settings, organisations are bringing innovative products to market to establish sustainable supply chains and support decarbonisation efforts.

Steve Morriss, Close the Loop, provided examples of the successful development of a product and contracts, playing a role in the transport infrastructure circular economy.

**TonerPlas** is a product comprised of recycled toner powder and soft plastics, now being utilised on road projects across the nation to enhance the mechanical properties of asphalt.

Close the Loop has also signed a circular contract with the City of Greater Bendigo, relying on partners sharing responsibility for the collection, baling, processing and reusing of plastics to establish a sustainable and closed supply chain for specific products.

The successful rethinking of waste management in this context has the potential to be upscaled and localised, allowing for waste to be recovered and reused enhancing regional benefits beyond emission reduction.

As highlighted by the NSW Office for Energy & Climate Change, 45% of global emissions are associated with the use and management of materials and products.

Synergy between policy and private sector capabilities is crucial, not just to support sustainable supply chains and drive new circular economy focused products to market, but to meet the decarbonisation challenge across the transport industry.

## Barriers to overcome

Normalising circular economy practices and the use of reused and recycled materials face several barriers that need to be addressed to increase uptake.

Steve Morriss cited the concern around the leaching of microplastics with recycled materials being considered for use in road surfaces, something which has been researched by Local Government NSW in their report [\*'Recycled materials in roads and pavements a technical review.'\*](#)

There is often a reluctance to incorporate recycled and reused products without a significant evidence base, supported through strong research and development processes.

This creates a role for government, universities and industry to collaboratively provide educative tools on the environmental benefits of new products and the betterment potential.

Standardisation of specifications across jurisdictions would provide industry with more certainty, alongside a rethinking of specifications, creating a performative rather than prescriptive approach.

Sharing the benefits of a circular economy can be complex in this context, alongside government's seeking value for money in a strained budgetary environment, potentially placing hurdles in front of this investment. Additionally, this requires a conversation around the optimal balance between carbonisation and procurement expenditure.

## Opportunities

*"We're thinking about quality outputs, great social and economic outcomes – and the dial has really shifted over the past two years.*

*It's important that we consider the circular economy as an integral part of the transition to net zero."*

- **Jodie Brincout**

The circular economy remains a developing field with strong opportunities for growth

alongside crucial contributions to broader social and environmental outcomes.

Contracts can be redesigned and rethought to consider the full life cycle of assets. This can lead to reevaluating business cases by fully considering the social and environmental impacts of reused and recycled products.

Localising supply chains not only drives sustainable outcomes but can address disadvantage and increase regional employment opportunities.

Most important is the ability of the circular economy to more efficiently use the resources we have and support decarbonisation, something industry and government are collaboratively making progress on.

The circular economy will continue to evolve and provide enhanced opportunities for government and industry to collaborate, innovate and drive progress towards a net-zero future. Collaboration remains the key to overcome these barriers and maximising the opportunities sustainable supply chains provide.

## Further Reading

Alexis Davison (MRPV) – [Webinar Presentation](#)

Ellen Macarthur Foundation – [Material Circularity Indicator](#)

Local Government NSW – [Recycled materials in roads and pavements a technical review](#)

NSW Department of Planning and Environment – [NSW Waste and Sustainable Materials Strategy 2041](#)

NSW Government – [Circular design guidelines for the built environment](#)

Sarah-Rose Pogson (NSW Office of Energy and Climate Change) – [Webinar Presentation](#)

Steve Morriss (Close the Loop) – [Webinar Presentation](#)