# CERN APAC Submission to the Productivity Commission

*Science and research, and conditions necessary for, is critical for the acceleration of the national circular economy transition.*

The Circular Economy Research Network Asia- Pacific (APAC) was founded and supported by RMIT, Monash and Swinburne Universities, together with the CSIRO providing transdisciplinary research capability for facilitating the transition to a circular economy by connecting stakeholders, sharing research outputs and outcomes, and promoting collaboration. CERN-APAC acts as a bridge between different sectors, helping to coordinate efforts and share best practices to support designing for circularity and assisting Australia and the region in its transition to circularity across all sectors.

The overarching vision for the circular economy (CE) in Australia is to create a sustainable, resilient, and regenerative system that minimises waste (waste to be seen as a resource), maximises resource efficiency, and fosters innovation. This vision aligns with global efforts and emphasises the need for systemic change to address sufficiency problems ensuring that resources are utilized efficiently and sustainably. Hence, transitioning to CE requires a systemic approach that integrates various sectors and stakeholders. This includes harmonising regulations across the local, state and national level, supporting coordination services, and fostering innovation through challenge-based funding and collaboration between industry and researchers.

At CERN APAC, we identify 'addressing sufficiency' as a primary challenge. Particularly, this involves ensuring that the planet's resources are used sustainably to support the population. This includes managing land use, population density, and resource consumption. We call for a more comprehensive approach to develop strategies that focus on sufficiency as the overarching problem ensuring that all other measures and reforms contribute to this goal. We propose focusing on the importance of designing for circularity outcomes, promoting the repair movement, ensuring accountability for imported goods and focusing on high-quality, sustainable products which promote the 'Made in Australia' initiative and boost local supply chains. Additionally, knowledge and awareness campaigns are essential, so stakeholders understand the impact of their purchasing decisions (Meat vs vegetarian, packaged vs non packaged food etc). For specific sectors such as the built environment identified in the PC interim report, we encourage the repair and refurbishment of buildings and infrastructure rather than new builds, use of prefabricated housing considering not just for house design but also for house deconstruction (so materials can be used as 'banks', negating the reliance on virgin materials), design for maintenance, developing regulations to support CE and more engagement with the first nations stakeholders. In summary, the significance of CERN-APAC's research capabilities provides a bridge between sectors and stakeholders informing how to design for circularity across sectors.

This submission is informed by extensive research on institutional transformation in resource rich economies, system's perspectives on circular economy transitions, organisational adaptation to circular economy business models, collaboration in the Victorian Circular Activator and cost-benefit analysis. The Interim Report focuses extensively on materials productivity, and we agree

that materials productivity can provide an actionable means of facilitating waste reduction and pollution, and potentially environmental harm reduction. Each of these outcomes are laudable but describe an efficient linear economy rather than a circular economy. Hence, another key challenge in transitioning to a circular economy is managing the transition process. An efficient circular economy will distinguish itself from the current linear economy not only at the regulatory level or degree of materials productivity, but also at the business model, organisational and consumer/demand level. It constitutes a fundamental realignment of how businesses, regulators and consumers interact and cooperate to deliver systemic change.

We also shed light on information requests that broadly relate to the governance and coordination aspect of transitioning to circular economy. Particularly, in response to Information Request 4.1, 10.1 and 10.2 our research in the Victorian Circular Activator – (a partnership with RMIT University, Swinburne University, Sustainability Victoria and Circular Economy Victoria – focuses on developing actionable roadmaps for individual businesses and regulators as part of a process of systemic transition. This research is summarised in Shittu et al (2023a, 2023b) and Iyer-Raniga et al (2022).

**Information request 4.2**: Coordination mechanisms to enhance the benefits of sustainable procurement policies: *how further government efforts to facilitate coordination between suppliers, contractors and government agencies could be implemented to maximise net benefits to the community.*

- Our response: pathways to achieve circular economy transitions for businesses and governments are emergent, and characterised by positive and negative feedback loops. A holistic CE pathway requires organisational models drawing on three inter-related dimensions: Market Creation, Enabling Environment, and Organisational Capabilities (Shittu et al 2023a). Governments can facilitate coordination by enabling intermediation capability (Moglia et al 2023) and capability building across economic ecosystems (Iyer-Raniga 2022). Maximisation of net benefits arise when transactions (procurement) are situated and evaluated within their wider economic context, rather than confined within the value perspective of the two (or more) contracting parties. In a systems transitions perspective, the wider desired system outcomes need to be incentivised within bilaterial contracting relationships.

**Information request 10.1**: Governance arrangements to harmonise regulations that pose barriers to circularity: *what other inconsistent regulations (such as planning, zoning and health regulations) are presenting barriers to circular opportunities? How well do existing intergovernmental coordination mechanisms in other portfolios take into account the impact of these regulations on circular opportunities?*

- Our response: harmonisation of regulations and standards are critical to lowering the transaction costs associated with transitioning to a circular economy (Shittu et al 2023b). The Interim Report frequently refers to qualifications such as subject to cost-benefit assessment. Given significant economies of scale and familiarity with linear business practices, compared to circular economy practices, the Australian cost-benefit framework is poorly suited to capture the longer-term benefits of circular economies. Moreover, cost-benefit analysis (CBA) frameworks vary across Australian state and territories. Australia requires a CBA framework that addresses the structural evaluation

inequities when comparing current practice with alternative practice. As an example, The UK Green Book provides and accepts a broader set of methods for capturing market and non-market values. Moreover, the UK Green Book allows for differential discounting practices where benefits accumulate in health and life outcomes (HM Treasury 2022).

**Information request 10.2**: Supporting coordination, facilitation or brokering services: *What are the barriers to knowledge (or transition) brokers, project officers, community development officers and the like effectively assisting organisations to navigate regulatory complexity?*

- Our response: intermediation (brokering, facilitation etc) is critical to transitions management and implementation. Intermediaries can act as knowledge entrepreneurs and innovators in a process of (co)creating an enabling institutional framework and space for CE economy transitions. To this end, we shed light on a forthcoming book by Iyer-Raniga and Cramer (2025). This book specifically focuses on the role of network governance to support the transition to a CE. A key role government can play is supporting and investing in Australia's CE intermediation capacity and capability. CERN APAC provides an emerging network of researchers across Australia and the Asia-Pacific region supremely placed to support and develop Australia's intermediation capacity and capability. The founding members of CERN APAC have a track record of working together in the creation of intermediation infrastructure (e.g. Victorian Circular Activator and significant expertise in intermediation for sustainability transitions (Moglia et al 2023, Others in CERN APAC). CERN APAC can provide a critical resource for identifying and co-creating the regulatory environment that would enable deep structural transformation (business, not-for-profits, and administrative organisations) aligned with opportunities in circular economy.

## References

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