FTD Circular submission in response to Australian Government Productivity Commission, Opportunities in the Circular Economy - call for submissions

The Commission invites interested people and organisations to make a written submission. Submissions are due by ***Friday 11 April 2025****.*

Section 4 – Built Environment

Information request 4.1

Enabling fit-for-purpose use of recycled materials in public projects
The PC is seeking information on:

- prescriptive versus performance-based standards:
  - – specific examples where prescriptive standards or specifications for infrastructure construction significantly inhibit the use of recycled materials
  - – what other benefits or objectives these prescriptive standards are intended to achieve (for example, public safety, or to enable clarity for smaller businesses)
  - – ways that various levels of governments could facilitate greater use of performance-based standards
  - – challenges, costs and benefits, and implementation issues that need to be considered if moving from prescriptive to performance-based standards (for example, monitoring and enforcement)

- harmonisation of standards:
  - – key areas where there is scope to harmonise standards and specifications across states or territories and increase the use of recycled materials
  - – specific implications (costs, benefits, risks) of harmonisation (for example, due to lack of flexibility to reflect local conditions), and whether or how they could be overcome.

Requiring the use of digital asset registers (Building as a Material Bank)/building material passports can provide the traceability and verification needed to support performance-based standards. The FTD Circular/Hardcat EAMS is Australia's leading register platform.

Information request 4.2

Coordination mechanisms to enhance the benefits of sustainable procurement policies
The PC is seeking information on:

- the benefits and costs associated with introducing or expanding government-led coordination initiatives to support public procurement policies in different jurisdictions
- how further government efforts to facilitate coordination between suppliers, contractors and government agencies could be implemented to maximise net benefits to the community
- specific ways that coordination could assist suppliers of recycled materials to navigate sustainable procurement policy requirements and help government procurement agencies and suppliers identify win-win opportunities.

Government should support existing brokerages such as the FTD Circular Supplier Directory that connect suppliers and users of recycled materials, instead of getting in the way by trying to replicate this industry innovation themselves.

Information request 4.3

Reducing unnecessary regulatory barriers to prefabricated construction
The PC is seeking further information on the regulatory barriers to prefabricated construction, including:

- the extent to which recently announced measures by the Australian Government (the Australian Productivity Fund and the Voluntary Certification Scheme) will address key barriers to prefabricated and modular construction
  - – how these initiatives could be implemented to maximise the net benefits to the community
- specific regulatory changes (including recommendations from previous reviews that remain relevant) that would have the largest effect on uptake of prefabricated and modular construction, and:

– the magnitude of the environmental, economic and social benefits associated with these changes, and measures and metrics that may quantify this
– costs associated with the changes, including resources required for implementation, compliance and enforcement, and potential impacts on the environment associated with different regulations
– how regulatory changes could be implemented to maximise the net benefits to the community.

Require that all prefabricated elements be put on a digital asset register with RFID, such as the FTD Circular/Hardcat platform to enable traceability, verification, maintenance for life extension and re-use.

Information request 4.4

Other circular economy opportunities in the built environment

The PC is seeking the following information on government assessment of public infrastructure projects, and integrated planning:

- any examples of infrastructure investment decisions proceeding without adequate integrated planning or assessment, which have led to significant unnecessary materials use and waste that may otherwise have been avoided
- the extent to which – and ways in which – improving assessment of public infrastructure projects could reduce materials use and waste, including quantitative analysis of costs and benefits (where available)
- barriers preventing further adoption of integrated urban planning, which governments could address.

The PC is seeking the following information on designing for disassembly in the built environment:

- expected growth in design for disassembly for different types of structures in Australia, in the absence of any further government activity
- barriers preventing further adoption of design for disassembly in Australia, which governments could address.

Disassembly and reassembly require a robust system to track and manage components effectively. To achieve this, it's essential to register all parts designed for disassembly/reassembly on a digital asset platform using RFID, such as the FTD Circular/Hardcat system, to ensure traceability, verification, maintenance, and extended life through reuse.

Please also read the following article (authored by Vanessa Cullen and posted to LinkedIn in Feb 2025)

Building as a Material Bank: Why a Living Register is Non-Negotiable

The idea of a Building as a Material Bank (BAMB) is gaining traction, but its success hinges on one critical requirement: a detailed, living materials register whose technology & data is maintained to endure throughout the building's lifecycle.

For effective material recovery & reuse at end-of-life, this living register must document:

- *Precise identities, quantities, & locations of materials*
- *Material/product passport data, including ingredient materials, key dates (manufacture, purchase, installation), supply chain details, maintenance & technical specifications*
- *Installation photos & details, plus de-installation instructions that align with the (hopefully) mechanical fixing & modular installation methods used during installation, to prevent damage during later salvage*
- *Ongoing maintenance records, in real time, for traceability & responsibility, to record material integrity & to de-risk future material re-use*

And it's not enough to simply record this data—the register must be:

- *Cloud-based with its technology continuously updated to prevent obsolescence*
- *Accessible via human & machine-readable tags selected & installed with consideration to: tag material & fixing durability in changing environmental conditions, signal interference, precise reader range & ability to locate materials concealed behind walls (e.g., RFID instead of barcode/QR codes for embedded materials).*
- *Visually integrated into the physical environment with visible cues ensuring future owners, managers, & salvage teams know that the register exists & that they can access it*

Without this living, dynamic & accessible system, materials & modular assemblies designed for reuse risk being lost to landfill—like having a cassette tape but no tape player (to listen to its data) 30 years later. Optical read tags applied to materials hidden behind walls, floors & ceilings, & static spreadsheets filled in once & then buried on a drive somewhere, simply won't cut it.

There is no point in designing for modularity & re-use if a detailed living register is not created & maintained to enable future awareness, salvage & second-life of these materials & assemblies. Today's good intentions lost to time. If we're falling short of pairing & preserving our assets with their data & keeping this register alive & accessible to future generations, then sadly, we're not really designing for reuse at all.

P.S: How do I know all of this to be true? FTD has been making registers of materials in built environment for decades (for re-use purposes) & our asset management technology partner; Hardcat, has been tagging, tracking & tracing materials & assemblies for clients globally, for almost 40 years. Collectively we've 'been there, done that' & have the battle scars to prove it. To find out more, contact us via www.ftdcircular.com or www.hardcat.com

Section 10 - System-wide arrangements

Information request 10.2 Supporting coordination, facilitation or brokering services

The PC is interested in further information on supporting businesses and communities to identify circular opportunities and develop partnerships:

- What government initiatives could most effectively support businesses' coordination?
  - How could governments use or build on existing platforms for information sharing or collaboration? As noted in 4.2 *Government should support existing brokerages such as the FTD Circular Supplier Directory www.circularsupply.au that connect suppliers and users of recycled materials, instead of getting in the way by trying to replicate this industry innovation themselves.*
  - Are there examples of governments partnering with intermediaries, such as industry associations or other network bodies, to support collaboration? How might this be further strengthened?
  - What would be the benefits and costs associated with these initiatives, in terms of economic, environmental and/or social outcomes? *FTD Circular is a social enterprise = social impact if government procures from and supports us instead of competing. Also facilitating collaboration between projects, for example the federally funded National Centre for Timber Durability and Design Life's (NCTDDL) recent Timber Circularity Project resource map with the FTD Circular Supplier Directory www.circularsupply.au.*
  - What lessons could be learned from successful government initiatives supporting facilitation or coordination in other industries?
- Are there special considerations for how governments might support businesses to identify partners in regional and remote Australia?
- How could governments support Aboriginal and Torres Strait Islander businesses and communities to identify opportunities and partnerships? What current or new initiatives could be adopted or extended?

• How do the needs of small and medium businesses or organisations differ from larger businesses or organisations in relation to adopting circular practices, and how might governments best support this cohort?

Our existing directory already addresses these needs, offering a comprehensive platform for businesses of all sizes, including those in regional and remote areas and Aboriginal and Torres Strait Islander communities; supporting its growth and adoption would be the most effective way for governments to facilitate these connections and promote circular practices across diverse sectors and regions.

The PC is interested in further information on navigating regulatory complexity:

• What are the barriers to knowledge (or transition) brokers, project officers, community development officers and the like effectively assisting organisations to navigate regulatory complexity?

• To what extent is there a need for government to provide services, given that there are already private consultant services that can support businesses to navigate regulations?

• What kind of regulations do businesses most need help navigating to pursue circular opportunities? Are these at Commonwealth, state and territory, or local government level?

Navigating regulatory complexity is best addressed by leveraging existing private consultancy services like FTD Circular, which already provide tailored solutions to help businesses meet circular economy requirements. Our consultancy, training, supplier directory, and digital tools—including the Hardcat-powered asset management platform—enable organisations to navigate regulations at all levels of government, fulfill ESG frameworks, and achieve measurable decarbonisation and waste reduction outcomes. Rather than duplicating efforts, governments should support and scale proven initiatives like ours to empower businesses effectively.

Information request 10.3 Supporting greater adoption and diffusion of circular innovations

The PC is interested in further information on challenge-based funding for innovation:

• Are there examples of circular economy innovations that have been successfully funded through challenges (in Australia or internationally) and what determined their success?

Yes, City of Casey Pilot Project by FTD Circular through City of Casey's Circular Economy Living Lab (Circular Casey), an Innovation initiative blending innovation with collaboration to tackle environmental challenges and support sustainable development.

FTD Circular_City of Casey Pilot Project Tear Sheet

FTD Circular_City of Casey Pilot video

Outcomes of ours and other Casey Circular Economy Living Lab projects are available here; Casey Circular Economy Living Lab Outcomes Report

• What might be the benefits and limitations to this approach? What are the likely costs?

Information request 10.4 Improving investor confidence in the circular economy

The PC is interested in further information on the following questions:

• Will the proposed Australian sustainable finance taxonomy and enhanced ESG reporting provide sufficient information for investors to make informed decisions about circular economy projects? Or are further initiatives, required to improve investor confidence in the circular economy?

Yes, Government procurement needs to fully commit to circularity at all levels of scope/cost and project type.

Information request 10.5 Government support for place-based circular initiatives

The PC is interested in further information on the following questions:

• To what extent are existing precincts (such as those set up for net zero, advanced manufacturing, or Special Activation Precincts) already engaged in circular activities? What are some of the ways to encourage further circular activities in these precincts?

Implement Building as a Material Bank (BAMB) and Precinct as a Material Bank with an integrated supply/demand matching functionality to link circular supply with circular demand in 'places'

thereby removing the need for materials recovery facilities as intermediary. Refer to FTD Circular/Hardcat EAMS as platform with this functionality.
More information available here; www.ftdcircular.com/digital-solutions
• What are the barriers (and possible solutions) to expanding or setting up materials recovery facilities? How might facilities provide a basis for place-based circular opportunities? Are there examples of this? *As above*
• What service provision and funding models would best support place-based circular activities, including reuse, repair, waste collection and recycling activities in remote and very remote areas?
• What are the main regulatory barriers that communities or businesses face in establishing place-based circular initiatives? *As above*
• What other kinds of government assistance or support do communities or businesses need to enable successful place-based circular precincts (such as coordination or facilitation, as in information request 10.2)? *Government investment in BAMB and Precinct/Community as a Material Bank*
• What actions could governments take to facilitate Aboriginal and Torres Strait Islander roles in progressing place-based circular initiatives?
• What actions could governments take to value Aboriginal and Torres Strait Islander knowledges, in ways that protect Indigenous cultural and intellectual property, to identify and develop place-based circular opportunities?

Information request 10.6 Expanding the set of circular economy indicators

The PC is interested in further information on the following questions:
• What are specific examples of how governments (at all levels) and businesses would use the proposed circular economy indicators to identify and track progress of circular opportunities?
• What would be the costs associated with gathering data on the proposed circular economy indicators?
• Which agencies would collect or estimate the data? *Use external consultants/service providers, especially social enterprises.*
• How consistent across states and territories is the data needed for circular economy indicators? Does it allow comparison across industries or sectors? *Total consistency*
• Are there alternative indicators that would better measure the progress of Australia's circular economy? What would be the benefits and costs associated with these alternatives? *Set indicators for all IOR's of circularity. Set indicators for social impact.*
• What reporting format would be most valuable and accessible to stakeholders using the monitoring data (e.g. including in the Measuring What Matters framework, or a separate dedicated dashboard)? *See reports by FTD Circular/ as a starting point, covering environmental, social and financial outcomes.*
• Over what timeframe could the proposed expanded set of indicators be rolled out? How frequently should the set of indicators be reviewed and updated, so that they can remain fit for purpose to inform government and business decisions about the circular economy? *Immediately, it's already being done!*