

Investing in the Circular Economy

Dr Kar Mei Tang
NSW Circular
Mar 2022



**NSW
Circular**

BlackRock bets on the circular economy with new fund

 REUTERS Oct 19, 2019

Intesa sells pioneering 'circular-economy' bond

IFR, Nov 30, 2019

BNP Paribas AM launches circular economy ETF

ETF Stream,
May 23, 2019

Mediolanum launches circular economy fund

International Investment, Feb 9, 2022



Major Dutch pension provider backs ambitious €100m circular economy fund

Feb 9, 2022

Friday Funds: Nuveen raises \$218m for circular economy impact fund

Responsible Investor, Feb 11, 2022

EU-initiated impact fund closes at €300 million to finance firms in bio-based circular economy

Impact fund European Circular Bioeconomy Fund (ECBF) has raised around €300 million

Tech EU, Feb 23, 2022

28x increase
in **CE public equity
funds AUM** since
2019, to \$9.5b

5x rise in annual
issuance of **corporate
& sovereign bonds**
with a CE focus from
2019-21

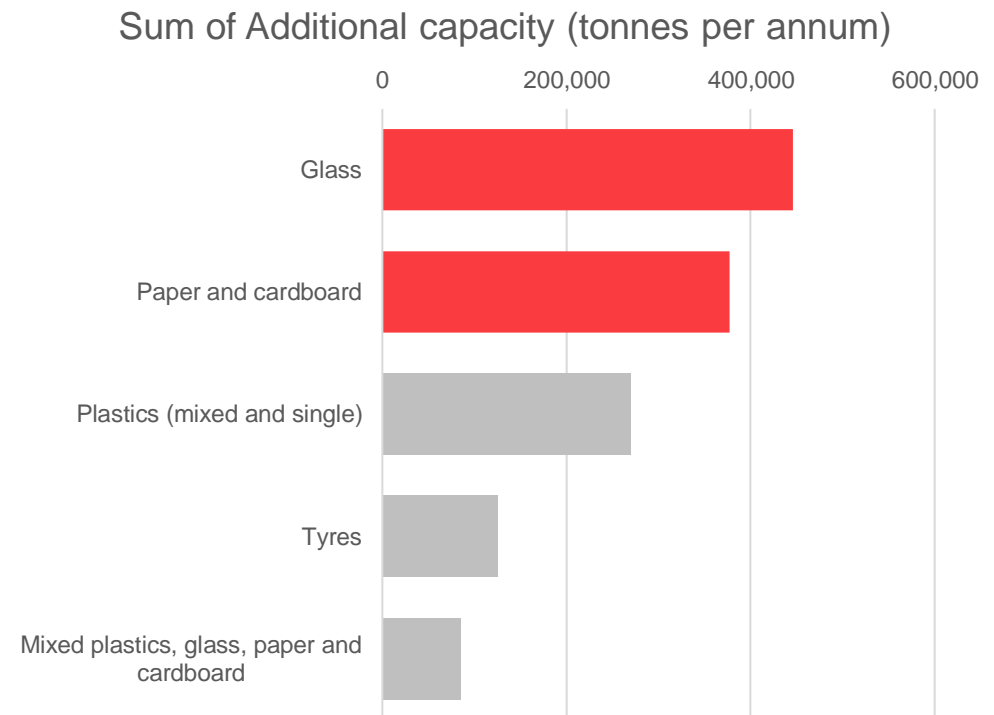
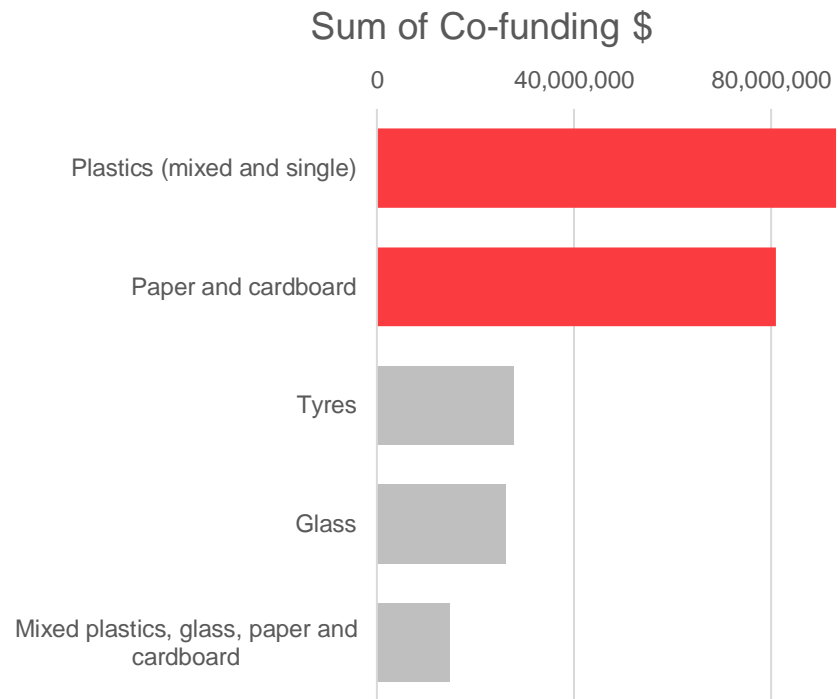
**40+ CE
bonds** issued in
the last 3 years

10x increase in
number of Private
Equity CE funds
since 2016,
FUM > £2b

Government co-funding in recycling projects

Plastics and **paper & cardboard** have received the largest co-funding from the Recycling Modernisation Fund and State/territory governments so far

Glass and **paper & cardboard** are projected to have the largest increase in capacity arising from these investments

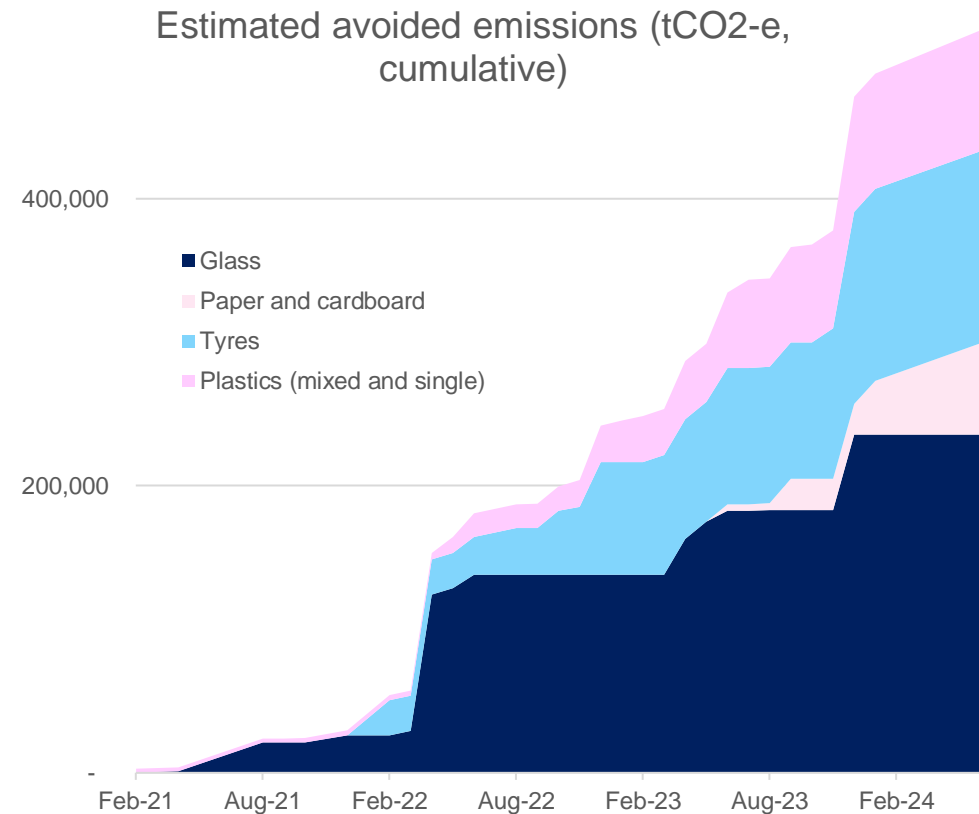
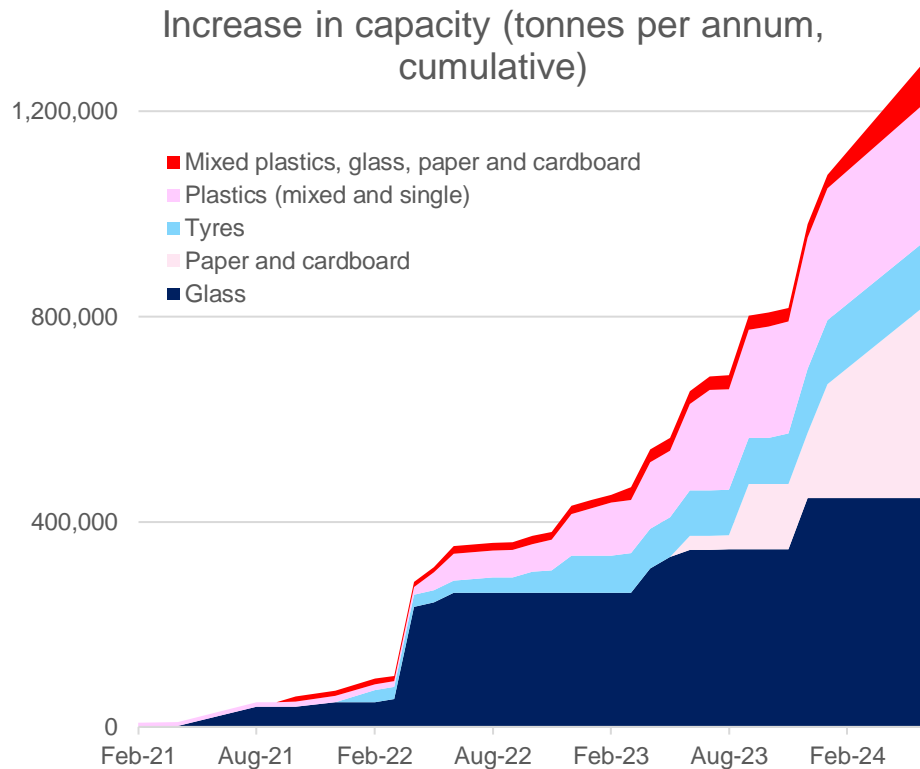


Sources: Department of Agriculture, Water and the Environment, Investments in Recycling Infrastructure at 18 Jan 2022, NSW Circular analysis. Only includes projects co-funded by the Recycling Modernisation Fund.

Impacts of these investments by 2024

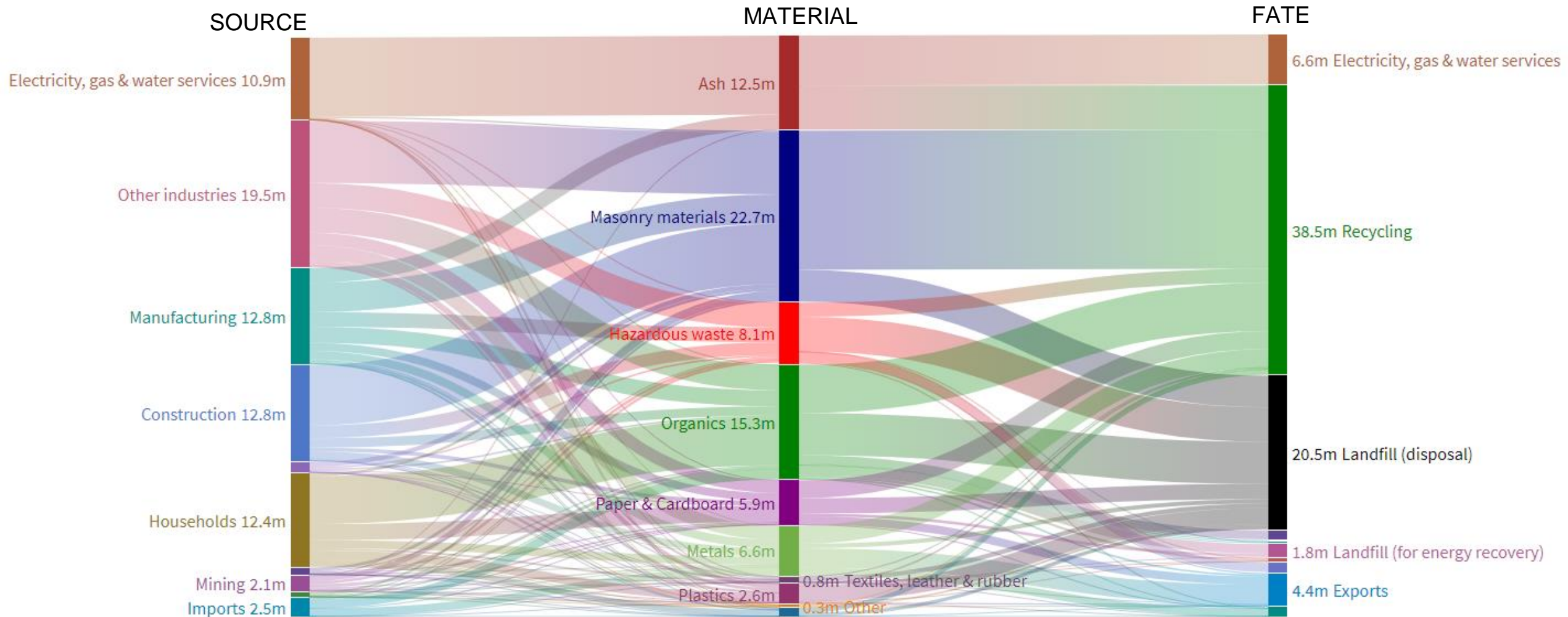
Glass will see the fastest increase in capacity from this funding, while **plastics** and **paper & cardboard** increased capacity will mostly come online late 2023-24

The increased volume of recovered **glass** and **tyres** potentially have the largest impact on avoided emissions



Sources: Department of Agriculture, Water and the Environment, Investments in Recycling Infrastructure at 18 Jan 2022, NSW Circular analysis. Only includes projects co-funded by the Recycling Modernisation Fund. Estimated avoided emissions are based on emissions factors estimated by Trellis Technologies (2019) for South Australia's Recycling Activity Survey 2019-20 Report.

Export bans are the tip of the iceberg



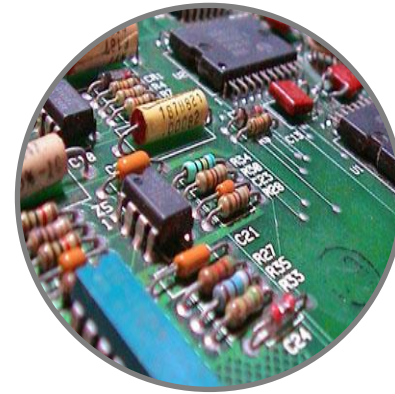
High-potential

High-volume waste materials with large environmental impacts and challenges in contamination and processing, where current recycling is still far from realising the full value of the materials stream















Future stars

Complex high-value waste products with strong growth projections but very limited recycling options (often ending up in landfill), and where innovation and investment in design, recycling and materials productivity can realise significant value



Opportunity areas

			 Contribution to real GDP by 2047-48 in present value *	 20-yr cumulative benefits from 2021-2040 **
Food			\$77.47 billion ← Nutrient recovery (fertilizer) Biogas from organic waste Water use efficiency Reduce food waste	N/A
Transport			\$3.57 billion ← Electric vehicles Car sharing	\$111 billion ← Intermodal transport systems Electric vehicles Autonomous vehicles
Built Environment			\$129.11 billion ← More compact dwellings Energy efficient buildings	\$773 billion ← Modular construction 3D printing Sharing space District cooling High value recycling and reuse
Industry			N/A	\$801 billion ← Electrification of industry New products e.g. green steel
Community			N/A	\$175 billion ← Energy consumption and purchasing attitudes Sorting & recycling Food waste reduction
TOTAL FOR AUSTRALIA			<hr/> \$210 billion <hr/>	<hr/> \$1.86 trillion <hr/>

Sources: KPMG (2020) and PwC (2021)

* From KPMG analysis only, based on transition over ~30 years

** From PwC analysis only, over 20 years

So ...

- Is CE investment still primarily about waste?
- What's the investment thesis for investing in the circular economy?
- And how do we measure its impact?