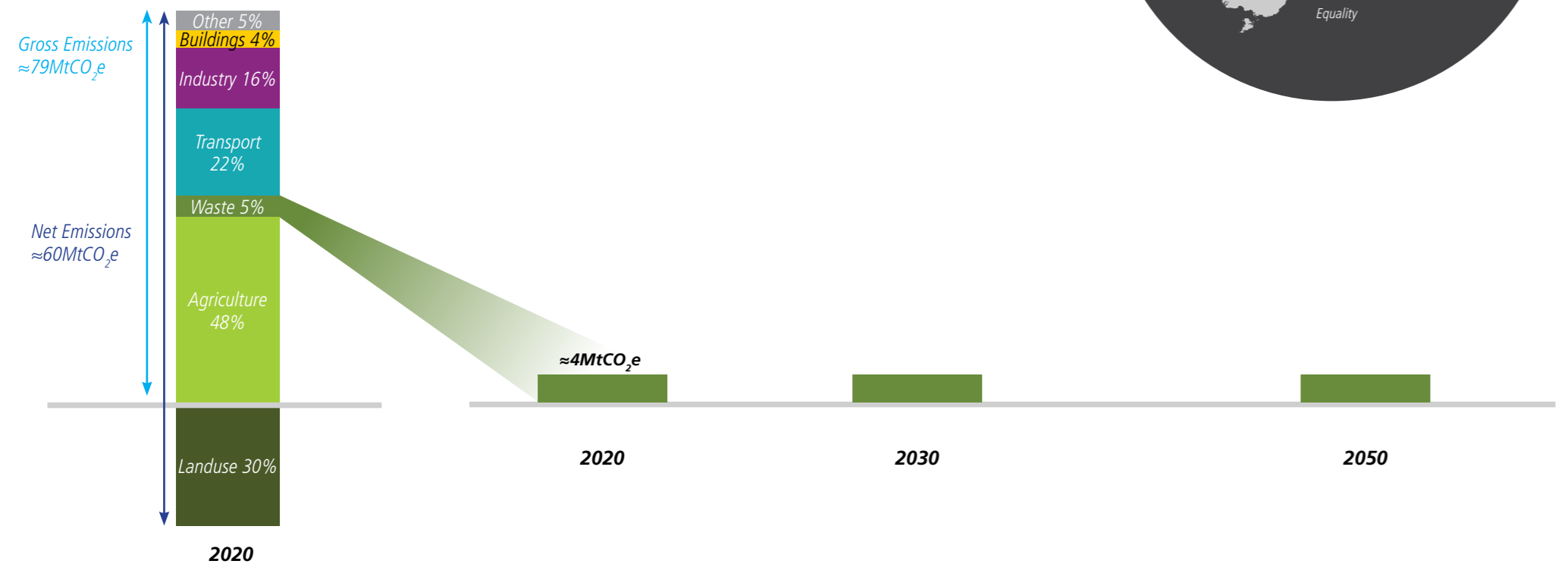


- THE CHALLENGE:**
- ▶ HIGH EMISSIONS
 - ▶ HEATING CLIMATE
 - ▶ UNEMPLOYMENT
 - ▶ HOUSING CRISIS
 - ▶ DECLINING BIODIVERSITY
 - ▶ LINEAR ECONOMY
 - ▶ ECONOMIC INSECURITY
 - ▶ POLLUTED WATERWAYS
 - ▶ DEGRADING SOIL

- TRANSITION: WASTE RECOVERY:**
- ▶ RECYCLE HIGH-VALUE WASTE
 - ▶ ANAEROBIC DIGESTION
 - ▶ INNOVATION FUNDING
 - ▶ ROAD MAP FOR WASTE



Transition: Recovery of Waste/Circular Economy

CHALLENGE STATEMENT

The circular economy advantage has been stated to be in the billions in GDP growth for Auckland alone and is therefore an exciting mechanism to enable economic growth.[1] It targets waste recovery - a significant challenge for New Zealand with an estimated 3.2 million tonnes of waste being sent to Class 1 landfills each year.[2] The negative impacts of waste to landfill are both the potential degradation of our land and water, and the lost value of reusable or recyclable materials prematurely being designated as “waste”. Most waste, before it became waste, had significant energy put into it either through it being grown or via a manufacturing process. At present, our waste system is designed to encourage a linear economy (extract, refine, use and dispose). Contamination and the mixed nature of waste in current waste streams makes it much more challenging to leverage its value, since without a certain degree of purity, materials have little use in available recycling processes.[3]

Our leaders believe that to make the most of our resources, New Zealand needs to prioritise a transition to a circular economy, where pathways exist for valuable materials to be re-used and recycled many times over. This will help address key environmental challenges in New Zealand while creating jobs and supporting our economic recovery.

KEY OPPORTUNITIES

Beca’s industrial specialists have identified the following key opportunities for a waste transition that can help support our economic recovery:

Recycling high value waste streams: Investments in projects that enable high-value waste stream recycling such as PET plastic will create new industry locally – supporting the Wave-3 transition, reducing our reliance on imports and decreasing transport emissions. To do this we need enhanced recycling methods to increase purity and keep value attached to the product such as return-to-manufacturer schemes, container deposit schemes and increasing the number of domestic bins for source-segregating domestic waste.

Anaerobic Digestion Plants: Organic waste makes up 40% of household waste in New Zealand. Projects creating valuable fertilizer and fuel products from food waste/organic waste via anaerobic digestion also serve to limit organic materials taking up landfill space, while generating renewable energy in new facilities and creating jobs across New Zealand. If all the domestic food waste nationally could be captured, it could power thousands of homes. There is even more opportunity with commercial food waste.

Funding for Breakthrough Innovation: Targeted investment is needed in projects that accelerate growth for high-tech SMEs and start-ups in low waste/reuse-friendly product design and packaging technology, waste segregation and sorting etc. This will create immediate jobs and increase the speed with which we can leverage the economic benefits of a circular economy.

Altering the road map for waste: The creator of waste is often not responsible for its disposal with the cost sitting with the consumer or the local government body. The development of an alternative road map for waste should be prioritised. This should include a review of how we can work with producers to encourage alternative pathways for waste. It should also encourage initiatives like high quality modular design for easier replacement and upgrade of components, plus alternative economic models like lease pricing (e.g. Philips pay per lux lightbulbs). The EU is considering legislation to prevent throw-away products, in parallel with considering a reduced tax on recycled goods, levies on single-use packaging and has much higher landfill levies.[4] New Zealand should consider a similar approach so we can actively manage our waste streams. While this will initially be a cost to business and inevitably consumers, it will also foster investment in new industries and alternative technologies, leading to new revenue streams and creating jobs.