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The Circular Economy as a Paradigm Shift

Welcome

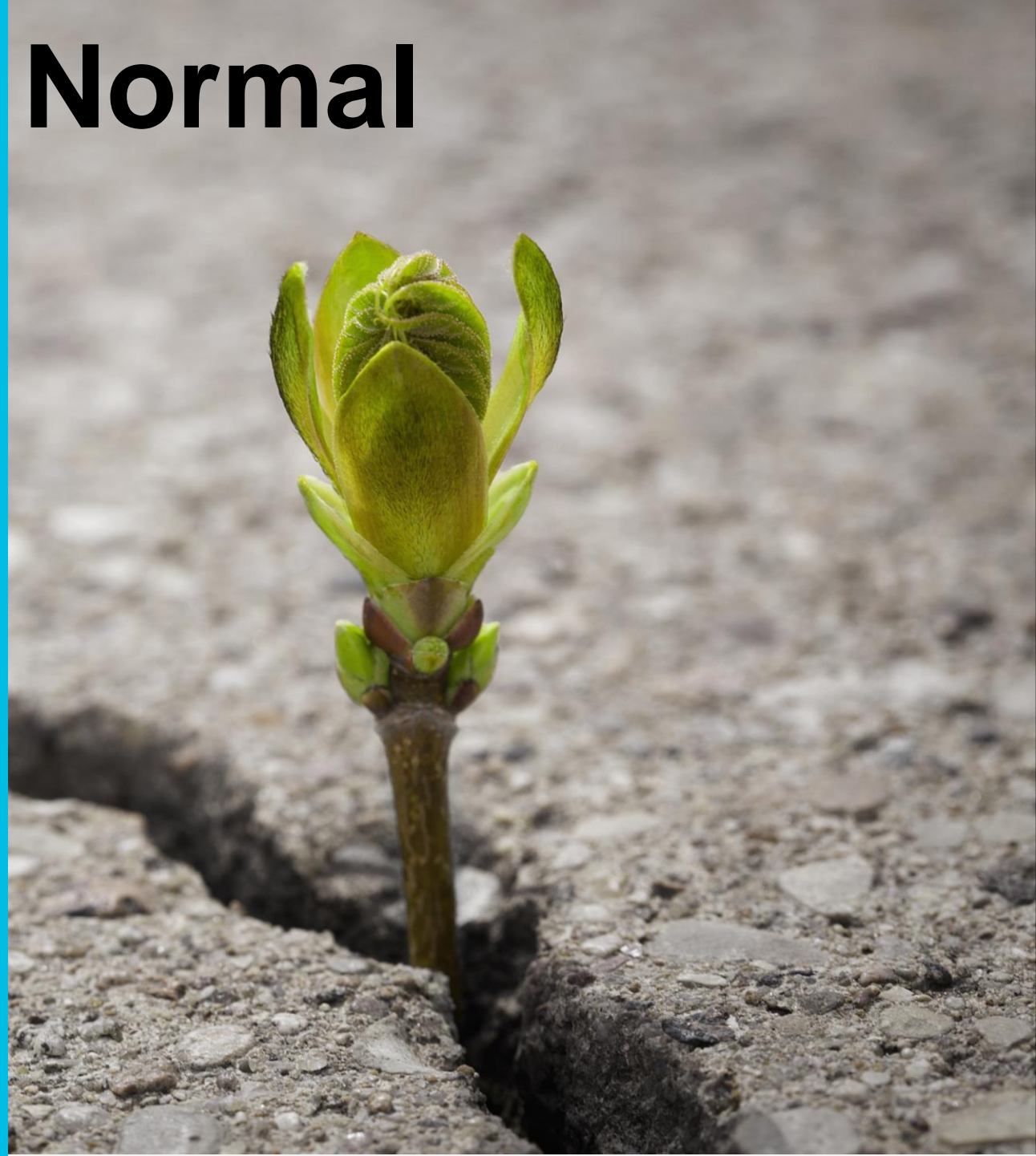
Acknowledgement & respect

GHD acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land, water and sky throughout Australia on which we do business. We recognise their strength, diversity, resilience and deep connections to Country. We pay our respects to Elders of the past, present and future, as they hold the memories, knowledges and spirit of Australia. GHD is committed to learning from Aboriginal and Torres Strait Islander peoples in the work we do.



We need a New Normal

- We live in a world where waste is a product of an economic model gone rogue
- Value is lost at every point in supply chains, product development cycles and procurement processes
- What if we could do something different, and change the way we look at waste?
- The Circular Economy model of economic growth gives us the opportunity to radically change the way we both value and perceive what has traditionally been called waste



The Linear Economy: (a rogue economic model)



- In Aus **54** megatonnes of waste produced in 2016/17- **21.7** megatonnes went to landfill
- **40%** of all waste materials going to landfill = **880kg** per person per year
- Construction consumes around **60%** of the world's materials & is responsible for around **53%** of the world's GHG, mostly from infrastructure
- Globally more than **91%** of what we take from the earth is wasted!
- Predisposed to waste by default
- Production of goods more important than environmental services
- Short product use times are incentivised by default
- Major risks with over-reliance on raw materials
- Incentivises inefficiency



Lost Value:

- Speed and volume incentivised over efficiency
- One size fits all approaches
- Inefficiency & obsolescence designed in
- End of life not considered
- Continual cycle of purchasing over reusing or repairing
- Constantly digging raw materials up





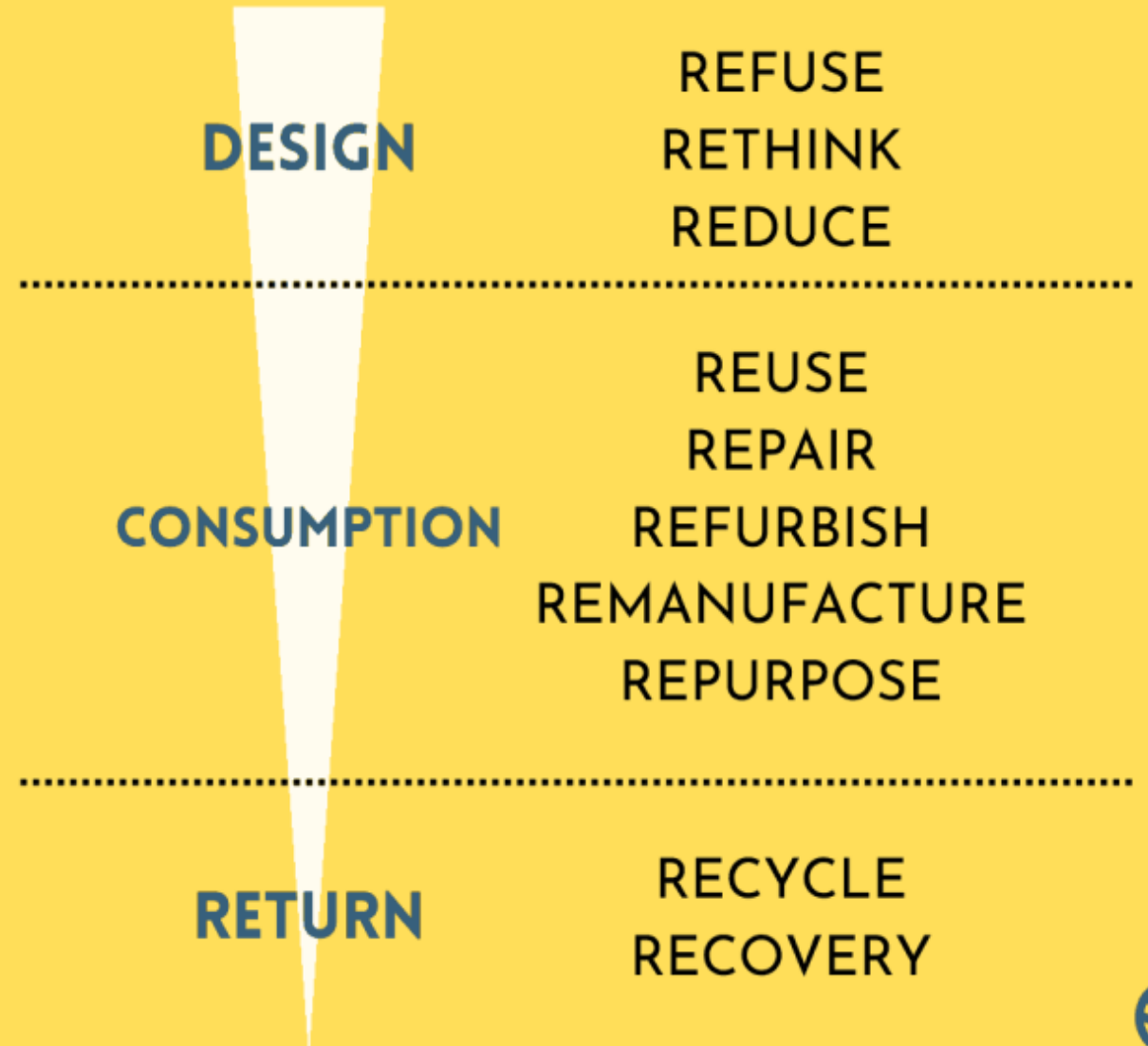
Creating Value

→ From Existing Resources:

- Hanging on to the value in materials means we create extra value!
- New business models to reuse, remanufacture, repair etc creates more income
- Supporting repair, reuse and refurbishment means products used for longer
- By designing out waste from the beginning creates costs & resource savings

10 Rs of Circular Economy

Level of Importance





Creating Value

→ Monetising value:

- CE is a closed-system mimicking natural systems
- CE model enables reuse, repair, refurb opps that can be monetised
- It saves businesses costs in the long run – especially as materials become scarce and/or expensive!
- It focuses on preventing as much waste as possible from going to landfill – which also saves money!
- reusing and refurbishing from recycled materials often results in lower cost for manufacturing





Creating Value

→ Rethinking the resource eco-system:

- Natural Ecosystems provide many services essential for human well-being
- They support the economic growth and livelihoods of human populations
- Ecosystem services and human well-being are strongly linked to biodiversity – pollination and climate regulation services
- LE is based on extraction and depletion assuming unlimited natural resources
- Systems thinking rather than reductionism



Systems within systems

The economy is embedded within society and the environment



Let's Reframe it:

- - \$4.5 Trillion globally in value in a CE model by 2030
- Redesign for resource and process efficiency & value leaks & extend use/reuse
- Support & redesign for 10 Rs
- Support & redesign for longevity & end of life
- Support & redesign for materials to circulate in supply chains
- Moving to a service business model & away from ownership





We can't keep doing the same thing and expect a better outcome:

- **1 planet with limited resources**
- **Natural ecosystems can't process more waste**
- **Climate risk is also resource risk**

We need a new paradigm to thrive:

- LE is inherently biased, inequitable & unjust
- CE can't work unless we actively collaborate
- CE will push us to work together vs against
- CE will add value to business bottom lines
- CE ensures resilience in business & community
- CE favours localised solutions to support all
- CE regenerates all systems for all our benefit

Global markets



WATER



ENERGY & RESOURCES

PROPERTY & BUILDINGS



ENVIRONMENT

TRANSPORTATION



90+ *years* **in operation**

135+ *countries* **served**

200+ *offices* **worldwide**

2.2^(B) AUD *revenue* **2021**

5 global *markets*

10^(K) *people*

50+ *service* **lines**

↳ **Providing engineering, environmental,
advisory, architecture, digital and
construction services**



*** Thank You**