

## **European Union Circular Economics – a Risk Management Tool, a Wealth Generating Opportunity...only the most Important Idea of the 21<sup>st</sup> Century.**

Current economic models inadequately address missed-opportunity costs arising from waste generation because determinations are made on the parts rather than the whole.

What is missing is what is essential systems, and systems thinking.

The role of the circular economy is to incorporate whole systems into new economic modelling, thereby establishing a new framework for value creation, which is underpinned by high level risk managements strategies.

It is a genuine economic policy challenge. The European Union (EU) worked for 30 years to incorporate sustainability and circularity principles into policy frameworks which demonstrates it is a complex public and administrative policy task. However, both the aim and outcomes are clear:

**To decouple waste generation from economic growth, and to transition economic activities from primary resource extraction to materials recovery by keeping as many materials and products in supply chains and secondary markets for as long as possible whilst optimising their value/s, and minimising their environmental footprints.**

In other words, to be sustainable and engage in true production efficiency where no resources are misused or misallocated.

In March 2019, The Council of Australian of Government (COAG) commenced turning its circular economic policy wheel by releasing a recyclable export ban strategy and subsequent *Recycling and Waste Reduction Bill 2020*.

The most important recommendation of our 2019 Churchill Study investigations in Belgium, Sweden and the UK goes several rotations further and takes on the whole rather than a part:

- ❖ The Commonwealth to establish a Circular Economic Commission, with Units in each State to drive substantive structural policy reform, and

- ❖ Treasury to implement taxation reform stimulating circular economic transitions.

What is evident from our investigations was all actors and practitioners involved in this exciting economic transition concluded it was not fast enough. There is a genuine sense of urgency, and competition between member EU states to decrease waste, generate new wealth and create new technological processes, reshaping the nature of the marketplace.

### **The Most Important Idea of 21<sup>st</sup> Century Economics**

#### ***Why a sense of urgency?***

In the context of whole systems thinking, in the past 40 years humans have consumed more natural resources than since we stood on two legs. According to the EU Commission, based on current resource use trends – there is simply not enough left to meet future use trends unless three new Earths are discovered!

But as those who work intimately with waste know there are an millions of tonnes of materials, parts, and products in circulation that have already been invested in and comprising of valuable resources with a carbon footprint, and the potential for new economic value in the market place.

#### **Comprehensive Government Response to Complex Risk**

Importantly the development and implementation of the EU Commission circular economic packages of 2015, represents a cohesive response from government, industry, and civil society to eliminate and mitigate a complex variety of actual risks that have emerged - particularly as climate change impacts increase, as well as waste generation.

Current examples of poor waste management include plastic particulates in the air, ice sheets, waterways & oceans, and human body.

Australia, US, & Russia are experiencing increasingly extended bushfire seasons resulting in high levels of resource and infrastructure loss, and all residuals being landfilled.

Regardless in Australia we continue to increase demolition and destruction of built infrastructure, products, and materials, which are known to deliver linear outcomes of irreplaceable resource depletion and extinction events.

Such outcomes are unintended consequences of 20<sup>th</sup> century linear economic policy post the Great Depression and the Second World War. The circular economic model manages complexity and is designed to deliver sovereign, commercial, human and ecosystem health risk management strategies for the 21<sup>st</sup> century.

Without prejudice, there is increasing evidence that systemic policy failure to adequately address risk, does and will continue to have a direct economic impact into the future.

For example a study produced by Plymouth Marine Laboratory, published in March 2019 titled '*Global ecological, social and economic impacts of marine plastic*', estimates the cost of plastic pollution to global fisheries (excluding costs to other sectors i.e. tourism) at \$2.5 trillion per annum.

Essential facts here are certain plastics/micro fibres can last for more than 100,000 + years in the environment. The economic cost and loss will be unfairly compounded over successive generations.

Circular Economic Systems thinking identifies a healthy ecosystem as essential to ongoing economic viability of the fisheries sector.

### **Macro Reform**

The EU circular economic framework focuses on reducing high risk applicable to supply chains influenced by geopolitics, critical raw material supplies, resources, and materials, human and environmental health, consumer protection rights, and the will and needs of civil society for the benefit of future generations as inspired by the original United Nations definition of sustainability – '*meeting the needs of the present without compromising the ability of future generations to meet their own need*'.

The EU circular economy framework delivers macro-economic reform managing risk, protecting, and reshaping European manufacturing and production sectors by securing:

- ❖ internal markets for critical raw, and secondary materials supplies essential for the success and competitiveness of the manufacturers and production sectors i.e. recycled plastics in Belgium flow to the car manufacturing sector, recycled metals in Sweden flow to metals producers.

- ❖ Settings for, and investment in circular innovation to secure first mover advantage for European business
- ❖ Establishing dynamic and static economic policies to ensure markets for secondary materials flows are not locked in at a low price I.e. highest value materials from the construction & demolition sectors must be prepared for re-use.
- ❖ Regional resilience by reducing the need for imports I.e. increasing local suppliers and supply chain links.
- ❖ Policies to encourage European Institutions and financial sectors to invest in circular economic activities.
- ❖ Certification systems that promote and build consumer confidence in the circular economic marketplace over the entire supply chain.

Photo right: Rotor DC second-hand building materials retail outlet, Anderlecht Brussels.

Rotor DC demonstrates the value of macro circular economic reform delivered through the development of Waste Directives leading to Construction and Demolition Protocols, and market realisation of higher economic value in secondary materials supply chains.



The EU reform is stakeholder focussed rather than shareholder focussed – it requires shifts in thinking including responsibility, participation, and

cooperation. Importantly circular economic principles and definitions are well established.

The world first *British Circular Economic Standard 8001:2017 Framework for implementing the circular economy an organisations guide*, defines circular economic principles as:

- ❖ Innovation
- ❖ Stewardship
- ❖ Value Optimisation
- ❖ Systems thinking
- ❖ Transparency

To support economic transitions, the EU framework expresses clear goals and targets addressing risk and providing structural economic incentives through taxation reform to drive step process change for the manufacturer and production sectors, as well as ensuring consumers are rewarded for their economic participation in driving an authentic sustainable marketplace through reduced or no Value Added Tax rates, or refund deposit schemes.

### **Application of the Hierarchy of Controls from a European Union Policy Perspective.**

When the substantive EU Waste Directive framework, the centre piece of the EU Circular Economic Package 2015, is placed inside of a risk hierarchy of controls an integrated policy and practice system emerges:

**Elimination:** ban on prescribed materials entering landfills, landfill the last and most expensive repository for materials, ban on contamination of products destined for recycling through separate collection systems, design and prepare products for re-use and repair and highly quality recycling, requirement for longevity rather than accepting designed obsolesce, removal of single use products causing most harm and economic loss.

**Mitigate:** Step processes in product design phase to reduce waste outputs over entire product life span, ensure separate collection systems and processes for products and materials to optimise their secondary market value, transfer end of life management costs to producers and manufacturers through extended product stewardship requirements, investing and build recovery infrastructure as alternatives to landfilling, mandating recycled content for new products.

**Review and Consult:** regularly review and revise directives, application of auditable and transparent performance management systems, extensive and timely consultation with stakeholders, realistic transition time frames 1- 3 years.

**Monitor:** Gross and net economic value of materials re-entering the market. Number of jobs created, new enterprises, and demonstratable reduced volumes of waste and pollutants.

### **Wealth Generation & Re-Use?**

Why focus on waste? There is no better example of economic inefficiency than waste generation. All potential is lost due to the linear nature of bash, bury, burn models = end of life = end of opportunity.

Our company Recovery Tas, as owners and operators of the Recovery Shop have for 29 years recovered products and materials from the waste stream and placed back into circulation – we are re-use and market development specialists. Daily auditing demonstrates over 40,000,000 products and parts have gone through our facility generating over \$12,000,000 in new wealth. Our model has provided ongoing full-time permanent employment at a higher rate than recycling or landfill, from a Glenorchy City population base of 46,000, with an average of 157,000 visitation per annum.

Our operation is a circular economic hub.

Like all circular economic activities the Recovery Shop operations are complex, we salvage directly from landfill, , receive, pick-up, deconstruct, process and repair re-usable products and materials (waste in Australian industry terminology) into thirty three categories of sale to optimise market value, and estimate we can manage several thousand items a day – incoming and outgoing. We are just like any other retail outlet. As a circular economic hub our outcomes are simple and measurable:

- ❖ High public participation rates and permanent gainful employment
- ❖ High volumes of audited materials, products, and parts put back into circulation
- ❖ New wealth generated
- ❖ Number of sales transactions
- ❖ Reduced landfill volume and associated cost savings
- ❖ Embedded carbon

As operators and developers of longstanding we are envious of the EU success in driving major reform. We are not economically incentivised in any way for the high level of waste reduction we and our colleagues have achieved.

In Belgium regional local authority settings for the re-use sector drive innovation and change. Re-use operators & retailers are paid for every kilo of material they recover and on sell back into to the market, government invests in the supportive infrastructure and disposal is penalised.

In Europe, the re-use sector is recognised as a service provider and a wealth generator, with a key role to play in the circular economy. In the Flanders region (one of three Belgium

regions) €45,000,000 was generated in 2018 from 150 re-uses shops, with a base population of 5 million, employing 5,000 people. The current target is for 7 kg, per household of reusables to go to Circular Economic Shops by 2022.

Tellingly, the most recent revision of EU circular economic packages released in March 2020, direct all activities including product design towards designing and marketing for longevity, repair, refurbishment, and subsequent reuse with low cost parts library's available for products. The EU policy directives, investment and business and society response has ensured the second hand first movement continues to grow and transform rapidly in Europe.

The photo right features Cyclup (see our report) Eco-design product labelling.



Brand Belgium well understands the creative potential of the circular economy to present a heart-felt modern consumer story promoting sustainable values, as well as practically transforming discarded items into highly desirable ones, generating new wealth and new employment opportunities.

The famous Swedish re-use shopping mall Retuna, located in Eskilstuna was established by the local government investing 5 million kronor into planning and retail infrastructure, including co location of waste management infrastructure to ensure a high level of product and material interception from the waste stream . Subsequently waste diversion has significantly increased stimulating new business ventures.



Photo above of Retuna.

Local and international tourism has also increased due to Retuna, an additional 6,000 visitors per annum.

Photo right: Eskilstuna Tourism Brochure:

The Retuna model is primarily based on private small to medium enterprises and is now firmly placed as a jewel in Brand Sweden's circular economic crown.

**All re-use models including in Tasmania, Belgium, and Sweden, demonstrate re-use represents higher economic value in the waste hierarchy, and is significantly less affected by national and international market fluctuations.**

Current Australian waste management practice remains focussed on lower order activities such as recycling, land fill and emerging calls for incineration – linear thinking!



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## **Waste Linked to Prosperity**

Australia missed this opportunity in the mid 1990's. Our enhanced Tip Shop model and others such as Revolve (Canberra) and the venerable Reverse Garbage (Sydney) were poised to develop and deliver the concepts nationally, funded by the Commonwealth and driven by new economic instruments signalling sustainable waste reform.

Unfortunately, a productivity commission erroneously determined increased waste generation was an indication of prosperity, rather than indication of future supply risks linked to finite resources, systems limits and economic loss. The roll out was stopped, in the EU it continued. The outcome? Australian's now throw out more than 2,700 kilo per annum, per person, (EU 800 kilos per person per annum declining) and are highly reliant upon imports.

## **Realising the Greatest Opportunity of the 21<sup>st</sup> Century**

The opportunities the circular economy presents for regional and urban Australia are nothing short of extraordinary. The European Union has done all the heavy lifting, and its most current frameworks can be transferred into Australian policy to ensure our systems do not need to undergo regular revisions and new and emerging business models simply replicated.

The Commonwealth Government next circular economic rotation should be a national economic impact assessment, informing the future work of the Circular Economic Commission and its partner Treasury.

Most importantly, to maximise new wealth generation opportunities circular economic activity should be directed towards the top end of the waste hierarchy of avoid, reduce, reuse, repair followed by lower value activities of recycle.

*Our report 'A Circular Economy Blueprint - An investigation of innovative waste reduction models for dissemination in Tasmania – Belgium, Sweden and the UK 2019' and can be accessed via the Churchill Trust website.*

### **The last word for A Sustainable Economy**

The Covid and climate crisis has demonstrated high risks to the Australian economy related to imports, national production and supply capacity and loss of valuable products and materials through linear thinking. Genuine economic sustainability in a risk context works best when your production and manufacturing sectors are closest to home; and your customers can access supply within national regions, with critically important items being designed for re-use then recycling where practicable.

Both circular economic principles and economic activity is designed to mitigate sovereign, and market risk, all without comprising or impacting on the ability of earths systems to restore and regenerate themselves, nor of humans to meet their current and future needs.

Circular Economics really is the greatest idea of the 21<sup>st</sup> Century.