

## THE EFFICIENCY REVOLUTION: AUSTRALIAN BUSINESS AND THE CIRCULAR ECONOMY

*We've had the industrial revolution, the green revolution and the knowledge revolution. Now we're on the cusp of the efficiency revolution, and there are great opportunities for Australian businesses.*

Our post-war industrial system was built on the premise of 'dig it up, process it, consume it and dump it'. But with increasing global competition from emerging nations and diminishing access to raw materials through depletion of natural resources, businesses face a future where supply risks are likely to outpace demand. Revolutionising the efficient use of resources offers a more sustainable future than 'business-as-usual'.

Establishing a circular economy offers businesses the opportunity of reducing material risks and guaranteeing supply through a continuous loop of resource management. By moving away from built-in obsolescence and designing for recovery, manufacturers can collaborate with other sectors to cycle products through consumption and end-of-life and effectively manage and secure their own material feedstocks. With greater coordination between sectors and across the economy generally, and innovation in systems and technology, comes a better understanding of markets, new job opportunities and improved business economics.

Each sector has a role to play in innovating for the future of a circular economy:

- **Designers:** Designers need to re-set definitions of good design and marketability. A product that is designed for efficiency, longevity and has less product complexity results in a smaller life cycle 'footprint', using fewer resources in production and use. This is the benchmark for a good design outcome.
- **Manufacturers:** Manufacturers can minimise leakage of resources through the production process (including raw materials, energy and water). Manufacturing processes can be reconfigured so that by-products and excess heat have secondary uses. A process that uses recovered resources and operates efficiently will reduce supply risks and is better able to compete in global markets.
- **Retailers:** Retailers can decide to sell either a product or the service derived from the product. Increased product longevity and higher levels of service can lead to improved relationships with consumers, building brand loyalty and maintaining profitability. Product stewardship systems can be operated to recover products designed and manufactured for recovery and reuse.
- **Users:** Consumers become both users and suppliers of feedstock, sharing or renting products or buying products which have an incentive for return at their end-of-life. Purchasing decisions are based on information about whole-of-life impacts derived from transparent supply chains. Recovery of resources becomes automatic through sophisticated material management systems.
- **Material managers:** Recycling companies become material managers. Through improved cross-sectoral material recovery, collection costs can be reduced: then material recovery becomes about value not volume. Fostering partnerships with manufacturers will allow direct re-supply of materials.

The potential benefits of the circular economy are significant. It will include a wave of innovations, productivity improvements and employment in growth sectors of Australian business, while increasing competitiveness in international markets. This can build long term resilience into the Australian economy.

So how does Australian business get started on this journey to a circular economy?

1. **Know and control the supply chain.** Find out the areas of wastage, improve transparency and tracking of materials, encourage improvement by suppliers, establish cross-sector partnerships for supply and recovery of materials.
2. **Re-think the paradigm.** Look at new ways of doing business, investigate new designs from first principles, consider how production and supply systems and products could be re-designed. Innovate and lead the market.
3. **Work together.** Foster new partnerships with designers, suppliers, retailers, recyclers. Use market leverage to work to continually improve products and services.
4. **Activate your network.** Tell stakeholders what you are trying to achieve, encourage their support and participation, establish collaborative pilot projects to test new ideas.
5. **Map your path.** Identify 'low hanging fruit' as well as medium and longer term measures. Initiate principles of eco-design and product stewardship to production and supply systems. Be honest about the main challenges and celebrate the easier gains.

*Christine Wardle*  
*Managing Director, Blue Environment Pty Ltd*