Australian Academy of Technology & Engineering

Will Australian waste management be technology ready in 2030?

Waste and resource recovery companies invited to assist in turning rubbish mountains into business opportunities.

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Australia wasn't ready for 2019's waste crisis. Can we shift to a viable, high-tech industry by 2030?

The Australian Academy of Technology and Engineering (ATSE) is calling on people at the frontline of waste and resource recovery to share their thoughts on how technology can best address the country's worsening waste crisis.

Fires at rubbish stockpiles, the collapse of a major recycling company, shrinking export markets, and public concern over plastic litter's effects on wildlife are all contributing to a growing sense of urgency around how to tackle rubbish problems.

To zero in on solutions, the Academy has launched a project to investigate the readiness of the waste management and resource recovery sector to adapt, adopt, or develop technologies that will enable it to address the challenges and opportunities of the next decade.

Businesses in the sector are being asked to give their opinions and ideas through an online survey.

"Technology has already transformed recycling in Australia," says Dr Matt Wenham, ATSE's Executive Director, Policy. "For example, glass bottles were once sorted by hand. Then from 2014, optical sorting facilities started sorting glass automatically using light to identify the glass type and colour.

"Australia generates about 67 million tonnes of waste per year, but 'waste' is the wrong word: recovered materials can be used to make everything from cardboard boxes to high-end building materials."

He adds that technological change also means rubbish is an economic opportunity, with 9.2 jobs created for every 10,000 tonnes of material recycled.

ATSE has identified four technology-based solutions that could help the sector make the most of these opportunities over the next decade:

- Improved product stewardship, where the consumer, manufacturers and the waste sector work together to reduce waste. This might involve manufacturers extending the useful life of their products with platforms that enable hiring, sharing or second-hand sales.
- Design for disassembly, which makes products easier to repair, repurpose, and recycle.
- Smart waste management systems, which use advanced technologies to sort and process materials, or technologies that make it easier for consumers to play their part, such as "pay as you throw" automated levies.
- Advanced resource recovery solutions that use technologies to recover energy to produce electricity, heat, gas and fuels from waste.

The survey is accessible at https://www.surveymonkey.com/r/DGQRRVF and open until the end of March 2020. It will ask respondents to rate the waste and resource recovery sector's readiness for each solution in terms of skills, infrastructure, economic feasibility, regulation and social acceptance.

This investigation is part of a wider three-year research project funded by the Australian Research Council, examining the technology readiness of different industry sectors. The report generated following the consultation will provide a blueprint for waste management planning to 2030.

Further information:

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