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# Establishing a single source of truth on the environmental impacts of Australian e-waste

Australian Government, E-Product Stewardship in Australia



## Summary

In this success story, we share how Iceni partnered with our Australian government client to analyse the current state and projected growth of e-waste in Australia. Our joint venture with Lifecycles produced a gold standard model for assessing the environmental impact of e-waste in the country.

## DAWE's challenge

E-waste, the fastest growing waste stream globally, has seen remarkable growth in consumption due to the widespread use of electronics. In Australia, e-waste is expanding at a staggering rate – three times faster than any other waste category. Recognising the need for effective environmental management of electronics, the Department partnered with state and territory governments to seek solutions. A major hurdle was the lack of a reliable, consolidated source of data on e-product consumption, e-waste production and end-of-life management trends in Australia.

To address this challenge, the Department enlisted the expertise of Iceni for comprehensive modeling, aiming to gain insights into the current state and projected growth of e-waste in the country. The department was also looking for a quantitative foundation to inform future policy development and actions.

## Our approach

To tackle this project, we formed a joint venture with Lifecycles, an esteemed lifecycle assessment firm. Our aim was to provide a comprehensive understanding of e-waste in Australia by leveraging the best practices in modeling and analysis.

To facilitate meaningful stakeholder engagement, we identified crucial information needed for effective consultation. Using the latest data and world-class modeling techniques, we updated and enhanced previous estimates of e-product consumption, e-waste production and end-of-life management.

We designed a consultation paper and an executive report on e-stewardship in Australia as a valuable resource for stakeholders to engage in informed discussions. The data-rich report effectively conveyed key messages about e-waste in Australia without influencing the stakeholder consultation process.

To enhance stakeholder understanding, we also developed engaging infographics depicting crucial aspects. These were designed to simply explain the e-product/e-waste value chain in Australia, the connection between e-stewardship and greenhouse gas emissions and the challenges and opportunities related to solar PV and battery storage.

## Value-adds

To create additional value for our clients, we conducted an in-depth analysis of the material composition of various electronics, estimating their material value and assessing their embodied greenhouse gas emissions. This provided valuable insights into the environmental impact of e-waste and enabled us to articulate the value of this precious resource to the industry.

We also used the evidence generated from our modeling efforts to co-design a path forward for the e-waste technical team. This collaborative approach facilitated internal agreement on critical success factors for key milestones in the subsequent phases of the project.

## Client Outcome

The culmination of our joint efforts with the Department was the creation of a gold standard model for evaluating the environmental impact of e-waste in Australia. This pioneering approach empowered policymakers and waste management agencies with vital insights into the most effective strategies for combating the e-waste challenge.

Our evidence and executive reports have been widely presented to government, industry and academic stakeholders and are publicly available.