Plugging Australia's E-waste Gap

Lifting the lid on Australia's e-waste crisis

sircel®

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A letter from Sircel CEO, Anthony Karam

At Sircel, our mission is to transform the future of e-waste into a world where there's no 'waste' at all. One of our goals is to see all the valuable commodities locked inside end-of-life electronic equipment and devices recovered and redirected into the circular economy.
It's a big goal, but we're committed to making it happen.

We knew the e-waste knowledge gap was significant, and that community and business education would be an essential part of our remit – that's why with this report we decided to quantify and qualify the gap this International E-waste Day.

The Plugging Australia's E-waste Gap report highlights the gaps we, as a community, need to bridge. From a corporate perspective, it's evident that robust policies and increased e-waste awareness is essential for shaping a vibrant circular economy and uplifting local and global communities. Meanwhile, for everyday Australians, emphasising e-waste education and breaking down barriers to encourage the responsible disposal of unwanted devices and appliances is necessary to achieve our goals of a sustainable world.

At the heart of our business is a deep desire to 'make better possible'. A better, brighter, more sustainable future where the valuable commodities we currently throw away in end-of-life electronics can and do find their way back into manufacturing. A truly circular economy.

But for this to work, system wide changes are needed. That's why we're advocating for change right across the community. One illustration of this is our recent submission to the Federal Government's Senate Enquiry into Waste Reduction and Recycling Policies.

In this submission we outlined how Australia can be at the forefront of solving the e-waste challenge, ultimately becoming an exporter of this expertise. However, to enable this to happen there needs to be:

- A specific, nationally recognised definition and product category for e-waste, treated in a discreet way.
- A single, nationally consistent, legislative and policy framework for the treatment of e-waste.
- A holistic approach to understanding and managing e-waste from manufacturing, product stewardship life-cycle usage, collection and recycling.
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Australia has the capabilities to become a leader of sustainable e-waste disposal. If we can, as a country, increase e-waste collection and recycling rates to 60% then we can create a positive impact on the economy. Not to mention improve the environmental, health and social issues caused by the mishandling of e-waste.

That's why Sircel is at the forefront of this issue, driving an ethical and effective circular economy for e-waste. It's better for business, the community and the planet.

Anthony Karam,

Executive Summary

As technology becomes more embedded into our professional and personal lives, e-waste has become the fastest growing waste stream in the world. While most companies and organisations are committed to broader ESG goals, e-waste consistently falls by the wayside in most sustainability reports by 200 companies listed on the Australian Securities Exchange (ASX).

The cost of inaction is huge. Ongoing environmental degradation, increasing commodity prices as mining becomes increasingly problematic, and a widening gap between public expectations and company performance.

A lack-of transparency from organisations on their e-waste adds fuel to the fire. Many businesses don't know where their e-waste goes for disposal, some don't treat it with the same urgency as paper and cardboard recycling, while others don't bother disclosing the amount of e-waste they produce.

When we presented the facts and figures around e-waste in Australia to consumers, the message was clear. Businesses need to take more responsibility with e-waste recycling and responsible disposal needs to happen on our shores.
To make this happen, Australian corporates need to establish clear e-waste recycling strategies that align with their broader sustainability goals. **While most ASX companies are committed to addressing sustainability and tackling Scope 3 emissions, there's little to no mention of e-waste in these areas, highlighting a clear gap that needs to be bridged.**

These are some of the key findings from Sircel's Plugging Australia's E-waste Gap report. As Australia's only end-to-end e-waste recycler, we wanted to know how Australians felt about e-waste and what corporates are doing to combat this escalating crisis.

As part of our research, we surveyed 1,000 Australians on their knowledge and expectations on e-waste and conducted an in-depth analysis of the most up to date sustainability reports that have been published and made available by ASX 200 companies prior to International E-waste Day on 14 October 2024.

What is e-waste?

Electronic waste (e-waste) is any appliance that has an electrical plug or separate charger that you no longer want or need, or is obsolete. It's the devices we simply can't live without, such as phones, laptops, computers, TVs and household appliances. E-waste also includes the electronics that we don't see, such as IT servers, communication exchanges, and control panels.

The Australian e-waste landscape

Everyone who owns an electronic device has a role to play in tracking the e-waste crisis. With the average Australian generating around 22 kg of e-waste each year, we're one of the highest contributors of e-waste per capita in the world. Reducing that number can present a challenge for corporates who want to protect their reputation while identifying ways of boosting revenue.

It's cheaper and more convenient for consumers and organisations to discard their devices irresponsibly. Some Australians might have access to a simple solution, thanks to many local councils offering e-waste collection services or drop off locations. For businesses, disposing of e-waste requires more responsible management.

Organisations might have an e-waste partner, but it's not enough to go through any e-waste disposal company. Unlike Sircel, a lot of these companies don't see the process from start to end. Instead, many strip out some resources for resale and send the rest to landfill or overseas where the waste is incinerated or dumped into off-shore landfill.

This is an opportunity for corporates to step up, create large-scale impact, and become sustainability leaders by contributing to a circular economy for e-waste that mitigates environmental and human harm while fostering economic growth.

In addition, disposing of your e-waste properly can reduce the global demand for virgin metals increasing the supply of green resources for future manufacturing.

At the end of the day, the onus falls on us all.

On consumers to understand end-of-life considerations and seek out ethical disposal services.

On business to have an e-waste strategy that looks at repurposing, reuse and recycling in the most sustainable way – not just the cheapest.

And on Governments to set a legislative framework that enables world-class recycling practices to increase accountability on business and individuals to do the right thing, as well as providing more legislative certainty for the industry and its legitimate operators.

Across the **top 200 companies** listed on the Australian Securities Exchange (ASX)

less than one in five (19%) even mention e-waste in their most recent sustainability reports.

E-waste by sector

When you break down the mentions of e-waste in sectors with three or more companies on the ASX, the numbers show which industries have their e-waste priorities straight:

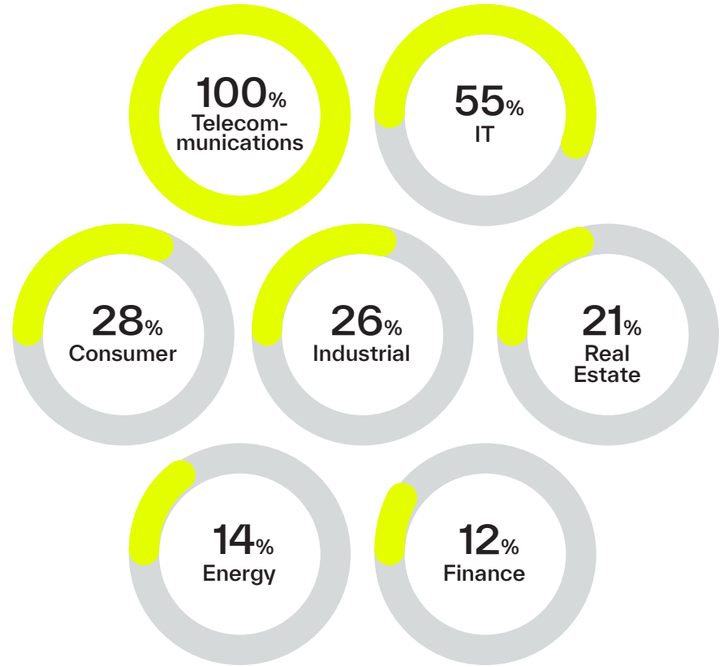
Getting e-waste on the agenda

Given the influence these companies have, it's staggering the vast majority are failing to acknowledge Australia's fastest growing waste stream.

Of the companies who acknowledged e-waste as a waste stream:

- **26%** provided e-waste statistics
- **29%** included some highlights about their e-waste strategy and approach
- **24%** shared the number of devices they have recycled or reused
- **13%** reported the amount of e-waste diverted from landfill

While it's a start, the number of companies prioritising e-waste should be higher. Not only does recycling e-waste responsibly have reputational benefits, but you'll be directly contributing to the Australian economy, mitigating environmental harm, and achieving ESG and Scope 3 goals along the way.



Reporting on e-waste takes a back seat

While the concept of e-waste has been around for some time, findings have revealed that many Australian companies are only just beginning to understand its impact on the environment and society. This is reflected in the sustainability reports published by companies listed on the ASX 200, where

44%

of sustainability reports mentioned waste streams but a vast majority failed to include e-waste.

Even though there were some mentions of e-waste as an individual waste stream, the fact that it's not widely recognised across the board as its own stream reiterates the perception that e-waste isn't as high a priority as other types of waste.

If businesses don't rapidly develop more stringent reuse and recycling policies for e-waste, the damage caused by this waste stream will remain unchecked.

Exploring the relationship between e-waste and Scope 3 emissions

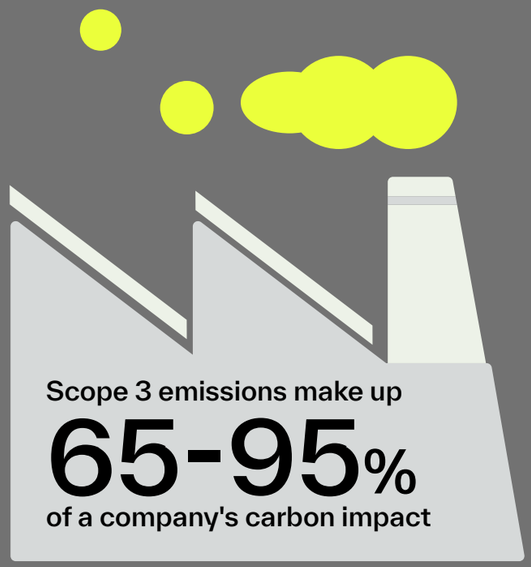
Scope 3 emissions come from activities by assets that aren't owned or controlled by an organisation, making them one of the harder emission types. In the context of e-waste, Scope 3 emissions come from the energy and processes involved when transporting or recycling e-waste, even though the actual work is carried out by external facilities.

As Scope 3 emissions make up 65% to 95% of a company's carbon impact, it begs the question of how big corporates are addressing these emissions in light of the e-waste crisis.[1]

Well, the answer isn't as clear cut as we'd like it to be.

Of the 200 ASX listed companies, 76% talked about Scope 3 emissions in their sustainability reports.

While this is a solid figure, only one company out of the 200 discusses the intricate relationship between Scope 3 and e-waste. In addition, 10 out of the 152 outlined their goals for reducing Scope 3 emissions by 2030 and beyond, while only three explain their strategy for achieving net zero Scope 3 emissions by 2050.



Scope 3 emissions make up

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10
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3
explain strategy for achieving net zero Scope 3 emissions by 2050

[2] PWC, Tackling the scope 3 challenge, 2022, https://www.pwc.com.au/energy-transition/scope-three-challenge.html

Creating a vibrant circular economy

A circular economy is where excess materials don't become waste. Instead, a circular system promotes the continual use, recycling, and repurposing of unwanted materials and products to support sustainable practices. The responsible recycling and processing of e-waste presents an opportunity for corporates to directly contribute to the Australian Government's goal for a circular economy by 2030.[2]

However, only 43% of the 200 ASX listed companies mention supporting and working towards a circular economy in their sustainability reports.

Within that, only 12% actually discuss the relationship between e-waste disposal and enriching the circular economy. There's room for corporates to make a stronger commitment to drive positive change on a local and global scale through recycling e-waste and repurposing the valuable materials back into the Australian economy.

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discussed the relationship between e-waste disposal & enriching the circular economy

Reuse, repurpose, recycle

When consumers and corporates think of recycling, the image that comes to mind is stacks of broken-down boxes, mesh bins full of unused printouts, and emptied milk bottles from the communal kitchen. The reality is that recycling extends beyond what gets put out in the council bin every second week and corporates need to start including e-waste in the recycling equation.

The vast majority of 200 ASX listed companies mentioned recycling in their sustainability reports (88%). This indicates that companies acknowledge that recycling is part of the answer in tackling climate change and promoting sustainability.
Yet **only 15% of those that mentioned recycling included e-waste in their definition** of recycling, highlighting the need to encourage corporates to expand their definition.

As part of our submission to the **Federal Government's Senate Enquiry into Waste Reduction and Recycling Policies,** we specifically called out the need for a nationally recognised definition of e-waste that businesses and consumers alike can understand and recognise.

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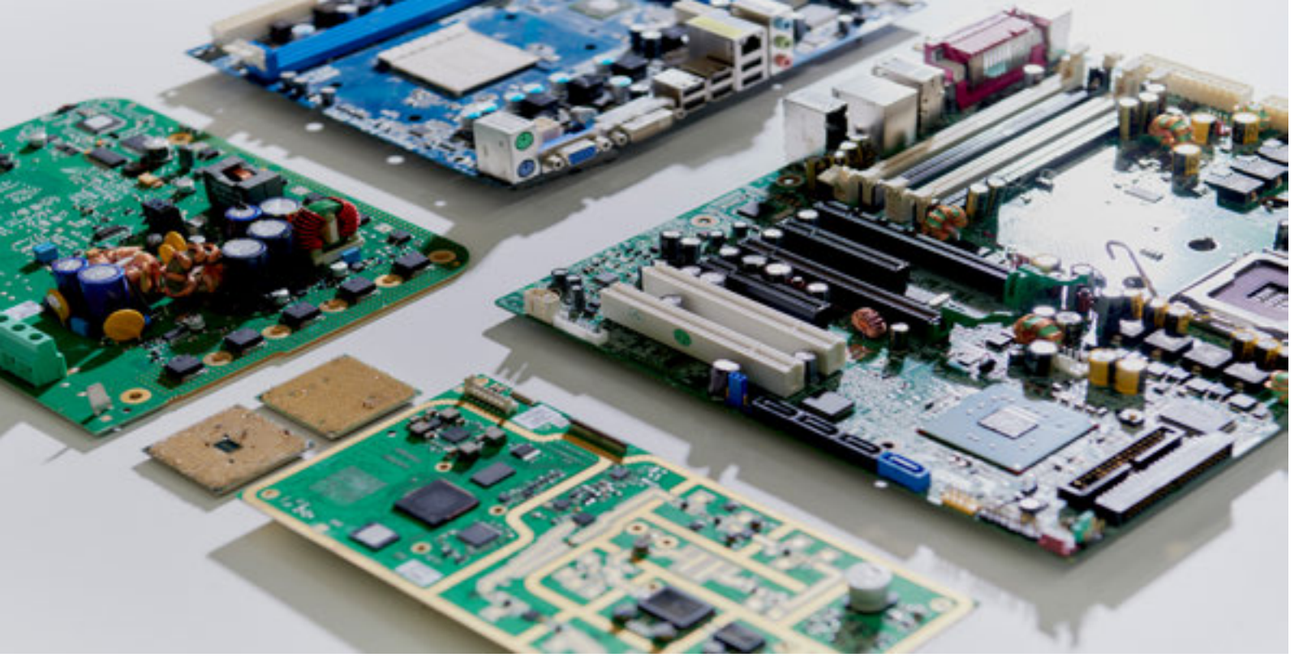
[3] The Australian Government Department of Climate Change, Energy, the Environment and Water, Transitioning to a more circular economy, 2024, https://www.dcceew.gov.au/environment/protection/circular-economy



Why do companies need to make e-waste a priority?

Corporates can reduce Scope 3 emissions and achieve their ESG goals.

Identifying e-waste as an individual stream of waste can have a positive impact on your business. Companies will have the awareness and ongoing capabilities to recycle and manage their e-waste to directly contribute to Australia's growing circular economy. In addition, companies can harness this awareness and commit to reducing Scope 3 emissions.

However, as mandatory reporting on Scope 3 becomes the norm for larger companies, recycling e-waste isn't enough. Companies need to have total clarity on where their e-waste is being recycled and prioritise Australian partners. This can help companies ensure they're not indirectly contributing to shipping e-waste overseas to be dumped into landfill or be incinerated, which can increase their Scope 3 emissions.

In addition, companies should visit their e-waste partners to get a better understanding of how they operate to guarantee their e-waste partner is aligned on achieving the organisation's Scope 3 goals. To take it one step further, companies should demand transparent reporting from their e-waste partners to ensure they can walk the talk.

There's no time like the present for organisations to step up and commit to actively working towards their net zero targets and become responsible with their e-waste. This can help lower the carbon footprint associated with sourcing and mining valuable materials, such as copper and rare earth elements. This can also reduce the Scope 3 emissions often associated with manufacturing and lower the emissions produced when transporting goods, including waste.

Government bodies can boost the local economy through valuable materials

The Australian Government has already taken steps towards empowering consumers and businesses to recycle e-waste responsibly through the National Television and Computer Recycling Scheme (NTCRS). Since its establishment in 2011, the NTCRS has provided Australians free access to industry-funded e-waste collection and recycling services.[3]

Government bodies have the power to establish a holistic approach to combat the e-waste crisis through a single, nationally consistent framework for e-waste treatment. As part of this, governments can extract and redistribute the valuable materials, such as precious metals, from end-of-life electronics to strengthen the economy and minimise the mining of virgin materials.
The technological know-how exists and was pioneered in Australia. Now it's time for the government to harness this knowledge to support the Federal Government's promise to invest in a future made in Australia.

We have the opportunity to be at the forefront of solving the e-waste challenge and become global e-waste leaders by turning Australia's largest pollutants into an opportunity for economic growth and sustainable leadership.

Help protect communities against the harsh reality of improper disposal

E-waste is one of the fasting growing waste streams in the world, yet only

17.4% of e-waste is responsibly collected and recycled on a global scale.

Irresponsible disposal of e-waste can have a devastating impact on the environment, such as contaminating the land and waterways with toxic pollutants.

In fact,

e-waste accounts for **70%** of the toxic substances found in landfill

and can have a long-lasting impact on the environment and communities due to their inability to biodegrade.[4] [5]

From a social standpoint, there are serious health and security consequences if e-waste is disposed of incorrectly. In addition, confidential data can be accessed on disposed devices and can pose a real security risk to consumers and corporates.

[3] The Australian Government Department of Climate Change, Energy, the Environment and Water, National Television and Computer Recycling Scheme, 2024, https://www.dcceew.gov.au/environment/protection/waste/product-stewardship/products-schemes/television-computer-recycling-scheme
[4] World Health Organisation, Electronic waste (e-waste), 2023, https://www.who.int/news-room/fact-sheets/detail/electronic-waste-(e-waste)
[5] Clean Up Australia, Our growing e-waste problem, 2024, https://www.cleanup.org.au/our-e-waste-problem

What do Australians know about e-waste?

Education is crucial in the fight against e-waste

There's an almost even split between Australians who know what e-waste is (52%) and those who don't (48%). This divide aligns with content and awareness campaigns that the general public might've engaged with over the years.

For instance, general recycling campaigns and initiatives are more common and widespread when compared to their e-waste counterparts. In addition, recycling plastic, paper and cardboard or putting food scraps into a green waste bin are concepts that are often drilled into Australians from a young age. Yet with the rise in technology and e-waste production, it's clear that e-waste requires equal, if not more, attention and education so that all Australians have a baseline understanding of what e-waste is and how we can address the issue together.

Consumers believe that we generate more food, construction and general waste

When asked which waste stream Australian's produced the most of, e-waste came in at number four out of eight. Taking the top three spots were food, general, and construction waste.

While these answers were on point with other reports on Australian waste consumption, it's our job to reinforce and emphasise how quickly e-waste consumption is increasing on a national and global scale. According to the United Nations Institute for Training and Research, e-waste is being produced five times faster than documented e-waste, which is the rate of proper e-waste recycling.

The World Health Organisation also states that e-waste is one of the fastest growing waste streams globally that, if disposed incorrectly and irresponsibly, can pose a serious health risks to communities.[6][7]

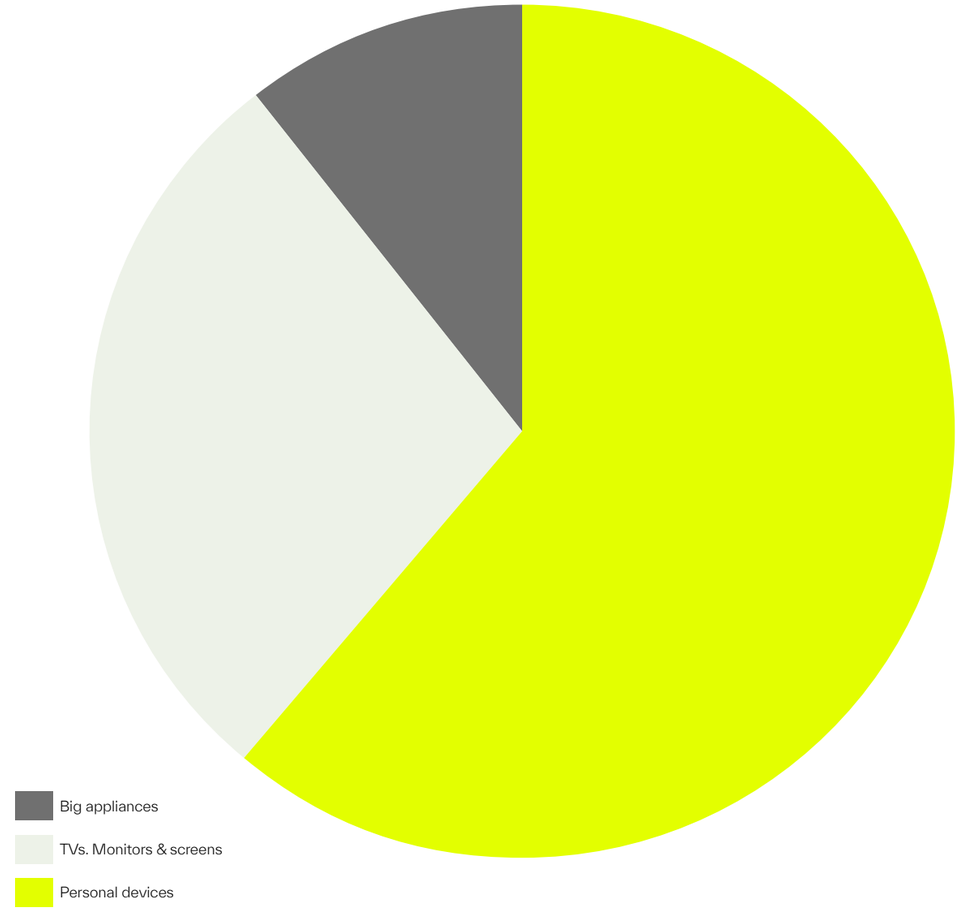
The consumer research demonstrates that Australians are aware of their waste habits, but they haven't grasped the magnitude of the e-waste crisis. This presents an opportunity to highlight how much waste we're actually consuming on an individual, corporate, and national level to hold ourselves accountable and drive real change.

[6]United Nations Institute for Training and Research, Global e-Waste Monitor 2024: Electronic Waste Rising Five Times Faster than Documented E-waste Recycling, 2024, https://unitar.org/about/news-stories/press/global-e-waste-monitor-2024-electronic-waste-rising-five-times-faster-documented-e-waste-recycling
[7] World Health Organisation, Electronic waste (e-waste), 2023, https://www.who.int/news-room/fact-sheets/detail/electronic-waste-(e-waste)

Around 41% of respondents associate e-waste with personal devices

When asked to identify what devices fell under the e-waste umbrella, personal devices such as computers, laptops, tablets and phones came out on top (41%). TVs, monitors and screens were also strongly identified as a form of e-waste (19%).

Bigger appliances and devices ranked lower on the e-waste scale, such as cooling equipment (like freezers and fridges), vending machines and solar panels. This gives companies the opportunity to educate consumers on what constitutes e-waste and expand their knowledge to make smarter decisions when disposing of appliances.



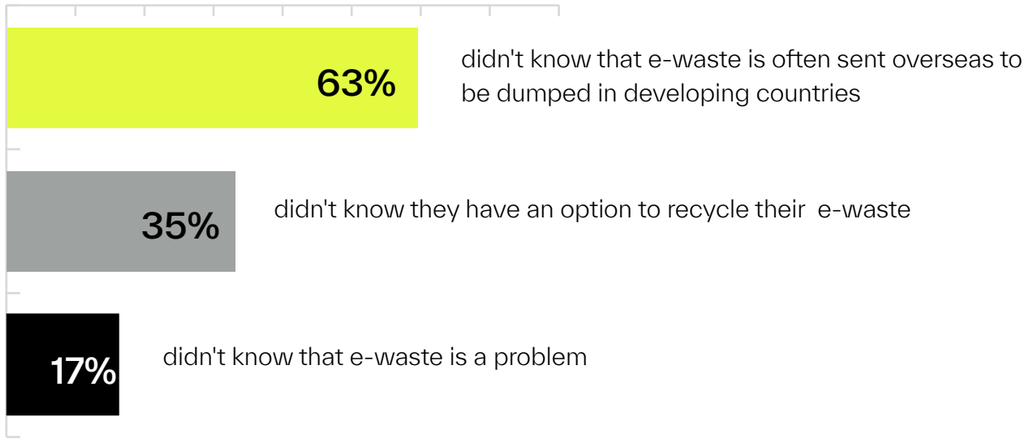
Australians face many barriers when wanting to recycle their e-waste

When you consider the education for other types of recycling, such as plastics and batteries, it's no wonder that **35% of Australians didn't know they had the option to recycle their e-waste.** Coupled with the **17% who weren't aware that e-waste was a problem,** there is an evident knowledge gap that electronic manufacturers, businesses that use e-waste, and governments can bridge. These organisations have the resources and capabilities to educate consumers on responsible e-waste disposal and help break down one of the major barriers stopping Australians from doing the right thing with their e-waste.

Consumers also highlighted **the inaccessible nature of dedicated facilities (40%).** There isn't a cookie cutter solution that will suit all Australians but promoting where they can recycle their e-waste and simplifying the journey can help remove the task from the 'too hard' basket.

Another major barrier was concerns over privacy (20%). The improper disposal of e-waste can lead to data breaches due to consumers or e-waste partners not taking that extra step in wiping the data from their devices prior to recycling. While there are extra steps to take to ensure there's no risk of a data breach, consumers should be recycling their e-waste through a local certified e-waste partner who is accredited to dispose of data safely before the device is recycled and repurposed responsibly.

% of Australian consumers

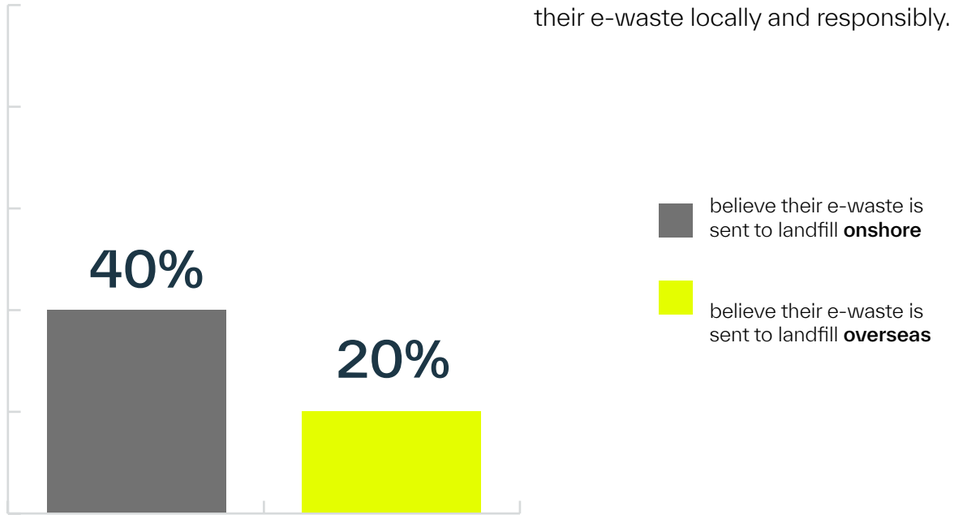


Most consumers don't know what happens to their e-waste

Australian consumers don't exactly know where their e-waste goes or what happens to it once disposed. **Around 40% of respondents believe their e-waste is sent to landfill onshore, while just 20% of people think it's sent overseas.**

In fact, around **63% of consumers weren't aware that e-waste is often sent overseas to be dumped in developing countries.**

We need to lay the foundations for robust education on the life cycle of e-waste, so consumers can feel empowered to recycle their e-waste locally and responsibly.



What are consumer expectations around e-waste?

The desire for local e-waste solutions reigns supreme.

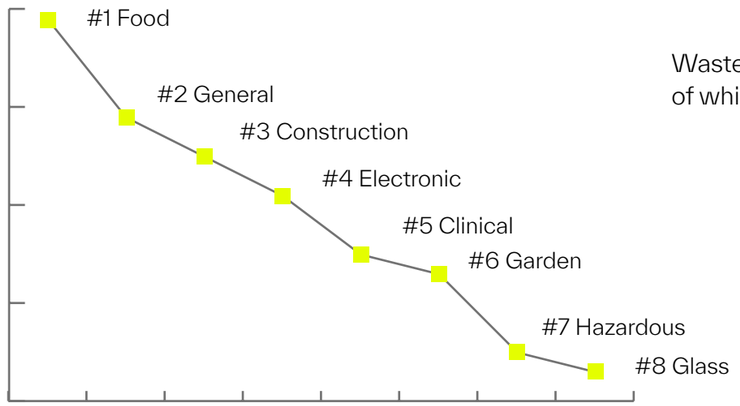
Going local should be the future of all Australian e-waste solutions. Almost half of Australians want to see less e-waste being sent overseas, while nearly three-quarters prefer their e-waste to be recycled in Australia. What this means is that businesses, governments at all levels, and electronics manufacturers and retailers have a responsibility to partner with local, certified e-waste recycling companies to meet the mounting pressures coming from Australians. If consumers learn a business isn't being responsible with their e-waste, they'll jump ship and support one that is.

The corporate world is where the e-waste gap is most evident, with **84% of Australian's sharing that their companies either have no e-waste policy or aren't sure if they do.** Australian's want businesses to take more responsibility with how much e-waste they produce and dispose.

Whether it's developing and implementing an e-waste removal strategy, educating team members on the topic, or being transparent in how they recycle e-waste, companies need to step up and drive change in their own workplace to inspire others to do the same.

There's also a strong agreement that precious metals recovered from e-waste should be directed back into Australia's economy to promote sustainable device and appliance life cycles.

Government bodies should do more to regulate the e-waste industry and be strict when it comes to e-waste recycling, the research found. **Australia has the power to lead the fight against e-waste through strategic policy development on a corporate and government level, giving us a worthwhile opportunity to plug the e-waste gap once and for all.**



Waste streams ranked in order of which people think Australia produces the most of?

How sircel can help

Sircel is Australia's only end-to-end e-waste recycling service. We won't take part in practices that result in our e-waste causing harm to Australia or other countries. Our Australian-owned and operated system means we can divert up to 100% of e-waste from landfill, against an industry average of just 20%. By partnering with companies, councils, manufacturers and retailers, we can ensure e-waste is properly recycled and contributes to a circular economy that prevents harm and promotes sustainability.

Methodology

This research was conducted in September 2024 and engaged 1,000 Australian device users and consumers. The survey was distributed through independent research platform, Pollfish.

We analysed the most recent sustainability reports made available by ASX listed companies. The sustainability reports date from 2020–2024. Where some companies had not published a sustainability report, we analysed the most up to date and publicly available annual report.

About Sircel

Sircel is an Australian green-technology company addressing one of the world's fastest-growing environmental problems: e-waste. Our world-leading proprietary system enables us to divert 100% of e-waste from landfill and contribute to Australia's circular economy. Addressing this rapidly growing problem will take effort for all of us – government bodies, businesses, schools, community groups, and the public.

We want to work with you as a strategic partner to complete the circular economy. Our resource regeneration experts can help you identify and unlock the e-waste in your organisation now and in the future.

Together, we can deliver outcomes that are better for everyone and our environment.

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