



CONTENTS

Introduction	3
Executive summary	4
Recycling behaviours	5
Sustainable behaviours	7
Motivations for recycling	8
Barriers to recycling	9
COVID-19 impact	12
The circular economy	13
Waste hierarchy	15
Comparing age groups	16
Solutions	17
Methodology	18

INTRODUCTION

A sustainable recycling system that delivers quality resources for the circular economy is based on consumer trust and compliance, efficient recycling infrastructure and reuse of material in product design and manufacturing. For the second year in a row, Cleanaway has released the Recycling Behaviours Report, to better understand the state of recycling in Australia and how we can work with consumers and brand owners to keep building our on-shore circular economy.

To support our goal of educating and empowering Australians to make the right recycling decisions, Cleanaway and the Clean Energy Finance Corporation (CEFC) conducted a second wave of research into Australians' recycling behaviour, following our 2021 Recycling Behaviours Report. Our investment in research is integral to identifying the everyday recycling challenges Australians face, enabling us to more effectively raise awareness for and educate on areas that need it most.

This report summarises research conducted in January 2022 with a representative sample of 1,000 Australian adults across all states of Australia and in metro and regional locations. In developing the survey we are looking to understand how Australians feel about recycling, sustainability and the circular economy but also how consumers' behaviour matches their intention.

Using a combination of sentiment scores, skills testing and long-answer question types, we have included questions that will form a benchmark for year-on-year surveys; questions that test recycling aptitude compared to self-reported capability; and questions about current or emerging themes like the circular economy, FOGO, recycling through the pandemic, single-use plastic and trust in the system.

We intend to deliver this survey yearly to observe trends in attitudes and behaviours over time and to continue tailoring our education and awareness campaigns to support better recycling towards a circular economy.

Cleanaway's e-learning platform, <u>Greenius</u>, supports education and building trust in the recycling system through a free and engaging platform for recyclers of all ages. The animations, quizzes and tips are designed to make recycling easy and fun. Sitting within <u>Cleanaway's Recycling Hub</u>, these tools are designed to build confidence in recycling beyond the bin, so we can continue making a sustainable future possible together.



About Cleanaway

Cleanaway Waste Management is Australia's leading total waste and recycling, health, industrial and environmental services company. We have supported Australian businesses for more than 50 years, delivering solutions that offer extraordinary benefits not only for our customers, but also for our communities. Because we see all waste as a resource, managing Australia's waste needs isn't a matter of asking "where does it go now?", but "what can it be next?" Our experience and expertise in the industry means we're always finding better, smarter and cleaner ways to make a sustainable future possible together.

About the Clean Energy Finance Corporation

The CEFC has worked with Cleanaway since 2017, supporting its efforts to reduce the amount of waste going to landfill. The CEFC has a unique role to increase investment in Australia's transition to lower emissions. With the backing of the Australian Government. it invests to lead the market, operating with commercial rigour to address some of Australia's toughest emissions challenges - in agriculture, energy generation and storage, infrastructure, property, transport and waste. The CEFC backs Australia's cleantech entrepreneurs through the Clean Energy Innovation Fund, and invests in the development of Australia's hydrogen potential through the Advancing Hydrogen Fund. With \$10 billion to invest on behalf of the Australian Government, the CEFC works to deliver a positive return for taxpavers across our portfolio.

EXECUTIVE SUMMARY

This year's Recycling Behaviours Report found that 92% of Australians believe recycling is important and 99% agree that it is important to work towards a circular economy. While the vast majority have the best intentions 38% of Australians say it's hard to find clear instructions about how to recycle and 34% of Australians find recycling confusing.

While Australians are motivated to recycle to help the environment and to minimise waste going to landfill (79% and 76% respectively), our survey found that confusion is a barrier to proper recycling practices. 27% of Australians admit they just put items in their general waste bin when unsure if it can be recycled. Even more concerning, 10% are still 'wish-cycling' by putting these items in their recycling bin when they're unsure.

Despite 18% rating themselves as very good recyclers and 60% describing themselves as good, many Australians are still unintentionally making errors when recycling. 18% believe they can seal their recycling in a plastic bag and two in three Australians do not use recycling options for soft plastic food packaging (31% put it in kerbside recycling and 38% in landfill). Participation in specialised recycling services, like REDcycle and *MobileMuster*, has room for improvement with 58% saying they participate in recycling programs outside the house.

Misconceptions about recycling processes are also barriers to proper recycling: 33% don't know kerbside recycling is taken to a facility in Australia to be sorted and then recycled, and 23% believe it's the council's responsibility to sort through waste and ensure correct recycling.

The survey uncovered a number of measures that Australians believe would improve their recycling including clear product labelling (56%), consistent information (54%) and a better understanding of the recycling process (46%).

Only around half of Australians (53%) seek out products with minimal packaging or take note of recycling symbols on packaging when physically shopping. Fewer (39%) will consider minimal packaging when shopping online.

Despite the challenges presented by the COVID-19 pandemic, such as difficulty avoiding single-use items, the report shows 41% of Australians have become more concerned about the environment and 42% more conscious of their household waste.

The survey also reveals a difference in how Australians recycle at home compared to at work or on holidays (90% separate correctly at home, and only 72% do so on holidays) which speaks to the need for more consistency across jurisdictions and increased education.

REPORT HIGHLIGHTS



34%

of Australians find recycling confusing



29%

are correctly disposing of soft plastics in specialised recycling



38%

say it's hard to find clear instructions on how to recycle



22%

are familiar with the concept of a circular economy



24%

found it more difficult to avoid single-use items in the pandemic



39%

seek out products with minimal packaging when shopping online, dropping from 53% who do so in-store

RECYCLING BEHAVIOURS

Our perceptions differ from reality

More than three-quarters of Australians believe they are good or very good recyclers and are mindful of their behaviours when recycling. Despite self-reporting high levels of separation, when tested only 29% are correctly disposing of soft plastics.



Australians have the right attitude and intentions but they aren't always consistent with their recycling habits in practice. Tangible examples of recycling separation reinforce these results with a third saying they do not usually separate soft plastics from hard or remove lids from jars and bottles.



73%

of Australians **empty or rinse recyclable containers** before putting them in the recycling bin most or every time



72%

of Australians **check for the recycling symbols** to see where an item should be recycled before disposing of it most or every time



76%

of Australians **separate the components of a single product** to recycle or dispose of in the appropriate bin most or every time



66%

of Australians **separate soft plastic and film from hard plastic** before recycling most or every time



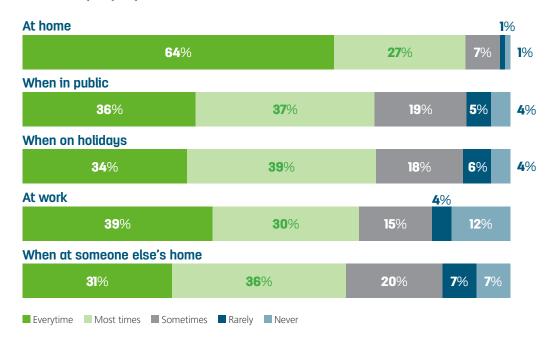
55%

of Australians recycle food waste in their council service or home compost



Recycling habits in and out of the home

While 90% of respondents say they separate components of a single properly recycle most or every time when at home, this behaviour is less common when outside the home. 73% said they separate their rubbish in public and 72% do so while on on holidays, and that drops further to 68% who say they recycle at work and 67% in someone else's home.



SUSTAINABLE BEHAVIOURS

In addition to recycling, Australians are embracing other behaviours that align with sustainability and a circular economy, in particular, generating less waste.

86% are trying to minimise their consumption of single-use plastics, backed up by 90% who use reusable shopping bags most or every time and 60% who use a reusable coffee cup. These sustainable behaviours extend to shopping and fashion, with 77% of Australians shopping locally and seeking out Australian-made products and prioritising buying pieces that will last.

"I go to the tip and take out building materials and odds and ends that I can reuse around the place. I go to op shops to buy clothes and other things. I grow vegetables inside."

- 50-54 year old female, other VIC

SUSTAINABILITY IN GENERAL



86%

of Australians try to minimise their consumption of single-use plastic



60%

of Australians use a reusable coffee cup



57%

of Australians pick up and dispose of litter that is not their own



37%

of Australians grow their own vegetables

SUSTAINABILITY AND SHOPPING



90%

of Australians use reusable shopping bags most/every time



77%

of Australians limit fast fashion purchases and try to buy pieces that will last



77%

of Australians shop locally and seek out Australian-made products



60%

of Australians seek out brands that are environmentally sustainable

Sustainability not a priority when shopping online

Despite showing strong enthusiasm for sustainability when out and about, Australians are not acting as sustainably with their purchases online. Consciousness about packaging for online purchases is well below the level of in-person shopping.

% who do this most/every time	Shopping in-person	Shopping online
Avoid buying things they don't need	76%	74%
Seek out products that are Australian made	59%	50%
Seek out products with minimal packaging	53%	39%
Seek out products made from or packaged in compostable, reusable, or recyclable material	42%	33%

MOTIVATIONS FOR RECYCLING

Why do Aussies recycle and what help do we need?

The main motivations driving recycling behaviours among Australians are the desire to do the right thing for the environment and to minimise waste in general. Although those who do not consider themselves to be good at recycling can feel apathetic towards the practice in general, some indicate an openness to improving, expressing feelings of disappointment and frustration.

How 'poor' recyclers feel about it:

Dissapointed	38%		
Indifferent	26 %		
Ashamed	26%		
Overwhelmed	24 %		
Frustrated	24 %		

When it comes to what could help people to improve their recycling, Australians say that clearer product labelling, clearer and more consistent information and a better understanding of the recycling process are the top three things that would encourage them to be better recyclers.





BARRIERS TO RECYCLING

Why aren't we recycling right?

Most Australians understand the importance of recycling and don't see it as something that involves significant effort. So what's stopping them from being better at recycling?

The findings of this survey reinforce that better education is crucial to overcoming the knowledge barrier that Australians face when recycling. More than one-third of Australians admit that it's confusing and that it's hard to find clear instructions about how to recycle.

In addition, many respondents indicated having misconceptions about recycling. These gaps in knowledge undermine Australians' best efforts to recycle and may discourage Australians from recycling at all.

85%
believe there is a point to recycling

BUT

38%
say it is hard to find clear instructions about how to recycle

9%
believe that recycling is too much effort

34%
find recycling confusing

Misconceptions about what can be recycled

In our survey, 94% of Australians said they use their council bin services as best they can to avoid contamination, but data from Cleanaway's material recovery facilities indicates far greater rates of contamination. Most Australians (84%) are aware that leftover liquid or food in containers can ruin a truckload of good recycling, but fewer (73%) say they rinse their recyclable containers before putting them in the bin most or every time. Moreover, 18% of Australians believe that recycling can be sealed in a plastic bag.

The sorting task further revealed Australians' misconceptions about where they would dispose of different items. We asked respondents to assign a number of common household waste items to the appropriate disposal method – landfill/general waste, kerbside recycling, organic/garden waste or specialised recycling. The results of this task are shown in detail on the following page.

Overall, most Australians correctly dispose of used nappies and face masks to landfill (92% and 82%, respectively), and they have a strong understanding of the disposal of organic/garden waste items. However, there is room to improve knowledge around specialised recycling of common household items:

- Many Australians also still wrongly place polystyrene and Styrofoam (22%), takeaway coffee cups (40%) and bubble wrap (25%) in kerbside recycling.
- Only one third (32%) would correctly dispose of aerosol cans in specialised recycling, while two thirds would rely on their kerbside bins (36% to recycling and 31% to general waste).
- Less than one third (29%) correctly dispose of soft plastic food packaging through specialised recycling services like REDcycle (31% put in kerbside recycling and 38% to landfill).
- Although 37% of Australians correctly identified that a broken kettle belongs in specialised recycling, two in five would send it to landfill.



BARRIERS TO RECYCLING cont.

The sorting task illustrates the gap between how people describe themselves as recyclers and their actual skills

Recycling is important because we can use items such as glass, plastic, paper, cardboard, electronics, batteries, food and garden waste as resources to make something new. Contamination, on the other hand, destroys good recycling and limits what we can do to reuse resources. In this activity, respondents indicate where they would dispose of a list of common household waste items (see table below).

How would you sort the below items when cleaning up?	Landfill/ general waste	Kerbside recycling	Organic/ garden waste bin	Specialised recycling such as council or drop-off
Polystyrene and Styrofoam	58%	22%	2%	18%
Batteries	17%	8%	1%	74%
Soft plastic packaging	38%	31%	2%	29%
Old clothing	29%	19%	3%	49%
Broken kettle	40%	22%	1%	37%
Paint cans	19%	18%	1%	61%
Aerosol cans	31%	36%	1%	32%
A ball of Easter egg foil	47%	43%	3%	6%
Disposable face masks	82%	11%	2%	5%
Takeaway coffee cups	48%	40%	5%	7%
8000 Bubble wrap	54%	25%	2%	19%
င်္ကိ Coffee grinds	21%	4%	74%	1%
Egg shells	21%	3%	76%	1%
Small garden branches	7%	6%	86%	2%
Used nappies	92%	3%	2%	2%

■ Correct ■ Incorrect to a concerning extent

BARRIERS TO RECYCLING cont.

Misconceptions and confusion about the recycling process

Uncertainty leads to contamination

What can be recycled depends on the sorting technology at the material recovery facility that services each council or business – meaning that the rules for what goes into commingled recycling bins vary by location. Although 55% of Australians say they check their local recycling rules most or every time for items they're unsure about, more than one quarter (27%) admit to just putting items in the general waste bin and 10% in the recycling bin when unsure.

Most Australians conduct some form of research when wanting to find out whether or not an item can be recycled. 42% opt for online research while 16% say they ask someone else. These avenues may lead to unreliable or conflicting information. Fewer rely on information from their council – 24% look at council pamphlets and only 16% reach out to their council or visit their council website.

33%

don't know kerbside recycling is taken to a facility in Australia to be sorted and then recycled

- they think it happens somewhere else

23%

think it's the council's responsibility to sort through waste to ensure items are properly recycled

- not their responsibility

13%

think you can just put everything in the recycling bin and it will get sorted out at the recycling facility

 so it doesn't matter if they don't sort properly Bin harmonisation, federally determined and locally applied, will give consumers confidence that their recycling knowledge is relevant wherever they are and better enable national education campaigns to improve consumer capability. This will make it easier for people to recycle, reduce confusion at the bin and, in turn, help reduce contamination.

Misconceptions about how recycling works

Australians also indicated a lack of understanding about overall recycling processes and our recycling system. These misconceptions could make Australians feel less invested in recycling overall and less inclined to put in the effort to recycle correctly. Indeed, our survey revealed that knowing where their recycling goes and what happens to it would motivate 46% of Australians to recycle more.



"There is little or no infrastructure or industry that actually conducts recycling."

– 25-29 year old male, Sydney

"It's not so much I think recycling is pointless. I just feel that we do not know where the recyclable materials are going and if these materials are being reused for production and manufacturing of new products. Some companies boast that their product is from 100% recycled materials but there is no way to confirm if that is true and it is not just a marketing tactic they use to get people to buy their products."

– 40-44 year old male, Sydney

COVID-19 IMPACT

The pandemic, while challenging, gave many Australians the time to reflect and reset their recycling behaviours. Our research revealed some promising changes in the way we think about waste.

For a notable proportion of Australians the COVID-19 pandemic provided an opportunity to consider the environment. 41% said the pandemic made them more concerned about the environment, 44% agreed the pandemic allowed them to implement more sustainable practices in their life and 42% said the pandemic made them conscious of the amount of waste their household generates. Moreover, one-third of Australians said the pandemic made them re-evaluate their approach to recycling and more than half (57%) disagreed with the sentiment that the pandemic made recycling less important.

Promisingly, our research reveals that 51% of Australians are extremely or very motivated to maintain the positive sustainability and recycling habits they picked up in lockdown as restrictions continue to ease.

SUSTAINABLE HABITS AUSTRALIANS PICKED UP DURING THE PANDEMIC



16%

of Australians who grow their own vegetables started during the pandemic



15%

of Australians who shop locally and seek out Australian-made products started during the pandemic



15%

of Australians who seek out brands that are environmentally sustainable started during the pandemic



14%

of Australians who have/use solar power in their home started during the pandemic



13%

of Australians who participate in recycling programs started during the pandemic



1119/0

of Australians who limit their fast fashior purchases started during the pandemic



10%

of Australians who try to minimise their use of single-use plastic started during the pandemic

While these sustainable habits show the pandemic ignited a positive change for many, 24% found it more difficult to avoid single-use items and 22% found it hard to avoid using takeaway coffee cups under COVID-19 restrictions

THE CIRCULAR ECONOMY

You don't need to know the name to be a part of it

A circular economy is an economic system that aims to reduce waste and encourages the continual reuse and recycling of resources. As opposed to a linear economy or 'take-make-dispose' model whereby raw materials are used to make products that are then disposed of in landfill after short-term use, a circular economy ensures that every product is designed with longevity and quality in mind so that it can become an input for other processes at the end of its life.

Achieving a circular economy has a number of benefits:

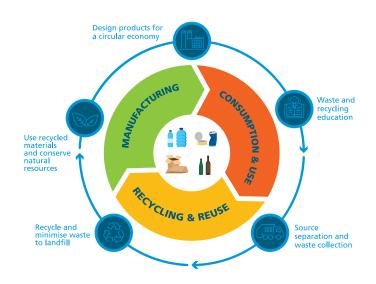
- It reduces our impact on the environment from the extraction of natural resources and allows our ecosystems to recover,
- It reduces the amount of litter becoming pollution, and
- It increases local job creation through new recycling and repairing ventures.

Consistent with results reported in the 2021 Recycling Behaviours Report, few Australians are familiar with the concept of a 'circular economy'. While 38% in total have heard the term, only 22% say they have any idea what it means.

When provided with a definition of a circular economy, Australians almost unanimously (99%) agree that it is at least slightly important; 80% said that it was very or extremely important.

HOW AUSTRALIANS CAN CONTRIBUTE TO A CIRCULAR ECONOMY

- **AVOID** and **REDUCE** the amount of waste we make
- **REUSE** and **REPAIR** the things that we own
- RECYCLE items correctly in our kerbside recycling bins and specialised recycling



"Buy products that last for years, minimise purchases of clothes, furniture and white goods, or repair them."

– 70+ year old male, Sydney

"Buy second hand/recycled/ upcycled products where I can to minimise buying new [and] repurposing old items."

- 25-29 year old female, other NSW

"Buy second hand when possible, recycle as much of my waste as possible, dispose of waste items responsibly and research when I'm not sure what can be recycled."

- 55-59 year old female, other VIC

How do we build a circular economy?

Achieving a circular economy

Within the range of materials that need to be recycled appropriately to facilitate a circular economy, Australians are more focused on inorganic than organic waste. 88% say the correct recycling of single-use plastic is extremely or very important to the transition, 85% for batteries, and 84% for e-waste such as electrical appliances. In contrast, only 71% say that the correct disposal of food waste is extremely or very important to the transition.

Who is responsible for building Australia's circular economy?

Australians believe that building a circular economy is a shared responsibility between companies and manufacturers (average responsibility share of 36%), Government (average responsibility share of 34%), and the Australian public (average responsibility share of 30%).

Despite assigning equivalent levels of responsibility to building a circular economy, Australians see themselves as the primary barrier to achieving it. Nearly two-thirds indicate that consumers finding it too difficult is the biggest barrier to correctly recycling batteries and e-waste, and around half say the same for food waste and single-use plastic.

		Single-use plastic	Batteries	E-waste	Food waste
	//very important to recycle Is correctly to our transition conomy	88%	85%	84%	71%
Barriers to correct	Consumers find it too difficult to dispose correctly	48%	63%	62%	56%
recycling	The cost to consumers/ rate payers is too high	19%	20%	25%	22%
	The technology to recycle is not available	20%	23%	25%	17%
	The cost to industry is too high	24%	21%	25%	17%
	The benefits don't justify the costs	17%	13%	13%	15%
	The cost to government is too high	15%	12%	15%	12%

"Availability of more sustainable (and not green-washed) packaging and easier to disassemble packaging would be highly beneficial."

– 35-39 year old female, Adelaide

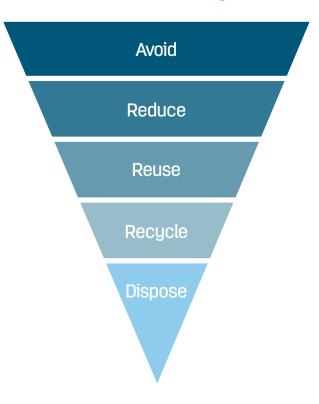
WASTE HIERARCHY

Australians' sustainable behaviours also indicate that they understand the core principles of the waste hierarchy. This is evident in the high proportion of respondents who report behaviours that reduce, reuse and recycle such as avoiding single-use plastic, buying only what they need and seeking out products with minimal packaging, making purchases with longevity in mind, and seeking out reusable and recycled packaging.

We asked respondents to rank five different solutions for managing waste. Each of these solutions differed in their level of sustainability with 'avoid buying unnecessary or singleuse items' being the most sustainable and 'dispose of waste into landfill' being least sustainable. This task further demonstrated Australians' implicit understanding of the waste hierarchy.

The ranking for the best solution was contentious – 'avoid buying unnecessary or single-use items' and 'recycle materials in the correct bins to ensure they can be made into something new' were equally ranked as the best solutions (both 34%). However, a high proportion of Australians (77%) correctly said that disposing of waste into landfills was the worst of the presented solutions.

The Waste Hierarchy



% OF RESPONDENTS SELECTING ITEM IN CORRECT RANK					
Correct order	1	2	3	4	5
1. Avoid buying unnecessary or single-use items	34%	18%	16%	25%	8%
Reuse materials by donating them, upcycling or repurposing	14%	27%	30%	24%	6%
3. Buy products that use recycled packaging or materials	15%	28%	28%	23%	7%
4. Recycle materials in the correct bins to ensure they can be made into something new	34%	23%	20%	20%	3%
5. Dispose of waste into landfill	4%	5%	6%	9%	77%

COMPARING AGE GROUPS

Older Australians self-identify as better recyclers than their younger counterparts

The 55+ year old age group self-identify as good or very good recyclers and report separating their rubbish more than younger Australians, regardless of where they are – at home, on holidays, in public or at work. Additionally, a significantly higher proportion of Australians aged 18-34 years report finding recycling confusing and something that takes more effort.

This poses an important question – are older Australians better at recycling, or is the younger generation more self-critical of their habits to better the planet? It's a question that will be addressed in future Cleanaway reports.

70%
of 18-34 year olds say they are good or very good recyclers

79%
of 35-54 year olds say they are good or very good recyclers

84%
of 55+ year olds say they are good or very good recyclers

Although it might seem from our findings that younger Australian adults are lagging behind their older counterparts in their engagement with recycling and other sustainable behaviours, they play an important role in imparting their knowledge to the next generation of Australians. Overall, 88% of Australian parents speak to their children about topics such as recycling, sustainability, climate change and the waste hierarchy. Recycling is the most commonly discussed topic (87%) and something parents find easiest to speak about. A much smaller proportion speak to their children about the waste hierarchy (54%) with more than one quarter finding this difficult to discuss.

Regardless of age, providing information that is up-to-date, easily accessible and easy to understand is crucial to educating Australians to be active and effective recyclers.

Sustainability topics that parents talk about with their children (n=283)

I talk to my children about recycling

87%

I talk to my children about sustainability

69%

I talk to my children about climate change

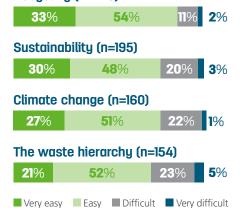
57%

I talk to my children about the waste hierarchy

54%

How easy or difficult do you find it to talk with your children about each of these topics?

Recycling (n=245)



SOLUTIONS

A key to improving recycling performance

Our Recycling Behaviours Report shows Australians want to achieve a more sustainable future and generally have a positive attitude toward recycling. However, a lack of knowledge about correct recycling rules is hampering progress. For instance, 31% still place soft plastics in their kerbside recycling bin and 34% find recycling to be confusing, which can ultimately lead to contamination in bins.

Education on how to recycle correctly is therefore integral, ensuring trusted resources are used to guide our decision-making rather than guessing. Moving toward bin harmonisation is a vital element of the solution that will create consistency of recycling rules across the country and reduce the often people are confused by conflicting information.

The mindset of Australians needs o shift to a point where people consider waste before making purchases and work to re-use individual components of products. This plays a vital part in the transition to a circular economy.

The pandemic has seen more people think and act sustainably and there are promising signs that these behaviours will continue as lockdowns have finished.

It's also important that recycling and eco-friendly habits are passed down to generations so as not to build a waste-driven society.



CLEANAWAY'S ROLE IN IMPROVING OUR RECYCLING AND WASTE HABITS

Education

We have built a range of resources to support schools, communities, businesses and households to recycle correctly. The 'Recycling Hub' is a fast and effective tool for the A-Z of recycling and Greenius makes online recycling education fun and engaging.

Infrastructure

We are playing a role in building the circular economy through meaningful partnerships and investment. Our new bottle-to-bottle facility in Albury will recycle one billion PET containers a year and we've got solutions in play for other material.

Working together

We are building trust in the system by working with a range of stakeholders to create meaningful change. We work with our customers, government agencies, industry, funding partners and the community to make a sustainable future possible together.

METHODOLOGY

This report has been prepared with the assistance of Empirica Research who conducted an online survey with a sample of 1,000 Australians in January 2022.

Any external sources that have been used are referenced throughout.

1,000 AUSTRALIANS					
GENDER	Male	461	46%		
	Female	538	54%		
	Don't identify as male or female	1	<1%		
AGE	18-34	307	31%		
	35-54	347	35%		
	55+	346	35%		
STATE/	NSW	323	32%		
TERRITORY	VIC	266	27%		
	QLD	179	18%		
	WA	112	11%		
	SA	80	8%		
	TAS	20	2%		
	ACT	18	2%		
	NT	2	<1%		
REGION	State capital	683	68%		
	Large city or town	198	20%		
	Regional or remote area	119	12%		





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