BUSINESS ATTITUDES TO RECYCLING

and other sustainable behaviours

RECYCLING NEAR YOU

PLANET ARK

ABOUT PLANET ARK

Planet Ark Environmental Foundation is an Australian not-for-profit organisation with a mission to enable positive environmental change by bringing individuals, communities, businesses and governments together. Planet Ark is one of Australia's leading environmental behaviour change organisations, having focused on working collaboratively and positively for over 30 years.

This research report was developed as part of Planet Ark's Business Recycling program, which is being amalgamated with the Recycling Near You program. Recycling Near You is an online platform that will provide comprehensive recycling information to households and workplaces. It includes a reuse and recycling directory for more than 90 types of materials.

ACKNOWLEDGEMENTS

Thank you to the team at Pollinate, especially Jacky Heath, Lilia Blanari and Rukmani Ahuja for their support with the survey and research component. We are also grateful to the 255 survey participants who gave their time to support this research.

REPORT PRODUCTION

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Planet Ark gratefully acknowledges the support of the Foundation Partner of Planet Ark's Business Recycling program, the NSW Environment Protection Authority.

ACKNOWLEDGEMENT OF COUNTRY

Planet Ark acknowledges the Traditional Custodians of Country throughout Australia. One of the most important lessons we can learn from the oldest enduring culture on earth is how to live and thrive within nature's limits. We recognise and respect the enduring relationships they have with their land, sea and community, and pay our respects to Elders past and present.

RESEARCH SUMMARY

BUSINESS ATTITUDES TO RECYCLING AND OTHER SUSTAINABLE BEHAVIOURS

RECYCLING NEAR YOU
PLANET ARK

Australian businesses want to operate more sustainably and have adopted a wide range of behaviours to reduce their impact. However, there is room for improvement.*

REUSE AND REPAIR

Encouragingly, Australian businesses are reselling, reusing and repairing

42% resell or donate office furniture

35% reuse particle-board

31% reuse clothes and textiles

27% repair computers

RECYCLING

Materials recycled by businesses who generate those waste items

77% recycle advertising material and envelopes

74% recycle aluminium cans, foil and trays

72% recycle plastic bottles and jars

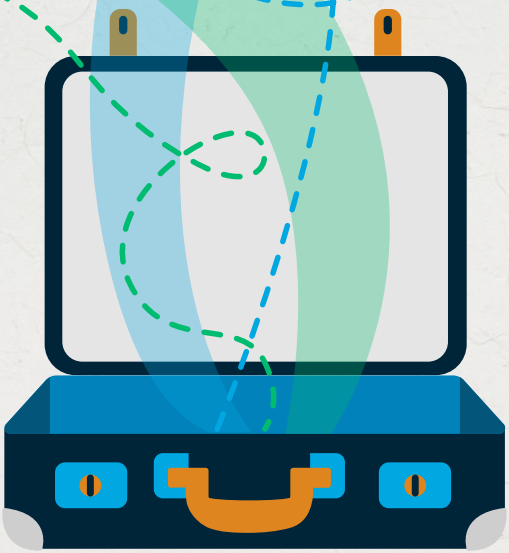
72% recycle office paper

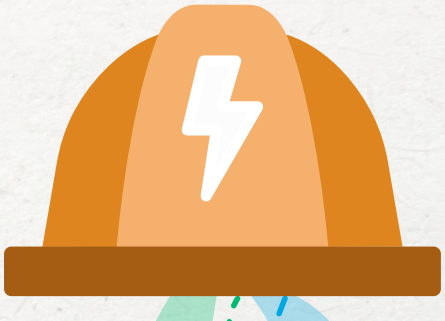
BROADER SUSTAINABILITY BEHAVIOURS

Australian businesses show intent towards operating more sustainably

71% have looked for information on how to reduce their environmental impact

74% have implemented policies, strategies or procedures to help reduce their environmental impact





THE 10 R'S OF MATERIAL CIRCULARITY

BARRIERS
to more sustainable waste management

1. **Lack of awareness of more sustainable disposal options**
2. **Perceived lack of access to recycling services**
3. **Time poor / lack of convenience (other business priorities)**
4. **Perceived increased cost of recycling over sending waste to landfill**

KEY MOTIVATORS
for businesses to adapt more sustainable business practices

- **79%** Cost savings from reducing energy consumption
- **67%** Staff values
- **65%** Government regulations
- **66%** Corporate image
- **55%** Competitive advantage
- **51%** Customer values

PLANET ARK RECOMMENDS

1. **Education campaigns**
2. **Programs to support SMEs**
3. **Research on how more circular 'R' strategies reduce costs for businesses**
4. **Strengthening of government policy/regulations for greatest impact**

**We surveyed 255 Australian businesses about their waste management practices and other sustainability behaviours*

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1. BACKGROUND

Australians are generating more and more waste as our population grows, and businesses are making a substantial contribution. The National Waste Report 2022 revealed the commercial and industrial (C&I) sector is responsible for more than a quarter (27 per cent) of total waste generation in Australia.[1] That equates to the weight of 129 Sydney Opera Houses (20.8 million tonnes).[2]

Recycling in the C&I sector is still an underdeveloped market, with almost half of the materials used by businesses in this sector going to waste in landfilll. The sector has increased its waste generation by 10 per cent over the past 15 years, but recycling rates are declining from a peak of 62 per cent in 2013–14 to 53 per cent in 2020–21.[3]

Aside from increased materials recovery via recycling, there are multiple approaches for businesses to contribute to creating a circular economy in Australia. Designing products for less waste and using strategies like reuse and repair can help reduce consumption and the amount of valuable materials businesses send to landfill.

The good news is there is great potential to grow the reuse and recycling markets within Australia, which will boost our economy, provide more green jobs and preserve our natural resources. We also know many businesses are eager to operate more sustainably and capitalise on the benefits of doing so. However, to better support businesses with this goal, first we must understand the challenges they are experiencing in managing their waste and resources, as well as the factors which motivate and drive more sustainable business practice.

> The commercial and industrial sector is responsible for more than a quarter of total waste generation in Australia.

1.1 REPORT PURPOSE AND OBJECTIVES

This report was produced in partnership with the NSW Environment Protection Authority, the Foundation Partner of Planet Ark's Business Recycling program. The research was conducted by Planet Ark's strategic research partner, Pollinate, from December 2023 to January 2024.

The research had four objectives:

1. **Understand the current waste management practices and broader sustainability behaviours of Australian businesses.**
2. **Understand business attitudes including the barriers and motivators to more sustainable practices in a post-pandemic landscape.**
3. **Provide insight into how governments and other stakeholders can better support Australian businesses on their sustainability journeys.**
4. **Raise awareness of the resources available to help businesses manage their materials and participate in the circular economy.**

1. Pickin, J. et al (2022) *National Waste Report 2022*, Blue Environment
2. Confirmed by Sydney Opera House representative via email on 22 February 2023
3. Pickin, J. and Randell, P. (2016) *Australian National Waste Report 2016*, Blue Environment

1.2 SAMPLING METHODOLOGY

The data that informs this report was obtained via a 10-minute online survey of 255 Australian businesses.

Figures 1.1-1.4 show the survey sample representation, including business location, business size, industry, level of responsibility for business waste management and reported personal understanding of environmental issues.

The survey sample was a reasonable representation of the Australian business ecosystem in terms of business size and industry spread, noting that some industries were over or under represented in our sample compared to the national average.[4] The findings provide a guide to the waste management and broader sustainability practices of Australian businesses and help inform what is needed to improve and support their sustainability journeys.

Over 95 per cent of survey participants claimed to be responsible for waste management within their business (69 per cent entirely responsible). Almost three quarters (74 per cent) of survey participants reported either an extremely or very good personal understanding of environmental issues.

LOCATION OF MAIN OFFICE

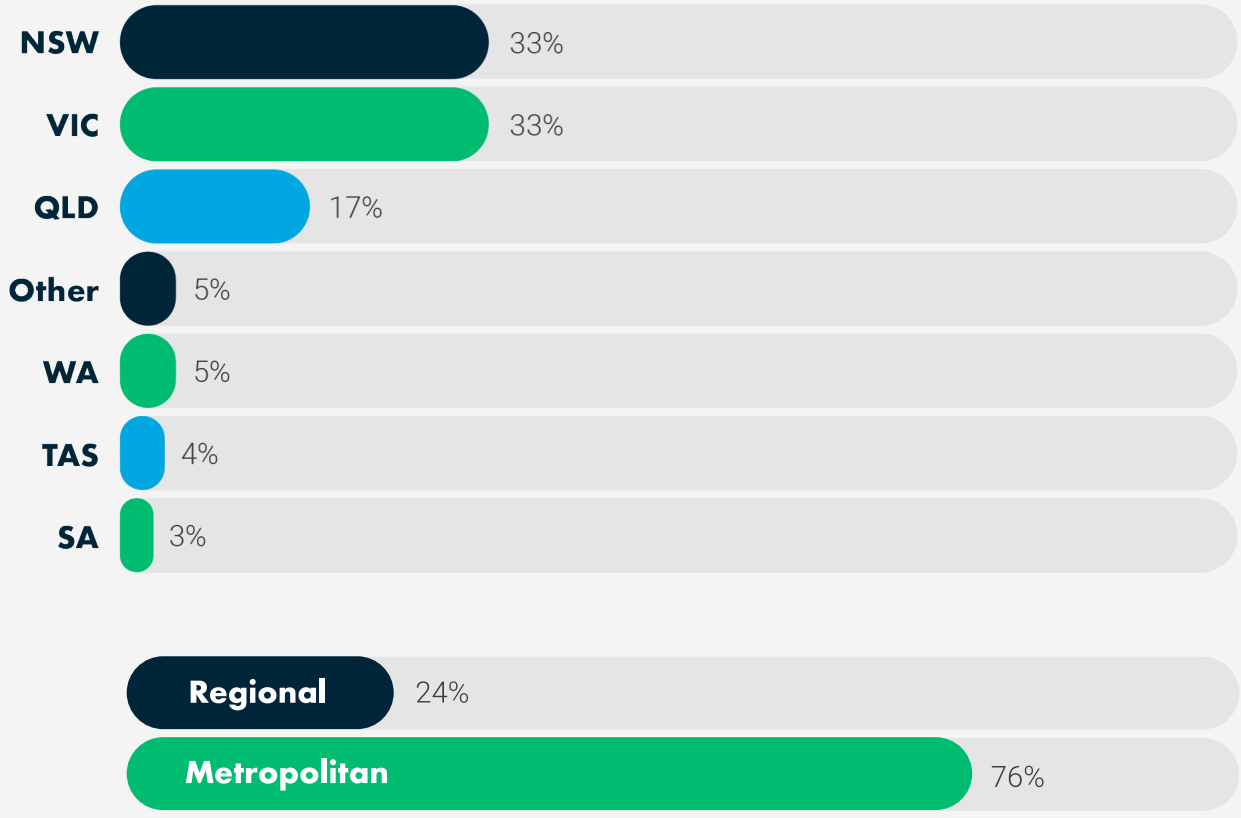


Figure 1.1: Survey sample representation

4. Commonwealth of Australia (2022), *Contribution to Australian Employment*, Australian Small Business and Family Enterprise Ombudsman

BUSINESS SIZE

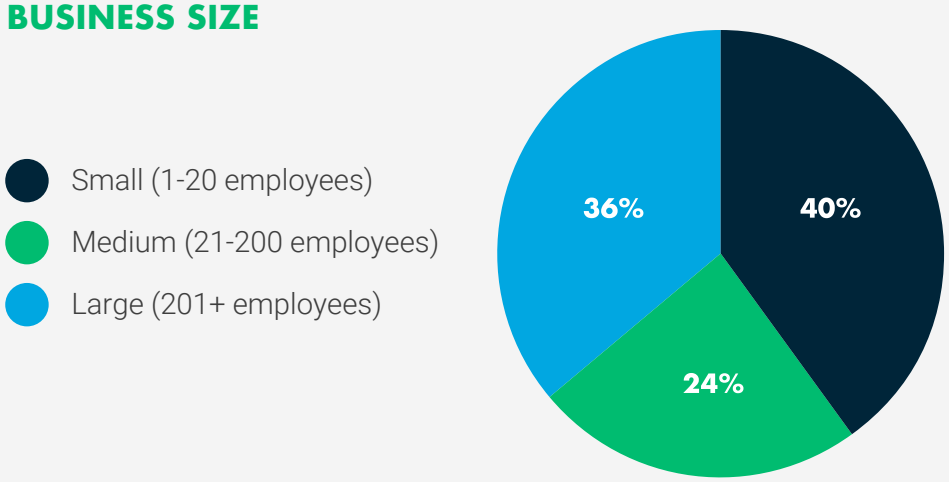


Figure 1.2: Survey sample representation

INDUSTRY

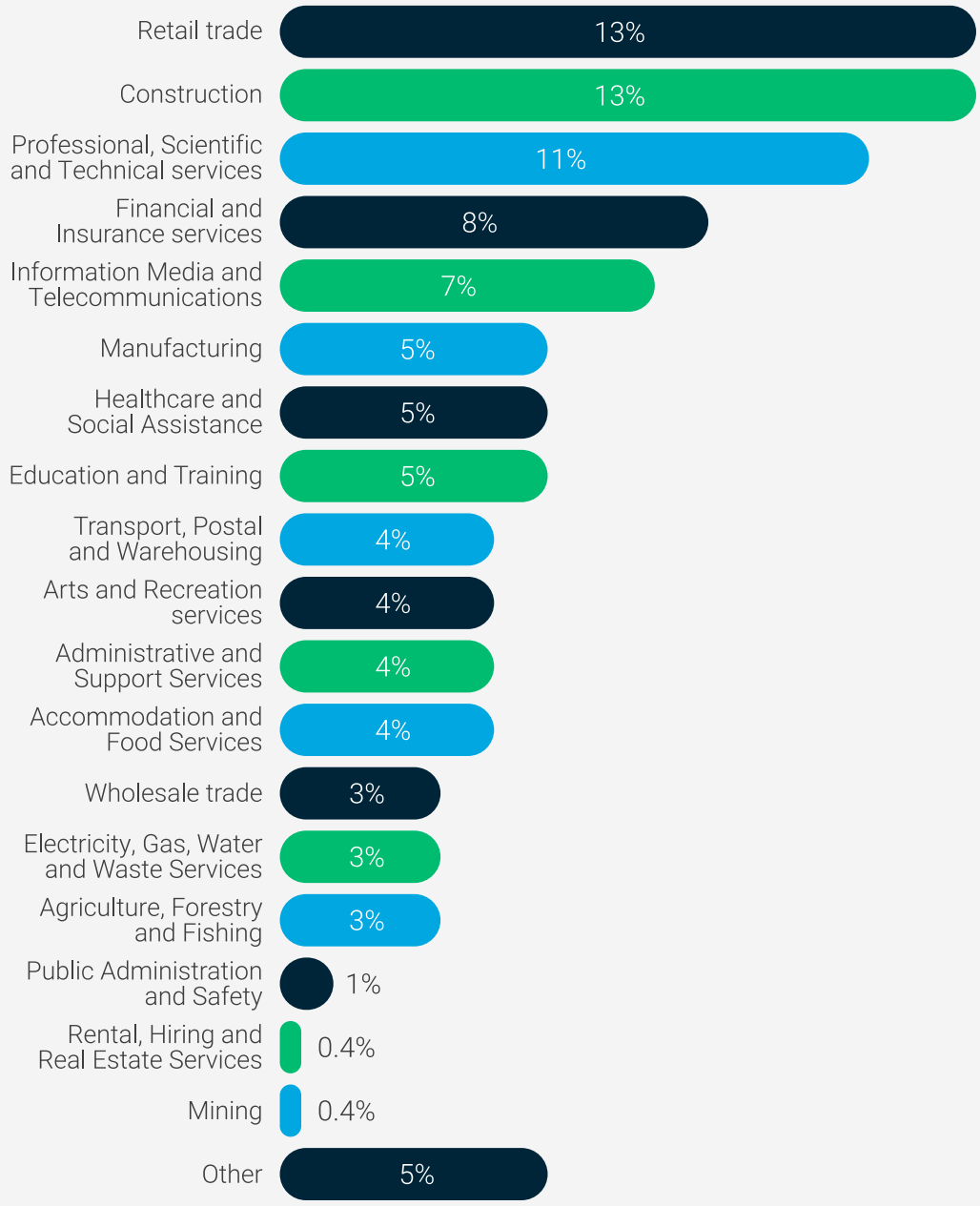
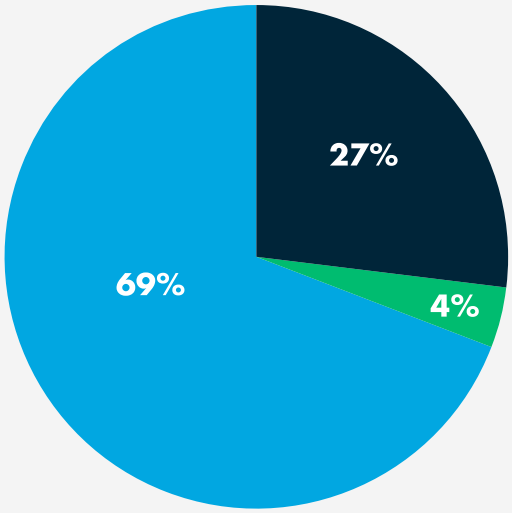


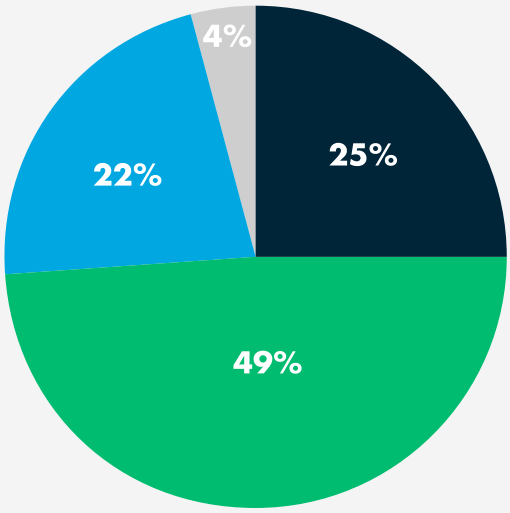
Figure 1.3: Survey sample representation

RESPONSIBILITY FOR WORK WASTE MANAGEMENT



- Limited responsibility
- Some responsibility
- Entirely responsible

PERSONAL UNDERSTANDING OF ENVIRONMENTAL ISSUES



- Extremely good
- Very good
- Moderate
- Slight

Figure 1.4: Survey sample representation

2. RESEARCH RESULTS

2.1 WASTE MANAGEMENT PRACTICES

Before presenting the survey results, it is important to highlight that although the terms 'waste', 'waste generation' and 'waste management' are used throughout the report, this is not to say these materials are no longer of value. 'Waste' is a sign of inefficiency. Governments, businesses and the general public must work together to keep valuable resources (including materials traditionally thought of as 'waste') in circulation for as long as possible, preferably at highest value.

2.1.1 WASTE GENERATION

Survey participants were asked to select which broad categories of waste their business generates and were reminded to include both materials that are only generated every few years, as well as those generated on a more regular basis (i.e. daily or weekly).

The five waste categories participants could choose from were:

1. **Electronic material**, such as computers, batteries and printer/toner cartridges.
2. **Containers, packaging or paper**, such as glass bottles, soft plastics and office paper.
3. **Organic material**, such as leftover food and coffee grounds.
4. **Building material**, such as bricks, timber, plasterboard and scrap metals.
5. **Other material**, which was a catch all for any remaining materials that do not fit into one of the other four categories.

As shown in Figure 2, containers, packaging or paper was the most reported waste category (73 per cent of participants), followed by electronic material (51 per cent), organic material (42 per cent) and building material (39 per cent). Thirty per cent of participants selected the 'other material' category.

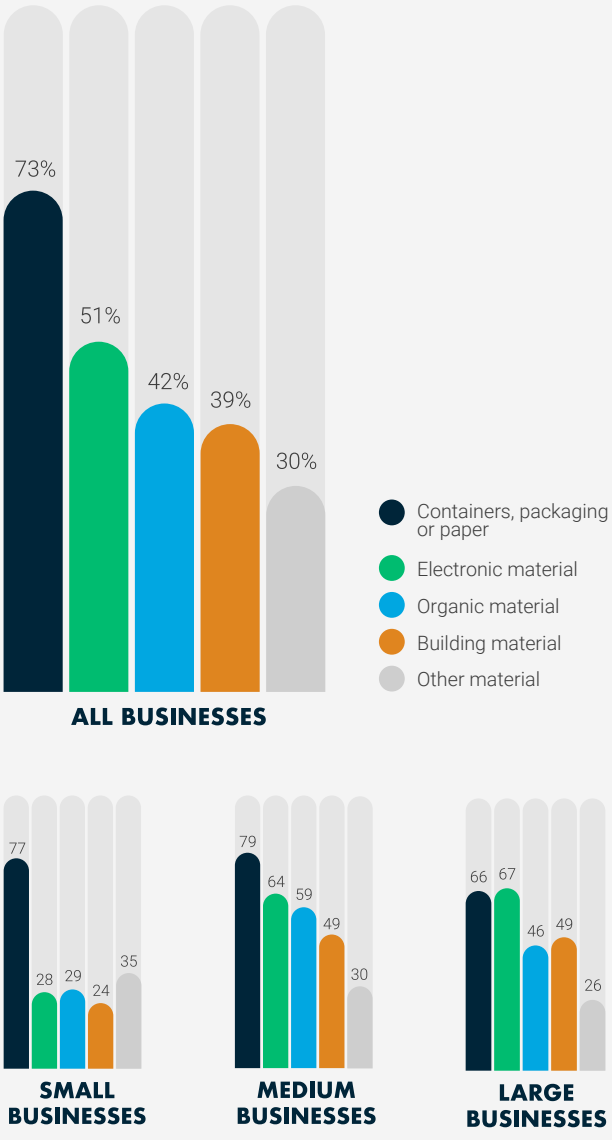


Figure 2: Broad categories of waste generated by the survey sample, split by small, medium and large businesses (%)

Participants from small businesses (those with 20 or fewer employees) were less likely to report generating electronic material, organic material and building material than participants from medium (21-200 employees) or large businesses (201+ employees). Small businesses are perhaps less likely to produce these waste materials, unless generated as part of their usual business operations, on a regular basis when compared to medium and large businesses that likely have broader material requirements in addition to higher consumption rates.

The breakdown of the specific waste materials generated by the survey sample is shown below (Figure 3). Note: Results are a self-reported indication of the presence of a waste stream (material/item) and not an indication of waste volume. Cardboard was the most reported waste material (reported by 55 per cent of survey participants), followed by office paper (52 per cent), plastic bottles and jars (45 per cent), soft plastics (43 per cent) and computer accessories (35 per cent). The high generation of these materials reported in the survey indicates their wide usage across industry. Figure 3 provides a valuable baseline from which to look at the disposal methods reported for each material type.

WASTE MATERIALS GENERATED BY BUSINESSES

RIGID PLASTICS 25%

INEDIBLE FOOD SCRAPS 24%

POLYSTYRENE 24%

WOOD/ TIMBER 24% (inc. wooden pallets)

MOBILE PHONES 23%

CONSTRUCTION/ DEMOLITION MATERIALS 20%

FLUORESCENT LIGHT TUBES 20% (inc. compact fluorescent lamps)

GARDEN CUTTINGS 20%

BRICKS/ CONCRETE 19%

PLASTER-BOARD 19%

CARPET & FLOORING 18%

WHITEGOODS/ APPLIANCES 18% (fridge, kettle, etc.)

IRON & STEEL 18%

SCRAP METAL 18%

PARTICLEBOARD 16%

CLOTHES & TEXTILES 14%

COOKING OIL 14%

OFFICE FURNITURE 13%

MEAT OFFCUTS 12%

PLASTIC PALLETS 11%

CORKS/CORK OFFCUTS 11%

CERAMICS 9%

TYRES & RUBBER 7%

ASBESTOS 7%

CHEMICAL DRUMS 6%

HAZARDOUS WASTE 6%

MOTOR OIL 6%

BULKA BAGS 5%

LEATHER 4%

Figure 3: Waste materials generated by the survey sample (% of overall sample, n=255)

2.1.2 DISPOSAL METHODS

Survey participants were asked how their business manages the materials they generate as waste. The disposal methods participants could select from were recycle, reuse, repair, resell/donate and general waste. Note that participants could select multiple disposal methods for each material, therefore the survey data does not identify the primary disposal method used.

General Waste

Australian businesses are still sending a wide range of materials to landfill (Figure 4). This includes materials with sustainable disposal options that are accessible to most businesses, such as coffee capsules/pods, organic waste (food waste, garden cuttings and coffee grounds) and electrical products (whitegoods and appliances, computers, mobile phones, batteries and printer/toner cartridges).

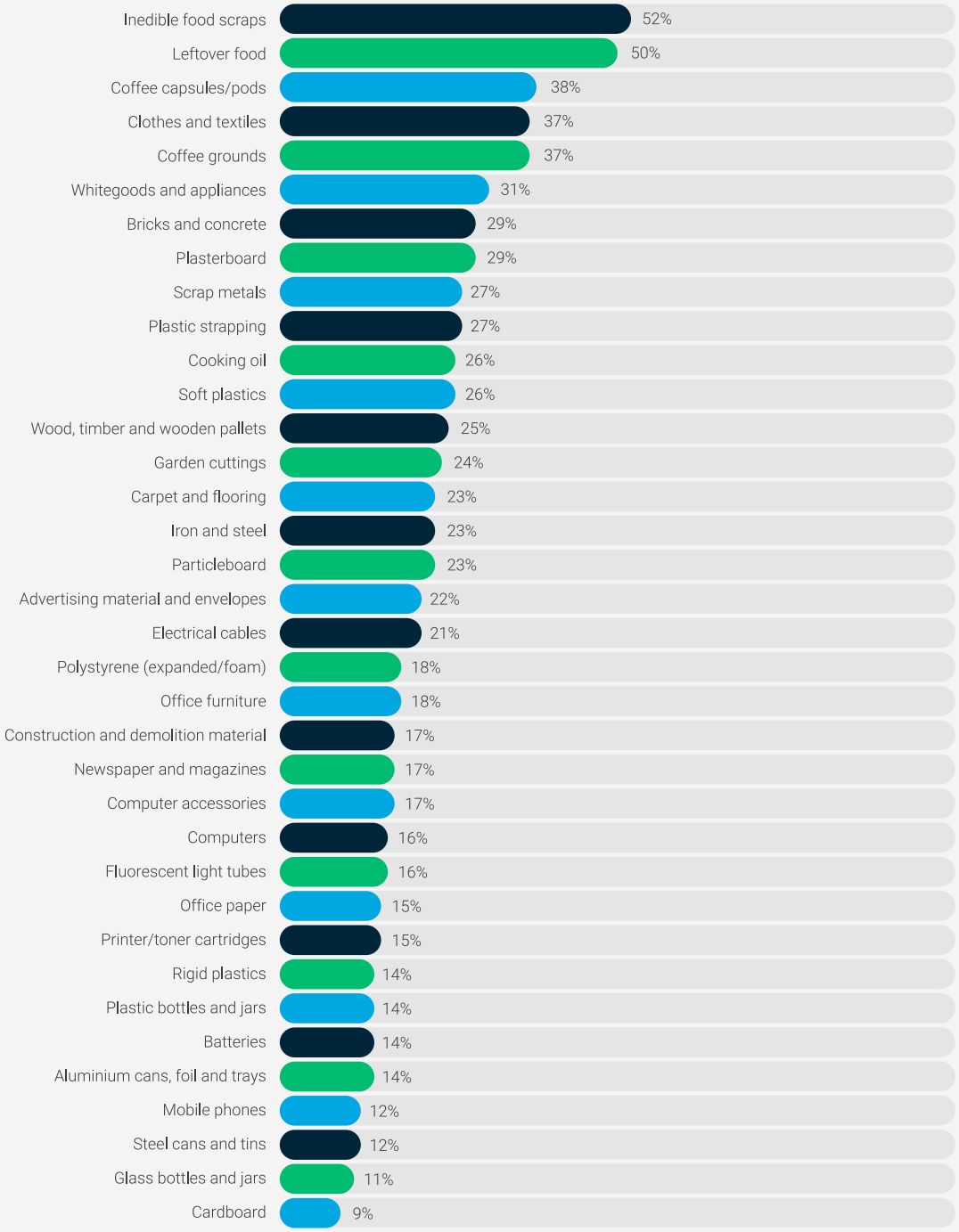


Figure 4: Reported disposal in general waste by material. Materials with sample sizes <30 have been removed (%). *Note: Percentages refer to the proportion of businesses who reported disposing each material via general waste and not the amount of material disposed. Materials with sample sizes <30 have been removed.*

Recycling

Table 1 shows reported recycling, as a percentage of the survey participants who said their business generates each material. For example, 77 per cent of survey participants who said their business generates advertising material and envelopes reported recycling this material in some capacity, whether that be all or only a portion of the material generated (noting participants could select multiple disposal methods). For the purpose of the survey, 'recycling' included recycling via collection from place of business, recycling via collection from place of residence (likely used by some small businesses such as sole traders) and recycling via drop off at an external collection point.

The five materials with highest reported recycling were advertising material and envelopes (77 per cent), aluminium cans,

MATERIAL	SMALL	MEDIUM	LARGE	ALL BUSINESSES
Advertising material and envelopes	94	74	61	77
Aluminium cans, foil and trays	84	67	69	74
Newspaper and magazines	85	64	70	73
Steel cans and tins	86	67	62	72
Office paper	86	55	66	72
Plastic bottles and jars	87	66	59	72
Glass bottles and jars	87	71	58	71
Cardboard	83	53	67	71
Soft plastics	73	58	56	64
Rigid plastics	68	62	56	62
Electrical cables	81	38	52	54
Printer/toner cartridges	88	30	53	53
Fluorescent light tubes	75	33	55	53
Plastic strapping	43	56	57	51
Polystyrene (expanded/foam)	64	43	42	50
Iron and steel	30	30	67	50
Coffee grounds	53	42	53	49
Garden cuttings	53	36	55	49
Whitegoods and appliances	50	47	50	49
Coffee capsules/pods	36	58	53	49
Mobile phones	69	47	38	47
Clothes and textiles	46	38	50	46
Batteries	69	36	42	45
Scrap metals	55	23	52	44
Computer accessories	80	41	35	44
Carpet and flooring	44	30	46	43
Wood, timber and wooden pallets	29	50	46	42
Bricks and concrete	38	54	37	42
Cooking oil	40	13	56	41
Construction and demolition material	36	53	33	40
Computers	63	30	32	40
Inedible food scraps	42	32	42	38
Office furniture	38	22	44	36
Leftover food	38	35	34	35
Particleboard	27	20	47	35
Plasterboard	31	33	35	33

Table 1: Reported recycling by material, split by small, medium and large businesses (%).
Note: Percentages refer to the proportion of businesses who reported recycling the material and not the amount that gets recycled. Materials with sample sizes <30 have been removed.

foil and trays (74 per cent), newspaper and magazines (73 per cent), plastic bottles and jars (72 per cent) and office paper (72 per cent). Five materials had less than 40 per cent reported recycling, including inedible food scraps (38 per cent), office furniture (36 per cent), particleboard (35 per cent), leftover food (35 per cent) and plasterboard (33 per cent). This suggests there is a need for greater education on available recycling solutions for some of these materials.

Recycling by business size

The data in Table 1 above suggests **small businesses** are more likely to be recycling what are commonly accepted recyclables for household collections (such as paper, cardboard, plastic and glass containers and metal and steel cans) in addition to materials which require specialist recycling programs typically available at no cost for households and small businesses (such as printer cartridges, mobile phones, batteries, computers and fluorescent light tubes). **Small business** operators are more likely to work from home and utilise household recycling services, which may explain this. **Larger businesses** may have less access to recycling collections for these materials if they are organised by building management.

Medium businesses were more likely to report recycling construction and demolition waste compared to **small** and **large businesses** (though only around 53 per cent of medium businesses indicate they recycle these materials). **Large businesses** reported higher recycling of iron and steel (67 per cent) than both **small** and **medium businesses**, which might suggest they are deriving significant value from recovering these materials.

Some other interesting findings from the survey were that relatively high numbers of survey participants reported that their business recycles soft plastics (64 per cent) and polystyrene foam (50 per cent). Since both materials require specialist recycling services and should not be placed in comingled recycling bins, these materials may be contaminating other recycling streams unless those businesses have dedicated collection services in place.

> … soft plastics and polystyrene foam… may be contaminating other recycling streams unless those businesses have dedicated collection services in place.

Higher order waste management actions

Although recycling is an important part of sustainable business practice, it is vital that businesses (and governments) shift their thinking to higher order waste management actions, such as reducing consumption, reusing and repairing, wherever possible (Figure 5). These higher order actions help keep valuable materials in circulation (and at their highest value) for longer, resulting in more significant environmental benefits and potentially greater business benefits compared to recycling.

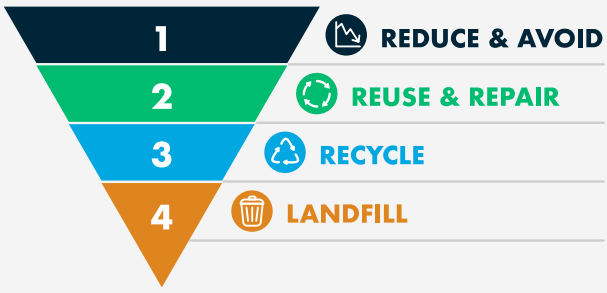
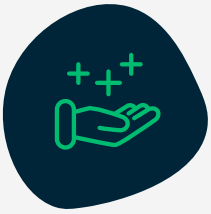


Figure 5: Waste hierarchy showing higher order waste management actions

Encouragingly, survey participants reported taking action on higher order waste management actions (reuse, resell/donate and repair) for a number of materials. Some examples are highlighted on the next page.

REUSE

Bricks and concrete	35%
Particleboard	35%
Clothes and textiles	31%
Wood, timber and wooden pallets	31%
Computers	27%
Mobile phones	25%
Whitegoods and appliances	24%
Computer accessories	22%
Carpet and flooring	21%
Office furniture	21%



RESELL/ DONATE

Office furniture	42%
Clothes and textiles	34%
Particleboard	25%
Whitegoods and appliances	24%
Carpet and flooring	23%
Iron and steel	23%
Computers	22%
Computer accessories	22%
Wood, timber and wooden pallets	20%
Leftover food	15%

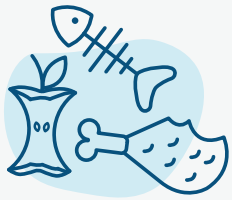
REPAIR

Computers	27%
Mobile phones	18%
Computer accessories	16%
Iron and steel	14%
Wood, timber and wooden pallets	14%
Office furniture	12%
Electrical cables	11%
Whitegoods and appliances	11%
Carpet and flooring	11%
Bricks and concrete	10%

Note: Percentages refer to the proportion of businesses who dispose of the material via that method and not the amount that gets disposed.

SOLUTIONS & OPPORTUNITIES

Below we provide solutions to assist businesses with better managing three common and problematic waste streams: food, office furniture and electronic products. Improved management of these materials will have significant positive impact for the environment, business and the transition to a circular economy.



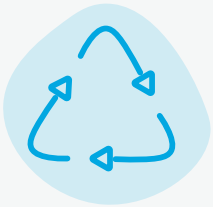
FOOD

Food waste costs the Australian economy around $36.6 billion each year and has significant environmental impacts.[5] Of particular concern is that half of the businesses generating food waste (inedible food scraps and leftover food) reported sending it to landfill. When food waste breaks down in landfill it releases methane, a potent greenhouse gas. Food waste is a major contributor to global climate change and is responsible for around 10 per cent of global greenhouse gas emissions (and three per cent of Australia's annual emissions).[6]

Businesses can become more circular with food by using the following strategies:

REDUCE

- Hotels, restaurants and other large food service establishments can follow the tips outlined by the NSW EPA's Love Food Hate Waste program to improve stock management and storage.
- Businesses can donate excess food to charities. A range of food rescue organisations exist in Australia such as Foodbank, OzHarvest and SecondBite. Online food marketplaces like Yume Food connect food manufacturers with businesses and charities to distribute surplus food. State regulations protect food donors from civil liability, provided they adhere to certain standards.



RECYCLE

- Certain businesses can install composters or worm farms onsite, creating a source of fertiliser for gardens. This saves the financial and environmental cost of transporting the materials. Search for this type of equipment on Planet Ark's Recycling Equipment Catalogue.
- Businesses can find collection services for food and organics using Planet Ark's Recycling Near You.

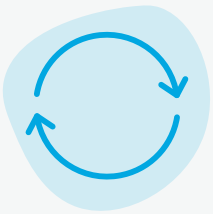
5. Department of Climate Change, Energy, the Environment and Water, *Reducing Australia's food waste*
6. Commonwealth of Australia (2017), *National Food Waste Strategy: Halving Australia's food waste by 2030*

OFFICE FURNITURE

Office furniture is one of Australia's largest problem waste streams. Each year, over 35,000 tonnes of commercial office furniture is disposed of from offices in Australian capital cities alone.[7] This research suggests there is opportunity to divert more of this material from landfill.

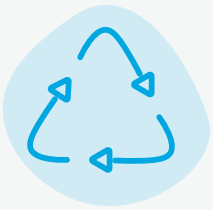
However, as many types of office furniture are made from multiple materials, recycling can be difficult and costly. Planet Ark is part of a product stewardship initiative with Edge Impact and GECA, called Fit for Office, which aims to make circularity a reality for commercial office furniture.

Businesses can become more circular with food by using the following strategies.



REUSE

- Businesses, especially those with large office spaces, may benefit from leasing office furniture rather than purchasing it. By forfeiting ownership for a leasing arrangement, businesses are not responsible for managing the recycling or disposal of the products once they have reached their end of life. This responsibility is transferred to the lessor, who are incentivised to keep the furniture in use through repair and refurbishment. Additionally, leasing furniture provides businesses with greater access to newer products and designs.
- Encouragingly, 42 per cent of survey participants stated they sell or donate at least some of their office furniture. Some office furniture retailers and office liquidators will collect or buy used office furniture for refurbishing and resale. GreenChair™ is tackling this waste by transferring commercial furniture from Australian businesses to Not-for-Profits (NFPs).



RECYCLE

- Businesses can find pick-up or drop-off recycling services using Planet Ark's Recycling Near You.

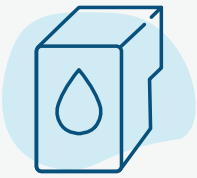
7. Fit for Office, *Fit for Office. Making circularity a reality*

ELECTRONIC PRODUCTS

Australia is one of the highest producers of end-of-life electronics per person (22.4kg/capita/year).[8] Survey participants reported sending hazardous waste items such as batteries, computers and mobile phones to landfill, despite there being more appropriate disposal methods in place for these products.

Batteries contain toxic metals such as cadmium, lead and mercury. Electrical products such as computers and mobile phones contain lithium-ion batteries and other hazardous and valuable materials. When these items are sent to landfill, the hazardous substances can leach into the soil and groundwater, causing harm to the environment and human health. Due to these dangers, several jurisdictions in Australia such as Victoria and South Australia have banned electrical products from landfill. A lack of awareness of the national recycling schemes available for batteries and some other electrical products, as well as recycling costs for businesses with large quantities of waste, are likely contributing to these items being landfilled.

A number of electronic materials already have nationwide recycling schemes in place to support Australian businesses. Despite this, survey participants reported relatively low recycling of some of these materials, which suggests more education is needed to raise awareness of these schemes:



PRINTER/TONER CARTRIDGES

Cartridges 4 Planet Ark is a free recycling service that businesses can access with thousands of drop-off points located across the country. Businesses can also apply for a collection box for their workplace with free pick-up for metropolitan areas, or alternatively apply for pre-paid mail satchels.

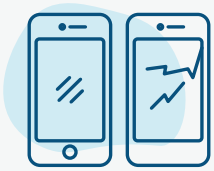
COMPUTERS AND ACCESSORIES

The National Television and Computer Recycling Scheme provides the public and small businesses with free drop-off points for various types of electronic products and accessories. Larger businesses can access pick-up services through recyclers, however there may be associated fees. There are also many companies that provide reuse options for computers by refurbishing or repairing them. Additionally, leasing tech products (rather than purchasing them) has several advantages for businesses such as access to repair services, takeback of leased products at the end of the term and tax deductions.

8. United Nations Institute for Training and Research (2024) *The Global E-Waste Monitor 2024*

BATTERIES

Australia has a national product stewardship scheme for batteries, B-cycle, which provides thousands of free drop-off points for the public and small businesses. Businesses with larger quantities of batteries to dispose of can use recycling services such as Batteries 4 Planet Ark, which provides a collection box and a national pick-up service for a fee.



MOBILE PHONES

MobileMuster is a national product stewardship scheme for mobile phones, which recycles all brands of mobiles, their chargers and accessories, smart watches, VR headsets and mobile broadband devices. The scheme provides around 3,000 drop-off points across the country, as well as free mail satchels. Businesses with larger quantities of mobile phones and accessories to dispose of can apply for a one-off pick-up service or register for a collection bin.

TOP 3 MOST IMPACTFUL BEHAVIOURS

According to recent research by BehaviourWorks Australia,[9] the top three most impactful behaviours both individuals and organisations can take to reduce their material footprint is to:

1.

BORROW/RENT ITEMS OR SERVICES

For businesses, this occurs in the form of leasing or product-as-a-service, which are important pathways to a circular economy.

2.

SOURCE ITEMS SECOND-HAND (INSTEAD OF NEW)

For businesses, identified items included furniture, crockery and knick-knacks to produce an aesthetic (e.g. in a café).

3.

BUY ITEMS BUILT TO LAST

For business, this can be incorporated into procurement policies.

9. BehaviourWorks Australia (2023) *Behavioural Roadmap to Circular Consumption*

2.1.3 BARRIERS TO MORE SUSTAINABLE DISPOSAL PRACTICES

As highlighted above, Australian businesses are still sending reusable and recyclable items to landfill. Survey participants identified some key barriers to more sustainable waste management practices (reusing, repairing, reselling, donating, recycling). These barriers fall into six broad categories, which are outlined below.

Lack of awareness of more sustainable disposal options*

COFFEE PODS

"I'm not sure how to recycle them or if you can."
(Small business)

IRON AND STEEL

"Not aware I could recycle."
(Small business)

POLYSTYRENE

"Lack of education on how to better dispose of this item"
(Large business)

COMPUTER ACCESSORIES

"Don't know how else to recycle them."
(Large business)

BATTERIES

"Lack of education on how best to dispose of them."
(Large business)

COFFEE GROUNDS

"Unfamiliar with any other options."
(Large business)

**There are recycling solutions for all these materials, though accessibility may differ depending on location.*

Lack of internal collection points/bins

PLASTIC BOTTLES/JARS

"No availability in the building"
(Large business)

OFFICE PAPER

"There is only one bin for the entire arcade where our business is located, and no recycling is offered."
(Small business)

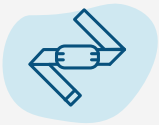
CARDBOARD

"The local recycling centre closed a few years ago and our landlords do not provide recycle bins." *(Small business)*

LEFTOVER FOOD

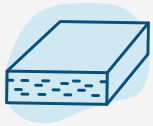
"No organic waste program established in building."
(Large business)

Lack of external recycling services



PLASTIC STRAPPING

"Not recyclable according to council guidelines and I live regionally so no drop-off points."
(Small business)



PARTICLEBOARD

"No one wants our offcuts and we have no choice in trying to recycle or reuse."
(Small business)

COMPUTER ACCESSORIES

"Lack of availability within rural area."
(Small business)

MOBILE PHONES

"Recycling points not available being in a rural setting."
(Small business)

WHITEGOODS/ APPLIANCES

"No options to recycle within rural location."
(Small business)

SOFT PLASTICS

"Some of them cannot be recycled."
(Small business)

OFFICE FURNITURE

"No available option."
(Small business)

CONSTRUCTION/ DEMOLITION MATERIAL

"No viable option to recycle or reuse"
(Small business)

CLOTHING/TEXTILES

"Because there is not any other way to dispose of it."
(Large business)

Time poor/convenience (other business priorities)

COFFEE PODS

"Nothing is stopping me. It's just convenient and easy to do it how I am currently and doesn't cost money."
(Small business)

GLASS BOTTLES/JARS

"It's quicker for us to just put them in general waste."
(Small business)

PRINTER CARTRIDGES

"[More sustainable disposal] needs a lot of effort."
(Medium business)

SCRAP METALS

"Probably because I don't have a lot of time."
(Medium business)

ALUMINIUM CANS + foil & trays

"Need to put effort and time."
(Medium business)

BATTERIES

"Mostly just the inconvenience of doing it any other way."
(Medium business)

Only small quantities produced (not worth the effort)

OFFICE PAPER

"Not enough being used."
(Small business)

NEWSPAPER/ MAGAZINES

"Not enough daily usage."
(Large business)

COFFEE GROUNDS

"Not worth the effort for the amount our business produces each week."
(Medium business)

AD MATERIAL/ ENVELOPES

"Not large amounts."
(Large business)

PLASTIC BOTTLES/JARS

"Not large amounts."
(Large business)

Increased costs (cheaper to send to landfill)

POLYSTYRENE

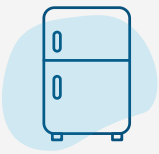
"Costs money."
(Small business)

BATTERIES

"Expensive."
(Large business)

COMPUTERS

"Too costly."
(Medium business)



WHITEGOODS/ APPLIANCES

"High cost."
(Large business)

NEWSPAPER/ MAGAZINEDS

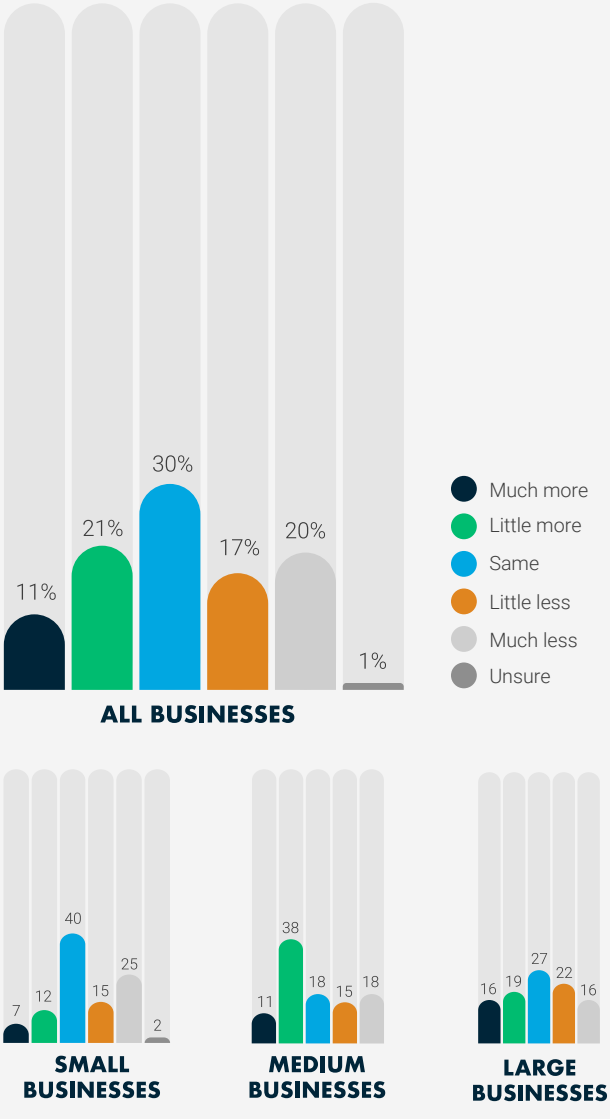
"Expensive."
(Large business)

2.1.4 IMPACTS OF COVID-19 ON WASTE MANAGEMENT

In the survey, participants were asked about the impact the COVID-19 pandemic had on waste generation and waste management practices in their business.[10]

Interestingly, 30 per cent of survey participants reported that COVID-19 had no influence on the amount of waste their business generated (Figure 6). Thirty-seven per cent reported their business produced less waste during the COVID-19 pandemic, whilst 32 per cent reported their business produced more waste.

As shown in Figure 6, survey participants from **small businesses** were more likely to report that their business experienced no difference in the amount of waste produced during the COVID-19 pandemic (40 per cent of small businesses). Participants from **medium businesses** were more likely to report that their business produced more waste during the COVID-19 pandemic (49 per cent), driven by the 38 per cent of participants who said their business produced a little more waste during the pandemic.



> ... medium businesses were more likely to report that their business produced more waste during the COVID-19 pandemic.

Figure 6: Amount of waste produced during the COVID-19 pandemic (2020-2022), split by small, medium and large businesses (%)

10. Any reference to 'the COVID-19 pandemic' in this report is describing the time from 2020 to 2022, a period when many restrictions were in place around Australia. On 5 May 2023, the World Health Organisation announced that it no longer considered COVID-19 to be a Public Health Emergency of International Concern. However, the WHO COVID-19 pandemic declaration is still active as of report publication date. Source: Australian Department of Health and Aged Care, *About Coronavirus (COVID-19)*, accessed 19/4/24.

When asked if the amount of waste generated by their business had changed post the COVID-19 pandemic (Figure 7), 39 per cent of survey participants reported no change. However, 33 per cent of participants reported their business produces a little more waste post the COVID-19 pandemic. Participants from **small businesses** were more likely to report no change (53 per cent), whilst participants from **medium businesses** were more likely to report producing more waste post COVID-19, driven by the 44 per cent who reported producing a little more waste.

The survey participants were also asked about any changes to how difficult it is to manage their waste post COVID-19 (Figure 8). Most participants reported their business finds it either the same (43 per cent) or easier (40 per cent) to manage their waste. Participants from **small businesses** were less likely to report easier waste management post COVID-19 (28 per cent) and more likely to report no change (58 per cent).

Of the 100 survey participants (40 per cent of total participants) who said that their business finds waste management **easier** now compared to pre COVID-19, 52 per cent said their employees are more aware of environmental issues and waste management processes and 31 per cent said their business had an increased internal emphasis on the importance of sustainability (Figure 9). This indicates there has been a shift in attitude and understanding among the business community of the importance of sustainable business practices. Another positive is that technical advancements in waste management, government policies, supply chain optimisation and strategic partnerships have enabled a good proportion of businesses to find waste management easier.

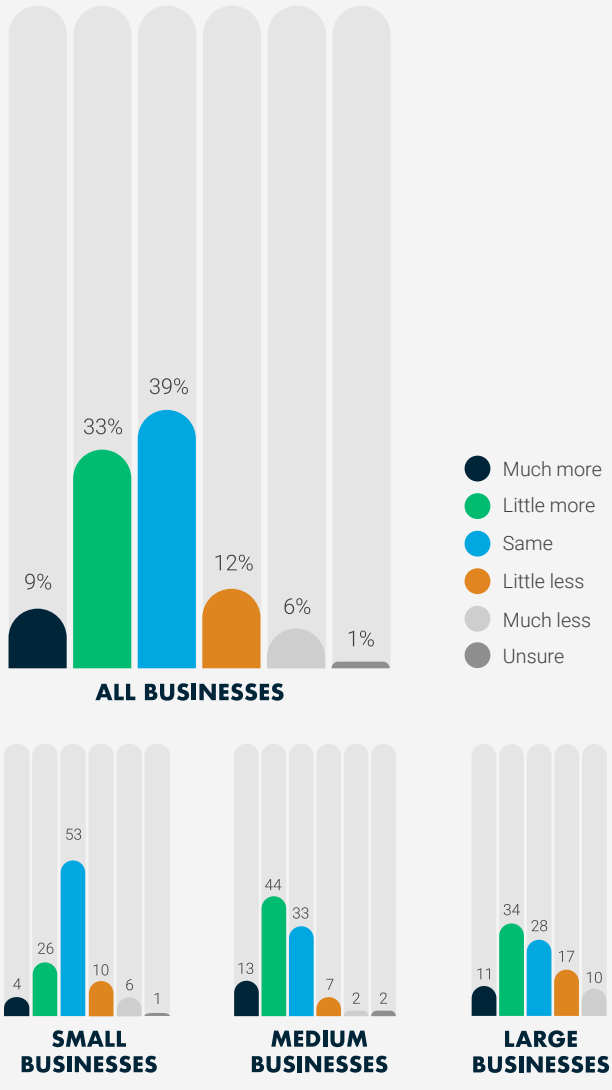


Figure 7: Amount of waste produced post COVID-19 pandemic, split by small, medium and large businesses (%)

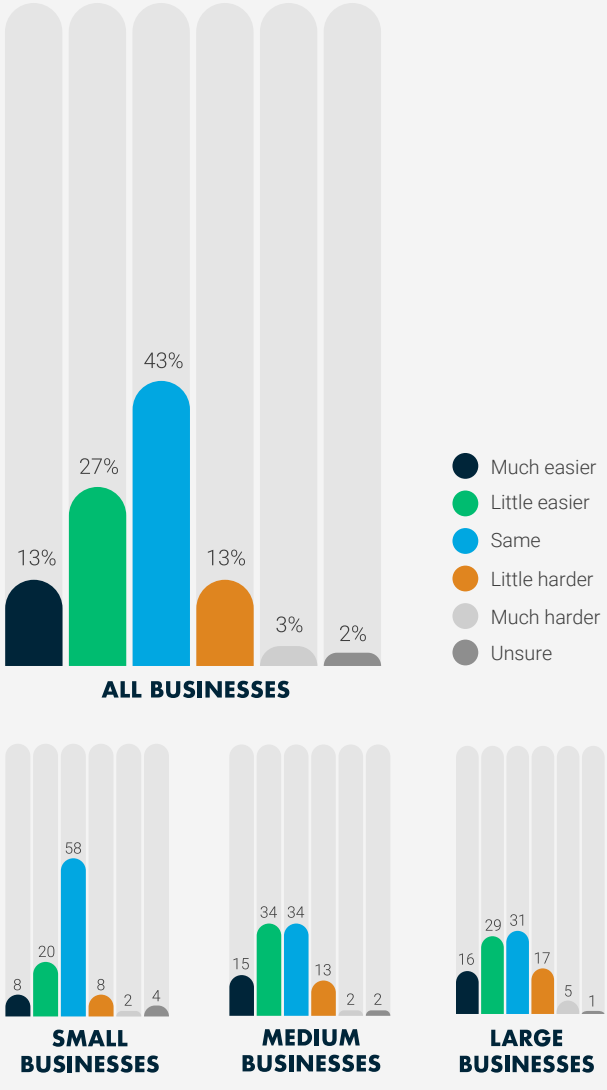


Figure 8: Ease of waste management now compared to pre COVID-19, split by small, medium and large businesses (%)

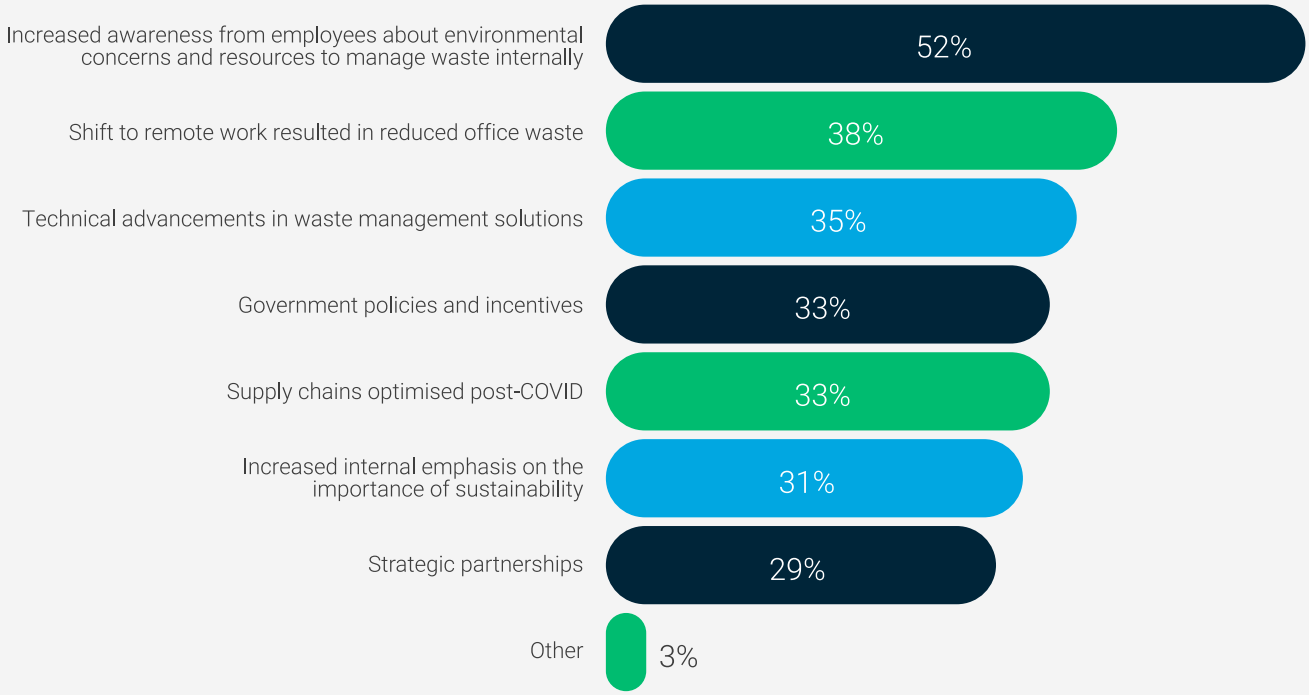


Figure 9: Why waste management is easier now compared to pre COVID-19 (%, n=100)

Conversely, of the 40 survey participants (16 per cent of total participants) who said that their business finds waste management **harder** now compared to pre COVID-19, 43 per cent reported budget constraints as a contributing factor and 40 per cent reported supply chain disruptions making sourcing sustainable materials more difficult. These results suggest that some businesses are still feeling the effects of COVID-19. Ongoing decentralisation of the workforce was also reported as a contributing factor by 38 per cent of businesses (Figure 10).

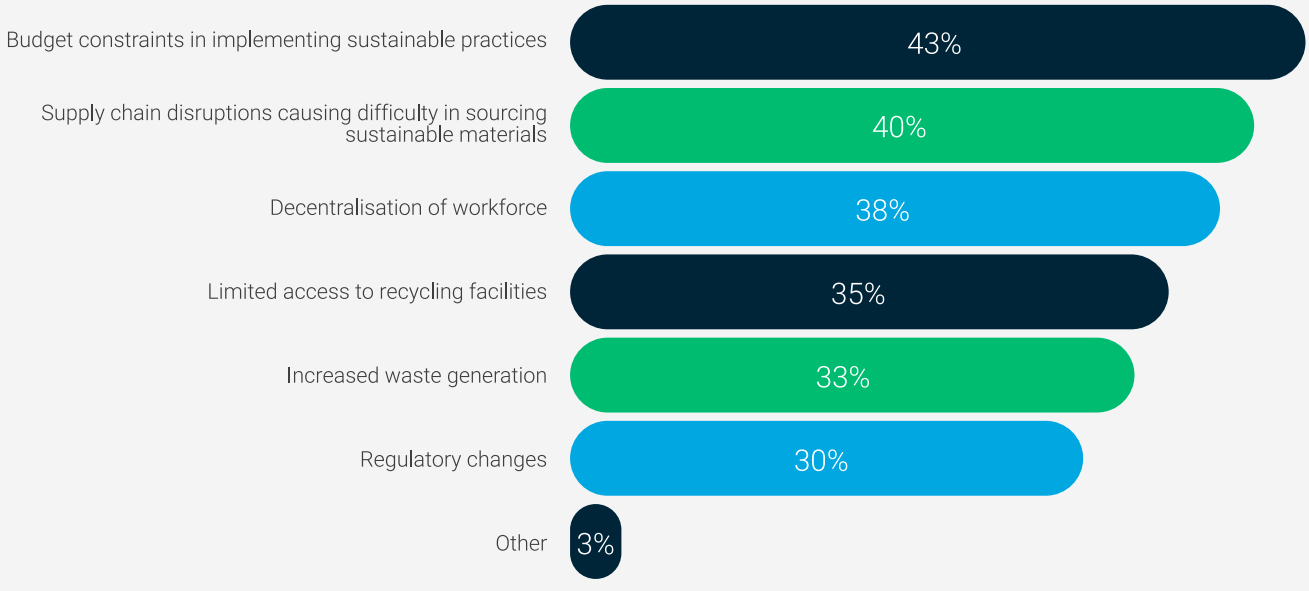


Figure 10: Why waste management is harder now compared to pre COVID-19 (%, n=40)

2.1.5 WASTE MANAGEMENT INFORMATION SOURCES

Figure 11 shows the sources survey participants had consulted for information on waste management and recycling. Waste management websites were the most reported information source for businesses (44 per cent of survey participants), followed by local government sources (43 per cent). State and federal government sources were less often consulted (31 per cent and 22 per cent respectively). Recycling company websites (41 per cent) and direct contact with recycling companies via phone or email (36 per cent) were often consulted.

Only 20 per cent of survey participants reported consulting non-government organisations for information on waste management. Despite the above, when survey participants were shown a list of five potential waste management resources, three of which were Planet Ark resources (BusinessRecycling.com.au, RecyclingNearYou.com.au and the Australian Circular Economy Hub), many said they would likely consult them for assistance with waste management in the future (Figure 12). This disparity might be explained by users being unaware that those resources are run by a not for profit.

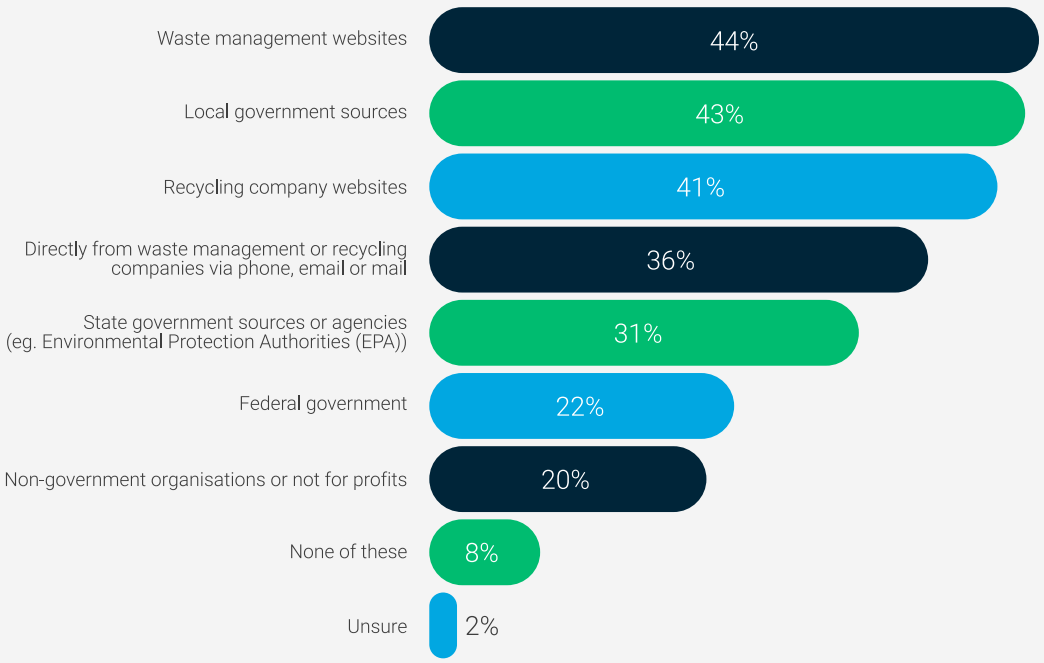


Figure 11: Where businesses have learned about waste management and recycling (%, n=255)

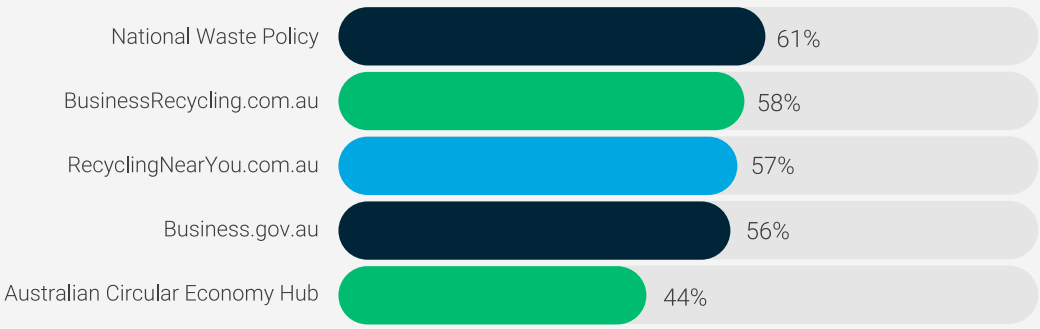


Figure 12: Sources businesses are likely to use for waste management (%, n=255)

Survey participants were most likely to consider consulting the National Waste Policy (61 per cent) to assist with their future waste management, followed by Planet Ark's Business Recycling website (58 per cent), being amalgamated with Recycling Near You (Figure 12 above). Whilst the National Waste Policy may not be as relevant for day-to-day waste management, businesses are likely interested in understanding Australia's higher level waste framework and any aspects of the associated National Waste Policy Action Plan that are relevant to their operations (such as the target to phase out problematic and unnecessary plastics by 2025).

At the time of the survey, Planet Ark's Recycling Near You only provided recycling information for a residential audience. Despite this, over half (57 per cent) of the survey participants said they would likely consult this resource for assistance with business waste management, which would result in these businesses missing out on commercial recycling solutions that are available. This supports Planet Ark's decision to amalgamate the websites into one resource under the name Recycling Near You. The updated website will make it easier for businesses to access relevant information and reduce the possibility of businesses incorrectly searching for residential services.

Just under half (44 per cent) of survey participants reported they were likely to consult Planet Ark's Australian Circular Economy Hub (ACE Hub) for help with future waste management, likely indicating that some businesses are thinking beyond recycling and seeking information on more circular solutions such as redesign and repair. Whilst this is encouraging, Planet Ark and the ACE Hub's latest *Circularity in Australian Business* report highlights the need for more education around what a circular economy is and, in particular, that it requires more than just improved recycling. The report found 50 per cent of business decision makers who considered themselves 'extremely knowledgeable' about the circular economy incorrectly defined the concept as one that ensures products and materials are recycled where possible, rather than one that is designed to ensure regenerative processes and products.[11]

NEWS

Planet Ark is updating **Recycling Near You**. The new website will offer recycling solutions for both households and businesses in one place. The first of its kind in Australia!

The New Recycling Near You

Planet Ark is combining the Business Recycling and Recycling Near You websites to make it easier for Australians to find information about recycling and sustainability.

RECYCLING NEAR YOU
PLANET ARK

Businesses and workplaces will be able to explore the website's free resources to assist them in their sustainability journeys, including their waste management practices. The website will feature:

- A reuse and recycling directory for more than 90 types of materials,
- A small-scale recycling equipment catalogue, and
- An educational hub with guides to implementing better sustainable practices in the workplace.

11. ACE Hub (2023), *Circularity in Australian Business 2023: Perceptions, Knowledge and Actions Beyond Recycling*

2.2 BROADER SUSTAINABILITY ATTITUDES AND BEHAVIOURS

2.2.1 INTENT TO OPERATE MORE SUSTAINABLY

A majority of survey participants (71 per cent) reported their business had looked for information on how to reduce their environmental impact (Figure 13).

Regional businesses (56 per cent) were less likely to have looked for information than **metropolitan businesses** (77 per cent). This may be explained by an assumption by **regional businesses** that there are less options available to them to reduce their environmental impact compared with businesses located in major cities, which highlights the importance of supporting this group along their sustainability journeys.

Small businesses (51 per cent) were less likely to have looked for information than **medium** (82 per cent) and **large businesses** (86 per cent). **Medium** and **large businesses** are likely under more external pressure from customers and regulators to reduce their environmental impact, whilst **small businesses** may have less resources, in terms of both personnel and finances, to devote to this objective.

Encouragingly, a large majority of businesses represented by the survey sample (74 per cent) had moved beyond simply looking for information on how to reduce their environmental impact and had implemented policies, procedures or strategies to achieve this goal (Figure 14).

Large businesses (91 per cent) were more likely to have implemented policies, procedures or strategies to reduce their environmental impact, followed by **medium** (74 per cent) and **small businesses** (57 per cent). Section 2.2.3 looks at some of the factors that motivate businesses to adopt more sustainable behaviours.

> Medium and large businesses are likely under more pressure from customers and regulators to reduce their environmental impact.

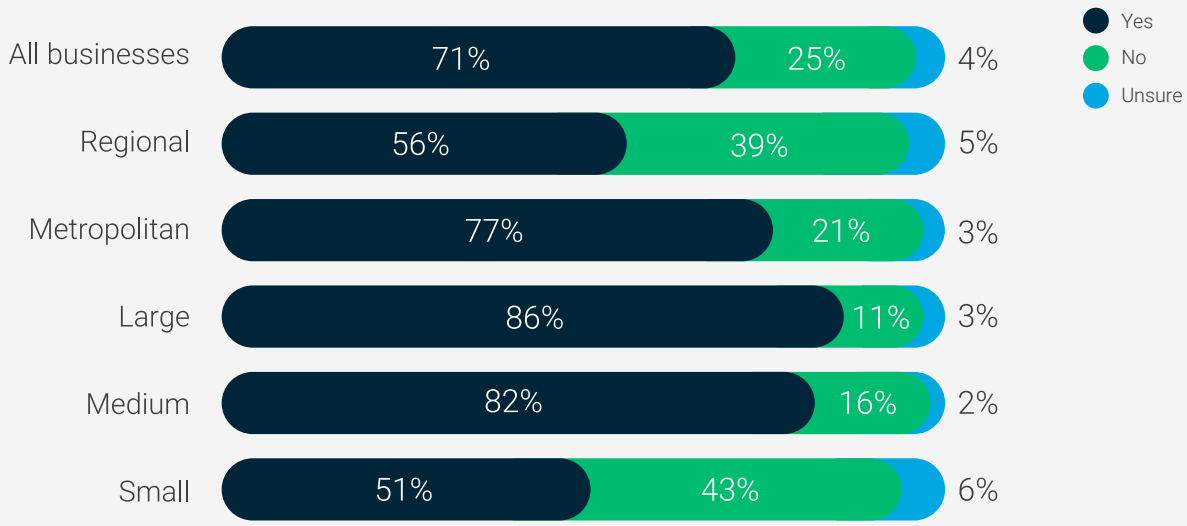


Figure 13: Businesses that have looked for information on how to reduce their environmental impact, split by small, medium, large, metropolitan and regional businesses (%)

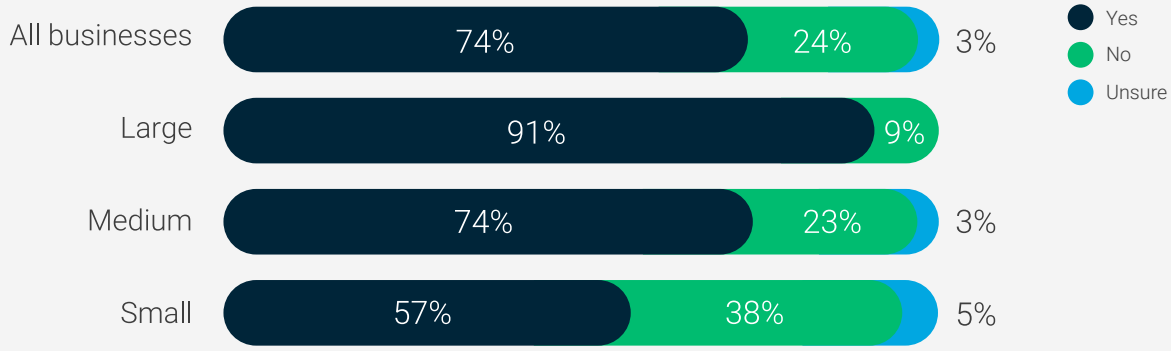


Figure 14: Businesses that have policies, procedures or strategies in place to reduce their environmental impact, split by small, medium and large businesses (%)

2.2.2 BEHAVIOURS ADOPTED TO REDUCE ENVIRONMENTAL IMPACT

Table 2 below shows some of the specific behaviours businesses have adopted to reduce their environmental impact.

Survey participants from **small businesses** were more likely to report that their business has adopted smaller or daily actions, like turning computers off at night (63 per cent) and installing energy efficient light bulbs (60 per cent). These changes are easy to implement and result in direct cost savings, which are likely both important drivers of behaviour change for **small businesses**.

Participants from **large** and, to a lesser extent, **medium businesses** were more likely to report that their business has taken action at a higher level, by discussing better waste management practices at a board or management level (32 per cent of large businesses) or through establishing a sustainability or green team (23 per cent of large businesses), for example.

BEHAVIOUR	SMALL	MEDIUM	LARGE	ALL BUSINESSES
Install energy efficient light globes	60	30	49	49
Turn computers off at night	63	44	35	49
Recycle office paper	65	39	34	48
Recycle glass, aluminium, steel and plastic bottles, cans and jars	61	28	34	44
Recycle printer cartridges and toners	43	41	33	39
Buy in bulk to reduce packaging	45	38	30	38
Have a waste and recycling action plan or policy	38	28	35	35
Purchase products made with recycled materials	35	30	26	30
Set computers to shut down after half an hour without use	33	25	24	27
Set printers to default to double sided	26	26	26	26
Use recycling equipment such as balers, shredders, compactors, and composters	23	26	28	25
Discuss better waste management and recycling practices at a board or management level	19	26	32	25
Purchase second-hand items such as furniture	27	28	18	24
Purchase or generate some or all of your energy from renewable energy sources such as solar	21	13	25	20
Have a sustainable procurement policy or strategy	13	16	26	18
Establish a sustainability or green team	9	26	23	18
Have a circular economy policy or strategy	9	13	19	14
Purchase carbon credits for some or all of the greenhouse gas emissions your workplace generates	4	21	14	12

Table 2: Behaviours businesses have adopted to reduce their environmental impact, split by small, medium and large businesses (%)

More effective behaviours

In addition to the behaviours adopted above, many survey participants indicated their business has also taken steps towards adopting business practices that are more in line with a circular economy, such as reduce, redesign and refurbish activities (Figure 16, bar chart).

A circular economy aims to keep materials in circulation, and retain the value embedded within them, at the highest level for as long as possible. The ladder of circularity provides a good visualisation of increasing circularity, where activities (known as R strategies) higher up the ladder (such as reduce and redesign) are more circular than those lower on the ladder (such as recycle) (Figure 15, ladder of circularity).

> A circular economy aims to keep materials in circulation, and retain the value embedded within them, at the highest level for as long as possible.

THE LADDER OF CIRCULARITY

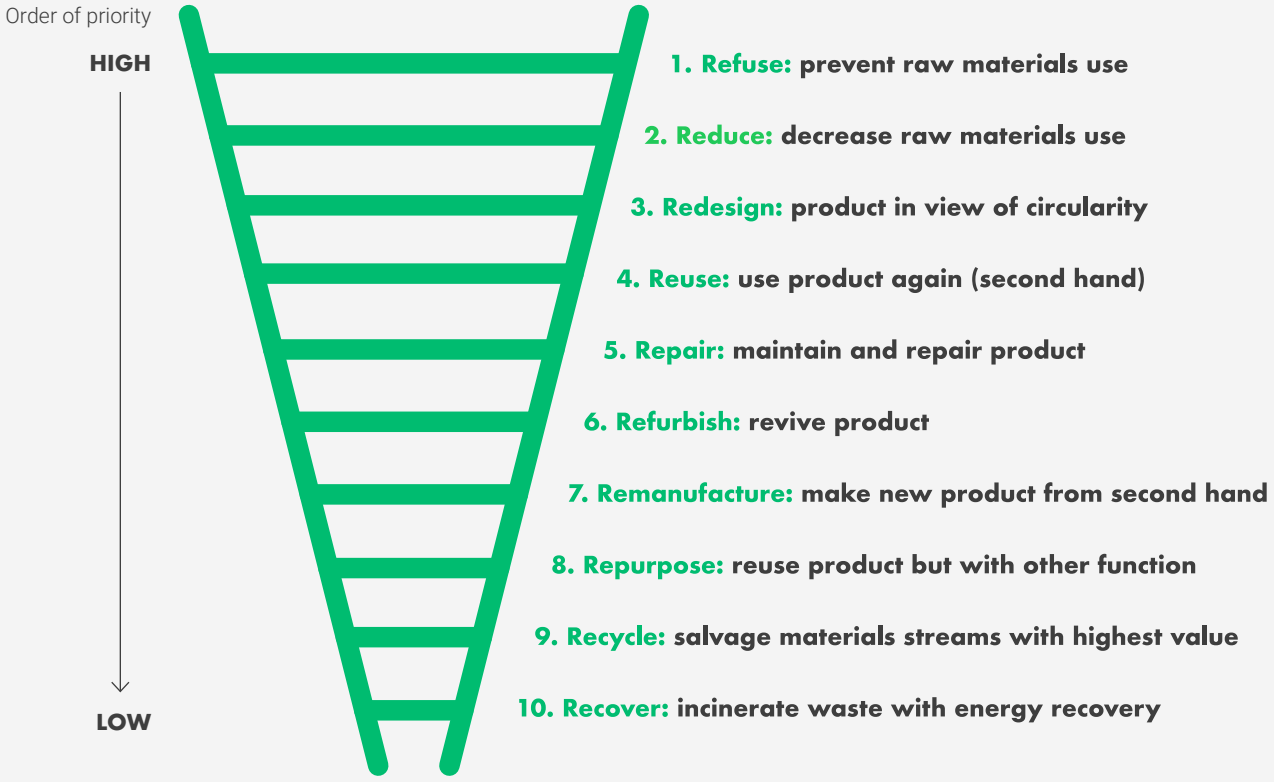


Figure 15: The ladder of material circularity and 10 R's adapted from Cramer 2017. Note, two additional R strategies were added to the survey (rethink and regeneration, both of which are high priority)

The survey data presented in Figure 16 suggests these businesses have not fully implemented the strategies across their organisation. However, it does indicate that many Australian businesses understand the benefits of taking action beyond waste management and recycling (i.e. many Australian businesses understand the benefits and potentially the importance of taking action higher up the ladder of circularity).

Future research could delve more deeply into business understanding of R strategies by requesting examples from participants of what they are implementing. This would enable an in-depth evaluation of the scope and effort of circularity implementation.

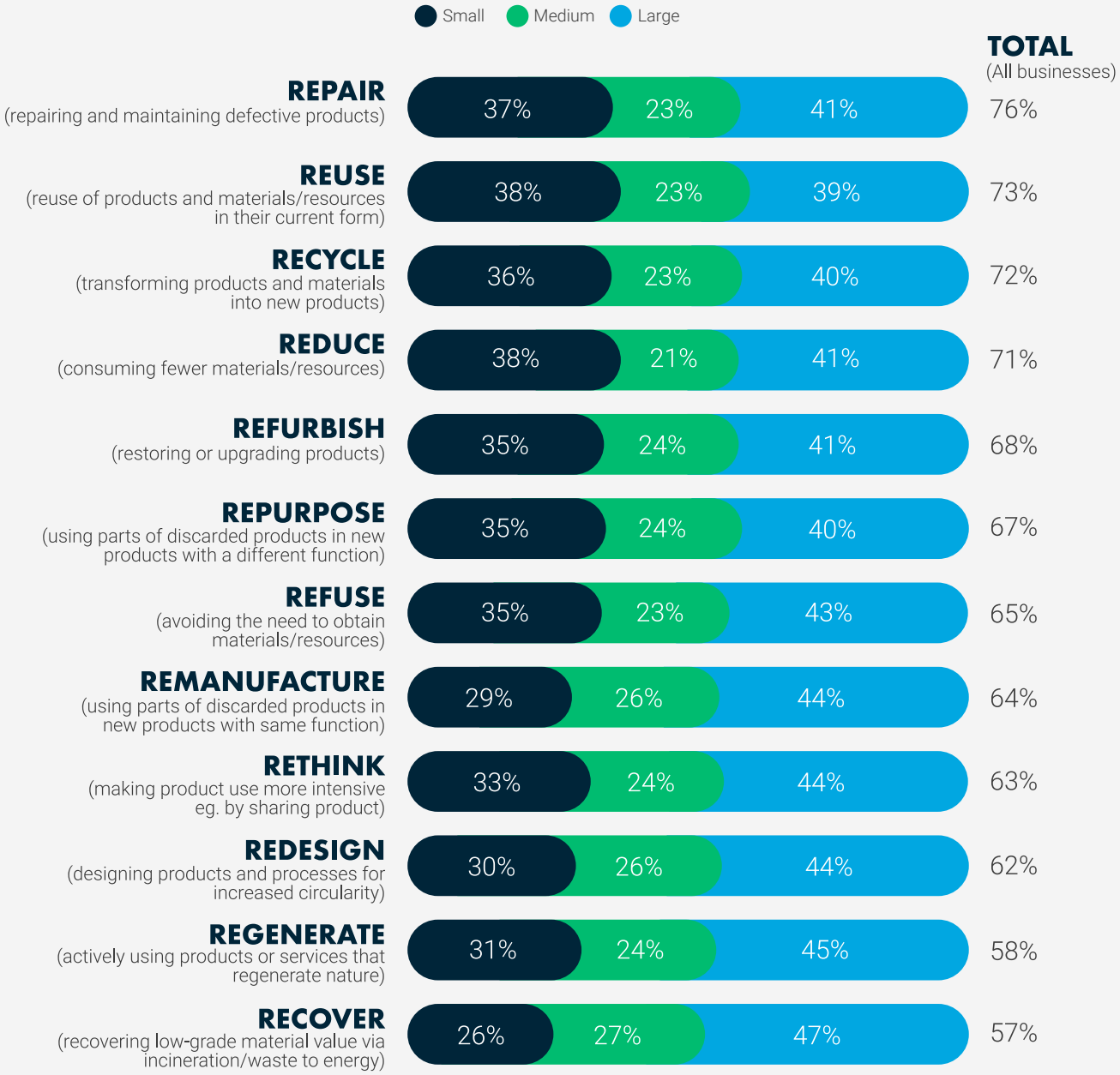


Figure 16: Implementation of R strategies, showing contributions of each business size to total (%)

The Australian Circular Economy Hub (ACE Hub)

The ACE Hub was established by Planet Ark in 2020, with support from the Australian Government. The ACE Hub's mission is to advance a carbon neutral and circular economy transition in Australia and the Asia-Pacific to help people and organisations thrive in balance with nature.

Businesses can explore the Knowledge Hub, including recent circular economy research reports, connect with more than 2,000 circular economy collaborators on the ACE Hub Portal or join the ACE Hub's annual Circularity conference.

AUSTRALIAN CIRCULAR ECONOMY HUB
PLANET ARK

2.2.3 MOTIVATORS OF MORE SUSTAINABLE BEHAVIOURS

There are many benefits for businesses that adopt more sustainable practices to reduce their environmental impact. For example, Figure 17 shows 79 per cent of participants reported cost savings associated with reduced energy consumption and 66 per cent reported that being more sustainable is important for their corporate image.

Other motivators for businesses to adopt more sustainable practices include being seen as a leader in addressing climate change (reported by 69 per cent of survey participants) and expectation among employees (reported by 67 per cent) and customers (51 per cent).

External pressures, such as government regulations (65 per cent), action from competitors (55 per cent) and the need to report their business' triple bottom line (51 per cent) are also important drivers of more sustainable behaviours.

Understanding what motivates different business groups, such as small, medium and large businesses, can help inform more effective behaviour change campaigns. Communications that use positive social proof or tap into a fear of missing out on competitive advantages are strategies that can be implemented.

> "... 66 per cent [of businesses] reported that being more sustainable is important for their corporate image.

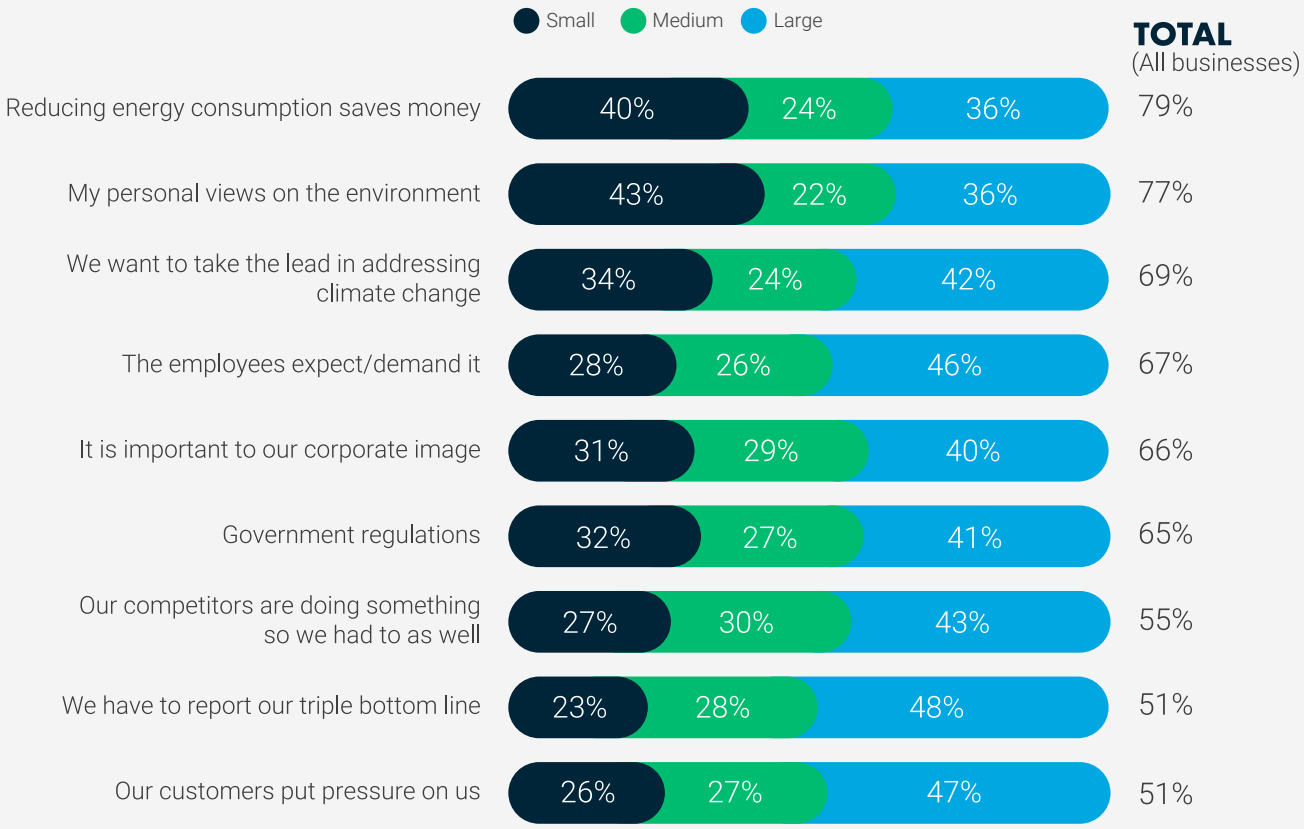


Figure 17: Motivators for businesses to reduce their environmental impact, showing contributions of each business size to total (%)

3. KEY TAKEAWAYS

1. Australian businesses are implementing R strategies

Encouragingly, the survey data suggests Australian businesses are reusing, reselling/donating, repairing and recycling some of the materials they generate as 'waste'. For example, **35 per cent** of survey participants reported their business reuses particleboard, **42 per cent** resell or donate office furniture and **27 per cent** repair computers. There is much room for improvement, however, as many businesses are still sending valuable resources to landfill that could be otherwise diverted, including leftover food (**50 per cent** of survey participants) and materials with nation-wide recycling schemes (for example, **16 per cent** send computers to landfill).

2. Businesses are adopting other sustainable behaviours

Australian businesses have reportedly adopted a wide range of behaviours, beyond better waste management, to reduce their broader environmental impact. These range from installing energy efficient light bulbs and switching off computers at night (both behaviours reported by **49 per cent** of survey participants), to developing a circular economy strategy or policy (**14 per cent**). The scale and impact of these behaviours requires further research.

3. Businesses show intent to operate more sustainably

Businesses showed intent towards operating more sustainably, by looking for information on how to reduce their environmental impact (reported by **71 per cent** of survey participants) and implementing policies, strategies or procedures to achieve this (**74 per cent**). This is less common for small businesses (**51 per cent**), compared to medium (**82 per cent**) and large businesses (**86 per cent**), which suggests they may need greater support.

4. Knowledge, access and other priorities are barriers

The key barriers to more sustainable business disposal practices were reportedly a lack of awareness and knowledge, perceived lack of access, other business priorities and the perceived cost.[12]

5. Cost savings, values and image are key motivators

The key motivators of broader sustainable business behaviours were reportedly cost savings (reported by **79 per cent** of survey participants), staff values (**67 per cent**), customer values (**51 per cent**), government regulations (**65 per cent**), corporate image (**66 per cent**) and competitive advantage (**55 per cent**).

12. These barriers were condensed from a larger list of reasons survey participants provided for why their business is sending some of their 'waste' materials to landfill rather than diverting them to higher order strategies like reuse, repair and recycle.

4. RECOMMENDATIONS

This research highlights the key barriers to more sustainable business disposal practices and the key motivators of broader sustainable behaviours. It paves the way for interested parties, such as Planet Ark, government, and other key stakeholders, to create targeted interventions that better support Australian businesses on their sustainability journeys. The recommendations are as follows:

1. Education campaigns

Sustainable and more circular disposal solutions already exist for many of the materials Australian businesses are sending to landfill. This report highlights the examples of food, office furniture and electrical products.

There is a clear need to raise awareness of resources like Recycling Near You, but information alone is not enough. Effective campaigns need to use tested messaging and established behaviour change principles to drive change. Addressing the barriers and understanding the motivators and values of the target audience is key.

2. Programs that provide support to SMEs

Smaller businesses often require more support to change behaviour than large businesses due to availability of resources and time. This research found that many businesses look to local governments for waste management information. Using this pathway, alongside state governments and other stakeholder collaborations, could be an effective way to promote programs that provide both recycling, reuse and repair information and, importantly, one-to-one specialist support for SMEs. The NSW Environment Protection Authority's Bin Trim program is one such example, engaging with over 38,000 businesses between 2014 and 2022 and diverting over 260,000 tonnes of waste from landfill.

> Effective campaigns need to use tested messaging and established behaviour change principles to drive change.

3. Research highlighting how more circular R strategies reduce costs for businesses

Costs and return on investment are major decision factors in any business. Circular R strategies like reduce, reuse and repair may have inherent cost savings, whilst others like recycling may depend on a number of factors such as state landfill levies, geographic location and the amount of recyclable materials generated. Presenting tangible evidence that aligns with the notion that employing sustainable disposal techniques reduces costs will significantly help in persuading businesses that adopting R strategies is the correct path forward.

4. Strengthening of government policy/regulations for greatest impact

All levels of government play a role in leadership and enablement. Government policy and regulation significantly impacts business decisions around resource management. Waste export and single-use plastic bans are examples of this.

Focusing on enabling high impact business actions and behaviours that significantly reduce Australia's material footprint should be a priority. Accessibility and convenience are key factors to consider. It is also crucial to focus on the product categories that will have the greatest positive impact on Australia's material footprint, as well as higher order R strategies of the circular economy (refuse, reduce, redesign, reuse, repair, refurbish, remanufacture and repurpose).

The table below provides recommendations to address the barriers outlined in this report and suggests which stakeholders are needed to deliver them.

BARRIERS	RECOMMENDATIONS	WHO
Lack of awareness of more sustainable disposal options	**Education campaigns** highlighting: • Resources to help businesses e.g. Recycling Near You • High priority materials • Materials with existing workplace collections (e.g. Cartridges 4 Planet Ark, MobileMuster, batteries, coffee pods) • How easy/convenient solutions can be • The power of reassessing business procurement **Programs that provide support to SMEs** focusing on one-to-one specialist support.	• Government • NGOs • Waste consultants • Business groups
Lack of internal collection points	**Education campaigns** highlighting: • Resources to help businesses e.g. Recycling Near You • High priority materials • How to make the business case for recycling to your executive or building managers **Programs that provide support to SMEs** focusing on one-to-one specialist support e.g. waste audits and recommendations.	• Government • NGOs • Waste consultants
Perceived lack of external recycling services	**Education campaigns** highlighting: • The various collection solutions for materials that are not known to many businesses e.g. postage for mobiles and printer cartridges • Resources to help businesses find collection points e.g. Recycling Near You • High priority materials **Strengthening of government policy/ regulations for greatest impact** e.g. supporting collection accessibility for target materials.	• Government • NGOs • Business groups

BARRIERS	RECOMMENDATIONS	WHO
Time poor/lack of convenience	**Education campaigns** highlighting: • Resources to help businesses e.g. Recycling Near You • Government regulations/penalties for incorrect disposal of certain materials (e.g. batteries) • Benefits of leasing arrangements for certain products • Benefits relating to gaining a competitive advantage and positive corporate image • How to make the case for less waste to your executive or building managers **Programs that provide support to SMEs** focusing on one-to-one specialist support e.g. waste audits and recommendations.	• Government • NGOs • Business groups
Only small quantities produced	**Education campaigns** highlighting: • Government regulations/penalties for incorrect disposal of certain materials (e.g. batteries) • How easy/convenient sustainable solutions can be • The power of reassessing business procurement **Programs that provide support to SMEs** focusing on one-to-one specialist support e.g. waste audits and recommendations.	• Government • NGOs • Waste consultants
Cost	**Research highlighting how more circular R strategies reduce costs for businesses** **Education campaigns** highlighting: • Free workplace collections or drop-off services e.g. Cartridges 4 Planet Ark, MobileMuster, coffee pods • More cost-effective ways to manage waste (e.g. sourcing compactors and balers for cardboard and plastic that reduce collection frequency) • Government regulation/fines for incorrect disposal of certain materials (e.g. batteries) • How more circular R strategies reduce costs	• Government • NGOs • Circular economy/waste consultants

Table 3: Recommendations to address perceived barriers to more sustainable disposal practices by businesses.

4. RESOURCES FOR BUSINESSES

Recycling Near You

When launched, the new Recycling Near You website will have an extensive database of recycling and reuse solutions for businesses for over 90 different materials.

Recycling Equipment Catalogue

The Small Scale Recycling Equipment Catalogue contains information on a wider range of onsite machinery, such as compactors, balers and organic processors, to make waste management more efficient and cost effective.

ACE Hub

The Australian Circular Economy Hub helps businesses go from a linear take-make-dispose system to a more circular economy, through its knowledge hub, events, membership services and the ACE Hub Portal's online community.

Government assistance

Explore eligibility for various environmental grants for businesses at business.gov.au.

RECYCLING NEAR YOU

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