

# 2017

# ANNUAL REPORT



PRODUCT STEWARDSHIP  
Australian Government Accredited

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# INTRODUCTION



**MobileMuster continues to play a leadership role in product stewardship and mobile phone recycling in Australia. The industry is constantly working to reduce the environmental and human health impacts of their products, across their entire life cycles. This includes improving material and energy efficiency, increasing recyclability and reducing the use of hazardous substances.**

The Product Stewardship Act 2011 came into effect in August 2011. This legislation provides the framework to effectively manage the environmental, health and safety impacts of products, and in particular those impacts associated with the disposal of products.

MobileMuster, which holds voluntary accreditation under the Act, was established by the mobile phone industry in 1998 to provide an environmental sound take back program that keeps mobiles out of landfill and optimises resource recovery.

The accreditation provides certainty to the community and industry that MobileMuster provides a recycling service that is safe and secure performing to the highest environmental standards. Everything collected by the program is recycled which ensures that any data left on devices is destroyed as part of the recycling process.

The program also provides social benefits by way of a free service to all mobile phone users and works to raise the awareness of mobile phone recycling through communication and education activity. The Australian Mobile Telecommunications Association (AMTA) manages MobileMuster on behalf of its members who fund the program voluntarily. They include Microsoft, Samsung, Motorola, HTC, Huawei, ZTE, Alcatel, Oppo, HMD Global, Google, Telstra, Optus, Vodafone and Virgin Mobile.

 Microsoft

 SAMSUNG  
COMMUNICATIONS

 MOTOROLA

 hTC

 HUAWEI

 ZTE

 alcatel

 oppo

 hmd.  
The Home of Nokia Phones

 OPTUS

 vodafone

 Virgin  
mobile

# FOREWORD



**Chris Althaus**  
CEO – AMTA



The mobile industry continues to evolve, change and grow. This year we saw Australia's mobile network operators – Telstra, Optus and Vodafone continue to invest in latest generation (4G) networks to support an ever-increasing array of applications and services. Part of the evolution has also involved closing 2G mobile networks. As part of the closures AMTA worked with its members to educate customers on how to safely dispose of their 2G devices by recycling them with MobileMuster.

As an industry we are currently working hard to deliver advanced 4G services while also preparing for the 5th generation of mobile technology – 5G – which will create new and diverse mobile services, such as enhanced mobile broadband and the Internet of things (IoT) – further transforming the way we live and work.

While commercial deployment of 5G is not anticipated before 2020 the industry is planning for the significant benefits the 4G/5G ecosystem will deliver across the economy and society. As the generations evolve, MobileMuster is well positioned to continue delivering a robust take back program and better understanding how the 4G/5G environment will influence consumer's decisions when adding or upgrading to new devices.

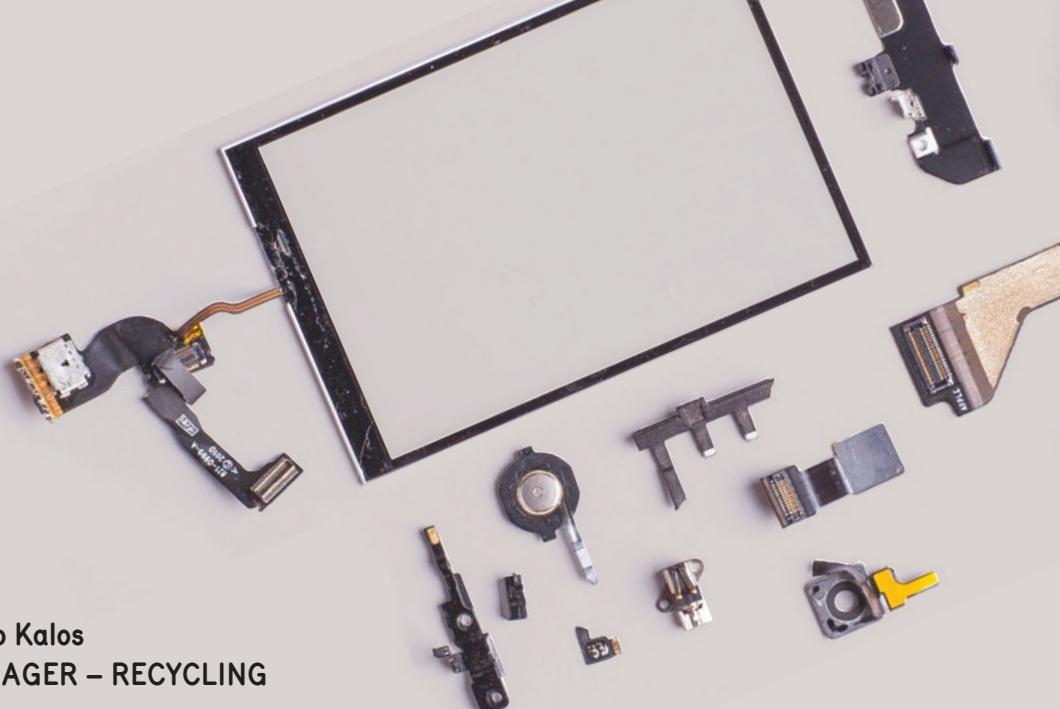
The introduction of 5G will also deliver significant growth in the number of connected devices. There will be more wearables, household gadgets and industrial sensors which are mobile enabled to take advantage of the new technology. AMTA is at the forefront of helping the industry to prepare for 5G and will look for opportunities for MobileMuster and the industry to take a proactive approach to product stewardship responsibilities as new products enter the market.

Since the program started the industry has invested over \$42 million into MobileMuster which has recycled over 11 million handsets and batteries. The longevity of the program is a great demonstration of the good that can come about when an industry and its stakeholders share the vision and commitment to do the right thing to benefit the community and the environment.

In the coming year MobileMuster will also continue to look for opportunities to expand its efforts to address product stewardship and sustainability issues outside of recycling by working with program members to explore, leverage and contribute where possible to the "circular" economy.



**Spyro Kalos**  
**MANAGER – RECYCLING**



Now more than ever mobile phone users have an array of options when it comes to managing their mobile phones when they are no longer needed. In the past the choice was made to keep a mobile as a backup, now we see many more of us selling them online, trading them in, leasing them, passing them onto friends and family, and finally when it reaches its end of life, recycling it with MobileMuster.

The reuse market is an important part of the life cycle of devices which helps to extend their useful life. Reuse is more mature in places like Europe and the United States, however local consumers are becoming more comfortable and aware of the options available to them.

MobileMuster continues to provide a robust take back program that is free for all mobile phone users. The program started in 1998 as a way to keep old mobiles out of landfill. It continues to do that today, this year the program achieved an increase on total volume of mobile phone components collected compared to last year. The program plays an active role in educating consumers on the benefits of recycling, making it easy and accessible to all. As an industry we continue to invest in education programs along with marketing activity which are a vital part of delivering a successful program.

This year we welcomed two new members to the program Google and HMD Global, the home of Nokia. The mobile phone industry acknowledges the important role they play in managing unwanted technology. Our members are constantly working to reduce the environmental and human impacts at each stage of the product life cycle.

The industry is committed to the accreditation of MobileMuster as a voluntary product stewardship scheme under the Federal Government's Product Stewardship Act. The accreditation provides certainty to the community and industry that MobileMuster provides a recycling service that is safe and secure, performing to the highest environmental standards.

The AMTA has welcomed the review of the Product Stewardship Act 2011 and looks forward to working with the Government to maintain MobileMuster as a voluntary scheme that delivers enhanced environmental, social and economic outcomes in Australia.

**79.1 TONNES OF MOBILE PHONE COMPONENTS RECYCLED**

THIS YEAR



# PROGRAM PERFORMANCE

This year MobileMuster continued to grow collections and recycled 79.1 tonnes of mobile phone components. Total collections, since the program started, have reached 1,323 tonnes. This includes approximately 11 million handsets and batteries kept out of landfill.

The performance of MobileMuster is measured against key performance indicators that look at changes in consumer behaviour, collection and recycling rates, diversion from landfill and industry involvement. Each of these indicators is assured independently by RSM Bird Australia ensuring transparency of the program's performance.

Aside from MobileMuster, there are a number of other recyclers that recycle mobiles and accessories through their own customers. A number of these programs share their recycled volumes. From the available data provided to MobileMuster, a further 3,838kgs was collected and recycled in 2017.

Key Performance Indicators	Target	Actual
<b>Collections</b>		
Mobile Phone Collections (weight – tonnes)	75.0	79.1
Annual Collection Rate, Available Phones (%)	57.5%	68.5%
Annual Collection Rate, Net Imports (%)	8.6%	10.3%
Estimated Number Handsets & Batteries (units – millions)	1.01	1.06
<b>Recycling</b>		
Diversion from Landfill	97%	99%
Recycling Rate	>90%	99%
<b>Consumer Behaviour</b>		
Personal Storage Rate (% users with 2 or more handsets at home)	37%	34%
Disposal to Landfill Rate	2%	2%
Awareness of Mobile Phone Recycling	>80%	77%
<b>Industry Participation</b>		
Manufacturers	58%	40%
Mobile Network Carriers	91%	86%

## EDUCATION AND AWARENESS



MobileMuster invests in education and public awareness programs to motivate Australians to recycle and change behaviour. We aim to increase awareness of mobile phone recycling along with the benefits it brings to the community. This way when a phone reaches its end of life the recycling option is not overlooked. Currently 77% of Australians are aware of mobile phone recycling, which is very high in comparison to other recycling programs.<sup>1</sup>

Australians continue to hold on to their old mobiles, many of which are redundant. MobileMuster estimates that Australians are storing 5 million old handsets that are broken or not working.<sup>2</sup> Our marketing strategy works to increase awareness of how, why and where to recycle, as well as provide incentives for consumers to take action and recycle more.

MobileMuster featured widely across national print, radio and online media this year. This included coverage generated by our various campaigns which included Able Australia, National Recycling Week, Mobile for a Meal, our market research, World Environment Day, local government awards, as well as general comments on topics of interest surrounding the War on Waste and mobile technology.

### PLANET ARK PARTNERSHIP

MobileMuster has partnered with Planet Ark, Australia's leading environmental behaviour change organisation, for the past five years to deliver MobileMuster's public drop off network, including local councils through the Recycling Near You portal. This makes it easier for people, who are ready to recycle, to find out how and where they can take action. Last year Planet Ark reported 35,490 visits for mobile recycling and MobileMuster. We also support Planet Ark's National Recycling Week where we both jointly promote mobile phone recycling through social media, radio and TV community service announcement as well as mainstream media coverage reaching over 1.5 million Australians.

The MobileMuster website provides a single online location for consumers to access information and resources about mobile phone recycling. It provides useful information from the location of local drop off points to understanding what steps to take when managing and removing the data on mobile phones. Our website provides comprehensive education material for schools and the general public on the benefits of recycling. It also hosts our booking portal for our collection network to book in free pickups, along with resources to help them promote mobile phone recycling to their customers and community.

The use of social media and adwords helps us to inform and educate mobile phone users about recycling and MobileMuster. We conduct targeted advertising on these platforms throughout the year to promote greater engagement with the program. Last year MobileMuster reached over 2.3 million people through social media and 1.5 million from adwords. Our members and collection partners also helped bolster these results by promoting MobileMuster through their extensive social media networks.

<sup>1</sup> IPSOS, Consumer insights into mobile phone use and recycling (February 2017). It was based on a used sample size of 1001 people Australia-wide. Respondents were randomly selected from an online panel and were over the age of 16 with a mobile phone.

<sup>2</sup> IPSOS, 2017.



## OZHARVEST PARTNERSHIP

**This year MobileMuster partnered with OzHarvest, Australia's leading food rescue agency, to tackle two of the fastest growing waste issues in Australia, ewaste and food waste. The campaign not only raised the awareness of MobileMuster, but at the same time provided an added incentive to drive collections over summer. Using a multi-media and public relations campaign, MobileMuster promised to deliver the value of a meal to an Australian in need for every mobile recycled during January and February. As a result the program recycled over 60,000 mobiles, and helped OzHarvest deliver 60,000 meals to those in need. Our collection network including local councils and mobile phone retailers reinforced the call to action during the campaign which in turn saw a 17% increase in collections compared to the same period last year.**



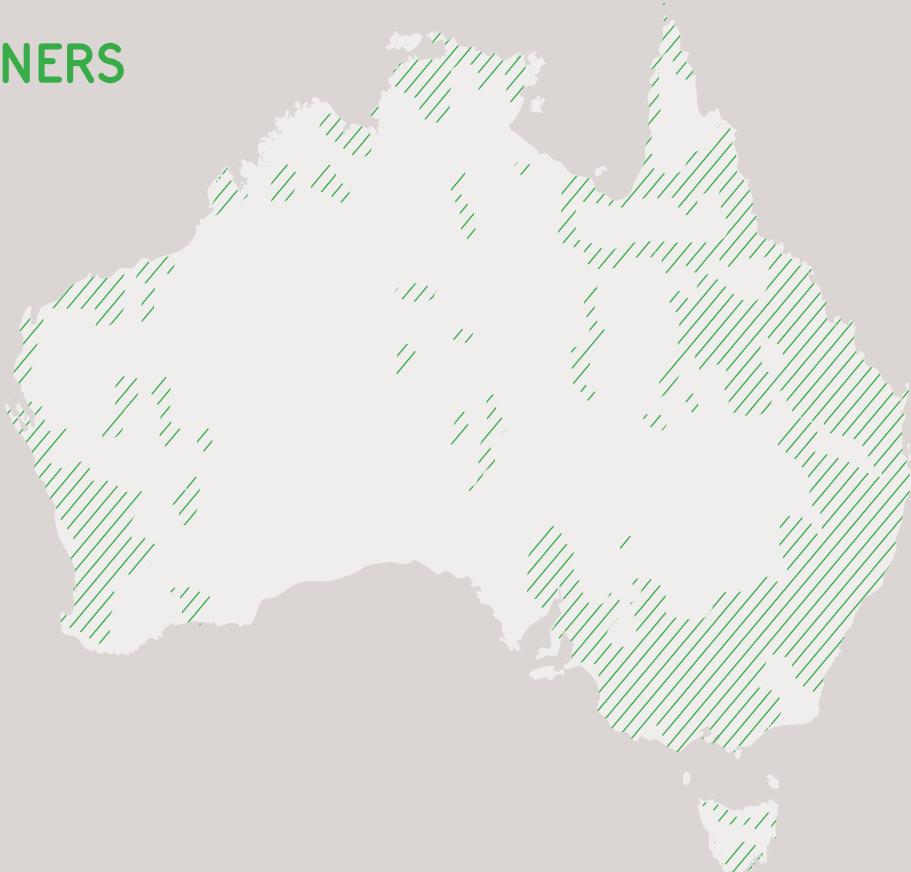
Stuart MacIntyre, Director of Optus Business Technology and Australian Mobile Telecommunications Association (AMTA) Chairman presenting MobileMuster cheque to Henrietta Ardlie, Head of Fundraising OzHarvest.

MobileMuster's schools program provides teachers and students with educational resources covering the life cycle of a mobile phone from the design stage through to the circular economy. We hope to educate the next generation of mobile phone users on product stewardship and the benefits of recycling.

The program delivers comprehensive education resources including 20 learning modules for preschool, primary and secondary teachers that are aligned to the national curriculum. We also partner with local councils, environment centres and Australia's leading education organisations, Planet Ark and Cool Australia, to expand the reach and use of our educational material.

Last year over 11,000 teachers accessed our learning modules through the MobileMuster and Cool Australia websites. We also co-developed content with Planet Ark for their Schools Recycle Right Challenge and conducted workshops at the Youth Eco Summit.

## COLLECTION PARTNERS



Without the efforts of our collection partners, MobileMuster wouldn't be able to provide a robust network and offer permanent collection sites covering major metropolitan, along with remote and regional communities throughout Australia.

The program hosts over 3,500 public drop off points across the country. Along with the public drop off network, MobileMuster has over 2000 organisations such as workplaces, universities and government agencies who promote mobile phone recycling and run their own internal collection drives for their staff and local community. Mobile phone users can also pick up a reply paid satchel from AusPost outlets and post back their mobiles and accessories for recycling for free.

This year the program increased collections resulting in 79.1 tonnes of mobile phones components being collected. Our achievements is a testament to the collaboration between the mobile industry together with our collection network and charity partners who not only collect mobiles and accessories but also support the program by promoting mobile phone recycling to their staff, customers and community.

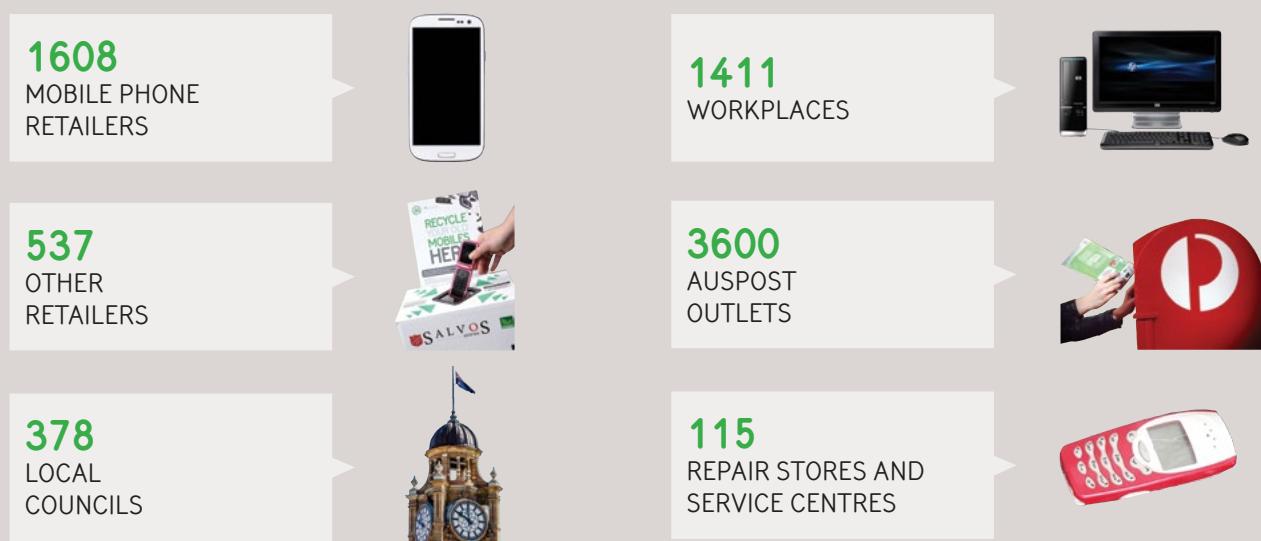
The mobile retail network made up of over 1,600 stores continue to be an integral part of our collection network with over 30% of our collections coming from this channel. Our mobile phone retailers and their staff are great advocates for recycling. A logical choice for consumers to take back their mobiles for recycling to the store where they purchase new products and services.



**OPTUS**



## OUR COLLECTION NETWORK



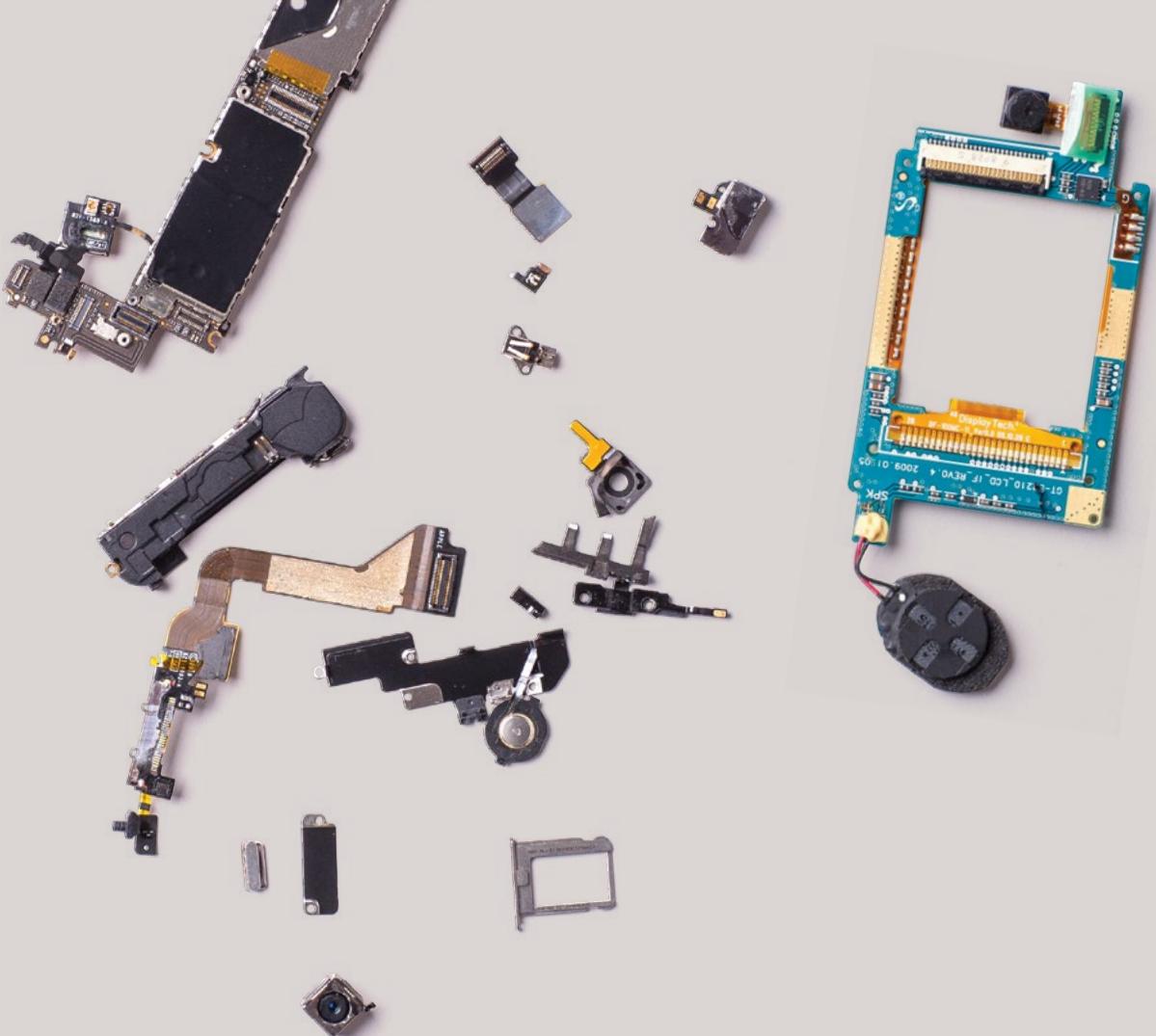
Councils are an important part of our public drop off collection network and help promote and educate their residents on the importance of recycling. This year we partnered with 378 councils throughout the country. Local councils increased their collections by 25% on the previous year and their efforts were rewarded in Canberra at the Australian Local Government Association Conference in June. The Federal Minister for the Environment and Energy, the Hon Josh Frydenberg showed his support for the program as he congratulated MobileMuster's top performing council collectors at Parliament House.

**"Electronic waste is one of the fastest growing waste issues in Australia and it's great to see MobileMuster bringing industry and local government together to make it easy to recycle and deliver important environmental benefits to our communities"**

**Hon. Josh Frydenberg MP**  
Minister for the Environment and Energy



Spyro Kalos, Manager MobileMuster with the Hon. Josh Frydenberg MP, Minister for the Environment and Energy



## CHARITY PARTNERSHIPS

Over the last 10 years MobileMuster has worked with a number of charity partners and at the same time given almost \$1,000,000 to important causes. Our social cause campaigns aim to not only motivate the traditional recycler but also encourage the non-recyclers to recycle and help someone in need within the community. The non-recycler needs an added incentive that over-rides the environmental benefit. An incentive to charity can entice consumers from displaying a positive attitude to demonstrating the desired recycling behaviour.

Our traditional social cause campaigns deliver a simple mechanism of recycle a mobile phone and help someone in need, action equals outcome. Throughout the year MobileMuster continues to support the Salvos by giving \$2 for every kilo of mobiles and accessories collected in-store. The money raised helps the Salvation Army's Red Shield Appeal (Northern Region) and Salvos Store (Southern Region). The partnership is a great way for the Salvation Army to increase the range of goods they are able to recycle in their retail stores while also generating extra funds for their programs.

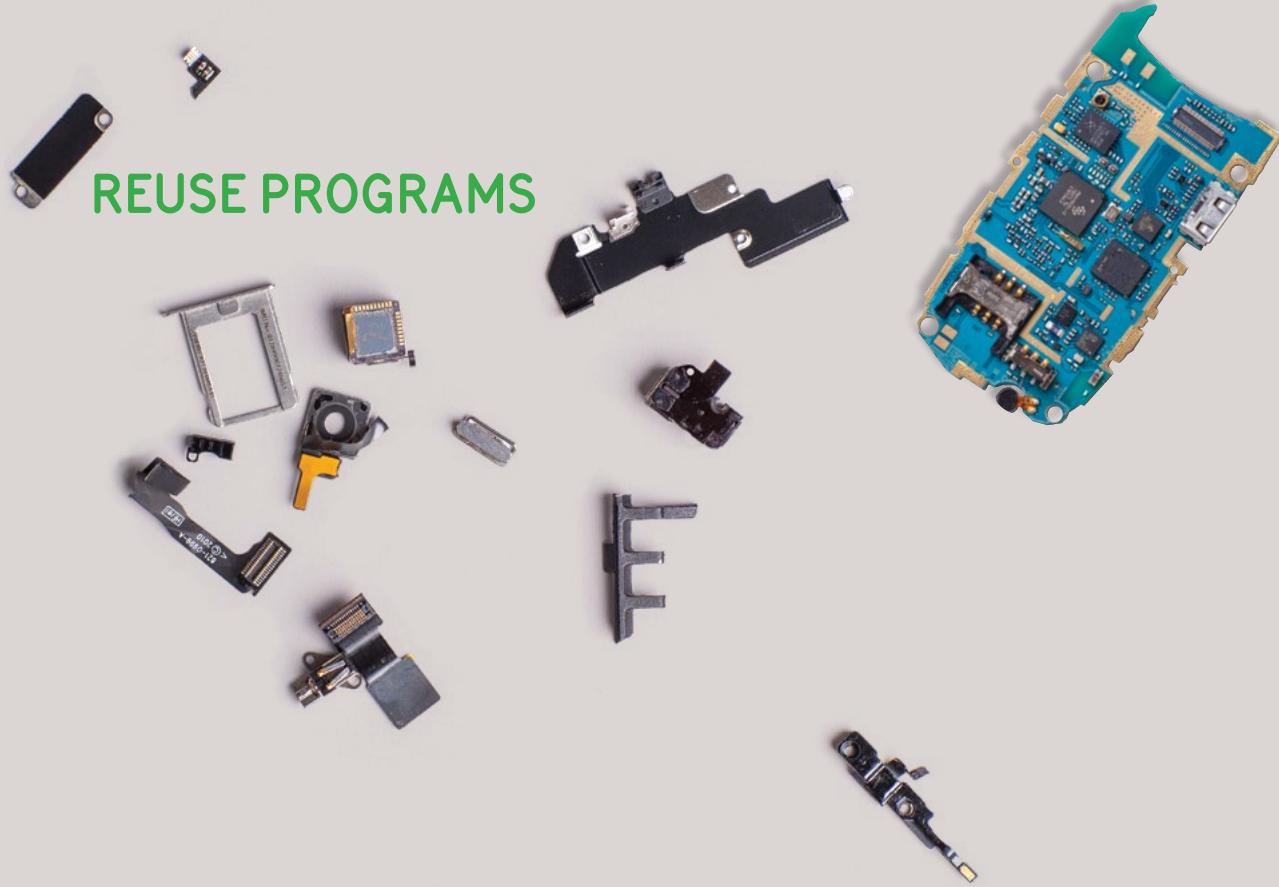




99% RESOURCE RECOVERY RATE



## REUSE PROGRAMS



Extending the life of products is an important principle of product stewardship and developing the circular economy. Research shows that consumers are holding on to their mobile phones for longer and more people are reusing their mobiles than ever before. We estimate that 1 in 10 Australians sell or trade-in their old mobiles and 1 in 6 Australians give their old mobiles to family or friends. It is predicted that these figures will rise as the reuse market matures in Australia.

Our members are playing an active role in extending the life of their products through repair and reuse programs. Manufacturers provide service centres and repair services to replace mobile phone parts so that consumers can continue to use their mobiles for longer. Some members, including the mobile phone carriers, provide leasing and trade-in programs where consumers can trade or return their mobile phone and receive a credit on their new product or service. These programs extend the life of mobiles and potentially provide better access to communication for more people.

We also partner with many of the commercial reuse programs in Australia as their recycling partner to ensure that any mobiles and accessories which have no resale value are recycled. Many of these programs collect old mobiles on behalf of charities and share the funds raised by reselling these devices. Last year MobileMuster collected a total of 980kg from reuse programs. MobileMuster also collects scrap from service centres and repair shops in the way of replaced parts and components from the servicing of mobiles.

### ABLE AUSTRALIA PARTNERSHIP

**For the second year in a row MobileMuster partnered with one of Australia's leading not-for-profit organisations, Able Australia, who provide services and support for people living with deafblindness. During September MobileMuster asked mobile phone users to support Able Australia by giving us their unwanted smartphones for reuse.**

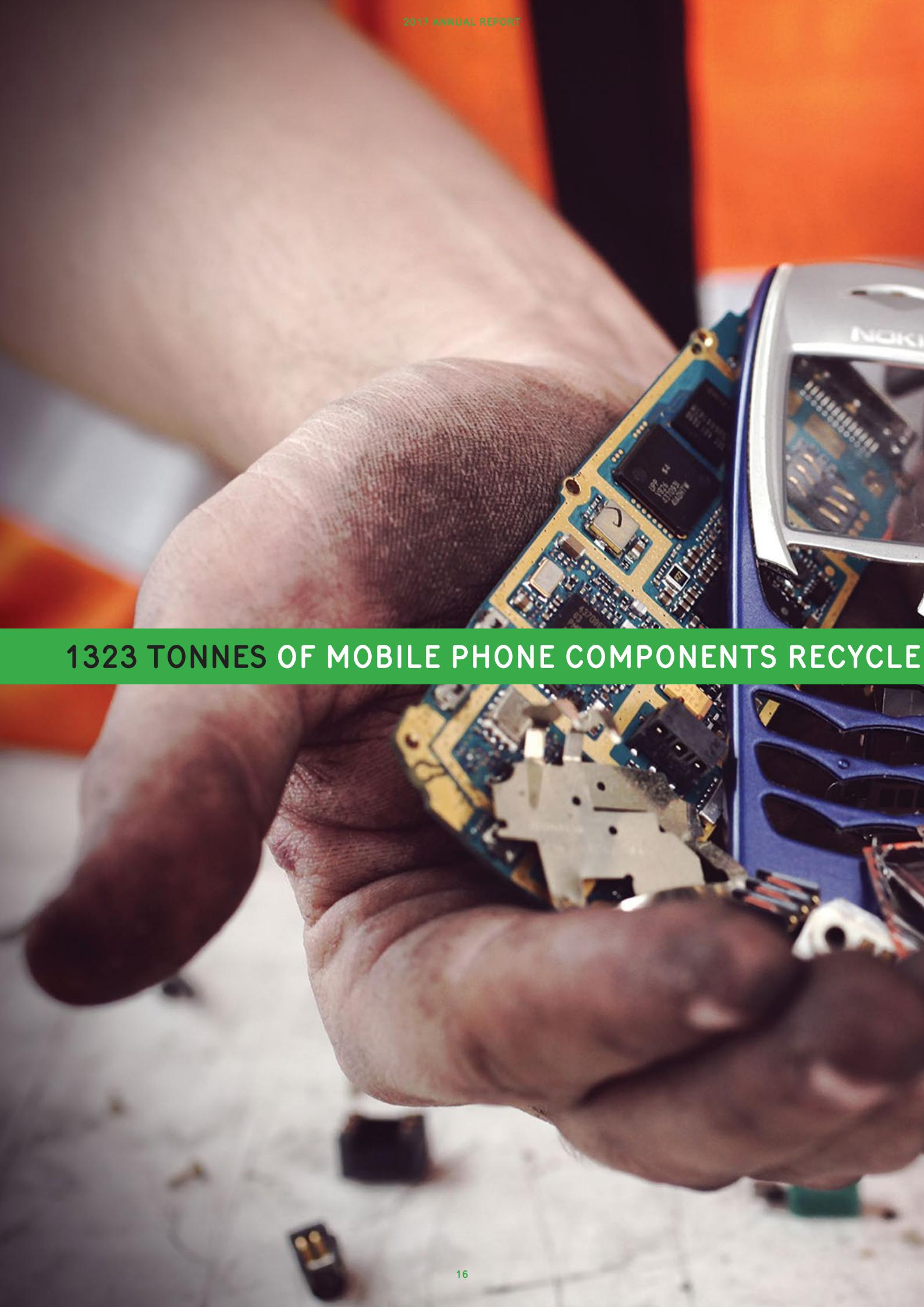
**The program collected, tested and data wiped the smartphones so they could be used by Able Australia to educate people with deafblindness on how to use speech recognition and Braille readers through mobile technology.**

**The smartphone technology provided to Able Australia plays a vital link that can transform a socially isolated person with deafblindness into an active member of their local community. Something most of us take for granted.**



## WHAT AUSTRALIANS DO WITH THEIR UNUSED MOBILES





1323 TONNES OF MOBILE PHONE COMPONENTS RECYCLED

A close-up photograph of a person's hands holding a disassembled mobile phone. The phone is held horizontally, showing its internal components like the screen, circuit board, and keypad. The keypad is white with black lettering. A green rectangular overlay is positioned in the upper left corner of the image, containing the text "D SINCE 1998".

D SINCE 1998

# RECYCLING PROCESS

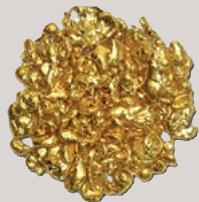
## WHAT WE RECOVER



MobileMuster's recycling partner TES, who are a global leader in electronic waste recycling, maximise our recovery rates and ensure all the mobile phone components we collect are properly processed in an environmentally responsible manner to the highest standards. TES maintains international best practice certifications; R2 (Responsible Recycling), ISO 9001, 14001, 27001, 28000, OHSAS 18001, and TAPA. They provide the program with transparency and accountability of the downstream recycling process and data to better understand and evaluate the program.

This year the program achieved a recycling rate of 99% and a diversion from landfill rate of 99%. Our strong results demonstrate the positive effect the program has on reducing the impact of mobile phones on the environment, maximising the materials that can be recovered and promoting the development of a circular economy.

## WHAT THEY BREAK DOWN TO



GOLD



COPPER



SILVER



PLATINUM



COBALT



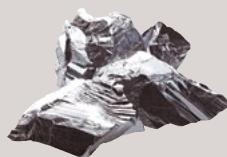
LEAD



ALUMINIUM



PALLADIUM



CADMUM



LITHIUM



STEEL



RECYCLED  
PACKAGING



RECYCLED PLASTIC



RECYCLED GLASS



NICKEL

## ENVIROSTREAM BATTERY RECYCLING

This year TES started using Envirostream to process the mobile phone batteries within Australia. Through their facilities in Melbourne the batteries are granulated and sorted into materials for recycling. The process recovers copper, aluminium, cobalt, nickel, lithium and plastics which can be reused. Envirostream have developed an onshore solution, reducing the need to transport the batteries internationally for processing, utilising skills and innovation within Australia plus at the same time creating local employment opportunities.

ACCESSORIES



PLASTICS



## OUR DISMANTLING PROCESS

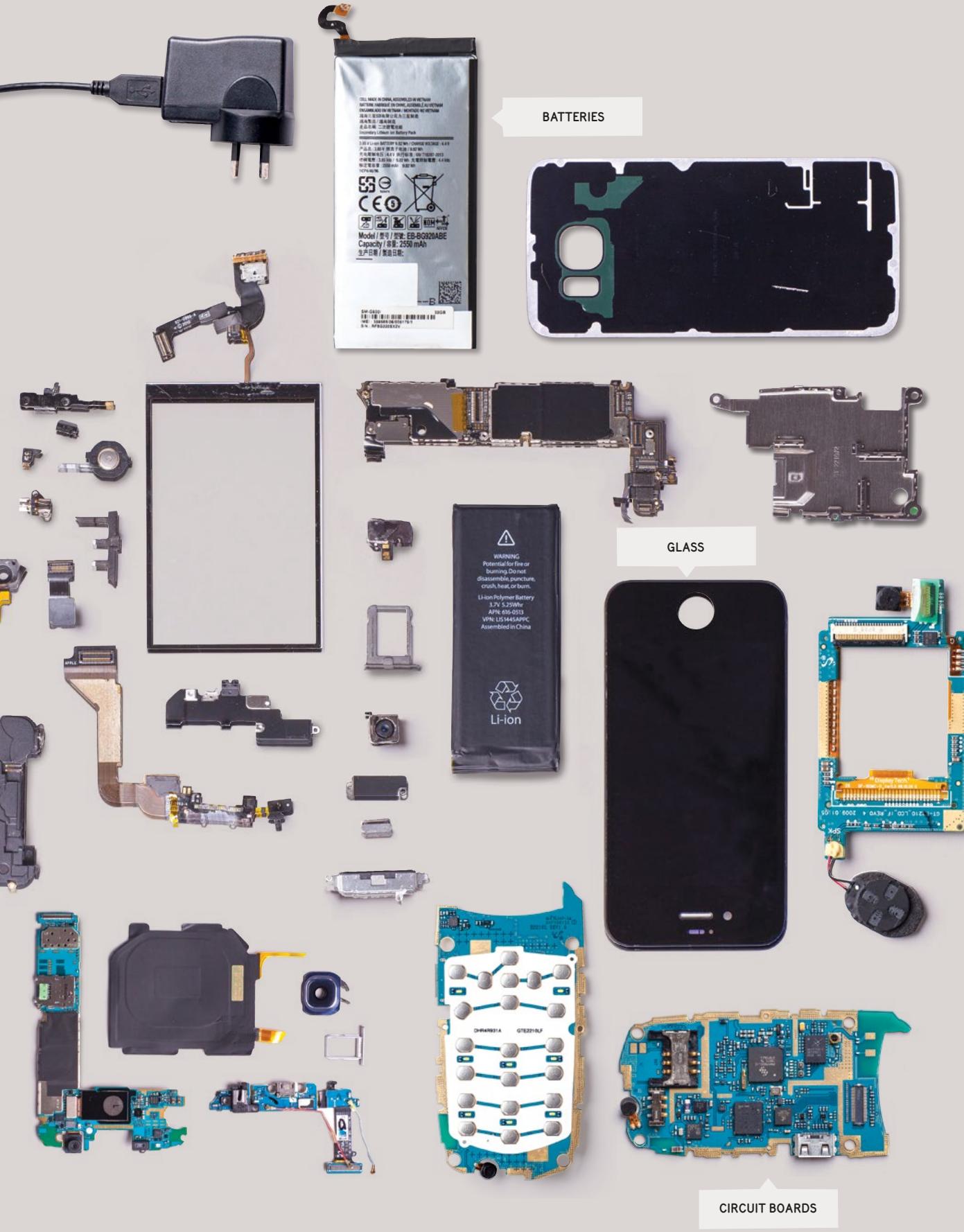
### WHAT HAPPENS WHEN YOU RECYCLE?

When you drop off your old mobile phones for recycling they are collected and transported to TES's recycling facilities in Melbourne, Sydney or Brisbane. Here the mobile phones are disassembled into their components. None of the phones are resold and any data left on devices is destroyed through this process. Once disassembled the parts are sorted into the following: batteries, printed circuit boards, handsets, accessories, plastics, metals and packaging. The components are then further processed by TES and downstream recyclers, using state of the art equipment to maximise resource recovery.

The materials recovered in the recycling process are returned to the supply chain and used in the manufacturing of new products. For example the recycled plastic from the mobile phone cases are used to make shipping pallets and the lithium extracted from mobile phone batteries can be reused to make new batteries. The recycling process has a positive impact on the life cycle of a mobile phone. It reduces the need to extract raw materials from the earth which saves energy, conserves scarce natural resources and protects our environment.

METALS





307 TONNES OF BATTERIES RECYCLED SINCE 1998

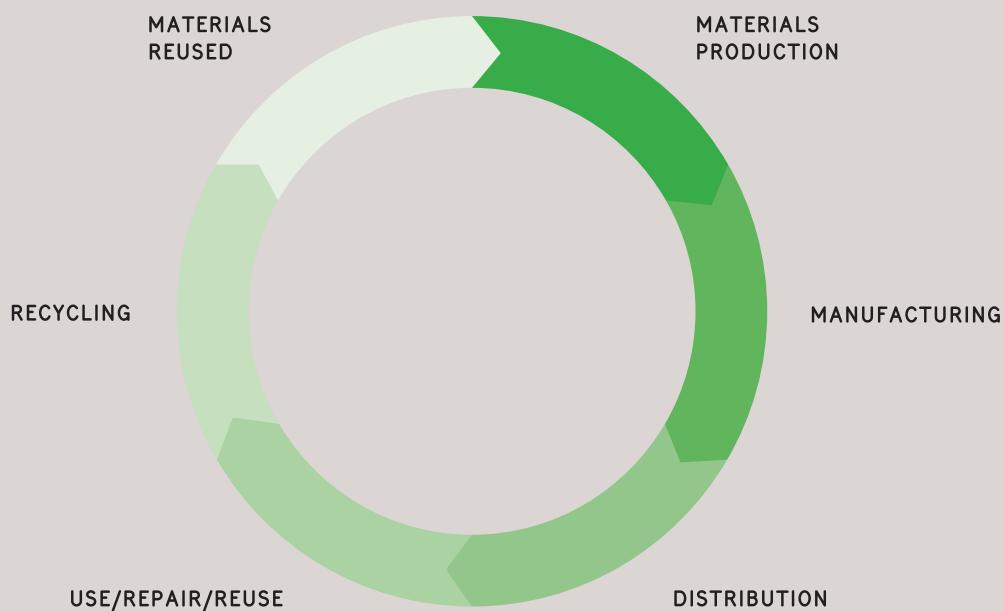


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# THE FUTURE

## THE LIFE CYCLE OF A MOBILE



**Product stewardship is not just about recycling. The mobile phone industry is constantly working to reduce the environmental impacts of their products throughout their life cycle. From improving product design and the materials used in manufacturing to extending the life of the product through reuse, recycling and recovering resources.**

In the coming years the introduction of 5G will deliver significant growth in the number of connected devices. There will be wearables, household gadgets and industrial sensors which are mobile enabled to take advantage of the new technology. MobileMuster will look for opportunities and work with industry to take a proactive approach to product stewardship responsibilities as new products enter the market. For now we have expanded our scope of products to include smart watches.

The concept of the circular economy is gaining momentum in the mobile phone industry and MobileMuster believes it is important to apply it to our own thinking and communications. Programs like MobileMuster play a vital part in the development of the circular economy as they turn waste into resources and make the connection between consumption of goods and the production of new products. Extending the life of the mobile phone through repair, reuse and reselling is also a part of the process.



## Contact Us

MobileMuster is the not for profit Government accredited recycling program of the mobile phone industry.

### An initiative of the Australian Mobile Telecommunications Association (AMTA)

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