



# 2015-2016 MOBILEMUSTER ANNUAL REPORT



# FOREWORD



## CEO – AMTA: Chris Althaus

The Australian Mobile Telecommunications Association (AMTA) manages MobileMuster on behalf of its members. It is a unique industry wide not-for-profit program that is supported by a strong partnership between the mobile phone manufacturers and mobile network operators.

MobileMuster is accredited as a voluntary industry product stewardship program under the Australian Government's Product Stewardship Act 2011. AMTA manages the accreditation of the program with the Federal Department of the Environment and Energy.

More broadly, AMTA is committed to engaging with all levels of government, industry and the community on the shared responsibility to tackle the challenges of collecting and recycling mobile phones to avoid disposal via landfill.

AMTA and members of the mobile telecommunications industry are constantly working to reduce the environmental impacts of their products, across their entire lifecycles. This includes:

- Improving how efficiently resources are used in the production of mobile phones.
- Ensuring that mobiles collected are recycled to the highest environmental standards.
- Minimising waste in the manufacture, production, use and disposal of mobiles and accessories.
- Reducing risk to human health through better management of product manufacturing and disposal.

The industry has invested over \$40 million into the MobileMuster program which has recycled over 10 million handsets and batteries since the program started. Our members and partners work together to ensure that the promotion, collection, transportation and recycling of old mobiles is done with transparency and accountability and we are very proud to acknowledge that MobileMuster has some of the highest rates of recovery of any comparable recycling program.

AMTA looks forward to the further development of MobileMuster as we continue to work with all of our stakeholders continuing this important contribution to the betterment of the environment.



## MANAGER | RECYCLING: Spyro Kalos

As the MobileMuster program moves into its seventeenth year, the mobile telecommunications industry is continuously proving to be leaders in product stewardship; providing a free recycling service for consumers as well as retailers, workplaces, government organisations and local councils within Australia. That way everyone can play their part in keeping old mobiles and accessories out of landfill.

The telecommunications industry is committed to continuing to raise awareness on how to recycle and provide easy and convenient access to recycling. With over 3,100 public drop off points across the country along with a free post back option, it is now easier than ever for mobile users to recycle their old mobiles and accessories.

This year MobileMuster has seen an increase in our overall collections year on year; a result driven by effective marketing and communication campaigns, support from committed members who help spread the message to their customers, and motivated channels who want to play their role in product stewardship.

However, with an estimated 25.5 million old mobiles still sitting in drawers and cupboards around the home and in the workplace, there is still work to do in raising general awareness of mobile phone recycling and MobileMuster.

I'd like to take this opportunity to say thank you to the ongoing commitment by our industry members and also to our collection partners for their continued support.

# ABOUT MOBILEMUSTER

MobileMuster, was established voluntarily in 1998 by AMTA and its members. It aims to keep old mobiles out of landfill and ensure that all components, including batteries, chargers and accessories, are recycled to the highest environmental standards.

In the world of product stewardship MobileMuster is a unique program. Unlike many schemes across the globe, it is not governed by regulation or enforced by mandatory laws. It is a voluntary initiative of manufacturers and carriers who have chosen to work together. MobileMuster has been accredited by the Federal Government under the Product Stewardship Act 2011 since May 2014. It was the first voluntary product stewardship scheme to achieve this accreditation.



**Product stewardship; those involved in producing, selling, using and disposing of products have a shared responsibility to ensure that those products or materials are managed in a way that reduces their impact, throughout their life cycle, on the environment and on human health and safety.<sup>1</sup>**

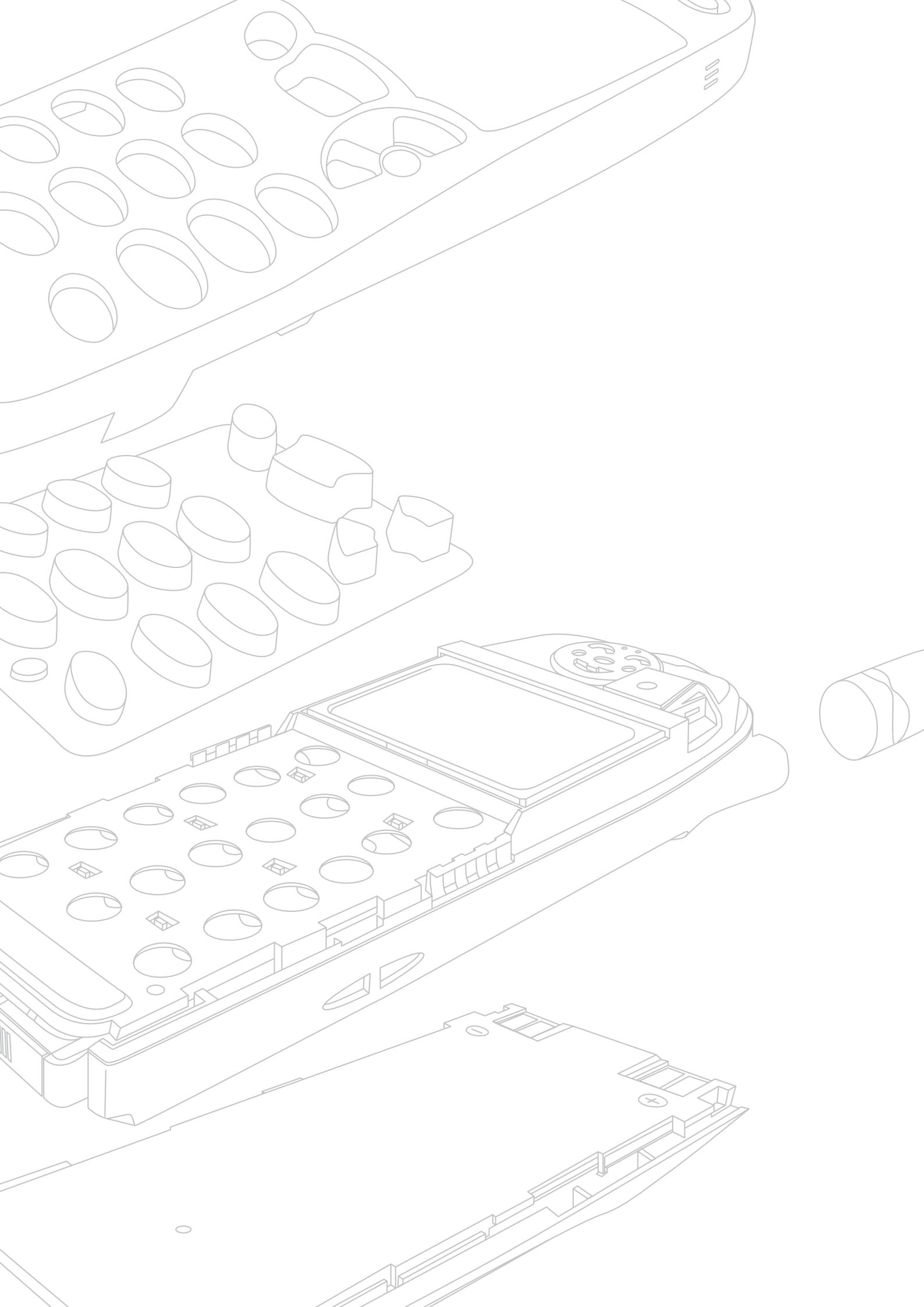
MobileMuster is funded voluntarily by its members and managed by the AMTA. The contributing members are Microsoft, Samsung, Motorola, HTC, Huawei, ZTE, Alcatel, OPPO, Telstra, Optus, Vodafone, and Virgin Mobile.



MobileMuster aims to keep old mobiles out of landfill, increase awareness of recycling, optimise resource recovery and provide a free recycling service to Australian consumers, retailers and workplaces. Everything collected by the program is recycled to the highest environmental standards, nothing is resold and any data left on devices is destroyed during the recycling process.

The program is committed to improving the visibility, accessibility, transparency and sustainability of mobile phone recycling in Australia.

<sup>1</sup> <http://www.environment.gov.au/protection/national-waste-policy/product-stewardship>



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# AWARENESS

MobileMuster is committed to educating consumers on what to responsibly do with old and unwanted mobile phones and accessories when they are no longer useful. The program does this in a multiple of ways across various channels utilising advertising, incentives, campaigns and social media.



Spyro Kalos Manager, Recycling (AMTA), Leigh Cleave, Communications and Fundraising Director (The Salvation Army) and Matthew Lobb, Chairman (AMTA).

## CAMPAIGNS

Every year the program promotes one major campaign nationally to raise awareness and drive collections. In FY15–16, MobileMuster partnered with the Salvation Army; consumers were encouraged to recycle their old mobiles and accessories around the country and by doing so they would be helping the environment by keeping old mobiles out of landfill, at the same time helping those in need in their local community through the Salvation Army's Christmas Appeal.

For every kilogram of mobile phones and accessories collected by the program in December and January, MobileMuster gave \$2 per kilo to the Salvation Army's Christmas Appeal. During the campaign 13,869 kilograms of mobile phone components were collected, allowing us to raise \$27,737 for the Salvation Army. The campaign was promoted through outdoor, radio, and digital advertising platforms.

In the lead up to World Environment Day, MobileMuster partnered with renowned declutter expert, Peter Walsh, to highlight our research that there are 25.5 million old handsets cluttering up our homes, including 4 million that are broken and no longer working. For the first time ever, the number of old mobiles in storage has surpassed the Australian population. Australians are early adopters of technology, but they also love to hold onto these old devices after they have been replaced, when in fact they should be recycled. These dormant devices contain resources that can be recovered and put back into the supply chain.

As part of the campaign, MobileMuster put out the call for Australia's biggest mobile phone hoarder. Mobile phone users were asked to come clean and recycle their old devices and accessories to simplify, destress and declutter their lives. Over 150 entries were submitted and the winner received a dream decluttering package which included an in home personal organisational session with Peter Walsh. The campaign was supported by digital advertising and PR.

## SCHOOLS PROGRAM

MobileMuster has a schools program that works with teachers and students to provide educational resources focusing on the benefits and need to recycle mobile phones. It goes beyond what to do with mobiles when they reach their end-of-life and educates students on the whole life cycle of mobile phones from the design stage through to the circular economy. There are a number of resources available to students and teachers, including 20 learning modules for preschool, primary and secondary teachers that are aligned to the national curriculum, along with downloadable games and student workshops.

As part of the schools program this year, MobileMuster partnered with the Jane Goodall Institute of Australia (JGIA) and Brightstar to raise awareness about mobile phone recycling and raise money for JGIA to continue their work to conserve chimp and ape habitats.



## SOCIAL MEDIA

Australians are obtaining their news on mobile phones more than ever, and in most cases through social media platforms like Facebook, Twitter, Instagram, YouTube and LinkedIn. MobileMuster aims to increase engagement with our social media community and use these platforms as an effective way of raising awareness through targeted advertising campaigns.

Last year MobileMuster reached over 1,110,000 people throughout social media platforms and engaged with over 22,322 people within our community. Our members have also helped to promote MobileMuster throughout their social media networks.

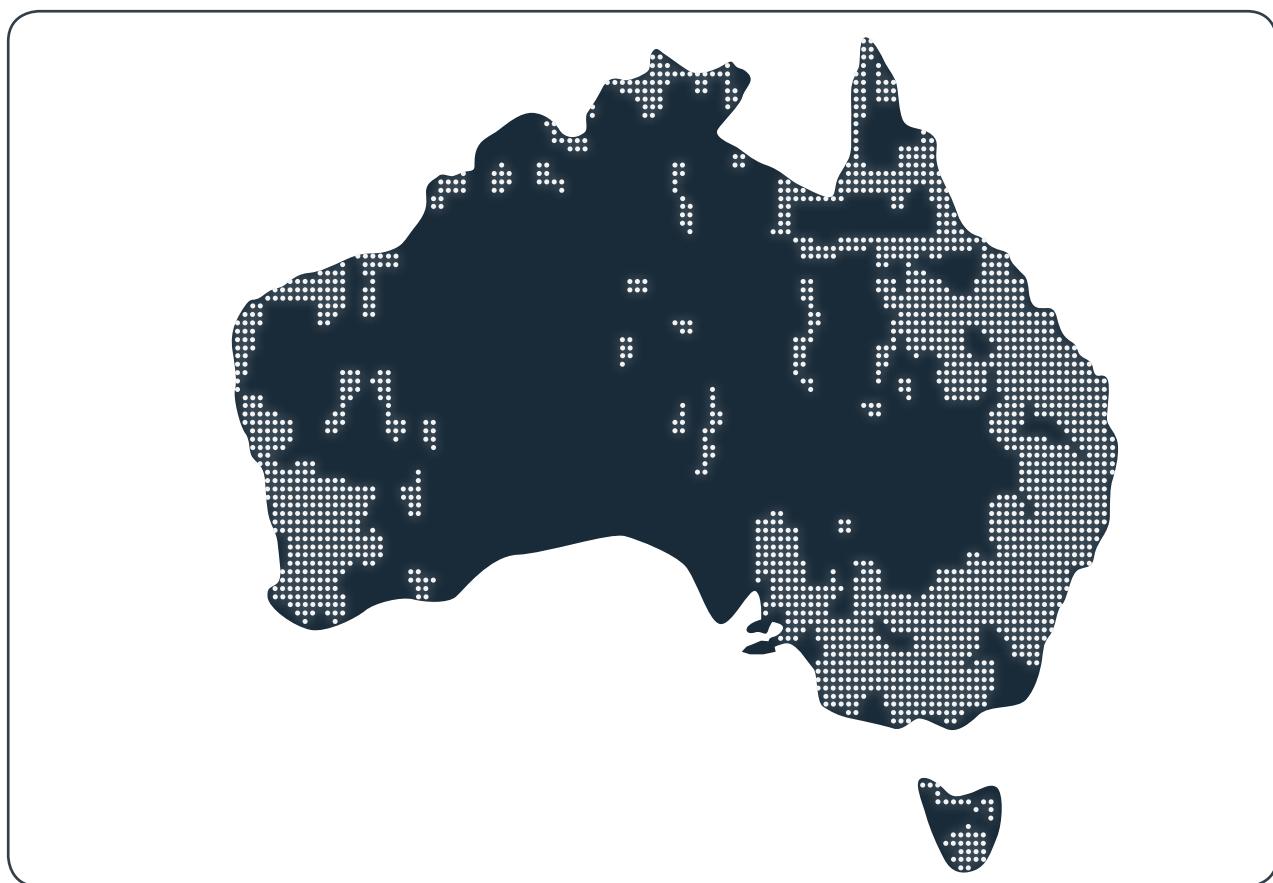


Peter Walsh, organisational expert.



# COLLECTION NETWORK

The mobile phone industry provides a solid network allowing consumers to manage their old mobiles and accessories when they are no longer wanted or needed. Not only does MobileMuster provide a free post back option for consumers, the program is also free to participating retailers, local councils, government agencies and workplaces. All mobile phones users play an important part in keeping old mobiles out of landfill.



Distribution of MobileMuster's public drop off points.

MobileMuster's extensive collection network provides consumers with an easy and convenient way of recycling their old and unwanted mobiles and accessories. There are over 3,100 public drop off points all around Australia, from the Tiwi Islands in the Northern Territory to the Huon Valley in southern Tasmania.

## RETAIL NETWORK

Our retail network is comprised of over 2,000 stores that are drop off collection points to the general public. It includes all major mobile phone retailers such as Telstra, Optus, Vodafone, Virgin Mobile and Samsung stores, along with Officeworks, Battery World and the Salvos.



## LOCAL COUNCILS

MobileMuster partners with 360 Councils around Australia who offer public collection points and also raise awareness among their residents on how to dispose of their old devices responsibly. Over the last 11 years, local council partners have collected almost 30 tonnes of mobile phones, including approximately 158,000 handsets and 210,000 batteries.

This year in June, MobileMuster recognised our top local council collectors at an awards ceremony as part of the National General Assembly in Canberra presented by Hon. Paul Fletcher.

## WORKPLACES

Along with our public drop off network, MobileMuster has over 2,100 workplaces across the country that promote mobile phone recycling to their staff and run internal collection drives. This year MobileMuster also introduced additional tracking and data wiping services for workplaces to assist organisations to meet internal procedures when recycling company owned mobile phone assets.

## FREE POST BACK OPTION

The free post back service through Australia Post provides consumers with a convenient way to recycle their old mobiles and accessories. The MobileMuster reply paid satchel can be picked up from most AusPost outlets around the country, or comes included in the box when purchasing new phones from Samsung, HTC, Microsoft, ZTE, Alcatel and Motorola.

## OUR COLLECTION NETWORK



# PROGRAM PERFORMANCE

The performance of MobileMuster is measured against nine key indicators that look at changes in consumer behaviour, collections and recycling rates, diversion from landfill and industry involvement. Each of these is assured independently by PriceWaterhouseCoopers (see appendix 4). The table below highlights the program's performance against its key performance indicators as part of our accreditation under the Product Stewardship Act 2011. Targets were revised to reflect the drop in handset shipment numbers in FY15–16.

KEY PERFORMANCE INDICATORS	2015 16	2015 16
	Revised Target	Actual
<strong>COLLECTIONS</strong>		
Reported Shipments (units – millions)	5.00	4.98
Estimated Available Phones (weight – tonnes)	122.83	126.17
Mobile Phone Collections (weight – tonnes)	72.5	76.1
Annual Collection Rate, Available Phones (%)	59%	60.3%
Annual Collection Rate, Net imports (%)	10%	9%
Estimated Number Handsets & Batteries (units – millions)	1.00	1.03
<strong>RECYCLING</strong>		
Diversion from Landfill	97%	98.7%
Recycling Rate (estimated material recovered)	>90%	99.3%
<strong>CONSUMER BEHAVIOUR</strong>		
Personal Storage Rate (% users with 2 or more handsets at home)	37%	42%
Disposal to Landfill Rate	2%	3%
Awareness of Mobile Phone Recycling	>80%	76%
<strong>INDUSTRY PARTICIPATION</strong>		
Manufacturers	56%	43.27%
Mobile Network Carriers	91%	90%

## COLLECTIONS

Collections increased from 74 tonne in 2014–15 to 76 tonne 2015–16. The annual collection rate of available phones increased from 54.7% to 60.3% due to a decline of mobile phone shipment numbers within the year. MobileMuster is committed to ensuring all components collected are recycled ethically, securely, safely and to the highest environmental standards. We work with our recycling partner TES-AMM to ensure transparency of all downstream processes and accessing data at the point where the material turns from waste to a resource. Our resource recovery rate and diversion from landfill has remained high at 99.3% and 98.7% respectively.

IN 2015-2016  
**76 TONNES**  
OF MOBILE PHONE COMPONENTS COLLECTED  
INCLUDING AN ESTIMATED 1,030,000 HANDSETS AND BATTERIES



**31,699** KG  
HANDSETS



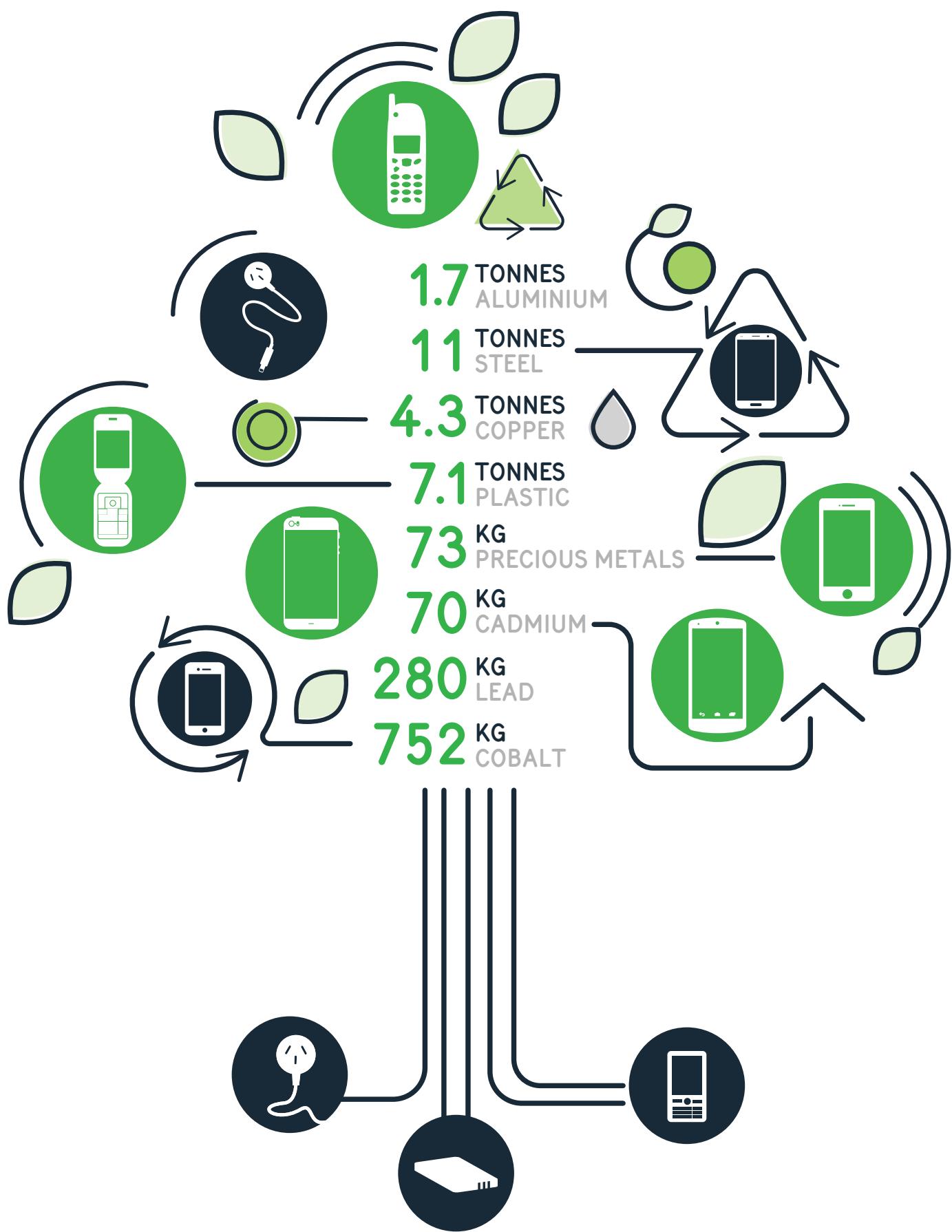
**16,525** KG  
BATTERIES



**27,849** KG  
ACCESSORIES

The split between handset, batteries and accessories collected has changed over the years with the total weight of accessories declining and the total weight of handsets increasing. In 2015–16 the program’s collections consisted of 42% handset, 37% accessories and 22% batteries.

## MATERIALS WE RECOVERED



# CONSUMER BEHAVIOUR

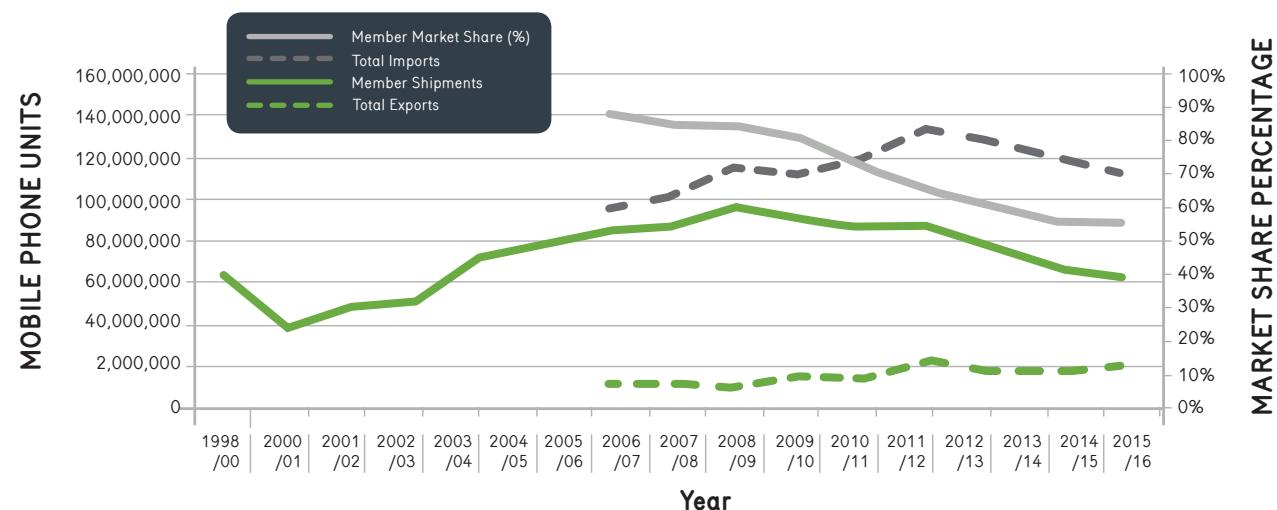
Our desire to keep old mobile phones remains strong and the proportion of people with two or more phones has increased. This has resulted in the estimated number of mobile phones stored at home and workplace to increase from 22.5 million to 25.5 million<sup>2</sup>. This includes approximately four million mobiles that are broken and no longer even working. Whilst very few people (around 3%) threw their previous mobile into the bin, overcoming Australia's hoarding behaviour to keep their old mobile 'just in case' is a major barrier to recycling.

Awareness of mobile phone recycling declined slightly from 78% in FY14|15 to 76% in FY15|16, however awareness of the MobileMuster program increased year on year.

CONSUMER BEHAVIOUR	2012/13	2013 14	2014/15	2015/16
Personal Storage Rate (% users with 2 or more handsets at home)	37%	37%	36%	42%
Disposal to Landfill Rate	3%	3%	2%	3%
Awareness of Mobile Phone Recycling	83%	80%	78%	76%
Awareness of MobileMuster	13%	15%	17%	19%

# INDUSTRY PARTICIPATION

Participating manufacturers include Microsoft, Samsung, Motorola, HTC, Huawei, ZTE, Alcatel and OPPO. Together these manufacturers represent 43.3% of the mobile handset market in Australia.



Australia's network carriers Telstra, Optus, Vodafone Hutchinson Australia and Virgin Mobile continue to be actively involved in the program. During the 2016 financial year, 90% of mobile network service providers participated in the program.

<sup>2</sup> Independent online survey conducted in January and February 2016 by IPSOS on behalf of AMTA of 1006 mobile phone users, aged 16 years or older randomly selected from all States across Australia.

# TOTAL COLLECTION FIGURES | NOV 98 – JUN 16

Since the program started in late 1998, MobileMuster has diverted more than 1,244 tonnes of mobile phones and their accessories from landfill, including an estimated 10.86 million handsets and batteries. Specifically, over the past decade annual collections have grown from 42 tonne to 76 tonne in 2015|16, peaking at 122 tonne in 2008|09. The annual collection rate of available phones has grown from 14% to 60.3% in 2015|16 and the annual net import collection rate has increased from 4.2% to 9.0%, peaking at 9.9% in 2011|12.

Over time the mix of components by weight has changed from a predominance of batteries and accessories to handsets and accessories. This in part is due to manufacturers replacing two NiCad batteries with one Lithium Ion batteries that are lighter and last longer and weigh a quarter the weight of a Nickel Cadmium battery. In the past five years there has also been a gradual decline in the volume of accessories received. This can be attributed to both harmonising of chargers across models to a USB plug, and the decreasing size and weight of chargers.

The average weight of handsets collected has changed over time as a result of the increasing size and weight of newer handsets.

## TOTAL NUMBER OF BATTERIES & HANDSETS COLLECTED FROM NOV 1998 TO JUNE 2016 (ESTIMATED)

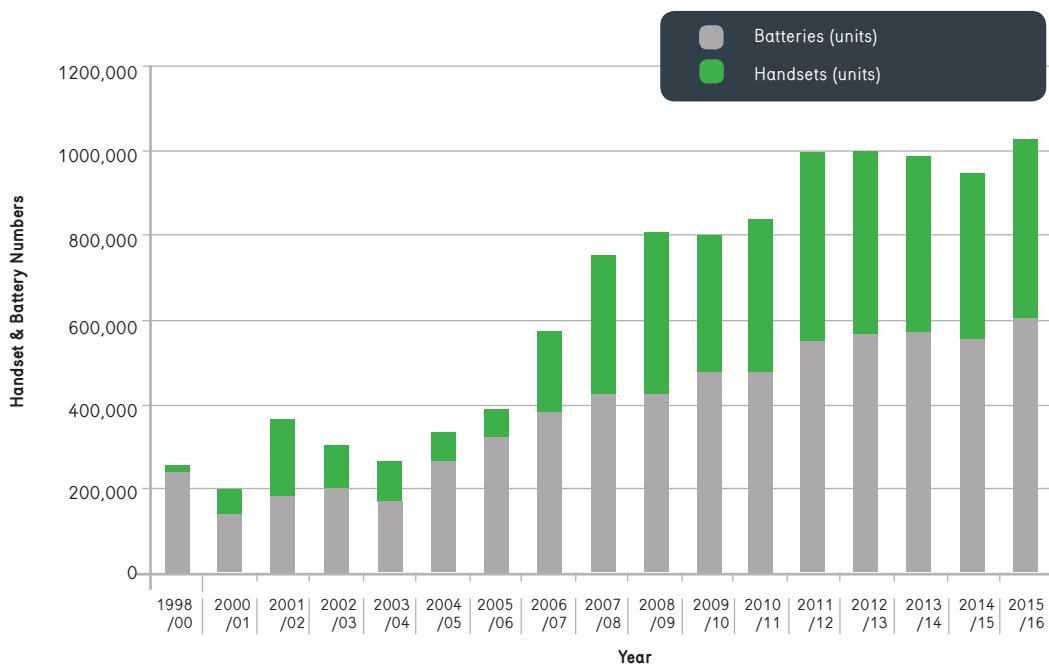


Figure 1 Total number of handsets and batteries collected

**1,244 TONNE**

OF MOBILE PHONE COMPONENTS COLLECTED

INCLUDING



**348** TONNES

HANDSETS



**290** TONNES

BATTERIES



**606** TONNES

ACCESSORIES & PARTS

INCLUDING AN ESTIMATED 10.86 MILLION HANDSETS AND BATTERIES

## ENVIRONMENTAL BENEFITS

**32,750** - - - - -  
LESS TONNES  
METAL ORE MINED

**2,799** - - - - -  
CARS OFF ROAD

**60,645** - - - - -  
TREES PLANTED

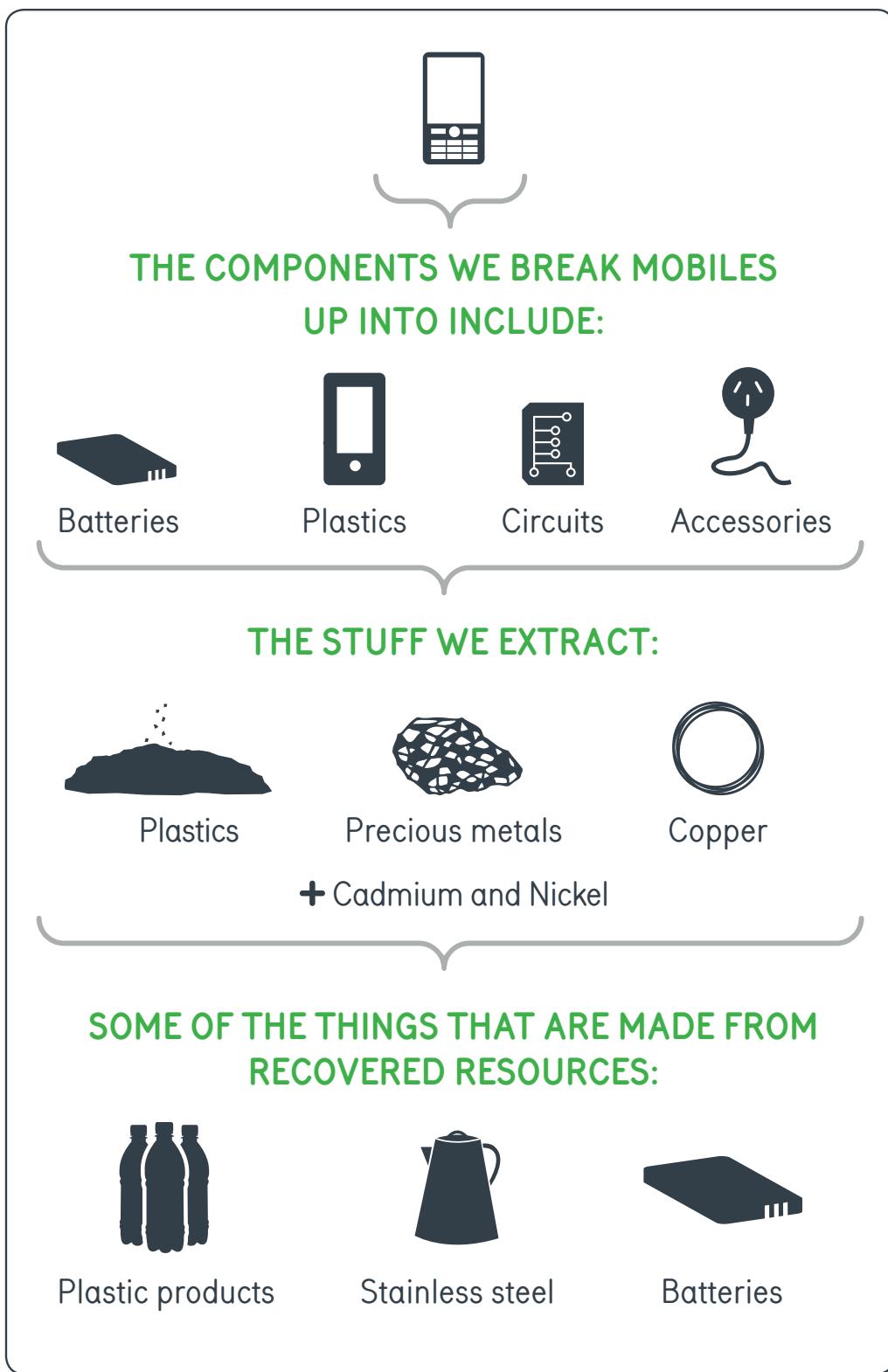
**9,984** - - - - -  
TONNES OF GREENHOUSE  
EMISSIONS AVOIDED



# RECYCLING PROCESS

All mobiles, accessories and batteries collected by MobileMuster are sent to our recycler TES-AMM's facilities locally in Sydney, Melbourne and Brisbane where they are dismantled into their core components before being further processed for resource recovery. Over 95% of the material in mobile phones can be recovered and returned to the supply chain to be used in the production of new products.

MobileMuster's recycling partner TES-AMM are a leader in recycling and resource recovery when it comes to e-waste and are certified ISO14001, OHSAS18001, ISO901, R2 and AS5377.



# OTHER RECYCLING PROGRAMS AND INITIATIVES

Part of the MobileMuster promise is that all mobiles collected are recycled for resource recovery, rather refurbished for reuse. That's because the program was established by the industry in 1998 to provide an end of life solution to old, broken and unwanted mobiles and accessories, keeping them out of landfill. However, we do recognise that the resale of mobiles is a legitimate commercial activity which can extend the life of mobile phones and increase access to technology for more people.

## RE-USE PROGRAMS

MobileMuster partners 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 in a safe, secure and ethical way. Many of these programs collect old mobiles on behalf of charities and share the funds raised by reselling these devices. In FY15|16 MobileMuster collected a total of 1528kg from reuse programs.

## OTHER RECYCLERS

Aside from MobileMuster's recycling partner, TES-AMM, there are a number of other recyclers outside of our program that do receive old mobiles and accessories through their own customers. A number of these programs share their collections. A further 4,726kg was collected and recycled by these recyclers.



Storage King E-Waste Recycling Box and Telstra eCycle Box

## BROADER E-WASTE RECYCLING

Electronic Waste known as e-waste is growing three times faster than any other waste in Australia. MobileMuster understands the role that collaboration can play to raise awareness and increase collections. There are a number of joint initiatives that the program participates in to provide a single stop integrated solution for mobile phones and e-waste in general.

**Storage King E-waste Box:** The e-waste recycling box is a joint initiative between MobileMuster, Storage King and EcoActiv, allows households, businesses and schools to recycle old electronics including mobile phones easily and responsibly for free. The boxes can be picked up from Storage King stores around the country, then once filled dropped off at the store again. Everything collected is recycled for resource recovery.

**Telstra eCycle:** The Telstra eCycle Service was developed by Telstra to provide a responsible, safe and environmental way for small and medium enterprise businesses to dispose of any unwanted or redundant technology. Driven by Telstra Business Centres, the eCycle Service provided a convenient and free pick-up and recycling program to ensure that old electronic devices don't end up in landfill or clutter up the workplace. To deliver the program Telstra partnered with Infoactiv who are a e-waste recycling and stewardship business, for logistics and program design. Plus MobileMuster, for the recycling of all mobiles, accessories and batteries collected through the e-waste box.

**Council Integrated Recycling Stations:** Councils provide a convenient drop off location to their residents. Many have developed integrated recycling stations to use in their library networks or administration centres. Along with mobiles, residents can also drop off household items like batteries and light globes.

# APPENDIXES

## APPENDIX 1 - TARGETS FOR 2015-16 TO 2018-19 (REVISED)

KEY PERFORMANCE INDICATORS	2015 16	2015 16	2016 17	2017 18	2018 19
	Est'd	Revised	Est'd	Est'd	Est'd
<b>COLLECTIONS</b>					
Reported Shipments (units - millions)	7.05	5.00	5.25	5.42	5.50
Estimated Available Phones (weight - tonnes)	203.75	122.83	130.47	134.70	136.69
Mobile Phone Collections (weight - tonnes)	105.9	72.5	75.0	78.1	79.3
Annual Collection Rate, Available Phones (%)	52.0%	59.0%	57.5%	58.0%	58.0%
Annual Collection Rate, Net imports (%)	10.4%	10%	8.6%	8.7%	8.7%
Estimated Number Handsets & Batteries (units - millions)	1.21	1.00	1.01	1.06	1.07
<b>RECYCLING</b>					
Diversion from Landfill	97%	97%	97%	97%	97%
Recycling Rate (estimated material recovered)	>90%	>90%	>90%	>90%	>90%
<b>CONSUMER BEHAVIOUR</b>					
Personal Storage Rate (% users with 2 or more handsets at home)	37%	37%	37%	37%	37%
Disposal to Landfill Rate	2%	2%	2%	2%	2%
Awareness of Mobile Phone Recycling	>80%	>80%	>80%	>80%	>80%
<b>INDUSTRY PARTICIPATION</b>					
Manufacturers	56%	56%	58%	60%	65%
Mobile Network Carriers	91%	91%	91%	91%	91%

Note: Targets for FY16|17, FY17|18 and FY18|19 were revised to reflect the decline in shipment numbers into Australia

## APPENDIX 2 – PROGRAM PERFORMANCE OVER PAST FIVE YEARS

KEY PERFORMANCE INDICATORS	2015 16	2014 15	2013 14	2012 13	2011 12
	Actual	Actual	Actual	Actual	Actual (excludes display phones)
<strong>COLLECTIONS</strong>					
Mobile Phone Collections (tonnes)	76.1	74	80	87	117 (97)
Annual Collection Rate, Discarded Phones	60.3%	54.7%	45.6%	53.1%	51.4% (42.6%)
Annual Collection Rate, Net imports	9%	9.3%	9.1%	9%	10.3% (8.5%)
Estimated Number Handsets & Batteries	1,030,000	947,365	1,003,562	996,874	847,240
Reported Shipments	4.98M	5.56M	6.20M	6.67M	7.80M
Exports (adjusted)	0.64M	0.70M	1.05M	1.00M	1.12M
Net Imports (units)	4.35M	4.87M	5.15M	5.67M	6.67M
Net Imports (estimated tonnes)	841	794	876	964	1,134
<strong>RECYCLING</strong>					
Diversion from Landfill	98.7%	98.7%	98%	99%	97%
Recycling Rate (estimated material recovered)	99.3%	98.4%	94%	96%	>75%
<strong>CONSUMER BEHAVIOUR</strong>					
Personal Storage Rate (% users with 2 or more handsets at home)	42%	36%	37%	37%	40%
Disposal to Landfill Rate	3%	2%	3%	3%	2%
Awareness of Mobile Phone Recycling	76%	78%	80%	83%	82%
<strong>INDUSTRY PARTICIPATION</strong>					
Manufacturers	43.2%	45%	55%	56%	61%
Mobile Network Carriers	90%	91%	85%	91%	97%

# APPENDICES

## APPENDIX 3 – KEY PERFORMANCE INDICATOR DEFINITIONS

### AVERAGE UNIT WEIGHT

The average weight of a mobile phone unit (i.e. a new handset, battery and charger imported into Australia) is currently estimated to be 193.5 grams based on advice from manufacturers regarding their shipment numbers and average weights. The average weight has increased from 163grams to 193.5grams based on more representative data from manufacturers.

### ANNUAL COLLECTIONS

The annual collection data is the weight of mobile phone components collected by MobileMuster measured in kilograms and then converted to tonnes. Mobile phone components include handsets, batteries, chargers, accessories and plastic coverings covered by the MobileMuster program.

### ANNUAL COLLECTION RATE (AVAILABLE MOBILES)

$$ACRDM = \frac{\text{Annual Collection (tonnes)}}{\text{Discarded Phones (tonnes)}} \times 100$$

**Annual Collection** = Weight of mobile phone components (i.e. handsets, batteries, chargers, accessories and associated plastics) received by recycler measured in kg and converted to tonnes

**Available Phones** = Participating Manufacturer Reported Imports – Estimated Participating Manufacturer Exports – (Kept + Given Away)

**Participating Manufacturer Reported Imports** = measured in units<sup>3</sup> (i.e. mobile phone unit = handset, battery, charger and accessory) and converted to weight using the average unit weight.

**Estimated Participating Manufacturer Exports** = measured in units and converted to weight using the average unit weight. The figure has been calculated to reflect the proportion of participating manufacturer reported imports that have been exported and is estimated as the All Industry Exports<sup>4</sup> divided by All Industry Imports<sup>5</sup> multiplied by Participating Manufacturer Reported Imports.

**Kept** = Estimate based on market research<sup>6</sup> on the proportion of people who keep their previous phones for further use including “kept it just in case”, “not working but kept it anyway” and “still using it” multiplied by Net Imports. Measured as units and converted to weight using the average unit weight.

**Given Away** = Estimated based on market research<sup>7</sup> on the proportion of people who pass on their previous phones for further use including “gave it to someone else”, “traded it”, “sold it” and “donated to charity” multiplied by Net Imports. Measured as units and converted to weight using the average unit weight.

**Net Imports** = Participating Manufacturer Reported Imports – Estimated Participating Manufacturer Exports.

3 Data sourced from GfK and participating manufacturers.

4 All Industry Exports (i.e. includes non-participating manufacturers exports) sourced from Australian Customs Data that has been reported by Australian Bureau of Statistics and provided to AMTA by GfK

5 All Industry Imports (i.e. includes non-participating manufacturers imports) sourced from Australian Customs Data that has been reported by Australian Bureau of Statistics and provided to AMTA by GfK.

6 & 7 Independent online survey conducted in January/February 2016 by IPSOS on behalf of AMTA of 1006 mobile phone users, aged 16 years or older randomly selected from all States across Australia.

The following assumptions have been made in calculating the amount of available (previously described as discarded) mobiles and may be subject to review in future years as more data becomes available:

- The majority of mobile phones being discarded are manufactured by participating manufacturers and that the number of non-participating manufacturers is minimal / insignificant.
- The amount of unsold mobile phones held in stock is relatively low and remains constant throughout the year.
- The IPSOS market research results used in the calculations are an accurate and consistent representation of what the general population do with their mobile phones when no longer in use.

## ANNUAL COLLECTION RATE (NET IMPORTS)

$$\text{ACRNI} = \frac{\text{Annual Collection (tonnes)}}{\text{Net Imports (tonnes)}} \times 100$$

**Annual Collection** = Weight of mobile phone components (i.e. handsets, batteries, chargers, accessories and associated plastics) received by recycler measured in kg and converted to tonnes.

**Net Imports** = Participating Manufacturer Reported Imports – Estimated Participating Manufacturer Exports.

**Participating Manufacturer Reported Imports** = measured in units<sup>8</sup> (i.e. mobile phone unit = handset, battery, charger and accessory) and converted to weight using the average unit weight.

**Estimated Participating Manufacturer Exports** = measured in units and converted to weight using the average unit weight. The figure has been calculated to reflect the proportion of participating manufacturer shipments that have been exported and is calculated by using the following formula All Industry Exports<sup>9</sup> / All Industry Imports<sup>10</sup> x by Participating Manufacturer Reported Imports.

The following assumptions have been made in calculating the annual collection rate based on net imports and may be subject to review in future years as more data becomes available:

- There is no material difference between the quantity of mobile phones being exported that are manufactured by participating manufacturers versus the estimated participating manufacturers exports which has been generated by applying the ratio of Participating Manufacturer Imports and All Industry Imports to All Industry Exports;
- There is no material difference between the average unit weight of imported mobile phones versus the estimated average unit weight used that is based on manufacturer data.

<sup>8</sup> Data sourced from GfK and participating manufacturers

<sup>9</sup> All Industry Exports (i.e. includes non-participating manufacturers exports) sourced from Australian Customs Data that has been reported by Australian Bureau of Statistics and provided to AMTA by GfK.

<sup>10</sup> All Industry Imports (i.e. includes non-participating manufacturers imports) sourced from Australian Customs Data that has been reported by Australian Bureau of Statistics and provided to AMTA by GfK.

## DIVERSION FROM LANDFILL OF MOBILEMUSTER COLLECTIONS

This indicator measures the proportion of mobile phone components (i.e. handsets, batteries, plastics and accessories) collected by MobileMuster that, once sorted and dismantled by the primary recycler, are sent either to third party specialist recyclers for further processing or manufacturers for re-use, versus being sent to landfill.

This indicator does not measure the proportion of mobile phone components recycled/materials recovered versus any residues sent to landfill by third party specialist recyclers' and manufacturers.

The indicator expressed as a percentage and calculated using the formula below:

$$\text{DFLR} = \frac{\text{Total weight of mobile phone components collected by MobileMuster and sent to third party specialist recyclers or manufacturers (kg)}}{\text{Annual collections (kg)}}$$

## RECOVERY RATE

(as defined in the Australian Standard AS/NZS 5377:2013 – Appendix D3)

The percentage of the total of all output fractions, classified as sent for recycling and other material recovery or other recovery in proportion to the total of the input amount of non-treated mobile phone components.

$$\text{Recycling rate} = \frac{\text{Total of all output fractions (kg)}}{\text{Input amount of non-treated mobile phone components (kg)}} \times 100$$

## STORAGE RATE OF MOBILE PHONES AT HOME AND WORK

Derived from annual market research<sup>11</sup> that measures the percentage of mobile phone users having two or more mobiles in storage.

## DISPOSAL TO LANDFILL RATE

This is currently measured through market research<sup>12</sup> that measures the percentage of mobile phone users that dispose of their mobile phones to landfill.

## AWARENESS RATE OF MOBILE PHONE RECYCLING

This is currently measured through market research<sup>13</sup> that measures the percentage of mobile phone users that are aware of mobile phone recycling.

<sup>11</sup> Independent online survey conducted in January/Feb 2016 by IPSOS on behalf of AMTA of 1006 mobile phone users, aged 16 years or older randomly selected from all States across Australia.

<sup>12</sup> Independent online survey conducted in January/Feb 2016 by IPSOS on behalf of AMTA of 1006 mobile phone users, aged 16 years or older randomly selected from all States across Australia.

<sup>13</sup> Independent online survey conducted in January/Feb 2016 by IPSOS on behalf of AMTA of 1006 mobile phone users, aged 16 years or older randomly selected from all States across Australia.

## INDUSTRY PARTICIPATION RATE

Industry participation is defined as the proportion of shipments of mobile phone handset manufacturers and revenue of mobile network carriers operating in the Australian mobile telecommunications market that contribute financially to the industry's mobile phone industry recycling program. This is measured in two parts:

<b>Manufacturers<sup>14</sup></b> =	Participating Manufacturer Shipments _____
&	Industry Imports
<b>Mobile Network Carriers<sup>15</sup></b> =	Total Market Share (by revenue) of each Mobile Network Carrier contributing financially to MobileMuster

## PARTICIPATING MEMBERS AS AT 30 JUNE 2015

**Handset Manufacturers** – Alcatel , HTC, Huawei, Motorola, Microsoft, Samsung Electronics Australia, ZTE

**Battery importers** – Force Technology

**Mobile Network Carriers** – Telstra, Optus, Vodafone Hutchison Australia

**Mobile Virtual Network Operators** – Virgin Mobile

Source – Access Economics 2008 Australian Mobile Telecommunications Industry, Economic Significance and contribution

14 Data sourced from GfK.

15 Data quoted is sourced from IBISWorld Industry Report J5802 Wireless Telecommunications Carriers in Australia, August 2016.

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## APPENDIX 4 – ARRANGEMENT OPERATIONS AND PERFORMANCE

(In accordance with Product Stewardship (Voluntary Arrangements) Instrument 2012)

### CLASS OF PRODUCTS COVERED UNDER ARRANGEMENT

Mobile phones, batteries, chargers and accessories.

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### PERFORMANCE OF THE ARRANGEMENT

#### Logo use

- Print and online collateral updated as required and where relevant to include product stewardship logo as per conditions of accreditation;
- MobileMuster Brand guidelines incorporating use of Product Stewardship Logo updated and circulated to members.

*Monitoring and evaluating the performance of the arrangement in achieving the outcomes of the arrangement. If an outcome was not achieved, an explanation was presented and measures proposed to rectify the failure to achieve the desired outcome.*

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### CONSUMER BEHAVIOUR

- For results see page 13 and Appendix 2.
- Consumer awareness of mobile phone recycling has dropped slightly from the previous financial year.
- The industry is committed to increasing consumer awareness of MobileMuster and therefore will move our major above the line campaign to January/February in 2017, from December/January, to allow our members to better promote the program and campaign out to their customers during the post-Christmas period.
- To help increase awareness to greater than 80%, AMTA's advertising strategy will continue to focus on outdoor, radio and an increase in social media advertising allowing for greater reach and frequency of the MobileMuster brand and general recycling message.
- AMTA in 2016/17 has selected a new charity partner for the January/February above the line campaign which will help drive collections and awareness of MobileMuster and mobile phone recycling. A new charity partner allows for a new creative look and messaging to the campaign and along with PR support will drive greater media coverage.
- MobileMuster will continue their year-round incentive with the Salvation Army where AMTA provides \$2 to the Salvation Army for every kilo collected by the Salvos Stores across Australia.
- To monitor the impact of the advertising strategy AMTA will conduct its Annual Market Research in late February 2017.

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### COLLECTION OF MOBILE PHONES

- For results see page 10 and Appendix 2.
- Collections by weight were higher than our revised target. This was due to strong collections across our collection network, plus greater participation and collections from reuse partners and service centres.
- Total collections have increased year on year despite more people holding onto 2 or more handsets at home.
- The calculation of the collection rate is influenced substantially by the average unit weight of product imported and the percentage of people who keep or give away their phone for reuse. The average unit weight of product imported has increased to 193.5grams due to auditing of our manufacturer's handset weights, including shipment numbers and average unit weights.

## RECYCLING

- For results refer to page 12 and Appendix 2.
- Recovery rate was up year on year, mainly because no batteries were processed for recycling in 2015|16 by our recycler. Batteries will be processed for recycling in 2016|17.

## RECOVERY RATES OF MOBILE PHONE COMPONENTS – 2015–16

	Net weight (kg)	Landfill (kg)	Recovered (kg)	Recycling Rate (%)
<b>COMPONENTS</b>				
Accessories – Electronic	20,688	214	20,474	99.0%
Accessories – Metals	936	0	936	100.0%
Accessories – Plastics	1,003	0	1,003	100.0%
Handsets	27,319	153	27,166	99.4%
<b>TOTAL</b>	<b>49,946</b>	<b>367</b>	<b>49,579</b>	<b>99.3%</b>
Accessories – Non recyclable	963	963	0	0.0%

## INDUSTRY PARTICIPATION

- See page 13 and Appendix 2.
- There was no change to the participating manufacturers.
- There was no change in the number of Carriers participating in the program.

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## **ACTIVITIES UNDERTAKEN IN RELATION TO HOW THE ARRANGEMENT DEALS ADEQUATELY WITH:**

### **Governance and organisational matters including procedures for decision making and dispute resolution**

- 2016–17 work plan, budget and program targets signed off by Recycling Committee and AMTA Board in June 2016.
- Recycling committee met every second/quarter month to review / monitor financial and program performance.
- Program Performance audited externally by PwC.
- Financial statements audited externally by RSM Bird Cameron.

### **Financial arrangements and funding to achieve the outcomes of the arrangement**

- No change in membership or funding levy for 2015–16, i.e. manufacturers contribute \$0.30 per handset shipped into Australia and carriers \$0.12c per handset shipped into Australia.
- Manufacturers report shipments monthly and are invoiced monthly.
- Carriers are invoiced quarterly in arrears.
- No changes in recycling rebates for selected components.

### **Assessing the adequacy of the environmental, health and safety policies and practices in relation to the activities undertaken under the arrangement**

- Logistics and recycler report monthly on collections and compliance with EHS policies and procedures.
- No Incidences reported .

### **Managing risk in relation to the operation of the arrangement**

- Risk management plan reviewed every 6 months, next review January 2017.

### **Financial statements setting out the revenue and expenditure of the arrangement**

- 2015–16 AMTA financial report and audited statements provided to Department of Environment.



## Independent limited assurance report

### What we found

Based on the work described below, nothing has come to our attention that causes us to believe that the Subject Matter for the year ended 30 June 2016 has not been prepared, in all material respects, in accordance with the Assurance Criteria.

To the Board of Directors of the Australian Mobile Telecommunications Association,

### What we did

The Australian Mobile Telecommunications Association (AMTA) engaged PricewaterhouseCoopers Consulting (Australia) Pty Ltd (**PricewaterhouseCoopers**) to perform a limited assurance engagement on the preparation of selected performance data relating to its MobileMuster mobile phone recycling program, in accordance with the its reporting criteria for the year ended 30 June 2016.

### Selected subject matter

The subject matter comprises the following indicators for the 12 months ended 30 June 2016 as contained in 'Appendix 2 – Program performance' within the MobileMuster Annual Report:

- Mobile phone collection (tonnes)
- Annual collection rate: Available phones (%)
- Annual collection rate: Net imports (%)
- Diversion from landfill (%)
- Recycling rate (%)
- Personal storage rate (%)
- Disposal to landfill rate (%)
- Awareness of mobile phone recycling (%)
- Industry participation: Manufacturers (%)
- Industry participation: Mobile network carriers (%)

### Assurance Criteria

The criteria against which we have assessed the subject matter are contained within the "Definitions" included within the MobileMuster Annual Report.

### Independence and Quality Control

We have complied with relevant ethical requirements related to assurance engagements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Auditing Standard ASQC 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, Other Assurance Engagements and Related Services Engagements and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### Inherent limitations

Inherent limitations exist in all assurance engagements due to the selective testing of the information being examined. Therefore fraud, error or non-compliance may occur and not be detected.

Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating and sampling or estimating such data.

### Restriction on use

This report has been prepared in accordance with our engagement terms to assist AMTA in reporting its Recycling Program performance.

Our report is intended solely for the Directors of AMTA. We do not accept or assume responsibility for the consequences of any reliance on this report for any other purpose or to any other person or organisation.

### Responsibilities

#### PricewaterhouseCoopers

Our responsibility is to express a conclusion based on the work we performed.

#### AMTA

AMTA management is responsible for the preparation and presentation of the Subject Matter in accordance with the Assurance Criteria.

### What our work involved

We conducted our work in accordance with the Australian Standard on Assurance Engagements (ASAE) 3000 Assurance Engagements Other than Audits or Reviews of Historical Financial Information. This Standard requires that we comply with independence and ethical requirements and plan the engagement so that it will be performed effectively.

### Main procedures performed

Our procedures consisted primarily of:

- updating our understanding of data collection and reporting processes
- re-performing calculations to check arithmetic accuracy and consistency with the reporting criteria
- testing, on a selective basis, the preparation and collation of performance data prepared by AMTA and
- conducting a site visit to one of the contractor recycling facilities relied upon by AMTA.

We believe that the information we have obtained is sufficient and appropriate to provide a basis for our conclusion.

*John Tomac*

*PricewaterhouseCoopers*

John Tomac  
Partner  
18 October 2016

PricewaterhouseCoopers  
Sydney

Liability limited by a scheme approved under Professional Standards Legislation

### Limited assurance

This engagement is aimed at obtaining limited assurance for our conclusions. As a limited assurance engagement is restricted primarily to enquiries and analytical procedures and the work is substantially less detailed than that undertaken for a reasonable assurance engagement, the level of assurance is lower than would be obtained in a reasonable assurance engagement.

Professional standards require us to use negative wording in the conclusion of a limited assurance report.



# CONTACT US

MobileMuster is the official 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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