



# MOBILEMUSTER'S 2014-15 ANNUAL REPORT

MOBILE RECYCLING AND REUSE IN AUSTRALIA

Microsoft

SAMSUNG  
TURN ON TOMORROW

MOTOROLA

HTC

HUAWEI

ZTE 中兴

ALCATEL  
onetouch.

FORCE

T

OPTUS

vodafone

Virgin  
mobile



PRODUCT STEWARDSHIP  
Australian Government Accredited

Managed by the Australian Mobile Telecommunications Association



# ABOUT MOBILEMUSTER

The Mobile Phone Industry Recycling Program (MPIRP), known as MobileMuster, was established voluntarily in 1998 by the Australian Mobile Telecommunications Association (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. In May 2014, MobileMuster was accredited as the first voluntary product stewardship scheme under the Federal Government's *Product Stewardship Act 2011*.



Product stewardship means 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 the following organisations and managed by the AMTA.



MobileMuster aims to:

- Keep old mobiles out of landfill;
- Increase awareness of recycling;
- Optimise resource recovery; and
- Provide a free recycling service to consumers, retailers and workplaces.

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

**NOTHING RE-USSED OR RE-SOLD,  
EVERYTHING RECYCLED, ALL DATA DESTROYED**

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

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# WORKING TOGETHER

## PARTNERSHIPS ARE A KEY ELEMENT OF MOBILEMUSTER'S ACTIVITIES

From an educational perspective, MobileMuster has worked closely with Planet Ark and Cool Australia to expand our online educational resources, Musterkids, for students and teachers. This includes incorporating them into Planet Ark's National Recycling Week's Recycle Right Schools Challenge and Cool Australia's Enviroweek activities.



With the objective to make recycling more appealing to primary school children, MobileMuster, in partnership with Planet Ark, released its first educational online game and mobile app *Recycle Rescue*. The app enables students to see how many mobile phones and printer cartridges they can rescue from landfill and how they can contribute to environmental conservation by recovering plastics and metals to make new products, like pens and rulers.



In an effort to make recycling even more convenient for consumers, MobileMuster has been working closely with its suppliers Infoactiv, the City of Sydney and storage specialists Storage King to provide two new one-stop collection services; the E-waste recycling box and multi-item collection units in libraries, as well as offering workplaces 'Go E-waste Free' workshops.



Engaging the community on the importance of mobile phone recycling has always been a priority for MobileMuster. In October and November 2014, we re-created the largest e-waste artwork made from mobile phones. We showcased this at the Sustainable Living Tasmania Festival in Hobart, and in Sydney to celebrate Planet Ark's National Recycling Week. We also created a mosaic of the Sydney Opera House at the University of Technology, Sydney to celebrate World Environment Day in June 2015.



#### MobileMuster – proud sponsor



To help drive mobile phone collections over the peak retail period (Christmas/New Year), MobileMuster, in partnership with the Salvo Stores (southern territory) and The Salvation Army, ran the **Recycle Your Mobiles and Help the Salvos** campaign. For every kilogram (kg) of mobiles and accessories recycled at a MobileMuster collection point between 1 December 2014 and 31 January 2015, MobileMuster gave \$2 to the Salvation Army's Christmas Appeal. The campaign collected just over 13,400 kgs of mobiles and accessories, donating \$26,800 to help people in need.



With so many mobiles laying idle in homes, many of which still work, MobileMuster took on the challenge to find unwanted smartphones that could be redeployed by Able Australia to help deafblind people communicate more easily with friends and families. With some help from our recycler TES-AMM, which ensured all handsets were working and any data left on the handsets wiped, MobileMuster collected and re-distributed over 40 suitable phones that are being used by deafblind people in Victoria.



Spyro Kalos, AMTA and Scott Darkin, Able Australia

## RECOGNISING COUNCILS AND WORKPLACES

Along with our network of over 1,900 mobile phone retailers, councils and workplaces play an important role in promoting and collecting mobile phones for recycling. This year, we were pleased to have the Federal Minister for the Environment, the Hon. Greg Hunt MP present the 9th MobileMuster Local Government Awards at the Australian Local Government Association's National General Assembly in Canberra. Over the past 10 years, councils around Australia have collected more than 25 tonnes of mobiles and accessories for recycling.



MobileMuster also hosted the MobileMuster Workplace Recycling Awards in Melbourne at the Australian Waste and Recycling Expo in August 2015, to the top state and national collectors. In the 12 months to 30 June 2015, workplaces diverted over 4,940 kilograms of mobiles, batteries, chargers and accessories from landfill.



# ENVIRONMENTAL BENEFITS

As a result of our activities since the program started in late 1998, MobileMuster has reduced the need to mine 29,000 tonnes of precious metal ore. This generated environmental benefits that are equivalent to keeping 2,600 cars off the road, planting 57,000 trees, preventing 9,400 tonnes of CO<sub>2</sub> greenhouse gas emissions and diverting tonnes of potentially harmful substances from landfill.

REDUCED THE  
NEED TO MINE **29,000 TONNES**  
OF PRECIOUS METALS



WHICH HAS ENVIRONMENTAL BENEFITS  
EQUIVALENT TO:

PLANTING OVER  
**57,000**  
TREES



KEEPING  
**2,600 CARS**  
OFF THE ROAD



PREVENTING  
**9,400 TONNES**  
OF CO<sub>2</sub> GREENHOUSE  
GAS EMISSIONS



DIVERTING  
**TONNES**  
OF POTENTIALLY HARMFUL  
SUBSTANCES FROM LANDFILL



# AUSTRALIA'S MOBILE DECADE

Since 2005, AMTA has commissioned independent market research into mobile phone ownership, use and recycling. In October 2015, AMTA compiled the results of this decade of research into a report.



**'Australia's Mobile Decade: 10 Years of Consumer Insights into Mobile Use and Recycling 2005-2015'.** This report analysed changes and trends in mobile phone use and recycling behaviour over the past decade, and also assessed the impact of MobileMuster activities and the rapid evolution of mobile telecommunications on consumer behaviour in Australia.

The report found that there have been some significant shifts in recycling behaviour over the past 10 years, such as:

- More people are aware of mobile phone recycling, which is up from 46% to 78%
- More people are either recycling or selling their phones, with collections up from 42 tonnes to 74 tonnes per annum in 2014–15, peaking at 122 tonnes in 2008–09 and 6% of consumers selling or trading their phones
- Fewer people are disposing of their phones into landfill, down from 9% to 2%.

Consumer desire to keep old phones remains unchanged at 60%, even if handsets no longer work. As a result, the number of unused phones stored away in homes has grown from 12 million to over 22.5 million over the 10 years, which is nearly one phone for every person in Australia. With substantially more mobiles sitting dormant in homes instead of being reused or responsibly recycled, this represents a significant loss of resources; creating an unsustainable imbalance between the rate of consumption and the rate of reuse and recycling.

Technological advancements have had both a positive and negative impact on the sustainability of mobile phones. Designing for the environment means hazardous materials have been removed, using more recycled content and less materials. However, Australians love their new technology and with each new model released, the desire to upgrade is very strong.

**Financial incentives, awareness** and **access** continue to be the three main drivers that encourage people to recycle. Personal financial rewards are the primary motivator. Although MobileMuster has raised awareness and made mobile phone recycling widespread and accessible, altruistic incentives appear to be less of a motivator to recycle in recent years.



The research also suggests there are essentially four recycling personality types:



# THE FUTURE OF MOBILE PHONE STEWARDSHIP IN AUSTRALIA

The industry recognises there is a need to look more closely into how a consumer's desire to keep a phone as a back-up can be altered by:

- Improving the product's durability and upgradability
- Streamlining repair and replacement of damaged phones
- Making data management and security a simple, yet robust, process
- Offering innovative and attractive contracts that encourage the return of mobiles (i.e. 'one in one out', trade-in, leasing, product-service ownership initiatives).

The AMTA also recognises there is a need for greater engagement and coordination of activities and reporting by all players in the mobile phone life cycle, from manufacturers, network carriers, retailers and service centres/repairers, through to second-hand traders and recyclers.

It is committed to working closely with other players in the industry moving forward to create a more sustainable mobile telecommunications industry.

NON-PARTICIPATING MANUFACTURERS/ DISTRIBUTORS	NON-PARTICIPATING RETAILERS	SERVICE CENTRE/ REPAIRERS
e.g. Apple, Sony Mobile, LG, Blackberry, ALDI and Oppo to promote and offer recycling, as well as publicly reporting on collections and recycling processes	e.g. Coles, Woolworths, Harvey Normans, Kogan, eBay, and other mass retailers who sell mobiles – to include consumer messaging on recycling, as well as offering a free collection service or providing post back alternatives	to ensure that all mobiles and accessories that cannot be repaired are recycled, as well as encouraging customers to recycle
SECOND-HAND TRADERS	RECYCLERS	
e.g. Mazuma Mobile, Cash A Phone, PhoneCycle, eBay, GumTree, Cash Converters, Boomerang and Bounce to ensure product not sold is recycled responsibly and contribute to recycling schemes in markets where second-hand product is sold	e.g. MRI, PGM, Sims to ensure that all mobiles and accessories are recycled responsibly and report publicly on volumes processed and material recovery rates	

# COLLECTION NETWORK

Consumer access to recycling remains extensive and convenient, with more than 3,500 public drop-off points Australia-wide, plus the option of free postage using either our pre-paid recycling satchels available with new phones or from Australia Post outlets, or by downloading a mailing label from [mobilemuster.com.au](http://mobilemuster.com.au).

There are also 3,000 MobileMuster units hosted by businesses, government agencies, schools, universities, service centres, manufacturers, distributors and carriers for their staff and students to recycle.



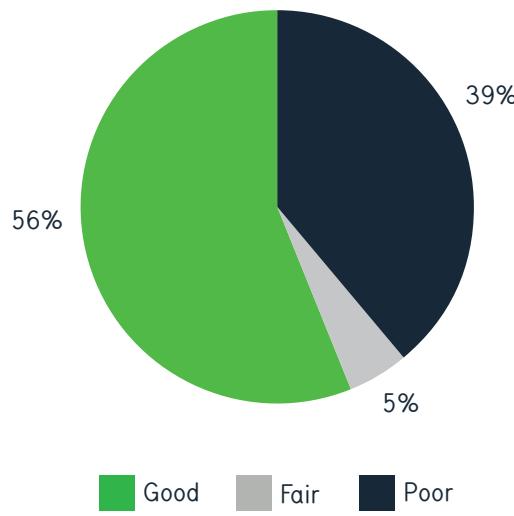
## MOBILE PHONE RETAILERS – STORE AUDIT PROGRAM

Each year, MobileMuster representatives visit around 1,100 mobile phone retailers across the country to ensure stores have their collection unit on display and correct point of sale. These visits also include staff training on how to book a pick-up, what the program accepts, relevant campaign information and how to promote mobile phone recycling to their customers.

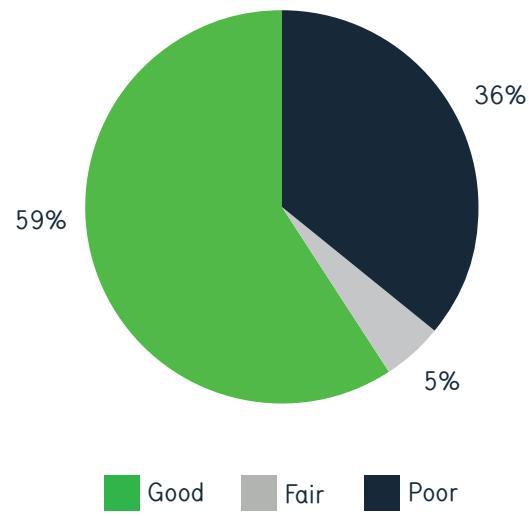


The audit in November 2014 found that over 90% of stores visited had a collection unit on the shop floor and that store engagement remained high, with 95% of staff promoting the program to customers sometimes or every time. Plus, over 95% of retail staff had a fair to good knowledge of the program.

**Store Engagement**



**Store Knowledge**



For the first time this year, Salvos Stores were included in the store audit to ensure that collection units were in good condition and staff were trained about our **Recycle Your Mobiles and Help the Salvos** campaign over Christmas and the New Year.



# RECYCLING PROCESS

All mobiles, accessories and batteries collected by MobileMuster are sent to our recycler TES-AMM's facilities in Sydney, Melbourne or Brisbane. There they are dismantled into their core components and put through further processes with its downstream recycling partners, so the resources recovered can be placed back into the supply stream.

IN 2014-2015  
**74 TONNES\***  
OF MOBILE PHONE  
COMPONENTS COLLECTED



**6.7** TONNES  
PLASTIC

**71.4** KG  
PRECIOUS METALS  
(gold & silver)

**1.5** TONNES  
ALUMINIUM

**10.7** TONNES  
STEEL

**4.2** TONNES  
COPPER

**79** KG  
CADMIUM

**293** KG  
LEAD

**731** KG  
COBALT

.....BY RECOVERING & REUSING THESE RESOURCES.....

APPROX.  
**2,450** LESS  
TONNES  
OF PRECIOUS METALS ORES  
(GOLD, SILVER, COPPER)  
WILL NEED TO BE MINED

OVER  
**590** TONNES  
OF CO<sub>2</sub> EQUIVALENTS IN  
GREEN HOUSE GASES  
WILL BE AVOIDED

.....THIS CO<sub>2</sub> EQUIVALENT IS COMPARABLE TO.....

TAKING  
**170** CARS  
PERMANENTLY OFF  
THE ROAD

OR PLANTING  
**3,600** TREES

\*73.862 tonnes

## OTHER RECYCLING / REUSE PROGRAMS

While MobileMuster is the industry's official recycling program in Australia, AMTA was advised by two recycling/reuse programs in Australia that they recycled 1,661kg of mobile phones and resold over 500 handsets overseas in the past year.

There are also a number of reuse programs operating in Australia, including trade-in programs by MobileMuster members Optus and Telstra. Any phones that these programs cannot sell for reuse are recycled by MobileMuster for free.

Nearly 3.3%<sup>2</sup> or 2.43 tonnes of mobile phone components in the past year came from recyclers and reuse programs.



2. Down from 4.8% in the previous year

# MOBILEMUSTER'S PERFORMANCE 2014-15

The performance of MobileMuster is measured against nine key indicators that look at changes in consumer behaviour, collection and recycling rates, diversion from landfill and industry involvement (see Tables one to four and Figures one to two). Each of these is assured independently by PriceWaterhouseCoopers (PwC) (see page 32).



## CONSUMER BEHAVIOUR

Awareness of mobile phone recycling has dropped slightly and, while people's desire to keep their old mobile phones remains strong, the proportion of people with two or more phones at home, has, for the first time in a number of years, started to drop. So too did the estimated number of handsets stored at home from 23.5 million to 22.5 million. Very few people, i.e. 2%, threw their previous mobile into the bin.

TABLE 1 - CONSUMER BEHAVIOUR

CONSUMER BEHAVIOUR	2012/13	2013/14	2014/15	
	Actual	Actual	Est'd	Actual
Personal Storage Rate (% users with two or more handsets at home)	37%	37%	37%	36%
Disposal To Landfill Rate	3%	3%	2%	2%
Awareness Of Mobile Phone Recycling	83%	83%	>80%	78%

## COLLECTIONS

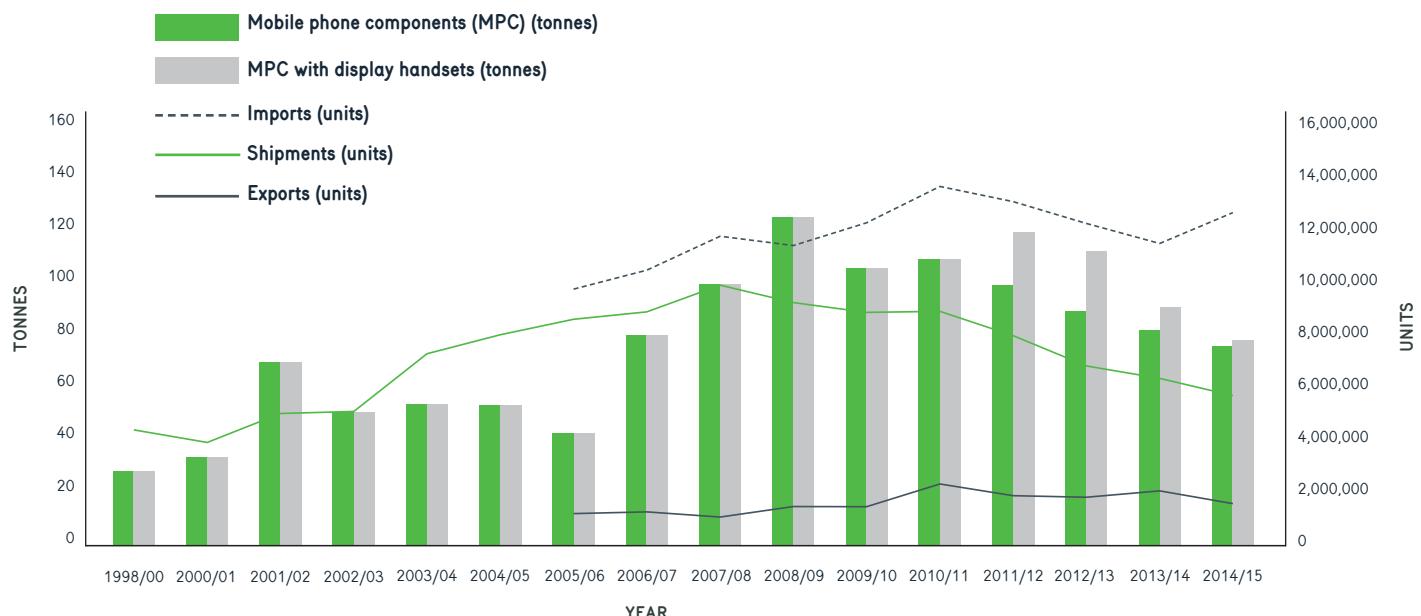
Collections dropped from 80 tonnes in 2013–14, to 74 tonnes in 2014 – 15. The annual collection rate of available phones increased however, from 50.6% to 54.7%, due to more people (83% versus 80% in the previous year) keeping their phones or selling/trading them in and handsets getting lighter.

TABLE 2 – COLLECTIONS

COLLECTIONS	2012/13	2013/14	2014/15	
	Actual	Actual	Est'd	Actual
Annual Collection Rate, Available Phones* (%)	53.1%	50.6%	51.0%	54.7%
Annual Collection Rate, Net Imports* (%)	9.0%	9.1%	10.2%	9.3%
Mobile Phone Collections (weight - tonnes)	87	80	100	74
Member Shipments (units - millions)	6.67	6.20	6.80	5.56
Net Imports (units - millions)	5.67	5.16	5.78	4.87
Net Imports (weight - estimated tonnes)	964	877	983	794
Adjusted Exports (units - millions)	1.00	1.04	1.02	0.70
Estimated Available Phones (weight - tonnes)		158	197	135
Estimated Number Handsets & Batteries Collected (units - millions)	0.99	1.00	1.11	0.95

\* See appendix 3 for definitions and formulas to calculate KPIs

**Figure 1:** Total annual collections by weight (tonnes) – all mobile phone components



**Figure 2:** Total number of handsets and batteries collected



## RECYCLING

MobileMuster is committed to ensuring all components are recycled ethically, securely, safely and to the highest environmental standards. In partnership with our recycling partner TES-AMM, we work closely to ensure transparency of the downstream processes and accessing data at the point where the material turns from waste to a resource. Our resource recovery rate<sup>3</sup> and diversion from landfill<sup>4</sup> has remained high at 98.4% to 98.7% respectively.



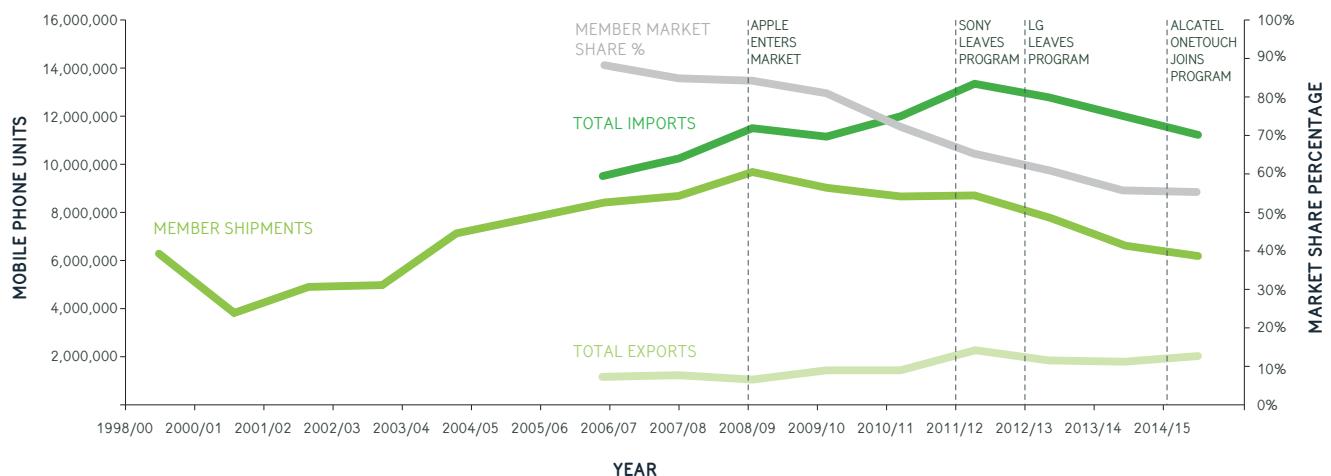
TABLE 3 – RECYCLING

RECYCLING	2012/13	2013/14	2014/15	
	Actual	Actual	Est'd	Actual
Diversion From Landfill	99%	98.3%	97%	98.7%
Recycling Rate (estimated material recovered)	96%	94%	96%	98.4%

3. The recycling rate or recovery rate as defined in the *Australian Standard AS/NZS 5377:2013* (Appendix D3) is 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
4. Diversion from landfill – 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

## INDUSTRY PARTICIPATION

Participating manufacturers include Microsoft (Nokia), Samsung, Motorola, HTC, Huawei, ZTE and Alcatel ONETOUCH (who joined the program in January 2015). Together, these manufacturers represent 45% of the mobile phone handset market in Australia, down from 55% in the previous year. This drop in market share can be attributed to the ongoing growth in non-participating manufacturers, such as Apple.



Australia's three network carriers, Telstra, Optus and Vodafone Hutchison Australia, and resellers Virgin Mobile, continue to be actively involved and support the program, along with battery importer Force Technology.

During the 2015 financial year, 91% of the mobile network service providers participated in the program, up on the previous year's participation rate of 86%.

TABLE 4 – INDUSTRY PARTICIPATION

INDUSTRY PARTICIPATION	2012/13	2013/14	2014/15
	Actual	Actual	Est'd
Manufacturers	56%	55%	56%
Mobile Network Carriers	91%	86%	91%

## APPENDIX 1: TARGETS FOR 2014-15 TO 2018-19

KEY PERFORMANCE INDICATORS*	2014/15	2015/16	2016/17	2017/18	2018/19
	Est'd	Est'd	Est'd	Est'd	Est'd
<b>COLLECTIONS</b>					
Mobile Phone Collections (weight - tonnes)	100	106	113	120	127
Annual Collection Rate, Available Phones (%)	51%	52%	53%	54%	55%
Annual Collection Rate, Net Imports (%)	10.2%	10.4%	10.6%	10.8%	11.0%
Reported Shipments (units - millions)	6.80	7.05	7.40	7.70	8.00
Net Imports (units - millions)	5.78	5.99	6.29	6.55	6.80
Net Imports (weight - estimated tonnes)	983	1,019	1,069	1,113	1,156
Adjusted Exports (units - millions)	1.02	1.06	1.11	1.16	1.20
Estimated Available Phones (weight - tonnes)	197	204	214	223	231
Estimated Number Handsets & Batteries Collected (units - millions)	1.11	1.21	1.30	1.38	1.46
<b>RECYCLING</b>					
Diversion From Landfill	97%	97%	97%	97%	97%
Recycling Rate (estimated material recovered)	96%	96%	96%	96%	96%
<b>CONSUMER BEHAVIOUR</b>					
Personal Storage Rate (% users with two 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%	56%	56%	56%
Mobile Network Carriers	91%	91%	91%	91%	91%

\* See appendix 3 for KPI definitions

## APPENDIX 2: PROGRAM PERFORMANCE OVER PAST FIVE YEARS

KEY PERFORMANCE INDICATORS	2014/15	2013/14	2012/13
	ACTUAL •	ACTUAL •	ACTUAL • (includes display handsets)
<b>COLLECTIONS</b>			
Mobile Phone Collections (tonnes)	74 •	80 •	87 • (110)
Annual Collection Rate, Available Phones	54.7% •	45.6% •	53.1% • (66.8%)
Annual Collection Rate, Net Imports	9.3% •	9.1% •	9.0% • (11.4%)
Estimated Number Handsets & Batteries Collected	947,365	1,003,562	996,874
Reported Shipments	5.56M	6.20M	6.67M
Exports (adjusted)	0.70M	1.05M	1.00M
Net Imports (units)	4.87M	5.15M	5.67M
Net Imports (estimated tonnes)	794	876	964
<b>RECYCLING</b>			
Diversion From Landfill	98.7% •	98% •	99% •
Recycling Rate (estimated material recovered)	98.4% •	94% •	96% •
<b>CONSUMER BEHAVIOUR</b>			
Personal Storage Rate (% users with two or more handsets at home )	36% •	37% •	37% •
Disposal To Landfill Rate	2% •	3% •	3% •
Awareness Of Mobile Phone Recycling	78% •	80% •	83% •
<b>INDUSTRY PARTICIPATION</b>			
Manufacturers	45% •	55% •	56% •
Mobile Network Carriers	91% •	85% •	91% •

\* As at 30 June 2011

\*\* Full 12 months 1 July 2010 to 30 June 2011

• Externally audited

2011/12 ACTUAL ● (13 months Jun 11- Jun 12) (excludes display phones)	2011/12 ACTUAL (excludes display phones)	2010/11 ACTUAL**	2010/11 ACTUAL*● (11 mths)
123 ● (106)	117 (97)	106	100 ●
49.5% ● (42.5%)	51.4% (42.6%)	48.0%	52.3% ●
9.9% ● (8.5%)	10.3% (8.5%)	8.6%	8.9% ●
912,274	847,240	797,105	744,816
8.55M	7.80M	8.70M	7.95M
1.23M	1.12M	1.45M	1.34M
7.31M	6.67M	7.25M	6.61M
1,243	1,134	1,232	1,123
97% ●	97%	100%	100% ●
93% ●	>75%	>75%	>75%
40%	40%	40%	40%
2%	2%	4%	4%
82%	82%	84%	84%
62% ●	61%	64%	63% ●
97% ●	97%	97%	97% ●

# APPENDIX 3: KEY PERFORMANCE INDICATOR DEFINITIONS

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## 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 163g, based on advice from manufacturers. This has dropped down from 170g used in previous years.

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## ANNUAL COLLECTIONS

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

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## ANNUAL COLLECTION RATE (AVAILABLE PHONES)

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

**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>5</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>6</sup> divided by All Industry Imports,<sup>7</sup> multiplied by Participating Manufacturer Reported Imports.

**Kept** = Estimate based on market research<sup>8</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>9</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.

5. Data sourced from GfK and participating manufacturers

6. 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

7. 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.

8. Independent online survey conducted in Jan/Feb 2015 by IPSOS on behalf of AMTA of 1,050 mobile phone users, aged 16 years or older, randomly selected from all States across Australia

9. As above

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.

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## 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>10</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>11</sup> / All Industry Imports<sup>12</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.

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10. Data sourced from GfK and participating manufacturers

11. 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

12. 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 reuse, 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 is expressed as a percentage and calculated using the following formula:

$$\text{DFLR} = \frac{\text{Total weight of mobile phone components collected by MobileMuster and sent to third party specialist recyclers or manufacturers (kg)}}{\text{Annual Collections (kg)}} \times 100$$

---

## 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 is calculated using the following formula:

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

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## STORAGE RATE OF MOBILE PHONES AT HOME AND WORK

Derived from annual market research<sup>13</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>14</sup> that measures the percentage of mobile phone users who dispose of their mobile phones to landfill.

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## AWARENESS RATE OF MOBILE PHONE RECYCLING

This is currently measured through market research<sup>15</sup> that measures the percentage of mobile phone users who are aware of mobile phone recycling.

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13. Independent online survey conducted in Jan/Feb 2015 by IPSOS on behalf of AMTA of 1,050 mobile phone users, aged 16 years or older, randomly selected from all States across Australia

14. As above

15. As above

## INDUSTRY PARTICIPATION RATE

Industry participation is defined as the proportion of shipments of mobile phone handsets from manufacturers and the revenue of mobile network carriers operating in the Australian mobile telecommunications market that contribute financially to the program.

This is measured in two parts:

<b>Manufacturers<sup>16</sup> =</b>	$\frac{\text{Participating Manufacturer Shipments}}{\text{Industry Imports}}$
&	
<b>Mobile Network Carriers<sup>17</sup> =</b>	Total Market Share (by revenue) of each Mobile Network Carrier contributing financially to MobileMuster

## PARTICIPATING MEMBERS AS AT 30 JUNE 2015

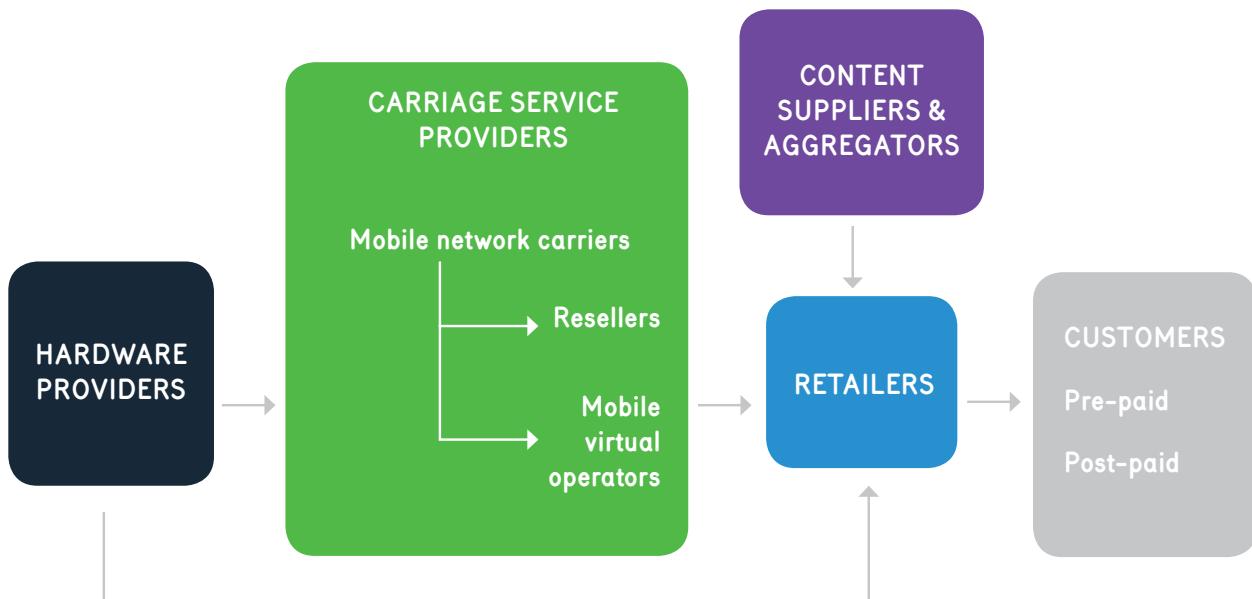
Handset Manufacturers – Alcatel ONETOUCH (joined January 2015), HTC, Huawei, Motorola, Microsoft (Nokia), Samsung Electronics Australia and ZTE

Battery importers – Force Technology

Carriage Service Providers – Telstra, Optus and Vodafone Hutchison Australia

Resellers/Mobile Virtual Network Operators – Virgin Mobile

## THE MOBILE TELECOMMUNICATIONS INDUSTRY



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

16. Data sourced from GfK

17. Data quoted is sourced from IBIS World Industry Report J5802 Wireless Telecommunications Carriers in Australia, July 2015

# 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.

## PERFORMANCE OF THE ARRANGEMENT

### Logo use

As the public announcement of the accreditation was not until mid-July 2014, the following was undertaken between 1 July to 31 October 2014:

- All print and online collateral updated to include product stewardship logo as per conditions of accreditation
- MobileMuster brand guidelines incorporating the use of the Product Stewardship Logo was 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.*

## CONSUMER BEHAVIOUR

- For results see page 16 and appendix two
- Consumer awareness of mobile phone recycling has dropped slightly from the previous financial year
- MobileMuster had originally planned to do a national TV advertising campaign in September 2014, December 2014/January 2015 and May/June 2015. However, due to a reduction in forecasted shipments, the May/June 2015 advertising campaign was cancelled. Also, the TV media buy in December and January was modified and therefore did not have the reach as originally planned
- To ensure that awareness remains greater than 80%, AMTA has further increased its investment in marketing and revised its advertising strategy to focus on outdoor and radio advertising to increase frequency and reach of messaging
- To monitor the impact of the revised strategy, AMTA will conduct its Annual Market Research in late January 2016
- AMTA will also continue with its **Recycle Your Mobiles and Help the Salvos** incentive, where MobileMuster will provide \$2 to the Salvation Army Christmas Appeal for every kilo of mobiles recycled between 1 December 2015 and 31 January 2016. This is in addition to the year-round incentive, where AMTA provides \$2 to the Salvos Stores for every kilo collected by the Salvos Stores (southern region).

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## COLLECTION OF MOBILE PHONES

- For results see page 17 and appendix two
  - Collections by weight were down on the set target. This is due to more people keeping, selling or trading their phones, which was up three percentage points from 80% to 83%
  - The collection rate, however, was higher than estimated due to a lower average weight of imported handsets
  - 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. A detailed audit of the weight of handsets imported by members in 2014–15 was undertaken. As a result, the average weight of a handset was revised down to 163g from 170g.
- 

## RECYCLING

- For results refer to page 19 and appendix two
  - Recovery rate and diversion from landfill rates were both above the estimates. This is because we received significantly less non-recyclable accessories and because we did not process any of the nickel cadmium batteries collected for the year.
- 

## RECOVERY RATES OF MOBILE PHONE COMPONENTS – 2014–15

COMPONENTS	NET WEIGHT (kg)	LANDFILL (kg)	RECOVERED (kg)	RECYCLING RATE (%)
Accessories – Electronic & plastics	1,667	3	1,664	99.8%
Accessories – Electronic, plastics & metals	2,708	9	2,699	99.7%
Accessories – Electronics	17,485	71	17,414	99.6%
Accessories – Metals	339	0	339	100.0%
Accessories – Plastics	2,051	19	2,032	99.1%
Batteries – Lithium Ion	643	40	603	93.8%
Batteries – Nickel Metal Hydride	9,304	574	8,730	93.8%
Handsets	28,182	291	27,891	99.0%
<b>Total</b>	<b>62,379</b>	<b>1,007</b>	<b>61,372</b>	<b>98.4%</b>
Accessories – Non recyclable	856	856	0	0.0%

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## INDUSTRY PARTICIPATION

- See page 20 and appendix two
  - The number of manufacturers participating in the program increased by one, with Alcatel ONETOUCH joining in January 2015. However, due to the performance of Apple in the market, MobileMuster member market share dropped to 45% of total imports
  - There was no change in the number of carrier's participating in the program. However, their market share increased to 91%.
- 

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

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

- 2014-15 workplan, budget and program targets signed off by the Recycling Committee and the AMTA Board in June 2014
- The Recycling Committee met monthly to review/monitor financial and program performance
- The Recycling Committee held quarterly meetings with logistics, recycling, marketing and communications suppliers to review 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 2014-15, i.e. manufacturers contribute \$0.30 and carriers \$0.12c per handset shipped into Australia
  - Manufacturers report shipments monthly and are invoiced monthly
  - Carriers are invoiced quarterly in arrears
  - Cost recovery for collection and recycling of display handsets and packaging implemented
  - No changes in recycling rebates for selected components.
-

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

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

**The use of the product stewardship logo in relation to the arrangement:**

As the announcement of the accreditation was not until July 2014, the following was undertaken between 1 July to 31 October 2014:

- All print and online collateral updated to include product stewardship logo as per conditions of accreditation and approved by the Federal Department of Environment
- Brand guidelines updated and circulated to members on use of the Product Stewardship Logo
- All collateral updated since then has been done in accordance with the conditions of accreditation.

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

- Risk management plan reviewed every six months, with the next review January 2016.

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

- 2014-15 AMTA financial report and audited statements provided to the Federal Department of Environment.
-



## Independent Assurance Report to the Board of Directors of the Australian Mobile Telecommunications Association

### **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 2015 has not been prepared, in all material respects, in accordance with the reporting criteria.

### **What we did**

The Australian Mobile Telecommunications Association (AMTA) engaged us 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 2015.

#### **Subject matter**

The subject matter comprises the following indicators for the 12 month period ended 30 June 2015 as contained in 'Appendix 2 – Program performance over past 5 years' 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 (%)

#### **Reporting criteria**

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

#### **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 estimating such data.

### **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.

### **Responsibilities**

#### **PwC**

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

#### **Management of AMTA**

The Australian Mobile Telecommunications Association management is responsible for the preparation and presentation of the subject matter in accordance with the Reporting Criteria.

### **Restriction on use**

Our report is intended solely for the Directors of the Australian Mobile Telecommunications Association. We disclaim any assumption of responsibility for any reliance on this report to any persons or users other than the Directors, or for any purpose other than that for which it was prepared.

We consent to this report being included in the MobileMuster Annual Report and understand that a copy of the Annual Report will be made available on the MobileMuster website. We accept no responsibility for the integrity and security of the MobileMuster website and this report is not intended to relate to, or to be read in conjunction with, any other information that may appear on the MobileMuster website.

### **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.

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### ***Main procedures performed***

Our main procedures included:

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

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

PricewaterhouseCoopers,

PricewaterhouseCoopers

John Tomac

John Tomac  
Partner

Sydney  
5 November 2015



# CONTACT US

MobileMuster – 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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