

# MobileMuster

The official recycling program of the mobile phone industry

# 2010-11 - Annual Report



#### Round 'em up and Hand 'em in

MobileMuster is the official recycling program of the mobile phone industry. It is the Australian Mobile Telecommunications Association's primary commitment to an environmentally sustainable industry that minimises the impact of its products, and the substances contained in them, on the environment through out their lifecycle.

#### The **primary goals** of MobileMuster are to

- increase collections,
- reduce disposal to landfill,
- increase awareness, and
- offer free recycling to consumers and retailers

These goals will be achieved by continually improving the **visibility**, **accessibility**, **transparency** and **sustainability** of the program.

AMTA's voluntary product stewardship program has achieved many outcomes over the past five years including;

- increasing awareness from 46% to over 84%,
- growing the collection rate of available mobiles from 18% to 50%,
- decreasing the disposal to landfill from 9% to less than 4%,
- growing its public collection network to over 4,500 sites across Australia, and
- offering a free post back service using recycling satchels or postage paid mailing labels available at mobilemuster.com.au .

All of this ensures MobileMuster is well on its way to achieving most of its key performance indicators outlined in its 2008 to 2013 Statement of Commitment to Mobile Phone Recycling as shown in Table 1.

Table 1: MobileMuster - Key Performance Indicators to 2013

Collections	Recycling	Consumer Behaviour	Industry Involvement
<ul> <li>Increase the annual collection rate of net imports to more than 20%, up from 5.5%</li> <li>Increase the annual collection for discarded phones to over 65%, up from 17%</li> <li>Diversify collection</li> </ul>	<ul> <li>Maintain diversion from landfill rate greater than 90%</li> <li>Maintain the estimated recycling rate (i.e. materials recovered) greater than 75%</li> </ul>	<ul> <li>Increase         awareness to         more than 85%, up         from 75%</li> <li>Decrease disposal         to landfill to less         than 2%, down         from 4%</li> <li>Decrease personal         storage rate of 2         or more phones to</li> </ul>	Maintain whole of industry participation greater than 90%
5 Biversity concetion		or more phones to	

methods to include	less than 18%,	
free postage paid	down from 32%	
recycling satchels		
and kerbside		
recycling		

### **New Recycling Contract for 2011**

In an effort to continually improve the collection and recycling processes of mobile phone components AMTA reviewed and put out to tender its recycling and logistics contracts in late 2010.

As a result of this process AMTA appointed a new recycler, TES-AMM Australia Pty Ltd replacing the incumbent recycler, MRI and reappointed Infoactiv as logistics provider with a broader scope of responsibilities including reporting and channel development.

Both contracts took effect from 1<sup>st</sup> June 2011. With the change in recyclers late in the year it was agreed that only the first 11 months of 2010-11 data i.e. from 1<sup>st</sup> July 2010 to the 31<sup>st</sup> May 2011 would be independently audited.

#### **2010-11 Results**

In a year where at least four commercially based recycling/refurbishment programs were launched and heavily promoted offering either cash for mobiles or raising funds for charities, MobileMuster continued to make steady progress against its key performance indicators as illustrated in Table 2.

Collections and awareness increased from 79% to 84% as a result of MobileMuster's year round cause-related marketing campaigns and the increased availability of recycling satchels in new mobile phone packs and satchels in national consumer magazines.

Collection rates of discarded mobiles dropped slightly from 50.6% to 48% and the disposal to landfill increased marginally from 3% to 4%.

The main challenge however continues to be peoples' desire to keep their old mobile phones, with the percentage of people having two or more unused mobiles in storage growing from 38% to 40%. This represents an increase of around 3 million handsets in storage up from an estimated 16 million to 19 million unused mobiles stored in homes.

Table 2: 2010-2011 MobileMuster Key Performance Indicators (Definitions of each Key Performance Indicator are provided at the end of this document)

Key Performance Indicators	2010/11 Actual***	2010/11 Actual* <sup>(d)</sup> (11 mths)	2009/10 Actual <sup>(c)</sup>	2008/09 Actual <sup>(b)</sup>	2007/08 Actual <sup>(a)</sup>	2006/07 Actual	2005/06 Actual
Collections							
Mobile Phone Collections (tonnes)	106	100√	103✓	122√	97✓	78	42
Annual Collection Rate, Discarded Phones**	48%	52.3%✓	50.6%✓	35%√ (37.4%)	18.9% ✓ (24.1%)	18%	15%
Annual Collection Rate, Net imports	8.6%	8.9%✓	7.9%✓	7.8%✓	5.5% ✓	5.3%	3%
Estimated Number Handsets & Batteries	797,105	744,816	845,919	806,812	755,196	576,640	391,074
Reported Shipments	8.70 M	7.95 M	8.66 M	9.02 M	9.77 M	8.63 M	8.41 M
Exports (adjusted)	1.45 M	1.34 M	1.41 M	1.43 M	1.05 M	1.24 M	1.18 M
Net Imports (units)	7.25 M	6.61 M	7.63 M	7.90 M	8.87 M	7.39 M	7.23 M
Net Imports (estimated tonnes)	1,232	1,123	1,297	1,581	1,775	1,478	1,446
Recycling							
Diversion from Landfill	100%	100%	100%✓	> 90%√	> 90% 🗸	> 90%	> 90%
Recycling Rate (estimated material recovered)	>75%	>75%	>75%	> 75%	> 75%	> 75%	> 75%
Consumer Behaviour							
Personal Storage Rate (% users with 2 or more handsets at home)	40%	40%✓	38%√	32%✓	32% ✓	36%	38%
Disposal to Landfill Rate	4%	4%✓	3%✓	2%✓	4% ✓	5%	9%
Awareness of Mobile Phone Recycling	84%	84%√	79%✓	79%✓	75% ✓	69%	46%
Industry Participation							
Manufacturers	64%	63%✓	72%✓	78%✓	85% ✓	> 90%	> 90%
Mobile Network Carriers	97%	97%✓	100%✓	> 95%√	> 95%# 🗸	> 95%	> 95%

<sup>\*</sup> As at 31 May 2011, \*\*\* 12 months from 1 July 2010 to 30 June 2011, \( \subseteq \text{ Externally assured, \*\*The formula to calculate the annual collection rate of discarded phones was modified in 2009/10. The formula no longer includes an estimate of mobile phones discarded from storage due to the uncertainty in estimating this figure. The revised formula is described in the definitions section of the MobileMuster Annual Report 2010-11 at <a href="http://www.mobilemuster.com.au/annual collection figures">http://www.mobilemuster.com.au/annual collection figures</a>. The updated formula has also been applied to the two previous year's results and the outcomes are shown in brackets below the original figure. All data has been rounded to the nearest whole number. The referenced data above has been independently assured since the 2007-08 period by:

a) Indicates KPMG has provided limited assurance on the figures, go to MobileMuster Annual Report 2007-08 including KPMG Assurance Report at http://www.mobilemuster.com.au/annual collection figures

b) Indicates PwC has provided limited assurance on the figures, go to MobileMuster Annual Report 2008-09 including PwC Assurance Report and 2008-09 definitions http://www.mobilemuster.com.au/annual collection figures

c) Indicates PwC has provided limited assurance on the figures, go to MobileMuster Annual Report 2009-10 including PwC Assurance Report and 2009-10 definitions <a href="http://www.mobilemuster.com.au/annual collection figures">http://www.mobilemuster.com.au/annual collection figures</a>

d) Indicates PwC has provided limited assurance on the figures, go to MobileMuster Annual Report 2010-11 including PwC Assurance Report and 2010-11 definitions <a href="http://www.mobilemuster.com.au/annual\_collection\_figures">http://www.mobilemuster.com.au/annual\_collection\_figures</a>

#### **Collections**

Consumers have two simple ways to recycle their unused mobiles and accessories.

They can either **drop** them off at any one of the 4,500 public collection points located around Australia including mobile phone retailers Telstra, Optus, Vodafone, Allphones, Fone Zone, Crazy Johns, Dick Smith, Network Communications and Leading Edge; other retailers such as Officeworks, Battery World, Cartridge World and Salvo stores as well as hundreds of local council libraries, administrative centres and transfer stations/recycling centres.

Or they can **post** them in using either a free postage paid recycling satchels which were made available to consumers either via Australia Post outlets, in most new mobile phone packs or included in major consumer magazines; or by downloading a postage paid mailing label from mobilemuster.com.au.

Many people can also recycle their old mobiles and accessories at work, school or university thanks to more than 3,000 schools, businesses, state and federal government agencies and various other organizations hosting internal musters for their staff, students and clients.

Collections are also received from service centres and commercial refurbishment programs.

Both collections by weight and by number increased in 2010-11 as illustrated in the bar charts below.

Figure 1: Total annual collections by weight (kg) - all mobile phone components

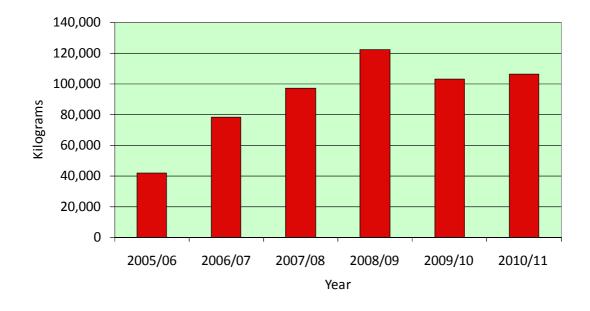
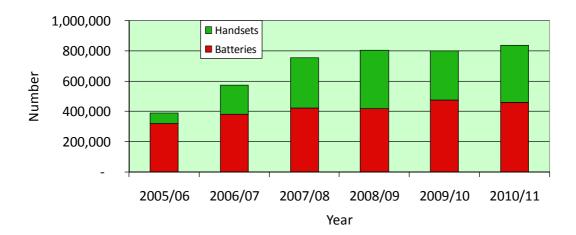


Figure 2: Total number of handsets and batteries collected



Other recycling and refurbishment programs operating in Australia have advised that 590 kg of mobile phone components have been recycled and 28 tonnes of mobile phones (i.e. over 220,000 handsets) have been sold off shore for reuse.

# Recycling

Mobile phone components collected by MobileMuster are recycled to the highest environmental standards. No mobile phone is refurbished or sold for reuse, all components are recycled and the material recovered to make new products.

Up until the 31 May MRI was contracted to undertake all mobile phone recycling. On the 1<sup>st</sup> June TES-AMM Australia Pty Ltd took over the recycling contract.

The majority of the recycling process remains the same with all mobiles being sorted and dismantled into their component parts locally in Australia at either the recyclers' facilities in Melbourne or Sydney. Up until the 31 May 2011 all mobile phone batteries collected (i.e. Lithium Ion, NiCad and NiMH) have been sent to Kobar in South Korea for processing where nickel, cadmium, cobalt and lithum are recovered.

All Lithium Ion batteries received after 1<sup>st</sup> June are now being sent to TES-AMM's recycling facilities in Singapore where nickel, cobalt and lithium will be recovered. NiCad and NiMH batteries continue to go to Kobar in South Korea for processing.

Circuit boards from the handsets, chargers and sim cards up until late May were sent to Reco Metal in South Korea for precious metal recovery using a pyrometallurgical process (i.e smelting). Now they are being shipped to TES-AMM's recycling facility in Singapore where they will be processed using a hyrometallurgical process (i.e. chemical).

Accessories are now also being processed in Singapore, while any plastics or ferrous metals continue to be recycled locally in Australia with the plastics being used to make fence posts.

100% of the mobile phone materials handled by MRI were diverted from landfill and it is estimated that over 90% of the materials in these mobiles has been recovered for reuse by third party recyclers like Reco Metal and Kobar in South Korea.

With over 106 tonnes of mobile phone components diverted from landfill, including 220 kgs of cadmium and 240kgs of lead from batteries, it is esimtated that over 6 tonnes of plastic, 2kgs of gold 62kgs of silver, 1.3 tonnes of aluminium, 20 tonnes of steel, 4 tonnes of copper and over a half a tonne of cobalt have been recovered as raw materials to make new products. This is enough raw materials to make the equivalent of about 90,000 aluminium cans, 2,000 plus fence posts and more than 600 gold wedding rings, as well as batteries and stainless steel.

#### **Consumer Behaviour**

General consumer awareness of mobile phone recycling jumped to 84%<sup>1</sup>. However, many people are still hanging on to their old mobile phones. The most recent independent research on mobile phone behaviours<sup>1</sup> found that 83% of mobile phone users either keep or pass on their previous mobile phone with 40% of people having two or more unused mobile phones stored at home, up from 38%.

The desire to keep old mobile phones is a major barrier to increasing collection/recycling rates. The research findings suggest that most people keep their previous mobile phone as a spare or back up with more and more people saying it has information on it. This in part reflects the growing take up of smart phones.

To encourage consumers to recycle more MobileMuster introduced two additional incentive based marketing camipaigns this year *Old phones, more ducks* in parthership with the Oxfam Unwrapped program to help people living in poverty and *Old phones, safe kids* in partnership with The Allannah and Madeline Foundation to help keep kids safe from cyberbullying and to teach them to be eSmart.

Together with the *Old phones more trees* campaigns in partnership with Landcare Australia where a tree is planted for every kilogram of mobiles sent in for recycling MobileMuster has not only recycled over 106 tonnes of mobile phone components it has also planted 25,000 trees through Landcare and Coastcare groups, given 1,000 ducks to families living in poverty in Mozambique through the Oxfam Unwrapped program and provided \$20,000 to help disadvantaged schools across Australia become eSmart through the Allanah and Madeline Foundation.

Very few people threw their mobiles out in the rubbish, with less than 4% saying they threw their previous mobile phone out in the last 12 months<sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> Independent online survey conducted in February 2011 by IPSOS on behalf of AMTA of 650 mobile phone users, aged between 16 and 64 years old randomly selected across Sydney, Melbourne, Adelaide and Perth.

<sup>&</sup>lt;sup>2</sup> Independent online survey conducted in February 2011 by IPSOS on behalf of AMTA of 650 mobile phone users, aged between 16 and 64 years old randomly selected across Sydney, Melbourne, Adelaide and Perth.

#### **Educating Youth**

MobileMuster continues to engage and educate Australia's youth through its National Schools Recycling Challenge which now runs across the school year. In the 2010 National Schools Recycling Challenge over 540 schools participated, sending in more than 2,300kgs of mobile phones for recycling. Over 220,000 students are estimated to have contributed to their school's muster.

The challenge provides schools and students with an opportunity to help the environment, learn about the importance of recycling and also be rewarded for their efforts.

Top honours nationally went to Fulham North Primary School from Henley Beach in South Australia for the highest weight (kilograms) of mobiles collected in 2010 with Mary Brooksbank School from Rosemeadow in New South Wales taking out the highest average weight (kilograms) of mobiles collected per student.

Each school received an environmental prize pack valued at \$1,500 as well as a \$750 tree and stationary pack courtesy of MobileMuster and Officeworks.

Daniel Coote from Fulham North Primary School was awarded the National Student Champion for round two and received a \$250 family experience voucher for his fantastic efforts in collecting 435 handsets, the highest number of handsets collected by a student.

#### **Working with Local Councils**

Local councils are an important partner with AMTA who work with MobileMuster in educating and encourgaing residents to recycle their old mobiles. To support councils further in this role and to encourage the establishment of free e-waste collections for residents MobileMuster launched its E-Waste Collection Grants for local councils in late 2010.

A total of \$15,000 was given out in grants to 17 councils to trial and run e-waste collections. Councils who received the grants included Knox City Council (VIC), Kiama Municipal Council (NSW), Ashfield Council (NSW), Mildura Rural City Council (VIC), Nillumbik Shire Council (VIC), Shire of Pingelly (WA) District Council of Grant (SA), City of Albany (WA), Boulia Shire Council, Shire of Murray (WA), Bayside City Council, (VIC), Balonne Shire Council (QLD), South Gippsland Shire Council (VIC), Shire of Donnybrook-Balingup (SA), Hunters Hill Council, (NSW) and Serpentine-Jarrahdale Shire (WA)

MobileMuster also pays Councils or their recycling contractor \$2.20 per kilogram of mobile phone components collected through a council e-waste collection service, as well as pick up and recycle all the mobile phone components for free.

In recent years several councils have developed innovative approaches to this issue (e.g. e-waste drop off days, providing households with free recycling satchels, using current kerbside recycling bins).

In recognition of the ongoing efforts of over 300 local Councils across Australia in tackling mobile phone e-waste MobileMuster presented five awards at the Australian Local Government Associations National General Assembly in June this year. The awards were initiated in 2007 to

to recognise the outstanding efforts by local councils in promoting and collecting mobile phones, batteries and accessories for recycling.

Over the past 12 months, local councils have helped MobileMuster to collect and recycle over 3,500 kilograms of mobile phones and accessories, including 28,000 handsets and batteries and over 1,800 kilograms of accessories.

The award winners in 2011 were:

National Excellence - Indigo Council (VIC)

Working with schools - Lismore City Council (NSW)

Best Promoter - Nillumbik Shire Council (VIC)

Top Collector Per Capita - Shire of Bridgetown-Greenbushes (WA)

Top Collector - Brisbane City Council (QLD)

# Industry Involvement<sup>3</sup>

The majority of members of the mobile phone industry continue to actively support MobileMuster both financially and in-kind by promoting the program to their customers and staff online, through sales material and in-store.

Handset manufacturers that currently participate in the program are Nokia, Samsung, LG Electronics, Sony Ericsson, Motorola, HTC, Huawei and ZTE. Each of these manufacturers voluntarily pays an advance recycling levy of \$0.30 per new handset shipped into Australia to fund MobileMuster.

Together they represent 64% of the mobile phone handset market in Australia, down from 73% in the previous year. This drop in market share can be attributed to the ongoing growth in smart phones including Apple's iPhone and Research In Motion's Blackberry (both manufacturers do not participant in MobileMuster).

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

Each of the carriers pays \$0.12 per handset of their share of new handsets shipped into the country to fund MobileMuster. After market battery importer Force Technology also contribute \$0.10 per new mobile phone battery imported into Australia.

# Mobile phone refurbishing

The profile of commercially based mobile phone reuse programs in Australia offering either cash or donations to charities as incentives to consumers to recycle their mobiles continued to grow in

<sup>&</sup>lt;sup>3</sup> Industry participation is defined as the proportion of shipments for 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.

2010-11. These programs are funded by the resale of mobiles for reuse into secondary markets in Europe, Asia and Africa, some are also sold locally via e-bay.

MobileMuster does not currently refurbish and resell mobile phones as it considers the environmental, human health and quality control risks are greater then the potential environment and social benefits through reuse.

By recycling all mobiles collected through the program MobileMuster tracks and traces the product through the recycling chain. This ensures all mobiles are processed to the highest environmental standards and that over 90% of the materials are recovered as raw materials to make new products in a safe and responsible manner. Similarly, it can ensure that any information on mobiles collected is destroyed through the recycling process.

AMTA recognises that refurbishment and reselling of used mobile phones is a legitimate global commercial activity that can extend the useful life of mobile phones, improving access to communications and providing social and economic benefits.

AMTA considers that refurbishment and reselling is only appropriate when it is conducted in a manner consistent with the UNEP Basel Convention Guideline<sup>4</sup> on the Refurbishment of Used Mobile Phones.

That is the repair and reconditioning of used mobile phones is done in an environmentally sound manner that will protect human health and where the mobile phones re-entering the market comply with applicable original equipment manufacturer technical performance standards and regulatory requirements.

To ensure the scrap from these reuse programs does not end up in Australian or overseas landfills, MobileMuster has established agreements with a number of the refurbishers to recycle their mobile phone scrap for free. In return MobileMuster is encouraging each program to report annually on the number and weight of mobile phone units exported for resale so that a more complete picture of mobile phone reuse and recycling can be included in future AMTA annual reports.

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<sup>&</sup>lt;sup>4</sup> UNEP Basel Convention, (2006) Guideline on the refurbishment of used mobile phones. Mobile Phone Partnership Initiative Project 1.1 – <a href="https://www.basel.int">www.basel.int</a>

# **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 170 grams based on advice 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 (Discarded Mobiles)**

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

<u>Discarded Phones</u> = Participating Manufacturer Reported Imports – Estimated Participating Manufacturer Exports - (Kept + Given Away)

<u>Participating Manufacturer Reported Imports</u> = 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.

<u>Estimated Participating Manufacturer Exports</u> = 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.

<u>Kept</u> – 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 Participating Manufacturer Reported Imports. Measured as units and converted to weight using the average unit weight.

<u>Given Away</u> – 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 Participating Manufacturer Reported Imports. Measured as units and converted to weight using the average unit weight.

<sup>&</sup>lt;sup>5</sup> Data sourced from Informark – Participating Manufacturer Shipments.

<sup>&</sup>lt;sup>6</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 Informark.

<sup>&</sup>lt;sup>7</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 Informark..

<sup>&</sup>lt;sup>8</sup> Independent online survey conducted annually by IPSOS on behalf of AMTA of 665 mobile phone users, aged between 16 and 64 years old randomly selected across Sydney, Melbourne, Adelaide and Perth.

The following assumptions have been made in calculating the amount of discarded phones 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 through out 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)**

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

<u>Net Imports</u> = Participating Manufacturer Reported Imports — Estimated Participating Manufacturer Exports

<u>Participating Manufacturer Reported Imports</u> = 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.

<u>Estimated Participating Manufacturer Exports</u> = 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.

<sup>11</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 Informark.

<sup>12</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 Informark..

<sup>&</sup>lt;sup>10</sup> Data sourced from Informark – Participating Manufacturer Shipments/Imports.

#### **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:

	Total weight of mobile phone components collected by MobileMuster
	and sent to third party specialist recyclers or manufacturers (kg)
DFLR =	
	Annual Collections (kg)

#### **Estimated Recycling Rate (materials recovered)**

Due to lack of specific data on the processing of mobile phone components from third party recyclers this KPI can only be an estimate of the proportion of materials recovered for reuse from mobile phone components recycled based on industry reported recovery rates for particular materials or components where data is available.

Estimated		Estimated Weight of Materials Recovered for F	Reuse
Recycling	=		x 100
Rate		AMTA Annual Collection Wt	

<u>Estimated Weight of Materials Recovered for Reuse</u> = Estimated weight of all materials recovered from mobile phone components accepted for recycling by all recyclers involved in the processing of mobile phone components for further productive use. This estimate is based on industry reported recovery rates for particular materials or components where data is available.

# 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 that dispose of their mobile phones to landfill.

#### **Awareness Rate of Mobile Phone Recycling**

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

<sup>&</sup>lt;sup>13</sup> Independent online survey conducted annually by IPSOS on behalf of AMTA of 665 mobile phone users, aged between 16 and 64 years old randomly selected across Sydney, Melbourne, Adelaide and Perth.
<sup>14</sup> Independent online survey conducted annually by IPSOS on behalf of AMTA of 665 mobile phone users,

aged between 16 and 64 years old randomly selected across Sydney, Melbourne, Adelaide and Perth.

15 Independent online survey conducted annually by IPSOS on behalf of AMTA of 665 mobile phone users.

<sup>&</sup>lt;sup>15</sup> Independent online survey conducted annually by IPSOS on behalf of AMTA of 665 mobile phone users, aged between 16 and 64 years old randomly selected across Sydney, Melbourne, Adelaide and Perth.

#### **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.

Mobile Network Carriers<sup>17</sup> =

Total Market Share (by revenue) of each Mobile Network Carrier contributing financially to MobileMuster

#### Participating members as at 30 May 2011

*Handset Manufacturers* – HTC, Huawei, LG Electronics, Motorola, Nokia, Samsung Electronics Australia, Sony Ericsson, ZTE

Battery importers - Force Technology

Carriage Service Providers – Mobile Network Carriers- Telstra, Optus, Vodafone Hutchison Australia Resellers/Mobile Virtual Network Operators - Virgin Mobile, AAPT

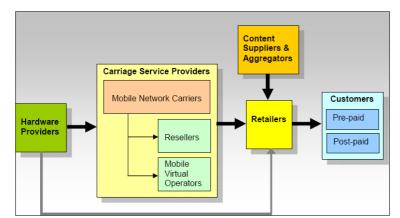


FIGURE 2-1: THE MOBILE TELECOMMUNICATIONS INDUSTRY

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

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<sup>&</sup>lt;sup>16</sup> Data sourced from Informark

<sup>&</sup>lt;sup>17</sup> Data quoted is reported for 2010/11 and sourced from IBISWorld Industry Report J7122 Mobile Telecommunications Carriers in Australia, May 2011



Independent limited assurance report to the Directors of the Australian Mobile Telecommunications Association on selected sustainability performance data presented in the MobileMuster 2010-11 Annual Report for the 11 months ended 31 May 2011

You have engaged us to provide a limited assurance report on selected sustainability performance data (**selected performance data**) for the MobileMuster national mobile phone recycling program (included on page 4 "2010-2011 MobileMuster Key Performance Indicators" table, column titled "2010/11 Actual (11 mths)" of the Australian Mobile Telecommunications Association (AMTA) MobileMuster 2010-11 Annual Report (Annual Report) for the 11 months ended 31 May 2011. The selected performance data provided to us were chosen by the AMTA for our review.

The selected performance data consist of the following:

- Mobile phone collections (tonnes)
- Annual collection rate (Discarded mobiles)
- Annual collection rate (Net imports)
- Diversion from landfill
- Personal storage rate (% users with 2 or more handsets)
- · Disposal to landfill rate
- Awareness of mobile phone recycling
- Industry participation Manufacturers
- Industry participation Mobile network carriers

# **AMTA management's responsibility**

Management of the AMTA (**Management**) are responsible for preparing the selected performance data based on the AMTA's "Definitions" included on pages 6-9 of the Annual Report. Management are responsible for determining the adequacy of the Definitions to meet the requirements of the MobileMuster national mobile phone recycling program.

## **Our responsibility**

Our responsibility is to form an independent conclusion on whether, based on our limited assurance procedures, anything has come to our attention to indicate the selected performance data have not been prepared and presented in all material respects in accordance with the Definitions. Our responsibilities do not extend to any other information presented in the Annual Report.

# **Assurance work performed**

We conducted our limited assurance engagement in accordance with the *Australian Standard on Assurance Engagements 3000 – Assurance Engagements other than Audits and Reviews of Historical Financial Information* (**ASAE 3000**) issued by the Australian Auditing and Assurance Standards Board. A limited assurance engagement involves making enquiries, primarily of persons responsible for the selected performance data and applying analytical and other limited assurance procedures over this data. The procedures selected, in order to form our conclusion, depend on judgment, including an assessment of the risks of material misstatement of the selected performance data.

Our procedures applied to the selected performance data primarily comprised:

- making enquiries of relevant AMTA management and of third parties who have supplied information to the AMTA:
- evaluating the design of the key processes and controls for managing and reporting the selected performance data;

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- testing, on a selective basis, the preparation and collation of the selected performance data prepared by the AMTA; and
- undertaking analytical procedures over certain data provided to us.

# **Use of our Report**

This Report, including the conclusion set out below, has been prepared solely for the use and benefit of the AMTA to assist the Directors in reporting on the performance of the MobileMuster national mobile phone recycling program.

We assume no responsibility and accept no liability arising out of, or in connection with, any use of, or reliance on this Report by any party other than the Directors of the AMTA, or for any purpose other than that for which this Report was prepared.

We consent to this Report being included in the 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. Readers of this Report on the MobileMuster website (who may read it for their information only) should bear in mind the inherent risks arising from the electronic communication of data.

#### **Inherent Limitations**

Because of the inherent limitations of any internal control framework and underlying data, it is possible that fraud, error or non-compliance may occur and not be detected. A limited assurance engagement in accordance with ASAE3000 primarily comprises of making enquiries, primarily of Management and applying analytical and other review procedures where the work is substantially less detailed than undertaken for a reasonable assurance engagement under ASAE3000. The conclusion expressed in this Report has been formed on the above basis.

Additionally, non-financial performance 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. There are no generally accepted reporting standards applicable for non-financial performance data. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgements. It is important to read the selected sustainability performance data in the context of the AMTA's Definitions.

#### **Our Conclusion**

Based on our limited assurance engagement, which is not an audit, nothing has come to our attention, which causes us to conclude that the selected performance data included in the Annual Report for 11 months ended 31 May 2011 have not been prepared, in all material respects, in accordance with the Definitions.

PricewaterhouseCoopers Australia

Liza Maimone

Partner

Sustainability and Climate Change

Melbourne 21 October 2011