



**Australian Mobile  
Telecommunications  
Association**

[Australian Mobile Telecommunications Association | MobileMuster](#)

**Submission to Senate Environment and Communications References Committee**

**INQUIRY INTO THE WASTE AND RECYCLING INDUSTRY IN  
AUSTRALIA**

**TERMS OF REFERENCE**

**12 October 2017**

## Introduction

The Australian Mobile Telecommunications Association ([AMTA](#)) is the peak industry body representing Australia's mobile telecommunications industry. Its mission is to promote an environmentally, socially and economically responsible, successful and sustainable mobile telecommunications industry in Australia, with members including the mobile Carriage Service Providers (CSPs), handset manufacturers, network equipment suppliers, retail outlets and other suppliers to the industry.

MobileMuster is a successful AMTA program established in 1998. AMTA manages the program on behalf of the members of MobileMuster who fund it voluntarily. MobileMuster members include Microsoft, Samsung, Motorola, HTC, Huawei, ZTE, Alcatel, Oppo, HMD Global, Google, Telstra, Optus, Vodafone and Virgin Mobile.

AMTA and MobileMuster welcome the opportunity to provide comments to the Environment and Communications References Committee in relation to the terms of reference of the Committee's inquiry into the waste and recycling industry in Australia.

## Background

MobileMuster is the product stewardship program of the mobile phone industry in Australia, established voluntarily by the handset manufacturers and the mobile network operators to keep mobiles and their accessories out of landfill.

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

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

MobileMuster, which holds voluntary accreditation under the Act, was established by the mobile phone industry in 1998 to provide an environmentally sound take-back program that keeps mobiles out of landfill and optimises resource recovery. The accreditation of the program provides certainty to the community and industry that MobileMuster manages a recycling service that is safe and secure and meeting the highest Australian and international environmental standards. Everything collected by the program is recycled and any data left on devices is also destroyed securely as part of the recycling process.

The program also provides social benefits to the community. The recycling service is both free and accessible to all mobile phone users and MobileMuster works to raise the awareness of mobile phone recycling through its communications and education activities, including a program targeting schools across Australia.

MobileMuster’s long- term focus continues to be delivering on the Key Performance Indicators (KPIs) under the Product Stewardship Act 2011 as per the program’s voluntary accreditation along with efficiently managing a financially sound program.

Mobile Muster has four fundamental objectives:

**Environmental:** keep mobiles out of landfill; plus optimise resource recovery in a safe, secure and ethical way.

**Social:** free recycling service for consumers; promote awareness and education.

**Political:** enabling our members to meet their product stewardship requirements and obligations.

**Economic:** effective, efficient, equitable and sustainable program for its members.

## Comments on the Terms of Reference

MobileMuster has provided comments on some of the terms of reference for the Committee’s inquiry into the waste and recycling industry below. We have only addressed the terms of reference that are relevant to the mobile industry and MobileMuster’s recycling and product stewardship program.

### *a) the quantity of solid waste generated and the rate of diversion of solid waste for recycling;*

In 2017 MobileMuster continued to increase its collection rate and recycled 79.1 tonnes of mobile phone components. Total collections, since the program started, have reached 1,323 tonnes. This includes approximately 11 million handsets and batteries which have been diverted from landfill.

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

**Figure 1. Key Performance Indicators FY16|17**

	Target	Actual
<b>Collections</b>		
Mobile Phone Collections (weight – tonnes)	75.0	79.1
Annual Collection Rate, Available Phones (%)	57.5%	68.5%
Annual Collection Rate, Net Imports (%)	8.6%	10.4%
Estimated Number Handsets & Batteries (units – millions)	1.01	1.06
<b>Recycling</b>		
Diversion from Landfill	97%	99.0%
Recycling Rate	>90%	99.0%
<b>Consumer Behaviour</b>		
Personal Storage Rate (% users with 2 or more handsets at home)	37%	34%
Disposal to Landfill Rate	2%	2%
Awareness of Mobile Phone Recycling	>80%	77%
<b>Industry Participation</b>		
Manufacturers	58%	40%
Mobile Network Carriers	91%	86%

Aside from MobileMuster, there are a small number of other recyclers that also recycle mobiles and accessories. A number of these programs share their collection data with us.

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

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

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

This year the program achieved a recycling rate of 98.3% and a diversion from landfill rate of 99.1%. Our strong results demonstrate the positive effect the program has on reducing the impact of mobile phones on the environment, maximising the materials that can be recovered and promoting the development of a circular economy.

- b) the accreditation and management of landfills;*
- c) the extent of illegal landfilling;*
- d) the role of landfill levies in determining the end destination of material, including the hypothecation of collected levies for enforcement and waste diversion purposes;*
- e) the role of different incentives and collection methods in determining the quality and quantity of material collected for recycling;*

### **Awareness & Incentives**

MobileMuster invests in education and public awareness programs to motivate Australians to recycle and change their behaviour. We aim to increase awareness of mobile phone recycling along with the benefits it brings to the community. This way when a phone reaches its end of life the

recycling option is not overlooked. Our research shows that currently 77% of Australians are aware of mobile phone recycling, which is very high in comparison to other recycling programs.<sup>1</sup>

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

MobileMuster regularly partners with other organisations such as Able Australia, the Salvos and others to promote and raise awareness of mobile phone recycling while also raising funds for these charities and their programs.

In 2017 MobileMuster partnered with OzHarvest for the second year running. OzHarvest is Australia's leading food rescue agency. Our campaign tackled two of the fastest growing waste issues in Australia, ewaste and food waste. The campaign not only raised the awareness of MobileMuster, but at the same time provided an added incentive to drive collections over summer. Using a multi-media and public relations campaign, MobileMuster promised to deliver the value of a meal to an Australian in need for every mobile recycled during January and February. As a result the program recycled over 60,000 mobiles, and helped OzHarvest deliver 60,000 meals to those in need. Our collection network including local councils and mobile phone retailers reinforced the call to action during the campaign which in turn saw a 17% increase in collections compared to the same period last year.

### **Collection Network and Partners**

Without the efforts of our collection partners, MobileMuster wouldn't be able to provide a robust network of permanent collection sites covering major metropolitan, along with remote and regional communities throughout Australia. The program hosts over 3,500 public drop off points across the country. Along with the public drop off network, MobileMuster has over 2000 organisations such as workplaces, universities and government agencies who promote mobile phone recycling and run their own internal collection drives for their staff and local community. Alternatively, mobile phone users can also pick up a reply paid satchel from AusPost outlets and post back their mobiles and accessories for recycling for free.

In 2017 the program increased collections resulting in **79.1 tonnes** of mobile phones components being collected. Our achievements is a testament to the collaboration between the mobile industry together with our collection network and charity partners who not only collect mobiles and accessories but also support the program by promoting mobile phone recycling to their staff, customers and community. The mobile retail network made up of over 1,600 stores continue to be an integral part of our collection network with over 30% of our collections coming from this channel. Our mobile phone retailers and their staff are great advocates for recycling. It is a logical choice for

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

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

consumers to take back their mobiles for recycling to the store where they purchase new products and services.

Councils provide an important part of our public drop off collection network but also in promoting and educating their residents on the importance of recycling. This year we partnered with 378 councils throughout the country. Local councils increased their collections by 25% on the previous year.

*f) the destination of material collected for recycling, including the extent of material reprocessing and the stockpiling of collected material;*

### **The Recycling Process**

MobileMuster partners with TES, a global leader in electronic waste recycling, to maximize our recovery rates and ensure all the mobile phone components we collect are properly processed in an environmentally responsible manner.

Through our recycling process over 96% of the materials in a mobile phone are recovered.

We believe our recycling process reduces the impact of mobile phones on the environment, minimises the resources that are thrown away and promotes the development of a circular economy.

Volumes collected are shipped directly

### **Transporting**

Everything collected by the program is transported to TES’s recycling facilities in Melbourne, Sydney or Brisbane.

### **Sorting**

At the recycling facility the mobile phones and accessories are disassembled into their components. None of the phones are resold and all of the data left on the devices is destroyed through this process. Once disassembled the parts are sorted into the following: batteries, printed circuit boards, handsets, accessories, plastics, metals and packaging.

### **Processing**

The components are processed separately to maximise resource recovery.

**Figure 2 – How components are processed and materials recovered:**

<b>Components</b>	<b>Transported to</b>	<b>Further processing</b>	<b>Materials recovered</b>
Batteries	Envirostream Melbourne	Batteries are granulated & sorted into materials	Copper, aluminum, cobalt, nickel, lithium and plastics.
Circuit Board	TES Singapore	A hydrometallurgical metals recovery process separates the precious metals	Copper, Silver, Gold, Palladium, Metal Ingots
Metals	Local recyclers	Shredded and baled	Copper, Stainless steel, Aluminum

Plastics	TES Singapore	Shredded and granulated. Combined with spent epoxy powder to make new products	Recycled plastic
Glass	TES Singapore / Veolia	Shredded and sorted	Recycled glass
Accessories	TES Singapore	De-manufactured through shredding and automated separating methods.	Ferrous and Non Ferrous Metals. Plastics.
Packaging	TES Australia	Segregated and treated as commodity	Recycled paper & plastic

### Materials Extracted

The materials recovered in the recycling process can be used in the manufacture of new products. For example, the recycled plastic from the mobile phone cases are used to make shipping pallets and the lithium extracted from mobile phone batteries can be reused to make new batteries.

The recycling process reduces the need to extract raw materials from the earth which saves energy, conserves scarce natural resources and protects our environment.

#### *g) the current economic conditions in the industry, including the market for material collected for recycling;*

MobileMuster is solely an end of life program for mobile phones along with their batteries, chargers and accessories. The levy that its members pay on each mobile phone they import into the Australian market of \$.0.42 AUD covers the cost of running the program. This includes logistics, administration, recycling and marketing costs. The program is also managed as not for profit.

Extending the life of mobile phones is an important principle of product stewardship and in developing the circular economy. Our research shows that mobile phone users are holding onto their devices longer and more people are reusing their mobiles than ever before. MobileMuster estimates that 1 in 10 Australians sell or trade in their mobiles and 1 in 6 Australians give their mobiles to family or friends when no longer needed. It is predicted that these figures will rise as the reuse market matures in Australia.

#### *h) the transportation of solid waste across state boundaries;*

Everything collected by MobileMuster across Australia is shipped to TES facilities in either Sydney, Melbourne, or Brisbane. Once collections reach the TES facilities, everything is dismantled into the various components.

These components are then aggregated by each site before shipping to either TES-Singapore or Local downstream vendors where it is further processed and refined.

TES possess the necessary approvals specifically for the export of electronic scrap and licenses for transporting hazardous materials. Regular reviews of processes are conducted ensuring compliance to these standards and any local regulations.

- i) the role of the Australian Government in providing a coherent, efficient and environmentally responsible approach to solid waste management, including by facilitating a federal approach; and*

We firmly believe that MobileMuster sets the benchmark for a voluntary scheme under the Product Stewardship Act 2011. The MobileMuster program demonstrates how the mobile industry has voluntarily implemented, funded and managed a successful recycling program that is free and accessible to consumers. The ongoing commitment to the program by industry members also demonstrates that regulation is not needed in relation to mobile phone recycling and product stewardship in Australia.

The Act can also act as a tool to motivate all industries to establish voluntary take back schemes that would otherwise not be considered.

- j) any other related matters.*

We believe a national approach is a preferred option when it comes managing electronic waste. Some State Governments have implemented a wide ban to landfill on electronic waste, and although the intention is to provide a framework to improve recycling rates, such an approach should be supported with educational resources to educate residents on how and where to recycle along with investment in collection network infrastructure to avoid contamination of waste streams, in the case of MobileMuster ensuring only mobile phones along with their batteries, chargers and accessories are collected in our collection bins. Any out of scope product collected in the programs bins that is shipped to MobileMuster becomes a financial burden on the program,

## Conclusion

For any questions in relation to this submission please contact Spyro Kalos, Manager MobileMuster, AMTA at [redacted] or on [redacted].