



CANTO Corporate Social Responsibility (CSR) Committee Paper 2014/1

Best Practices for the Environmentally Sound Management of Mobile Handsets and Equipment

Executive Summary

The CSR Committee was convened in response to the increasing desire by stakeholders in the dynamic and ever evolving ICT market to achieve a balance between business and social responsible interests.

This paper is the first output from the CSR team and its objectives are to raise awareness and recommend best practice solutions to the environmentally sound disposal and management of end-of-life mobile handsets and equipment. It draws heavily on the environmental standards established under the Basel Convention, to which many Caribbean countries are Parties.

The Caribbean mobile market space continues to grow bringing with it increasing e-waste products. It was determined that there was little immediate focus on the issues surrounding the environmentally sound management of end-of-life mobile handsets and equipment. Providers generally rely on third-party disposal but few clear policies are in place to manage this.

Going forward, the team recommends that a common Regional approach should be developed, promoted and adopted. This would include increasing awareness of the potential hazardous implications of e-waste and the development of best practices facilitating additional steps such as collection and channelling of mobile handsets and equipment to environmentally sound management facilities within the region. CANTO and its CSR Committee, alongside the Basel Convention Regional Centre for the Caribbean, stand ready and willing to assist and collaborate with regional stakeholders to develop sustainable solutions for the ICT sector.

1.0 Definitions

Basel Convention – The *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* has as its overarching purpose the protection of "human health and the environment against the adverse effects of hazardous and other wastes". To date there are 181 Parties to the treaty and in the Caribbean region these include: Antigua & Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Guyana, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Suriname and Trinidad & Tobago.

Key among its objectives is to control the transboundary movement of hazardous wastes and ensure their environmentally sound management or disposal. The Mobile Phone Partnership Initiative (MPPI) was developed and implemented under the Basel Convention to fulfil the objectives of the Convention with respect to the ESM of mobile handsets.

End-of-Life (or EoL) Mobile Handset (or Phone) – A mobile handset that is no longer suitable for use, or may not be up to the required specification, and is destined for disassembly and recovery of spare parts, material recovery and recycling or for final disposal.

Environmentally Sound Management (ESM) – Taking all practicable steps to ensure that used and EOL products and wastes are managed in a manner which protects human health and the environment.

Equipment / Components – This refers to parts or items removed from used mobile handsets, which may include batteries, chargers and any additional mobile handset accessory or equipment which permits the mobile handset to function or further enhances the device.

Transboundary Movement (TBM) – Any movement of wastes from an area under the national jurisdiction of one State to or through any area that is under the national jurisdiction of another State or not under the national jurisdiction of any State, provided that at least two States are involved in the movement. It includes a system of prior informed consent between the involved States, labelling and record keeping of that which is considered to be a waste in the interest of public and environmental safety.

2.0 Problem Statement

Several global entities, including the Basel Convention¹ and Solving the E-waste Problem (StEP) initiative², have confirmed that mobile phones are major contributors to electronic wastes, or e-waste. In the Caribbean, where mobile phones are increasingly contributing to the regional waste stream, there is a noted absence of policy regarding best practices on the management of used and end-of-life (EoL) handsets.

3.0 Objectives

This paper is intended to:

- Raise awareness of the deficiencies in the management of used and EoL mobile handsets and equipment in the Caribbean, and to
- Develop solutions and standards for the above in a manner that is environmentally sound and promotes sustainable management of resources across the region.

3.1 Target Audience

This document is intended to provide initial support to **Telecom Providers, Governments** and **Regulatory Bodies** as they seek to soundly manage used and EoL handsets in the Caribbean.

4.0 Recommendations

4.1 Background

According to the StEP Initiative, 'E-waste' is a term used to cover almost all types of electrical and electronic equipment (EEE) that has or could enter the waste stream. Although e-waste is a general term, it can be considered to cover TVs, computers, mobile phones, white goods (e.g. fridges, washing machines, dryers etc.), home entertainment and stereo systems, toys, toasters and even kettles. Therefore, it includes almost any household or business item with circuitry or electrical components with power or battery supply. The definitions of e-waste put forth by the EU's Waste Directive, the OECD

¹ Basel Convention: <http://www.basel.int/TheConvention/Overview/tabid/1271/Default.aspx>

² Solving the E-Waste Problem (StEP) Initiative: <http://www.step-initiative.org>

Waste Agreement and the Basel Convention definitions, as well as those of various national governments, contain nuanced differences.

4.2 Recommended Management for Used and EoL Mobile Handsets and Equipment

The Basel Convention's Mobile Phone Partnership Initiative (MPPI)³ provides guidance on the environmentally sound management of used and EoL mobile handsets and equipment. This includes their collection, reuse, refurbishment, material recovery and recycling. This paper presents key recommendations from the MPPI Guidance Document on Environmentally Sound Management of Used and EoL Mobile Phones. The MPPI guidelines should be consulted for the complete set of recommendations and more in-depth guidance and information.

Collection of Used and EoL Mobile Phones

These recommendations are intended to encourage countries and organisations to set up collection systems that best suit their needs so that most, if not all, used and EoL mobile phones are collected and that they are diverted from final disposal operations such as municipal landfills.

- 1.** Users should avoid depositing EoL mobile phones into the municipal / local waste collection system, which will result in the phone being disposed of in a landfill or incinerated. Telecom operators and distributors can make a proportional contribution to raise users' awareness by informing and educating customers about potential environmental impacts of equipment and to ensure that new and used mobile phones and accessories are responsibly managed throughout their life cycle.
- 2.** As reuse or recycling value may drop quickly, users should be encouraged to avoid storing or setting aside unneeded mobile phones and to deliver them promptly to a collection system. However, if a collection system is not available or the collection point is not convenient, a user should hold the mobile phone in storage until the next opportunity arises to deliver it to a collection point.
- 3.** A used mobile phone collection system should have collection points conveniently located for users so that they can bring their mobile phones to such collection points. In addition, the collection system should be free of charge for users.
- 4.** Collection of used mobile phones through telecom operators', retailers' or manufacturers' distribution channels should be a key element of an efficient collection system. Other collection

³ For more information on the MPPI and the guidelines developed, you can visit the webpage:
<http://www.basel.int/Implementation/PartnershipProgramme/MPPI/Overview/tabid/3268/Default.aspx>

methods, such as collection by mail, may also be considered. Collection systems will operate most efficiently when they are integrated with existing product collection and distribution frameworks.

5. In general, the management responsibilities of the collection points should be simple and limited in scope, dealing only with collection, or may include some ability to perform preliminary evaluation to determine whether the mobile phone is potentially reusable. Collection points must be the initial part of the overall collection system, which should also include appropriate facilities where evaluation and/or testing and labelling can be carried out to decide whether used mobile phones destined for reuse are in working order and can be directly reused, or require repair, refurbishment or upgrading prior to reuse, or are to be sent for environmentally sound material recovery and recycling. As such, collection facilities should usually not be involved in further testing or processing, leaving the more difficult responsibilities for the refurbishment or other facility, such as a central collection point.

6. In addition to collection points for consumers, it is important to consider collection from the repair sector, both formal and informal, to ensure that parts and mobile phone components/scrap do not end up in landfills. *Note:* Caribbean operators should be amenable to or should consider having the ability to act as a collection medium for repairers/refurbishers of mobile phones.

7. Depending on the capacity available in particular countries and the logistics involved in managing used phones and accessories, used mobile phones should be collected separately from other equipment (e.g. tablets) if they are to be shipped.

8. A collection point should ensure the security of the phones collected. Collection points should store used mobile phones in a way that is appropriate for their intended possible reuse and inside a building to avoid physical damage to the mobile phones as a result of exposure to rain or other adverse weather conditions. Where the collection point conducts a preliminary evaluation of potential for reuse, appropriate packaging material should be used to separate used mobile phones from each another while in storage and during transportation to protect them from undue wear and to preserve their surface appearance, operational capability and market value for possible reuse.

9. Used mobile phones should be safely stored at each collection point until a sufficient quantity is accumulated for transport to another collection point or to an evaluation and/or refurbishment facility. There should then be a regular pick-up and transportation system which will take all the collected mobile phones from a collection point to another facility for evaluation and/or testing. The timing of pick-ups and transportation should be mindful of (a) the cost involved in logistics, both financially and

environmentally, and (b) the potential rapid loss in value during delays. The collection of used mobile phones should, where possible, operate within existing new product delivery and collection schedules.

10. Whenever possible, used and EoL mobile phones should be collected with all of their components, even if the battery chargers and accessories are not to be reused. However, it should be noted that in some markets, phones, batteries and other accessories may be returned separately. It should be assumed that every battery retains some degree of electrical charge. A loose battery is therefore a potential fire hazard. Consequently, at the first point of collection, any loose batteries should be identified and properly managed. If the batteries are removed, they should be packaged in such a way as to avoid contact with their terminals, to avoid short-circuits and fires. Batteries should be sent only to facilities that are specially qualified to recycle or process batteries for materials recovery, and should be protected against extremes of temperature. Care should be taken to ensure that the transportation of batteries complies with all applicable regulations or courier requirements, i.e., International Air Transport Association (IATA) regulations for the handling of lithium metal and lithium-ion batteries. Battery chargers are more likely to be unique to specific phones, and should not be reused with other mobile phone types because of the risk of damage to batteries and phones.

11. Collection systems for used mobile phones should be accountable in a way that is practical and transparent to audit. This may require keeping a written record of the actual number of used mobile phones received, currently in storage, and shipped and other associated details.

12. The collected used mobile phones should be sent only to environmentally sound facilities, whether for intermediate accumulation, refurbishment and repair or for materials recovery and recycling.

13. Governments and other stakeholders should consider actions that could be taken to promote successful collection schemes. It is important for all stakeholders to play their role in addressing used mobile phones and accessories.

14. Consideration should be given to providing incentives to users to participate in a used and EoL mobile phone collection system. Sellers of new mobile phones should consider offering appropriate incentives for the collection of used mobile phones when needed. Discounts on the purchase of new phones, free air time and free SMS are some of the possible incentives to be considered.

15. Manufacturers, telecom operators and mobile phone distributors should consider the possibility of sharing, as part of Extended Producer Responsibility (EPR) systems, the physical and/or financial obligations entailed by the collection and management of used mobile phones. This is particularly

necessary and should be implemented as soon as possible in countries where the legislation and infrastructure for the collection of used mobile phones is lacking.

Transboundary Movement (TBM) of Used and EoL Mobile Phones

These recommendations are intended to assist regulatory agencies and authorities, manufacturers, network operators, collection facilities and other entities involved in the export or import of used mobile phones and equipment for reuse, repair, refurbishment, upgrading, material recovery, recycling and final disposal.

- 1.** All used mobile phones that have been collected should be evaluated / tested, and labelled, prior to any TBM. When mobile phones are to be tested, the test should utilize at minimum an “air” or “ping” test, loopback test, a screen and keypad test, and a battery test to determine to what extent they are suitable for reuse with or without repair, refurbishment or upgrading.
- 2.** EoL mobile phones destined for material recovery and recycling or final disposal are subject to Basel Convention TBM controls, unless it can be demonstrated that those EoL mobile phones are not hazardous in accordance with the Basel Convention definition⁴.
- 3.** In situations where hazardous wastes are to be sent back to the original exporting country or to a third country, it is recommended that the contract between the exporter and importer specify details of the return of the hazardous waste, return dates and financial responsibilities.
- 4.** All TBM of used and/or end-of-life mobile phones should follow applicable transport rules.
- 5.** Consistent with MPPI guidelines, importing countries should take measures to establish an appropriate infrastructure to ensure that mobile phones which reach the final end of their lives are collected and recycled in environmentally sound facilities, be those located within or outside the country.

⁴ This is applicable for shipments to and from countries that are Parties to the Basel Convention. Exporters should contact the Competent Authorities of the Basel Convention in their respective countries to obtain guidance on the transboundary movement controls of the Convention. Further elaboration on the definition of ‘hazardous’ is provided in the MPPI Guidance Document and under the Basel Convention. Additional information can also be gained from the Basel Convention Regional Centre for the Caribbean Region (BCRC-Caribbean): bcrc-caribbean.blogspot.com

5.0 Caribbean Case Study

While actions to ensure the sound management of mobile handsets in the Caribbean has been extremely limited, there have been some attempts to comply with the Basel Convention and apply the MPPI Guidelines at the corporate and policy levels. One example was demonstrated when the *Telecommunications Services of Trinidad & Tobago Ltd (TSTT)* developed its formal Mobile Services "Disposal Policy and Procedure for Mobile Handsets and Equipment" in February 2009⁵. TSTT's policy established "standards and guidance to both internal users and external Third Parties on the management and procedures for the disposal of mobile handsets and equipment in order to reduce environmental risks and hazards[...]" in accordance with the MPPI Guidance Document. The process entails in-house collection and management of returned mobile handsets and equipment, which are subsequently passed on to a pre-selected, MPPI compliant third party for further EoL management.

TSTT has expressed its commitment to ensuring the environmentally sound management of used and EoL mobile handsets and equipment in its Policy Statement as follows:

"TSTT would exercise duty and care for the environment and human health by ensuring that mobile handsets and equipment are disposed of as electronic waste in an environmentally responsible manner to eliminate associated risks and hazards which may result from such waste, as far as it is reasonably practicable. TSTT would also ensure that mobile handsets are not discarded through the standard public landfill system and would adhere to the Mobile Phone Partnership Initiative (MPPI) as enforced in the Basel Convention (2006)."

6.0 Conclusion

Awareness and sensitivity are considerably lacking regarding the issues and implications of environmentally sound management of end-of-life mobile handsets and equipment. The way forward involves affirmative action in raising the profile of this issue initially and getting the key stakeholders to commit to developing the requisite initiatives in support of this objective.

While, the MPPI guidance provided in this paper provides a practical framework upon which action can be taken to address this issue, a common Regional approach should be promoted. This not only includes

⁵ Source: Telecommunications Services of Trinidad and Tobago Ltd (Mobile Services), (2009). Disposal Policy and Procedure for Mobile Handsets and Equipment.

the possible development, adoption and roll-out of policies along the lines of what has been previously outlined, but facilitating additional steps such as collection and channelling of mobile handsets and equipment to environmentally sound facilities within the region. Such actions will ensure that corporate and producer responsibilities are extended throughout the entire Caribbean.

It is to this end that CANTO and its Corporate Social Responsibility Committee, alongside its partner in this paper, the Basel Convention Regional Centre for the Caribbean, stand ready and willing to assist and collaborate with Caribbean stakeholders in further development of the actions required to guarantee sound management of mobile handsets and sustainable solutions for the sector which we serve.