Recycling of mobile phones in India: Challenges and barriers

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Despite the increasing popularity of mobile phones, their end-of-life

disposal remains a major environmental challenge.

Electronic waste, in general, is an enormous problem not least because many devices are built with long-lasting plastics and potentially hazardous metals, such as copper, cobalt, lithium, ferrous metals, nickel, aluminum, tin, gold, silver, platinum, palladium, tantalum, indium, and others. While the industry itself, third party organizations, and government policies encourage us to recycle our electronic waste, including mobile phones, the rate of recycling remains very low in most parts of the world.

Research in the *International Journal of Environment and Waste Management* has looked at the reasons why people fail to recycle their smart phones and to identify the barriers that might be overcome from the user perspective.

Prakashkumar Limbachiya, Fenil Tamakuwala, Rishabh Yadav and Dileep Kumar Gupta from the Institute of Infrastructure, Technology, Research and Management, Ahmadabad, India, carried out a local study. This involved analyzing data collected from field surveys of different user groups, as well as secondary data available on various mobile recycling portals. They identified the limiting behavior and various attitudes toward the recycling process.

The main issue was a lack of financial incentive for recycling a device. There is a high turnover of smartphones but the value of a device less than a year old will have fallen by 70%–90% within a short time. Of course, at less than a year old, one would hope that modern users could cope without succumbing to the urge to upgrade so summarily. However, smartphone users while recognizing the environmental concerns and the social responsibility of recycling were commonly unaware of how and where to recycle an old device. Users were also faced with the inconvenience of the process of disposing of an old device at a recycling

site.

In addition, many smartphone users were concerned with the issue of data privacy and the possibility that a third party might gain access to information in their old phone after it is handed over for recycling despite the ability to completely reset a device and clear any stored information, logins, or phone numbers completely before disposal.

The researchers suggest that there is now a need for greater public education and awareness campaigns to encourage more people to recycle their mobile phones. They add that governments should consider implementing policies that require mobile phone manufacturers to design devices that are easier to recycle, but perhaps more importantly, have a longer lifespan. Of course, this latter point is perhaps moot, as there will always be users keen to buy the next generation of smartphone with all of their novel features and technology perhaps unavailable in older devices.

More information: Rishabh Yadav et al, Recycling of Mobile Phones in India: Challenges and Barrier for the Industries, *International Journal of Environment and Waste Management* (2021). DOI: 10.1504/IJEWM.2022.10036548

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