



Positive and Negative Effects of E-waste

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ABSTRACT

E-waste is becoming major threat to entire world. Toxic materials of e-waste mix with air and soil and causing harmful effects on biodiversity. Consumers buy the new product and throw away the old one, which is referred to as e-waste. The price of a new product is directly proportional to its quality and the logical expectation of consumers for the duration until the next new product is offered. E-waste has a negative impact on the environment, thus it's critical to send it to an R2 accredited recycling center. Recycling e-waste can keep a range of harmful material out of environment. The growing demand for electronic devices and appliances means range of metals and other non-renewable resources need to process. There are many devices such as mobile phones, appliances and other e-waste are made using gold, steel, copper etc. Can be reused and turned into new product.

1. INTRODUCTION

Almost all e-waste contains recyclable components such as plastic, glass, and metals, however these items cannot be recovered for other uses due to inappropriate disposal procedures and techniques. Toxic elements such as lead, zinc, nickel, and chromium are also found in computers and most gadgets. But most of them can be use indefinitely without any lost of physical or chemical properties, as a result we can stop most of them from dissolving and concoction. toxic gases or material by releasing in air.

II ADVANTAGES OF E-WASTE MANAGEMENT

Important Parts of device

There are so many useful parts are found in e-waste. These materials can be collected and we can reuse them and create new products.

Positive Benefits of The Environment

The environment impacts of mining are far-reaching so, if we replace these outdated, harsh methods with recycling instead, we can significantly conserve and regenerate the amount of biodiversity on our planet.

Best and Healthier Outcomes For Humans

The reduction in mining activities to create materials needed for our technology will also cut the amount of harmful greenhouse gas emission on earth, which directly affects humans. Recycling items or purchasing previously used or recycled items helps the earth replenish itself- which in turn helps us becomes healthier in our environment

III GROWTH COUNTRIES ECONOMY

An important, but lesser known benefit of tech waste recycling is economic growth- which will undoubtedly rise with the amount of recycled materials. This is because e-waste management demands a multitude of processes, which in turn requires many jobs. The more jobs available in a country, the more the economy rises, improving the nation as a whole. Along with this economic benefit, the more popular recycled items become, the less governments and corporations will spend on mining and deforestation practices.

IV.WHAT IS THE NEED OF E-WASTE MANAGEMENT

Rich Source of Raw Materials

Internationally, only 10-15 percent of the gold in e-waste is successfully recovered while the rest is lost. Ironically, electronic waste contains deposits of precious metal estimated to be between 40 and 50 times richer than ores mined from the earth, according to the United Nations.

Solid Waste Management -Because the explosion of growth in the electronics industry, combined with short product life cycle has led to a rapid rise in the of solid waste.

Toxic Materials- Because obsolete electrical devices contain hazardous materials such as lead, mercury, and cadmium, careful disposal is required to prevent these materials from being released into the environment. Other heavy metals and potentially harmful chemical flame retardants may also be present.

V.ARE YOU ALLOWED TO THROW E-WASTE IN THE TRASH?

Depending on the equipment and area, you may be able to dispose of EOL electronic gadgets in the garbage. Please refer to your state's individual legislation, but please recycle. Even if there is no such prohibition at the state level, some villages or localities will have regulations prohibiting the disposal of e-waste. Make sure to hire recyclers who have been qualified by one of the voluntary certification schemes intended to promote responsible recycling, such as R2/RIOS and e-stewards.

VI.MINIMIZING E-WASTE IS IMPORTANT:

Reusing the precious metals and polymers found in old cell phones instead of manufacturing or mining new ones would save enough energy to power 24,000 US households for a year. In 2009, the EPA estimated that there were 24 electronic devices in the average American household.

VII.REVIEW

The study's main focus is on electronic waste (E-Waste), which is emerging as a whole new environmental challenge for the twenty-first century. The rapid growth of the electronic and IT industries, as well as the present client culture and rising rates of electronic goods consumption, have had disastrous environmental implications. E-waste has become a severe concern in China and other Asian emerging countries, as one of the largest sources of heavy metals and organic contaminants in municipal garbage and the fastest increasing waste stream. These countries not only generate massive volumes of domestic e-waste due to their high rates of electrical and electronic consumption, but they also have 2.37 million tons of electronics that need to be disposed of. This would be enough to fill nearly five football stadiums!

Extend the life of your electronics -Get a case for your gadget, keep it clean, and don't overcharge the battery.

Purchase eco-friendly electronics- Look for Energy Star-qualified items or those that have been certified by the Electronic Product Environmental Assessment Tool. Donate used gadgets to charitable programs that aid domestic abuse victims, children's safety efforts, environmental causes, and other causes. Request a postage-paid mailer for your cell phone or ink cartridge from your student REP. The World Wildlife Fund will receive one dollar for each item received.

VIII.HOW CAN WE PREVENT IT?

Not only do many consumers fail to comprehend the environmental risk, but they also fail to recognize something else: secondhand gadgets contain a lot of inherent worth that we are unaware of. The vast majority of electronics may be recycled, with plastic, steel, aluminum, copper, gold, silver, and other precious metals among the materials that can be recovered.

Those metals can be repurposed, which is why recycling is such an excellent answer to the problem. Great Lakes Electronics Corporation, for example, can disassemble those gadgets so that the individual parts can be reused in new products.

(EE) items, but it also imports a large number of secondhand information technology (IT) devices from other countries. The fastest-growing waste stream today is electrical and electronic garbage. Every year, around 40 million tons of e-waste are produced.

IX.DATA & RESULTS

We submitted our data collection form to a variety of people and collected information on many elements of what they think about the positive impact of e-waste on industry in the near future.

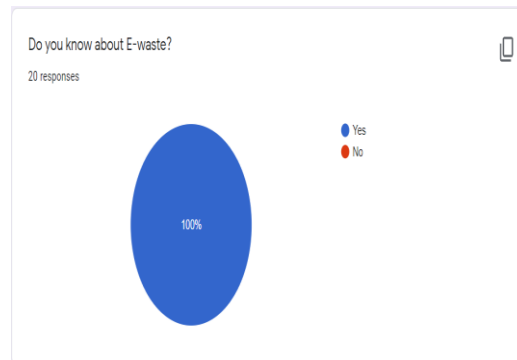
Questionnaire

- Do you think E-waste Management Industrialization can lead to less environment pollution?
- Do you heard about TCIL solution(Telecommunication Consultants India Limited)
- Have you heard about ATTERO company?
- How many unused Electronic Devices you throw away in trash after every 2 years?
- What is your most common reason to change a mobile phone to newer one?
- Have you ever recycle any Electronic device.
- What do you with old and unused mobile phones?

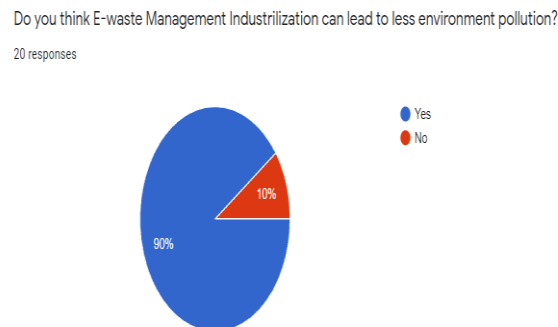
These are some of the Questionnaire from the survey which has been helpful for me in searching for the result of what and how people know about E-waste and how they deal with E-waste.

When people were asked if they knew about e-waste management, all of the people were aware about this. The main reason is that the people using electronic devices usually don't throw them in dustbin but they exchange old product with new one with the seller or give them away to their known once. When people were asked about how much they were aware about e-waste management the results were impressive as nearly everyone was aware of it. We rolled out the survey in such a way that whole family would be able to answer the question and it was found that all generation people knew about e-waste management.

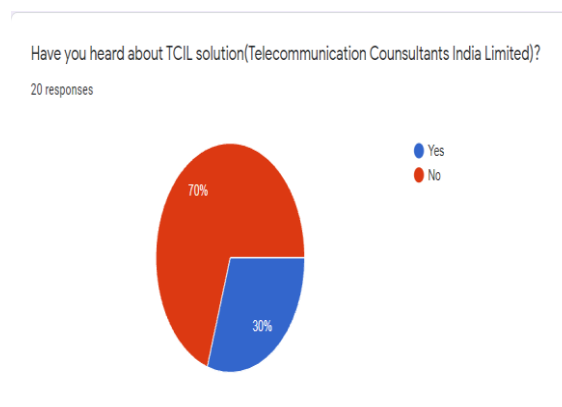
We reviewed this result and found about that everybody knows about this e-waste management technique as a result we got 100%.



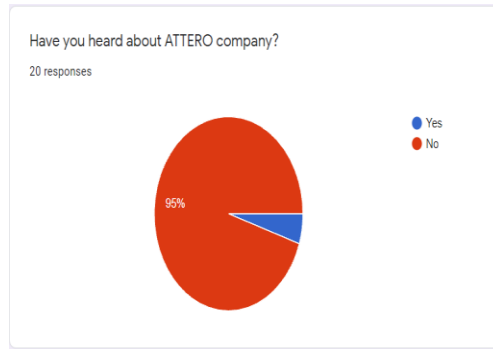
As we can see in the pie chart 90% of the people think that e waste management industrialization can lead to less environment pollution & only 10% of it don't think the same, this is because they don't have a proper idea of how this can lead to less environment pollution.



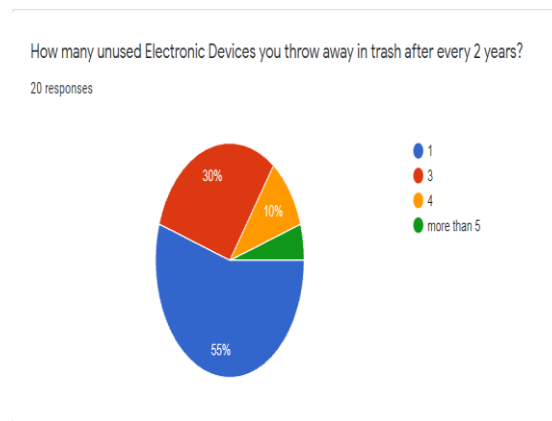
TCIL solution stands as **Telecommunications Consultants India Limited** as we can see in the pie chart 70% of people haven't heard about it so we can give them proper knowledge about it, as only 30% of people know about TCIL.



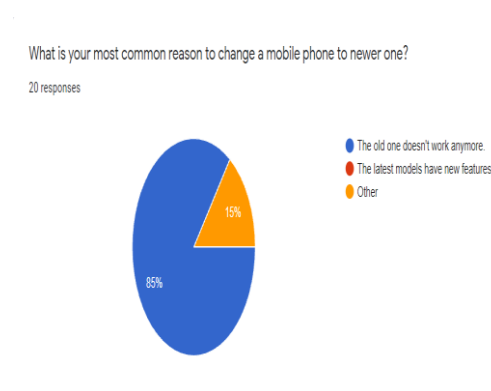
ATTERO is an environmental company which operates in national & international arena which have been active since 90 years for recovering & reusing energy and raw materials from waste, as we can see it has a big roll on global basis & as per our responses 95% of people even don't know about this which is very concerning for today's environmental crisis as a result we have to spread this information as much as we can to control or overcome the crisis we are facing and will be facing in these coming years.



As we can see in the pie chart nearly 55% of people throw away only one device every 2 years which is not bad but in the other hand we can see 30% of people throw away more than 3 after every 2 years, 10% of 4 devices & 5% of people throw away more than 5 devices so we can contact them & see what are the ways they use to throw away old or defected electronics and give them proper guidance for recycling.

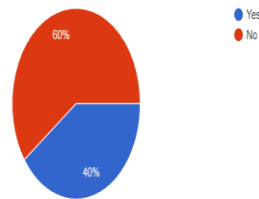


We all use mobile phones more than any other electronic gadgets and as a result often we need a new mobile phone after some time, same we can see in above pie chart 85% of people's have only one reason to change their old mobile to newer is The old one doesn't work anymore and only 15% of have their own reasons & it can be anything.



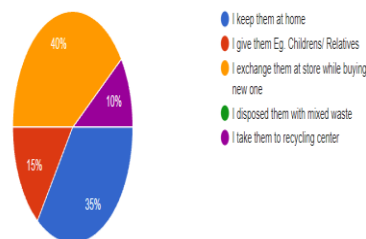
Most of us don't really know that they can give their device for recycling and many of us want to but we don't know exact places or sites or ways that can recycle our electronic devices, same we can see in the pie diagram as 60% of people haven't recycled their device or they even don't know that their device can be recycled. 40% of people have recycled their devices which is not bad according to study's. so we need proper ways to tell or give them knowledge about this.

Have you ever recycle any Electronic device.
20 responses



We asked people what they do with their old and unused phones as we know mobile phones are the most used devices as of now, so 40% of people exchange their old phones at store while buying new one which is a good option because customer gets discounts fir exchange seller gets old device where he can re-cell that old at cheaper or recycle it for better returns, 35% people keep their old phones with them where reasons can be anything & as we can see 15% of give there old mobiles to their relatives or children as they can use it for more if the device is in not too bad condition, but only 10% take their mobile to recycling centre.

What do you do with old and unused mobile phones?
20 responses



X.CONCLUSION

There are currently very few restrictions on the disposal of E-waste and they are being allowed to enter our landfills or be burned. We are willingly allowing hazardous substances to leach into our air and water so that we may enjoy a new form of technology. This problem is not going to go away because the global population is growing and the demand for newer and better technology is creating enormous amounts of old and outdated electronics.

With the help of recycling we can reduce the e-waste also there are some products/ parts that we can reuse. According to EOL that is end of life of electronic device. We can use the device which is having higher EOL so we can use them for longer time. According to survey there are so many people they do not recycle their e-waste and therefore the e-waste problem is increasing to solve this problem there are few solutions

We can make the website where people can enter their e-waste products and at the end of month their waste is collected.

Some people do not want to throw their old electronic devices because of their emotional sentiments. We can give them their electronics restored we know that there are plenty of restoration places but they are not at all cheap so people just keep their devices at home so we can try and get some cheaper restoration ideas.

Also we can collect the e-waste in every 6 months so people can not throw them in dustbin and it is disposed properly.

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3] Wikipedia for E-waste

4] Figure, charts and survey results

https://docs.google.com/forms/d/e/1FAIpQLSeLGRLGBwBgzy7YYO-ACf7Bt7M2Wn13-nn6WYOfoL1YGt0cGQ/viewform?usp=sf_link