➢ E-waste(Electronic waste)

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INTRODUCTION

- Electronic waste, or e-waste, refers to all items of electrical and electronic equipment (EEE) and its parts that have been discarded by its owner as waste without the intent of re-use.
- E-waste is also referred to as WEEE (Waste Electrical and Electronic Equipment), electronic waste or e-scrap in different regions and under different circumstances in the world.

Effect of E-waste on Nature

Some people aren't aware of the dangers of throwing away E-waste and will throw away electronics with no regard of what happens after. E-waste contains harmful toxins that cause adverse effects to the environment.

1. Pollution of Soil

Pollution of the landfill soil is where the dangers E-waste begin. Electronics contain elements that are harmful to soil. Electronics are not biodegradable and will cause long lasting damage to the landfill indefinitely

2. Water Runoff

Once electronics are in the landfill, the inevitable is going to happen—it will rain. When it does, all of those chemicals in the electronics will run off with the water.

3. Air Pollution

Many landfills and waste management companies use incinerators to dispose of their waste. Because of all of the chemical compounds in an electronic item, incineration releases hydrocarbons into the atmosphere.

•HOW CAN WE PREVENT IT?

3 R'S

Reduce. Purchase products that require less packaging or to limit the waste you are producing.

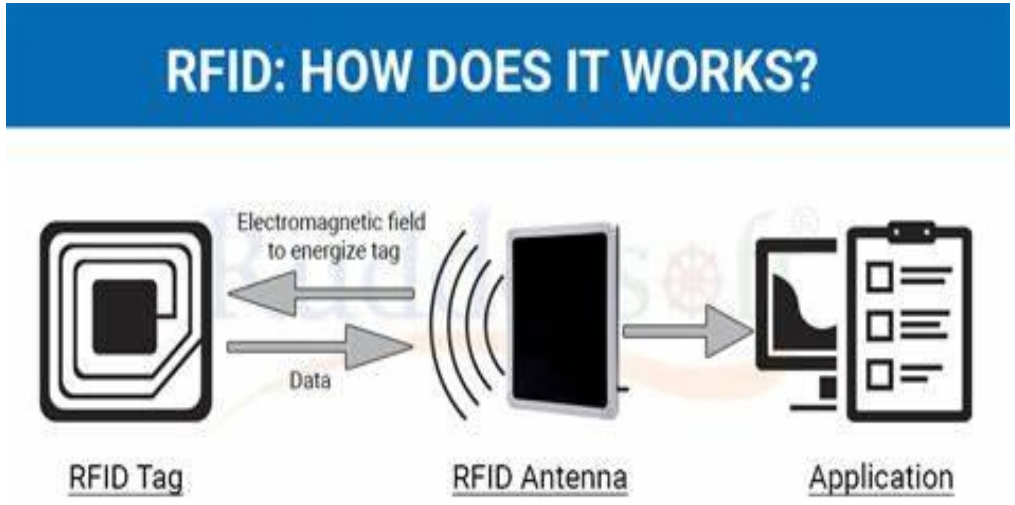
Reuse. Use a travel mug or reusable water bottle and avoid single-use bags.

Recycle. Paper, plastic, glass, magazines, electronics, and more can be processed into new products while using fewer natural resources and less energy. This is the 3 R's mantra.

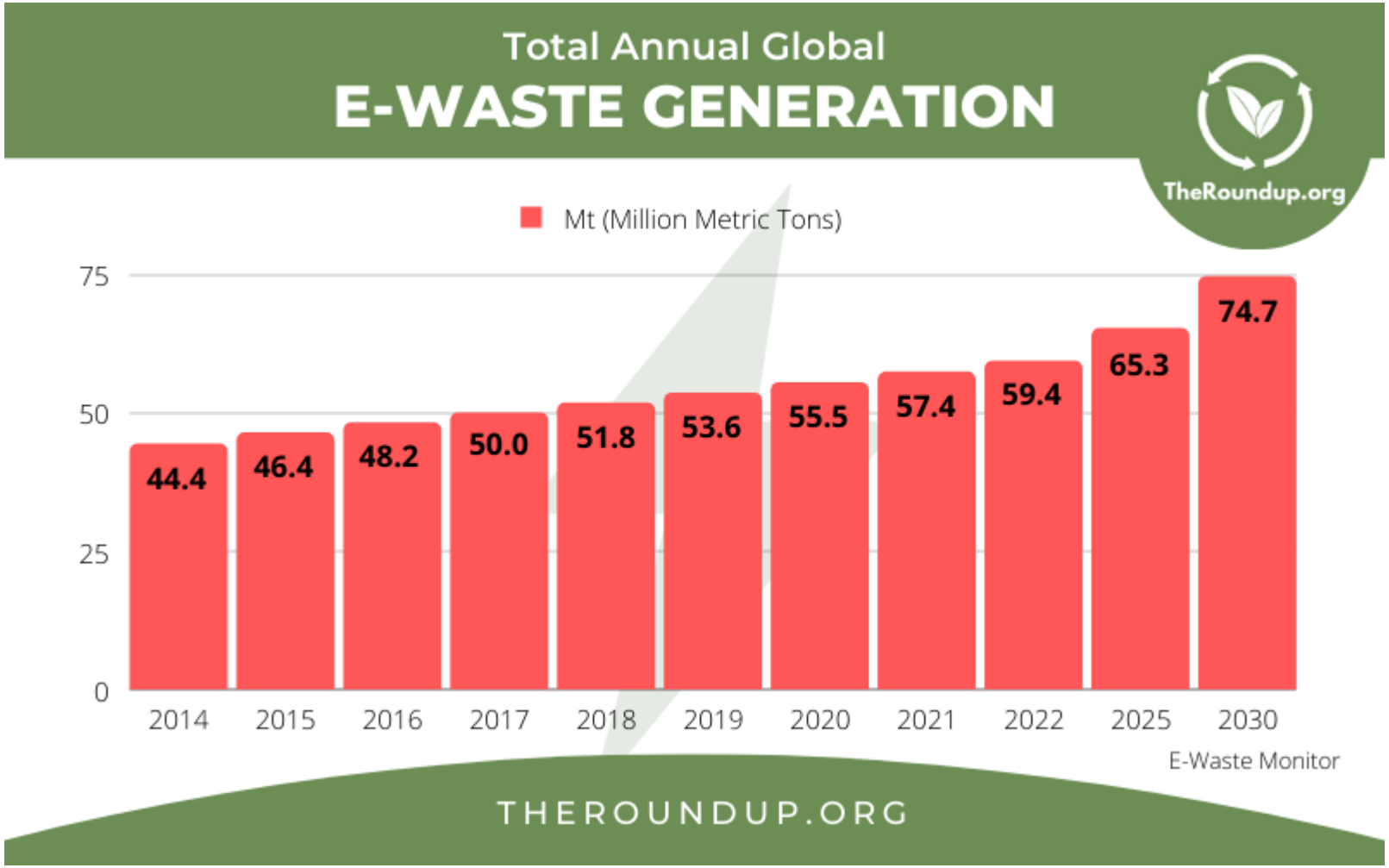
Technology used for recycling

- RFID (Radio Frequency Identification)

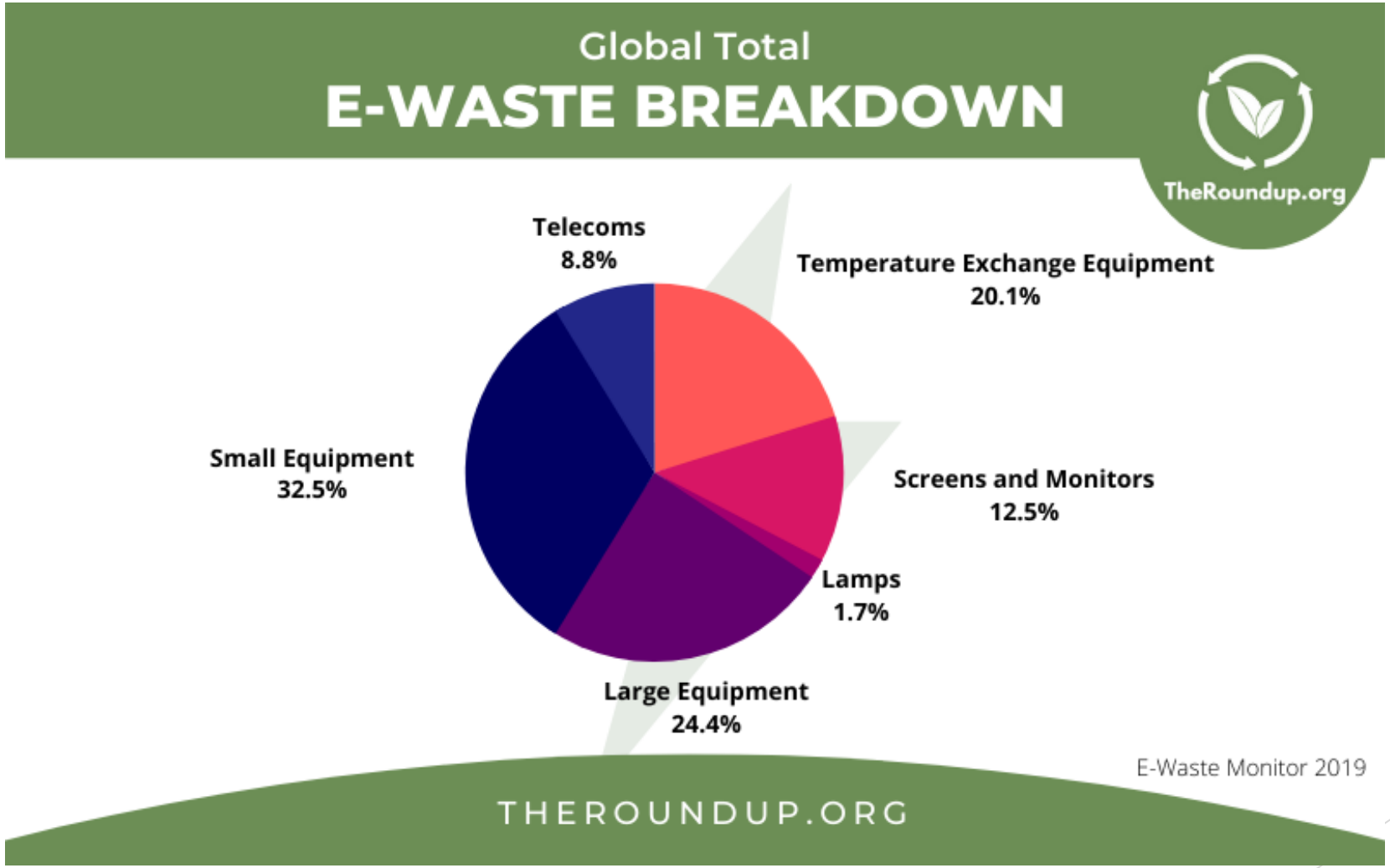
- Radio-frequency identification (RFID) technology systems were initially touted as the go-to for pay-as-you-throw waste and recycling collection programs. Asset tags were attached to waste and recycling containers and data was collected when the bins were full, alerting haulers to deploy a vehicle to empty the bins.



E- WASTE GENERATION BY TIME



Composition of E-waste



Countries E-waste production and recycle rate

Rank	Country	E-Waste Produced (Kt)	Recycling Rate
1	China	10129	16%
2	USA	6918	15%
3	India	3230	1%
4	Japan	2569	22%
5	Brazil	2143	0%
6	Russia	1631	6%
7	Indonesia	1618	n/a
8	Germany	1607	52%
9	UK	1598	57%
10	France	1362	56%

Use of machine in recycling of wastes.

❑ Eliminate E-Waste with Newtech Recycling

1. Use Cloud Storage

you might be ready to go one step further by replacing on-site hard drives with cloud storage. Owning and maintaining dedicated physical servers and external backups can be expensive, but it's also complicated, tedious, and takes up a lot of real-world office space that could be better utilized.

2. Try 3D Printing

one of the greatest revolutions in recent years has been the wide availability of 3D printing technology. Whereas traditional production methods start with a solid block of raw material—such as metal or plastic—and then essentially "carve" a product out of it, 3D printing works the opposite way. It builds up a product as a series of individual layers.

3. Switch Energy Sources

Every flick of the light switch and every hum of a booting computer requires one thing: electricity. But conventional energy sources generate electricity at power plants that burn huge amounts of fossil fuels every day. That's why being more energy efficient should be a priority for any company interested in going green.

How is e-Waste Harmful to Human Health?

In 2020, the Organisation for Economic Cooperation and Development (OECD) released a report on the toxicity of e-waste following an exhaustive review of 11,000 studies on the hazards of nanomaterials that were conducted between 2000 and 2013.

What they found is troubling, to put it lightly?

Their findings suggest that, after interacting with almost all 485 manufactured nanomaterials observed throughout the studies, human cells tend to go through a process of inflammation, injury, then death.

This conclusion becomes even more disturbing when one realizes that enough cells dying within organ tissues would result in that organ being impaired.

And that's exactly what additional research saw happening to people living near these e-waste sites.

BENEFITS OF RECYCLING

7 Benefits of Recycling

- Financial Benefit
- Conservation of Resources
- Energy savings
- Community Building
- Jobs creation
- Strong economy
- Environmental Protection

Conclusion

- Need for a e-waste policy and legislation
- Create a national framework for the environmentally sound management of e-waste
- Conduct detailed inventories of e-waste
- Initiate pilot schemes on collection and sorting of e-wastes, including take back schemes and schemes for repair refurbishment and recycling
- Encourage and facilitate organized recycling systems
- Should subsidies recycling and disposal industries
- Collect fee from manufactured/consumers for the disposal of toxic material
- Incentive schemes for garbage collectors and general public for collecting and handling over e-waste
- Awareness programme on e-waste for school children and general public

THANK YOU