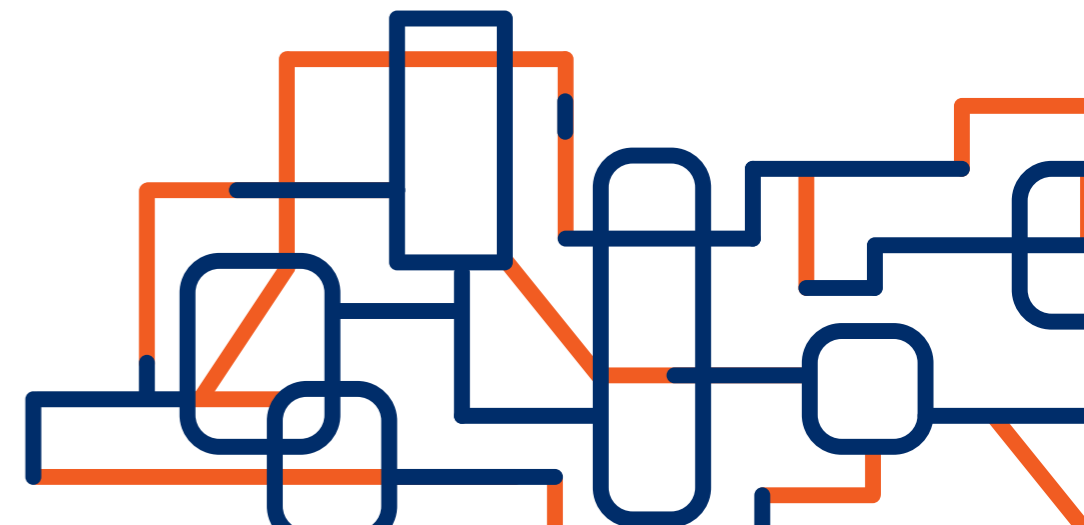

FRAMEWORK OF INDIA'S E-WASTE



WASTE CATEGORIES

MUNICIPAL SOLID WASTE

Commercial and residential waste generated in municipal or notified areas, excluding industrial hazardous wastes but including treated bio-medical wastes.

Governed by the Municipal Solid Waste Management and Handling Rules, 2016

BIO-MEDICAL WASTE

Any waste generated during the diagnosis, treatment or immunisation of human beings or animals or in research activities, in the production or testing of biologicals.

Governed by the Bio-Medical Waste Management Rules, 2016

PLASTIC WASTE

Waste generated from indiscriminate use and disposal of plastic in to the physical environment leading to water, soil and air pollution.

Governed by the Plastic Waste Management Rules 2016

E-WASTE

E-waste refers to electrical and electronic equipment, whole, or in part, discarded as waste by the individual or bulk consumer as well as rejects from manufacturing, refurbishment and repair processes.

Governed by the e-waste (Management) Amendment, Rules 2018

HAZARDOUS WASTE

Waste generated from residential, commercial or industrial activity.

Ignitability, corrosiveness, reactivity, and toxicity are all attributable qualities.

Governed by the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

INDUSTRIAL WASTE

Attributes to waste material produced during industrial activity.

Can be hazardous or non-hazardous in nature.

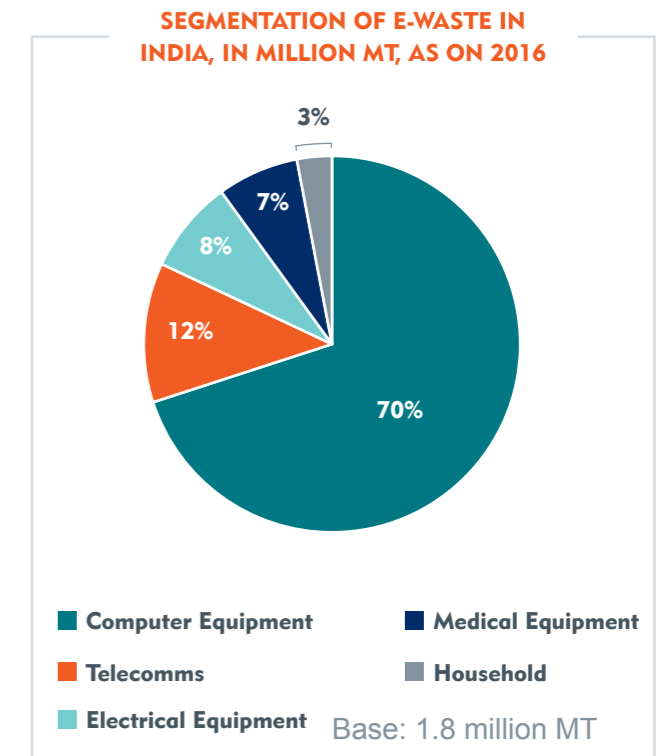
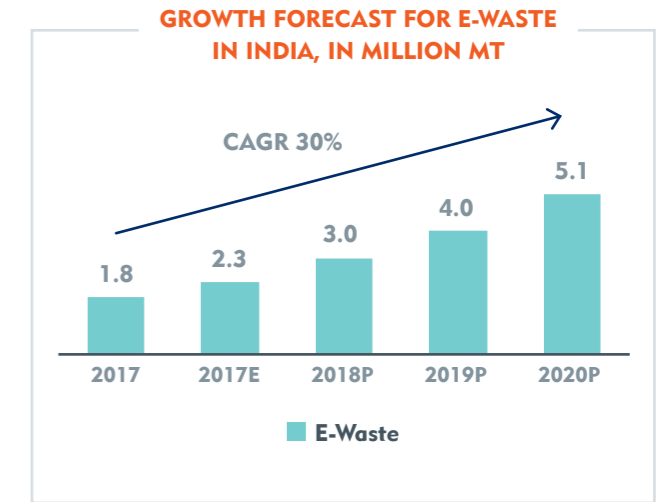
Governed by rules based on the particular type of waste.

In addition to the above waste categories, construction and demolition waste generated from various means such as waste comprising building materials, debris and rubble resulting from construction, re-modelling, repair and demolition of any civil structure, has also been defined with the **regulatory framework under the Construction and Demolition Waste Management Rules, 2016, published by the Ministry of Environment, Forest and Climate Change in 2016.**

E-WASTE SNAPSHOT IN INDIA

E-WASTE GENERATION IN INDIA

- India's production of e-waste is likely to increase by nearly three times, from 1.8 million metric tonnes (MT) in 2016 to 5.1 million metric tonnes (MT) per annum by 2020 at a compound annual growth rate (CAGR) of about 30%.
- India has emerged as the world's second largest mobile market, and also the fifth largest producer of e-waste, discarding nearly 1.8 million metric tonnes of electronic waste every year.
- Rising levels of e-waste generation in India have been a matter of concern in recent years.
 - With more than 1 billion mobile phones in circulation, nearly 25 per cent end up in e-waste annually.
- Computer equipment accounts for almost 70 per cent of e-waste material, followed by telecommunication equipment (12 per cent), electrical equipment (8 per cent), and medical equipment (7 per cent).
 - Other equipment, including household e-waste account for the remaining 4 per cent.

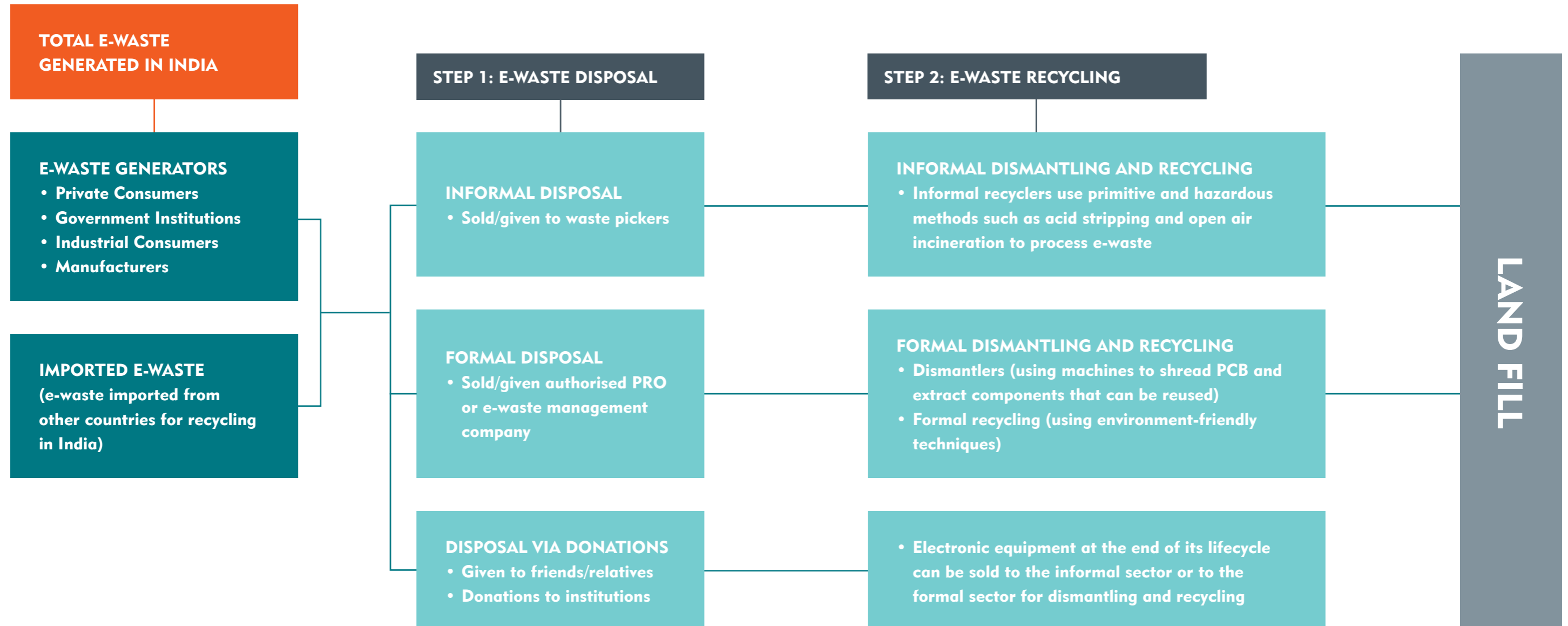


* computer equipment, telecom (mobile phones, household (TV/LED/Microwave form the key components for electronic waste)

MT – Metric Tonnes, P – Projected, Equipment – Equipment, CAGR – Compounded annual growth rate

Source: ASSOCHAM-cKinetics study Electronic Waste Management in India

E-WASTE MANAGEMENT IN INDIA



In India, more than 95 per cent of e-waste is managed by the unorganised/informal sector and scrap dealers

A mere 2-3 per cent of India's total e-waste is recycled due to poor infrastructure, legislation and framework

GOVERNMENT BODIES THAT MANAGE E-WASTE

MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE

The nodal agency of the administrative structure of the Central Government for the planning, promotion, co-ordination and overseeing the implementation of India's environmental and forestry policies and programmes. The Central Ministry of Environment and Forests has notified the e-waste (Management) Rules, 2016 in March 2016 which was amended to e-Waste Management Rules Amendment, 2018.

CENTRAL POLLUTION CONTROL BOARD (CPCB)

CPCB is mandated to prepare guidelines on extended producer responsibility, environmentally sound dismantling and recycling, collection centres, storage, refurbishment, channelisation, and transportation of e-waste. Under the e-waste management rules, producers of electrical and electronic goods who offer their products for sale on a pan-India basis are required to obtain EPR authorisation from the Central Pollution Control Board.

STATE POLLUTION CONTROL BOARD (SPCB)

Producers who sell within a state can obtain authorisation from the concerned SPCB. Dismantlers and recyclers of e-waste are mandated to obtain authorisation from the SPCB. Refurbishers of electrical and electronic equipment are required to obtain a one-time authorisation from the State Pollution Control Board.

E-WASTE MANAGEMENT ISSUES

VOLUME OF E-WASTE GENERATED

India stands fifth in e-waste generation producing around 1.7 lakhs metric tonnes per annum.

The majority of India's electronic needs are fulfilled by imports but in the near future there will be more reliance on manufacturing.

INEFFECTIVE INFORMATION

There is an absence of any public information on most SPCB or PCC websites.

15 of the 35 PCBs/PCCs do not have any information related to e-waste on their websites.

LACK OF INFRASTRUCTURE

There is huge gap between current recycling and collection facilities and the quantum of e-waste being generated.

There are no collection and take back mechanisms. This is compounded by a lack of recycling facilities.

HEALTH HAZARDS

E-waste contains more than 1,000 toxic materials, which contaminate soil and ground water. Exposure can cause headaches, irritability, nausea, vomiting, and eye pain.

Recyclers may suffer liver, kidney and neurological disorders.

LACK OF INCENTIVE SCHEMES

There are no clear guidelines for the unorganised sector to handle e-waste.

There are no incentives to encourage those engaged in waste collection to adopt a formal path to handle e-waste.

POOR AWARENESS AND SENSITISATION

Limited reach out and awareness regarding disposal, after determining end of useful life.

Only 2 per cent of individuals think of the environmental impact while disposing of their old electrical and electronic equipment.

RELUCTANCE OF AUTHORITIES INVOLVED

Lack of coordination between authorities responsible for e-waste management and disposal including the non-involvement of municipalities.

LACK OF RESEARCH

Not many institutions take research into the development and standards of hazardous waste management, environmental monitoring and the regulation of hazardous waste-disposal.

HIGH COST OF SETTING UP A RECYCLING FACILITY

Formal recyclers are slow to adopt state-of-the-art technologies to recycle e-waste due to problems in sourcing e-waste and also due to difficulty in making it profitable with high end investment in these superior and expensive technologies.

E-WASTE MANAGEMENT GROWTH DRIVERS

BASEL CONVENTION

The Basel Convention aims to control and reduce trans boundary movements of hazardous and other wastes including the prevention and minimization of their generation, the environmentally-sound management of such wastes and the active promotion of the transfer and use of technologies.

RISE OF FORMAL E-WASTE RECYCLERS

India has more than 100 registered recycling companies. A number of new companies and public-private partnerships are setting up recycle centres.

India's formal e-waste recycling sector is currently being developed in major cities.

EXTENDED PRODUCER RESPONSIBILITY

EPR makes manufacturers of electronic products responsible for the end-of-life management of their products. They have to set up collection centres and ensure that waste is recycled and disposed of in an environment-friendly manner. All collection centres, dismantling units and recyclers must register with State Pollution Control Boards and comply with their norms.

INDIA'S BIGGEST STRENGTH ITS POPULATION

Millions of waste collectors carry out door-to-door collection of waste and their livelihoods depend on their ability to collect and sell the waste to informal recyclers.

RISE OF PRIVATE SECTOR TOWARDS WASTE MANAGEMENT

Large Indian MNC's have started taking the initiative to manage their own e-waste either through PRO or by themselves by making and enforcing their own company's e-waste policy.

GOVERNMENT SUPPORT EXAMPLES

- E-Parisara in the formal sector in Bengaluru has been encouraged by the Central and State Pollution Control Board which would like it replicated in all major Indian cities.
- Vishakhapatnam government aimed at safe disposal of electronic waste and checks environment pollution through planting of e-waste bins and door-to-door collection.
- The Delhi government has authorised setting up of 37 e-waste collection centres across the city.
 - These centres will ensure that e-waste is segregated and recycled properly, with regard to the Government notified e-waste Management Rules.
- The city of Pune started the NGO Janwani as a social wing of the Maharashtra Chamber of Commerce.
 - The objective is to segregate and collect all the garbage generated by the ward. The NGO invested substantial efforts on creating awareness, logistics and training.
- To encourage proper disposal and management of e-waste, the Telangana government has announced the e-waste management policy.
- Maharashtra government started Ecoreco an e-waste collection drive.
- The government of Haryana will promote the development of comprehensive e-waste collection and recycling systems and their use by the state as well as private agencies for the disposal of IT and electronic products.
- To facilitate overall e-waste management, the government is implementing a scheme under which financial assistance is provided for awareness and capacity building activities relating to e-waste management.
- The Kerala government plans to raise Rs10 crore by disposing of around one crore kg of e-waste lying in state-run schools in the state.
- Under the e-waste management rules, a deposit refund scheme has been formed whereby the producer charges an additional amount as a deposit at the time of sale of the electrical and electronic equipment and returns it to the consumer along with interest when the end-of-life electrical and electronic equipment is returned.



AREAS OF COLLABORATION FOR UK COMPANIES

- Setting up a recycling unit
- R & D Programmes. By setting up Eco park under a PPP model
- Supplying new and innovative technologies to segregate e-waste
- Construction and managing collection bins for e-waste
- Collection depots and transportation techniques
- Testing technologies and automatic data destruction for e-waste

ENTRY SUPPORT

- 100 per cent foreign direct investment is allowed under the automatic route for urban infrastructure, including waste management, subject to relevant rules and regulations.
- Low entry barriers to waste management sectors.
- India's current lack of adequate facilities to manage waste streams against a huge demand from the local market.
- India undoubtedly requires more infrastructure, processes and expertise to manage its waste streams, a source of great potential for investors and private firms.

URBAN GATEWAY INDIA

WHO ARE WE?

India's cities are undergoing a massive infrastructure transformation. This poses a challenge to city authorities to find the world's best urban expertise. Businesses with that expertise are faced with making connections across India.

The UK India Business Council's Urban Gateway India addresses both these challenges.

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