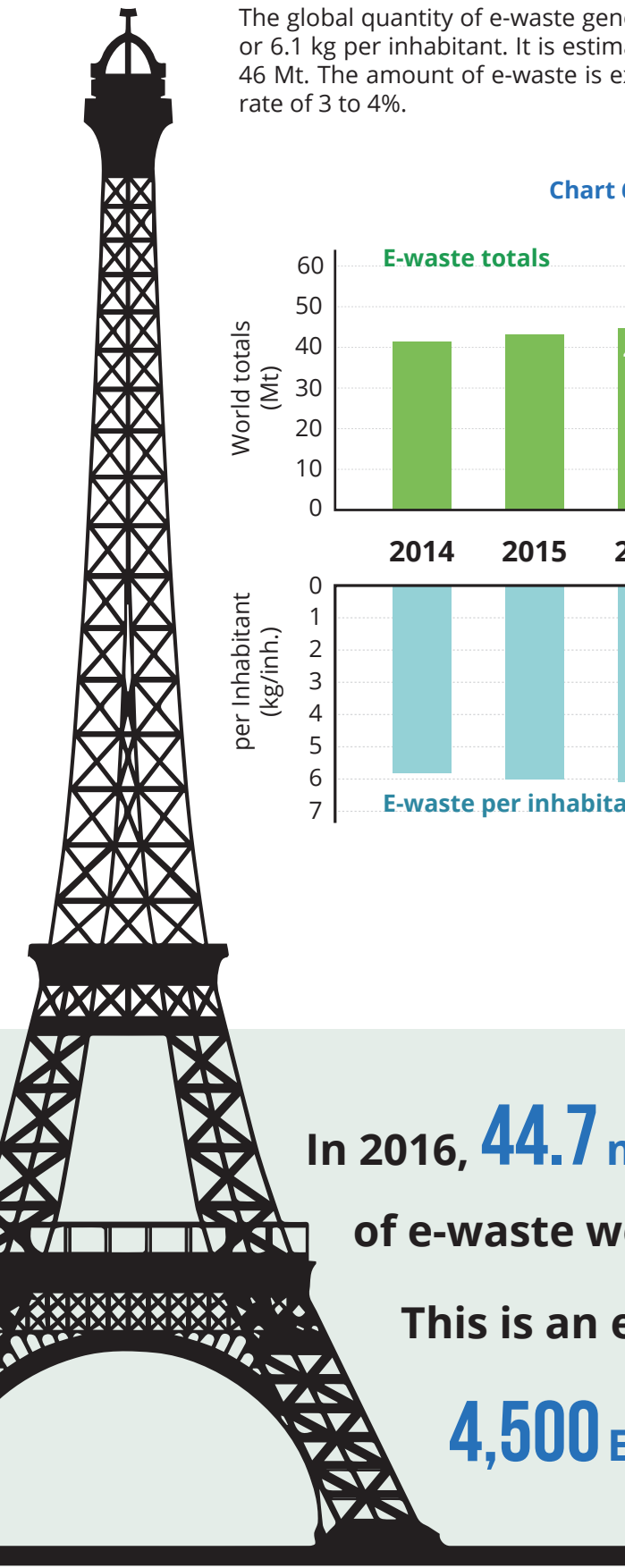


Chapter 6

Global E-waste Status and Trends

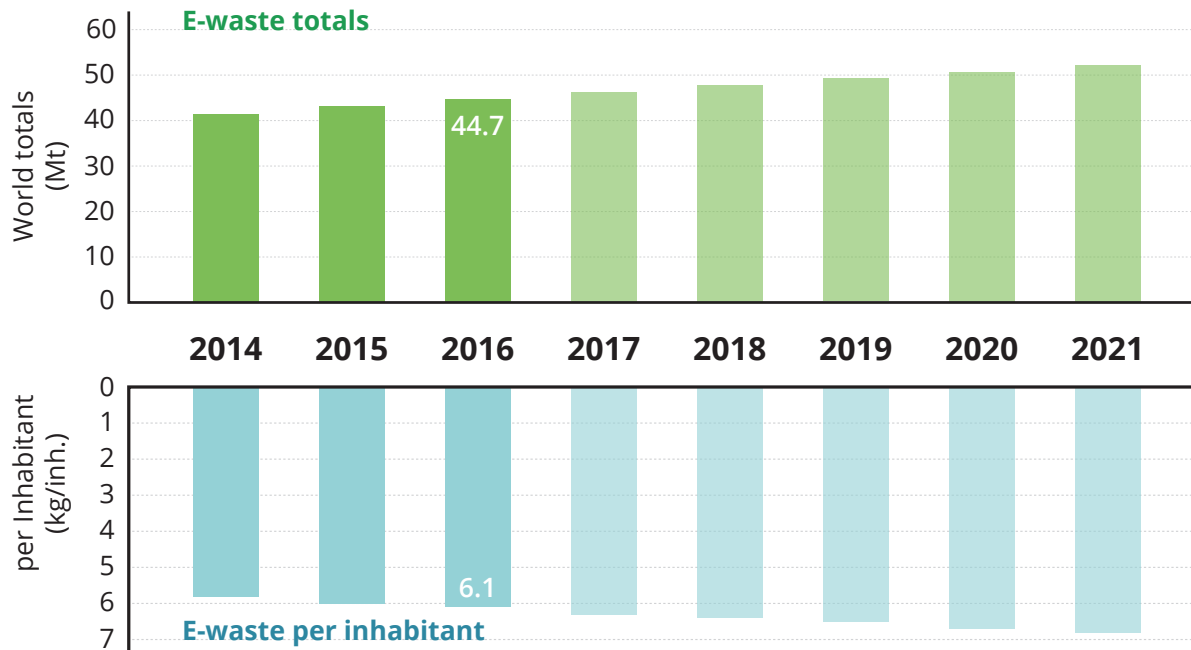






The global quantity of e-waste generation in 2016 was around 44.7 million metric tonnes (Mt), or 6.1 kg per inhabitant. It is estimated that in 2017, the world e-waste generation will exceed 46 Mt. The amount of e-waste is expected to grow to 52.2 Mt in 2021, with an annual growth rate of 3 to 4%.

Chart 6.1: Global e-waste generated



Note: 2017-2021 are estimates

In 2016, **44.7** million metric tonnes of e-waste were generated.

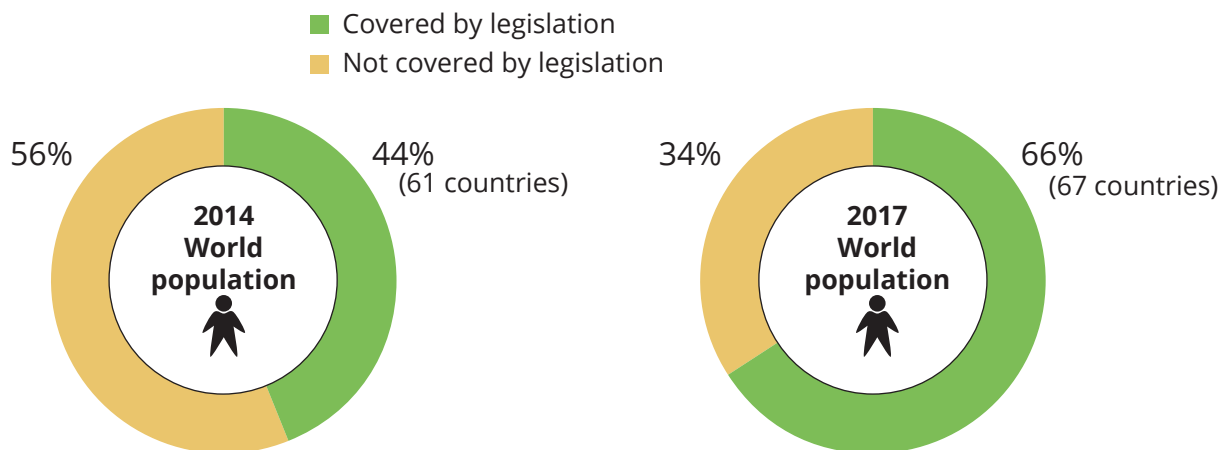
This is an equivalent of almost

4,500 Eiffel towers.

In January 2017, approximately 4.8 billion people were covered by national legislation, which is 66% (67 countries) of the world population. Improvements have been made since 2014, when only 44% (61 countries) was covered. However,

national legislation does not always translate to concrete action. In addition, the scope of products covered and targeted by e-waste laws may differ from the more comprehensive scope of products used in this report.

Chart 6.2: World population (and number of countries) covered by e-waste legislation in 2014 and 2017



Under the requirements of the legislation, at least 8.9 Mt of e-waste was reported as formally collected and recycled by an official take-back system. It is estimated that a total of 1.7 Mt of e-waste ends up in waste bins from the richest countries in the world.

A large majority of the e-waste is managed outside the official take-back system. Those flows are

not documented in a consistent or systematic manner. This, together with unreported data for the transboundary movement of e-waste (mostly from developed to developing countries), is likely to be the gap between e-waste generated that's officially collected and the e-waste in the waste bin. It is estimated that approximately 34.1 Mt of e-waste generated worldwide in 2016 is untraced and unreported.

Chart 6.3: Collection methods of e-waste in 2016

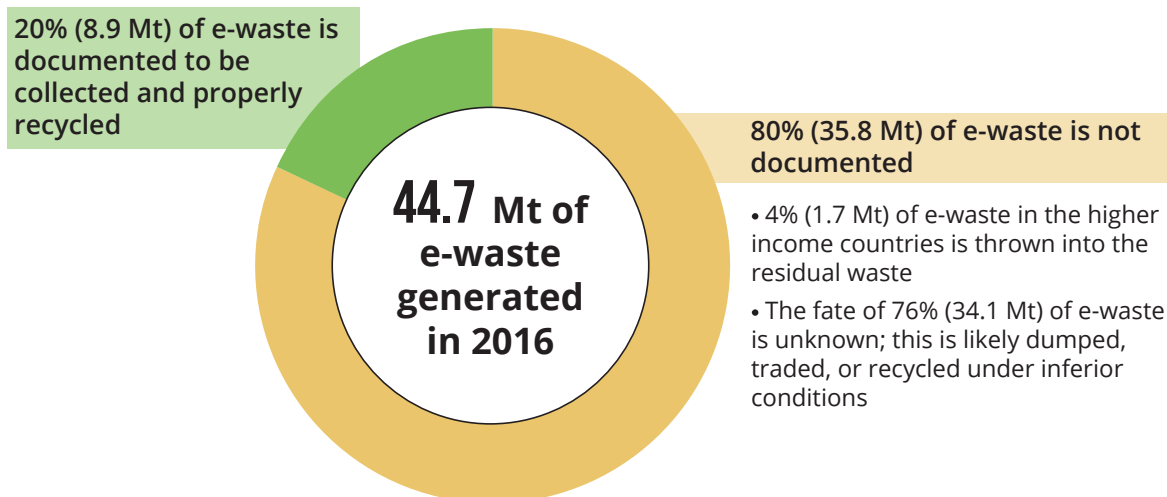
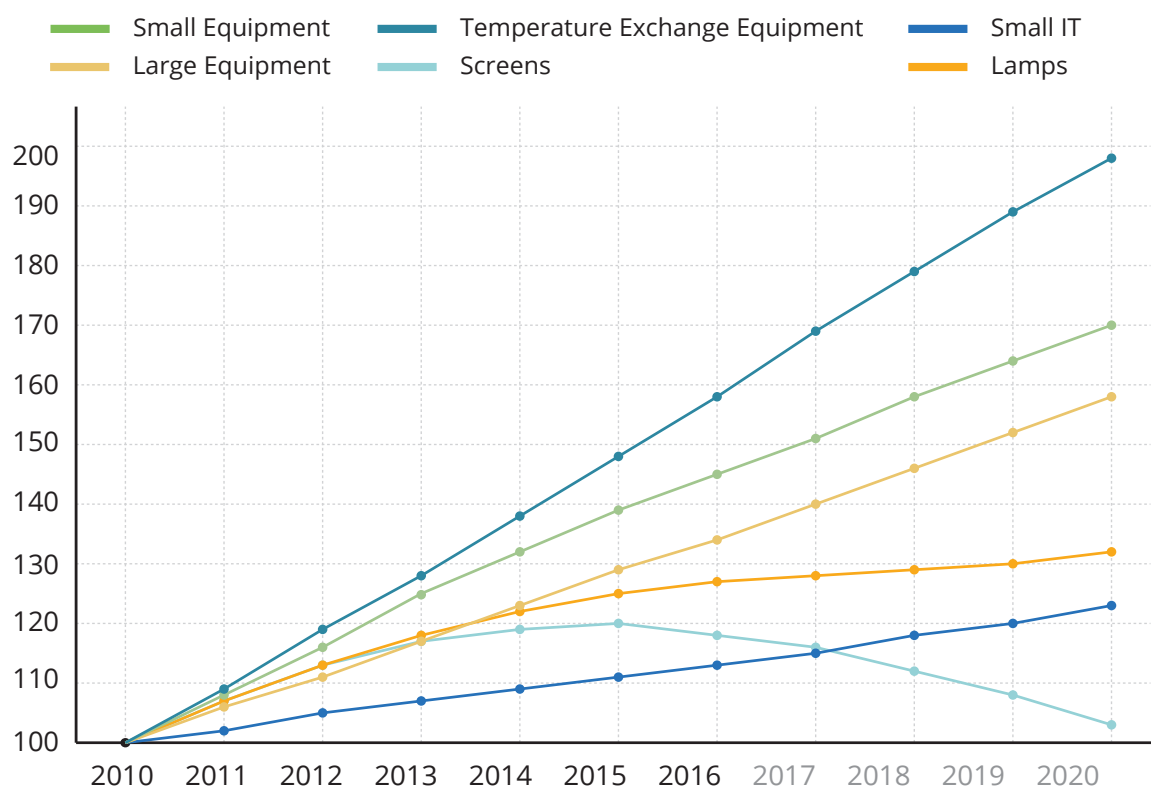


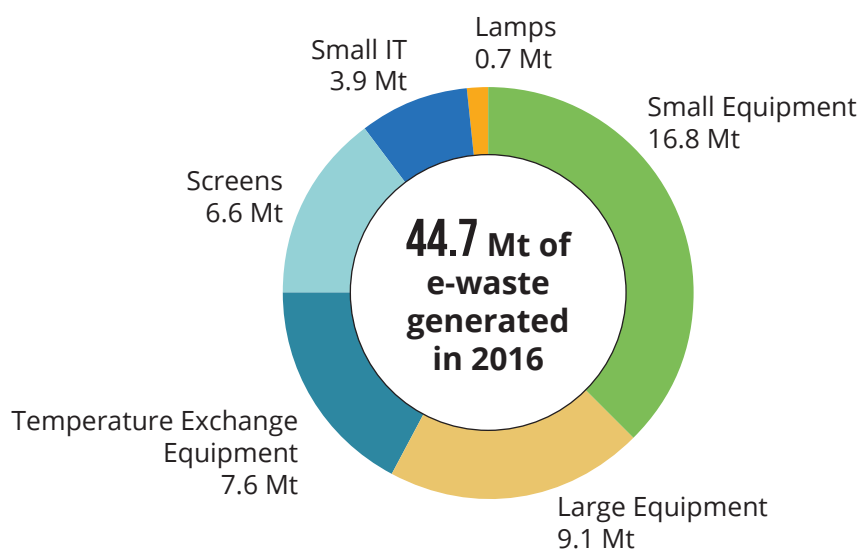
Chart 6.4: E-waste growth rates per category



Overall, the amount of e-waste generated per category is expected to grow in future years. However, the annual growth rate differs per category. It is expected that waste from temperature exchange equipment and small and large equipment will have the largest growth rates. As this is driven by growing consumption of those

products, it will improve the living standards in parts of the world. It is expected that waste from screens will decline in the years to come, due to the replacement of heavy CRT screens to flat panel displays. IT waste is expected to grow less quickly, due to the effects of miniaturisation.

Chart 6.5: Estimates of e-waste totals per category in 2016



The global quantity of e-waste in 2016 is mainly comprised of Small Equipment (16.8 Mt), Large Equipment (9.1 Mt), Temperature Exchange Equipment (7.6 Mt), and Screens (6.6 Mt). Lamps and Small IT represent a smaller share of the global quantity of e-waste generated in 2016, 0.7 Mt and 3.9 Mt respectively.

Table 6.1: E-waste generation and collection per continent

Indicator	Africa	Americas	Asia	Europe	Oceania
Countries in region	53	35	49	40	13
Population in region (millions)	1,174	977	4,364	738	39
WG (kg/inh)	1.9	11.6	4.2	16.6	17.3
Indication WG (Mt)	2.2	11.3	18.2	12.3	0.7
Documented to be collected and recycled (Mt)	0.004	1.9	2.7	4.3	0.04
Collection Rate (in region)	0%	17%	15%	35%	6%

In 2016, most of the e-waste was generated in Asia; around 18.2 Mt, or 4.2 kg per inhabitant. Approximately 2.7 Mt were documented to be collected and recycled.

Oceania generated the highest quantity for each inhabitant: 17.3 Kg/inh. However, Oceania generated the lowest quantity of e-waste in the world in 2016 at 0.7 Mt, and could only document 6% of its e-waste that was documented to be collected and recycled (43 kilotons (kt)). The European continent, including Russia, generated an amount of e-waste per inhabitant comparable to Oceania (16.6 Kg/inh). In total, the e-waste generation for the whole region is 12.3 Mt. Around 4.3 Mt of e-waste was collected to be recycled in Europe, showing the highest regional collection rate of 35% compared to

e-waste generated. The lowest amount of e-waste per inhabitant was generated in Africa; 1.9 kg/inh. The whole continent generated 2.2 Mt of e-waste, and with current data, only 4 kt were documented as collected and recycled; this is less than 1%. In 2016, the Americas generated 11.3 Mt of e-waste: 7 Mt for North America, 3 Mt for South America, 1.2 Mt for Central America. The whole continent generated 11.6 kg/inh. of e-waste in 2016, and approximately 1.9 Mt of e-waste documented was collected and recycled.

The difference of e-waste generated in developed versus developing countries is quite large. The richest country in the world in 2016 generated an average of 19.6 kg/inh, whereas the poorest generated only 0.6 kg/inh.