ego

TECHNOLOGY REGENERATION
ENVIRONMENTAL SUSTAINABILITY

TECHNOLOGY REGENERATION

Mission

Millions of tonnes of surplus technology are wasted every year. However, more efficient streaming technologies and other innovations are striving to make technology 100% reusable and recyclable. As a technology company focusing on reuse, our mission has never wavered.

From our earliest days, we have believed in reusing technology. We create the conditions for business and society to thrive hand in hand. With each passing year, we have deepened our commitment to this belief. As a result, we're a stronger company that is making a more sustainable impact on the reuse of IT.

We continually strive to do more with less, reducing the impact on the earth that we all share, whilst expanding and redefining the possibilities ahead.

Vision

To deliver regeneration solutions that adds value and security to our clients whilst protecting the environment.

Values

- Sustainable solutions
- Reducing CO_2
- Environmental protection
- Revenue generation

REUSE AND REGENERATION

A CLEANER FUTURE

The global pandemic continues to cause challenges and uncertainties, along with a noticeably changing climate that is devastating many communities and threatening the very future of the planet we all share. We are facing a period of great flux and whilst these are stark challenges that won't be overcome quickly, we are embracing them as positive catalysts for change.

If we can summon the courage and resolve to take ambitious leaps forward, the future may be uncertain, but it still provides great hope and opportunities. Our vision is always to be a truly good technology company. Immensely proud of the work we do, this review highlights the progress we are making towards our goals.

Over the last 30 years the technology industry has witnessed the most extraordinary growth in the development of new technology. In the wake of the Covid 19 challenges, the move to remote working meant, over 250 million laptops were manufactured. This makes the IT industry responsible for as much greenhouse gas pollution as the entire airline industry. This equates to the IT industry contributing 2% of global carbon dioxide (CO_2) emissions.

The environmental impact of IT is set for a reset with governments and industries worldwide keen on redressing the balance. Becoming aware of how everyday activities affects the environment means that we can make a positive change to lower our carbon footprint.

There are some simple solutions to reducing CO_2 emissions which don't require a huge shift in process or mentality. We examine one of those solutions in the reuse of technology and how this can reduce the corporate carbon footprint by embracing a sustainable IT regeneration program.

The carbon footprint is the total greenhouse gas emissions (carbon dioxide CO_2 and methane CH_4) of a defined activity.

"We are united by our ambition to reuse technology that supports human progress and protects our environment "

LAPTOPS

How much CO2 does a laptop produce?

The average estimated carbon footprint of a laptop is around 422.5 kgs, which includes the carbon emissions during the production, transportation and first 4 years of use.

It should be noted there is a large variation in CO2 emissions depending on the manufacturer, size of laptop and how often it's used. In all manufacturers' estimates they suggest their CO2 could be +/- 15 to 20% due to the uncertainty of their calculations.

Manufacturing
Through the research of 230 specific laptops, it was discovered that the average CO2 emissions during production of a new laptop is 331kgs. This means that 3 new laptops produce roughly a tonne of CO2, filling around 19,000 cubic feet, which is similar to filling an entire 3 bed house with CO2 equivalent.

The Build
The majority of emissions stem from the production and materials used for the motherboard, SSD and display and is actually credited with 75% – 85% of the overall carbon footprint. During this process there is also an average of 190,000 litres of water used and 1,200kgs of earth dug and mined. The components of a typical laptop also routinely contain mercury, lead, chromium and other heavy metals that provide power and maintain functionality.

Shipping
Transportation is another key factor that adds to the carbon footprint of laptops. The emissions caused by vehicles in the supply chain massively impact Scope 3 (supply chain) emission.
Currently, the timescale and risks associated with road and sea freight are considered too slow and precarious. 6%-12% of CO2 emissions are accrued from the Air freight transportation of the devices from the country of origin.

Carbon footprint during use of a laptop
To measure the carbon footprint of a laptop, it is important to consider the entire lifecycle which includes everyday use. The lifetime of a laptop is estimated to be 4 years and it's assumed that laptop is used 6 - 8 hours per day. The energy consumption use varies quite significantly, as most manufactures state that estimates are uncertain. Nonetheless, for the laptops we process, HP generally has the lowest footprint during use, which is around 32 kg of CO2, and the Lenovo T450 has the highest at 91kg of C02.

Indirect carbon footprint concerns
It is important to acknowledge that using the internet has its own carbon emission issues. Browsing online is not 100% green and the 'Cloud' is a range of large data centres that require a great deal of energy to power and cool down.

Regeneration
It is also important to keep the laptop's end of life or opportunities for reuse in focus because of the environmental saving. In terms of carbon footprint, the reported CO2 emissions are negligible from almost every manufacturer. We can confirm for our reports that 0.00018 kg of CO2 is used in refurbishing a laptop which saves a massive 331kg of CO2 against a production of new device.

The benefits of refurbishing and releasing devices for reuse have an extremely positive effect on carbon offsetting for a business. There is also great social value in providing access to refurbished low-cost internet access to schools, hospitals and users at home and around the world.

MOBILE TELEPHONES

What is the carbon footprint?

Taking total carbon emissions' figures from across all storage capacities since the iPhone 4S. The lifetime carbon footprint of an iPhone works out to be an average of 76.51 kg of CO2. per device.

However with a record 15 billion phones in circulation and estimated 250 million iPhone units from Apple alone, this changes the entire picture. It is estimated that there was megatons of CO2 created in 2021. It is therefore safe to say, that the overall environmental impact of iPhones is significant and reuse is essential.

The bulk of the carbon footprint associated with smartphones is actually buried once again in the manufacturing chain. In fact, more CO2 emissions are generated by the manufacture of smartphones than most consumers create after buying them

To identify the carbon footprint of their products, many of the biggest smartphone manufacturers have been content with the traditional approach of measuring the greenhouse gas emissions of their production facilities.

However, that only measures the gases produced by the manufacturing of the device and does not account for the suppliers, logistics and the operation of the stores where the phones are sold.

All smartphones contain hazardous materials like bromine, chlorine, lead and mercury. More than 1,000 components are made of metals like gold, tin, lithium and tantalum, which, although not poisonous, cause huge damage through land degradation and mining.

EGO REUSE AND RECOVERY 2021

100	
75	
50	
25	
0	
Reused devices	Harvested devices	Sent for Refining
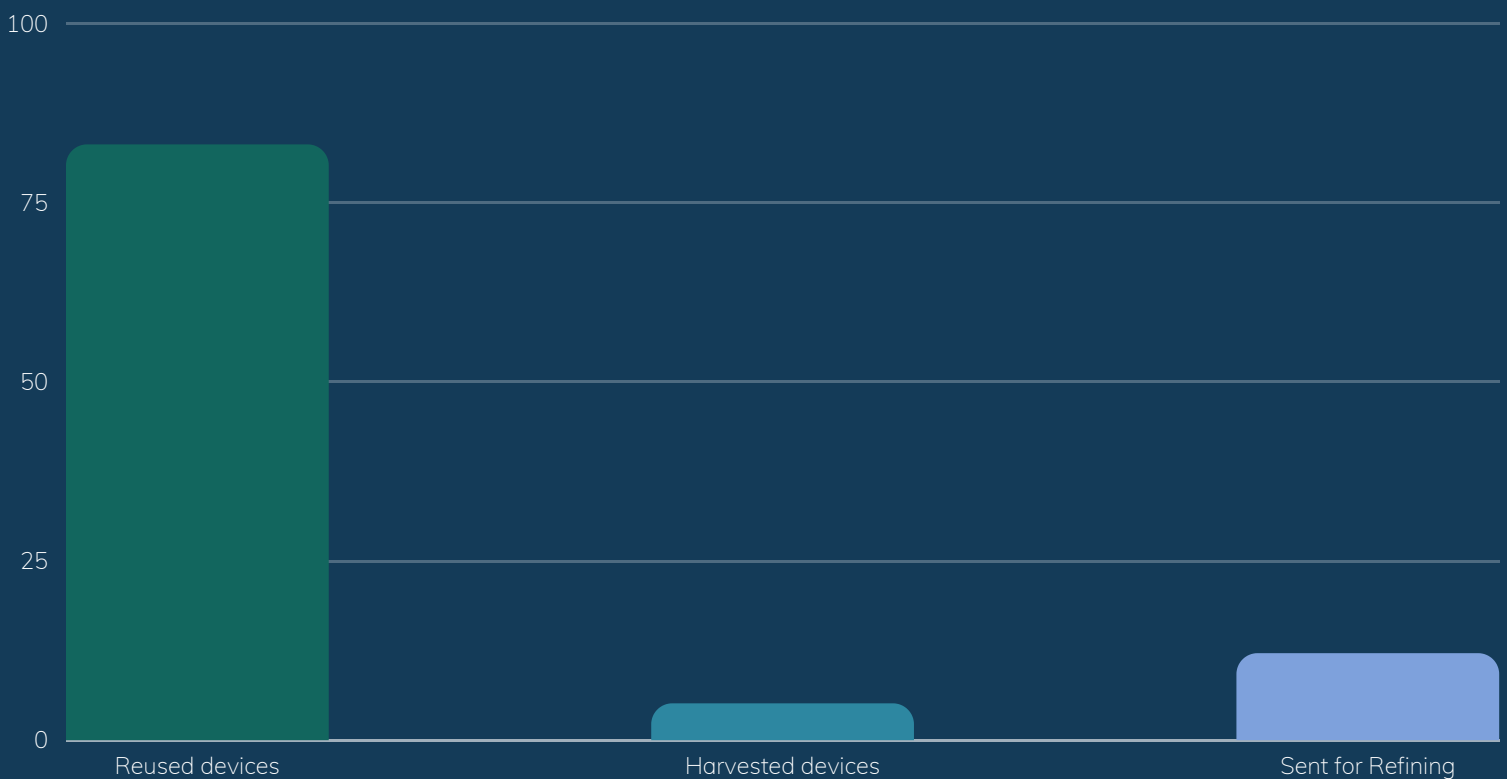
A sustainable future

More efficient streaming technologies and other innovations are striving to make technology 100% reusable and recyclable.

For every 100 tonnes of waste electronics sent for refining, refiners report an average of 4% of incinerator fly ash produced. This is after the recovery of the useable components and materials which have been removed from the devices.

Steps towards using this fly ash in the manufacture of items like cinderblocks and aggregates are being investigated but this awaiting authorisation by the Environmental Authority (EA). Manufacturers are being encouraged to redesign devices to make them completely recyclable.

Working with nature

Everything we value ultimately comes from nature and everything we do impacts upon it. Our goal is to make reuse not only good for business but also great for the environment.

The challenges are complex, but the philosophy is simple. By working together we can always achieve more. Today, our passions remain focused on the areas where we can make the biggest difference: reuse of resources.

The best reuse practice

We think that great innovation should leave a mark on the world not the environment. Our work helps recover values, protect the environment and natural resources with secure global circle reuse and recovery methods .