Personal Development Resources

Understanding if it is more sustainable to recycle old computers or give them away

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In this quick guide we aim to provide an overview of the 7 Key Themes to ESDGC relating to the above topic

1. Choices & Decisions

The choice is between a range of options, not just either/or. Each choice would have different implications. More detailed information might be needed, such as: how are they being recycled?

What are the health impacts on the workers or the environment? If you are giving them away how is the recipient using them? Is there a viable alternative? Do we need to upgrade computers so often?

2. Identity and Culture

What is the impact on other cultures and on our own?

Computers can be refurbished and sent for reuse in schools in the developing world. In the last 7 years Computers for Schools Kenya has supplied around 30,000 computers to 1,000 education establishments in Kenya, helping to enrich the lives of children in poverty, and playing an important role in teacher training, and in medical and technical education.

Computer Aid International also comply with all regulations and arrange reuse wherever possible.

However in other places, computers are recycled in backstreet sweat shops by children, using no protective clothing, and working long hours for little pay.

3. Wealth and Poverty

Does this product have a beneficial or detrimental effect on the distribution of wealth locally and globally?

Many of the components of e-waste are valuable and are a resource worth recycling, and the export of e-waste to the developing world is an important part of many economies, providing employment, and supporting many small businesses. However, often workers are exploited and suffer health hazards from this work.

There are some businesses recycling e-waste in the UK, where the separation of components is done mechanically rather than by hand. The largest facility in the UK is at Billingham on Teeside.

Computers can be donated for re-use in the UK, often to local organisations.

4. The Natural Environment

What is the impact on the natural environment locally and globally?

It is estimated that two thirds of the toxic heavy metals in landfill sites come from electronic waste, and Britain produces more than 1 million tonnes of electronic waste per year. Most of this goes to landfill, where it can seep into the surrounding environment, affecting wildlife and water courses.

It is now illegal in this county to send electronic waste to landfill (WEEE directive on electronic waste), but in practice it still happens, and waste that is sent abroad also often ends up polluting the natural environment.

Computer waste that is exported to the developing world and salvaged in back street workshops can be dipped in acid to remove the copper. The resulting sludge is then disposed of in the local environment, polluting streams and rivers. Some waste is burnt to melt off the heavy metals. The resulting fumes pollute the atmosphere, and are damaging both to human health and to the environment.

5. Health

How does this product affect health locally and globally?

The toxic waste that affects the environment also affects the workers in the unregulated recycling industry.

6. Climate Change

How does the production and use of this product affect the climate? What is its carbon footprint?

According to Computer Aid International 'Reusing a computer is 20 times more effective at saving life cycle energy use than recycling it. Given the substantial environmental cost of production, it is imperative we recover the full productive value of every PC through reuse before eventually recycling it to recover parts and materials at its true end-of-life.'

7. Consumption & Waste

Is this product made from finite or renewable resources? How can it be recycled at the end of it's useful life?

Computers and other e-waste contain a range of valuable metals even including gold, but also mercury, cadmium, nickel, copper to name just a few. Some of these metals are becoming in short supply, and all are finite resources. It has been suggested that at some point in the future we may have to resort to mining landfill sites to retrieve these materials, because they are present at higher concentrations in landfill sites than in the few remaining mining deposits.

These materials can be recycled.

Conclusion

On balance at the moment our expert would:

If possible find someone who wants your computer and will use it, either locally or at an organsiation like Computer Aid International. If it has completely passed its useful life recycle it with a reputable company.