Refurbished Digital Devices

The Future of the Circular Economy

Wisetek™

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Introduction

Over the last few years, the circular economy has started to come out from beneath the shadow of the linear economy. The idea that recycling, reusing materials and reducing waste must be a consideration when upgrading consumer goods has not only given people pause for thought, but has translated into a small, but growing force for good.

Changing peoples' behaviour at such scale is a mammoth task. Since mass production of industrial and domestic appliances started in the 1950s, the idea of planned obsolescence has been hard-wired into products and also the minds of consumers. As consumers we look forward to getting rid of old products and buying shiny new ones. Slick advertising campaigns herald the features of new products and almost 'shame' people into upgrading to devices which they don't need, just because they are new.

The linear economy, which is based on a 'take-make-dispose' model, forms the basis of our spending patterns and as a result, has very powerful vested interests.

Yet the philosophy of the circular economy has taken root. According to Chatham House, governments, companies and private financial institutions invest over $1.4 trillion a year in the circular economy[i].

While this might sound plentiful, it still accounts for only 4% of the $35 trillion spent on the linear economy.

From an IT Asset Disposition (ITAD) perspective, preventing e-waste is central to the transition to the circular economy as little as 17% of such waste is actually recycled in formal recycling centres with worker protection[ii].

In the future, refurbished devices are a vital part of the circular economy.

In this Whitepaper, we will discuss:

1. The Growing Problem of E-Waste
2. Refurbished Devices and the Circular Economy
3. IT Asset Disposition and the Circular Economy
4. Conclusion

1. The Growing Problem of E-Waste

At a G7 Summit held in the UK, a thought-provoking sculpture was unveiled to the attendees - world leaders from each of the G7 countries in attendance were sculptured out of e-waste in an art project entitled 'Mount Recyclemore'[III].

By creating the artwork, artist Joe Rush wanted to draw attention to the problem of e-waste to the visiting politicians. However, while he expects politicians to play their part, he also noted that e-waste is 'a problem that the human race has to deal with.'

According to Rush, electronic devices need to be reusable, recyclable or just longer lasting because the 'stuff is going into landfill.'

As a protest in front of an influential audience, Mount Recyclemore certainly got the headlines. But it also focused on one vital point in the e-waste debate. It's not just up to politicians to drive the circular economy, the public have to play their part too.

E-waste is the fastest growing sector of waste on earth. In 2019, a record 53.9 million metric tonnes were generated worldwide, which was up by 9.2 million metric tonnes over five years.

The Telecommunication Development Sector (ITU-D) estimates that by 2030, this figure will be 74 million metric tonnes, all fuelled by increased electric and electronic consumption rates, shorter lifecycles and limited repair options[IV]. In summary – keeping with the principles of planned obsolescence and the traditional linear economic model.

Some territories are trying to tackle e-waste by introducing right-to-repair legislation. In the EU, new rules were introduced that mean certain electric goods sold in the EU need to repairable for at least ten years.

The aim is to encourage manufacturers to make durability and repairability a part of product design – and to stop people disposing of products just because one part may be broken[V].

While this is a step in the right direction, it only covers machines, hairdryers, refrigerators and televisions; future legislation will cover smartphones, laptops and other devices.

Curiously, France has adopted a 'repairability score' which details how easy a device is to repair and will help consumers to buy a product knowing that it can be repaired to a certain degree.

Nevertheless, legislation takes time, manufacturers are slow to adopt, and e-waste continues to pile up. That's why business and consumers alike are looking at the emergence of the refurbished devices market.

2. Refurbished Devices and the Circular Economy

We all know people who are good with their hands and have the ability to follow YouTube videos to fix all manner of household items. Tinkering with things is a hobby for a certain type of individual and while there are thousands of videos out there which will teach you how to mend broken devices, it's not for most people.

The reality is that fixing electronic devices is a professional skill. The recognition of this has spawned a fast-growing sector of consumer goods called the 'refurbished' market. This market is set to grow by around 12% by 2025 and is driven by 'improvements in methods of collection, grading, repairing, and online/offline selling[VI].

Other positives for the refurbished market are that devices are often sold with warranties and you can also insure them if you have proof of purchase.

Such differences detail the subtle but important distinction between the refurbished market and the traditional 'used' or 'second-hand' market. For example, a refurbished smartphone has been professionally tested, repaired with equivalent parts if required, and sold under a scale typically ranging from New to Good.

This is a long way from second-hand and as a result, a game changer for the circular economy. Refurbished devices act as a bridge between manufacturers who are reluctant to encourage their products from being repaired and lasting longer and consumers who are aggrieved because they feel that they are being forced into a constant cycle of unnecessary upgrades and contracts.

The Ellen MacArthur Foundation has been campaigning on this issue for many years. When it comes to the circular economy and consumer electronics, their vision is as follows:

"In our vision of a circular economy, consumer electronic products are loved for longer. They are kept in use for as long as possible, either by the original user, or flowing to new users who will find new value and utility in them. Eventually, devices end up in the hands of specialists, who will professionally refurbish products, reuse or remanufacture the valuable components inside, and separate and recycle materials.[VII]"

2. Refurbished Devices and the Circular Economy

This vision is further expanded in four specific ways

1. **Electronic devices are loved for longer and by more than one owner**. People want different features from their devices; if one person wants to upgrade a phone for a specific reason, their existing phone will undoubtedly suit another user.

People with children are used to 'hand-me-downs' when it comes to clothes. The same should apply to devices. Unwanted devices should be passed down to others and not destined to a landfill.

2. **Devices and the cloud**. With more power available in the cloud thus freeing up demands on devices, items like memory should not be a reason to change your device as the cloud can scale up when you need it. With the cloud in mind, devices should become simpler, less dependent on upgrades and more of a portal to the cloud than a standalone device.

3. **Consumers get the service they need**. The circular economy believes that there is always utility in an electronic device; this utility should be matched with the consumers who need it and have the budget for it. This way, devices and parts remain in circulation as long as possible.

4. **Products and components are cascaded**. Where possible, older devices should be refitted with parts from higher-end devices, the idea being, that the latest technology 'flows' down to older models, while eventually being responsibly recycled.

As mentioned earlier, to facilitate this aspect of the circular economy, the ability to refurbish devices at scale and supply the global electronic market is required. This is why a commitment to refurbished assets must be embedded in your IT Asset Disposition (ITAD) strategy.t

3. IT Asset Disposition and the Circular Economy

IT Departments in many organisations have changed dramatically over the last decade. The ability to develop apps and move to paperless processes, along with the constant threat of cybercrime, have given such departments a leading role in companies.

However, while the ability to rollout software and revolutionise work practises - remote working, for example - has been a phenomenal contribution to the corporate world, gone are the days when IT staff are physically tinkering with PCs and devices.

This is due to both the reduced cost of equipment and the temptation to buy instead of fix, and also the specialised nature of certain devices. We are no longer sitting in front of traditional desktop PCs with their easy access and willingness to swap out parts.
Instead, we're working with a variety of devices from smartphones to tablets, and from PCs to laptops.
Embedded within your IT Asset Disposition (ITAD) strategy, should be a commitment to align your organisation to the circular economy by instigating a series of processes.

1. Physical Audit of IT Assets

While there are network crawlers and software which can detail the location and certain aspects of a device, nothing can replace a physical examination of an asset in terms of ascertaining its actual condition but also its value.

As this has been complicated by new working practices, it is important that your ITAD partner has the ability to go onsite and to visit places where people are remote working. By tracking all devices, you will not only have a clear idea of your inventory, but you will know what devices are reaching their End of Life (EOL).

2. Refurbish

On an asset-by-asset basis, your ITAD partner will examine and test your devices. The core principle of the circular economy is that all items have 'utility' and that they are of value, if not to you, but to another user.

By swapping out parts or buying parts on the 'as-new' parts market, devices can be kept in circulation longer which means less environmental impact and lower costs for organisations.

3. End of Life (EOL)

If and when a device reaches its EOL, it doesn't have to go to the recycling centre and possibly end up in a landfill. Local schools and community organisations, and charities which specialise in sending devices to developing countries, are all possible recipients that would happily receive the device.

And failing that, devices should be recycled in line with the highest standards to ensure that there is no danger to human health and the environment.

Only a professional and certified ITAD provider has the necessary skills to refurbish IT assets. Such is the range of devices and tests, parts and quality control that are required, a properly refurbished device stops being merely a 'used' good but the obvious choice from any company's perspective, both financial and practical.

3. IT Asset Disposition and the Circular Economy

Buying refurbished devices

Likewise, when all the parts and assets that have been in circulation within a company have 'cascaded' downwards and new stock is required, organisations must stick with their alignment to the circular economy and buy refurbished devices.

1. Fully functional

A professionally refurbished device is as fully functional and operational as a new device, once it has been refurbished to the highest standards. For most corporate users, and the day-to-day tasks they undertake, refurbished laptops, for example, are more than adequate to perform their daily work. Also, guarantees are in place if anything goes wrong.

2. Cyber protection

When you buy a refurbished device, you are not buying the 'history' of the old user. All refurbished devices are sanitised before they are sold which means that all apps which hitherto had been in use, have been removed. This clears any malware or untrustworthy apps that might have been installed on the device and thus renders it 100% secure.

3. GDPR

In the same way that refurbished apps are cyber protected, all data and files are wiped from refurbished devices which means that if you are getting a device refurbished you don't have to worry about your data and any GDPR implications; and likewise, if you buy a refurbished device, you will not be the recipient of someone else's data.

While refurbished devices are helping the circular economy, they are also helping your bottom line. For example, you can expect to save up to 40% on items such as laptops, and 10% - 30% on smartphones.

4. Conclusion

The importance of refurbished devices to the circular and wider economy cannot be overstated. While it's hard to imagine that a simple choice such as buying a refurbished smartphone has a big impact, our collective behaviour as consumers has influenced and continues to put pressure on legislators to try to force manufacturers to make devices longer lasting and easier to repair.

Presently, while devices can be refurbished, they can only be done, at scale, by professional companies who have the experience, equipment and personnel dedicated to the required task. Due to this, for the foreseeable future, the refurbishment of devices will always be outsourced to such niche companies.

At Wisetek, we have over a decade of experience in ITAD processes. This experience is perfectly suited to refurbishing assets for our customers, but also supplying them with refurbished assets too.

By incorporating the circular economy into your ITAD strategy, your existing assets are not only working products which you depend upon, but also 'resources' which you can use in the future, and which will subsidise your other devices.

As **Walter Stahel** said, *"The goods of today are the resources of tomorrow at yesterday's resource prices.*[VIII]*"*

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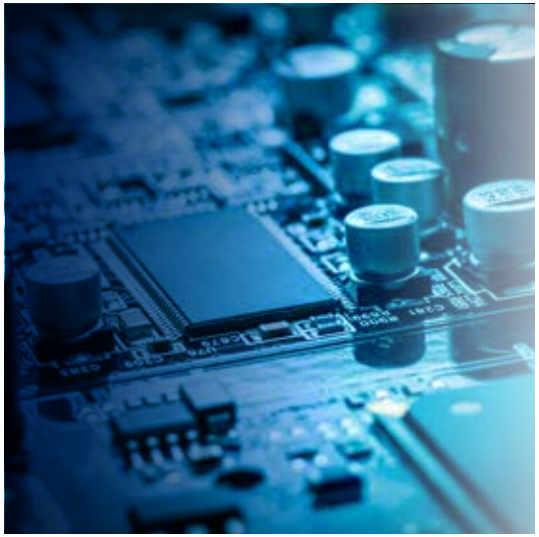

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