

Are IoT devices just more gadgets destined for landfill?

Remember Google Glass, smart fridges and personal air filters? These IoT devices that were once hot commodities are now likely part of the rising tide of e-waste.

For companies increasing their dependence on IoT to achieve sustainability, they must avoid this obsolescence by aligning capabilities with needs, extending the lifecycle of these devices and embracing the circular economy.

The circular economy isn't actually a circle. Instead, it is a set of pathways that reduce dependence on raw materials and emissions from production. The 'circle' part comes from the closed loop of reusing what we already have in circulation.

There will be **40 billion** IoT devices in circulation by 2030¹

Circularity is achieved through:



IoT devices have another sustainability pathway: redeployment.



Effective redeployment means changing the use case of the device at the end of its intended lifecycle. Let's look at the sectors making this work:



AgTech

As data needs change based on crop rotation, so does the required IoT ecosystem.

The thriving IoT device resale market allows farmers to trade humidity and nutrient sensors without incurring the heavy cost of purchasing new devices.



Healthcare

The Samsung Upcycling initiative turns old phones into IoT devices.

The phones are repurposed for new uses such as medical devices capable of screening for eye diseases or remote patient monitoring.²



Manufacturing

Legacy IoT devices get a new life through edge computing.

Vibration sensors that indicate when maintenance is needed can provide customised analytics for greater insights into production lines when connected at the edge.³

New IoT devices can also be created from old hardware such as phones, computers and routers:

Reusable components

Redeployed as IoT devices



Avoid a cyber attack from dumpster diving

Where does your e-waste go? In some cases, it ends up straight into the hands of criminals. The waste management chain provides criminals multiple opportunities to extract sensitive data from disposed devices. Data-cleansing the devices and keeping them out of landfills protect these valuable assets.



Powering the prolonged IoT lifecycle - Network at the edge

Utilising new and repurposed IoT devices increases the network demand, meaning careful management at the edge is essential. Edge computing is built for scale, as it handles data processing close to the source, minimising the need for data to travel to centralised processing centers.

Sustainability-conscious companies can add IoT devices without worrying about increased network and processing pressure.

- Low latency**
- Ultra-fast data speeds**
- Network reliability**
- Deeper insights**

Sustainability is a journey, not a destination. Ready for tech-driven sustainability?

Contact us

References

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