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This summer marks the iPhone's 10th anniversary. It's a significant indication not just of the pace of change in the technology and gadgets themselves, but also of how they have become such an indispensable part of everyday life in the last decade.

Phones initially became smaller, then grew bigger. TVs slimmed down as cathode ray tube (CRT) sets were phased out, and plasma gave way to LCD and LED – TVs are now slimmer, lighter, and brighter. We've gone from CDs and DVDs to digital downloads, streaming and HD entertainment hubs.

Evolution and revolution both play a factor in the how the 'digital home' now shapes

## The mobile age

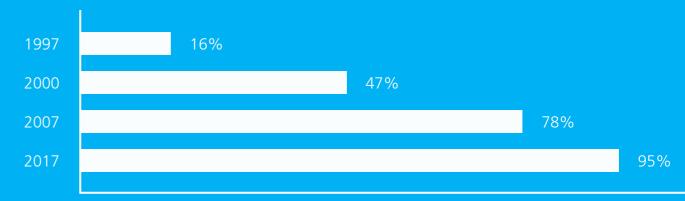
In today's connected world, we're tuned in almost 24/7: a phone, tablet, or screen is often over 95% of UK households – that's 24.7 the first and last thing we see each day. We may even glance at a screen in the middle of the night, when some notification or another interrupts our sleep with a beep or vibration. With the average user checking their phone over 100 times a day, our social and working lives merge. This offers the benefits of flexibility, but makes it difficult to switch off.

Unsurprisingly, more and more people are becoming connected. Mobile phone ownership has rocketed from just 16% in

1997 to 78% in 2007, and now stands at million phones. If we assume two phones per household are changed every two years, it adds up to an eye-watering 247 million phones in the last 10 years.

"There have been a number of high profile initiatives to raise awareness of the value and importance of recycling small devices like phones, but many still end up in drawers, under the bed, in the loft, glovebox or even the bin, going straight to landfill," observes Nick Purser, ERP UK Communications

Manager. "It's an increasing challenge not just here in the UK, but globally. In fact, it's a challenge that has led to projects looking at the feasibility of collecting and recycling the precious elements and scarce resources used in these devices – for example, the Critical Raw Material Recovery project which ERP is supporting. Industry is trying to adopt a more circular approach, but we're still reclaiming only a tiny fraction of the diminishing raw material supply used in manufacturing."



Mobile phone ownership in UK housholds (%)

Another technological change that illustrates the way this world keeps changing has taken place in lighting. From incandescent bulbs to compact fluorescent bulbs (which were massively promoted at one point) to LED today: we've seen a three-generational change in lightbulbs in a decade."

**John Redmayne** ERP UK General Manager

## The internet revolution

Perhaps one of the biggest changes effecting product replacement in the last decade in the home, and throughout the recycling system, has been the switch from chunky CRT TVs to sleeker and slimmer flat screens. Replacement was driven not by need, but by desire for a new experience. This resulted in increased recycling both through retail trade-ins and at local authority recycling centres.

"The move from CRT TVs to flat screens drove change throughout the system. We had to change how waste was collected, stored, and sorted at local authority level, and in the decommissioning and separation of elements carried out by our partners further along the chain," explains John Redmayne, ERP UK General Manager.

The combination of higher quality, higher resolution screens in the home was accompanied by a shift in the way users accessed and consumed films, music, gaming, and TV content over the last decade – which was largely dependent on internet access.

More and more households got on board:

in 2016, 89% of homes in Great Britain (23.7 million) had internet access, an increase from 86% in 2015 and 57% in 2006. Subsequently, streaming and subscription services exploded, and users gained greater control of how and when they consumed content. Simultaneously, faster broadband coverage spread out from metropolitan areas across the entire country, giving even more flexibility to customers outside urban areas.

In homes across the UK, consoles and TV boxes replaced DVD players, in the same way that VCRs became extinct a decade prior. Multiscreen homes are increasingly common, with each family member streaming personalised content to phones, tablets and TV screens at any given moment.

"Regular internet use continues to rise, with more than 8 in 10 people going online almost every day in 2016."

Kate Davies, Surveys and Economic Indicators
Division. Office for National Statistics







## **Consumer trends and future challenges**

Our love of digital devices won't change anytime soon, and the trend of increasingly digitised homes is growing. Further developments in Internet of Things (IoT) will be a driving factor – the ability to control the tech that automates tasks remotely. We can already control household functions like heating, lighting, and hot water from outside the home via apps. And we can sync across multiple devices – our phones, tablets, computers, smart TVs, and wearables can all speak to each other and exchange key information. That may be great for busy homeowners, but the home's increased digitisation only increases pressure on the scarcity of critical raw materials.

While an increasingly digitised world has its consumer benefits, it presents a unique recycling challenge. We are amassing more and more EEE in our homes, most of which is far smaller than a chunky CRT TV or washing machine.

These concerns are echoed by WRAP (Waste & Resources Action Programme), a UK charity that works with businesses and communities to achieve a circular economy through resource efficiency. In July 2017, a WRAP survey concluded that 8 in 10 households are interested in returning used electricals to retailers through take-back and trade-in schemes, and highlighted that half of customers are willing to buy quality used products from major retailers. If customers are willing, then the rest of the industry needs to respond.

Given that the UK places close to 2 million tonnes of EEE on the market each year – a figure that's set to increase – there's a clear need for change. WRAP suggest that through the increased amounts of 12 to 18-month-old products discarded for newer models, retailers

and brands can capitalise by creating a market for second and third users, continuing to profit from their products beyond first use. They've set an example in supporting retailers to meet the challenge, partnering with Argos, Dixons Carphone and John Lewis to roll out and trial gadget trade-in at stores. Hopefully, embracing closed-loop systems will become a trend within the electronics and retail sector.

Treating EEE as an asset and a resource is both a big challenge and opportunity for the future. EEE contains valuable materials that can be used again if recycled correctly. ERP CEO, Umberto Raiteri believes youth and developing a culture of recycling is the answer: "The younger generation is key, once they are convinced, they remain convinced forever and become champions showing the way to parents and wider communities."

ERP has played its part to date, with numerous awareness initiatives targeting younger people, such as 'Junk Kouture' and 'Make Noise'.

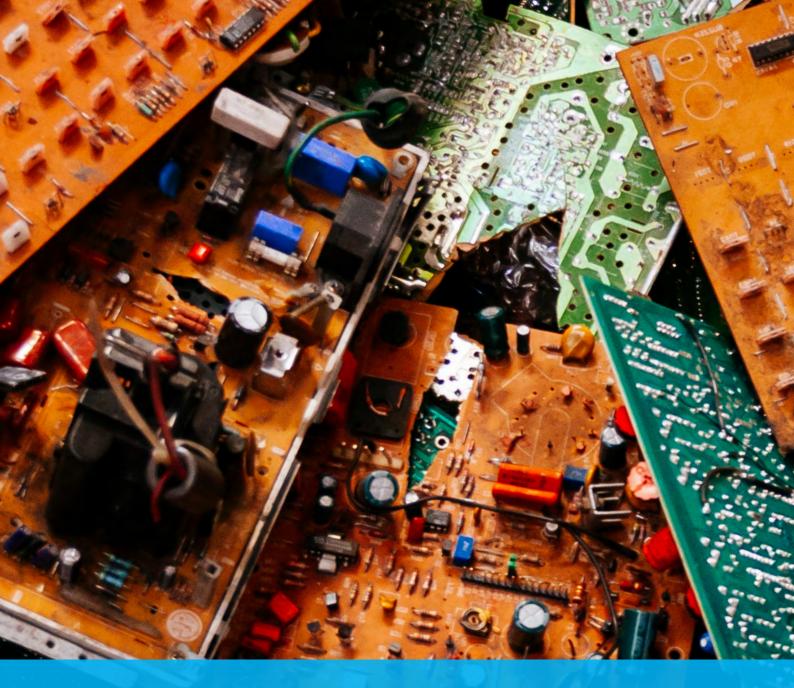
And connecting on a community level, by reaching out to schools and universities, and working with local authorities is important, as ERP's collaboration with Hertfordshire County Council shows.

"The promotional work we did with ERP to collect unwanted WEEE in the county's 500+ schools was easily our most successful, which was definitely helped by our strong links with our schools," recalls Linda Whitehead of Hertfordshire County Council. "If a schools' pupils gathered 10 or more WEEE items, big or small, then ERP would provide collection. We initially collected over 40 tonnes of WEEE," explains Linda, "and between June 2011 and September 2016, we collected over 321 tonnes. We don't have the kind of funding to plan and run these kinds of

programs independently so ERP's sponsorship made it all possible."

As far as WEEE is concerned, this decade of digitisation is just the beginning: 90% of electrical products sold are new despite half of UK households owning at least one unused product. To guarantee that we make best use of the resources in EEE, we need to ensure that progressive reuse and recycling practices continue along with increased promotion. Just as digital technology has in the past decade, so recycling and compliance must continue their own evolution and consistently strive for higher levels of performance.





## Get in touch – we'd love to hear from you!



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