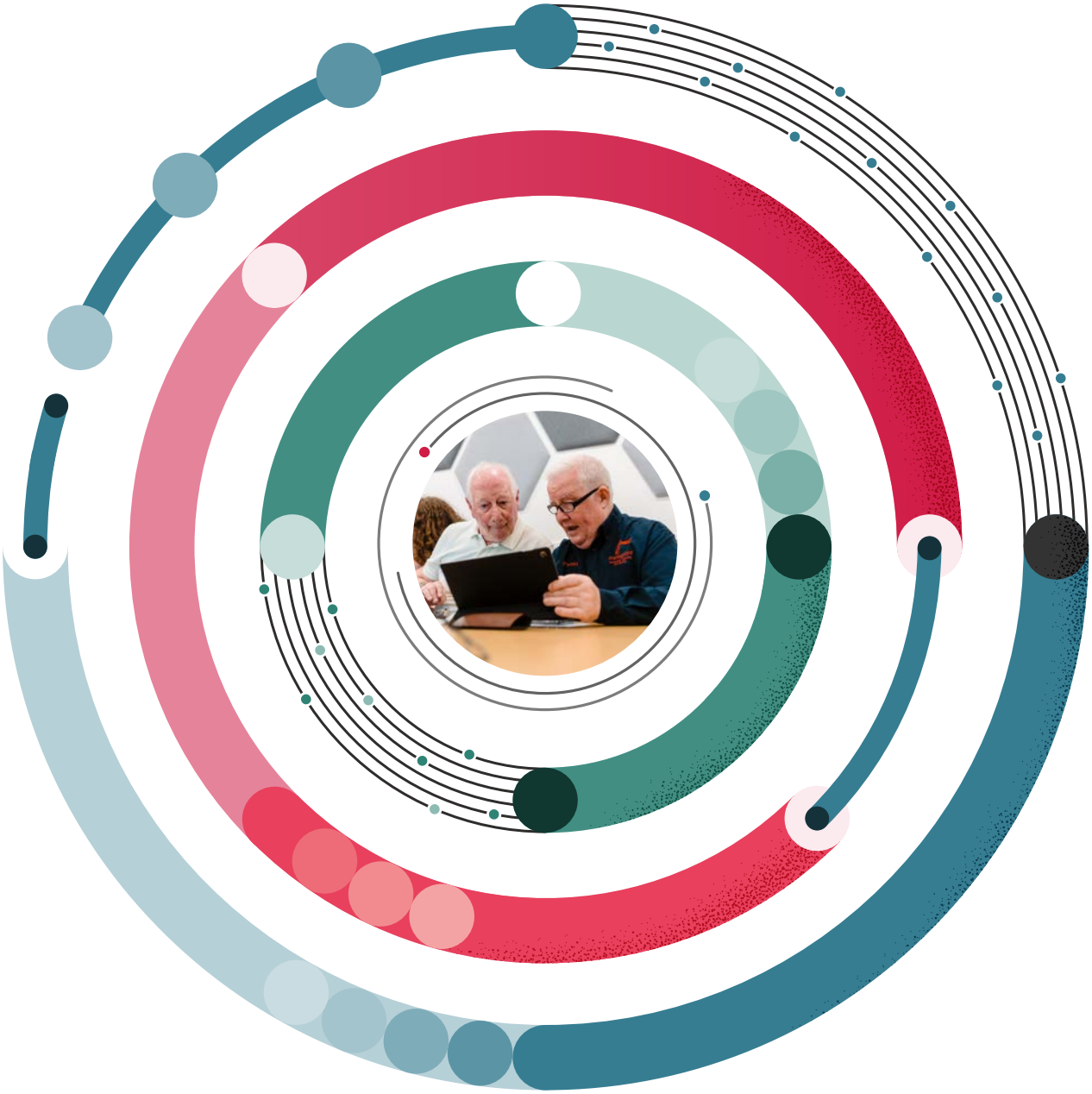
Circular electronics for social good:

Reusing IT equipment to bridge the digital divide

2023



Good Things Foundation

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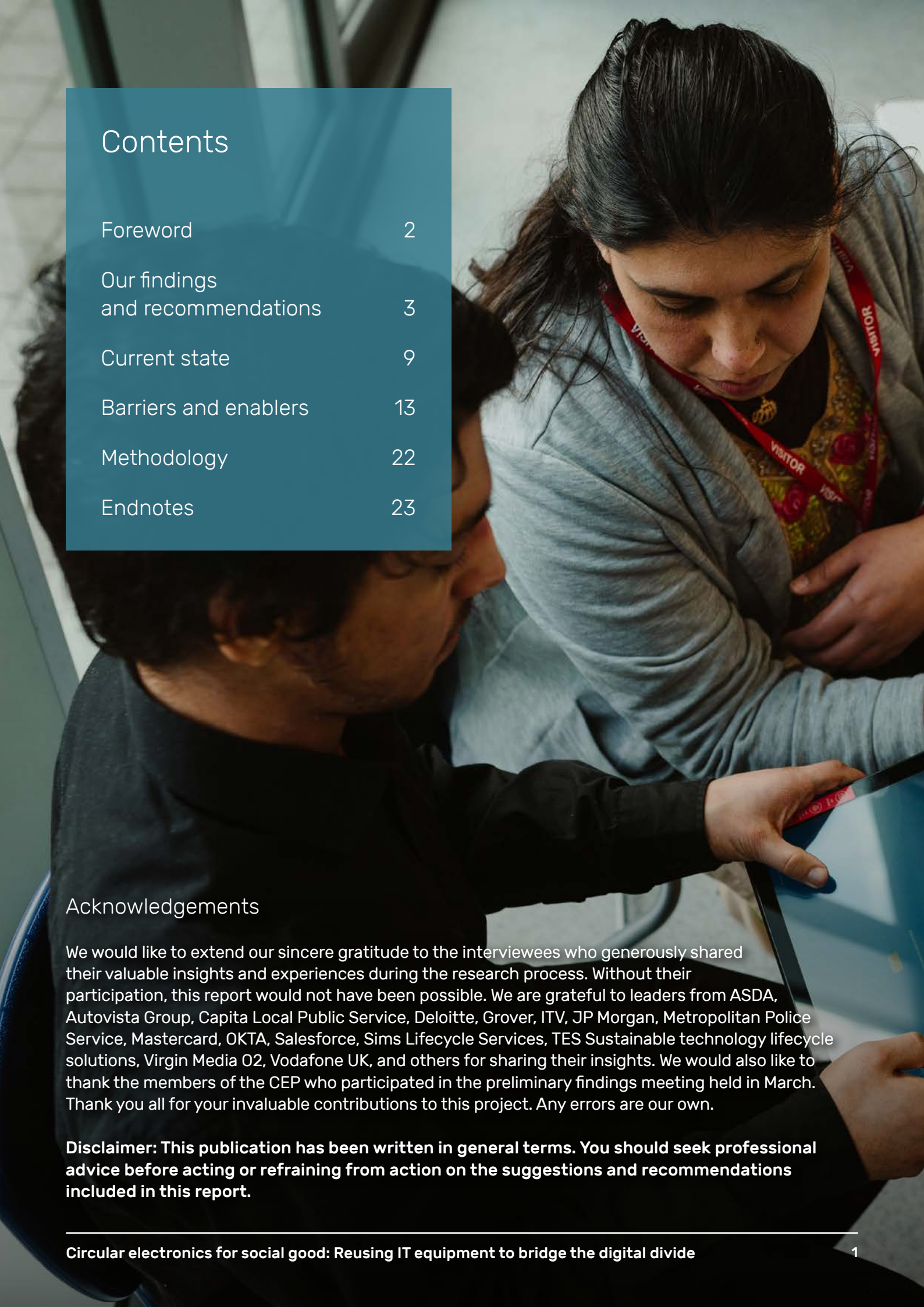
Contents



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Foreword

Reusing IT equipment for social good creates an opportunity for businesses to tackle two challenges in tandem: the digital divide and the linear economy.

In January 2023, Good Things Foundation (the UK's leading digital inclusion charity) and the Circular Electronics Partnership (CEP) asked Deloitte to support them to better understand the opportunities for businesses to reuse their IT equipment to bridge the digital divide. The research has led to the development of a circular electronics for social good model which benefits society as well as the environment.

This report summarises insights and lessons from interviews with business leaders across different industries. It highlights enablers, barriers, and opportunities for IT reuse for social good. Whilst the scope of this report is limited to the UK, its findings may be a springboard for organisations in similar countries.

The Covid-19 pandemic lockdowns highlighted the urgency of addressing the digital divide. Many businesses, charities, large organisations, and government stepped up to help where they could. But, when lockdowns ended, digital divisions remained. In the UK today there are 10 million adults excluded and 1 in 20 households without home internet access. The social benefits of bridging the divide are significant – getting work, doing schoolwork, connecting with family and friends, accessing services; the nation also benefits economically with over £13.6 billion[1] in tangible benefits in the UK.

> **The time to act is now. We can all support transformation towards a more sustainable and equitable world by providing a new life for unwanted IT equipment in the hands of disconnected people.**

Businesses are increasingly attuned to how they can improve their environmental, social and governance credentials, and promote a circular economy. Digital technologies play a critical role at every step of most businesses' value and supply chains, and they require their staff, clients, and customers to have sufficient digital access and skills. Yet, even in countries with high levels of digital infrastructure, significant digital inequalities remain. The UK's digital divide is stark. This limits opportunities, hinders economic productivity, and exacerbates social injustice and inequalities.

Bridging the digital divide, whilst also enabling circularity for electronics, is possible and brings multiple positive outcomes. It overcomes one of the main barriers to digital inclusion and reduces the amount of e-waste generated. Our interviews showed it is a material business opportunity with tangible possibilities for cross-sector creative collaboration.

This report shares insights and actions that businesses, governments, and civil society organisations can take together. If taken seriously, these activities will improve the lives of digitally disadvantaged people and contribute to business goals for positive social impact.

The time to act is now. We can all support transformation towards a more sustainable and equitable world by providing a new life for unwanted IT equipment in the hands of disconnected people.

Helen Milner OBE is the Group Chief Executive of Good Things Foundation

Our findings and recommendations

A Circularity for Social Good Model holds the key to unlocking environmental value and bridging the digital divide – but persistent data security and end-to-end logistics concerns must be addressed.

Key Insights

The reuse of IT equipment to create a positive impact on society is an area that businesses are increasingly exploring. Our research identifies some of the key barriers and enablers that businesses have when looking at the end-of-life of their IT devices. Some of the business leaders we interviewed were unaware of the impact reusing their IT equipment can have on society, as well as how partnering with expert charities could help to ease the donation process. This lack of awareness may lead to the perception that it is difficult to implement a circular electronics for social good model. This model involves reusing electronic devices in a closed-loop system that benefits society and the environment. It focuses on the reuse and repair, as well as recovering and refurbishing, of used electronics to provide affordable technology access to underserved communities. A circular electronics for social good model aims to reduce electronic waste (e-waste[2]), promote sustainable consumption, and increase digital inclusion.

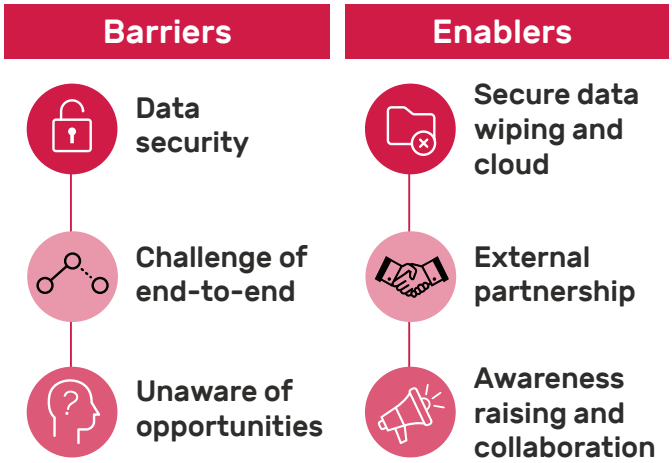
"Helping to tackle digital exclusion is so important - it is very now, very immediate, makes a huge impact to people. I'm also acutely aware that through providing that device to someone who needs it, you're therefore not having to undertake something which is environmentally unfriendly - the destruction, the shredding, the melting, whatever it is."

Business leader

"I think the important thing was always the certificate of destruction ... we've definitely changed our mindset on that."

Business leader

The main barriers and enablers identified in our research were:



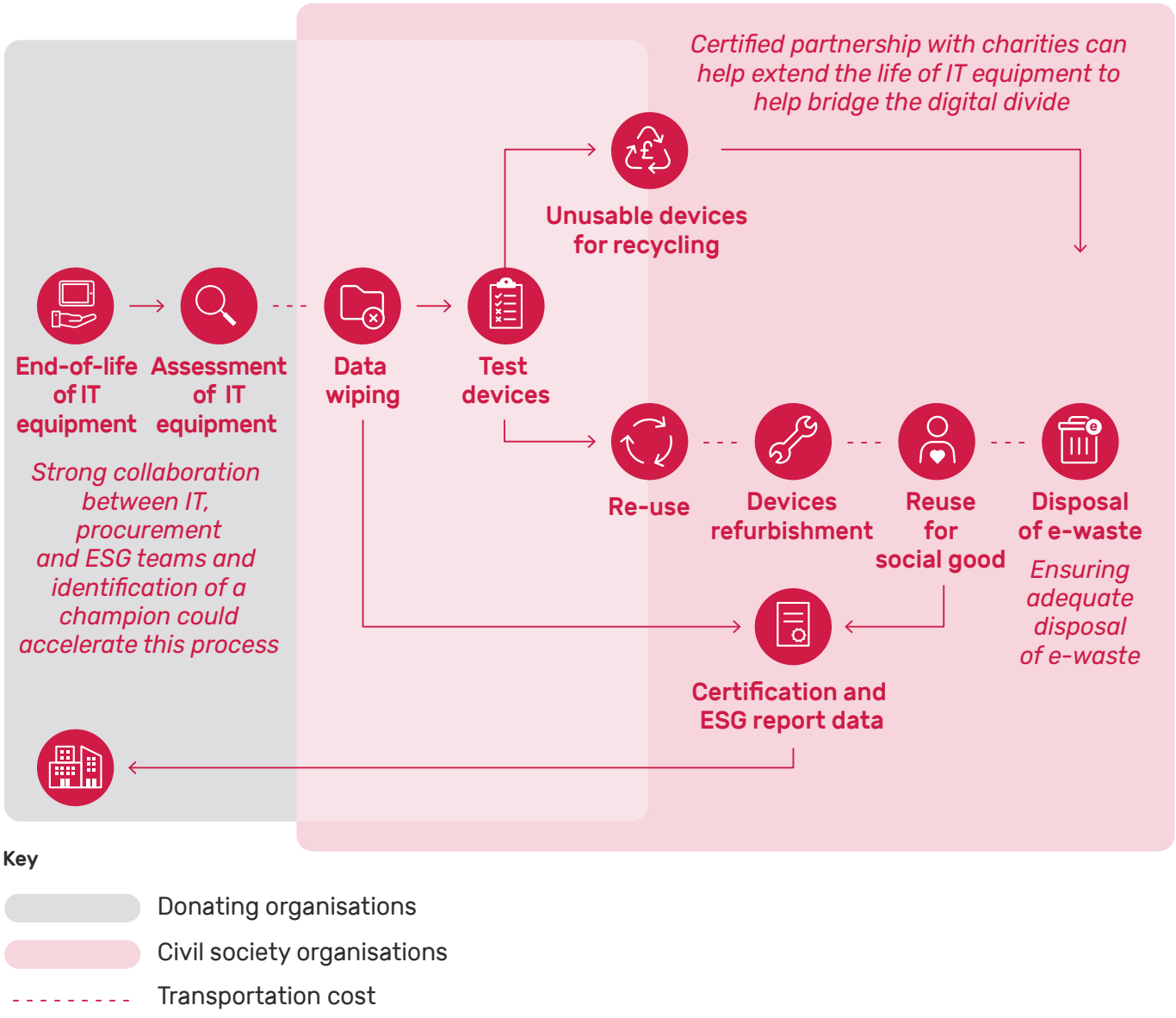
For some companies the risk of any commercial, personal or customer data remaining on donated laptops, smartphones or tablets, remains a key barrier and restricts their ability to donate the equipment to people who are digitally excluded[3]. For other companies this risk is perceived as minimal, and the use of data wiping software and rigorous certification of data wiping[4], reduces the data risk to almost zero; these companies balance the risk of data security with the benefit of the social impact that the technology's second life brings.
The interviews brought to light the differences in views around data wiping, ranging from an organisation comfortable with the wiping of laptops holding 'government tagged secure data' to the standard required, and others where the only viable option for them, currently, is the destruction of hard-drives or whole laptops where the data is integrated through the device.

Overall, we found significant opportunities to scale up reusing technology to close the digital divide. Most barriers are coupled with parallel enablers for circularity from both a social and environmental dimension. Some of the business leaders we talked to were actively involved in reusing IT for social good. A few had considered it before finding other ways to contribute, such as using revenue from recycling IT equipment to purchase new devices that are given to digitally excluded groups. Others were unaware that opportunities existed for businesses to extend the life of their IT equipment through donation for reuse.

To address this issue, our research highlights the need for information and awareness-raising; by becoming more familiar with the concept of creating a positive impact on society through IT reuse, businesses can unlock greater benefits for society and the environment. The interviews uncovered a significant opportunity to tackle e-waste and the digital divide. Businesses looking to start on this journey or scale up can apply these findings to their organisations.

"If there hadn't been an organisation like Good Things - out there - I think we'd still be throwing away our devices now."
Business leader

Circular electronics for social good model



Our recommendations

The importance of environmental, social and governance action suggests that now is the right moment to establish reuse of IT for social good as a high-impact, creative and collaborative contribution to closing digital divides and reducing e-waste. Ability to deliver social impact is a powerful enabler. Social impact can provide more value to businesses than direct financial gain, especially where taking part is cost neutral. Below, we set out our recommendations for businesses, government, and charities and civil society organisations to help realise the potential for reusing business IT equipment for social good and to help close digital divides.

Recommendation for Business

Current position of an organisation considering participation in a donation scheme	Recommendations
Unable to donate due to high-level security data	• Work with certified charities and IT asset disposal providers that offer secure data destruction services. • Consider refurbishing devices for internal use. • If the devices cannot be donated or repurposed, consider recycling them through a certified e-waste recycler. • Ensure that all partners involved in the process are certified and reputable to ensure secure data destruction and responsible recycling.
At the start of the journey	• Use the 'circular electronics for social good' model to assess your next steps. • Bring the right decision-makers together in your business (IT, Procurement, Sustainability and ESG) to enable the setup of this model. • Collaborate with established organisations (charities and/or refurbishing companies) with the expertise and relationships to help you. • Take a strategic approach - a refresh of your IT estate can create the right conditions for a quick win. • Support an internal champion to excite decision makers and colleagues. • Tell the story as part of your ESG reporting.
Ready to move to the next level	• Turn initial one-off initiatives into sustained long-term partnerships for impact and cost-efficiency. • Embed reuse of IT for social good into your IT asset management strategy and plans. • Establish your business as a sector-leader in reuse of IT for social good. • Share your story and encourage others in your sector and value and supply chains to follow your lead. • Build reuse of IT for social good into your ESG metrics and annual reports.

Recommendation for Partners

Types of organisations	Recommendations
For charities and civil society organisations	• Promote the opportunities to deliver environmental and social benefits through reuse of IT for social good. • Maintain high standards of quality and longevity of refurbished devices to enable effective use by digitally excluded people (e.g., compatibility with relevant apps and other software). • Ensure support is available for people receiving a device (e.g., tech support, skills support, free connectivity). • Collect data and gather stories about the benefits for use in ESG reporting by your partners.
For circular economy experts and advocates	• Organise and lead discussions with industry and government leaders on how to further develop and encourage organisations to implement a 'circular electronics for social good' model which bolsters initiatives for digital inclusion. • Bring together companies who do allow, and who do not allow, reuse of their redundant devices so that diverse views and global expertise on risks around data wiping can be heard. • Work with digital inclusion experts to quantify the social impact value of reuse of IT.

Our research did not specifically focus on policy changes (related questions were not included in interviews). However, it is important to note that there is ample room for further debate and discussion on the topic, especially as we strive to find solutions for e-waste management, circularity, and digital inclusion. It is crucial to consider how policy development can support these goals in a more comprehensive manner. We encourage businesses and government bodies to collaborate in exploring innovative policy solutions that can facilitate the adoption of circular electronics for social good, while also addressing concerns around data security and privacy.

Recommendation for government bodies and policy makers

- Lead by example and reuse government-owned IT equipment to help close digital divides.
- Build reuse of IT for social good into strategy and plans for 'Greening Government'.
- Remove any unnecessary barriers which restrict suppliers from reusing IT for social good.
- Encourage reuse of IT for social good as part of social value in government contracts.
- Consider how regulatory requirements (such as WEEE and EPR in the UK) can continue to enable businesses to donate IT for social good to help fix the digital divide.

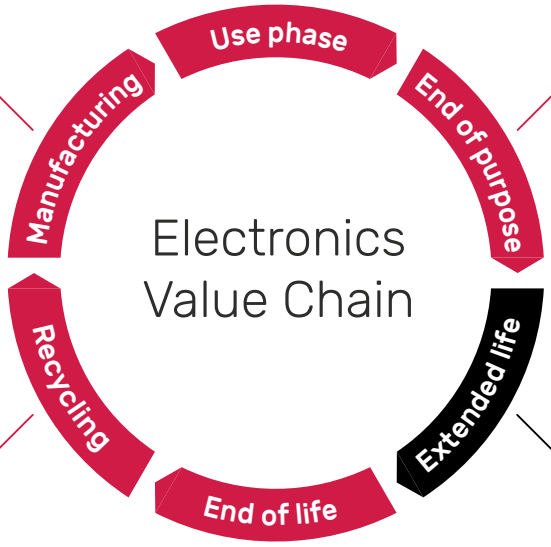
Circular electronics for social good value chain

Design and manufacturing

Re-use and extended life should be considered across all stages of the value-chain. Increasing recyclability, re-usability and durability can help eliminate waste.

End of purpose

Assets may no longer be fit for purpose for intended function within an organisation, but advanced refurbishment may give second or even third-life.



Recycling and recapture

E-waste should be disposed of correctly, ensuring as much material content is re-circulated back into re-manufacturing processes.

Refurbishment and repair

Will prolong the asset's life and ensure safe e-use. Security and wiping will allow an organisation to comfortably re-home devices.

Greater Social Value

Can be achieved through asset donation, identifying those who are excluded or in greater need for access.

Asset life can continue to be prolonged

With access to guidance, assistance and parts for maintenance, repair and life-extension.


"My life feels less quiet now."
Device recipient
"My mum, she's got some sisters in Pakistan, which she hasn't seen for years and it's such a privilege for her to see her sister's face when they made a video call. It's something that she wasn't able to do, and now just because of that device it's made a world of difference to her."
Device recipient
acer

Current state

Technology and internet access are now essential for modern life, offering transformational possibilities to improve a person's quality of life. However, rapid digitisation has also brought new environmental and social inequality challenges.

Digital technologies carry transformational possibilities to improve quality of life for everyone. However, the pace, scale and nature of innovation and adoption has also resulted in significant adverse impacts on the environment (such as e-waste) and on social inequalities (where lack of digital access and digital skills compound existing social, economic, and health inequalities). The nature of these adverse impacts is summarised below.

E-waste and circular economy

The demand for technology has grown rapidly during the transition towards a digital society, accelerated further by the Covid-19 pandemic. However, the linear system of constant consumption has led to large amounts of electronic waste and negative impacts across the value chain, from mining to disposal. E-waste is often disposed of incorrectly, causing long-lasting harm to the environment and society. Tackling the issue of e-waste is essential, not only to protect the environment but also to recover valuable resources, such as gold, silver, and copper, which can be reused in the production of new electronic devices. A circular economy can play a crucial role in addressing these issues by reducing waste and promoting the reuse and recycling of resources.

"Our circular economy model is relatively developed although there is definitely scope for improvement in terms of e-waste prevention and circular design."

Business leader

E-waste is a rapidly growing global problem. The world generated 53.6 million metric tons of e-waste in 2019, a figure that is expected to increase to 74.7 million metric tons by 2030. Unfortunately, only 17% of e-waste is properly collected and recycled, and the rest ends up in landfill or is processed informally, posing a serious threat to the environment and human health[5]. In the UK alone, it is estimated that 1.5 million tonnes of electrical and electronic equipment (EEE) are discarded every year[6]. According to the UK government, the recycling rate for e-waste in the UK in 2020 was 52.2%. This means that just over half of the e-waste generated in the UK was recycled, while the rest may have ended up in landfill or been illegally exported to other countries where they are often informally recycled.

It is important to note that the UK government has set a target to recycle 65% of all WEEE by 2030, which highlights the growing importance of tackling the issue of e-waste and promoting more sustainable practices in the management of electronic devices. However, recycling targets focus on the destruction and the appropriate reuse or proper disposal of the materials once a device is destroyed; setting targets that incentivise reuse, and not destruction, of all working devices would be a significant next step.

Systemic issues can be observed across all areas of the typical EEE value chain. Electronics are reliant on, and contain, vast amounts of raw materials including rare metals and chemicals. Laptops rely on finite raw materials, including rare metals and chemicals, and their production accounts for 75-85% of their total lifetime carbon footprint. The majority of emissions come from materials used for the motherboard, SSD, and display. Additionally, laptops contain heavy metals like mercury, lead, and chromium for power and functionality[7]. The inappropriate disposal of e-waste poses risks to both environmental and human health, especially in countries with lacking or insufficient infrastructure. There is a crucial need for transformational action across the entire value chain to extend the physical life of electronics through repair and reuse.

Digital Inclusion

In a digital society, where the use of internet and digital technologies has expanded into every aspect of life, the extent to which every child and every adult can access and use these becomes a key marker of life chances.

Digital access means having the essential goods and services to connect to the internet: a suitable device and sufficient data connectivity. Digital inclusion requires more than access. It is also about having the digital skills (digital literacy), motivation, and understanding to be able to use the internet safely and confidently.

Evidence shows a strong correlation between pre-existing educational, social, economic and health inequalities, and people's access to and use of the internet. In a digital age, as services and opportunities move online (for example, news, information, education, jobs, commerce, healthcare, state support), those who face digital barriers risk being left further behind. By contrast, those who are digitally enabled continue to accrue benefits as technologies evolve.

In the UK - a country with a good track record of tackling digital exclusion, and of using digital to deliver public services and drive economic innovation - digital divides remain stark. Cost of living pressures have widened divides as affordability becomes a problem for more households (impacting those who have digital skills already, as well as those who do not have these skills).

The impact on people's lives can be significant: compounding social isolation and loneliness; making it harder to access essential services (including for health, welfare, education); creating barriers to getting or staying in work; and adding cost and time pressures through not being able to get better or cheaper goods and services. Conversely, digital inclusion can transform lives and open up a world of opportunities.

There are strong examples of cross-sector cooperation to close digital divides in the UK, as in other countries[12]. However, much more needs to be done to prevent digital divides from deepening and widening. These two important agendas - reducing harmful e-waste and closing digital divides in society - have largely been pursued separately. Our research shows this is starting to change.

In the UK and elsewhere, awareness about digital access barriers rose significantly during the Covid-19 pandemic – catalysing emergency efforts to get digital devices into the homes and hands of people without them[13]. Some initiatives distributed brand new devices, some involved donations of unused or unwanted technology. These initiatives, coupled with concerns about climate change, reducing waste, and appetite for a more sustainable circular economy, mean the time is ripe to bring ambitions for environmental and social impact together.

In the next section, we summarise lessons learned from interviews with business leaders about barriers and enablers to re-using IT to extend the life of equipment and help to close digital divides.

In the UK, 1 in 20 households do not have home internet access[8]

10 million adults lack basic (foundation-level) digital skills[9]

Over 1 in 4 young people (16- to 25-year-olds) lack access to a laptop or tablet or Chromebook at home[10]

An estimated 5.8 million people will still be digitally excluded in the UK by 2032 without further intervention[11]

"Being able to send messages is an important thing. I'm just here on my own all day, most of the day. Nice to be able to talk to people… It's just feeling connected to the world out there."

Device recipient

"I am really happy with my tablet. Before, I used to do my learning on my phone, and it was difficult because of the font. Now I do my study, my research, use YouTube for my research [on my tablet]. It is very helpful for me to study English and other subjects. It is much easier for me than [doing this on] my phone."

Device recipient

"We have people who use devices for the children's schoolwork. We discovered that when the pandemic hit, schools gave out to devices to families, but then when it ended, they took them back again, but teachers carried out giving work online, so children got left behind."

Community organisation

Barriers and enablers

We uncovered a significant opportunity to tackle e-waste and the digital divide. Most barriers uncovered had parallel enablers that could overcome them. Business leaders are either already putting equipment up for reuse for social good or are keen to take the next step towards it.

The key barriers and enablers we found through our interviews are summarised below:

Barriers

Data security

Data security is a major concern for businesses in the age of digitalisation, indiscriminate of size and geography, as the risk of non-compliance or data leaks can have serious financial and reputational consequences.

Challenges of the end-to-end process

Business spoke of the complexity of internal processes, liability risks, and the logistics of finding suitable external partners, and costs of donating IT devices. Organisations also cited barriers of limited staff time and that the responsibility for donation of devices does not currently exist in staff roles.

Unaware of opportunity to reuse devices for social good

Lack of awareness or knowledge is a significant barrier to reusing IT equipment for social good. Many organisations are not aware of the potential for reusing their IT devices. Good practice and guidance is not readily available nor shared.

Enablers

Secure data wiping and cloud

Ensuring the highest level of data wiping, such as government wipe standards can help businesses mitigate these risks. Using and storing data in the cloud can reduce the risk of data breaches during the refurbishing process.

External partnerships for end-to-end process as BAU

Partnering with established civil society organisations can enable device donations. Large charities can reach excluded people at scale and can provide free connectivity and digital skills resources alongside the refurbished device. Charities can provide impact data and beneficiary stories for businesses' ESG reporting.

Awareness raising and internal collaboration

Raising awareness of the benefits of reusing refurbished devices by digitally excluded individuals could encourage organisations to develop a 'circular electronics for social good' model. Strong internal collaboration between IT, procurement, and ESG teams is essential. Build reuse of IT for social good into ESG metrics and annual reports.

Barriers

Data security

Data security is a major concern for businesses in the age of digitalisation, regardless of their size or location, as the risk of non-compliance or data leaks can have serious financial and reputational consequences. In addition, there is an extra cost associated with data erasure through third parties. While some companies decided to physically destroy their hard drives to eliminate any risk of remaining data, this leads to a considerable amount of waste and loss of value. However, wiping data from a hard drive using appropriate software can securely and reliably erase data while keeping its functionality intact, and professional data sanitisation services can help businesses prepare their disks for refurbishment.

Depending on whether data is stored on a solid-state drive (SSD) or hard disk drive (HDD), it may be technically complex. The UK's National Cyber Security Centre has a verification program in place for trusted wiping software and provides guidance on how to safely erase any type of hardware storage. Currently, there is an important market for professional data sanitisation services that help business clients wipe their disks and prepare them for refurbishment.

Despite these solutions, some industries still see data security as a barrier to IT refurbishment and reuse for social good initiatives. Government agencies and businesses dealing with sensitive or confidential data may be hesitant to take on the perceived legal and reputational risks associated with IT donation. However, data encryption and cloud storage solutions offer effective ways to mitigate these risks and allow for secure and sustainable reuse of IT hardware. Ultimately, with the right knowledge and tools, the path towards surmounting the barrier of data security concerns to IT reuse and refurbishment is possible, and there is good practice that the interviews uncovered.

"I'm passionate about how we can support charities and make devices available.... [but] we need to first and foremost make sure customer data is secure. In doing so, internally, it's part of the reason we've adopted the strategy."
Business leader

"They don't want to donate because they don't want ... responsibility to fix. I just don't think that IT managers in particular want the headache of any comeback."
Business leader

Challenges of the end-to-end process for using e-waste for social good

The research findings suggest that many organisations encounter obstacles when attempting to reuse their IT devices for social good, primarily due to the complexity of their internal processes, liability risks, and the logistics and costs of donating their IT devices. Implementing an asset reuse scheme requires a commitment of resources, including authorisations and processes to ensure compliance, safety, and sanitisation of devices.

> *"The key point that we do for the IT waste is zero cost, and that we can be assured that the company that we operate with is respectable - nothing's going to end up in a beach - it's not going to put our brands at risk."*
>
> **Business leader**

- **Complex internal process:** implementing an asset reuse scheme needs an internal champion or operating unit to take responsibility, as demonstrated by the variety of roles held by stakeholders we interviewed. Ownership of electronic reuse is often not easily associated with one business function, creating difficulties when trying to establish the necessary processes or gain internal permissions.
- **Finding a charity to partner with:** we found that most businesses did not know how to find appropriate beneficiaries to reuse their equipment, and they were not aware of charities who can operate at scale and continually reach people who are excluded and cannot afford a device.

> *"We did do a piece of work where we sent a hundred devices off ... So, there are instances where things have been done. What we don't have is a Business as Usual 10% or whatever ... that's a possibility but it'd be a matter of looking at it to see what would be possible."*
>
> **Business leader**

- **Logistics and transportation:** the interview research found that logistics and transportation of IT equipment can be problematic, resulting in stockpiling within organisations before donating.
- **Liability risk:** a concern raised by some of our interviewees, as donated equipment may be sold or disposed of inappropriately, potentially leading to legal liabilities if the equipment causes environmental damage or other negative impacts. Separately, some organisations opt to donate brand new devices instead of old infrastructure, as they believe that refurbished assets may become faulty or pose a health and safety threat, which could become a liability for the business and impact future donations.

Lack of knowledge

A lack of knowledge is a significant barrier to effective IT asset recovery and reuse, with many businesses not realising the social and environmental benefits of donating or repurposing their IT equipment. During the research, this was a barrier that was also highlighted among business leaders. We found that some were unaware of the opportunities to reuse IT equipment for social impact.

> *"Knowledge is what people need. The more you know about something, the easier [it] is to make decisions because you're making decisions on facts rather than assumptions."*
>
> **Business leader**

The lack of knowledge regarding reuse of IT assets can have negative consequences for both organisations and society. For organisations, it can mean missed opportunities to reduce their environmental impact, create social value, and make a positive impact. For society, it can contribute to the growing problem of e-waste, as usable IT equipment is needlessly discarded and ends up in landfills or incinerators. Businesses and other organisations are not prioritising sharing the benefits and best practices of IT asset reuse where they have overcome the barriers. Businesses do not know who to ask for advice and there is no guidance easily available on how to evaluate IT assets for reuse, how to identify potential charity partners or beneficiaries, nor how to ensure that data security and privacy are maintained throughout the process. By improving knowledge and awareness around IT asset reuse, organisations can unlock new opportunities for social impact and contribute to a more sustainable and equitable future.

Numerous businesses have established partnerships with IT disposal companies to maximise reuse, with a focus on the sale of both unusable and usable equipment for revenue sharing, rather than donation for social impact. This model also incorporates recycling, whereby key parts are harvested from technology that is damaged and no longer reusable. Some of the companies that were interviewed had not previously considered switching to a "reuse for social impact" model but expressed interest in exploring this idea when questioned. The financial benefit from revenue sharing was often deemed "irrelevant" since the assets had already been depreciated. Our research showed that the financial benefit was inconsequential if the expenses associated with collection, data wiping, and refurbishment were covered.

> *"The real missing part of circularity already is where it's a second life value, rather than a recovered physical asset value … If you can quantify the second life social value, it's a much easier conversation to have."*
>
> **Business leader**

> *"If we could see what the effects and benefits [are] that local people have received from this."*
>
> **Business leader**

Enablers

Secure data wiping and cloud systems

During the interviews, we found a wide range of opinions about the acceptability of risks around data wiping and donating equipment for reuse. Often, the decision regarding risk mitigation or the amount of acceptable risk was made at a global level for very large multinationals. Ensuring the highest appropriate level of data wiping, such as government wipe standards, which are designed and set by government agencies to ensure that all sensitive information is securely erased from devices, making the data unrecoverable, can help businesses mitigate these risks. By asking charities and data security/IT disposable companies to provide certification for this type of wiping, businesses can further improve their data security.

"Data wiping a device to an approved standard ... isn't a challenge anymore ...we've got that embedded in the infrastructure contract."

Business leader

"There's a certain amount of risk which is acceptable."

Business leader

The integration of cloud systems and data wiping in the reuse of IT equipment can also enhance data security. Businesses who have established working practices where staff use and store data in the cloud can reduce the risk of data breaches during the refurbishing process. An interviewee stated that they have transitioned some of their operations and data storage to cloud-based systems; this move is aimed at improving efficiency, reducing costs, and enhancing security. Using cloud systems, organisations can transfer their data to the cloud, enabling access from anywhere with an internet connection. This simplifies the reuse process as it eliminates the need for physical data transfer.

Charities receiving the devices should also ensure that the devices they are receiving have been properly wiped of data so that a compromised or vulnerable device is not then onward donated to an excluded person. If in the data cleansing process all parts are wiped – and not just the parts known to house data – then this risk will be well mitigated.

External Partnerships

Many companies have identified logistics as a key obstacle to achieving digital inclusion through the reuse of electronic waste. This is because of the complexity of the end-of-life process and a lack of knowledge about the support charity partners can provide to improve and scale this process, ultimately leading to positive impacts on people's lives.

> *"We're into our second or third initiative [with Good Things Foundation] ... Very quickly we've got into a position where both our suppliers internally and Good Things third parties have got into the swing of cracking on with it ... I definitely see this as an ongoing cycle. Desktops, tables, laptops, smartphones - all these things are going to be subject to ongoing refreshes now. The options are to find a second use for those, or put them in the bin - and that's not our direction anymore."*
>
> **Business leader**

Partnering with established civil society organisations that have mature and ongoing end-to-end processes can ensure that IT equipment is handled safely and securely throughout the process. This type of partnership can help overcome the barriers that organisations face such as mitigating risk of data wiping, logistics and transportation. This is particularly important for large organisations that often have many devices to dispose of, which can be time-consuming and costly if done in-house or with multiple organisations. Large charities can reach excluded people at scale and provide a constant service, not just a one-off project. They can also combine the gift of a refurbished device with essential support such as free connectivity and digital skills resources to meet all the needs of digitally excluded people.

For example, the Air Ambulance Service in the UK has partnered with a company called Green Machine Computers to refurbish and reuse donated IT equipment[14]. Computer Aid International[15] refurbishes donated computers and laptops and ships them to schools, libraries, and community organisations in developing countries. Good Things Foundation, the UK-based digital inclusion charity, distributed over 22,000 new data-enabled devices to vulnerable people during the pandemic and has since created the National Device Bank[16] as a circular economy initiative to help fix the digital divide, partnering with a specialist in wiping, recycling, and refurbishing tech.

Experienced charities collect impact data and beneficiary stories that can be provided to businesses for their ESG reporting.

Awareness Raising and Internal Collaboration

The COVID-19 pandemic has accelerated the digitisation of work and life for many organisations, creating a sense of urgency and highlighting digital inequality. This urgency has led to greater flexibility, streamlined processes, and collaboration, resulting in faster decision-making when it comes to retiring IT devices. Awareness raising, internal collaboration and employee engagement are all enablers to reuse for social good.

During interviews, some respondents were not aware of charities that could assist them in reusing old IT equipment sustainably. Raising awareness of the benefits of reusing refurbished devices to digitally exclude individuals, along with clear communication about the process, could encourage organisations to develop or scale a 'circular electronics for social good' model. Engaging employees in social responsibility initiatives can create a sense of responsibility and social consciousness while enhancing engagement, loyalty, and retention rates. By involving employees in social responsibility initiatives, companies can create a more committed and motivated workforce dedicated to achieving the organisation's mission and values.

Strong internal collaboration between IT, procurement, and ESG teams is essential for successful IT equipment reuse and digital inclusion. During the interviews, we talked to cross-organisation teams who communicated and worked well together to ensure that the reuse of IT equipment is appropriately processed and distributed to individuals and organisations that need them. The identification of an internal champion within an organisation was a crucial enabler to help develop and scale up a 'circular electronics for social good' model.

By working together, organisations can create a more sustainable and equitable future while reducing e-waste and promoting responsible consumption. Using a key moment within an organisation can be an enabler: several companies we interviewed had used a large company-wide technology refresh programme as the impetus to implement a reuse scheme for digital inclusion.

When the reuse of IT equipment for digital inclusion becomes standard practice, this also includes embedding it in IT asset management strategies and plans. This means that it is easier to sustain and expand the programme over time, and it becomes part of the organisation's core values. Understanding the social value of digital inclusion is crucial to increasing the motivation to collaborate and donate IT equipment. While financial returns were not significant for many business leaders we interviewed, emphasising the social value of reuse for digital inclusion can help organisations prioritise social impact over financial gain.

Refreshing an organisation's IT estate can trigger internal collaboration and promote wider changes in practices. It is also important to consider future changes in the asset procurement space. One interesting finding from our interviews was that an organisation started to provide a cash allowance for its employees to purchase their own equipment for work. This initiative has the potential to increase employees' sense of ownership, encourage better care of the devices, and promote responsible consumption. Nonetheless, this initiative requires a strong communication and awareness plan to ensure that employees are disposing their equipment correctly, and to encourage and enable donations to support reuse for social good. This could lead to a higher rate of usable devices for circular electronics for social good.

> *"I'm much more interested in ensuring that what we buy today has a 4-year lifespan for us and maybe a 4-year lifespan after that as well."*
>
> **Business leader**

ESG reporting can be a powerful enabler for organisations when considering the reuse of IT equipment for social good. By repurposing devices for digital inclusion, organisations deliver a threefold impact, bringing environmental, social, and governance benefits.

Environmental: Device reuse can contribute towards reducing e-waste, which is the fastest-growing waste stream globally[17].

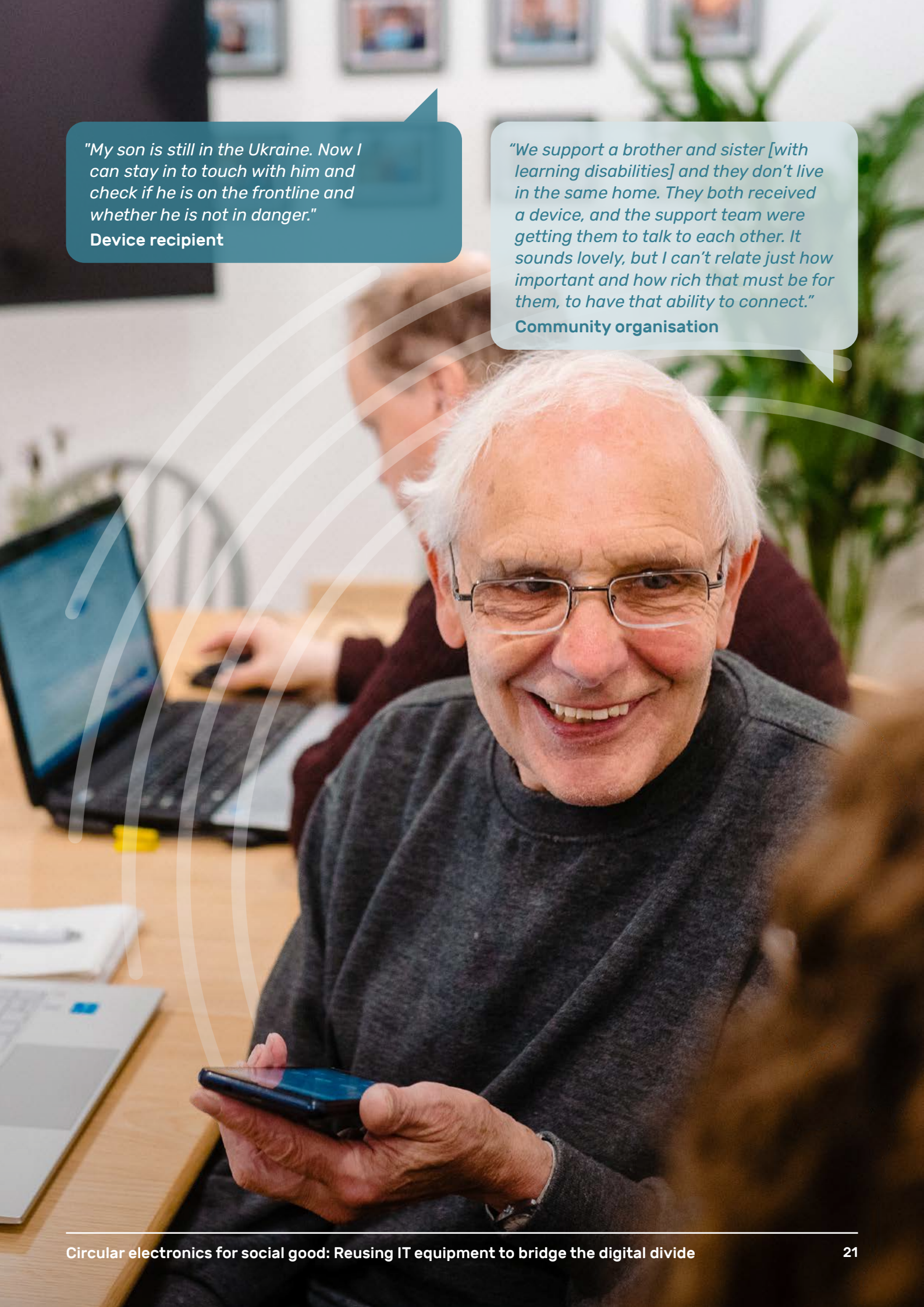
Social: Refurbished devices given to vulnerable people will improve lives[18].

Governance: Enabling businesses to comply with laws and regulations related to e-waste. Many companies and other organisations have a C-Suite level "Climate Action Delivery Group" or a "Environmental Impact Committee" - bringing reuse of technology to internal governance boards or committees.

By incorporating the donation of IT equipment for social good into their ESG reporting and annual reports, businesses can demonstrate their commitment to sustainability and social responsibility while enhancing their reputation and building stronger ties with their communities. Businesses which partner with experienced charities can receive ESG data (both quantitative data and beneficiary stories) to help strengthen and achieve their ESG goals.

"The social part of asset recycling or circularity is of much more value than the green part."

Business leader


"My son is still in the Ukraine. Now I can stay in to touch with him and check if he is on the frontline and whether he is not in danger."
Device recipient
"We support a brother and sister [with learning disabilities] and they don't live in the same home. They both received a device, and the support team were getting them to talk to each other. It sounds lovely, but I can't relate just how important and how rich that must be for them, to have that ability to connect."
Community organisation

Methodology

After conducting initial desk research, Deloitte and Good Things Foundation invited a variety of businesses that have a presence in the UK and interest in social and environmental impact, to participate in interviews for this research. This invitation encompassed members of the Circular Electronics Partnership (CEP) and Good Things Foundation partners.

The research methodology involved a combination of desk-based research and targeted interviews led by Good Things Foundation and Deloitte. Over 20 interviews were held with sustainability, IT, and procurement leaders across a range of sectors, including retail, technology, media, telecoms, and financial services. The research primarily focused on the UK landscape. Over 40 published resources were reviewed as part of the desk-based research, and the insights collected from both the interviews and research were analysed and validated by Good Things Foundation and CEP members. Deloitte Subject Matter Experts in circular economy and sustainability reviewed and discussed the emerging findings to add broader context and insight. To bring insights to life, a selection of anonymised quotes from interviews with business leaders are included in this report, alongside quotes from people who have received refurbished devices through the National Device Bank run by Good Things Foundation.

A preliminary findings meeting was held on March 13, 2023, with over 15 attendees, mainly comprising CEP members and a sub-set of interviewees, providing an opportunity to present the initial findings, gather feedback and validate.

Endnotes

1 The economic impact of digital inclusion in the UK. Cebr (2022). www.goodthingsfoundation.org/insights/the-economic-impact-of-digital-inclusion-in-the-uk/

2 E-waste is defined as 'anything with a plug, electric cord or battery (including electrical and electronic equipment)' from smartphones, household appliances, laptops and fridges that have reached end of life. E-waste is also referred frequently as waste electrical or electronic equipment (WEEE). A New Circular Vision for Electronics. World Economic Forum (2019). www3.weforum.org/docs/WEF_A_New_Circular_Vision_for_Electronics.pdf

3 People who are digitally excluded are those who lack access to digital technologies due to various factors, such as socioeconomic status, geography, age, disability, and literacy level. See for example: Digital Nation 2022, Good Things Foundation (2022). www.goodthingsfoundation.org/insights/building-a-digital-nation/.
The Digital Disconnect. Helsper, E. (2022).

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15 Computer Aid International. www.computeraid.org/

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17 Global e-waste surging: up 21 per cent in 5 years. World Health Organisation (2020). www.who.int/news/item/28-06-2020-global-e-waste-surging-up-21-per-cent-in-5-years

18 Bridging digital divides in G20 countries. OECD (2021). www.doi.org/10.1787/35c1d850-en

For more information

Good Things Foundation, including the National Device Bank:

Helen Milner, OBE, Group Chief Executive
Emma Stone, Director of Evidence and Engagement
Natasha Early, Partnerships Manager
Email: partnerships@goodthingsfoundation.org
Visit: www.goodthingsfoundation.org/national-device-bank

Deloitte:

Mike Barber, Sustainability & Climate Partner
Nicholas Wyver, Global Technology, Media, and Telco (TMT) Sustainability & Climate Lead
James Pennington, Circular Economy Lead
Gabriela Velasco, Manager Circular Economy & Sustainability
Bradley Roberts, Consultant Sustainability & Climate Change
Visit: www2.deloitte.com/uk

Circular Electronics Partnership:

Carolien Van Brunschot, Lead Secretariat, Circular Electronics Partnership
Ralitza Naydenova, Associate, Circular Electronics Partnership
Visit: www.cep2030.org

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