

RESEARCH STUDY

The Rising Tide of E-Waste

How Environmental Concerns and Shifting Work Patterns are Shaping Device Management Practices

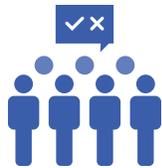
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Table of Contents

About the Report	3
Executive Summary	4
An Unprecedented Year, a Growing Concern and Lingering Uncertainty	4
Survey Results and Discussion	6
E-waste: An Issue Lacking Ownership	6
Rethinking End-of-Life Device Decisions	8
Excess COVID-19 Investment and Underlying Data Risks	10
The Device Management Conundrum—and the Opportunity	12
Best Practice Recommendations	14
Conclusion	15
About Blancco	16

About the Report

This report is based on an extensive survey of:



600 enterprise decision makers. These individuals had the following job roles: Chief Financial Officer, Head of Operations, Data Protection Officer, Head of IT Operations, IT Asset Manager, Head of Legal, Chief Information Security Officer and Head of Compliance.



Each respondent was from an organization with more than **5,000** employees and located in the US, United Kingdom, Japan, Germany and France.



The following sectors: Government, Finance, Healthcare, Technology, and Legal.

The research was undertaken by independent research company Coleman Parkes Research in September 2020.

An Unprecedented Year, a Growing Concern and Lingering Uncertainty

Globally, consumers are becoming more environmentally aware, conscious of the impact that energy consumption, wastefulness, pollution and the rapid decline in biodiversity is having on the planet.

In the business world, sustainability is going through a revival: Digital pollution is now top of the global agenda. It has become a central factor in many organizations' efforts to influence social change through corporate social responsibility (CSR) best practices. What's more, we're seeing environmental, social and governance (ESG) issues becoming more important to investors and shareholders as they evaluate businesses' long-term performance and risk potential.

If data storage devices are not disposed of appropriately when they are decommissioned, millions of perfectly usable devices and harvestable components can make their way into landfills—and put data at risk.

Wastefulness is prevalent [within the IT industry](#). Specifically, there are concerns regarding the energy efficiency of data centers, with forecasts expecting that the storage of digital data will account for [14 percent of the world's emissions by 2040](#). And, with the acceleration of cloud adoption as enterprises embrace remote working, there will be pressure on data centers to address the rising demand of increased data use and access. But it's not just the issue of energy consumption leading an environmental push worldwide.

E-waste is a global concern—and it is quickly becoming a crisis of its own. More than [53 million metric tons](#) of e-waste was produced in 2019 alone. This weighs more than the total number of commercial aircraft ever built. Used enterprise assets—computers, servers, hard drives, mobile phones and more—make up a portion of this amount. It's clear that education is needed on how best to handle end-of-life devices and IT assets to tackle an issue growing at an unprecedented rate.

Furthermore, this year's global pandemic has caused seismic and lasting change. Enterprises have responded to the health crisis by undergoing years' worth of digital transformation in a matter of months. Operationally and culturally, the face of business and our society has changed forever. Although it was widely reported that the first series of COVID-19 lockdowns had a [significant impact on reducing CO2 emissions](#), it now appears that the impact is fleeting.

More must be done.

To facilitate the switch to remote working, many enterprises have had to purchase additional IT equipment. But what does this imply for the global issue of e-waste?

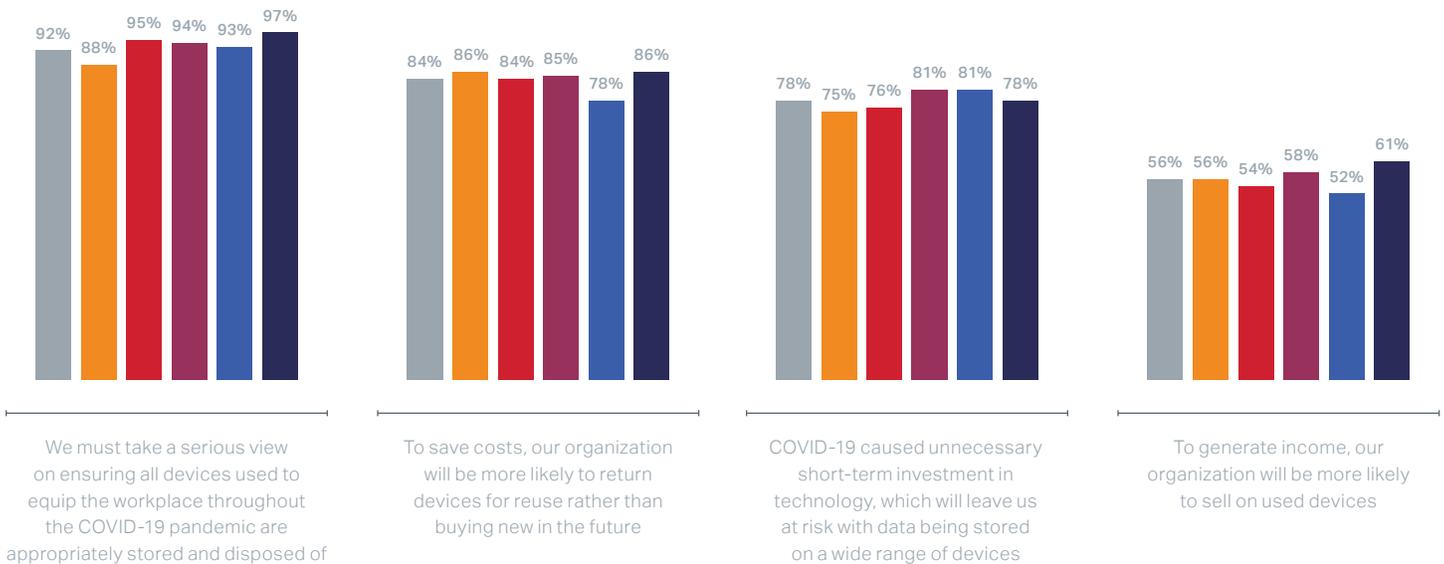
If data storage devices are not disposed of appropriately when they are decommissioned, millions of perfectly usable devices and harvestable components can make their way into landfills—and put data at risk. On the other hand, even when saved from the trash heap, inadequate device sanitization can leave data behind, leading to data exposure, reputational harm and regulatory penalties when devices are reused or recycled. Data sanitization—the verified process of deliberately, permanently and irreversibly removing or destroying data stored on a device—is crucial for today's modern enterprise.

Executive Summary, cont.

As part of our survey, we asked respondents for their views on the current way devices are managed and used within their business. Interestingly, 78 percent agreed that COVID-19 caused unnecessary short-term investment in technology. That leaves the organization at greater risk with data now stored on a wide range of devices (with many devices dispersed to remote, at-home workers). This concern is significant for data management best practices. It suggests some enterprises could be putting themselves at risk of a data breach or regulatory compliance failure resulting from the purchase and potential mismanagement of both additional and previously owned devices. The question for enterprises, therefore, is how to mitigate that risk and growing uncertainty.

Figure 1.

Views on statements: Completely Agree and Agree



BASE: Total - 600 US - 200 UK - 100 Japan - 100 Germany - 100 France - 100

In our research conducted in 2019, Blancco explored enterprise CSR practices and whether enterprises were complying with their own sustainability policies. The study found that only a quarter (24 percent) of end-of-life equipment was being sanitized and reused, despite 83 percent of organizations having a CSR policy in place.

As we enter the “next normal,” Blancco explores behavior around e-waste, sustainable practices and the environment. This report will examine the responsibility of enterprises in managing both devices and the data stored on them. It will also explore the impact of COVID-19 on e-waste and end-of-life device management. Finally, it will identify the areas enterprises need to address in order to be environmentally responsible and confident about data protection and compliance.

Survey Results and Discussion

E-waste: An Issue Lacking Ownership

Demonstrating corporate social responsibility (CSR) is a requirement of most organizations surveyed, ensuring ethical practices and raising awareness of the social, environmental and economic impact of their operations. And, in the past year, efforts to engage in CSR programs have ramped up.

However, the survey identifies that CSR and e-waste initiatives struggle due to lack of ownership both in policy communication and in policy implementation and compliance.

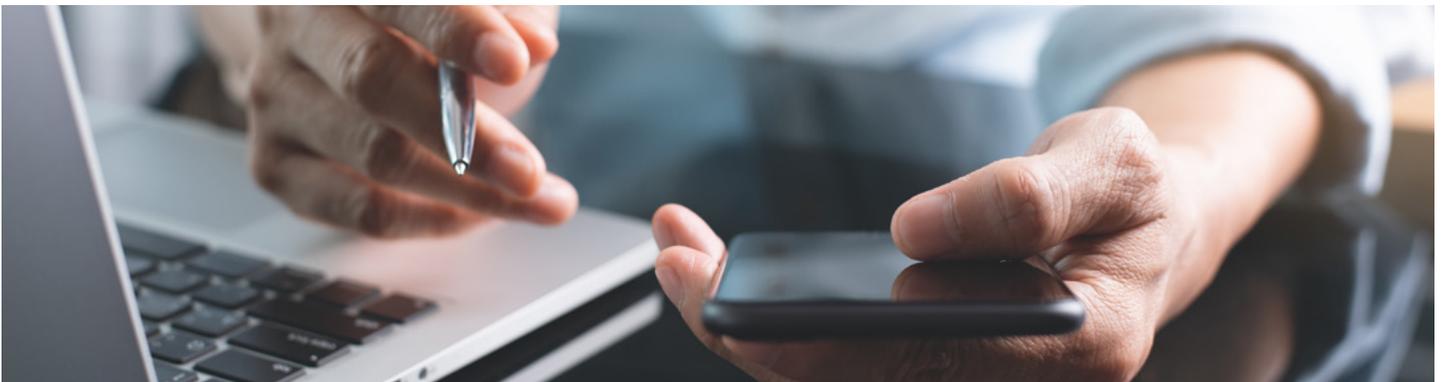
Communication

Our study found that only half (50 percent) of enterprises surveyed had a dedicated e-waste policy in place that was communicated across the whole organization. Exploring specific countries' responses shows that the US (56 percent) and Japan (55 percent) lead the way here, with the UK far behind the pack at just 40 percent. The findings bring to light a consciousness around the e-waste issue, but a lack of ownership for it. It is crucial that enterprises take this opportunity to implement and communicate e-waste policies companywide. The policies must also recognize IT asset data management and new remote work environments.

To compare with our 2019 research, we again asked whether enterprises had a CSR policy in place. Fifty-six percent of respondents stated that their organization had a policy communicated company wide. This is up by six percent from the previous year.

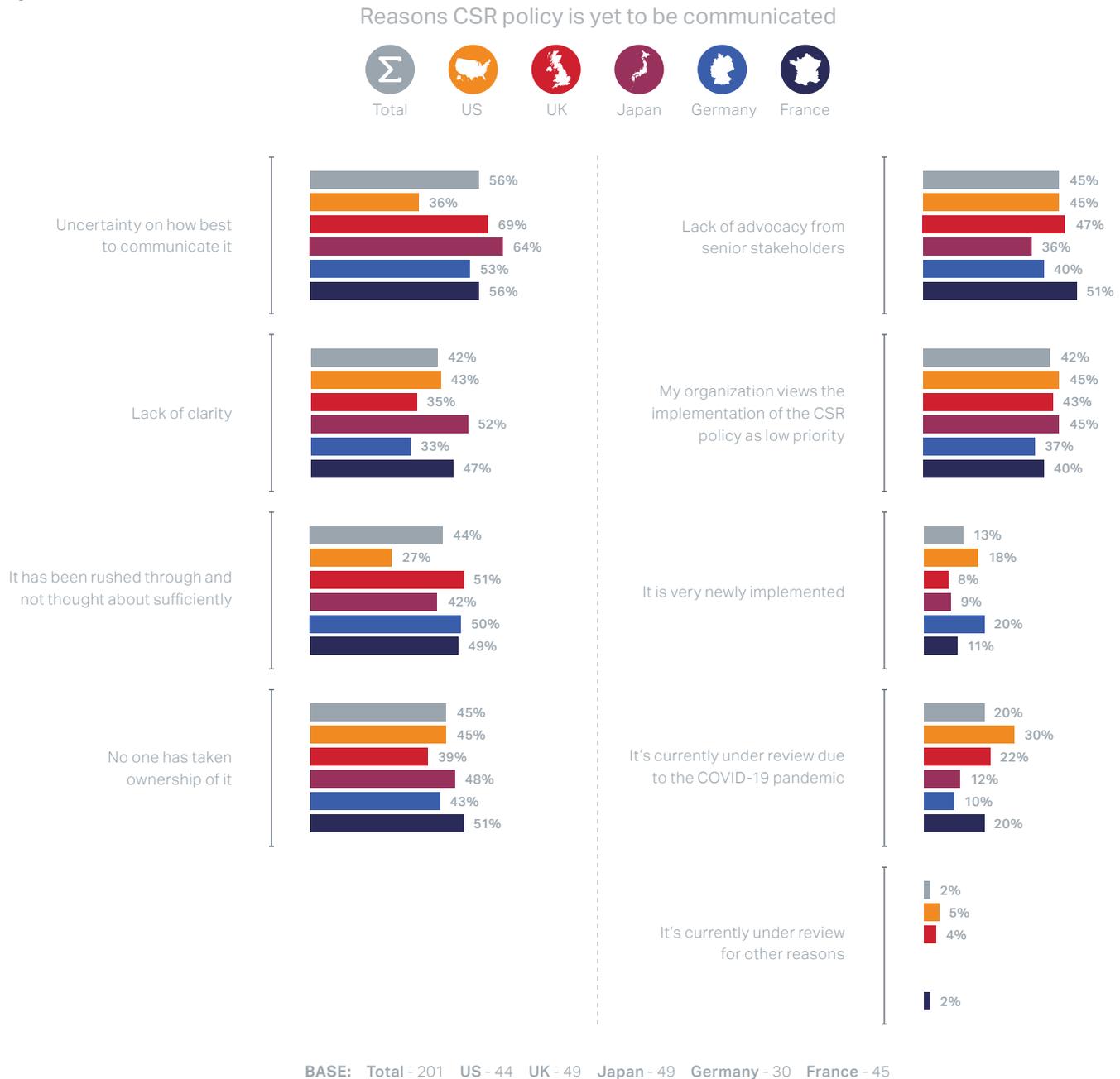
It is positive to see more enterprises implementing CSR and e-waste policies, but nearly half struggle to effectively communicate them.

Digging deeper, the data revealed myriad and overlapping reasons for a lack of effective policy communication. The primary one being uncertainty on how best to communicate these important initiatives (47 percent for e-waste and 56 percent for CSR policies). A lack of clarity around the policies themselves came second (46 percent for e-waste and 42 percent for CSR policies). This challenge is exacerbated by the fact the ownership of e-waste and CSR policies is unclear. Indeed, 39 percent of respondents said the reason their e-waste policies hadn't been communicated was because no one had taken control of them. This goes up to 45 percent for CSR policies.



Survey Results and Discussion, cont.

Figure 2.



Implementation and Compliance

The roles respondents cited as being best suited to implement an e-waste policy were Head of IT Operations (18 percent), Data Protection Officer (17 percent) and Chief Information Security Officer (16 percent). But when it comes to ensuring compliance with the policy, roles differ: respondents ranked Head of Compliance Officer first (36 percent), followed by Legal (22 percent) and then Chief Information Security Officer (11 percent). It is interesting to note that the roles respondents saw as responsible for implementing e-waste and CSR policies are IT related, despite the strong regulatory and legal link.

In the past year, efforts to engage in CSR programs have ramped up. However, the survey identifies that CSR and e-waste initiatives struggle due to lack of ownership in communication and implementation.

Ensuring that policies are carried out and enforced is a compliance and legal responsibility, but this disconnect between the two sets of roles and responsibilities could be adding to the confusion. Does this perhaps suggest that the scale of the e-waste issue, or its importance, is not fully appreciated? Both sets of respondents feel the CISO may have a role to play here, indicating awareness of data risk when disposing of data storage devices.

At this point, the survey findings highlight a genuinely fascinating occurrence. Respondents report that nearly half—47 percent—of enterprises have created roles for implementing and ensuring compliance with e-waste policies specifically to deal with issues related to the COVID-19 pandemic. So, while the pandemic has led to the purchase of additional devices to enable working from home, it has also driven the appointment of hundreds of e-waste-focused roles. For policy implementation, creating a specific role was highest among Legal (54 percent) and Finance (51 percent) enterprises. For compliance, new role creation changed to 56 percent for Legal and 47 percent for Finance. It is unsurprising that these sectors rank highly here, given their history of shying away from remote work environments for data security reasons.

This lack of clear ownership both in the communication of the policies and in their implementation and compliance matters if enterprises are to mitigate environmental, reputational and security risks. According to the Global E-Waste Monitor 2020, only 17.4 percent of the 53.6 million metric tons of e-waste produced in 2019 was properly collected and recycled. By not playing their part in ensuring the management of e-waste, enterprises not only run the risk of contributing to air, water or soil pollution, particularly in the world's poorest countries, but also suffering from a data breach if their IT assets are improperly disposed of.

So, what does this mean for enterprises that may have embraced remote work for the long term? Enterprise policies must address both e-waste reduction and secure handling of end-of-life devices in the context of mass remote working. With 78 percent stating that COVID-19 had created a data security risk with a wide range of devices, developing an understanding of how to manage both asset and data lifecycles will be imperative for enterprises.

Rethinking End-of-Life Device Decisions

To understand end-of-life device management's role in an enterprise e-waste policy, it's important to note what is currently being done. In our 2019 research, we discovered that 39 percent of enterprises were using physical destruction to sanitize end-of-life equipment because enterprise leaders believed it to be better for the environment. This year, it is only down by 4 percent, with 35 percent of enterprise respondents stating that their organizations carried out physical destruction on end-of-life equipment for the same reason.

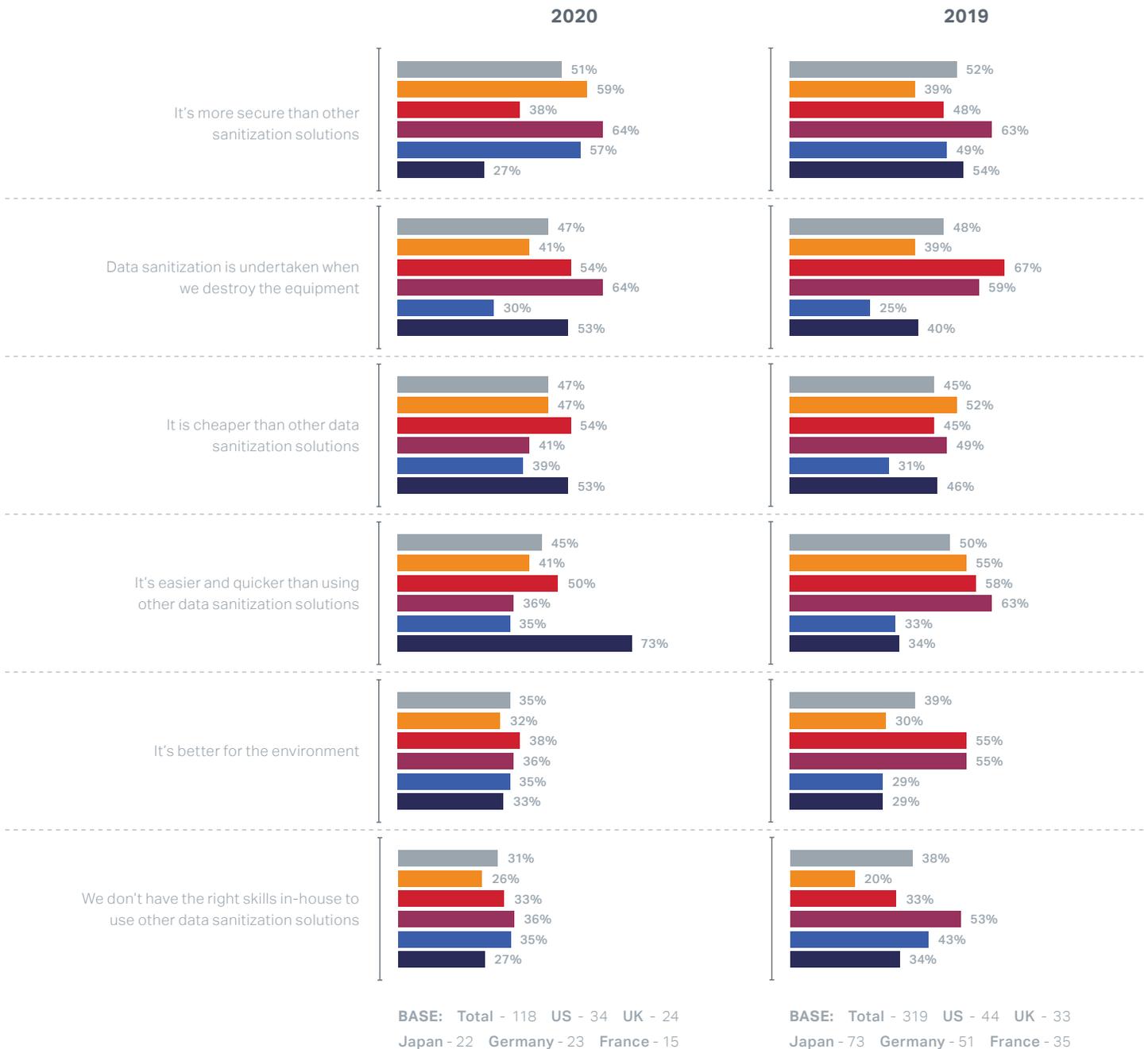
To better understand enterprises' views on this matter, this year's survey also asked respondents why they considered physical destruction to be better for the environment. Fifty-six percent stated that because it is done in-house, they are not reliant on additional services. Just under half (49 percent) also believe it to be more energy efficient and 46 percent believe some of the waste can be recycled or

Survey Results and Discussion cont.

reused. It's important to note that physical destruction in-house, for an enterprise, is challenging. Specific and certified equipment is required to ensure full and complete data protection, hence the propensity to outsource this activity where possible.

Figure 3.

Reasons for physically destroying end-of-life equipment



Survey Results and Discussion, *cont.*



It's positive to see respondents acknowledge that they plan to recycle or reuse some of the waste; there is most certainly great value in reusing components and harvesting resources that are difficult to mine or becoming less plentiful. However, that does not detract from the fact that there will be physical waste that will contribute to landfill. It is, therefore, crucial that enterprises make and understand the distinction between end-of-first-life hardware and non-functional, end-of-life hardware.

For hardware that is broken beyond repair or does not otherwise work with data sanitization software, physical destruction with an audit trail is a perfectly appropriate and advised method of sanitization. However, many devices that no longer have any use to the business can still be sent to an IT asset disposition (ITAD) vendor or environmentally friendly recycler for a new lease on life within the refurbished or secondary device market. To that end, it's essential that sanitizing the device of data, by erasing the data onsite rather than destroying the device itself, forms part of an enterprise's e-waste and CSR policy. This ensures the safeguarding of any sensitive data before that device is reused.

Apart from physical destruction, it is cause for concern that 17 percent of enterprises format drives at end-of-life. This is up 5 percent from the previous year's survey. Formatting is widely considered to be an inappropriate method of sanitization, as it cannot guarantee the complete and irreversible removal of data from a device. Overwriting the drive with a free software tool was another inappropriate method used by 7 percent of respondents. Furthermore, 7 percent are overwriting with a paid, software-based tool without ensuring that the device is free of data. Enterprises that persist in carrying out these processes are also at risk of a potential data breach once that device leaves the organization. When considering how to dispose of devices at end-of-life and how that fits in with enterprise e-waste and CSR policies, verifying that data sanitization is full and complete must be front of mind.

Excess COVID-19 Investment and Underlying Data Risks

COVID-19 has been an unprecedented situation for everyone. Businesses have had to adapt to seismic change with some industries completely reinventing their business models to adapt to an increasingly digital landscape. As has been discussed in this report, some of these enterprises had processes, policies and equipment in place to adapt and facilitate remote working, but many others did not.

With some employees working from home for the first time, enterprises have had to purchase additional IT equipment, battling against [temporary closures of factories and disruption to manufacturer stock levels](#). Reflecting again on the earlier statement, 78 percent of respondents believe these "unnecessary" equipment purchases have caused significant risk with data stored on a wide range of devices. The security risks of [remote working have been widely reported](#), and bad actors thrive off the vulnerabilities of a less secure home working environment. This is a prime opportunity for enterprises to become better at securing their data, including using data sanitization practices to minimize the amount of data stored in live environments.

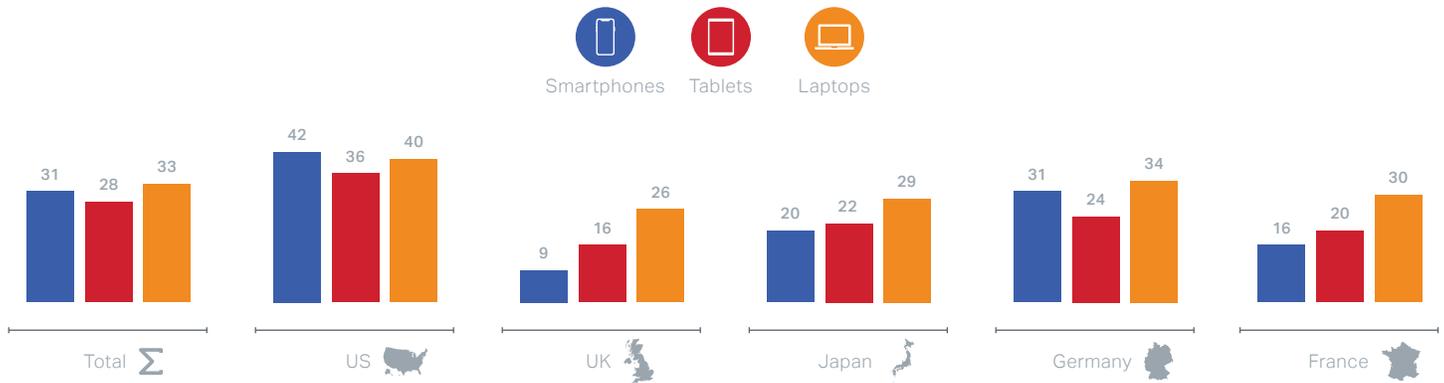
However, remote work also brings up issues that have traditionally been easier when staff are office-based: employee departures, for instance, mean devices need to be returned to the employer or equipment leasing vendor. Yet, despite the premises the devices are leaving from, or how they are being transported, they should not leave their original worksite before data has been completely removed.

Survey Results and Discussion cont.

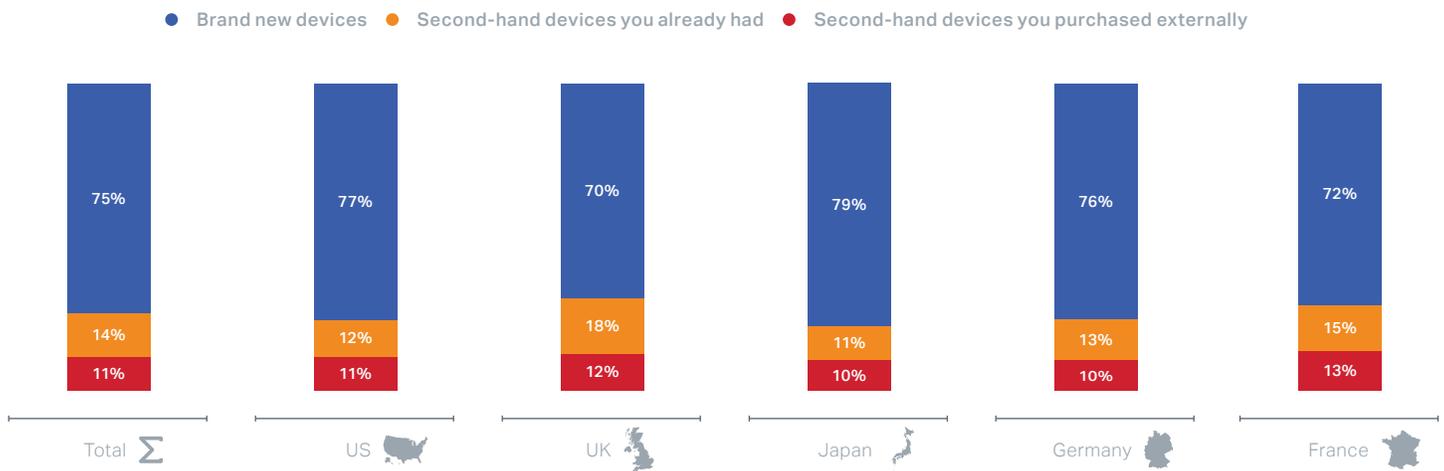
The volume of remote devices these companies are dealing with is no small matter. On average, our research found that enterprises purchased a total of 92 devices — a combination of smartphones, tablets and laptops. UK enterprises bought the least (51, on average) while US enterprises purchased the most (118). Almost all enterprises (97 percent), though, said they had to make purchases of laptops, with 75 percent buying the devices brand new. The additional 25 percent either engaged with the secondary market or used second-hand devices already owned by the business. All of these purchases came at a cost. One US enterprise operating in the technology industry, for example, spent \$16,400 on additional devices. Another enterprise operating in the UK legal industry spent \$19,500.

Figure 4.

Average number of items purchased



Laptops: Proportion of second-hand vs. brand new devices



BASE: Total - 201 US - 44 UK - 49 Japan - 49 Germany - 30 France - 45

Of the three device types (phones, devices, laptops), 55 percent of respondents considered tablets to be non-essential equipment for employees' roles. The majority of enterprises surveyed (82 percent) also did not purchase smartphones in response to the pandemic, stating that employees would use their personal, at-home devices.

The Device Management Conundrum—and the Opportunity

This report has explored two main concerns: the risks associated with a lack of CSR and e-waste policy communication and ownership, as well as pandemic-sparked purchases of additional devices and what this means from a data management perspective. But there is another important point to address. Ninety-two percent of respondents agreed that there must be a serious view taken on ensuring all devices used to equip the workforce throughout the COVID-19 pandemic are appropriately stored and disposed of.

Enterprises are clearly concerned about the risk that an increased number of devices represents in terms of data management. A key part in tackling that challenge is ensuring all e-waste and CSR policies include appropriate methods of sanitization and step-by-step processes to follow when it comes to device lifecycle management. This could even involve classifying data based on type and confidentiality level as well as specifying how to comply with regulatory data protection and auditing requirements during device disposal. Enterprises should also create policies that require a stringent chain of custody processes. These processes must document the handling of data and devices all the way from first acquisition to final, secure disposition of the device and the data that resides on it.

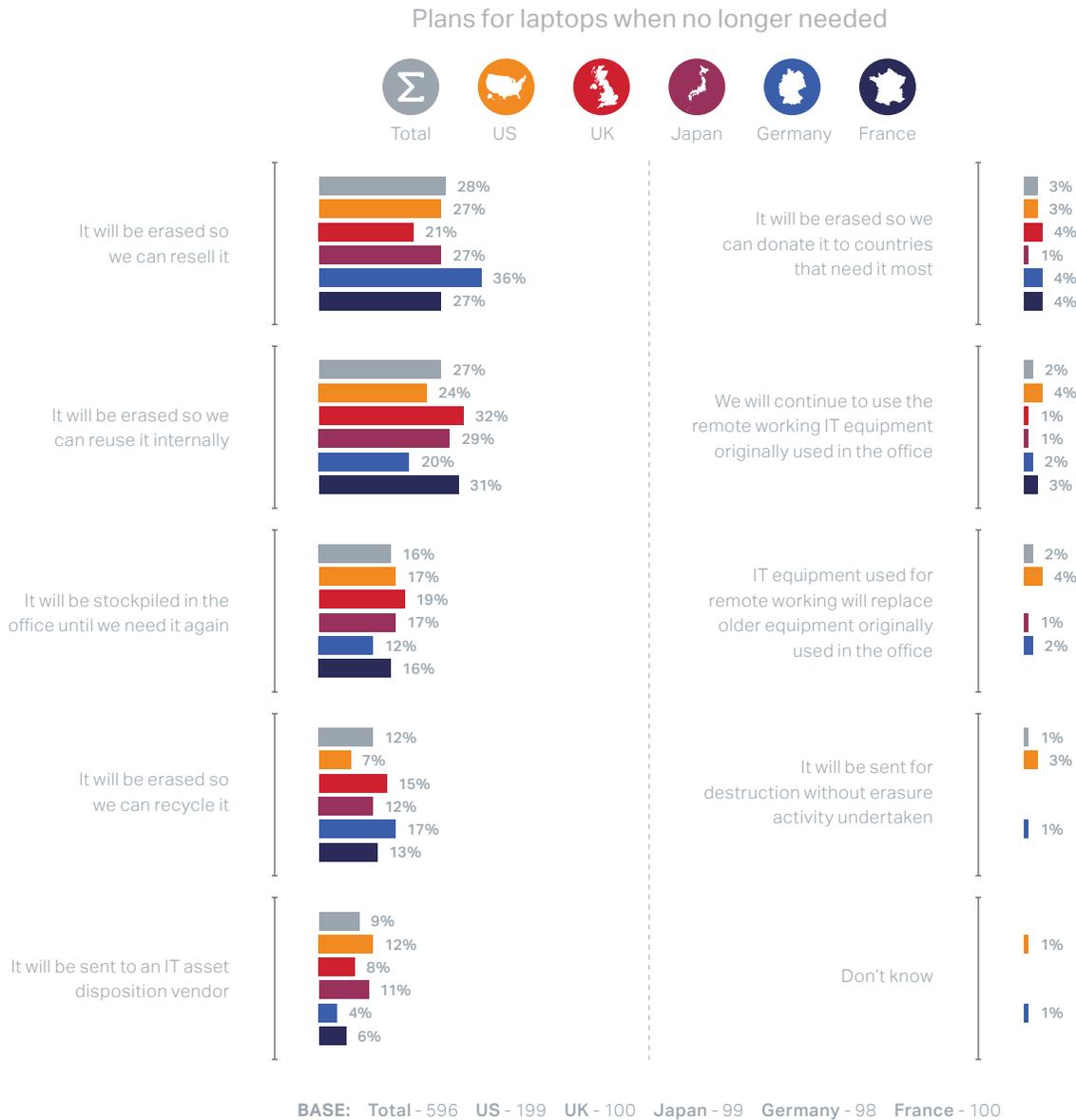
When asked what will happen to their newly purchased devices when no longer required for remote working, 28 percent of enterprises said laptops would be erased to be resold. A further 27 percent said they would be erased to be reused internally. An additional 12 percent said they would be erased and recycled and 9 percent will send them to an ITAD. These findings are hugely significant and positive. When done correctly—including verifying that data has been permanently removed and creating an audit trail proving it—data erasure is the recommended form of data sanitization that leaves devices available for reuse.

The intentions of enterprises to appropriately dispose of used devices is reassuring and points to benefits to the enterprises themselves. By extending the device lifespans, enterprises can not only maximize value from their IT purchases but also put them back into the circular economy. Devices can be sold to earn carbon credits, reused internally or safely donated to organizations that have less need for the most current or top-of-the-line technologies. In addition, components can be recaptured for use in future devices. These options reduce the amount of e-waste produced, reduce the rate of natural resource consumption, provide affordable options for second-hand purchasers and create sustainable jobs in the refurbishment of electrical components.

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Survey Results and Discussion, cont.

Figure 5.



The findings also suggest that the remaining 24 percent of respondents do not have sustainable plans for their used devices. It is critical that enterprises seize this opportunity both to unlock the devices' latent value and take responsible action with device disposal.

In the healthcare sector, for example, the opportunity to get ahead of handling end-of-life devices securely will be essential, but currently this sector is lagging behind. Just nine percent said they will send the purchased devices to an ITAD, with a further nine percent saying they will recycle and nine percent saying they will resell. With such a huge focus on privacy of health data and the critical importance of its safeguarding, more must be done to ensure the responsible disposal of devices at end-of-life.

Best Practice Recommendations

The majority of enterprises (92 percent) agree that devices need to be responsibly stored and disposed of in order to protect against data leaks. What's more, 72 percent are concerned about the risks that a wave of new devices might present for secure data management. However, there are basic hygiene factors that any enterprise needs to adopt.

Not only do these ensure a best practice approach, they are also key elements to consider as part of any e-waste or CSR policy—or IT security policy—to demonstrate responsible asset management:

If IT equipment has not reached end-of-life and can still be used, enterprises should make sure adequate processes are in place to immediately sanitize it onsite.

- ✓ Develop and implement a specific e-waste policy or CSR policy that includes e-waste and shout about it, particularly to those within the organization that have the responsibility, authority and means of protecting sensitive data and managing IT assets. It is important to call out end-of-life device management within this policy, clarify roles and responsibilities, and highlight how the business is helping combat the e-waste problem while maintaining the highest possible data security standards.
- ✓ Make sure that policy includes data erasure as part of the organization's asset decommissioning processes:
 - If IT equipment has not reached end-of-life and can still be used, enterprises should make sure adequate processes are in place to immediately sanitize it onsite, using certified software and clear plans on the various reuse scenarios. By executing data erasure via the network before disconnecting, ensuring that the device is free from data before it is used again—internally or externally, for resale, donation or recycling—enterprises can be confident they are implementing both a secure and environmentally friendly option. Note that when IT equipment is still usable but must be physically destroyed (per mandate, for instance), erasure should still take place onsite, before being transported offsite for destruction.
 - When IT equipment becomes truly non-functional, enterprises should send it to an environmentally friendly recycler or ITAD for certified data sanitization via physical destruction in a way that enables proper recycling without risking the data being breached.
- ✓ Remote data erasure should be high on the agenda, given the proliferation of staff working from home. Carrying out remote erasure immediately is crucial in removing data from a decommissioned device, ahead of its transportation to a recycler, ITAD or centralized enterprise location. Devices can be sanitized easily in a home office as well, using automated processes where certified software is deployed in that unique environment as part of normal centralized asset management.

Conclusion

For today's enterprises, demonstrating corporate social responsibility is high on the agenda. Organizations understand the value of putting in place policies that drive sustainability companywide. But when it comes to regulating the amount of e-waste produced through enterprise IT use, we believe that enterprises are uncertain about how best to communicate these policies, clarify best practices, and assign responsibility for implementation and compliance.

Within any CSR or e-waste policy, data management for end-of-life devices should be paramount and top of mind. Without this, enterprises run the risk of suffering a data breach, which can cause reputational and financial damage.

End-of-first-life devices need to be appropriately sanitized and erased for them to present no risk to the organization should that device fall into the hands of bad actors. Importantly, erasure of data from a device readies that device for recycling or resale. This is crucial in tackling the overall e-waste problem. What's more, preserving precious materials is becoming part of resource conservation, as a means of unlocking the latent value within used devices.

There has never been a better time for enterprises to act on improving device management practices, all while having a positive environmental impact on our planet.

Blancco has helped organizations securely erase sensitive data from end-of-life assets and live environments for more than 20 years, enabling hundreds to millions of assets to be ready for reuse, while also removing the risk of data breaches. Recently, Blancco was awarded the Green Economy Mark accreditation from the London Stock Exchange for its sustainable business model. In addition to providing a positive environmental impact, Blancco also enables organizations to save money on data storage and meet retention, security and compliance goals.

Contact your Blancco provider today for more information.

About Blancco

Blancco is the industry standard in data erasure and mobile device diagnostics software. Our data erasure software provides thousands of organizations the tools they need to enable sustainable data sanitization processes across the widest array of IT assets. By focusing on erasing and reusing assets instead of physically destroying them, organizations can improve their security posture and address corporate social responsibility requirements, while also ensuring compliance with local and global data privacy requirements.

Blancco data erasure solutions have been tested, certified, approved and recommended by 15+ governing bodies and leading organizations around the world. No other data erasure software can boast this level of compliance with the rigorous requirements set by government agencies, legal authorities and independent testing laboratories. All Blancco erasures are verified and certified, resulting in a tamper-proof audit trail.

With Blancco Mobile Solutions, organizations can achieve real-time valuation for mobile devices with a simple tool that enables consistent, accurate and measurable diagnostic testing, in-store or remotely via a customer-facing app, with workflows purpose-built for buy-back/trade-in, mobile insurance and returns reduction.

Additionally, mobile processors can achieve operational excellence while maximizing profits with Blancco Mobile Diagnostics & Erasure—a purpose-built solution that streamlines diagnostics, erasure and grading processes to prevent unnecessary touchpoints and increase efficiency.

For more information, contact your Blancco provider.