



10TH ANNUAL

ITAD BENCHMARKING REPORT 2024

Reflecting On the Past While Looking Toward the Future

ABOUT THIS REPORT

This tenth edition of the Cascade Asset Management Annual Benchmarking Report provides information and research on security, environmental, and financial issues related to IT Asset Disposition (ITAD) and the more general IT Asset Management (ITAM) discipline. The findings are derived from the results of our Annual Benchmarking Survey and Cascade's processing activities.



SURVEY RESULTS

Cascade's Annual Benchmarking Survey compiled detailed responses from 50 enterprises and organizations collectively representing over 168,200 employees.



MARKET RESEARCH & INSIGHTS

An analysis of key topics impacting ITAD decisions is presented throughout this report.



ASSET PROCESSING DATA

Nearly 1.6 million assets processed by Cascade Asset Management between 2019 - 2023 were evaluated and analyzed for disposition trends.



EXAMINE BEST PRACTICES

Use the benchmarking information to help you understand how your ITAM/ITAD program compares to others and how you can further improve your systems.

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FROM THE ARCHIVES



In our milestone 10th edition of the Annual Benchmarking Report, we take a retrospective look at the evolution of IT asset disposition (ITAD) trends over the last decade. While some aspects have undergone changes, the unwavering principles of security and sustainability continue to be the cornerstones for both our industry and Cascade. Throughout this report, you'll notice several "From the Archives" sections revisiting key insights from past Benchmarking Reports. We invite you to download these resources as many of them remain relevant today. You can access past reports by scanning the QR code above or visiting: Cascade-Assets.com/Cascade-Benchmarking-Report.

In addition, if you would like to request a no-obligation ITAD program review, please reach out to us at info@cascade-assets.com.



OBSERVATIONS

REFLECTING ON THE PAST WHILE LOOKING FORWARD TO THE FUTURE

When Cascade published our first annual IT Asset Disposition (ITAD) Benchmarking Report ten years ago, our goal was to share knowledge and insights with our customers and industry peers to help all of us improve our programs and processes. At the time, there was a dearth of information available about ITAD best practices and refurbished computer equipment resale values. Clients would ask us, "How does our disposition activity compare to your other clients?" They (and we) wanted the data to identify market trends and the wisdom to develop better outcomes for everyone's programs.

The foundation of this report is our in-depth survey completed by a diverse set of IT asset management practitioners. We have always benefited from a healthy mix of large and small organizations from a wide variety of industries participating in this process that yields a representative sample of the needs of ITAD practitioners at large. Since we launched this

annual survey, 600 ITAD professionals shared information about their programs to allow us to formulate the most comprehensive and consistent ITAD benchmarking study available.

Looking back ten years, it seems that the more things change, the more they stay the same. Apple introduced the iPhone 6 on September 9, 2014 at a starting price of \$199. The current iPhone 15 sells at \$799 and up. In contrast, Microsoft released Windows 10 in 2015 and that continues to serve as the dominant operating system for end user client devices.

There's always plenty to share in this report—it's doubled in size from our initial publication in 2015. We hope you find the information useful and we welcome you to reach out to us to learn more about how we can improve your ITAD program.



Neil Peters-Michaud, CEO

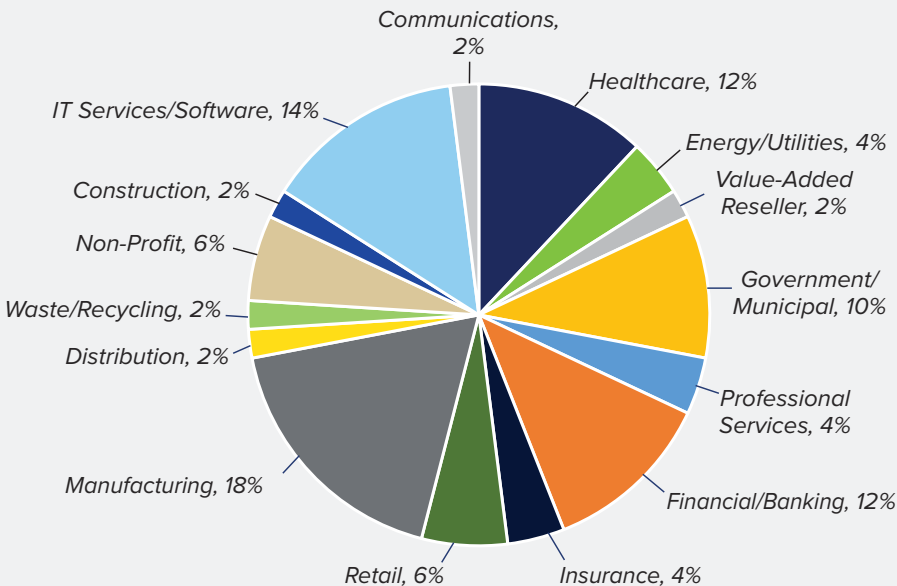
SURVEY DEMOGRAPHICS

Participants in this year's benchmarking survey identified with 15 industries, spanning manufacturing, government, healthcare, non-profit, retail, and several categories of services.

Regarding their organizational roles, a majority of respondents were part of the IT (52%) or IT Asset Management (20%) Department. The next largest category, at 10%, was management, including Owner or President. The remaining 18% consisted of Finance, Environmental Health and Safety, Facilities Management, Purchasing, Supply Chain Management, and Operations. A notable trend consistent with past years is the increasing role of IT departments in asset disposal, sidelining responsibilities that were once under facilities management or environmental services.

Regarding organizational size, the survey encompassed a wide range. The largest category (40%) was medium-sized firms, ranging from 100 - 1,000 employees. Small enterprises, those with fewer than 100 employees, and the larger brackets of 1,001 - 5,000 and 5,001 - 20,000 each comprised 28%. The smallest category (4%) included the largest organizations of 20,000+. In terms of the number of workstations managed by the organization, the numbers were closely aligned with the company's size, suggesting most the employees in these industries have a company-issued device.

Which term best describes your industry?



72%
of respondents work in an IT-related job role

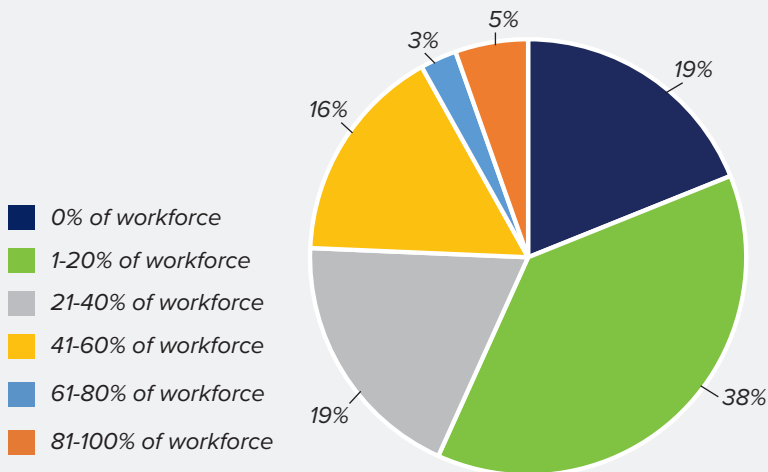
40%
work at a medium-size company (100 - 1,000 employees)

44%
manage 100 - 1,000 workstations (laptops & desktops)

WORKPLACE TRENDS

FROM THE ARCHIVES

What percentage of your employees are classified as "mostly remote?"



Today's workforce is more multi-faceted than pre-pandemic times.

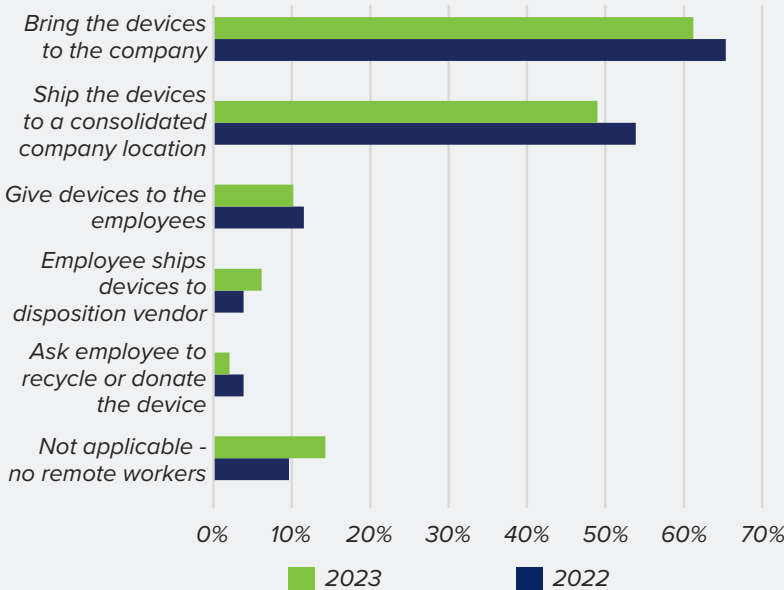
Fifty-seven percent of respondents indicated that less than 20% of their workforce is primarily working remotely now. Just 8% percent of companies indicate that the vast majority of their workforce is remote. Over 88% of companies indicate they now support at least some remote workers in their environment.



While the mostly remote category has stabilized, what remains to be seen is the hybrid category. Given that this year's survey was the first introduction of questions on remote, hybrid, and in-office work setups, we cannot offer historical trends. However survey respondents predicted only slight changes between now and the future.

How do remote workers return their devices?

Choose all that apply

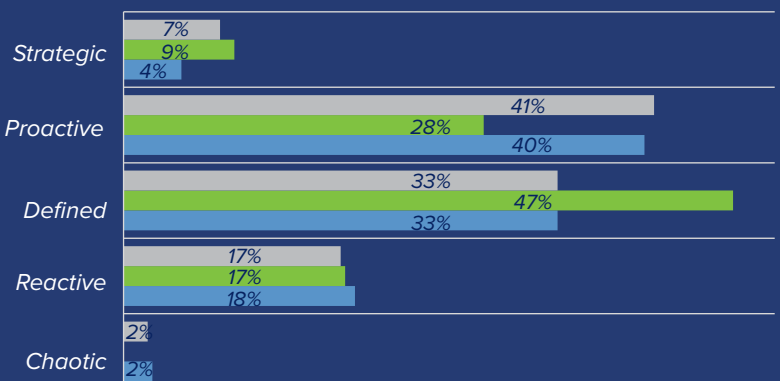
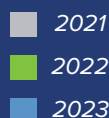


A diversification in work settings means more IT asset management protocols. We asked what options are offered to remote employees when it's time to return devices. The results showed only slight variations year over year. A significant 85% of respondents reported offering multiple return options. One thing to note is slight decreases in giving devices to employees as well as asking workers to recycle or donate their devices. Later in this report you'll notice that respondents ranked managing data security and privacy risks as the top concern during asset disposition. Perhaps these priorities are making some organizations reconsider asset disposal options that give employees decision-making authority.

ITAM/ITAD PROGRAM MATURITY LEVEL

What stage of the "ITAM/ITAD Process Maturity Model" would you place your organization in?

This year's survey respondents rated their ITAM/ITAD program **less strategic and more chaotic** than 2022 respondents. However, most rated their programs in the defined and proactive categories.



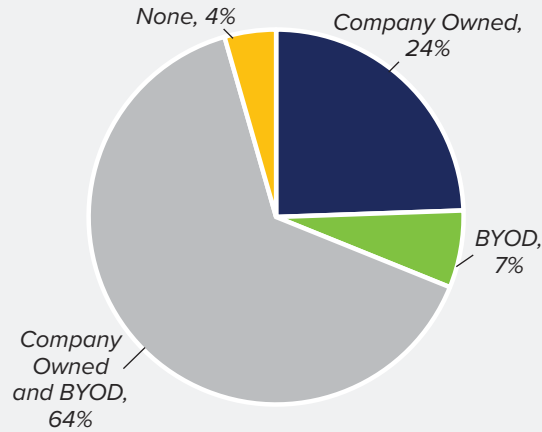
HARDWARE TRENDS

SMARTPHONES

Our latest survey on smartphones deviated slightly from previous editions, reflecting the growing number of organizations that are blending company-owned devices with a bring-your-own-device (BYOD) policy. Notably, this integrated strategy garnered the highest response rate, capturing a 64% majority. While implementing a BYOD phone policy can save an organization money, it may increase data security risks.

See our [2020 Benchmarking Report](#), pages 4-5, for tips on managing enterprise mobile device disposition.

Company-Owned Smartphones vs BYOD



FROM THE ARCHIVES

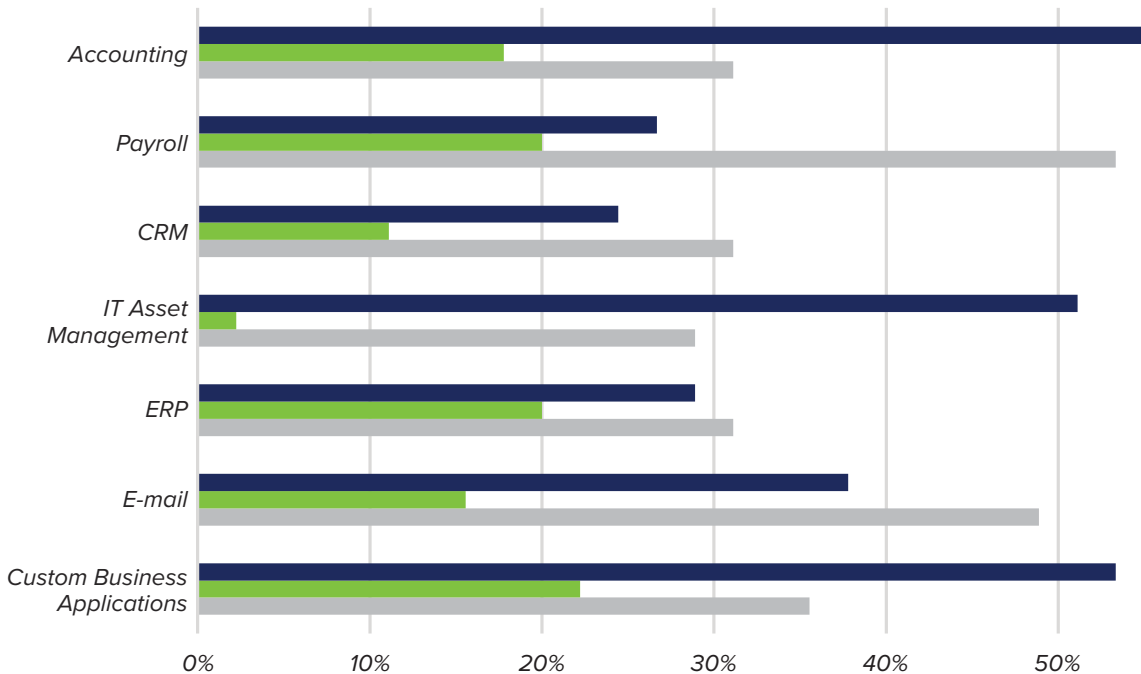


2020 Benchmarking Report, reference pages 4-5 for enterprise mobile device disposition tips

DATA CENTER OPERATIONS

The topic of data center operations generated a wide variety of responses. This is the first time we asked a question about data center operations as they relate business applications. The answers differed significantly from one application to another as well as within the application type itself. As expected, there continues to be a movement to outsourcing data center operations. This survey recorded the lowest level of data center operations hosted by enterprises.

What types of data center operations do you use for your business applications (on-premise, hosted, or cloud-based)?



- On-premise: Your software installed on your servers
- Hosted: You own the software, but it's hosted on a server you rent from a third party
- Cloud-based: You pay a subscription fee to the provider to access software maintained on their server.

Data Center Trends



We expect to outsource more data center services

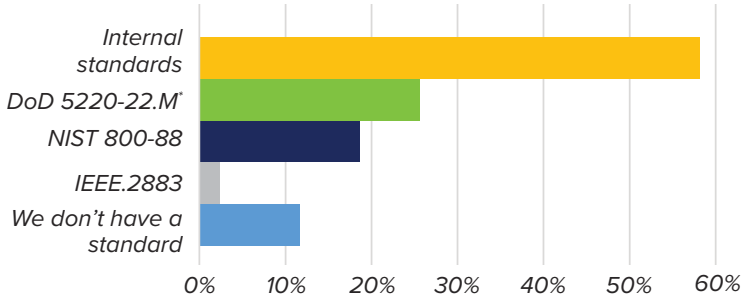
2021	2022	2023
26%	13%	22%

We will expand investments in our own data center infrastructure

2021	2022	2023
16%	2%	13%

DATA SANITIZATION

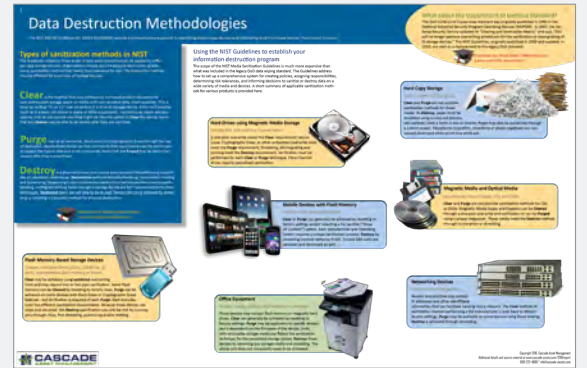
What data sanitization standard(s) do you follow when retiring IT assets? (check all that apply)



Our query into data sanitization standards uncovered some concerning trends. Over 25% of survey participants rely on Department of Defense (DoD) 5220-22.M methods, which are obsolete. Another 12% admitted their organization lacks a standard procedure.

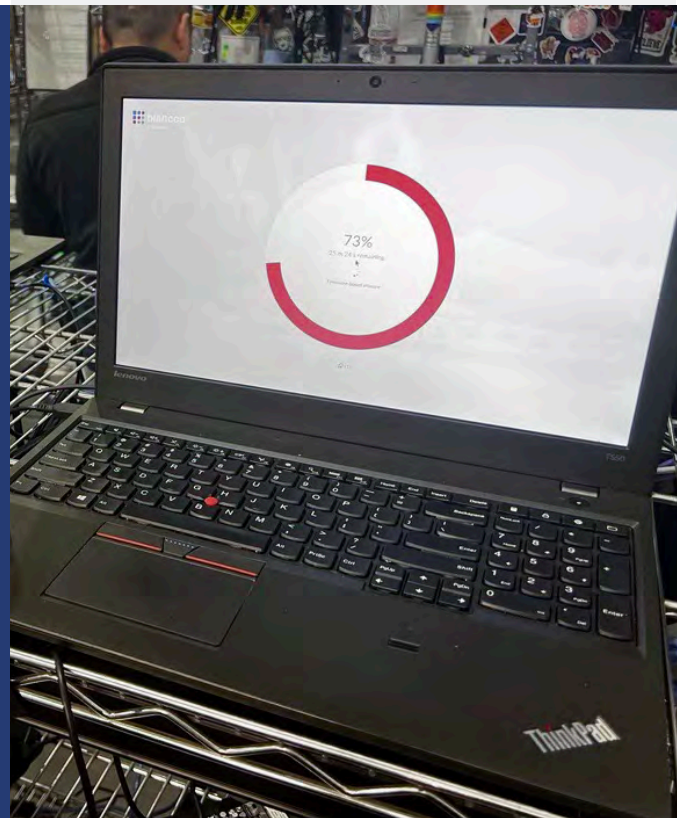
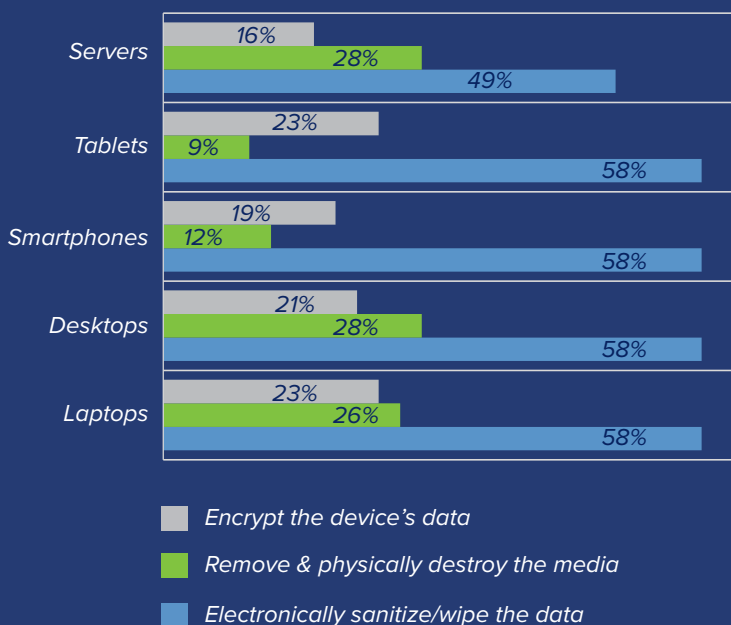
As the financial implications of data breaches continue to skyrocket, it is critically important to secure data on decommissioned IT assets. This is especially true for firms in tightly regulated industries such as healthcare, banking, finance, insurance, and technology. At Cascade, we primarily follow the National Institute of Standards and Technology (NIST) Guidelines for Media Sanitization Revision 1 and maintain a NAID AAA certification. For information on NIST and data destruction methodologies, reference our 2015, 2016, and 2017 *Benchmarking Reports*, especially pages 4-5 in the *2016 report*.

FROM THE ARCHIVES



Cascade Benchmarking Report 2016, reference pages 4-5 for details on data destruction methodologies

How do you secure the data on devices before sending them off-site for disposal? (check all that apply)



UNLOCK THE POTENTIAL OF SECURED DEVICES

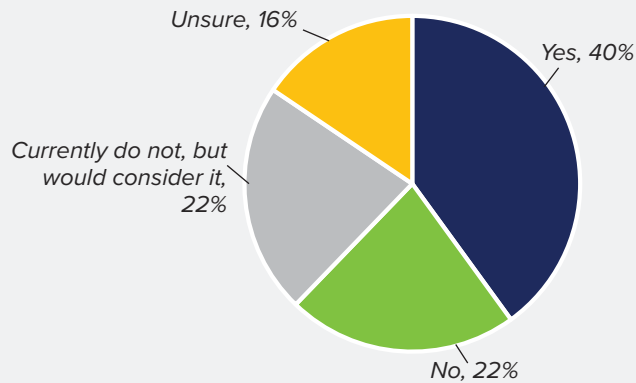
Utilizing security measures such as activation locks, BIOS passwords, Computrace, and mobile device management software is a critical practice for organizations to safeguard their IT assets and the confidential data they contain. However, protective measures can complicate an IT asset disposition (ITAD) provider's ability to process the device when it is retired.

An ITAD provider can securely and effectively remove these security controls to allow you to unlock the value of this asset and give it a second life. This not only helps organizations

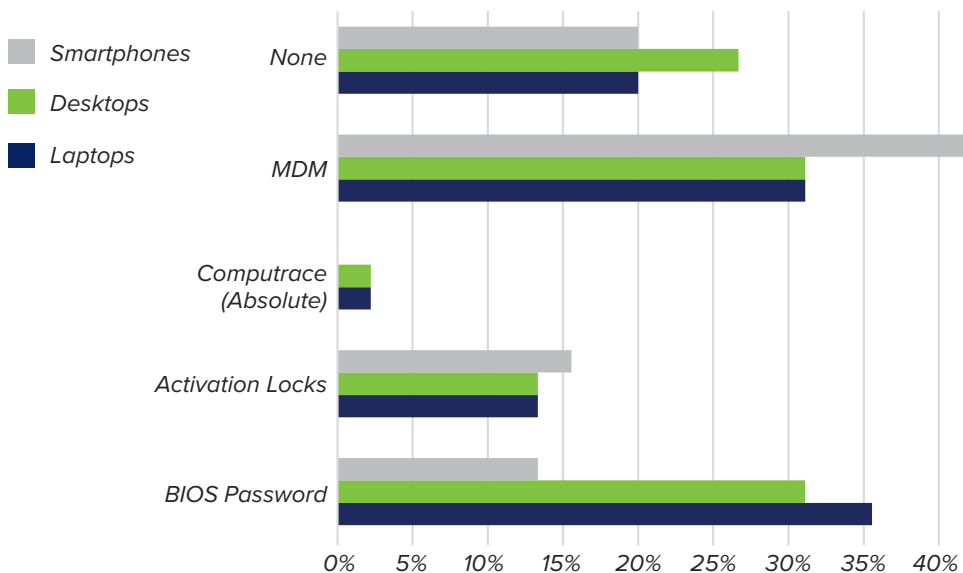
reap profit from resold devices but also contributes to sustainability goals.

In the past two years, Cascade processed almost 16,000 security locked assets. Many times a company would choose to recycle these items because the process of unlocking is a challenge. However, in coordination with our customers, we securely unlocked over 74% of these assets, generating over \$584,000 in resale revenue that was shared with our clients. Ask your ITAD provider about their security unlocking services.

Do you allow your ITAD vendor to remove security locks from devices so items can be re-marketed?



What types of security locks do you use on your devices? (check all that apply)



REASONS TO UNLOCK A DEVICE RATHER THAN RECYCLE IT



Reusing or reselling a device provides value

Deactivating locks saves on software subscription costs



The environmental impact of extending a device's life is greater than recycling it



Unlocking and electronically sanitizing a device is more secure



Scan to learn more about how to unlock value from retired devices.

FROM THE ARCHIVES



2018 Benchmarking Report, reference pages 4-5 for information on balancing security and value

SUPPORTING SUSTAINABILITY

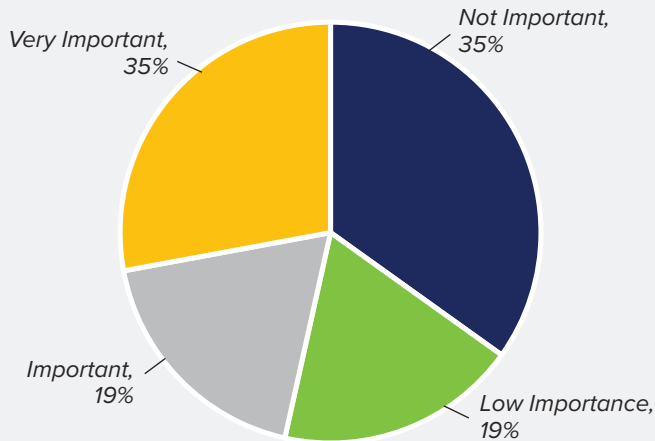
Since the beginning of the decade, the number of organizations incorporating **ESG (Environmental, Social, Governance)** factors into their reporting has been rapidly growing. This is especially true among publicly traded companies.

The IT department can play a significant role in supporting corporate ESG efforts.

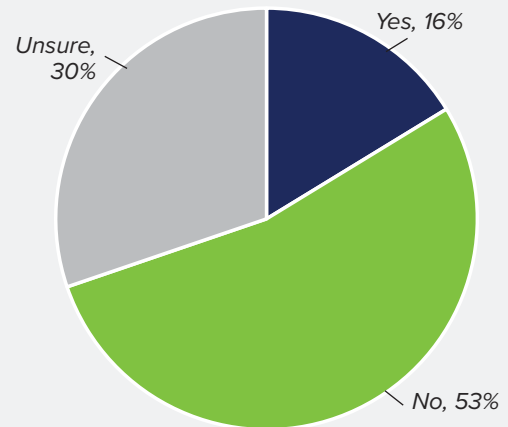
- Environmental:** Partner with an IT asset disposition (ITAD) vendor that supports environmental initiatives including both recycling and reuse. They can help your company extend the life of assets and responsibly recycle materials, which reduces e-waste and natural resource consumption.
- Social:** If your company takes part in asset donation and digital equity programs, an ITAD vendor can manage logistics and assist with reporting. Plus, a socially responsible ITAD provider sets a commendable standard within your supply chain.
- Governance:** Working with an ITAD provider that possesses certifications helps your organization demonstrate a high level of governance in managing data security risks, complying with environmental regulations, and maintaining high-quality operations. They can also make your IT department's job easier if they offer ESG reporting on electronics that are reused or recycled.



What level of importance is your company placing on ESG initiatives?



Does your company produce a public ESG or sustainability report?



What types of information do you include in the ESG report? (check all that apply)



*Other: One survey participant shared their organization's content: Planet, Principles of Governance, People, and Prosperity. Another respondent mentioned their company has a dedicated ESG department, but was unfamiliar with the details. A third participant admitted didn't know what information was

featured in their company's ESG report. IT Departments that learn what's included in their report and take steps to support the initiatives would undoubtedly be a positive outcome for the department, the company, its stakeholders, and the environment.

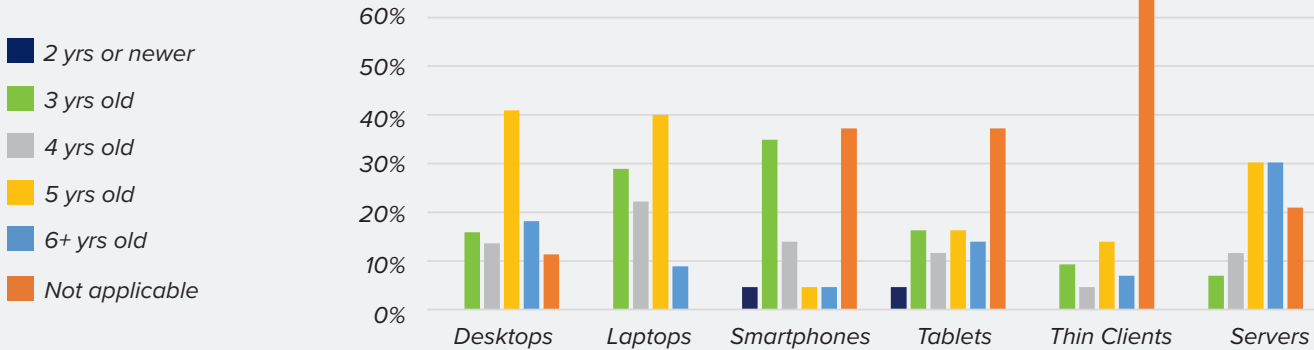
IT ASSET MANAGEMENT

DEVICE RETIREMENT

In comparison to last year's survey results, the age at which some devices are retired has gotten a bit older. In 2022, most respondents were retiring laptops at 4 years old, while the most popular answer this year was 5 years old. Although many answered they use the 3 or 4 year mark as the retirement age.

Desktops saw a slight increase in their retirement age from an average of 4.39 to 4.69 years. The smartphone category also saw changes. Last year's respondents selected 2 years old as the most popular answer, and this year 3 years old was most popular. However, 37% respondents selected "not applicable" because they don't provide company-owned smartphones.

On average, how old are the assets you expect to retire in 2024?



Average Age of Retired Devices from a Historical Perspective



LAPTOPS

2015	2019	2023
4.20 years	4.09 years	4.29 years



DESKTOPS

2015	2019	2023
4.53 years	4.36 years	4.69 years



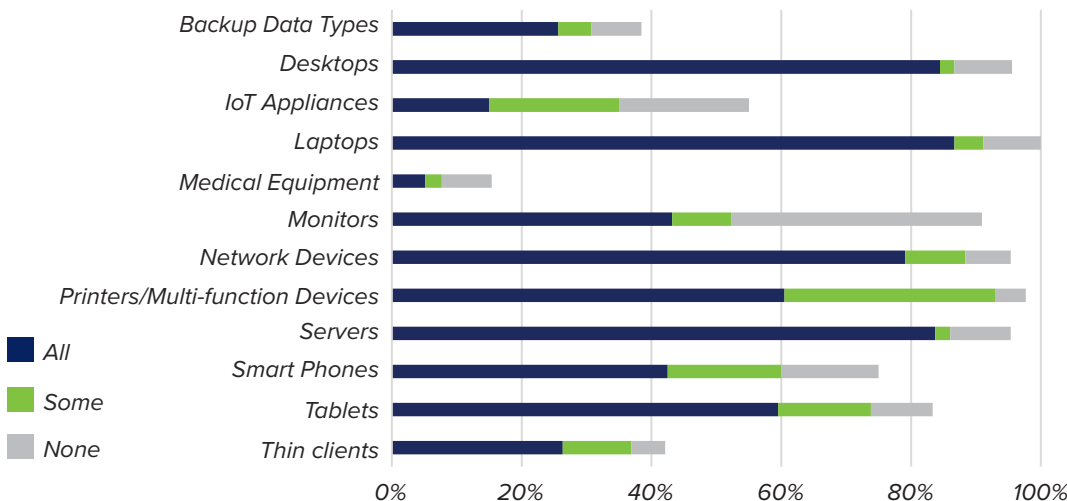
PHONES

2023
3.52 years, but 37% don't provide them

TRACKED ASSETS

Monitoring assets through final disposition is the best protection for an organization. It provides evidence the device and its data underwent due diligence throughout its life cycle. Historically, the most tracked assets over the past decade encompassed laptops, desktops, and servers. Yet there's been a decline in the number of respondents reporting thorough asset tracking in those categories. Given the dynamic nature of technology and the dispersed work setups of today's workforce, perhaps IT asset managers are finding it increasingly difficult to maintain constant oversight.

What types of assets do you track internally?



Asset Tracking Trends



LAPTOPS

2015	2019	2023
93%	81%	87%



DESKTOPS

2015	2019	2023
93%	76%	84%



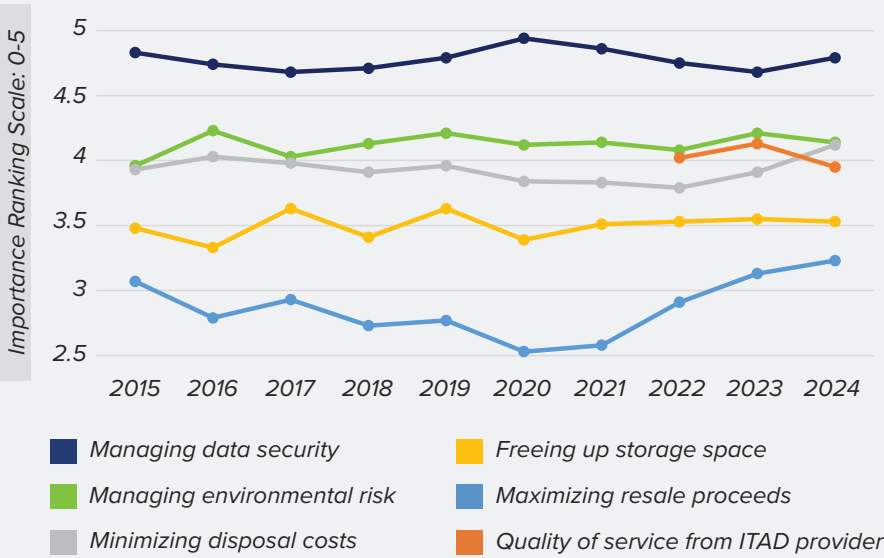
SERVERS

2015	2019	2023
91%	84%	84%

IT ASSET MANAGEMENT

FROM THE ARCHIVES

Rank the criteria used when disposing of technology



CIRCULAR TECHNOLOGY DISPOSITION

When an organization decides it has completed an asset's first usage cycle and it's ready for transfer to an ITAD provider, there are several aspects to consider. The graph on the left shows that managing data security and environmental risk are top priorities. There are several ITAD services that align with this criteria: refurbishment, redeployment, reuse, parts recovery, and recycling.



2019 Benchmarking Report



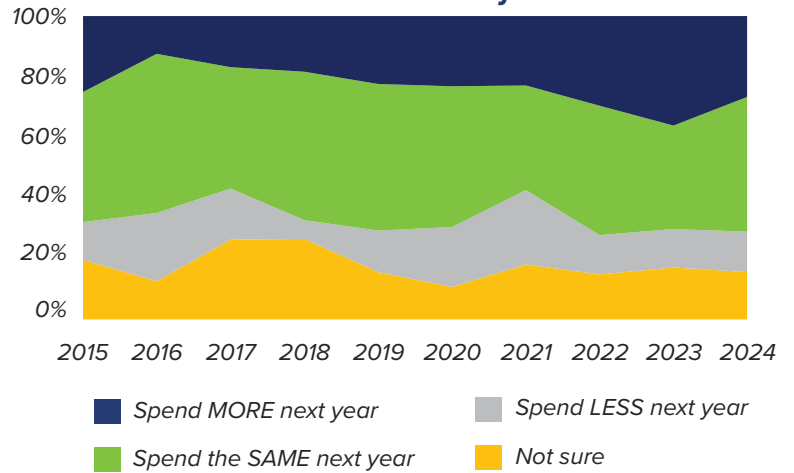
Reference our *2019 Benchmarking Report* for more information on the "Circular Economy: A Framework to Optimize Assets."

IT HARDWARE INVESTMENTS

A majority (44%) of this year's survey respondents revealed they are expecting the same level of IT hardware investments in 2024 as they did in 2023, while 23% expect to spend more. This contrasts with last year's results where over 36% indicated they expect to spend more, the most Cascade has ever recorded in this category.

The chart to the right illustrates the changes in projected investments over the past decade. Although the survey respondents in December 2019 couldn't have anticipated the global pandemic, its repercussions on IT hardware acquisitions are evident. Some firms ramped up their equipment purchases early on, and then tapered off after making substantial acquisitions. Notice the slight uptick in 2023, as some firms refreshed items purchased during the pandemic or used up remaining funds that had been allocated for IT assets. Additionally there's a marked drop in the "not sure" category in 2020, hinting that the pandemic may have prompted some companies to refine their IT asset management protocols.

What is your expected investment in IT hardware next year?



2024 PREDICTION
expected investment on IT assets



SIMILAR TO 2023

INDUSTRY CERTIFICATIONS

FROM THE ARCHIVES

THE VALUE OF INDUSTRY CERTIFICATIONS

During the 10-year lifespan of the Benchmarking Survey, respondents have always selected data security as the top priority when disposing IT assets. With the high costs of a data breach, it's easy to understand why.

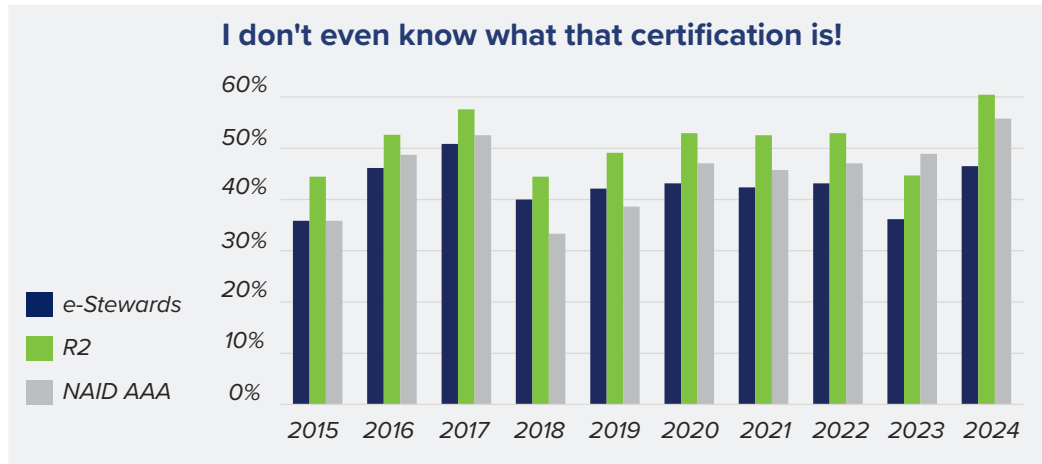
To help identify whether an ITAD provider meets expectations, we recommend you review their certifications. They're valuable

because they prove the ITAD provider is regularly evaluated by a third party on a stringent set of criteria rather than self-attesting to a list of claims.

Despite the importance of certifications, our survey shows the long-standing unfamiliarity of their value. This suggests ITAD providers and industry partners need to do a better job of educating on the topic.



To learn more about certifications, reference page 13 of the 2023 Benchmarking Report.



CERTIFICATION TYPES

All certifications listed are issued and audited by a third party.

Certification	Certification Principles			2024 Survey Results: Importance of Certifications				
	Quality	Security	Sustainability	Critically Important	Very important	Somewhat important	Not important	I don't even know what that is!
e-Stewards CERTIFIED		✓	✓	9%	21%	12%	12%	47%
R2		✓	✓	12%	9%	5%	14%	60%
AAA NAID CERTIFIED		✓		12%	7%	14%	12%	56%
ISO 14001 CERTIFIED			✓	12%	28%	9%	9%	42%
ISO 9001 2015 CERTIFIED	✓			21%	26%	12%	9%	33%
ISO 45001:2018	✓			12%	14%	16%	9%	49%
ISO 27001 Certified		✓		12%	19%	12%	9%	49%

KEY ITAD CHALLENGES FOR 2024

What are the some of the most important ITAD issues you'll be facing in the next year?

One of our survey questions asked participants to share their key IT asset disposition challenges for 2024. It was an open-ended question, yet many of the responses had common themes. Below are a few of the comments:

Security Concerns

- Ability to track laptops that are not on the IT domain
- Making sure that hard drives are wiped and there is no risk of data getting compromised

Asset Management

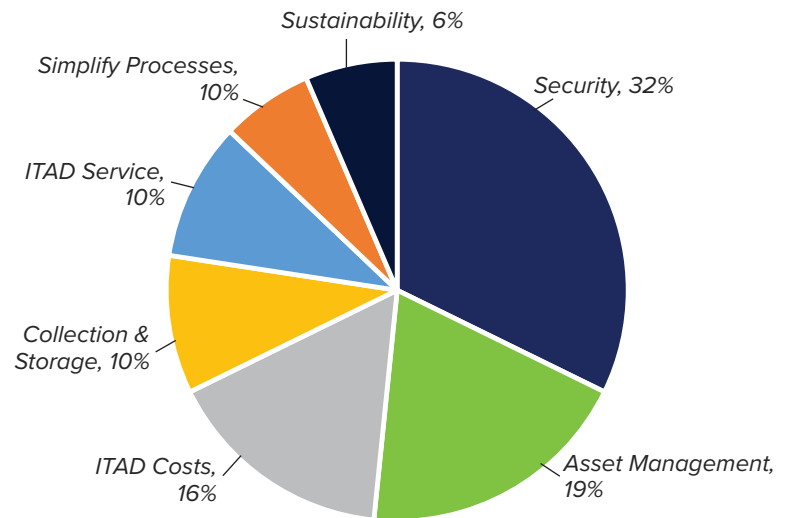
- Replacing vs maintaining - what is worth the time to fix and what is not
- Getting everyone on the same standard and getting information about the process to everyone
- We have locations throughout the USA and it is somewhat difficult to coordinate consistent disposal throughout our corporate footprint
- Being proactive in collecting and disposal

ITAD Savings

- Reducing costs

Collection & Storage

- Reducing the amount of equipment held in our facility
- Storage of devices pending disposal
- Volume management - sorting through and ensuring we dispose of assets in compliance with data storage policies will be a challenge



ITAD Service

- Organizing into one IT asset disposal partner
- Ease of disposal
- Phone hardware resell or disposal

Simplify Processes

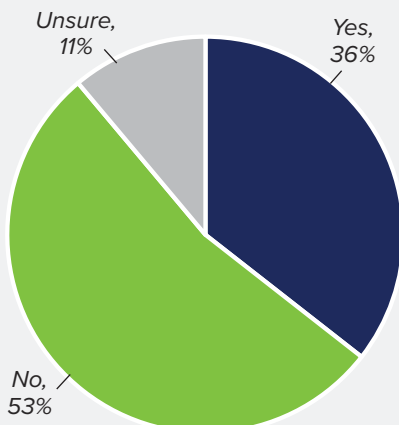
- Getting equipment back from remote/work-at-home employees to properly dispose of

Sustainability

- Keeping costs down while recycling more
- Environment sustainability and landfill preservation

DAMAGED LITHIUM-ION BATTERIES

Do you have a process for Li-ion battery handling?



A new question in this year's survey asked if the organization had a process to identify, store, and dispose of damaged or swollen Lithium-ion batteries. This category of batteries is prevalent in many electronics, therefore IT asset managers and ITAD providers should be knowledgeable about the risks these batteries can pose. Most respondents (53%) said they do not have a battery handling process in place.

Li-ion batteries, especially damaged ones, require special handling to prevent fires and to comply with the Department of Transportation's shipping requirements. If you come across swollen or damaged batteries, you can order a special kit from [Call2Recycle](#) or contact Cascade to legally and safely pack the device for you. In the meantime, keep the batteries away from combustible materials.



RESALE TRENDS

RESALE VALUES

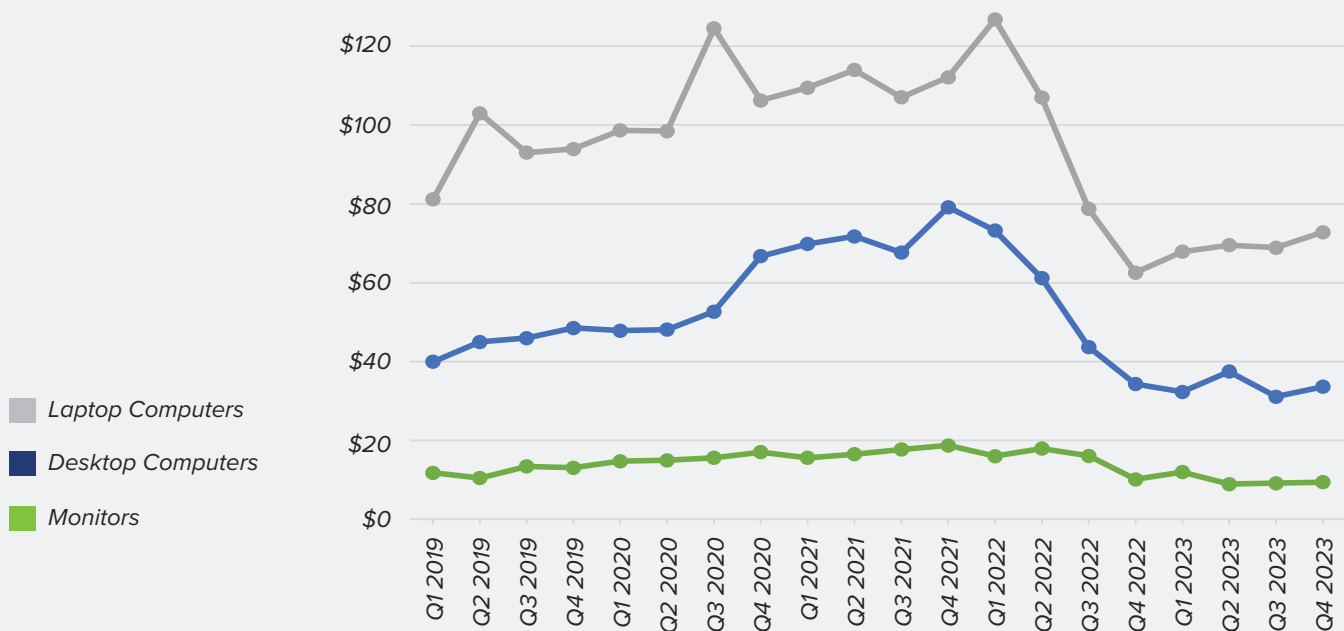
In cases where the client allows reuse of their retired equipment, Cascade strives to maximize the assets' revenue. We work with the customer to deploy the best refurbishing methods for their devices and then remarket the items via international and local dealer channels as well as retail websites such as *Cascade Marketplace* and *eBay*. Devices come from a wide range of industries and are typically 3-5 years old. The prices shown in this graph represent the average cash price paid to Cascade after all fees are deducted from the sale. We share a percentage of the resale earnings with our clients.

After a couple of years of steady price increases during the pandemic (caused by an increased demand for refurbished

equipment), the resale market dropped dramatically in mid-2022 when supply chains opened up for new equipment and inflation increased costs and shifted demand away from used IT devices. Compared to 2022, the average price paid in 2023 for refurbished desktops and monitors decreased an average of 36%, year-over-year. Meanwhile laptops decreased 26% while mobile device resale prices increased 199% on average in 2023 compared to 2022.

Recent trends are looking better for resale values. Average prices for refurbished products increased over the course of 2023, but they have not quite gotten back to pre-pandemic levels.

Average Resale Values of Retired Assets



DESKTOPS

A desktop's resale value is consistently about 50% of the value of a laptop. There was a strong demand for desktops at the height of the pandemic in late 2021 when access to any new computer device was limited. Prices stabilized in 2023 at a rate slightly below the average value from before the pandemic.



LAPTOPS

Annual laptop resale values have decreased 26% over the past year, although their average price at the end of 2023 is up by 16% compared to one year ago. During the pandemic, the demand for Cascade's refurbished laptops grew, with the average price peaking at \$126 in the first quarter of 2021. This past year's average price came in at \$69.68 with prices averaging \$72.81 in the fourth quarter.



SERVERS

The category of refurbished devices with the highest average value is servers. The average resale value of Cascade refurbished servers was \$182.55 in 2023. Over the past year, this resale value decreased by about 8%.



MOBILE DEVICES

The trend for smartphones and tablets has seen its ups and downs in recent years. This year's average price of \$66.33 was up 199% compared to last year's average. This was a close match to the pre-pandemic (2019) average of \$65.16.



RESALE TRENDS

RESALE VALUE INFLUENCING FACTORS

The average price paid for refurbished computer equipment is dependent on the following factors:

- Age of equipment
- Condition and quality of devices
- Global and local resale markets
- Demand for substitute products

Over the past 10 years of our benchmarking, we've seen average resale prices for laptops and desktops rise and then fall back to earlier levels. There was a brief increase in resale values for these products during the pandemic because of an increased global demand for refurbished IT devices to substitute for the lack of availability of new devices. Regardless of the increased demand for used products, enterprises maintained or extended their refresh rates for laptops and desktops during the pandemic to hold onto whatever product they had. Now that older devices are being retired, their average resale values have similarly declined.


The appetite for new mobile devices, and the data center equipment to support them, has led to shortened refresh cycles for this equipment. The demand for these refurbished devices and parts has led to dramatic increases in their average resale prices, too. Since the cost of a new smartphone today is about 4 times the cost of the newest smartphone from 2015, the resale value of refurbished phones has increased as well.

History of Average Resale Values by Device

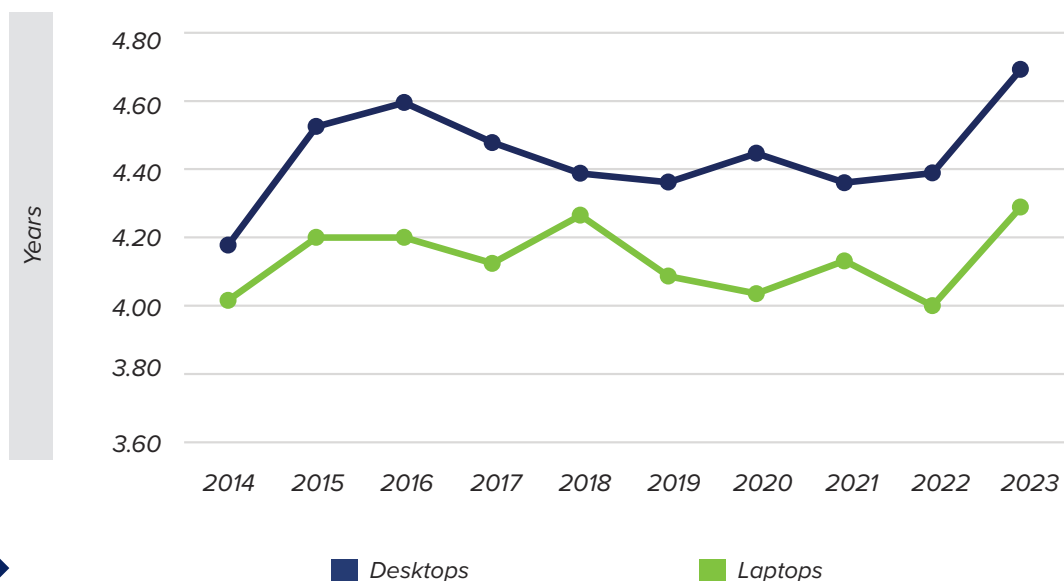
	2015	2019	2023
 DESKTOPS	\$ 31.07	\$ 46.42	\$ 33.66

	2015	2019	2023
 LAPTOPS	\$ 75.79	\$ 96.38	\$ 69.68

	2015	2019	2023
 SERVERS	\$ 133.21	\$ 146.32	\$ 182.55

	2015	2019	2023
 MOBILE DEVICES	\$ 38.33	\$ 58.28	\$ 66.33

Average Age of Devices at Retirement



RESOURCES FOR ITAD BEST PRACTICES

Highlighted on page 10 of this report is the significant emphasis placed on the quality of service provided by IT asset disposition (ITAD) partners. A notable 23% of survey respondents have identified ITAD service as a critical component in their programs for 2024 and it is very important to another 53% of respondents.

For IT asset managers seeking a qualified IT asset disposition partner that not only delivers exceptional service but also aligns with their program's security, sustainability, and asset resale goals, a wealth of information is at your disposal.

A variety of informative materials are available from respected research firms, publications, and industry groups. Many of these valuable resources are highlighted at the right. The International Association of IT Asset Managers (IAITAM) even offers courses and certifications in IT Asset Disposition and related disciplines.

Additionally, numerous ITAD providers equip you with decisionmaking tools, including Annual Reports, Self-Audit Packets, Request for Proposal Kits, ESG Calculators, and service checklists. Be sure to reach out to them as a resource and to help you adopt best practices.

Cascade, for instance, not only provides these comprehensive tools but also offers a complimentary, no-obligation ITAD program review. Reference our expansive online library of resources and blog posts at Cascade-Assets.com/Learning-Center.

Gartner
Gartner Market Guide for ITAD

COMPLIANCE STANDARDS
ITAD Vendor Ranking

ITAM review
Industry Resources

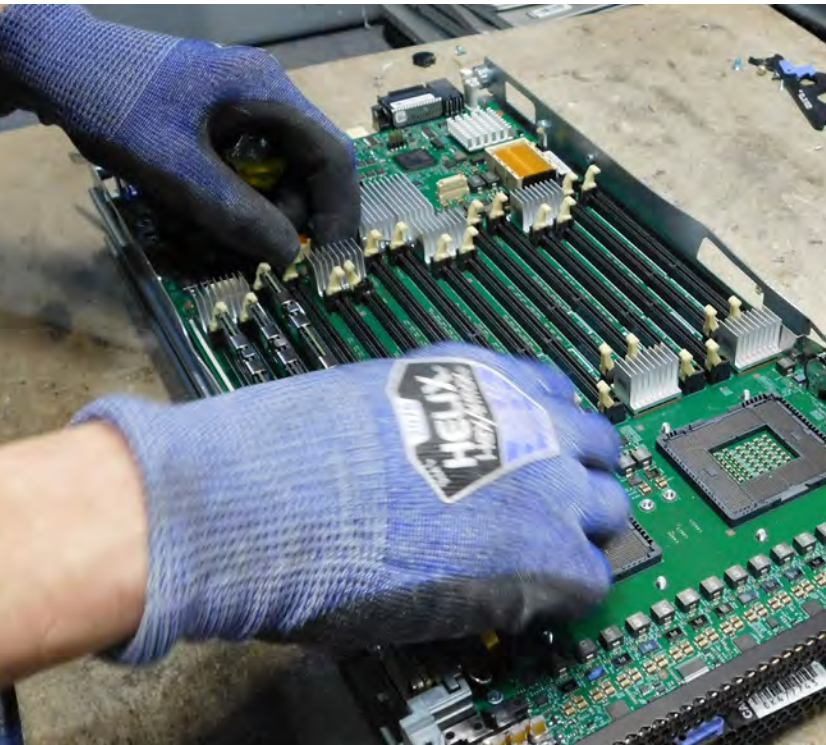

Industry Resources


Industry Resources

E-SCRAP NEWS
Industry Publication

i-SIGMA
NAID AAA Certified ITAD Vendor Listing


e-Stewards Certified ITAD Vendor Listing



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