

A photograph of a person in a blue shirt using a handheld device to scan a server rack in a data center. The rack is filled with server units, and several monitors are visible in the background displaying various web interfaces. The scene is dimly lit, with the primary light source being the screens and the handheld device's light.

IT Asset Disposition Trends and Best Practices

2019 Benchmarking Report

Prepared by Cascade Asset Management

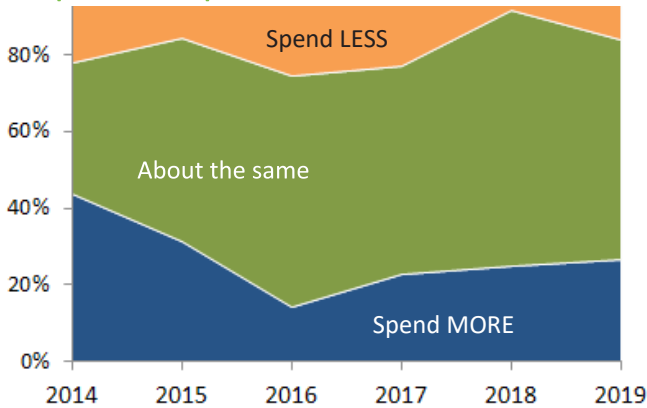
This fifth annual benchmarking report provides information and research on security, environmental, and financial issues related to IT Asset Disposition (ITAD) and the more general IT Asset Management (ITAM) discipline.

This report was built from data Cascade compiled through (1) a November 2018 customer survey, (2) an evaluation of more than 500,000 assets processed by Cascade in 2017 and 2018, and (3) a review of related industry research.

As a benchmarking tool, we encourage you to use the information to help understand how your ITAM/ITAD program compares to others and how you can further improve your systems to better attain your desired outcomes.

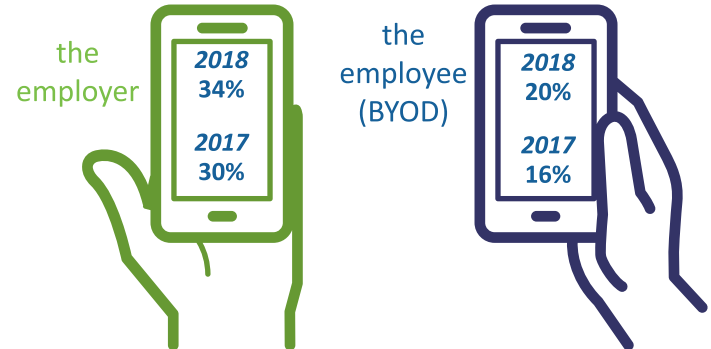
IT Investment Trends

How much do you expect to spend on IT hardware?



In this year's survey, respondents indicated a slight increase in expectations to spend more (from 18% to 22%) on IT hardware in 2019 compared to 2018, but more than twice as many respondents (from 6% to 13%) plan to trim their spending in 2019. The industries starting to cut back are from the financial/banking sector, healthcare and government.

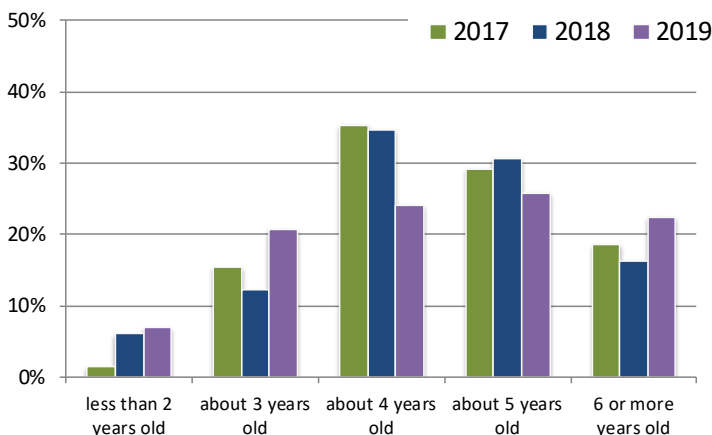
What percentage of employees in your organization are using smartphones provided by . . .



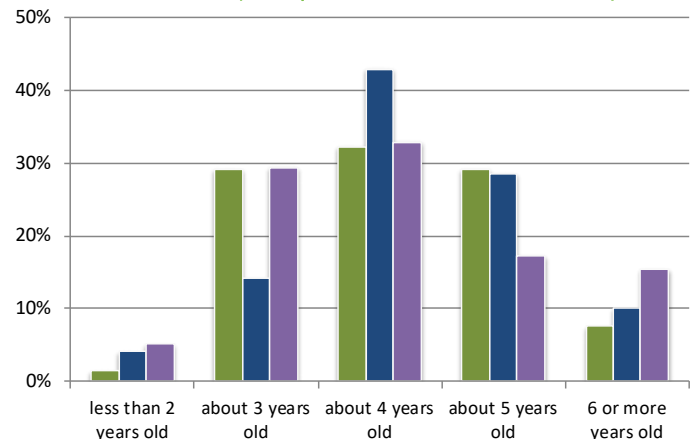
For the third straight year, smartphone use continued growing at a double-digit pace. Company owned phones were provided to 13% more employees in 2018 and 25% more employees were expected to use their own phones for work ("BYOD"). Industries with above average smartphone adoption (when provided by the employer) are government, financial, and healthcare. BYOD adoption is led by healthcare, IT services/software, and insurance industries.

Steady refresh rates

How old are the majority of desktops you expect to retire in 2019 (compared to 2018 and 2017)?



How old are the majority of laptops you expect to retire in 2019 (compared to 2018 and 2017)?



For desktops, 51.7% of respondents are now refreshing their devices every 4 years or less, compared to 53.1% in 2018. Almost half of respondents hold onto their desktops for 5 or more years now, the longest desktop refresh cycle we've recorded over five years. For laptops, the refresh rate is shortening. Respondents expect 67.2% of retired laptops to be 4 years old or less, compared to 61.2% in 2018 and 63.0% in 2017. Financial/Banking firms and companies providing IT services/software have the fastest laptop refresh rates.

Disposition Priorities

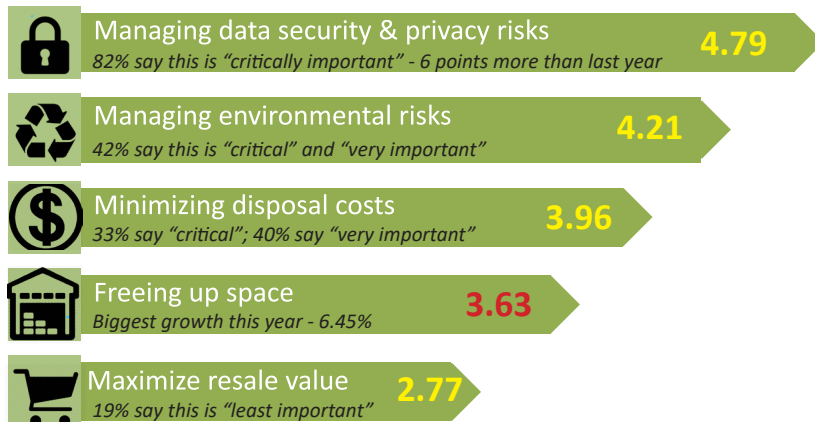
How important are the following criteria when disposing of your IT assets?

rated on a scale of "1 to 5" with 5 being "critically important" and 1 being "least important"

Security continues to top the list as the most important consideration when disposing of IT assets. The order of criteria has remained unchanged in the 5 years of the survey.

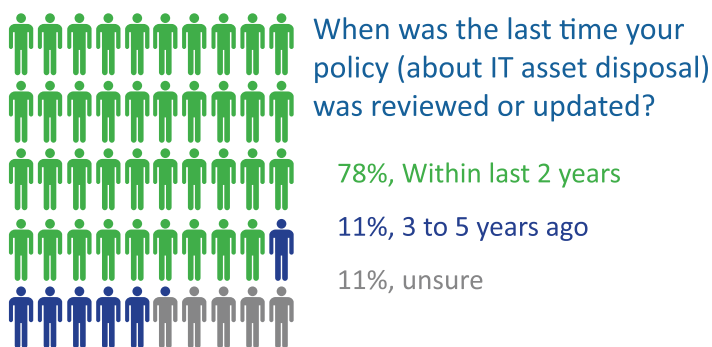
All criteria saw a boost in importance this year, but "freeing up space" saw the greatest increase in score - a 6.5% increase. The other criteria grew at a rate of 1.5% to 2.0%.

Even though retired IT assets generate significant resale value, this is seen as the least important factor when making disposition decisions.



Security policies and programs

Over 75% of respondents indicated their organization has a policy in place that addresses how information on IT assets are to be destroyed when disposed (10% don't have a policy and the remaining 15% of respondents weren't sure if they had a policy). Privacy regulations **require** all organizations to adopt a security policy that manages security risks that arise from the multitude of ways data may leave the organization.



When was the last time you were trained on this policy?

68%, Within last 2 years

21%, 3 to 5 years ago

11%, unsure

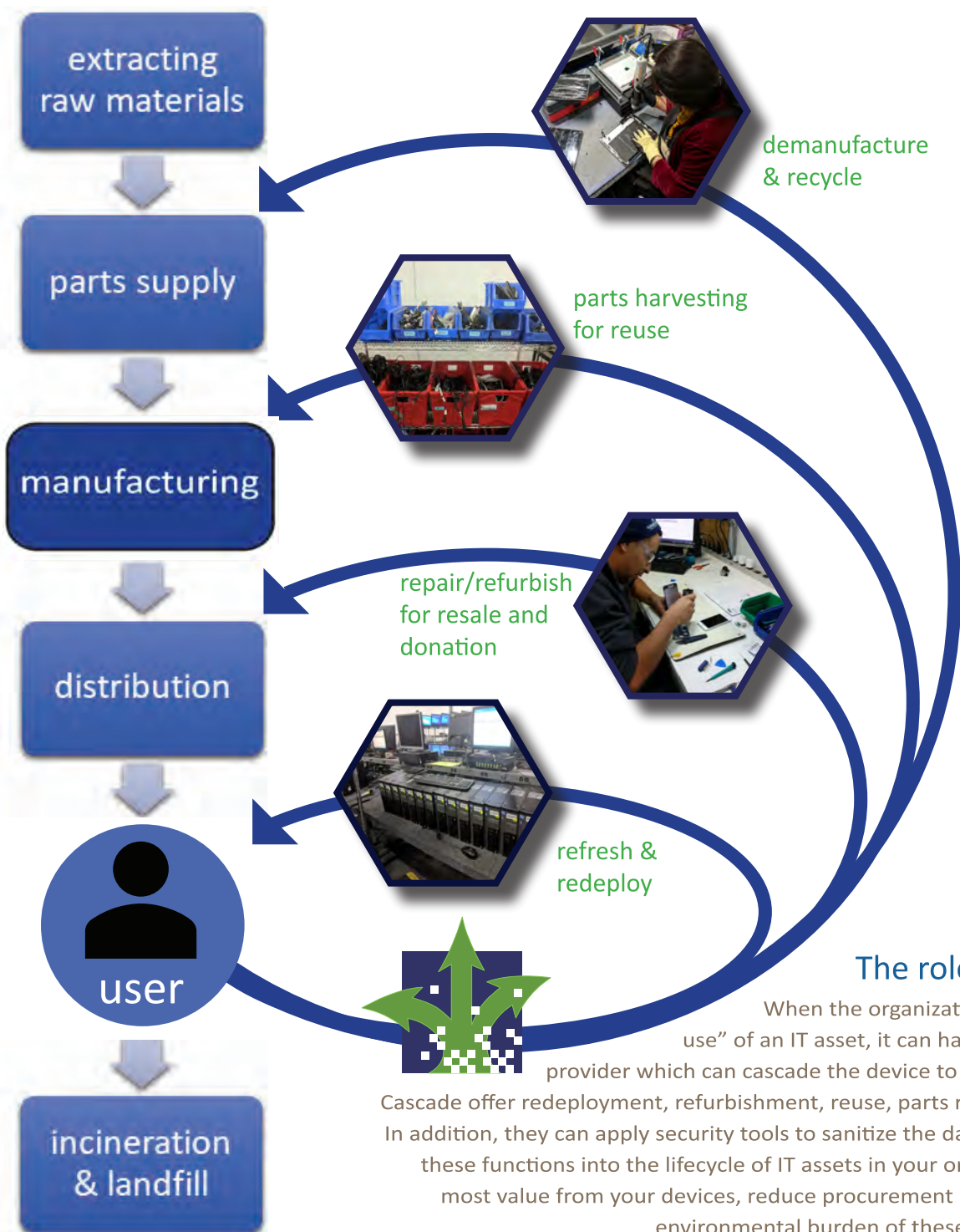
What's included in your ITAD security policy?

- ☒ Disposition of assets to a 3rd party vendor 93.6%
- ☒ Which wiping standard is specified for data sanitization 63.9%
- ☒ Re-purposing of assets within the organization 48.9%
- ☒ Company owned mobile devices 36.1%
- ☒ Sales of equipment to employees 34.0%
- ☒ Employee acknowledgment of policy 29.8%
- ☒ Donation of assets to charities 23.4%
- ☒ Employee training 23.4%
- ☒ Employee owned devices (BYOD) 17.0%
- ☒ Return of assets to leasing company 14.9%
- ☒ Return of damaged/warranty return assets to a manufacturer or distributor 14.9%

Circular Economy - a framework

"A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life."

- Waste and Resources Action Programme (UK)



The role of the ITAD provider

When the organizational user is done with its "first use" of an IT asset, it can hand over the product to an ITAD provider which can cascade the device to its next best use. Providers like Cascade offer redeployment, refurbishment, reuse, parts recovery and recycling services. In addition, they can apply security tools to sanitize the data from devices. By integrating these functions into the lifecycle of IT assets in your organization, you can extract the most value from your devices, reduce procurement costs and mitigate the negative environmental burden of these products in the waste stream.

Network to optimize IT assets

A circular approach creates more value

The **Ellen MacArthur Foundation** leads the charge to facilitate and formulate ideas and actions related to building circular economy systems. It involves global partners, including Google, Philips and companies from non-IT industries. A circular economy seeks to rebuild capital, whether this is financial, manufactured, human, social or natural.

Businesses and organizations can adopt circular economy thinking into how they manage IT assets throughout their lifecycle. It starts with responsible procurement - purchasing devices that are suitable for the job, built to last, easily repairable, modular, upgradable, and designed for recycling. Some vendors now offer Device as a Service (DaaS) models which feature monitoring services to maximize up-time of the device by identifying when parts need repair or replacement before the entire device breaks down and is thrown away. When it's time to cascade the device to another use, responsible IT asset disposition can look for options outside the organization to generate more value from reuse or recycling.

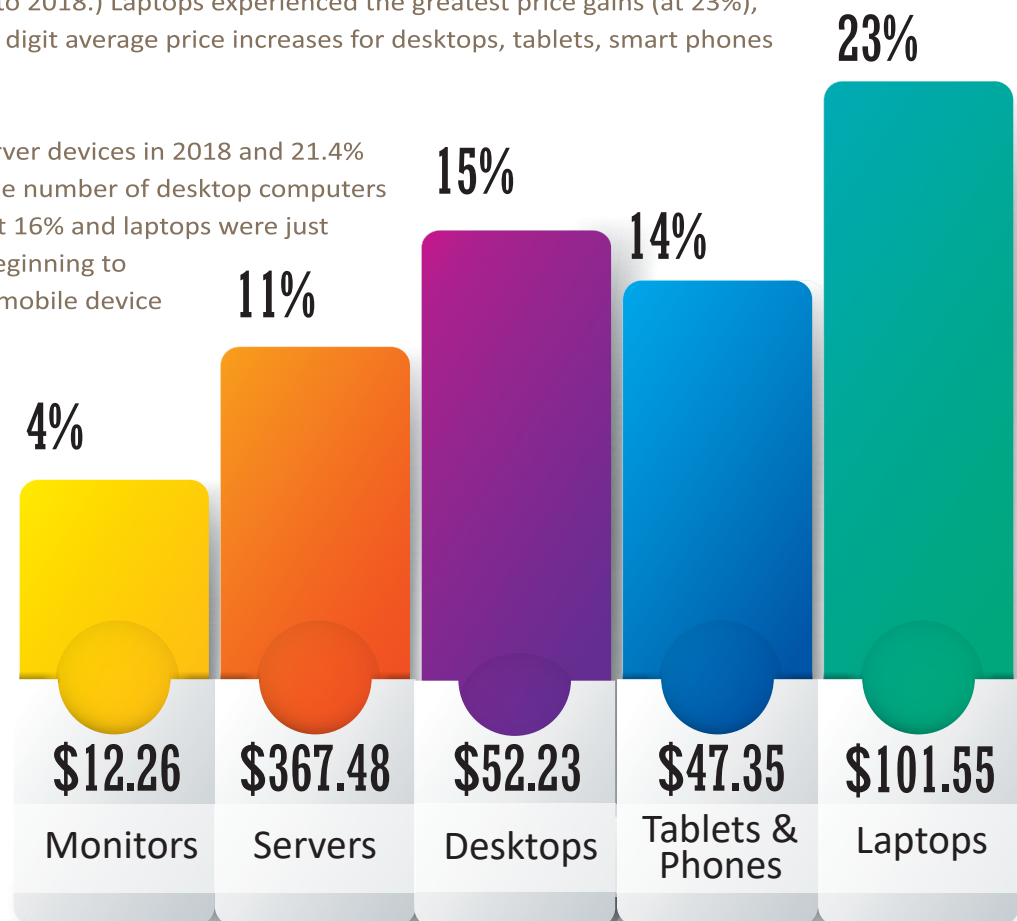
Growth in average resale values of resold refurbished equipment

The average resale value of computing devices sold by Cascade over the past two years rose by more than 14% (from 2017 to 2018.) Laptops experienced the greatest price gains (at 23%), though there were also double digit average price increases for desktops, tablets, smart phones and servers.

Cascade resold 11.5% more server devices in 2018 and 21.4% more tablets/smart phones. The number of desktop computers sold in 2018 declined by almost 16% and laptops were just slightly up, indicating we are beginning to see an inflection toward more mobile device retirement.

Reuse is an important element of the circular economy and generates significant value. Firms need to consider how to optimize resale as a way to also reduce ITAD costs overall.

Average resale values in 2018 and % gains in past year



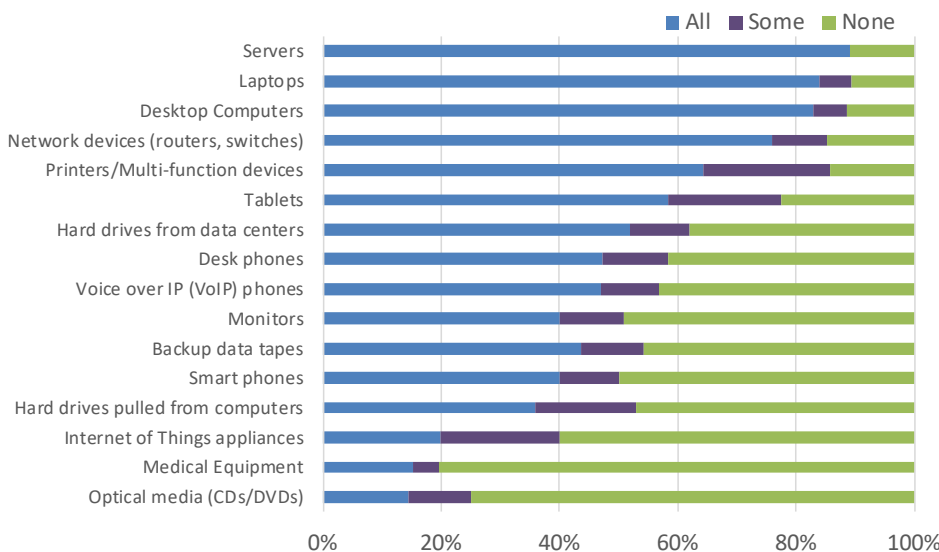
Mitigating Security Risk

“31% of Data Breaches Lead to Employees Getting Fired.” - Kaspersky Labs, 2018

2018 - the year of the data breach law

- The **European Commission** implemented **GDPR** on May 25.
- **Colorado's** data breach law (HB18-1128) went into effect Sep 1st. It creates more stringent requirements regarding the disposal of personal information. Under the law all “covered entities in the state that maintain paper or electronic documents during the course of business that contain personal identifying information” will be required to develop a written policy for the destruction or disposal of such information once such documentation is “no longer needed.”
- California's Consumer Privacy Act (AB 375) took effect on June 28 and is similar to GDPR.

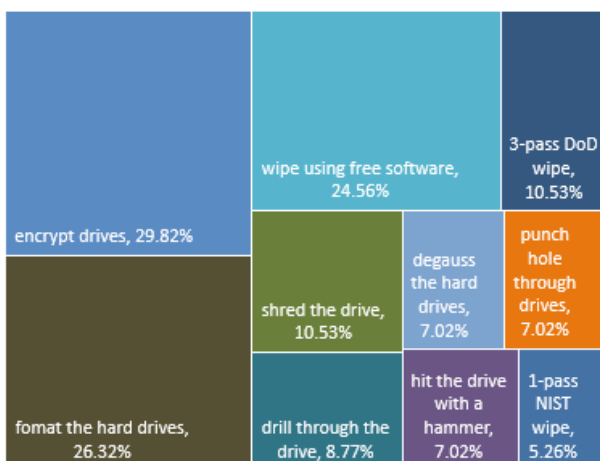
What types of assets do you track internally?



When Cascade asked our survey respondents what they tracked in their asset management programs, servers jumped to the number one spot this year (up from #3 in the previous year), likely due to their asset value and security risk. Desktops, laptops and network gear come next.

There are many reasons to track IT assets throughout their lifecycle. Organizations need to account for them as financial assets and properly report personal property tax obligations. Tracking data bearing assets to the point of final disposition is a requirement of privacy protection regulations. Tracking is also an essential risk mitigation strategy. Essentially, you don't know what you don't have if you don't track it.

Which methods do you use (internally) to control and destroy data on hard drives?



Organizations report that they may use one or more ways to control and destroy data on their hard drives. Encryption of drives grew from 9% of respondents last year to 30% this year. In this year's survey, 49% of respondents (down from 56% last year) didn't perform any onsite media sanitization themselves and instead outsourced all data destruction work to Cascade. Thirty-two percent place media in a secure bin for offsite destruction.

Special media sanitization

Different technologies are required to destroy data on Solid State Drives (SSD) and flash media in many tablets and smart phones. Our survey indicates many firms are still looking for processes to sanitize these media. While 54% of respondents said they have a process in place to sanitize data from smartphones, less than half were destroying data on SSDs.

Do you have an internal process in place to destroy data on SSDs?

Yes
38.6%

No
61.4%

Environmental Programs

Carbon credits gain currency



Firms may wish to offset carbon emissions to meet voluntary sustainability goals or to fulfill cap-and-trade compliance obligations. A dozen states and some Canadian provinces now require certain industries to reduce or offset their carbon footprint.

A new program makes available certified carbon offset credits resulting from the reuse of refurbished IT equipment. These credits are earned when used computers are refurbished and resold with a three-year warranty, replacing the need to manufacture a new computer that contributes an equivalent amount of CO₂ when produced. Companies can use these credits to offset the carbon generated from purchasing new computers or the overall carbon footprint of the organization.

These computer reuse carbon credits are currently registered by the Canadian Standards Association to ensure these offsets are verifiable. The program is being managed by **CarbonBank**.

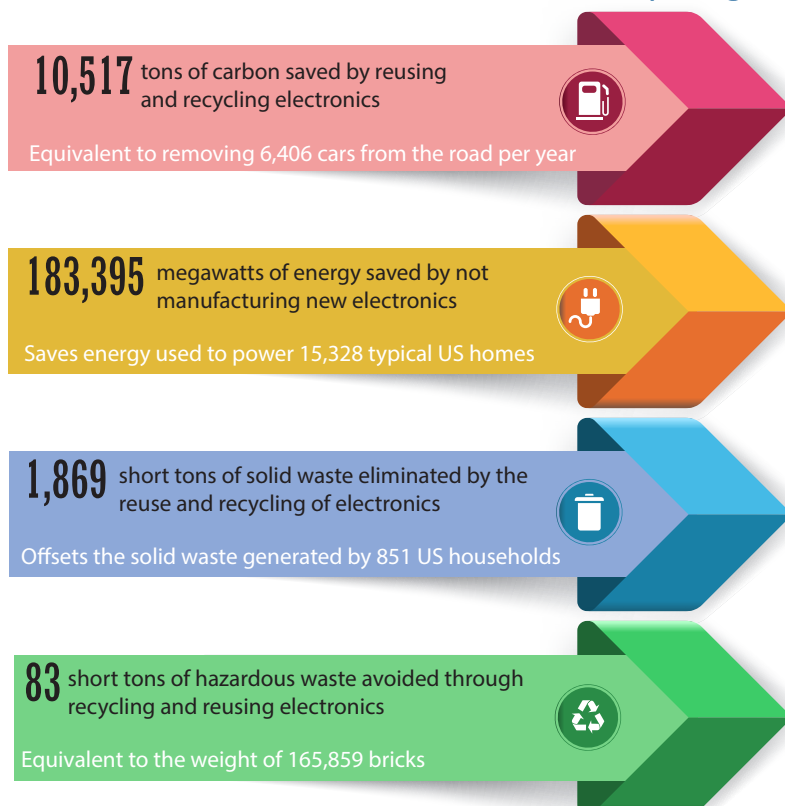
The cost of environmental noncompliance

State and federal regulators continue to step up enforcement of laws related to e-waste disposal. Both recyclers and generators of old electronics are receiving civil and criminal penalties. These consequences make it even more important to ensure your used electronics are processed properly and lawfully. Here are some incidents reported in 2018:

- **Target** will pay \$7.4 million to settle allegations it again broke California law by illegally tossing used electronics and hazardous materials in the garbage.
- **Whole Foods Market** California and two companies it owns will pay over \$1.6 million to settle allegations they improperly disposed of electronics and hazardous wastes.
- A former executive of **Global Environmental Services**, an e-scrap processor in Kentucky, was sentenced to three years in prison after pleading guilty to hazardous waste-related crimes.
- A federal judge sentenced the former head of **Zloop**, an e-scrap recycler, to 10 years in prison and more than \$27 million in restitution to victims based on a series of fraudulent schemes.

Environmental benefits of reuse and recycling

Impact of processing activities by Cascade in 2018



Many companies have a goal of “Zero Waste.” It’s difficult to expect to divert all the waste generated by an

organization into recycling streams. Some items (like certain plastics and contaminated materials) just can’t be recycled completely, and incineration creates its own waste and health problems.

By **eliminating** items that eventually become waste and reusing/recycling everything else, firms and individuals will be best positioned to reduce waste from their “ecosystem.” This optimizes the use of resources over their lives.

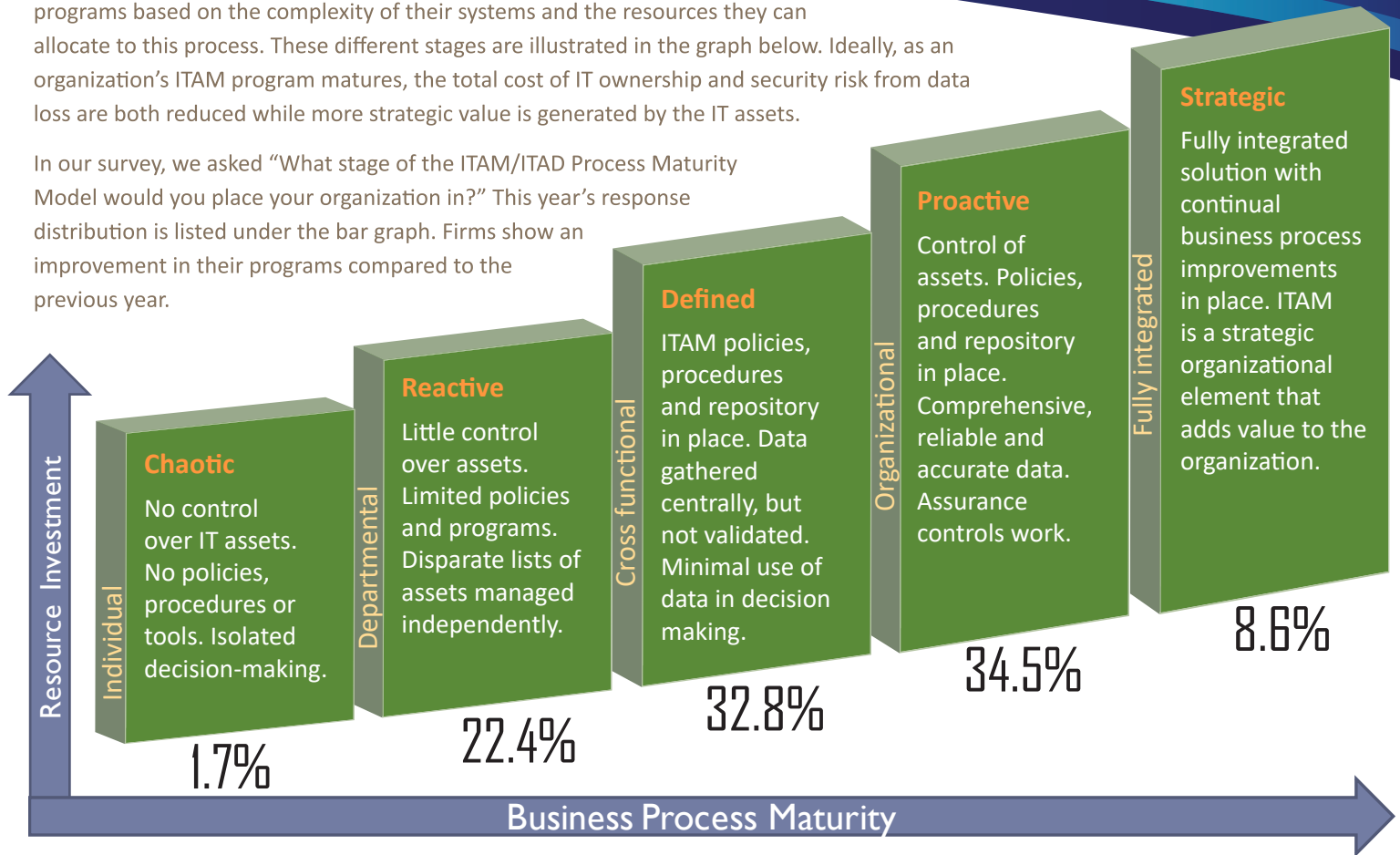
In 2018, Cascade converted 86.5% of all items collected into refurbished products or new raw materials - up from 85.1% in 2017.

ITAM/ITAD Business Process Maturity Model

Organizations find themselves in different development stages of their IT Asset Management and Asset Disposition programs based on the complexity of their systems and the resources they can allocate to this process. These different stages are illustrated in the graph below. Ideally, as an organization's ITAM program matures, the total cost of IT ownership and security risk from data loss are both reduced while more strategic value is generated by the IT assets.

In our survey, we asked "What stage of the ITAM/ITAD Process Maturity Model would you place your organization in?" This year's response distribution is listed under the bar graph. Firms show an improvement in their programs compared to the previous year.

Where does your current program fit?
What can you do to move it further along the
ITAM/ITAD Maturity Model this year?



Partnering to protect security and increase value

Cascade actively collaborates with our customers to ensure their security requirements are met while minimizing the cost of asset disposition. We work in partnership with our clients to maximize resale opportunities (when appropriate) and optimize handling and reporting costs. As a result, we are able to show that a responsible asset disposition program can protect the organization's security and reputation and potentially generate revenue for the company. Through this partnership,

Cascade reduced the overall net disposition cost to our customers by over 19% in 2018 compared to 2017.

Contact Cascade for further assistance.

Safe & Sound® IT Asset Retirement Since 1999.

"Cascade made it super easy and convenient for me to be confident my data was disposed of in an appropriate, legal manner meeting HIPAA guidelines at a reasonable price."

- Susan Tualia, Lafayette Hearing Center (IN)

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www.cascade-assets.com/solutions

info@cascade-assets.com

[608.316.6625](tel:608.316.6625)

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www.cascade-assets.com/pickup

pickup@cascade-assets.com

[608.222.4800](tel:608.222.4800)

