THE TRANSITION TO IT ASSET DISPOSITION (ITAD)

By Sean Magann

With an expanding variety of uses, smartphones, laptops and tablets are among the most useful tools in business. These devices are providing convenience for companies and customers alike, such as mobile point-of-sale (POS) systems, while also providing sales and business executives more options to handle business tasks while away from their desks.  

HOME-FIELD ADVANTAGE ON RECYCLING

Well before the start of a Cleveland Indians game at Progressive Field, as players warmed up on the jewel-green field, it was business as usual in the garage behind left field for C.L. Gholston, a dishwasher.
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GREETINGS, FELLOW COLLEAGUES

It’s August in Florida, where temps and humidity are both in the 90’s. There is another month or so of sweltering heat, then we transition to more moderate fall temperatures. Final vacation excursions are underway before school begins again. Retail outlets are busy with parents and children shopping for those back-to-school bargains. There are glimpses of empty school buses wandering through neighborhoods, making their practice runs for the real schedule, soon to be a daily practice. Change is in the air…in climate, in activities and in attitude.

Refocus is occurring within the association leadership too. Committees are busy working on industry analysis, curricula and membership. The Conference Committee, of which I am chair, has been meeting on conference calls since the Chicago Conference in March, reviewing feedback and listening to your suggestions. Now we’re redirecting our attention to the next conference, planning the itinerary, assessing topics and searching for possible speakers.

As we formulate the agenda and discuss presentations and speakers, the committee is sensitive to provide topics that appeal to our diverse membership. The board’s intent is that every attendee gleans something to take away from the sessions that will have an impact on personal development or business growth. Recently, as we pondered some of the ideas, it again became apparent that each industry has asset recovery needs that are unique to that market sector. Utilities deal with wire, breakers and transformers; petrochemicals look to reclaim value from pipe and vessels; and the manufacturing sector has a host of other asset recovery expectations.

There is, however, one common thread that crosses all member affiliations. In the age of ever-changing technology, every industry deals with the disposition of IT assets. Whether high-tech telecommunications, power generation, or food processing, every industry is touched by computerization. And at end of life for this equipment, every investment recovery professional has a vested interest in maximizing the recovery while ensuring sensitive information is purged for security compliance. So IT asset disposition, or ITAD, impacts the daily business of us all.

The enclosed article by Sean Magann, as presented at our conference, provides a clear and concise synopsis of reclaiming value from these assets. Though the concepts follow many of the seven steps of investment recovery, the evolving concentration is on reuse rather than recycling. The concept provides great value in redirecting equipment to be used by schools, charities or individuals; however, added responsibility is placed on investment recovery to ensure hard drives and storage media are securely wiped or removed/replaced.

Also included is an appropriate article from The New York Times, providing another look at the growing level of innovation being brought to bear on unique opportunities to find value in unused “assets”. (In this case, leftover food from the ballpark!) Both articles are informative and educational.

During my tenure in the industry I’ve learned that investment recovery is an ever-changing, never-stagnant industry. I trust change is in the air for you as well—change in personal development, expanding business and widening your circle of friends and customers.

Wishing you the best,

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Different versions of laptops are even being made to accommodate different types of executives. The everyday traveler may choose a smaller and lighter laptop with less functionality whereas stationary employees might consider a bulkier option with increased storage and processing capabilities.

Regardless of the user or the usage, upgrades to faster devices with newer operating systems and more robust apps mean that technology cycles are growing shorter, and the resulting e-waste is challenging organizations of all sizes to deal with the proper disposition of these electronic assets. This is a growing responsibility for the Investment Recovery department. That's where the process of IT asset disposition (ITAD) comes into play.

WHAT IS ITAD?

If you are not familiar with the term ITAD, you are not alone. The term references the rapidly growing field of information technology asset disposition. ITAD is the process of disposing of IT equipment in a safe and responsible manner. A solid ITAD strategy is a crucial component of any IT life-cycle management strategy.

THE ITAD PROCESS CAN INCLUDE:

- **Redeployment**—reuse of assets within an organization
- **Remarketing**—resale of assets to a third party in their entirety
- **Recovery**—reuse of assets for parts
- **Recycling**—reducing assets to commodity form

All technology devices will eventually have a need for this service. Businesses large and small as well as consumers are affected, and many of these devices store personal and confidential data. Devices may include:

- Laptops, tablets, cell phones and smartphones
- Servers, routers and other networking equipment
- Printers or multifunction devices, fax machines and more

The management of retired IT assets has for many years been focused on the reuse of commodities rather than on the reuse of parts or the equipment as a whole. However, more e-waste recycling companies and their customers are realizing the benefits of reusing equipment when and where possible. Not only does equipment reuse add value to the recycling process, it is also the most environmentally friendly choice.

Transitioning from a recycling company to an ITAD company forces operational changes. Metrics such as weight may have been appropriate for recycling streams but ITAD companies also measure throughput units. While identification of remarketing value is extremely important, this does not mean metal separation and commodities are not. Eventually all devices will reach the end of their useful life. The recycling of commodities will always be an important component in dealing with obsolete equipment and is something technology recyclers should (and will) continue to invest in, in conjunction with other ITAD operations.

With recycling representing just one part of ITAD, there are several other services available as well that are outlined as follows:
MAXIMIZING VALUE

Services focused on capturing the value from these old devices are managed in two ways: redeployment or refurbishment. Redeployment is the process of returning assets to an organization for internal reuse. Redeployment encourages use across different departments and allows the company to avoid the purchase of new equipment. Otherwise, if an item isn’t needed internally, it can be refurbished and remarketed either a whole unit or as individual components, such as memory and hard drives. This allows the client to receive the maximum returns on their IT assets.

DESTRUCTION OF DATA

The destruction of stored data is often a customized service for the client. There are various methods for data erasure that can be performed, some allowing the hard drive to be reused and some rendering the device obsolete.

Overwriting or clearing data is a common solution for organizations who want to remarket their equipment. This process replaces written data with random data. Data can be cleared or “wiped” a single time or go through multiple passes. Generally, hard drives manufactured after 2007 require only a single-pass wipe. The cost and value of the drive are all considerations, but ultimately it’s the client’s decision.

Regardless, it is critical for this service to be performed by certified professionals to guarantee data erasure. Older methods for erasing data, such as trash can and delete, or shift and delete, do not remove data. Even the Gutmann wiping method, involving a series of 35 patterns that are run over the region, holds patterns that are now outdated. Methods that were developed for use on older devices and require many wiping procedures are proving irrelevant for today’s hard drives.

In addition to wiping considerations, the type of hard drive makes a difference on the desired method for data erasure. Solid-state drives store data in flash memory chips, which allow for no moving parts. They are smaller, more durable, use less energy and are cooler than traditional drives. However, solid-state drives are more expensive and cannot go through standardized wiping procedures for confidential data destruction. These drives need custom wiping and have a limited number of write and erase sequences, but do hold a high resale value.

Purging and/or shredding of hard drives can also ensure data destruction. Purging represents the degaussing of media, which is a magnetic data erasure process. Since a degaussed hard drive cannot be reused, this is typically followed by the physical destruction of the hard drive for commodity value. Devices sent with a request to purge data typically store highly sensitive information (no desire for reuse), contain unusable hard drives or are drives that were made before 2007. Pre-2007 hard drives require a three-pass wiping process but the value of the drive doesn’t support the cost of multiple passes. Otherwise solid-state drives cannot be degaussed and are sent immediately for destruction. The shredding and/or physical destruction of the hard drive can occur whether or not the hard drive has been degaussed, so sometimes it can be easier to eliminate the step of degaussing and go straight to destruction.
HARVESTING SOFTWARE

A service offered by some ITAD vendors is to take an inventory of installed software prior to wiping or destruction of the hard drive. Removing, transferring or canceling licenses is a component that most software asset management (SAM) programs might include in their reporting but forget to take action on. Ensuring this software is followed up on can save companies a great deal of money when managing large quantities of devices.

REPORTING

In dealing with evolving inventories and various types of equipment, detailed reporting can be critical to ensure accuracy. Every IT asset should have the type, make, model, serial number, installed software, condition, drive erasure verification and asset capture serialization report tracked and readily available to reference at any time. If the asset is being managed by a vendor, you should have some sort of access to an online portal where certificates of destruction and sustainability can also be retrieved as needed.

POLICY COMPLIANCE

Two primary industry standards, e-Stewards and Responsible Recycling Practices (R2), help guide consumers and businesses during their ITAD vendor selection. In an industry sprinkled with bad players who might abandon warehouses of hazardous equipment or ship devices to areas without recycling processes in place, assistance in comparing vendors is critical. The two standards are similar in process and procedures and often compete with each other on a public stage. Regardless of the certifications, it is important that the firm generating the material audit the prospective ITAD vendor. Sims Recycling Solutions holds the R2 certification and encourages all customers to visit any of their global facilities.

Some additional global industry certifications include:
- Asset Disposal and Information Security Alliance (ADISA)
- HM Government
- Transported Asset Protection Association (TAPA)
- AS/NZS 4801 Occupational Health and Safety Management Systems
• EfbV Germany (German waste management regulation)
• Metaal Recycling Federatie (MRF) Netherlands
• Microsoft Authorized Refurbisher (MAR)
• WEEELABEX (WEEE label of excellence)

While all of these ITAD service options are important, data and physical security remain critical components of eliminating vulnerabilities. When changing the location and function of a device, security breaches become more likely to occur, making security part of the initial removal processes as well as throughout the device’s final disposition.

Data typically at risk can include:
• Proprietary data—e.g., new product info, product designs
• Customer/patient data—e.g., credit card info, Social Security numbers
• Regulatory compliance data—e.g., local and global requirements, industry regulations (HIPAA/GLBA, etc.)

CONCLUSION

The selection of a competent vendor to properly handle ITAD is a critical decision for an Investment Recovery department. The consequences of putting company data at risk can include upsetting customers and stockholders, damaging a company’s reputation, costing the company penalties from fines and sanctions, and potentially putting executives at risk of civil or criminal prosecution. While most companies already maintain an IT asset management program, integrating end-of-life IT assets into that program can prove beneficial to maximize device value and minimize risk.

This is a recap of a presentation delivered at the 2015 Investment Recovery conference in Chicago. Sims Recycling Solutions a leading provider of IT asset disposition services.

Sean Magann
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He had wheeled down gray bins full of kitchen scraps—pineapple and melon rinds, carrot shavings and tomato ends—that were all part of the mix he fed into a contraption he calls the “energy machine.” The machine grinds all types of food waste, including skin, fat, flesh and bone, into a slurry that is later transformed into energy and fertilizer at a plant operated by the renewable energy company Quasar.

As governments and industry seek to reduce emissions of methane—a more powerful heat-trapping gas than carbon dioxide—by limiting the amount of organic waste in landfills, large food processors are looking for new ways to get rid of their leftovers. Food waste, an estimated 34 million tons a year, according to the Environmental Protection Agency’s most recent figures, is the largest component of landfills, which are responsible for roughly 18 percent of the nation’s methane emissions.

In Cleveland, the Indians began using the process last year, following the Browns, who started in 2013, and a casino has recently joined the effort.
“We’re a wasteful nation,” said Steven M. Smith, Quasar’s chief financial officer. The company, he said, repurposes “material that is either being landfilled, incinerated—that’s not good for the economy—and we extract the energy and concentrate the nutrients, and we have water at the back end.”

Both InSinkErator and Quasar see potential in their system, which uses naturally occurring bacteria to speed decomposition. Less than 5 percent of American food waste is recovered and recycled, but it can be a potent source of energy for electricity, heat and transportation fuel.

The idea of using food or municipal and farm waste to generate energy is not new. Europe is far ahead in harnessing biogas, said Mackinnon Lawrence, who leads the Energy Technologies and Utility Transformations programs at Navigant Research. In the United States, with plenty of land left to fill, he said, there had not been much incentive to change the practice of dumping organics, so biogas has remained “a niche opportunity,” but one that is expected to expand.

A recent Navigant report for the Advanced Energy Economy, a business-backed policy and advocacy group, estimated that the waste-to-energy market could generate $40 billion in revenue over the next decade. Already, energy-recovery projects contribute nearly $500 million in annual revenue in the United States.

Wastewater and manure treatment plants have been using anaerobic digesters to capture methane for decades. Some companies like Waste Management convert landfill gas to vehicle fuel for use in their trucks, but much of it is still collected and burned off.

As government policies shift to encourage extracting the energy from organic trash, the United States is beginning to catch up. The East Bay Municipal Utility District in California, for example, has been funneling

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At Quasar’s plant in Cleveland, a belt press turns liquid organic material into a solid. The company also captures released methane, which is then converted into electricity or transportation fuel.

food waste from restaurants and other large producers to a digester for years as part of a federal pilot program, and some cities have experimented with similar diversion efforts. Harvest Power, a start-up backed by Waste Management and Kleiner Perkins and based in Waltham, Mass., has been operating a facility in Orlando, Fla., since 2013 that turns waste from Disney World into fuel and fertilizer.

In theory, adding food to digesters processing manure or sewage has advantages, said Chad Kruger, director of the Washington State University Center for Sustaining Agriculture and Natural Resources, chief among them that it increases methane production. But without an infrastructure in place to handle, transport and process the material, building that kind of energy system has been too difficult and expensive to spread widely.

“We've kind of stalled out on some of these issues,” he said. “That said, the industry, the composters, in particular the bigger ones, are really set on this — they think it's the right thing to do.”

The partnership between Quasar and InSinkErator follows years of research and development at both companies. Managers at InSinkErator had been looking into the potential of anaerobic digestion and energy production at wastewater treatment plants. They came upon Quasar, a fast-growing company that was incubating its business at Ohio State University’s agricultural research campus in Wooster and was aiming to build a digester network nationwide.
“One of the things that they basically were looking for was a clean feedstock of organic material that was consistent and low in contamination but had high energy content in terms of methane potential,” said Matt Whittener, general manager of the Grind2Energy business at Emerson, the parent company of InSinkErator. “On-site, point-of-generation grinding technology was kind of the missing piece to make an efficient model where the food waste generator has a mechanism to convert their food scraps into a slurry.”

At Progressive Field, Mr. Gholston and the other dishwashers feed loads of food waste into the grinder, which is about 13 to 20 times as powerful as home models. The milkshake-consistency slurry that results from the discarded fruit and vegetable peelings, uneaten pasta, used cooking grease or leftover hot dogs that cannot go to a food bank is then pumped into a 3,000-gallon tank.

Once the tank signals to Grind2Energy that it is full, Quasar is alerted to send a truck to take the mass to its plant, where it is put into giant anaerobic digesters full of bacteria that break down the slurry. The system captures the released gas, which is then converted into electricity for the grid or transportation fuel. The leftover solids become fertilizer.

Peg Kalberer, assistant manager of concessions at Delaware North Sportservice, which runs the stadium’s food operation, said she was happier with the system than one that funneled the waste to a composting company, in part because it helps document their sustainability efforts.

“Overall it worked, but this is better,” she said. “I don’t know what happened to the product when it left. Here I know exactly what’s happening: 90 days from tank to energy.”

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