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| How Microsoft Does It:  A Comprehensive Global Strategy for IT Asset Disposition |
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|  |  |  | Corp HeaderMicrosoft Gives Old PCs New Life, Enhancing Environment, Reducing Risk, Raising ROI |
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| Overview  Business Situation  Microsoft estimates that 200 to 230 million PCs are decommissioned each year. Up to 76 million of them could end up in landfills, where they can contaminate water supplies. Companies need a better way—consistent, environmentally friendly, and secure—to handle IT asset disposition (ITAD).  Solution  Microsoft is rolling out a comprehensive, global strategy on ITAD, including best practices that other companies, dealing with these same issues, may find of interest.  Key Elements of Microsoft ITAD Policy   * Data security * Maximizing value * Environmental responsibility |  |  | “We believe that sharing best practices on PC disposition and energy-smart computing are important to enabling a lower carbon future.”  T.J. DiCaprio, Senior Director, Worldwide Environmental Sustainability, Microsoft |
|  |  | Figuring out what to do with obsolete PCs can be a drain on corporate time and money, and making mistakes can harm corporate interests as diverse as data security and brand value. Doing the wrong things with old PCs—such as dumping them—can create environmental and health hazards. You’d think that a company that helped to popularize the PC around the world would have some answers—and you’d be right. After using a decentralized approach to IT asset disposition, Microsoft is now implementing a comprehensive global strategy on the matter. The results from a Microsoft Canada pilot are proving once again that, in the words of Ralph Waldo Emerson, “doing well is the result of doing good.” |
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Situation

Where do old PCs go to die?

The answer is one of increasing importance not only to businesses worldwide—which must somehow dispose of their aging PCs every three-to-five years—but also to anyone, anywhere, who might drink groundwater that contains chemicals leached from PCs dumped in nearby landfills.

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| PC disposition can represent more than obstacles to be overcome: It can also represent opportunities. |

The problem of disposing of obsolete PCs is large and getting larger. Microsoft estimates that 200 to 230 million PCs are disposed of each year. Up to 76 million of those PCs could find their way into landfills, leading to the concern about contaminated water supplies. A significant amount of e-waste doesn’t even make it to a landfill—disposed PCs, unbeknownst to their former owners, are sometimes shipped to developing nations and simply dumped in rivers, deserts, and elsewhere.

**Beyond Environmental Damage**

Beyond the environmental damage and health risks that such PC disposition engenders is tremendous financial risk. Anti-dumping regulations are growing more common throughout the world—as are the penalties for non-compliance. Perhaps even more dangerous to companies than the risk of financial penalties is the risk of a public relations disaster. The largest corporations may have the largest investments in their brands, but few companies of any size want to suffer the loss of brand equity that might well follow the exposure of environmental negligence.

Corporate risk managers and other executives need to have even more on their minds when they contemplate the disposition of old PCs, such as security. Have hard drives and other storage devices been irretrievably wiped of their data—or could proprietary information left on old PCs find their way to competitors? Does the data remaining on decommissioned PCs constitute a potential violation of Sarbanes-Oxley or the Health Insurance Portability and Accountability Act in the US, or of privacy standards of the European Union or other regions in which a company may do business?

PC disposition can represent more than obstacles to be overcome: It can also represent opportunities. Traditionally, companies have assumed that the PCs they decommission are no longer assets, that they no longer hold any value. But is that true? As new technologies are applied to old problems, companies are discovering solutions that either didn’t exist or weren’t cost-effective just a few years ago. Could the same principle turn formerly worthless PCs into assets and, if so, how should the corporation respond?

**Microsoft: A Special Interest  
in IT Asset Disposition**

Microsoft is like most companies throughout the world in needing to take these concerns into account when it disposes its decommissioned PCs. But it’s unlike most companies in another respect: as a leader in the IT industry, it has a special interest in showing leadership on the issue of responsible IT asset disposition (ITAD).

“IT industry leaders, including Microsoft, have helped to make PCs ubiquitous throughout the world,” points out T.J. DiCaprio, Senior Director, Worldwide Environmental Sustainability at Microsoft. “That’s part of the reason that there are so many PCs today, and so many needing proper disposition each year. Now, Microsoft is demonstrating responsible environmental leadership in a multifaceted approach to environmentally friendly computing. We continually work to improve the efficiency of our software, for example enhancing the power-management capabilities of Windows to help reduce the energy consumption of PCs. We believe that sharing best practices on PC disposition and energy-smart computing are important to enabling a lower carbon future. ”

**Needed: A Global Corporate Policy**

Like many companies, Microsoft had operated without a comprehensive global strategy on PC disposition and, more broadly, all ITAD. The company’s regional groups and divisions handled the issue each in its own way. Some paid for PC disposal; others gave PCs away. Some donated their old PCs—despite their sometimes less-than-useful conditions. Some had policies that put limits or outright prohibitions on the use of landfills. Others didn’t know what to do with their PCs—and stored them under desks and inside cabinets, awaiting a comprehensive global strategy they could follow.

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| “Put simply, our global program is designed to maximize return on IT investments while avoiding the risks of data loss and environmental non-compliance.”  Karen Chalk GPG Green IT Global Category Manager Microsoft |

This situation became increasingly untenable, of course. In 2011, Microsoft studied its various internal practices, consulted with environmental and other experts, and devised a global IT lifecycle management strategy, including implementing a comprehensive, global ITAD strategy, which it’s now rolling out worldwide. The Microsoft experience may be instructive for companies working through the same issues of responsible ITAD.

Solution

The task of driving the global IT lifecycle management strategy, including asset disposition, fell to the company’s Global Procurement Group (GPG).

“We take a long view of ITAD,” says Karen Chalk, GPG Green IT Global Category Manager at Microsoft. “ITAD service providers have become an important link in the overall lifecycle management of IT equipment. The number and complexity of legislative mandates—often country- or region-specific—that cover the secure and environmentally proper disposal of IT equipment are growing rapidly, and the consequences of non-compliance are quickly gaining board-level attention.”

**Three Principles**

Collaborating with colleagues in the company’s Environmental Sustainability, Information Technology, Citizenship, and Finance groups, GPG developed three core principles to guide the new IT Lifecycle Management strategy:

* data security
* maximizing value
* environmental responsibility

“Put simply,” says Chalk, “our global program is designed to maximize return on IT investments while avoiding the risks of data loss and environmental non-compliance.”

**Data security** starts with data sanitization—whether PCs are removed from the network for disposal, resale, or redeployment—to ensure compliance with privacy and security requirements. To minimize chain-of-custody security risks, data sanitization is performed onsite, before PCs are removed from Microsoft premises. ITAD suppliers must use products that meet NIST (National Institute of Standards and Technology) standards and that guarantee secure data destruction of hard drives, disks, tapes, computers, and other data-bearing electronic equipment And they must provide certifiable proof of that destruction.

**Maximizing value** means several things. First, it means a preference for refurbishing and reuse over recycling, to unlock more of a PC’s value. Microsoft replaces its PCs on a three-year cycle, and most of the decommissioned PCs can be reused. To increase the value of those PCs and to support the program goal that refurbished PCs should be fully functional, Microsoft requires that its ITAD suppliers install up-to-date Windows software, licenses, and certificates of authentication. While Microsoft has a unique interest in installing genuine Windows software on its refurbished PCs, the practice should prove useful for any company that wants to maximize the value in, and return from, its refurbished PCs.

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To further generate value, Microsoft Global IT Lifecycle Management strategy calls for refurbished PCs to be sold to the secondary market as a way to fund ITAD process costs—rendering the process cost-neutral—and for remaining revenue from those sales to be donated to nonprofit organizations.

Minimizing risk is yet another way to maximize value. Microsoft uses its strategy to further this goal, too. For example, it confirms compliance not only with the environmental regulations of the countries in which it does business, but with their business and privacy regulations, as well.

**Environmental responsibility** naturally made it onto the list of key principles. But it doesn’t always mean what people think it means. Throughout much of the environmental movement, recycling is a key goal. When it comes to ITAD, recycling is second, and a poor second at that, to the goal of reuse. The difference: Recycling means disassembling a PC, shredding its parts, and separating its basic materials—glass, plastic, and metals—to be used elsewhere. It’s a relatively energy-intensive process that destroys much of the remaining value in the decommissioned PC. In contrast, reuse means refurbishing the PC to a fully functional state, so it can be sold into the secondary market or donated. The process has a smaller carbon footprint, keeps PCs and their components out of landfills, and maximizes the value remaining in the asset.

Beyond a priority for reuse over recycling, the Microsoft ITAD strategy includes other key elements, chief among them zero landfill, zero incineration, and zero export of non-functioning assets. Microsoft ITAD suppliers must be ISO (International Standards Organization) 14001-certified, demonstrating their commitment to sustainable business practices, and must provide Microsoft with certified disposal and environmental reporting.

**Microsoft Canada: Putting Strategy into Practice**

To pilot and refine the implementation of its ITAD strategy, Microsoft is conducting a phased rollout that it started in 2011 and that it expects to continue throughout 2012. That rollout began with Microsoft Canada.

One of the initial steps there was to use a strategic sourcing process to select an ITAD supplier. Microsoft already had an extensive list of best practice requirements ready for that supplier, based on the company’s own Microsoft Authorized Refurbisher (MAR) program. That program certifies refurbishers based on their ability to meet Microsoft program standards for environmental responsibility, data security, and compliance; and to refurbish at least 1,000 PCs per month. Some MARs offer additional services, such as donation and employee-purchase programs, end-to-end IT asset management, trade-in programs, and warranties.

To choose its MAR, GPG assembled a Microsoft Canada cross-functional project team including local representatives from Procurement, Finance, Information Technology, Citizenship, and Real Estate & Facilities. “Bringing in diverse viewpoints ensured a more robust discussion about how to implement the comprehensive global strategy and what we needed in a vendor to support that implementation,” says Steve Heck, CIO, Microsoft Canada.

Figure 1: Once CDI identifies PCs that qualify for refurbishment, it moves them along a line in which workers address any cosmetic damage, then repair or replace damaged components.



The strategic sourcing project team selected CDI Computers, a MAR that sells refurbished PCs to more than 9,000 schools throughout Canada and the US. “We chose CDI because of its ability to implement a broad but centralized IT asset disposition program, and one that is completely transparent, keeping us in full control of the process and our assets,” says Heck.

CDI collects Microsoft IT assets in several ways. To kick off the program, Microsoft Canada arranged for CDI to pick up the backlog of about 200 decommissioned PCs that had accumulated around the division. On a continuing basis, CDI removes both PCs and smaller items—hard drives, keyboards, and “anything with a plug on it,” according to Jim Drohan, Vice President, Business Development at CDI—from bins placed at locations throughout the Microsoft Canada facilities. CDI transports the IT assets to its own facility using security-cleared staff and following ISO secure-shipping practices.

CDI conducts visual and electronic inspections of the PCs and other IT assets and then conducts triage. PCs that are too old or damaged for refurbishment have their hard drives wiped clean and are set aside and held securely pending shredding and the separation of their base materials. PCs to be given a second life also receive a NIST-level disk wipe, and then move along a CDI process line for both cosmetic repair and replacement or repair of damaged components (see figure 1).

These PCs then receive newly licensed Windows and Microsoft Office software, and any additional memory or other hardware upgrades that will be needed for sale in secondary markets. The PCs are sold to schools, VARs, and other customers, with the proceeds funding the refurbishment process. Excess funds will be donated to Microsoft-designated beneficiaries.







Benefits

While Microsoft is still in the early stages of its comprehensive global ITAD strategy rollout, its experience with Microsoft Canada is proving the value of that strategy.

The new ITAD practices are already keeping PCs out of landfills, and PC refurbishment is more energy-efficient than shredding PCs and recycling their base components. Heck and his Microsoft Canada colleagues have high confidence in the data security and risk mitigation practices of CDI, so the new practices are supporting the Microsoft brand rather than undermining it. The ITAD program is also proving to be revenue-positive, as Microsoft hoped, creating funds to be distributed through a Microsoft donation program.

**The Benefits They Didn’t Expect**

But the expected benefits aren’t the only ones that Microsoft is seeing. Heck says that the program, quite unexpectedly, is also boosting employee productivity and morale.

The productivity gain results from a major change in the way that employees at Microsoft Canada respond to sudden PC failures. Previously, unused PCs were often retained under desks or in cabinets throughout the division. When employees experienced PC failures, they would often retrieve and attempt to work with these units. When new problems arose as a result, employees would turn to the Helpdesk, which was forced to attempt emergency repairs or expedite the purchase of replacement PCs—expensive processes that could take several days per incident. Productivity suffered in the business units and on the Helpdesk.

Figure 2: Steps in MAR refurbishment include (from top) physical and cosmetic repair, affixing a new certificate of authenticity, and packaging for resale.

With the new, centralized IT Lifecycle Management program, damaged PCs go to the Helpdesk rather than being stored around the division. The Helpdesk culls the PCs it can repair from those identified for refurbishment or recycling, and stores the repaired PCs in a central inventory. As PCs in the business units fail, the Helpdesk can immediately replace them out of that inventory, saving employees the time otherwise lost around the former process. Heck estimates that for 1,400 “break-fix” incidents, Microsoft Canada will save CDN$231,000. That’s a modest sum to Microsoft, but one that will grow into significance as the new comprehensive global ITAD strategy continues to be rolled out.

The company’s budget-watchers aren’t the only ones pleased by the change. So are the employees. “There’s a big increase in morale among employees experiencing PC problems,” says Heck. “Now we can offer them a replacement PC immediately and fix the PC problem on a non-emergency—and lower-cost—basis. The stress that break-fix situations create is real, so any way we can avoid that stress will increase employee morale. We’re seeing it already in the customer satisfaction numbers coming out of our Helpdesk.”

**Looking Ahead**

As Microsoft continues to roll out its global ITAD strategy, it expects the benefits—in helping the environment and building brand value, in increasing data security and reducing risk, in expected and unexpected ways—all to continue. It expects to learn new lessons that will help it to further refine its comprehensive global strategy for even greater results.

It’s also learning the answer to that question about where old PCs go to die. Increasingly, in Microsoft’s case, they don’t die at all; they rise again to a second, refurbished life that aids the company, the beneficiaries of its donation program, and the environment.

Microsoft Authorized Refurbisher

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