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The Green Office: The Importance of Peripherals in the Green IT Ecosystem

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The "Green IT" phenomenon continues to attract significant attention in the Asia/Pacific region. Organizations are starting to see the benefits, but the key focus has been on infrastructure optimization in a bid to reduce costs associated with energy consumption. Environmental sustainability (i.e. reducing the carbon footprint of IT to help mitigate climate change) is a lot lower on the list of priorities. Where reducing energy consumption (and therefore carbon emissions) has been possible, CIOs and IT managers have been ready to listen – but mainly in the context of reducing costs. And it is clear that cost pressures as a result of the prevailing economic situation in the near term will continue to push organizations down the "infrastructure optimization" path to ensure a diligent management of the budget. However, in parallel, IDC believes that some progressive organizations will look to adopt "Greener" technologies with a view to a more strategic understanding of how IT can play a positive role in terms of mitigating the effects of climate change. This document examines the role of peripherals in the Green IT ecosystem – both in terms of reducing costs of running the Green Office, as well as its role in the broader notion of environmental sustainability.

The following questions were posed to Philip Carter, Associate Research Director for IDC Asia/Pacific Green IT Research, on behalf of Hewlett-Packard's customers.

Q. There has been plenty of hype on the topic of Green IT over the past 12 to 18 months. Where do you see clients deriving most value from this technology area?

A. There has been a great deal of hype surrounding this, and in order to gain a better understanding as to where clients are deriving the most value from Green IT, IDC launched the Asia/Pacific Green Poll¹ – an ongoing end-user survey designed to assess the importance, drivers and challenges of Green IT and its adoption across the region. End-user organizations have consistently expressed that their most pressing concern in terms of adopting 'Greener technology' is the increasing energy costs associated with the operation of their IT equipment. The typical IT manager has focused on providing an "always power-on" environment to support the business requirements within his or her organization; the impact in terms of energy costs tended to be an afterthought. More recently, with the rapidly increasing electricity prices, the focus on the running energy costs of the overall IT environment is becoming a growing concern among CIOs and CFOs. Hence, the concept of a "Lean Green IT" environment is becoming of key interest in order to reduce these costs. In line with this, 70% of the 321 respondents of IDC's most recent Green Poll cited the cost of energy as the most pressing reason to adopt Green IT.

¹ The IDC Asia-Pacific Green Poll is an ongoing survey of IT executives across the Asia/Pacific region. With each iteration, the scope (in terms of countries) changes. The first one was done in November 2007 (13 countries, 453 respondents), the second was in January 2008 (8 countries, 582 respondents) and the most recent was in October 2008 (321 respondents) focused on India and China.

In fact, IDC's research highlighted that in 2008, roughly 50 cents was spent on energy costs for every dollar of new hardware. This will increase by up to four times within the next five years.² So there is significant opportunity to reduce this expense in the short term – and this is where organizations are deriving the cost benefits in terms of the adoption of Green technology. IDC has seen examples of organizations that have addressed the power and cooling issue holistically and have cut operational expenses associated with energy consumption by up to 40% as a result. This segment of the Green IT ecosystem has clearly shown that going green clearly makes very good business sense.

In terms of the value of Green IT, one of the other frequently asked questions is whether this technology area is relevant to the small and medium-sized business (SMB) segment. IDC believes that the 'lean' aspect of Green IT mentioned earlier is very much applicable to smaller organizations in terms of consolidation, standardization and improving overall energy efficiency of the IT infrastructure. In absolute terms, the resulting cost savings might not be as large, but it will still have an impact on the bottom line. In addition, SMBs can introduce 'Green policies' quicker into the office environment. This can be kick-started by the use of basic energy-saving measures, such as automatic power down of devices when not in use, and encouraging employees to reuse and reduce paper consumption (e.g. setting up peripheral devices for double-sided printing and copying). These measures, although small, are relatively easy to introduce into the workplace and will have cost benefits as well as a positive impact on the environment. SMBs will also derive business benefits by going Green from a compliance standpoint, by playing their role in encouraging responsible IT asset disposal, as well as reducing hazardous materials usage. Finally, the benefits of a Green IT strategy should be viewed in the context of delivering positive commercial and environmental outcomes, and SMBs (because of their overall volume) have a major role to play in terms of creating that positive environmental outcome, even if their individual commercial benefits might not be as great as larger enterprises.

Q. How relevant is Green IT in the context of imaging and printing devices?

A. With all the current market noise on reducing power consumption within the datacenter, the role of the distributed office environment within the Green IT ecosystem has been largely underplayed. IDC believes that organizations need to incorporate the notion of the 'Green Office' into their overall Green IT strategy by ensuring a positive business and environmental outcome in terms of four main areas:

- Energy Efficiency – Reducing electricity consumption at the device level.
- Device/Fleet Management – Reducing the number of printers and replacing those left with networked multi-function devices (MFDs), e.g. combined printers/copiers.
- Asset Disposal and Materials Usage – Responsible eWaste policies that ensure a minimal impact for devices at the end of life.
- Document/Paper Management – The management of the document environment, and specifically paper, is also a key factor within this Green Office framework. Although one would think that paper would be easier to recycle than PCs, the Green Poll highlighted that a higher proportion of organizations were actively recycling PCs and desktops as compared to paper. Only half responded that they have some form of formal policy concerning the use of paper in copying and/or printing. The 'paperless office' is still a long way into the future, and until we get there, the benefits of recycling paper cannot be underestimated in terms of ensuring a positive environmental outcome from a Green IT strategy in the office environment.

² IDC Worldwide Power and Cooling Expense Forecast (2006-2010)

IDC's Green Poll, 2008, also shows that peripherals are high on the agenda in terms of the IT executives' 'Green Radar'. In fact, 32% of the 582 respondents identified peripherals as the product having the second most negative impact on the environment after PC hardware, which garnered the vote of 41.2% respondents. So it is clear that 'Greener' peripherals are a very important component of the broader Green IT ecosystem. Electricity consumption of printers/faxes, inefficient paper management, toxic/hazardous ink and the ability to recycle printers/faxes and consumables are all areas that need to be addressed as part of the creation of a 'Greener' office environment.

Q. In terms of an overall roadmap, what advice can you provide to end-user organizations looking to kick off Green IT initiatives relating to the procurement, deployment, operation and support of their printing devices?

A. In IDC's Green Poll, approximately 3 out of 4 organizations indicated that they did not have a Green IT policy in place, showing that Green IT adoption levels are a lot lower than the awareness levels – IT departments are aware of the issue, but the majority are not acting on it. Again, the Green Office component is a critical component of such a Green IT policy, including a formal audit of their printing and copying environment to identify areas where improvements can be made. This impacts the following business processes:

- Procurement: A sustainable procurement policy needs to include "Green" requirements into 'request for proposal' (RFPs) for the procurement of printing/copying devices. The focus of this policy should be on the following:
 - Energy efficiency (and therefore 'carbon impact') – Specific percentage of energy reduction targets should be put in place via more device consolidation and more energy efficient equipment.
 - E-Waste disposal – Vendor printer/copier asset disposal initiatives.
 - Vendor internal operations – Vendors should be required to report annually details on how they have pro-actively minimized their environmental impacts.
- Deployment/Operation: In terms of the actual operation of the Green Office, the following are some examples of the type of policies that organizations can put in place:
 - Electricity consumption – Device switch-off campaigns and power-only when in use, apply timer switches to non-networked technology and printers to turn off such equipment automatically outside office hours.
 - Paper Management – including setting the default to 'green' printing including duplex and grey scale. In addition, offices can promote printing/copying on recycled paper, and multiple page-up functions can also reduce the amount of paper used.
 - Support – There are opportunities to participate in community used cartridge pick-up and refills, using 90% re-usable/recycled parts in cartridges by product manufacturers and using refillable toners/cartridges from the product manufacturer.

In order to maximize the impact of these initiatives, the progress needs to be measured and monitored in a proactive fashion – and most importantly, communicated to the relevant internal and external stakeholders on a regular basis.

Q. What do you see as Green IT and Sustainability 'best practice' in the printing and document management space?

A. Assessing 'best practice' in any domain can be a challenging exercise; the Green IT and sustainability space is no exception. With the prevailing economic situation, the focus has to be on how by going Green can save operational costs. Outside of the aforementioned focus in terms of energy efficiency, two key best practices that stand out in terms of making Green pay in the printing and document management space are outlined below:

■ **Leveraging the vendor** – Organizations that have used a hardcopy vendor to perform a strategic print assessment have derived significant benefits. This can be used to ensure IT-business alignment, understand usage patterns, establish potential savings, propose a long-term output management plan, and recommend appropriate device replacements/consolidation. Part of this engagement can also investigate the use of managed print services. IDC has seen an increased uptake of managed services as organizations look to move from capex to opex in a challenging economy. Not only does this make business sense, but it also reduces the environmental impact of the printing/copying function in the following ways:

- Device consolidation and effective management can lead to significant cost savings associated with electricity consumption. This can be achieved by reducing the number of devices, managing just-in-time inventory for consumables, and structuring device placement based on volume usage which, in turn, maximizes the capacity of the machines.
- Leveraging vendor IP and management tools to ensure optimal fleet management in terms of usage, environmentally friendly asset disposal as well as support.
- From a demand usage perspective, in terms of paper management, using only what is required as opposed to large batch jobs reduces wastage. Providers of such services can also remotely monitor the toner and ink levels and replace consumables as the need occurs, minimizing the need for inventory at client locations.

■ **Understanding the 'Real Green'** – with all the hype surrounding Green IT in the market at the moment, it is understandable that organizations feel slightly 'Green washed'. This results in a healthy amount of scepticism relating to this technology area in the market. However, some IT executives have taken a proactive stance in embracing Green technologies and a number of case studies has shown how this has generated significant returns on investment. So the key point here is one of understanding – cutting through the market noise, and ensuring that real value can be derived as organizations see that being 'green' will actually have a positive impact on the bottom line in terms of reducing the electricity bill, improving asset utilization, as well as streamlining operations

ABOUT THIS ANALYST

Philip Carter is the Associate Research Director for IDC's Asia/Pacific Green IT and Services research, based in Singapore. Philip leads IDC Asia/Pacific's Green IT research practice that pulls together content from various hardware, software and services programs that relate to this topic. Philip speaks regularly on the topic of Green IT at events and seminars in the region. He is also frequently quoted in regional press and broadcast media (e.g. Business Times, South China Morning Post and Bloomberg) on Green IT and sustainability.

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