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The Power of Partnering in Accomplishing Your Green IT Agenda

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Survey Sponsored by Wipro Technologies

WIPRO
Applying Thought

This content of this paper is based in part on information gathered from an Outsourcing Center Quick Poll and is not intended to replace industry market research

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Introduction: Removing the Barrier to Achieving Green IT Objectives

Green IT initiatives in businesses are no longer simply a fast-growing trend; achieving IT that is more "green" has been bumped up to one of the top items on corporate agendas. With an increasingly heightened awareness of the adverse effects of not having green IT, organizations are now seeking ways to:

- Reduce e-waste
- Reduce carbon footprint
- Increase environmentally friendly processes and equipment
- Reduce unnecessary energy use and decrease energy consumption costs
- Reduce the use of non-renewable energy resources
- Reduce data center inefficiencies
- Comply with a growing number of environmental regulations worldwide, some differing from country to country

Price is the number-one barrier to adopting a green approach when purchasing technology for organizations.

These days, many organizations' IT purchase, management, and life cycle decisions take into account some or all of the above "green" issues. There is a two-sided dilemma in achieving these objectives. The cost of not doing so is high, due to rising operational costs, non-compliance with regulations, and public image of not being a socially responsible company. The other side: the cost of becoming green is high and may not be affordable in existing budgets.

Outsourcing is a proven business model that brings power to an organization, as it brings the competitive advantage of leveraging the partnering service provider's resources (e.g., capital, people, equipment, economies of scale, and expertise) and reducing risks in achieving the buyer organization's objectives. It also facilitates cost-avoidance and cost-savings objectives. Thus, companies are beginning to adopt the strategy of outsourcing to achieve their green IT objectives.

Outsourcing Center and Wipro Technologies jointly conducted research in the first quarter of 2008. The research, which was not a scientific study, polled visitors at the Outsourcing Center portal, asking CIOs and IT department heads to select the top initiatives IT service providers should undertake in order to promote green IT. As illustrated in **Exhibit 1**, nearly one-third of the respondents stated the top priority in initiatives should be reducing e-waste by using recyclable devices.

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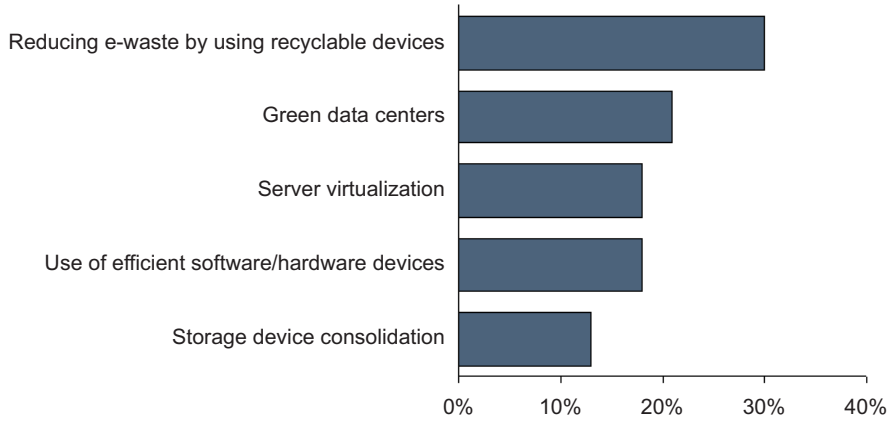
EXHIBIT 1

Top initiatives IT service providers should take to promote green IT

Source: Outsourcing Center poll, January 2008



Reducing E-Waste

While financial factors are the primary driver for enterprises undertaking most green IT initiatives, reducing e-waste has an added component: compliance with environmental legislation.

The European Union, for example, enacted a "Reduction of Hazardous Substances" regulation, effective in 2006, specifically banning six substances in electronics. The U.S. Environmental Protection Agency (EPA) has established several regulatory laws and guidelines. The countries, states, and cities that do not already have environmental regulations are in the process of enacting them. In addition, industry associations are promoting standards. The Association of Information Technology Professionals, for instance, has developed for IT organizations a formal set of Standards of Responsibility for Handling Electronic Waste.

Nevertheless, initiatives surrounding e-waste still come down to a financial consideration. In the United States, for example, noncompliance with the Gramm-Leach-Bliley Act's computer disposal regulations can incur a fine of US$10,000 per day to the CEO and board members.

Given the increasing attention on e-waste due to evolving legislation and associated fines for non-compliance with disposal regulations, it is not surprising that the Outsourcing Center poll repondents selected this green IT initiative as a top priority for service providers.

In addition, there are hidden costs associated with in-house PC disposal (e.g., sanitizing hard drives by completely overwriting the old data several times, storage costs, and packing/shipping). There is also a cost for using a recycling firm, and that cost can increase exponentially if the firm does not conduct data cleansing rigorously to ensure it has destroyed confidential, sensitive data from PCs. In addition, separating electronics waste materials for recycling is a labor-intensive process, and much of this work is shipped to China.

Obviously, there are potentially significant adverse impacts on people and the environment if companies do not dispose of technology properly. Electronics waste – which includes hazardous and carcinogenic materials and chemicals such as polychlorinated biphenyls, mercury, lead, cadmium, and flame retardants – is toxic to both humans and the environment. A typical computer monitor contains seven pounds of lead; CRT tubes contain leaded glass, and LCD screens contain mercury. Multiply those seven pounds of lead by the 57 million computers the EPA says were sold in 2006 – just in the United States, let alone the rest of the world – and the e-waste challenge grows to staggering proportions. Most PCs these days are replaced in just two or three years.

Reuse of computer components is preferable to recycling e-waste.

Because of the staggering and ever-growing volume of e-waste, as well as the substantial risk of not removing confidential data from PCs, reuse of computer/technology materials is becoming preferable to recycling.

Besides reusing computer materials, companies can reduce e-waste by reducing their PCs and servers through other green IT initiatives such as virtualization and more efficient data centers.

Achieving a Green Data Center

In the Outsourcing Center poll on green IT initiatives that IT service providers should undertake, respondents ranked "green data centers" as the second-highest priority. A green data center provides efficient power consumption, efficient space utilization, and reduces energy sources of pollution.

The twenty-first century has been dubbed by some as the Information Age. Unfortunately, the information explosion has led to data-intensive businesses requiring more and more servers, storage devices, and desktops – which increase energy consumption and thus increase operating expenses. Even more important than the cost of generating electricity for the computing equipment, the electricity generates carbon in the environment.

PCs and monitors consume between 5-13 percent of power in an office, but they waste approximately 66 percent of the power they consume.

The EPA estimates that without implementing green IT initiatives data centers will double their energy consumption by the end of 2011. Even worse, according to the Office of the Federal Environmental Executive in the United States, PCs and monitors consume between five to 13 percent of all the power in an office, but approximately 66 percent of the electricity consumed by PC and monitors is wasted.[1]

In the Outsourcing Center poll, responses resulted in a tie between server virtualization and the use of efficient software and hardware devices for the third top green IT initiative that IT service providers should undertake (see **Exhibit 1**).

Most green IT initiatives in a data center focus on strategies such as virtualization, consolidation, and software data management to reduce energy consumption. However, implementing these strategies creates risks when the IT group lacks expertise in deploying them in a manner that produces value.

Virtualization is Key to Green Data Centers

Whether virtualization focuses on servers, storage, desktops, networks, or applications, it contributes toward a green data center by consolidating similar functions onto fewer machines. This more efficient use of computing resources reduces energy consumption and results in infrastructure cost savings. Virtualization also enables disaster recovery solutions.

Adoption of the virtualization strategy continues to grow rapidly by all accounts. According to IDC, the virtualization software market will grow from US$810 million (in 2006) to US$1.8 billion in 2009. Forrester says server virtualization adoption will reach 65 percent in 2009.[2] Springboard Research predicts the virtualization software and services market in Asia Pacific will reach US$1.35 billion by 2010 – and the spend on services will be two to three times more than on software.[3] And according to a press release issued by Gartner, virtualization will transform how IT is managed and will be the highest-impact trend in infrastructure and operations through 2012.[4]

Despite widespread adoption of virtualization, there are risks. Many CIOs have found that implementing the technology creates more complexity and new security challenges. In addition, the effort and expense of managing virtual servers can be as costly as managing physical servers. The potential risks can increase IT overhead.

1 http://ofee.gov/es/ES_Initiatives_Fedgov2008.pdf
2 Shurtleff, Jane. "Accelerating Remote Access Within the Virtualized Enterprise." May 23, 2008. http://virtualization.sys-con.com/read/572404.htm
3 Press release, March 31, 2008. http://www.prlog.org/10060963-springboard-research-apac-market-for-virtualization-software-services-to-reach-us-1-35b-by-2010.html
4 Press release, April 2, 2008. http://www.gartner.com/it/page.jsp?id=638207

Storage device consolidation is another strategy for reducing data center power consumption. Thirteen percent of respondents in the Outsourcing Center poll ranked it as a top green IT priority for IT service providers (see **Exhibit 1**). Virtualization also now impacts storage challenges by creating virtual storage pools for applications and eliminating under-utilized production disks.

Wipro, an IT infrastructure service provider, is involved in various capacities with technology partners and has helped a number of its global clients to implement virtualization in their data centers.

Partnering Power: The Benefits of Outsourcing Green IT Initiatives

A report on findings from "GreenFactor," a global study of IT decision-makers on green products and marketing (released by Strategic Oxygen, CGI Group, and Cohn & Wolfe), states that price was the study respondents' number-one barrier to adopting a green approach when purchasing technology for their organizations.[1]

Outsourcing is a proven strategy for reducing costs and risks in implementing technology solutions. A service provider's best practices and economies of scale can produce cost savings in a client's infrastructure. Selecting a service provider with offshore resources is another way to reduce costs.

Besides the provider's green IT initiatives in its own data centers and service delivery locations, it can meet a client's green objectives through expertise in virtualization. Moreover, the service provider can help its client configure storage architecture in a manner that is scalable, flexible for meeting future business needs cost-effectively as the volume of data continues to grow.

Another advantage of outsourcing is leveraging the service provider's innovation in proprietary solutions. For example, as part of its corporate-wide concentrated green initiative called "ecoeye," Wipro has developed innovative green solutions such as virtualization of testing, green testing labs, emission-compliance management systems, and green data centers, which it uses to help its customers go green.

1 Press release, June 18, 2008.
http://www.businesswire.com/portal/site/google/?ndmViewId=news_view&newsId=20080618005274&newsLang=en

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In addition, outsourcing is a proven strategy for weathering the challenges of evolving regulations and can speed up compliance with any new laws.

Outsourcing firms can also provide e-waste-friendly computing hardware more cost-effectively than a client can procure it because of the provider's economies of scale. All of Wipro's personal computing products are Energy Star certified and comply with environmental/safety standards and statutory regulations.

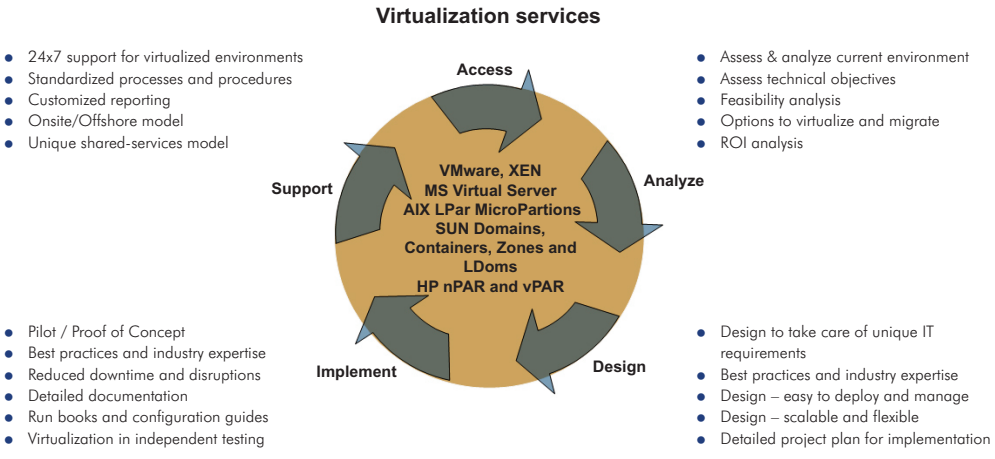
Moreover, many service providers offer e-waste disposal and recycling or reuse services. Wipro, for example, disposes of e-waste through vendors authorized by State Pollution Control Boards to handle e-waste in a responsible manner. This process is audited regularly to ensure compliance. Wipro also works with vendors to reuse rejected computer components in order to minimize e-waste. In addition, Wipro's infrastructure engineering business recycles wood used in packing; this saves approximately 200 trees annually.

Finally, some outsourcing providers offer the option for a hosted virtual data center. Across server, storage, and network technologies, the end-to-end services in Wipro's virtual data center include assessments and virtualization planning, product and solution evaluation and selection, system integration, testing, and management (see Exhibit 2). The provider also uses such components as occupancy sensors, auto vents, ambiators, and building management systems to conserve energy.

EXHIBIT 2

End-to-end services in Wipro's Virtual Data Center model

Source: Wipro



The bottom line: outsourcing brings partnering power. It is a cost-effective, risk-minimization strategy for achieving a company's green IT agenda including:

- Applying environmental guidelines to computer technologies
- Better management of technology and equipment in an environmentally responsible manner
- Achieving data center energy efficiencies

About Outsourcing Center

Outsourcing Center (www.outsourcing-center.com) is the world's most prominent Internet portal for authoritative information on methods for creating and sustaining a competitive advantage; improving organizational performance; focusing resources on core competencies while obtaining resources to improve important, non-core business processes; ensuring companies get the best return on their IT investments; and capturing value in business solutions that make an enterprise-wide strategic impact.

The Center provides a wealth of free research, case studies, database directories, market intelligence, and ever-expanding content targeted to the information organizational decision-makers seek on emerging trends and best practices in outsourcing as a strategic business solution. The Center also publishes the monthly Outsourcing Journal with more than 48,000 subscribers and presents the annual Outsourcing Excellence Awards (www.outsourcing-awards.com).

About Wipro Ltd.

Wipro Technologies, a division of Wipro Limited (NYSE:WIT) is the first PCMM Level 5 and SEI CMM Level 5 certified IT Services organization globally. Wipro is one of the largest product engineering and support service providers worldwide. Wipro provides comprehensive research and development services, IT solutions and services, including systems integration, information systems outsourcing, package implementation, software application development and maintenance services to corporations globally.

In the Indian market, Wipro is a leader in providing IT solutions and services for the corporate segment in India offering system integration, network integration, software solutions, and IT services. Wipro also has profitable presence in niche market segments of consumer products and lighting. In the Asia Pacific and Middle East markets, Wipro provides IT solutions and services for global corporations. Wipro's ADS are listed on the New York Stock Exchange, and its equity shares are listed in India on the Stock Exchange – Mumbai, and the National Stock Exchange.

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