**YOUR COMPANY IS GOING GREEN**

**Run your IT operations greener and more efficiently**

Make a positive impact on your operations with green IT. Our sustainable IT solutions can help you reduce energy consumption, enable sustainable sourcing, and achieve dematerialization.

* Consolidate IT assets through virtualization and decommissioning of legacy systems (previous or outdated computer **system**)
* Minimize e-waste through strategic salvaging techniques
* Replace high-carbon products and activities with low-carbon alternatives

Consider a few examples of recent corporate-level green initiatives:

**· Toyota sets broad environmental goals in its five-year plan.** The world’s largest auto company unveiled its Second Consolidated Five-Year Environmental Action Plan (2007-2011), setting new environmental goals for all phases of the vehicle life cycle and addressing themes of energy, climate change, recycling, resource conservation, use of toxic substances, atmospheric quality, and environmental management.

**· Citigroup plans to invest $50 billion in carbon-reduction projects.** Over the next 10 years, the world’s largest financial services company will devote $50 billion in investments and financing to projects that reduce global carbon emissions. Citigroup will focus its investments

on the commercialization and development of alternative energy and clean technology both within its own operations and among its clients.

**· Wal-Mart steps up its sustainability commitments.** The CEO of the Fortune No. 1 retailer announced “Sustainability 360,” a program to broaden the company’s green efforts beyond its own operations to those of its suppliers, employees, communities, and customers.

**IT Must Be A Contributor**

What do such initiatives have to do with corporate IT organizations? Everything. IT will be a significant part of corporations’ efforts to make their internal operations greener, given its disproportionate share of energy consumption relative to headcount or overall operating costs. As a leader of an IT organization, if you haven’t gotten the knock on your door yet from someone asking how and when IT will contribute, you will. The green IT mandate generally comes from one or more of three motivations:

**· Improve business results.** Making IT more efficient is simply good business. Green IT can save hard dollars through reduced (or at least slower-growing) energy expenditures.

**· Enhance customer and public perception.** A greener company, with greener products and services, is more desirable to a growing segment of consumers and business customers. Improving green practices can also reduce the risk of a “gotcha” event caused by intervention by government regulators or NGO watchdogs.

**· Do the right thing.** Some companies are led by “true believers” who simply want to do the right thing for the environment. Whatever the sources of a green IT mandate, it’s moving higher on the priority list for IT organizations. Rather than turning into another thorny project dumped in IT’s lap by “the business,” green IT is a sterling opportunity for the IT organization to be a role model for other functional groups in the company. By greening its own operations and serving as an enabler for a broader set of green business opportunities, IT can accelerate its own transformation from a service organization into a full participant in business strategy and contributor to business results.

**Start By Creating An Action Plan**

How do you get started? Create a plan. The purpose of this research report is to guide CIOs and senior IT managers in crafting an action plan for getting green IT under way. Such a plan is the necessary first step because it:

**· Defines purpose.** Planning efforts need focus and boundaries. The green IT action plan should ask and answer a fundamental question: “What are we trying to accomplish?”

**· Sets expectations.** The plan will help stakeholders throughout the company understand what’s possible and when.

**· Builds credibility.** You may be asking for significant capital outlays, in some cases with returns not directly evident in IT’s operations. Senior management will be looking for prudent expense governance and alignment with corporate priorities. The action plan is the place to put IT’s spending and projects into a broader business context.

**· Establishes priorities and tradeoffs.** The green IT plan makes choices about what gets done sooner, later, or not at all. And it can lay out tradeoffs between goals that might be in conflict.

**FOUR STEPS TO CREATING THE GREEN IT ACTION PLAN**

Before putting pen to paper, IT leaders should take several steps to ensure the plan’s impact and success.

**1. Identify And Prioritize The Goals Of A Green IT Initiative**

The different sources and motivations for pursuing green IT mean that organizations will have

different goals for their initiatives. In turn, different goals will lead to different priorities and

decisions about which activities to pursue most intensively. Each company will have different goals, depending on its industry and business context, management style and preferences, and particular IT infrastructure and architectures. Based on our interviews with IT practitioners and a growing volume of client inquiries, the menu of green IT goals for most companies will include:

**· Reduce overall electricity consumption and spend.**

**· Improve utilization of IT equipment.**

**· Capture tax and utility rate benefits of green initiatives.** Numerous US states offer property tax exemptions or corporate income tax incentives for green efforts like improving energy efficiency or tapping renewable energy sources. And a growing number of utilities, led by

PG&E in northern California, are offering rebates to customers that implement energy-efficient

technologies like virtualization in their IT shops.

**2. Assess the Current Situation Relative to High-Priority Goals**

Assessment is a crucial step in green IT planning, but it’s often overlooked, especially by vendors looking to sell new, more energy-efficient gear. IT organizations cannot plunge into a technology or architecture refresh without first:

**· Cataloging existing internal activities.** Several companies we’ve interviewed were amazed at the breadth of ad hoc activities already under way when they started a formal green IT effort.

Initiatives by individual departments or locations can be fuel for a more coordinated effort. Find

them, understand their goals and motivations, and bring them into the fold without draining

the spirit that got them going in the first place.

**· Assessing baseline electricity usage by IT gear.** Here’s where IT and facilities need to team up. In some cases, we have found very advanced planning and instrumentation of electricity usage throughout an organization; but in most cases, there is remarkably little gap in using these IT and facilities.

**· Specifying IT’s organizational role.** A green IT initiative must be placed in a broader organizational context. A crucial part of that is identifying the leadership and execution role of IT relative to facilities, HR, legal, and marketing. Green IT must also be explicitly aligned with

Corporate Social Responsibility and other green initiatives including regulatory compliance and reporting

**· Documenting current procurement criteria and supplier qualification processes.** A critical section of the green IT action plan will be changing procurement criteria and processes to favor green products and greener suppliers. This activity starts with a clear documentation of current procurement practices.

**· Tapping the “eco-services” suppliers.** The large systems and some of the IT services firms have started service teams aimed specifically at performing assessments and helping estimating green IT initiatives.

**3. Find And Execute Quick Wins**

After assessment, again the temptation will be to plan for big-bang infrastructure and process

changes. Resist this. It is vital in the early stages to demonstrate successes; the best way is to start small. Pick a handful of easy-to-understand and easy-to-see activities and make sure everyone knows about them. The goals at this point are to: 1) get employees interested and excited, and 2) build credibility with management. These quick-win activities can be done in parallel with, and incorporated into, writing the longer-term action plan.

In addition to very obvious actions like changing to efficient light bulbs, printing double-sided, and recycling consumables, choose from a menu of quick-win activities like:

**· Find and turn off unused IT equipment.**

**· Turn off lights, PCs, and other equipment.**

**· Enable power management on printers and other peripherals.**

**· Join Climate Savers**.

**· Improve data center airflow.**

**4. Craft And Communicate An Action Plan**

The action plan document is the touchstone of your green IT initiative. Use it as a way to foster

creativity, focus on activities with the most impact, and communicate your intentions and progress to the rest of the company. The plan should incorporate a variety of internal marketing techniques both in the document and in surrounding activities:

**· Promote and certify green ideas and activities.**

**· Create platforms for employee brainstorming.**

**· Emphasize internal viral marketing**

**· Employ change management techniques.**

**OPTIMIZING EFFICIENCY OF EXISTING IT ASSETS**

Every IT organization will choose different optimization priorities depending on its green IT goals, appetite for change, and current infrastructure. But even with wide variation in priorities, IT enabled organizations should always:

**• Reconfigure data center equipment.**

• **Instrument/equipment with temperature and power consumption sensors.**

**• Upgrade power supplies, converters, UPS systems, and/or CRAC systems.**

**• Optimize data center thermals via precision cooling and other techniques.**

**• Implement server and/or storage virtualization, tiering, and consolidation.**

**• Implement networked PC power management system.**

**• Lengthen PC life cycle.**

While the menus of green IT activities suggested in this report can occupy months of planning

and years of execution for CIOs and their organizations, we can see the next frontiers on the

horizon. Very few IT suppliers and customers are thinking about these yet, but you should at least

keep them in the back of your mind:

**· Measuring the lifetime carbon footprint of IT assets.** IT is starting to think vigorously

about energy efficiency, but the energy used during a server’s operating lifetime is only

part of its total environmental impact. In fact, systems OEMs agree that most of the energy

consumed by IT equipment occurs during its manufacture. We expect manufacturers to work

on quantifying the total lifetime impact (or carbon output) of their equipment, including raw

materials, manufacturing, transport, packaging, and recycling. This kind of analysis will go

well beyond the energy standards being put in place today.

**· Reusing and recycling.** Systems vendors tell us that very few customers are thinking hard

about the end-of-life disposition of IT assets. The lifetime impact analysis described above

will factor into organizations’ decisions about the frequency of equipment refresh, upgrades,

and how to “hand down” equipment to other institutions. We believe that manufacturers are

on the cusp of forming a new design ethos for IT gear that will emphasize longer life cycles

and easy upgrading, instead of the fast product cycles and ever-shorter refresh cycles that

most vendors depend on today.