

The Growing Role of IT Departments in Corporate Green Strategies

By H. Ritchie, P. Wong

The IT department may seem an unlikely place to find motivated environmentalists. But that is precisely where many private-and public-sector organizations will find teams driving critical climate-change initiatives.

Taking on an eco-sustainability role, however, does carry some interesting implications. For one thing, IT staffs will have to develop new skills and perspectives about the role technology can play in advancing environmental objectives. In addition to delivering high levels of technical performance and aligning their activities with key business objectives, they will have to learn the language and the logic of sustainable growth – which will be necessary considering that 60% of global executives view climate change as important to consider within their companies' overall strategies.¹

According to a recent survey of 280 IT executives conducted by *CIO Magazine*, more than 54% said their organizations have instituted environmental sustainability goals for their information technology operations² for both business and social reasons. In fact:

- 38% said that pursuing green IT and sustainable business processes could contribute to significant reductions in operating expenditures (OPEX), as the enterprise becomes more energy-efficient.
- 38% reported that such initiatives would help their organizations be more socially responsible corporate citizens.

In short, there is as much of a business case for energy efficiency as there is a public relations case.

The Role of IT in Streamlining Operations

New operational efficiencies enabled by technology – such as mobility, collaboration and business process optimization – have a significant impact on reducing the carbon footprint of organizations. Teleconferencing, video-conferencing and tele-working, for instance, are all viable alternatives to commuting and long-distance business travel, and they allow companies to reduce their OPEX and their CO₂ emissions at the same time.

In a recent Harvard Business Publishing blog,³ Mindy Lubber, President of Ceres, a leading coalition of investors and environmental groups, talks about open work strategies. She indicated that the number of corporate employees in the United States open working in 2007 was expected to be 12.4 million – nearly double what it was five years previously.

Many companies understand the value of tele-working – not just for the environment, but also for overall operational costs and for the ability to attract and retain good employees.

Sun Microsystems, for example, offers employees the ability to work anywhere, anytime, using any device. This strategy enables them to cut carbon emissions by reducing energy use from employees working in their facilities and by decreasing their real estate holdings. In 2007, Sun's award-winning Open Work platform prevented 29,000 tons of CO₂ from entering the atmosphere.

1 ©2008, How Companies Think about Climate Change: A McKinsey Global Survey, McKinsey & Company

2 http://www.cio.com/article/196450/The_Greening_of_IT?contentId=196450&slug=&

3 <http://blogs.harvardbusiness.org/leadinggreen/2008/08/telecommutings-small-carbon-fo.html>

Additionally, a recent Sun study showed that the energy saved by an employee who works from home just 2.1 days per week equaled 5,400 kilowatt-hours (kWh) per year. (The average home uses 1,000 kWh per month in energy.) Other environmental and socioeconomic impacts include reduced traffic congestion and less stress on urban transportation infrastructures.⁴

Another example is West Corporation, a business process outsourcing company with revenues of \$2.1 billion USD (€1.5 billion) and more than 42,000 employees in North America, Europe and Asia. They have set up an infrastructure that supports 15,000 virtual contact center employees.

Using Alcatel-Lucent's contact center technology, West Corporation's virtual workforce shares information easily, operates with clear processes and capitalizes on cross-sell and up-sell opportunities. They do this so well, Frost and Sullivan named the company its 2008 Contact Center Outsourcing Company of the Year. Its employees also save nearly 85 million miles of commute time and \$12 million USD (€8.8 million) in gas expenses, while gaining more flexibility. Most impressively, by reducing the number of cars on the road, West Corporation has reduced CO₂ emissions by 28,000 metric tons annually. And that's just savings associated with commuting.

Alcatel-Lucent also supports tele-working and is equally pleased with the operational savings. The company undertook a project in Belgium and has documented its impact. By encouraging Belgian employees to work at home and providing office space on an as-needed basis, we have saved 20% in associated real estate costs. The company also saved 11% in associated energy costs. The trial project has been so successful that we are increasing formal tele-working programs.

In addition to reducing the need for employees to travel, we also have initiatives in place to make travel more efficient and reduce trucks rolls through smart transport/logistics and smart metering. These represent just two ways to turn energy reduction into reality identified by the Global e-Sustainability Initiative.⁵

Reducing IT's Environmental Footprint

The carbon footprint of Integrated Computer Telephony represents about 2% of global emissions, according to an analysis by The Climate Group in partnership with the Global e-Sustainability Initiative (GeSI), and McKinsey.⁶ However, this percentage is expected to double in the next 12 years.

In response to these challenges, *CIO Magazine's* survey reports that:⁷

- 64% of the IT organizations surveyed plan to reduce server power consumption
- 57% ask users to turn off equipment at night
- 49% configure desktops not in use to enter sleep mode
- 44% plan to upgrade or reconfigure data center cooling infrastructure for improved efficiency

While this is a good start, there is much more to be done to streamline the carbon footprint of the enterprise technology infrastructure. In 2007, the United States Environmental Protection Agency (EPA) produced a report showing that data centers in the United States have the potential to save up to \$4 billion USD (€2.7 billion) in annual electricity costs through more energy-efficient equipment and operations, and the broad implementation of best management practices.⁸

The EPA recommends the industry pursue efficiency opportunities and policies that can lead to additional energy savings – as much as 25% – with even greater savings possible with advanced

4 <http://www.sun.com/aboutsun/openwork/planet.jsp>

5 <http://www.theclimategroup.org/assets/resources/publications/Smart2020Report.pdf>

6 ©2008, SMART 2020: Enabling the Low Carbon Economy in the Information Age, The Climate Group in partnership with the Global e-Sustainability Initiative (GeSI), and McKinsey

7 http://www.cio.com/article/196450/The_Greening_of_IT?contentId=196450&slug=&

8 ©2007, The EPA 2007 Report to Congress on Server and Data Center Energy Efficiency

technologies. We support these recommendations and have seen dramatic savings in our own operations. For example, in 2006 Alcatel-Lucent began consolidation of its data centers from 25 to six. By using more energy efficient equipment and energy-saving features, we save more than \$850,000 USD (€668,000) on data center electrical bills and reduce CO₂ emissions by more than 500 metric tons each year.

A Call to Action

From our perspective at Alcatel-Lucent, we believe climate-change initiatives represent an opportunity for enterprise IT leaders to strengthen their strategic role. But to do this, CIOs will have to understand the issues, know where they can provide value and how to make the best use of technology.

Alcatel-Lucent recommends enterprises use a dynamic communications framework to drive eco-sustainability – interconnecting networks, people, processes and knowledge (Figure 1). The framework takes a broader view of eco-sustainability, providing ways to not only optimize IT footprints, but also to empower people, make processes more efficient and eco-friendly, and apply knowledge for more innovative solutions.

Figure 1: Connecting networks, people, processes and knowledge



We have developed technologies and methodologies that help enterprises:

- Contain energy costs and reduce the costs of production, goods and services
- Limit the energy cost impact on balance sheets
- Develop consumption analytics needed to identify maximum savings
- Gather data to monitor power consumption and device usage
- Manage power and alternative energy sources to avoid outages
- Develop automated compliance strategies
- Find new and innovative ways to do business
- Substantiate eco-branding initiatives

We have joined the growing community of CIOs who are engaged in an ongoing dialog to integrate cutting-edge technologies with emerging business strategies and important social issues like climate change.

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