

# IT and sustainability: Is IT part of the problem or part of the solution?



How much could you save by taking a strategic approach to green IT?

Where does the biggest opportunity lie for improving your organization's environmental footprint?

Will your IT meet the regulatory, investor and consumer demands of a carbon-constrained economy?

2008 will likely be remembered as the year that the way businesses view the world changed. As the emphasis shifts from debate to action, governments and businesses are grappling with the enormous and complex challenge of sustainable development. Pressure from the public, employees and shareholders is driving organizations to become more transparent and accountable for their impact on the environment.

The role of IT is significant. With technology's increasing requirements for energy and raw material and its subsequent contribution to toxic waste, corporate IT departments are in the spotlight.

The good news is that although IT is part of the problem it can also be part of the solution. Not only is this beneficial for the planet and for governments, but businesses can achieve real cost savings from using IT sustainably.

To realize a commercially realistic advantage, organizations should consider more than just employing computing devices efficiently. The focus of IT should not just be inward to the operation of the IT function. It should be outward as well through the IT supply chain to the operation and use of technology across the whole business.

IT offers technology solutions to improve a business's sustainability and deliver a commercial advantage.

### Key business drivers

Regulatory frameworks are becoming more onerous. For example in Canada, the BC government recently imposed a carbon tax and Alberta imposed regulations to reduce emissions intensity: both signs of changing times.

Some external risks will impact IT even more directly. Escalating energy and insurance costs will hit technology installations, which will be targets for corporate cost reduction schemes. The locations of data centres will therefore become increasingly important. Energy cost increases may not be linear or predictable.

Suppliers will be promoting an increasing number of green "solutions" to IT organizations, placing IT under pressure to adapt their technical architecture and supporting infrastructure.

“Electricity use has more than doubled since 2000 and amounts to about \$4.5 billion in electricity costs. It is equivalent to the electricity consumed by 5.8 million average U.S. households.”<sup>1</sup>

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<sup>1</sup> Report to Congress on Server and Data Center Energy Efficiency Public Law 109-431, by U.S. Environmental Protection Agency ENERGY STAR Program, August 2, 2007.

## Roles for IT in sustainability

IT has three distinct but complementary roles, which can help deliver corporate sustainability:

### Custodian

The CIO is responsible for the environmental impact of providing IT services to the business. Responsibilities include the management of power and cooling and the management of IT assets through their lifecycles from design and manufacture through to procurement, use and final disposal.

### Enabler

IT can support the business by identifying, validating and delivering solutions and services, which help minimize the business's impact on the environment.

### Reporter

IT can provide data and information on its energy consumption and other sustainability metrics to the rest of the business as part of the overall measurement, management and reporting of sustainability performance.



## Metrics and measurement

Without metrics progress cannot be measured. Few organizations currently have insight into the true environmental impact of their use of technology yet signs show that myriad stakeholder pressures will shortly combine to force companies to track and report the impact.

All organizations need to understand their sustainability performance. They can start by measuring and setting targets for improvements, particularly within the IT function. Understanding the starting point or baseline is critical.

We encourage organizations to seek a holistic set of measures, which take into account the full lifecycle of IT provisioning and are normalized against business metrics (such as the number of customer accounts, sales or level of productivity) to give it a realistic commercial context.

Reporting frameworks should include measures that address all the roles within IT, for example:

- Custodian – measures such as the power required to operate IT equipment using the industry guidelines already available.<sup>2</sup>
- Enabler – measures such as the usage of telecommuting and video conferencing, or the usage of location-sensitive technology to reduce distances when delivering shipments.
- Reporter – measures such as the energy consumption and associated carbon emissions across the entire IT footprint, not just within data centres.

<sup>2</sup> 'The Green Grid' industry consortium and others offer guidelines on the measures for the effectiveness of data centre power usage ([www.thegreengrid.org](http://www.thegreengrid.org)).

## Where does the biggest opportunity lie?

Simply managing the power consumption of IT misses the full opportunity. IT has a much bigger role to play in improving business sustainability and achieving significant cost savings. It can enable different ways of doing business and support the way employees fulfil their duties.

Finding these opportunities requires a holistic approach that takes into consideration strategy, policy, procurement and partnerships, energy and waste management and reporting, and has in place a process for continual review. All this combined with an awareness of how products and services impact the environment from conception to completion.

Many businesses already have effective and mature sustainability or environmental departments. IT needs to work more closely with these groups and take on wider responsibilities for sustainability in the business.

Winners will be those companies that view sustainable IT as a strategic, rather than a tactical, challenge.

## Environmental IT strategy

IT must plan and act now to:

1. Develop an integrated, environmentally responsible IT plan that:
  - measures and monitors carbon emissions and abatement successes in and beyond IT
  - incorporates technology solutions into abatement plans
  - forecasts IT emissions and sets reduction targets
  - prices carbon into IT investment decisions to quantify exposure and minimize the potential for liability
  - develops ways to de-materialize IT and reduce waste
2. Identify, validate and leverage new technology solutions to address sustainability across the business.

The alternative is to delay and accept the cost and constraints of the action imposed by governments, suppliers, customers and the rest of the organization.

“95% of companies we surveyed currently have zero, low or uncertain confidence in their greenhouse gas (GHG) emissions data.”<sup>3</sup>

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<sup>3</sup> Carbon Countdown, by PricewaterhouseCoopers Australia, January 2008.

## Why engage PwC?

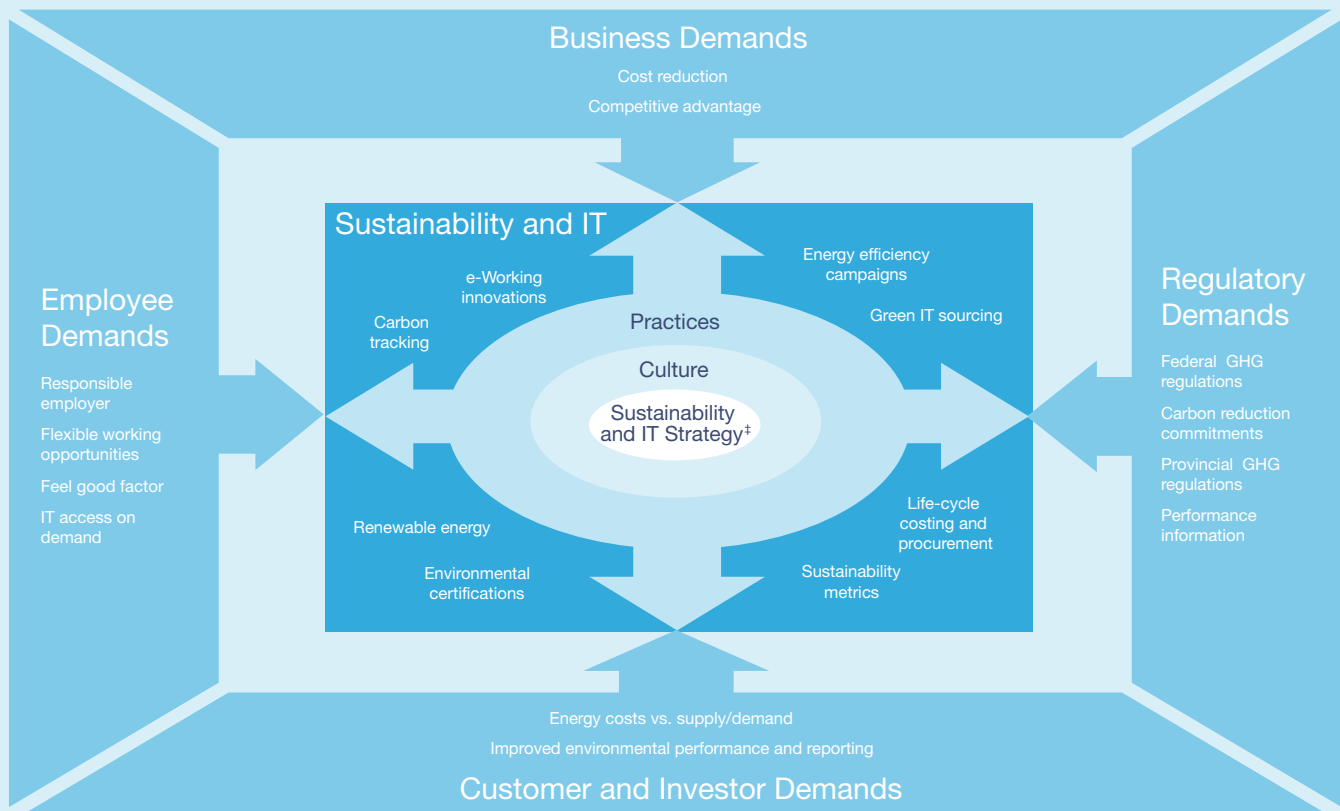
To meet the challenges of sustainability and climate change, you have to put these issues at the heart of your business.

PricewaterhouseCoopers (PwC) has a 15-year track record in sustainability and climate change, and deep sector-specific expertise, to complement our IT advisory, tax, audit and assurance practices.

We bring insight from all areas of our business to our clients' sustainability issues so they get the full picture.

We can help you understand which issues will have the greatest impact in your business, form a coherent strategy to address them, and then support you through the often complex organizational changes needed to put your strategy in place.

## PwC's approach to delivering high value sustainable IT initiatives to meet new demands



<sup>‡</sup>Connected to IT, corporate social responsibility, growth, sourcing, mergers and acquisition strategies

## How PwC can help

Leveraging our industry, sustainability and IT knowledge, we can work with you to identify the current status of sustainability within your IT environment to capture how they negatively and positively affect your business. From there, we can build a strategy that addresses the issues and develop a realistic roadmap that is focused on business outcomes. Our trusted advisors can also help you engage key stakeholders to implement the strategy and make sure change “sticks”. Finally, as an

independent third party, we can verify your sustainability outcomes to ensure information is accurate and reliable.

Our deep understanding of sustainability and IT principles can help accelerate your progress towards an IT capability that reduces its environmental impact and provides enhanced support to your business through enabling technologies and improved sustainability reporting.

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