

# 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 organisation's environmental footprint?

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



“Data center energy intensities have doubled or even tripled in the last 5 years leading to increased costs and environmental impact”

- US Environmental Protection Agency

2007 will likely be remembered as the year that 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 will drive organizations to become more transparent and accountable for their impact on the environment.

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

The good news is that despite IT clearly being part of the problem, it can also be part of the solution. This is good for the planet and for governments and business; there is potential for real cost savings from using IT sustainably.

To achieve a commercially-realistic advantage, organisations should consider more than just computing device efficiency. IT's contribution to an organisation's sustainability should not just look inward to the operation of the IT function but outward through the IT supply chain to the operation and use of technology across the whole business.

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

## Key business drivers

Regulatory frameworks are becoming more onerous. For example, in the UK, the Government's proposal for a Carbon Reduction Commitment will apply mandatory emissions trading to cut carbon emissions from companies not currently covered by either Climate Change Agreements (CCAs) or the EU Emissions Trading Scheme (EU ETS). It will target those large commercial and public sector organisations whose annual mandatory half hourly metered electricity use is above 6,000MWh.

Businesses will increasingly be subject to employee, shareholder and customer pressure to demonstrate their green commitments or face consumer backlash and even loss of investors.

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. Data-centre location 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 organisations, placing IT under pressure to change their technical architecture.

## Metrics and measurement

All organisations need to understand their sustainability performance and begin to measure, and set targets for improvements, including the IT function. Understanding the starting point or baseline is critical.

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



## Roles for IT in sustainability

IT has three distinct but complementary roles in helping to deliver corporate sustainability:

### Custodian:

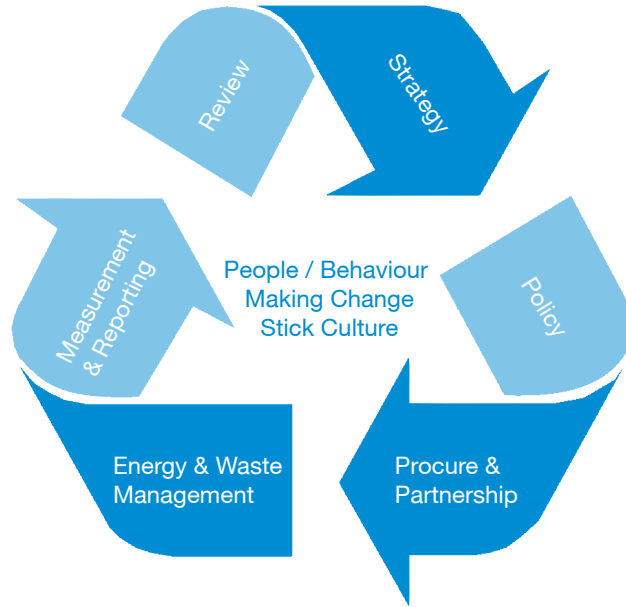
The CIO has responsibility for the environmental impact of providing IT services to the business. Not just for management of power and cooling, but also for influencing management of IT assets through their lifecycles from design and manufacture through procurement, use and final disposal.

### Enabler:

IT has a role in supporting the business by identifying, validating and delivering solutions and services which help reduce the business's impact on the environment.

### Reporter:

IT has a role in providing data and information on energy consumption and other sustainability metrics, to the rest of the business as part of the overall measurement, management and reporting of sustainability.



combine to force companies to track and report their impacts.

## 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 finding significant cost savings by enabling different ways of doing business and by supporting the way employees fulfil their duties.

Finding these opportunities requires an integrated, holistic approach which considers strategy, policy, procurement & partnerships, energy & waste management, reporting and putting in place a process for continual review. All this with an awareness of the environmental impacts of products and services from conception to completion.

**“95% of companies we surveyed currently have zero, low or uncertain confidence in their Greenhouse Gas emissions data” [2]**

Many businesses already have an effective and mature sustainability department. IT needs to work more closely with this function and take on wider responsibilities for sustainability in the business.

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

## Environmental IT strategy

IT professionals must plan and act now to

1. Develop an integrated, environmentally responsible IT plan encompassing the:
  - Measurement and monitoring of carbon emissions and abatement successes in and beyond IT
  - Incorporation of technology solutions into abatement plans
  - Forecasting of IT emissions and setting of reduction targets
  - Pricing of carbon into IT investment decisions to quantify exposure and minimise the potential for liability shocks
  - Development of ways to de-materialise IT and reduce waste.
2. Identify, validate and leverage new technology solutions to address sustainability across the business.

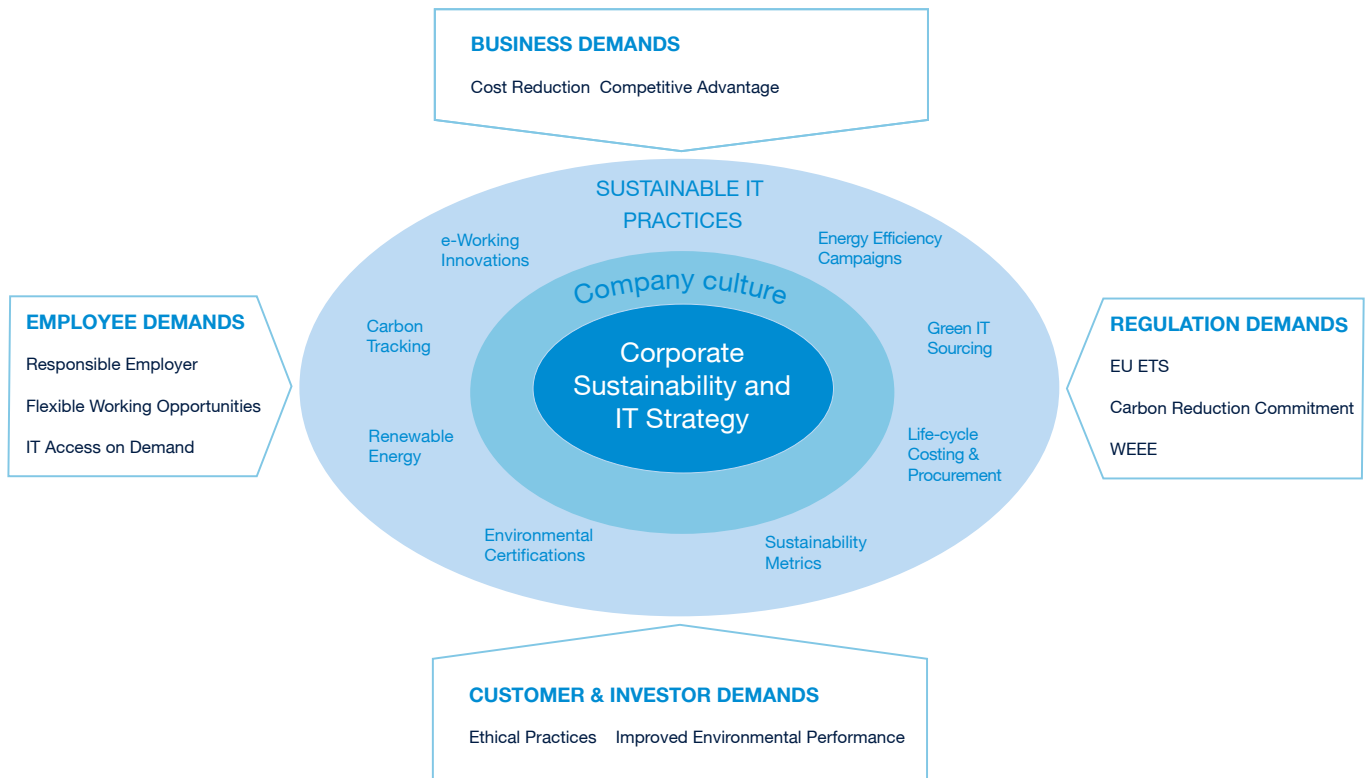
The alternative is to delay and accept the cost and constraints of the action imposed by governments, suppliers, customers and the rest of the organisation.

Reporting frameworks should cover measures against all roles for IT in sustainability, for example;

- Custodian—measures such as the power required to operate IT equipment using the industry guidelines already available [1]
- Enabler—measures could include the usage of telecommuting and videoconferencing, or perhaps usage of location sensitive technology to reduce delivery distances for shipments.
- Reporter—measures include the energy consumption across all IT facilities not just data centres.

Without metrics, progress cannot be measured and yet few organisations currently have insight into the true environmental impact of the use of technology in their organisations. Yet all the signs are that myriad stakeholder pressures will shortly

[1] '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)  
[2] PwC "Carbon Countdown" 2008.



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

### Why engage with PwC?

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

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 to 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 organisational changes needed to put your strategy in place.

### PwC service areas for IT and sustainability

- Green IT review methods and tools
- Strategy and policy development
- IT investment management
- IT governance risk and compliance
- Enterprise architecture
- Data and information services
- Environmental impact assessments
- Management reporting
- Corporate responsibility assurance
- Tax optimisation
- Regulatory compliance
- Environmental management and reporting

### Who do I contact to find out more?

Neil Eastwood  
Technology Consulting UK  
+44 7899 062 513  
neil.j.eastwood@uk.pwc.com

Phil Case  
Sustainability & Climate Change UK  
+44 207 212 4166  
Philip.v.case@uk.pwc.com

Grant Waterfall  
Technology Assurance UK  
+44 (0)7711 445396  
grant.waterfall@uk.pwc.com

Jonathan Hirst – Technology  
Consulting Canada  
+1 403 509 6608  
jonathan.p.hirst@ca.pwc.com

For a large print version of this document, please contact Laura Sloane,  
+44 (0)20 721 23261 laura.sloane@uk.pwc.com

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Design: PIC0800285 BG