

Butler Group ▶
a **Datamonitor** Company



Sustainable IT Provision

Meeting the Challenge of Corporate,
Social, and Environmental
Responsibility

December 2007

SECTION 1: Management Summary

► 1.1 MANAGEMENT SUMMARY

CATALYST

Corporate, Social, and Environmental Responsibility (CSER) is now a core competence, which IT management must incorporate into their strategy and operations.

ANALYSIS

KEY FINDINGS

- IT management has an opportunity to take the lead by being proactive in supporting the sustainability objectives of the organisation.
- When looking to improve sustainability in the data centre there are three main areas of focus – hardware, software, and buildings.
- An environmentally-friendly approach is a win/win for IT, creating a more effective operation and reducing costs.
- The four R's of reduce, reuse, recycle, and re-engineer should form the core of responsible IT provision.
- Measurement and monitoring are the first important steps to gaining transparency and an understanding of the environmental issues that need to be addressed.
- Whilst not given the highest of profiles in a Green agenda, effective asset management is a must.
- The adoption of consolidation and virtualisation will produce a more efficient and flexible IT operation.
- Power consumption is a very important consideration for the IT manager, as is the use of renewable energy.
- Service providers can supply established practises and expertise in data centre efficiency improvement.

Introduction

CSER has become a significant issue for every enterprise, and is particularly pertinent for IT management which must focus on supporting the requirements of the organisation in this area. The challenges of meeting these responsibilities have brought into sharp focus the need for IT to be more proactive, along with including the required capabilities into IT strategy and governance procedures. A more responsible agenda requires longer-term planning, and also brings new disciplines which potentially conflict with existing IT management goals.

There is a need for the IT manager to look beyond the 'Green' marketing hype of the vendors and get to grips with the environmental challenges being faced by the organisation and the IT industry. In the past, most organisations have paid little regard to the environmental aspects of the equipment they use, or the way resources are consumed. Now, sustainability issues are becoming an important consideration for IT.

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Business Issues

The business drivers for acting more responsibly are increasing each and every day – energy prices are rising, regulatory pressures are multiplying, stakeholders are demanding enterprises are more socially aware, and the popularity of ethical brands is growing. The Stern Report, written by Sir Nicholas Stern and published October 2006 in the UK, provides a compelling set of financial indicators for stemming climate change. It estimates that lack of action, together with corporate and political intransigence, is costing the global economy 15 times more than that needed to stabilise climate change.

New opportunities continue to emerge which enable organisations to work in a more environmentally-friendly way, such as the use of renewable energy. Innovative organisations can make the most of these openings to gain a leadership position ahead of the competition. Yet many enterprises are failing to act and have not yet recognised the fact that business-as-usual is no longer an option. IT management and the use of new technologies have a great opportunity to take a leading role in assisting the organisation in meeting these social expectations.

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One reason why IT departments have been slow to react is because IT management often does not have energy expenditure in their budget. Power costs are usually tied to the property portfolio, so energy savings do not translate directly to budget savings for IT. It is up to IT managers to interact with senior management and to raise awareness of the benefits that IT can bring, whilst also highlighting the importance of changing employees' behaviour.

Work is now *'what you do'* and no longer *'a place you go'*. Employees now require seamless connectivity in order to enable flexibility and reduce travel. In

the information age, access to data, knowledge, and know-how, from any location and at any time, is fundamental for the sustainable enterprise. An increasing proportion of the workforce are working from home or remotely on a regular basis, and so the need for the delivery of services and information in a secure and efficient manner is growing in importance.

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The cost of business travel continues to rise, and with it also the impact upon the environment of international journeys. As a result, organisations must now consider the impact of travel in terms of their carbon footprint, and so any opportunity to make reductions in this area, without damaging employee and customer relationships, is well worth considering.

CSER is making organisations be more proactive with all stakeholders, and incorporate environmental factors into strategy, along with corporate and IT governance procedures. It is important to take a holistic approach which encompasses not only equipment energy usage, but product, software, and building design. For example, during the procurement process, questions need

to be asked regarding the use of toxic chemicals within the products and during their manufacture, as well as ascertaining how recyclable the equipment and resources are.

Technology Issues

Over the last few decades IT has transformed the way that we work, where we are employed, and how we interact with each other. Furthermore, it has become a fundamental part of delivering business objectives and achieving competitive advantage. However, now it is time for IT to change itself, the tools, and the infrastructure to be more sustainable, and to do so quickly.

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There is increasing prominence being placed on the ability of IT deliverables to match organisational CSER objectives. Unfortunately, there still appears to be a lack of focus by IT management on understanding the organisation's main goals in this area. Without this, it is impossible to formulate an IT strategy that will meet the organisation's sustainability needs. To facilitate this IT must improve the flexibility and efficiency of operations, and measure performance related to environmental and social objectives.

Those taking an interest in environmental aspects of life may have already come across the mantra of the Three R's – Reduce, Reuse, and Recycle. Butler Group has added a fourth for the IT manager – Re-engineer – to encompass the approaches and technologies that need some investment in resources to bring to fruition but can be a significant factor in the IT department's contribution in this area.

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An obvious starting point for energy reduction is to ensure that all computer equipment is turned off when it is not being used, enabling power management capability, and having effective asset management where unused equipment is quickly decommissioned. In addition, all organisations should aim to dispose of old hardware responsibly by sending unwanted PC equipment to be reconditioned and recycled. Moreover, management should become familiar with the new and impending legislation in this area.

Clearly, any organisation's printing activities are an area that is likely to be suitable for investigation in terms of lowering environmental impact and possible reuse. Cheap printers have become ubiquitous in office environments, along with a combination of spiralling information volumes and the accessibility of printed output, have led to wasteful practices and needless paper use. The net effect on resources and the environment is highly detrimental, especially when combined with many organisations' lack of formal recycling practices.

The adoption of key re-engineering efforts can result in reduced energy consumption, significant efficiency benefits, and lower overheads.

Many data centres are bursting at the seams with hundreds of underutilised servers and storage systems, many of which are consuming the same amount of electricity as a fully-loaded server. The adoption of key re-engineering efforts, such as implementing an architectural approach, deploying hardware designed to use a Direct Current (DC) supply, and utilising fresh air cooling, as well as improving utilisation by investing in consolidation and virtualisation, can result in reduced energy consumption, significant efficiency benefits, and lower overheads. Although, sometimes we are guilty of focusing on the *effects* (such as improving cooling systems) rather than addressing the *root causes* by looking at things that actually reduce the amount of code processed in the first place (such as software design).

The increasing energy requirements of data storage can no longer be ignored by the IT manager. The growing amount of uncontrolled storage cannot be allowed to carry on indefinitely. This growing complexity and size of the storage environment also leads to poor performance, problems with back-up windows, extended recovery times, security issues, and administration costs spiralling out of control. The time has come to address the mounting disparity between storage management capability and the increasing number of storage devices and capacity.

The norm for most organisations' client deployments is still the dedicated PC running Microsoft Windows. However, the number of alternatives to this approach is expanding rapidly. Server-based computing is an application-delivery solution that enables thinner and less-power-hungry client machines to be considered. Another technology increasingly being deployed in the desktop environment is virtualisation. This computing model shifts the power consumption from the office into the data centre and, as a result, organisations see an overall reduction in energy bills.

Market Issues

The launching of various ecological initiatives, which measure environmental resource usage and provide proven practises, is further evidence that vendors (and others) are recognising the fact that these issues have hit the mainstream. It also reflects the need to embrace transparency and traceability to meet the demands of today's more discerning stakeholders.

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Unfortunately, many of the initiatives are focused solely on measuring and reducing the energy usage of IT equipment. Butler Group believes that in order to be effective there needs to be initiatives which encompass the three main areas of not just IT infrastructure, but also building and software design.

Organisations typically have insufficient expertise or resources to undertake all necessary, or potentially beneficial, elements of a programme to align with a sustainable strategy. The use of IT and business expertise, and computing assets, from service providers is therefore likely to be worth considering.

Two ways in which the IT industry can help to improve the situation are by enabling measurement of the success of programmes to reduce the exposure to climate change, and the contribution of organisational processes to responsible IT delivery; and by increasing the efficiency of IT operations, which comprise such an important part of the overall foundations for the organisation.

Both of these areas are potentially where organisational IT functions could not be expected to have a great deal of expertise. The use of services providers can be a shortcut that avoids the substantial investment and time delay involved in establishing such capabilities.

This Report reveals:

- The business drivers and issues providing a compelling reason to act now.
- Why being environmentally-friendly is beneficial for both IT and the enterprise.
- How to develop a sustainable IT strategy.
- Why IT must take the lead in being more responsible.
- The technologies and strategies that make a more efficient operation and save costs.
- Why energy consumption is an important area of focus for the IT manager.
- How using services can contribute to a sustainable approach.
- The industry and vendor initiatives that can help shape IT thinking.
- What other organisations are doing to comply with their responsibilities.

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Analysis without compromise

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