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Green IT: Barriers Versus Benefits

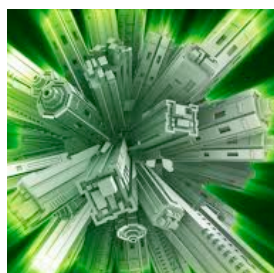
A holistic and objective assessment reveals that it is better to adopt green IT in the interest of several opportunities and benefits it offers to businesses, the society and our planet even if it is a burden. Smart companies are now implementing their green strategies to innovate, create value and build a competitive advantage. This is the second part of a two-part series.

June 10, 2013 by San Murugesan, Director, BRITE Professional Services

Part two of a two-part series...

While [part one](#) focused on the opportunities inherent in green practices that lead to reduced energy consumption and lower utility bills, part two identifies means of increasing green adoption in the face of barriers both perceived and real.

Green IT: Barriers Versus Benefits



While Green IT is a game changer in addressing environmental problems facing us and there is growing support for adoption of green initiatives, there are barriers – both perceived and real – to implementing green technologies and measures. But that doesn't mean we should abandon our green efforts; instead we should identify real barriers and address them to realize the benefits.

Table 1 highlights the major barriers as well as the benefits of greening IT. Often the cost of implementing green IT and other green initiatives is seen as major stumbling block. Though there will be capital cost associated with required additional hardware or software, replacing existing hardware with greener IT products or new software for IT-enabled green initiatives, over a period of time enterprises can see net savings. And the green initiatives could be carried out in a phased manner, initially focusing on low-hanging fruits that don't require major investments.

As highlighted earlier in the article, greening by IT might call for reengineering of business processes and practices, which in some instances, could be a major challenge that enterprise had to address holistically. Several studies reveal that reluctance to change as another key barrier. Stakeholder involvement and engagement with enterprise green initiatives from early on addressing their fears and convincing them on the need for going green will help to overcome or minimize this barrier.

Potential lack of alignment between Green IT and enterprise green initiatives is an issue as it wouldn't yield fuller benefits of green efforts. Business executives should, therefore, develop business, IT, and environmental sustainability (BITES) strategies for their business enterprises that are aligned with each other. This nexus is the key to the successful realization of their business goals and the fulfillment of their environmental and social responsibilities.

As briefly summarized in Table 1, benefits of judiciously implementing green IT initiatives are many, and the benefits have to be assessed in the business context. The adoption of green technologies and initiatives will be driven by a strong business case. Several case studies confirm the realization of several benefits. The energy and cost savings more than compensate for the upfront cost associated with the implementation of green IT as well as other burden. Businesses also need to look at green requirements from another viewpoint. The implications of not going green might cost a lot in the context of emerging stricter environmental regulations, stakeholder demands, competitiveness, brand or corporate image and social responsibility.



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In an interesting development, as a recent [HBR blog](#) highlights, a new study reveals sustainability is an increasingly important factor in attracting and managing talent. Employees also want to be involved in developing sustainability strategy. Half of younger employees, about one-fifth of older employees and three-quarters of enthusiasts expect to play a role in how their firms approach the topic.

Table 1. Green IT: Barriers and Benefits

	Barriers	Benefits
	Initial (capital) costs	✓ Reduction in power and resource consumption
	Challenge of reengineering processes and businesses practices; revising procedures	✓ Better resource utilization
	Reluctance to change – cultural and behavioral	✓ Improved operational efficiency;
	Lack of alignment between Green IT and enterprise green initiatives	✓ Reduced environmental impact and carbon footprint
	Lack of management drive and support	✓ Total (operational) cost savings
x	Need – and reluctance - to learn new skills	✓ Improved corporate image; doing corporate good
x	Lack of motivation among stakeholders	✓ Meeting compliance and regulatory requirements
x	Fear of loss of job or need for retraining	✓ Meeting sustainability demands of customers and employees

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Green Prospects

Though IT has to become greener, as the [Smart 2020](#) and [Smarter 2020](#) reports pointed out, ICT's largest influence will be in enabling energy efficiencies, minimizing resource consumption and reducing environmental impact in all other sectors and areas. New technologies and systems such as RFID (radiofrequency identification), Internet of Things, sensor networks, smart phones, ubiquitous computing, cloud computing, context-aware systems, environmental intelligence and smart systems present new opportunities to address resource (energy and water) consumption and improve environmental sustainability.

Green Action Agenda

Unsustainable environments make societies vulnerable, and can severely impact the future progress of the society – growth of the economy, business and societal well being. Sustainable innovation – innovation that is inspired by and built on a vision to cater to economical, environmental and societal needs (triple bottom line) – is one of the most meaningful and lasting contributions that we as individuals and businesses, supported by the government, can make. Future of our planet and the society is in our hands and what we do today to address environmental issues will not only shape our future but also our future generations.

IT professionals, educators, researchers, and businesses can make a difference by harnessing IT's power to create a sustainable environment for the benefit of current and future generations. Smart companies are adopting innovative environmental strategies to innovate, create value, and build a competitive advantage.

Enterprises and individuals can – and should – work both independently and collaboratively to accelerate the adoption of green IT and help speed the world's transition to a low-carbon economy. As Albert Einstein once said, "The significant problems we have cannot be solved at the same level of thinking with which we created them." To build a greener environment, you must modify or end many old and familiar ways of doing things and discover new methods.

Helpful Resources for Further Information

For a comprehensive overview on Green IT, refer to book chapter, "[Green IT: An Overview](#)," in the new book [Harnessing Green IT: Principles and Practices](#), San Murugesan and GR Gangadharan (Editors), Wiley-India and IEEE Computer Society, 2012 – free download.

For information on how IT could be harnessed in other key sectors to green their operations, refer to the report, [SMARTer 2020](#): The Role of ICT in Driving a Sustainable Future, Global e-Sustainability Initiative (GeSI), 2013.

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