

## Chapter 8.7

# Strategic Business Trends in the Context of Green ICT

**Keith Sherringham**  
*IMS Corp, Australia*

**Bhuvan Unhelkar**  
*University of Western Sydney & MethodScience, Australia*

### ABSTRACT

The adoption of Green ICT by business is far more than just the acquisition of low-carbon emitting solutions, green hardware and implementing software to switch-off computers in periods of inactivity. Although such changes are necessary actions, Green ICT is about a strategic business transformation in response to both markets and legislation because it is good for business. Such transformation requires a redefinition of business processes, a realignment of information exchange, integration of unified communication, and above all, changing the business model to align with

evolving business trends and market opportunities. Beyond the marketing benefits that accrue to a business from the use of Green ICT, the adoption of Green ICT allows businesses to lower costs and improve service delivery, while simultaneously addressing environmental footprint. Operational gains and market opportunities are the business drivers to overcome the incumbency of replacing utility infrastructure and the knowledge worker assembly line that ICT provides to business. This chapter discusses aspects of the strategic business transformation associated with the adoption of Green ICT within businesses, including the significance of information exchange for green business operations.

DOI: 10.4018/978-1-60960-472-1.ch807

## **INTRODUCTION**

Although environmental issues are assuming a stronger focus within the business decision making process (Stern 2005 and Garnaut 2008), the adoption of Green ICT by business is far more than the “low hanging fruits” of acquiring low-carbon emitting solutions, green hardware and implementing software to switch-off computers in periods of inactivity (Australian Computer Society 2007). Green ICT is about a strategic business transformation in response to both markets and legislation, requiring a redefinition of business processes, a realignment of information exchange, integration of unified communication and above all, changing the business model to align with evolving business trends and market opportunities.

For many businesses, ICT is a utility infrastructure and ICT is used and applied as an assembly line for knowledge worker (Sherringham 2005). To significantly change their environmental footprint, businesses need to address all of the issues around incumbency (e.g. time, scale, integration, cost, expectation), while supporting both existing and future requirements, e.g. accommodating carbon trading schemes.

For businesses to bring about a substantial change in their environmental footprints, a significant investment of time, money and resources is required because changes have to be accommodated within the needs of business as usual (allowing a business to survive) whilst adjusting to revised operations. For noticeable impacts upon environmental footprints to be seen, sizeable change in business processes and operations will often be required e.g. integration of information exchange to remove the need to share and transport paper across organisations (Sarantis 2002).

It is the ability to apply Green ICT solutions (Benson et al 2004) that lower costs or improve service delivery (yield Return on Investment), whilst reducing carbon footprint which will be the enabler of business. It is the strategic business

transformation from Green ICT that is discussed further in this chapter.

## **GREEN ICT WITHIN BUSINESS DRIVERS**

As discussed by Sherringham and Unhelkar (2008a), business responds to legislation, customers, market forces and costs (suppliers). Depending upon the nature of the business, the impact of changes in any of these areas can have major impacts on both the structure and dynamics of business.

Markets are often highly volatile and rapid response capabilities are the order of the day within business. Superimposed upon short-term markets are the longer-term trends that often require major business changes and restructuring to address. Therefore, Green ICT is set to play a key role in both the tactical short-term and in transforming businesses in the longer-term.

Customers often respond “in-the-now” (respond instantly and on an emotional basis) and bring significant influence to short-term actions within markets. The role of Green ICT for business in customer-terms lies in two key areas. Firstly the marketing power of green-credentials for a business (discussed earlier by Ginsbert and Bloom, 2004) and secondly as a tool for driving change to realise lower costs and improved customer service.

Though several elements impact the costs for business, it is the services from suppliers on both expenses and cost of goods that are of substantial impact on operations. When compared with customers, suppliers tend to be in a long-term relationship with a business. This relationship can offer opportunities to realise cost savings and improve services through the integration of systems. Green ICT can also be used as a tool for business optimisation and for lowering costs and improving service delivery through integration of

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:  
[www.igi-global.com/chapter/strategic-business-trends-context-green/51799](http://www.igi-global.com/chapter/strategic-business-trends-context-green/51799)

## Related Content

---

### Strategies for a Sustainable Enterprise

Michael Rosen, Tamar Krichevsky and Harsh Sharma (2011). *Handbook of Research on Green ICT: Technology, Business and Social Perspectives* (pp. 1-28).

[www.irma-international.org/chapter/strategies-sustainable-enterprise/48416](http://www.irma-international.org/chapter/strategies-sustainable-enterprise/48416)

### Performance Analysis of Target Information Recognition System for Agricultural Robots

Yun Ji, Rajeev Kumar, Daljeet Singh and Maninder Singh (2021). *International Journal of Agricultural and Environmental Information Systems* (pp. 49-60).

[www.irma-international.org/article/performance-analysis-of-target-information-recognition-system-for-agricultural-robots/275242](http://www.irma-international.org/article/performance-analysis-of-target-information-recognition-system-for-agricultural-robots/275242)

### Bioprocessing Requirements for Bioethanol: Sugarcane vs. Sugarcane Bagasse

Sophie Anderson and Pattanathu K.S.M. Rahman (2018). *Handbook of Research on Microbial Tools for Environmental Waste Management* (pp. 48-56).

[www.irma-international.org/chapter/bioprocessing-requirements-for-bioethanol/206523](http://www.irma-international.org/chapter/bioprocessing-requirements-for-bioethanol/206523)

### Role of Biotechnology in Bioremediation

Tapan Kumar Mohanta, Yugal Kishore Mohanta and Nibedita Mohanta (2015). *Handbook of Research on Uncovering New Methods for Ecosystem Management through Bioremediation* (pp. 399-432).

[www.irma-international.org/chapter/role-of-biotechnology-in-bioremediation/135104](http://www.irma-international.org/chapter/role-of-biotechnology-in-bioremediation/135104)

### Physical Principles of the Photovoltaic Energy Conversion: Temperature Dependences of PV Cell Parameters

Martin Libra and Vladislav Poulek (2018). *Handbook of Research on Renewable Energy and Electric Resources for Sustainable Rural Development* (pp. 327-351).

[www.irma-international.org/chapter/physical-principles-of-the-photovoltaic-energy-conversion/201344](http://www.irma-international.org/chapter/physical-principles-of-the-photovoltaic-energy-conversion/201344)