

Chapter 5

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.

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,

DOI: 10.4018/978-1-61692-834-6.ch005

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 operations, the electronic sharing of information and sharing common operational platforms.

Changes to government legislation are often infrequent, but when they do occur, the impact may be very significant, with considerable work in the areas of governance, audit, reporting and compliance regularly resulting. Given the timeframes involved around the implementation for and compliance with legislation, business is often faced with the need to implement tactical solutions to meet immediate needs, which may then become the incumbent or are replaced by longer-term solutions. Green ICT can be used to deliver both tactical solutions for businesses to

16 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/48420

Related Content

Sustainable Management of Agricultural Resources and the Need for Stakeholder Participation for the Developing of Appropriate Sustainability Indicators: The Case of Soil Quality

Konstantinos N. Baginetas (2011). *Agricultural and Environmental Informatics, Governance and Management: Emerging Research Applications* (pp. 227-261).

www.irma-international.org/chapter/sustainable-management-agricultural-resources-need/54411

Technical and Economical Feasibility of Biomass Use for Power Generation in Sicily

Antonio Messineo, Domenico Panno and Roberto Volpe (2012). *International Journal of Agricultural and Environmental Information Systems* (pp. 40-50).

www.irma-international.org/article/technical-economical-feasibility-biomass-use/62065

Processing and Visualizing Floating Car Data for Human-Centered Traffic and Environment Applications: A Transdisciplinary Approach

Patrick Volland and Hartmut Asche (2017). *International Journal of Agricultural and Environmental Information Systems* (pp. 32-49).

www.irma-international.org/article/processing-and-visualizing-floating-car-data-for-human-centered-traffic-and-environment-applications/179582

Data Mining Techniques in Agricultural and Environmental Sciences

Altannar Chinchuluun, Petros Xanthopoulos, Vera Tomaino and P.M. Pardalos (2010). *International Journal of Agricultural and Environmental Information Systems* (pp. 26-40).

www.irma-international.org/article/data-mining-techniques-agricultural-environmental/39026

Solid Waste Management in Cambodia

Ran Yagasa, Rithy Uch and Phalla Sam (2020). *Sustainable Waste Management Challenges in Developing Countries* (pp. 56-85).

www.irma-international.org/chapter/solid-waste-management-in-cambodia/240072