

## Chapter 17

# Collaboration as a Key Enabler for Small and Medium Enterprises (SME) Implementing Green ICT

**Ioakim (Makis) Marmaridis**  
*IMTG, Australia*

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

### ABSTRACT

*Global competitiveness through advances in ICT is giving SMEs abilities that up until a few years ago were inconceivable. Along with increased market reach and added impact SMEs also begin to feel the pressure of becoming more ecologically friendly. Therefore, they need to establish Green ICT practices within their businesses. While these practices are relatively better resourced in large businesses, SMEs find it rather challenging to implement Green ICT practice because of their size and amount of resources they can put behind such initiative. This chapter describes how collaboration can be used as a key enabler for SMEs adopting Green ICT for their operations. Green ICT improvements are presented in the context of people, process and technology framework and individual solutions are offered along with their benefits that SMEs can readily adopt and begin their transition towards Green ICT.*

### INTRODUCTION

Green computing is a widely adopted initiative of most large organisations (Murugesan, 2008) worldwide. There are substantial benefits, no doubt, from all these efforts at a social and economic level (InfoAge 2007; HBR, 2009). There is however an entire class of businesses known

as SMEs (Small and Medium Enterprises) who would benefit greatly from adopting Green ICT practices and at the same time are constraint in several ways from moving to this level of adoption.

This chapter builds on some previously published work in the area of SME technology diffusion and technical transformation capabilities (Marmaridis & Unhelkar, 2005; Marmaridis, 2004). The chapter discusses the drawbacks SMEs

DOI: 10.4018/978-1-61692-834-6.ch017

face in trying to adopt Green practices along each of the three ITIL dimensions of people, process, and technology and how collaborative practices can see them overcome these constraints. Finally the chapter closes with the presentation of a set of best practice steps for SMEs wishing to undergo transformation in their ICT operations and enable them to realize the benefits of becoming Green.

### **WHAT DRIVES SMES TOWARDS GREEN ICT?**

There are number of factors that drive a business to adopt and embrace green ICT initiatives. These initiators have been discussed in the past by Unhelkar and Dickens (2008). Four such specific initiators that propel an organisation to develop and implement an environmentally responsible strategy are the social and political pressure, rules and regulations, enlightened self-interest and a responsible collaborative business eco-system. These are discussed next *in the context of an SME*, as also shown in Figure 1:

- Social & political pressure: when there is pressure on an organisation from the society in which it exists, then the organisation is forced to consider environmental strategies. Social pressure can come in from the marketing department that wants to differentiate the products or services, the education system that enforces green values in the upcoming generation, or the political pressure from the electorate. However, such pressure is not legally binding, but relies on the ability of a collective opinion to enforce good corporate citizenship.
- Rules and regulations: Government environmental legislation that makes it legally mandatory for a company to implement environmental measures within their business operations further enforces the gen-

eration of environmentally responsible strategy.

- Enlightened self-interest: when an organisation, on its own accord, realizes the need to be environmentally responsible, and creates or adopts a green strategy. This initiator can also be cost driven or driven by the need to have brand recognition or even be driven by the need for business continuity
- Responsible Business Eco-System: when the entire eco-system of the industry and the environment in which an organisation exists, including its business partners, suppliers and customers are all creating and implementing green ICT initiatives; being part of such a business eco-system enforces an organisation to follow suit or be left out.

### **PEOPLE, PROCESS AND TECHNOLOGIES FOR SME'S GREEN ICT EFFORT**

Examining Green ICT initiatives under the standard ITIL framework of processes, technology

*Figure 1. Drivers for environmental responsibility in small and medium business (based on methodology from methscience.com)*



7 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/collaboration-key-enabler-small-medium/48432](http://www.igi-global.com/chapter/collaboration-key-enabler-small-medium/48432)

## Related Content

---

### Domain-Specific Modeling for a Crop Model Factory

Guillaume Barbier, Véronique Cucchi, François Pinet and David R. C. Hill (2013). *International Journal of Agricultural and Environmental Information Systems* (pp. 37-49).

[www.irma-international.org/article/domain-specific-modeling-crop-model/78157](http://www.irma-international.org/article/domain-specific-modeling-crop-model/78157)

### Revolution of Energy Storage System in Smart Grids

Jianhui Wong and Yun Seng Lim (2016). *Smart Grid as a Solution for Renewable and Efficient Energy* (pp. 181-206).

[www.irma-international.org/chapter/revolution-of-energy-storage-system-in-smart-grids/150320](http://www.irma-international.org/chapter/revolution-of-energy-storage-system-in-smart-grids/150320)

### Coping with Uncertainty and Risk

Costas P. Pappis (2011). *Climate Change, Supply Chain Management and Enterprise Adaptation: Implications of Global Warming on the Economy* (pp. 241-270).

[www.irma-international.org/chapter/coping-uncertainty-risk/46415](http://www.irma-international.org/chapter/coping-uncertainty-risk/46415)

### Demethylation of Arsenic and Nickel From Tannery Effluent

Shankar Mukund Rao Khade and Suresh Kumar Srivastava (2022). *Research Anthology on Emerging Techniques in Environmental Remediation* (pp. 508-516).

[www.irma-international.org/chapter/demethylation-of-arsenic-and-nickel-from-tannery-effluent/291253](http://www.irma-international.org/chapter/demethylation-of-arsenic-and-nickel-from-tannery-effluent/291253)

### The Enterprise in the 21st Century

Costas P. Pappis (2011). *Climate Change, Supply Chain Management and Enterprise Adaptation: Implications of Global Warming on the Economy* (pp. 1-29).

[www.irma-international.org/chapter/enterprise-21st-century/46408](http://www.irma-international.org/chapter/enterprise-21st-century/46408)