Chapter 5

Developing Environmentally Responsible Business Strategies: A Research Perspective

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ABSTRACT

This paper reports on a 3 year-long PhD level research study carried out by the author in the development of Environmentally Responsible Business Strategies (ERBS). Although ERBS has taken a long time to develop, it is maturing into an approach used by many organizations in practice. This paper reports on the major elements that form part of ERBS: the business architecture, Green policies, processes that create waste and emissions, enablement of efficient use of resources, metrics for monitoring the greening of the organization, and implementation of environmental strategies. The ERBS is made up of five phases: 1) Green Business architecture, 2) Green Process mapping, 3) Creation of organization specific ERBS, 4) Implement reengineered processes and employ ERBS, and 5) Improve continuously to monetize emissions. This paper further provides a review of environmental challenges and understanding of the contribution of computing to the environmental strategies of a business and its sustainable management.

INTRODUCTION

Organizations that aspire to become green incorporate environmentally responsible business strategies within their technological products, services and solutions. Stern (2006) has correctly identified and underscored the correlation between environment and economic stability and prosperity of business organization. The rapidly growing importance of environmental issues requires business enterprises to take immediate responsibilities for ‘green’ initiatives (Unhelkar & Dickens, 2008). This is because business enterprises have greater resource available to them as compared to rest of the society; also their activities have greater impact on the environment. There is a need to
Developing Environmentally Responsible Business Strategies

reengineer the business operations, process and services according to the environmental parameters because man made carbon emissions are a major contributing factors to global warming (Murugesan, 2008a). Enterprise, government and society at large now have an important new agenda: tackling environmental issues and adopting environmentally sound practices. Therefore, it makes business sense to embark on strategies and programs that will reduce greenhouse gas emissions (Unhelkar, 2010). The time to explore, investigate, and experiment with the existing and future technologies that can be used to dual advantage — business efficiency and carbon efficiency — was never as appropriate as it is today.

The links between the ICT and the business environmental outcomes are becoming clearer, but there is no specific conceptual framework for the business strategies and practices with environmental compliance (OCED, 2009). The IPCC report (IPCC, 2007) identified the positive role of ICT in business including both mitigation and adaptation. Monitoring (OCED, 2009), modeling, administration (IPCC, 2007) and dissemination can be important role of ICT in businesses to handle carbon emissions (ITU, 2007). This paper presents a comprehensive approach to develop Environmentally Responsible Business Strategies (ERBS). ERBS comprises green policies and procedures, green ICT itself, corresponding green systems and support, carbon management system, enterprise solutions and a roadmap for green enterprise transformation.

ENVIRONMENTALLY RESPONSIBLE BUSINESS ARCHITECTURE

The ICT services and products can enable smart development opportunities for carbon emission reduction in business as, “ICT examines more than just the technological system, or just the social system, or even the two side by side; in addition it investigates the phenomena that emerge when the two interact” (Lee, 2009). Unhelkar (2010) defined “Green ICT as the conscious implementation of technologies, techniques and policies designed to reduce the carbon footprint of the IT function within the organization and the use of IT to reduce the carbon footprint of the whole organization.”

The formation of ERBS in this paper is to bring to the attention of the policy makers and decision makers that ICT; in particular Green ICT has an important role to play in stimulating green business goals and promoting sustainable development (T-Systems International GmbH, 2009; Street, 2007). Green business transformation of the current business is possible only if it is known where the possible carbon emissions occur throughout the processes and products in various sectors of the business (Steer, 2007). Green ICT and its services present opportunities to deliver low carbon footprints and mitigate carbon emissions because of the unique ability to make energy consumption and GHG emissions visible through its products and services (Unhelkar & Trivedi, 2009a; Murugesan, 2008b) (discussed later in this paper).

With the purpose of understanding the contribution of Green ICT in environmental strategies of a business and its sustainable management, a research survey was designed by the author which includes understanding organizational and individual attitudes and policies towards Green ICT, wasteful and emissive processes, enablement of efficient use of organizational resources, metrics for monitoring and justification of the greening of the organization and implementation of environmental strategies in business (Stancich, 2009). For each Survey question, individual responses from different industries, countries were collected in year 2009 and 2010. 331 organizations were surveyed from small scale industries to large scale industries as well as private, public and government organizations. The surveyed organizations were mainly from India, Australia, UK, North
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