

Chapter 10

Green ICT Organizational Implementations and Workplace Relationships

Heemanshu Jain

London School of Economics (LSE), UK

ABSTRACT

This chapter discusses a Green IT implementation in an IT services company. Starting with a literature review on the current state of Green IT, this chapter develops the motivators for implementing a Green IT environment in an organization that is focused on services (as against products). While the data collection and analysis related to Green IT is limited in this research at its current stage, still the material discussed here follows a research approach. This discussion also contains invaluable suggestions on creation of green policies and procedures, their impact on people and processes and strategies for implementing them successfully.

INTRODUCTION

This chapter investigates and reports on the impact of Green ICT organizational implementations on workplace relationships in organizations. This work is based on the analysis of a Green ICT implementation in an IT services company. This discussion is important, particularly in the context of ICT as, according to a Gartner report on climate change, ICT accounts for 2% of total Green House Gas (GHG) emissions by businesses. Furthermore, this figure is likely to double by 2015 if the use

of ICT keeps on growing unabated. (based on Mingay and Pamlin, 2008). Rapid technology advances have contributed to this situation in ways more than we anticipated and we now see adverse effects of GHG such as global warming, increased pollution levels, harmful effects to the environment and depleting natural resources. This has raised an alarm in the ICT industry worldwide and an increasing number of organizations are implementing measures in order to reduce their carbon footprints.

Coupled with the self-awareness exhibited by many businesses, there are also pressures from governments, enforcement of legislations and

DOI: 10.4018/978-1-61692-834-6.ch010

mandatory regulatory compliances, customer demand for Green certifications and processes, competitor pressures of Green initiatives, Green marketing and branding, close inspection by various non-profit organizations, customer demands of transparency in production and other business processes, increasing demand of carbon emissions and audit reports by national and international bodies, rising energy costs and a growing need to effectively utilize ICT resources for cost optimization. These are some of the salient driving forces that have pushed organizations to implement Green ICT programs (Murugesan, 2008). This field is therefore receiving far more attention in recent times even amidst of an economic downturn as corporations invest into implementing Green infrastructure and practices to prepare themselves strategically for the future.

However, even with this increasing number of implementations, we find that the field of Information Systems (IS) research has not given enough emphasis on understanding how these initiatives can be successfully implemented within an organization. The effectiveness of Green ICT implementations, its organizational impact and the validity of claims made by organizations on carbon savings remain a puzzle even when organizations are spending millions on these implementations. The discussion in this chapter, therefore, takes an interpretive lead by analyzing organizational Green ICT implementations in an ICT services company. The aim is to create an understanding of how Green ICT implementations have changed work practices and work place relationships in the organization and derives pointers to successful Green ICT implementations in organizations.

This chapter is organized into following sections. The chapter starts with a literature review which demonstrates the importance of this research in practice. This literature review also provides current status of the industry with respect to the environment. A research question is then derived, which also presents a theory that was used to analyze the results. The subsequent sections detail

the research design and methodology that were used for the empirical study. The empirical results are discussed in the findings section followed by the analysis of the results using the theoretical framework. The research ends by presenting the limitations and scope of further research with a conclusion that suggests corrective action for practitioners.

REVIEW OF GREEN ICT LITERATURE

As per Murugesan (2008), organizations have embraced Green ICT programs to cut ICT costs, utilize the ICT resources to their maximum, save on power bills and to save the environment from the ill effects of ICT usage. Thus, organizations are now actively looking for optimized ICT solutions that have a lower carbon footprint (Mingay and Pamlin, 2008). This phenomenon of organizational ICT change for the environment is growing across several wide ranging industries and geographical regions. For example, the airline industry is just as interested in reducing its ICT carbon footprint as the banking and the transportation industry is.

A review of the literature shows that the field of Green ICT has been widely researched to understand the impacts on society and environment at large; the economic impacts of due to adverse climate change and the management models required within organizations to implement such initiatives. The specific organizational impact of these implementations have not been completely explored within the literature. With the green issues capturing attention of some IS researchers, some programs such as the Lowcarbonworks project at the University of Bath have started addressing the issues of technology adoption for a low carbon economy (Reason, 2009). Further room for exploration and adoption of Green ICT within organizations exists, particularly in relation to the impact of such adoption on the workplace.

21 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/green-ict-organizational-implementations-workplace/48425

Related Content

Hadoop Paradigm for Satellite Environmental Big Data Processing

Badr-Eddine Boudriki Semlali, Chaker El Amrani and Guadalupe Ortiz (2020). *International Journal of Agricultural and Environmental Information Systems* (pp. 23-47).

www.irma-international.org/article/hadoop-paradigm-for-satellite-environmental-big-data-processing/244146

Estimation of the Temperatures in an Experimental Infrared Heated Greenhouse Using Neural Network Models

Angeliki Kavga and Vassilis Kappatos (2013). *International Journal of Agricultural and Environmental Information Systems* (pp. 14-22).

www.irma-international.org/article/estimation-temperatures-experimental-infrared-heated/78155

Social Cooperation in Autonomous Agents to Avoid the Tragedy of the Commons

Shagun Akarsh, Avadh Kishor, Rajdeep Niyogi, Alfredo Milani and Paolo Mengoni (2017). *International Journal of Agricultural and Environmental Information Systems* (pp. 1-19).

www.irma-international.org/article/social-cooperation-in-autonomous-agents-to-avoid-the-tragedy-of-the-commons/179580

A Comparative Study of Deep Learning Models With Handcraft Features and Non-Handcraft Features for Automatic Plant Species Identification

Shamik Tiwari (2020). *International Journal of Agricultural and Environmental Information Systems* (pp. 44-57).

www.irma-international.org/article/a-comparative-study-of-deep-learning-models-with-handcraft-features-and-non-handcraft-features-for-automatic-plant-species-identification/249691

Current Approaches, Challenges, and Perspectives on Spatial OLAP for Agri-Environmental Analysis

Sandro Bimonte (2016). *International Journal of Agricultural and Environmental Information Systems* (pp. 32-49).

www.irma-international.org/article/current-approaches-challenges-and-perspectives-on-spatial-olap-for-agri-environmental-analysis/168500