UNIVERSITY OF NAIROBI

SCHOOL OF COMPUTING AND INFORMATICS

A FRAMEWORK FOR ADOPTING GREEN IT IN KENYAN ORGANIZATIONS: A CASE STUDY

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DECLARATION

I, Rufus Mburu Muchiri, do hereby declare that this research project is entirely my own work and where there's work or contributions of other individuals, it has been dully acknowledged. To the best of my knowledge, this research work has not been carried out before or previously presented to any other education institution in the world of similar purposes or forum.

Signature...................................   Date.....5|7|2011.............

Rufus Mburu Muchiri,

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I, Stephen Mburu, do hereby certify that this project has been presented for examination with my approval as the University of Nairobi Supervisor.

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ABSTRACT

Environmental issues are receiving unprecedented attention from businesses and governments around the world as the concern for climate change and sustainability continues to grow. The widespread use of information technology (IT) while improving our lives and work has also contributed significantly to the growing environmental problems. Computers and other IT infrastructure consume significant amounts of electricity, placing a heavy burden on our electric grids and contributing to greenhouse gas emissions. Additionally, IT hardware poses severe environmental problems both during its production and its disposal. Thus *greening* the IT sector where possible can reduce IT's environmental impact and help create a more sustainable environment.

While many organizations in the developed countries have increasingly initiated green IT practices aimed at reducing the IT's impact on the environment e.g. server virtualization and consolidation, desktop virtualization, existing server room upgrades, PC power management, printer consolidation and IT equipment recycling, such schemes have in general not reached many developing countries, particularly the ones with only a low level of awareness of this issue as is the case in Kenya. The adoption of green IT practices can support the three crucial aspects of an organization's sustainability i.e. economic, environmental, and social- the so called "triple bottom line".

In this research we investigated the frameworks and models that address the adoption of green IT and other related works and developed a more comprehensive framework for the adoption of green IT suitable for developing countries where there is low green IT knowledge and a lack of proper green IT regulatory framework.

To validate the framework, the research methodology employed in this research is a case study through questionnaires, and interviews. The study is conducted at the Kenya Power and Lighting Company Limited (KPLC) which is a utility organization responsible for the transmission, distribution and retail of electricity in Kenya.

The outcome of our research findings is a validated green IT adoption framework that can guide organizations seeking to take a proactive role to reduce their impact on our planet's environment through adoption of green IT initiatives.

Keywords: Green IT, Technology Adoption, Readiness