Chapter XL
Role of Mobile Technologies in an Environmentally Responsible Business Strategy

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ABSTRACT

This chapter aims to investigate and expand the role of mobile technologies in an Environmentally Responsible Business Strategy (ERBS). An ERBS with mobile technologies can help organizations achieve socially responsible goals of reducing green house emissions, reducing physical movement of men and materials, and recycling materials, to name a few. Organizations are electronically collaborating globally through the medium of the Internet and by employing service-oriented architectures. This electronic collaboration amongst large numbers of globally spread businesses creates a collaborative business "ecosystem" that is also virtual. Virtual collaborations between businesses create further challenges for environmentally responsible strategies as they make it difficult to identify the precise contributors to green house emissions and pollutions. This chapter delves deeper into the role of mobile technologies in creating and enhancing what can be considered as Environmental Intelligence (EI) – extending business intelligence with mobility for a "Green" enterprise.

INTRODUCTION

This chapter discusses the effect of mobility on a collaborative business ecosystem. Previously, before the advent of the Internet connectivity, business implied physical commercial transactions between entities that were in close proximity with each other. This business understanding was particularly true before the advent of the ability of the Internet-based services to enable electronic-commerce and, more recently, mobile commerce. Today, however, communication network structures and the corresponding concepts of business collaboration (Ghanbary and Unhelkar, 2009) are perceived as effective means to cope with the challenges of 21st century business transactions and growth. This business growth today is character-

ized as global and competitive (Gothlich, 2003). The globalization of business organizations is achieved by the communication revolution that is based on the use of computers, their peripherals (such as monitors, printers, storage devices) and strong, standardized and reliable networking and communications systems. Information and Communications Technologies (ICT) play a vital role in the development of any collaborative system. However, this phenomenal and ever increasing use of networks and computers also puts increasing demands on energy consumption. Computers and other IT infrastructure consume significant amounts of electrical energy, placing a heavy burden on the electric grid and contribute to greenhouse gas emissions. Greenhouse gas emission is creating an imbalance in our environmental equilibrium. In addition, computers pose severe environmental problems both during manufacture and at disposal. (Unhelkar and Dickens, 2008)

However, most studies related to green house gases and the strategies to reduce their emissions and effect on the environment are focused on the 'hardware' aspect of ICT. There is a significant need to study, understand and change the 'process' aspect of ICT in business. This process aspect of ICT in business comprises 'how' we use the people, processes and technologies of business which can reduce the carbon footprints. The need to persuade the business activities of an organization, including the way in which its people and technologies and employed and its processes are carried out from an eco-friendly viewpoint is vital. However, creation of such eco-friendly business processes can succeed only when it's a part of the overall environmentally responsible business strategy. Mobile communications integrated in the business strategy can help to attain an environmentally responsible strategy. Mobile devices require less power and generate less heat than full workstations or PC's , their cooling cost is also less than the PC's, so the company enjoys the benefits of powering a small unit,. Using mobile devices instead of conventional PCs would lower energy consumption by 51 percent and reduce CO2 emissions, concludes a recent study by the Fraunhofer Institute (www.windowsfordevices.com). Mobile capabilities not only can improve the style of the business by automating process and promoting more reliable connections but also will be a step ahead towards green environment. The business-specific applications can be developed for the mobile devices and solutions that target improvements in areas including email and Internet access, automation of paper-based processes, training and professional development, asset management, employee safety, inventory management, collaboration and security. This will result to an Environmentally Responsible Business Strategy (ERBS).

This chapter discusses and incorporates the use of mobility in the overall greenhouse gas emission, which is creating an imbalance in our environmental equilibrium of an organization.

SIGNIFICANT FACTORS IN THE CREATION AND IMPLEMENTATION OF AN ERBS

Mobility is increasingly playing a vital role in the development of environmentally intelligent (EI) systems. Mobility helps to strengthen the social as well as business relations and also have positive environmental aspects.

Mobility infrastructure planning is an increasingly crucial aspect of environmental planning, essential to boost regional economies and social relations, as well as critical for environmental impacts involved. Structuring inherently complex issues and problems is a major challenge of mobility planning. Today, therefore, a major issue is the setting up of system architectures that take into account the impacts of the mobility system on environmental and social quality (Borri, Camarda and Liddo, 2005). Mobile devices and their applications are no longer a mystery for any one. Now a days the corporate world believes in virtual or mobile employment strategy where workers need not be present at the company offices. The employees have an access to the crucial business intelligent information system and according the authorities analyze, plan the finance and make strategies.

Dial up connectivity and wireless access have empowered most (Business Intelligence) BI users to access, analyze, and share information if they are sitting at their desks or to access data from their home.

The need of the business community for mobile Business intelligence is obvious, and if business personnel are not physically moving from one place to another and are not using any vehicle then we can say that network mobility is a one successful step in going green. Mobile business intelligence plays a vital role to attain an ERBS as location independently strategic business objectives can be met without any physical movement. Therefore, ICT must have its own set of mobile BI capabilities to maintain and sustain the