

Chapter X

Mobile Strategy for E-Business Solution

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ABSTRACT

It is becoming evident that mobile technology can enhance a current e-business system to provide competitive advantage in business activities. These enhancements in mobile device applications such as in mobile hotel check-in system, m-payment system for parking tickets, and mobile donor transplant system are evolving with usage of wireless technology such as Wi-Fi, Bluetooth, and WiMax (Worldwide Interoperability for Microwave Access). Other examples include wearable mobile technologies used in military observation tactics and civilian clothing accessories for entertainment purposes. The lack of current mobile strategies, can cause some businesses to over spend or under utilize potential mobile applications. The use of a mobile strategic framework will help provide the insights to improving companies in their commercial operations and examples of these mobile solutions are outlined in relation to commercial applications which have been implemented in hospitals, retail Supply Chain Management (SCM), and in Customer Relationship Management (CRM). These types of systems are known to improve quality of service and provide competitive advantage. A mobile framework is presented to introduce the application of user mobility to mobile usage as an extension of existing Intranet, Extranet, and Internet e-business application. This Mobile Business Application Framework could assist practitioners in identifying the financial and competitive aspects in relation to mobile technology applications into their business infrastructure.

INTRODUCTION

Mobility has become a key factor in Information Technology (IT) strategy (Savvas, 2007). The literature indicates that the use of mobile devices can assist the communication networks in business activities, such as Supply Chain Management (SCM), parcel tracking

and Customer Relation Management (CRM) (UPS, 2005). Mobile Commerce (m-Commerce) operates where mobile devices facilitate business operations that enhance and improve commercial activities (Varshney and Vetter, 2002). In commercial organisations, mobile devices such as Personal Digital Assistant (PDA) phones can help business users to organise their daily

activities such as taking notes, arranging appointments, storing contacts phones numbers, receiving emails and surfing the internet, from a single mobile device (Jervanpaa, 2006). Stockbrokers can receive critical information on their PDAs such as changes in financial stocks and shares at anytime and also access financial documents and make amendments with the use of built in word processing applications.

Short Messaging Services (SMS) is another mobile solution making mobile payments or m-Payments (Serbedzija et al, 2005). In Croatia, parking in the city can be difficult as parking areas can be on either side of the road, or one large central lot located far from the drivers destination, the hassle of walking to 'top up' a parking meter and then walking back to the destination can be tedious. The driver receives an SMS acknowledgement text to indicate the expiration time of the parking meter and can then choose to return to the vehicle or extend the parking meter by replying to the SMS text (Serbedzija, 2005).

Addenbrooke's Hospital in Cambridge, highly regarded for the success of kidney operations in the last few years is utilising Blackberry's mobile phone application to wirelessly connect to the hospital's centralised database to keep track of available organ donors. The use of mobile devices allows surgeons and doctors to make on the spot decisions as they track available donors that match with the patient's profile. An indirect application of using these mobile phones in this situation can also be used to assist emergency crews in applying first aid. In the event of an accident, by taking images of any unusual wounds and forwarding them to a specialists, a remote doctor can advise the ambulance crew to apply appropriate first aid to the victim (British Red Cross, 2004). The agility and mobility of using these mobile devices can prove advantageous to commercial operations (Harrington, 2006), especially e-commerce applications. The increased demand of mobile devices is due to the improvements of wireless technology that has allowed managers to select from a wide variety of mobile technology to apply to their business. The use of m-commerce can provide both competitive advantage and modern image to the business. However, there are risks associated with it, such as the cost of development, security issues relating to viruses and privacy policies. It is imperative that the business should analyse the type of mobile devices which can best enhance their business activity (Varshney and Vetter, 2002). The use of strategic IT frameworks could be used for assessing mobile business application to aid business practitioners in decision making.

A combination in the use of mobile applications and e-business can offer competitive advantage by creating new platforms to reach global markets (Farhoomand, 2003). The e-business services allow business companies to reduce costs and increase revenue from distribution. Increased online sales and the use of mobile devices can enhance mobile business activities. Mobile applications are currently being used in warehousing, Small and Medium Enterprise (SME) and Customer Relationship Management (CRM) systems that allow tracking of parcels etc. These types of mobile devices suit the business needs and activities of the companies concerned. This principle of distribution and transaction can be adapted for e-government or e-society applications. In these cases information can be distributed electronically similar to the e-society i2010, which the European Commission is developing for a European Information Society that promotes growth and jobs in the EU (Hines, 2007). John Hopkins Hospitals has implemented mobile applications to assists in their medical activities, such as e-prescriptions. This implementation saves the hospitals \$1,000 per day by providing the pharmaceutical information and the medicine that the patient needs (Brian, 2006). The use of data retrieval through a mobile device can be similarly used in warehousing; Wal-Mart stocks can be identified using Radio Frequency Identification (RFID) tags read from a special mobile RFID reader (Sliwa, 2006). Nissan automobiles have a similar approach with CRM activities that allow the salesperson to answer customer queries on the spot (Greengard, 2006).

There are two types of mobile data retrieval technologies, which are classified as web-enabled and standalone. The Web-enabled architecture involves mobile devices to send and retrieve information from a centralised database. With the standalone database, the data are distributed and stored on the mobile devices. The database can share the data among mobile devices, but the original data remain in the mobile device for example using PDAs for collecting questionnaire data. The type of wireless technology used, such as Wireless Local Area Network (WLAN), Wifi, Bluetooth and WiMax, will also affect the type of mobile application that a company can apply in their business activities. The most popular ones are Bluetooth and Wi-fi connections which are simple and less expensive to use. Japanese Wagamama restaurant chains in the UK (Terry, 2006) apply this type of mobile devices. Wi-fi applications are more technically diverse as they can support both Personal Digital Assistants (PDA) and

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