ICT Considerations for a Municipality in South Africa

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INTRODUCTION

The availability of publicly accessible Internet networks and services are the first prerequisite in ensuring that all citizens and nations can benefit from information on the World Wide Web (UNESCO, 2003). Information and communication technologies (ICT) are playing an increasingly important role in the daily lives of citizens, revolutionising work and leisure and changing the rules of doing business. ICT encompass all technologies that facilitate the processing and transfer of information and communication services (United Nations, 2002). In the realm of government, ICT applications are promising to enhance the delivery of public goods and services to citizens not only by improving the process and management of government but also by redefining the traditional concepts of citizenship and democracy (Pascual, 2003). The spread of ICT brings hope that governments can transform (Pacific Council on International Policy, 2002).

This article is organised as follows:

- Background to the research is given
- ICT adoption in the eThekwini Municipality in South Africa is described
- The research goals, method, data gathering, and results are discussed
- Management implications towards implementing a successful e-government strategy are given
- Future trends are then suggested and a conclusion is given

BACKGROUND

Electronic service delivery (ESD) is a method of delivering services and conducting business with customers, suppliers, and stakeholders to achieve local government developmental goals of improved customer service and business efficiency. The eThekwini Municipality in South Africa sees the e-government strategy (Ethekwini Municipality Integrated Development Plan 2003-2007, 2003) and its Web site at URL http://www.durban.gov.za as important management tools for improved citizen service delivery and communications. The ultimate objectives of this Web site are to make most of Durban's over-the-counter services available online, assisting people to find a wide range of information about local governance online and marketing the city to tourists and business people (eThekwini Municipality Portfolio of Sustainability Best Practice, 2004).

An editorial in the *South African Business Day* on August 26, 2003 reports that the City of Durban on the east coast of South Africa in the eThekwini Municipality Area (EMA), is quietly installing one of the largest networks in the country to link up scores of municipal centres all over greater Durban. The more technologically savvy can already access a wealth of city information via the Internet, by browsing the Web site either from home personal computers (PCs) or an increasing number of Web-linked computers at municipal libraries. The editorial states that Durban "is also pumping tens of millions of rands into promoting the local technology sector." It is against this background that research was conducted to glean a clearer understanding of the implication of ICT for e-government adoption in the EMA.

ICT ADOPTION IN THE eTHEKWINI MUNCIPALITY AREA (EMA) OF SOUTH AFRICA

eThekwini Municipality's population is 3.9 million citizens (Statistics South Africa, 2001). The population is an amalgamation of racial and cultural diversity. The black African community is comprised of 68.3%, coloured citizens 2.8%, Asian citizens 19.9% and white citizens 9% (Statistics South Africa, 2001). Thirty-eight percent of the population is under 19 years of age (Ethekwini Municipality Integrated Development Plan 2003-2007, 2003). Ethekwini Municipality has a capital budget of ZAR2.70

billion (approximately U.S. $0.40 billion) and an operating budget of ZAR9.64 billion (approximately U.S. $1.45 billion) for the 2005/6 financial year—visit URL http://www.durban.gov.za. Durban is South Africa's major port and the second largest industrial hub after Johannesburg. The EMA's gross geographic product income is ZAR25,529 (approximately U.S. $3,838) per person, per annum which is higher than the South African average of ZAR17,756 (approximately U.S. $2,670) per person, per annum.

Erwin and Averweg (2003) report that there is a need for organisations to adapt to constantly changing business conditions. The Ethekwini Municipality: Quality of Life Household Survey 2002/2003 (2003) reveals the needs and problems impacting the quality of life of EMA citizens. Some issues raised include new housing requirements, water and sanitation supply and lack of recreation facilities (Ethekwini Municipal Area Development Profile, 2002). This survey reveals that there is also a growing need for information in the EMA. Among the solutions to fulfil this need, ICT is seen as an effective mechanism to access municipal information in particular and development information in general. As reflected in the "Results and Discussion" section in this article, most EMA citizens receive municipal information via a municipal magazine (*MetroBeat* publication which is published monthly by the Communications Department, eThekwini Municipality) delivered to their post box. However, from the authors' survey, EMA citizens indicate that they would like to receive information via the electronic information exchange mechanism in the form of the Internet.

There is a growing number of EMA citizens accessing the eThekwini Municipality Web site through other initiatives (e.g., Carnegie E-Community project aims to improve the quality of life of municipal citizens and access to information by placing computers in municipal libraries). South African Web sites, which seek a local and global reach, have to cater for the digital divide which exists between the technological "haves" and "have nots" (Averweg, Barraclough, & Spencer, 2003). The mere existence of gaps in levels of ICT practices between rich and poor across and within countries is not an automatic reason to argue that ICT should be placed near the top of the development agenda (Manyanga, 2002). In looking at the difference in access between developed and developing countries, Gumucio-Dagron (2003) notes that the "divide has never been only a 'digital' or technological divide. It is a social, economic, and political fracture." The authors suggest that a comparable situation exists (in microcosm form) in the EMA. Bridging the digital divide in the EMA is not the end in itself. It is not even the beginning of the end. The authors suggest that perhaps it is the end of the beginning to bring positive changes in the development of a municipal information society.

E-Government and E-Governance

E-government is about transformation that helps citizens and businesses find new opportunities in the world's knowledge economy (Pacific Council on International Policy, 2002). Governments have not been immune to the impact ICT have in society (Rivera-Sanchez & Sriramesh, 2003). Governments that define e-government as simply moving services online "miss larger opportunities which [will] determine competitive advantage in the long run" (Caldow, 2002). Definitions of e-government range from "the use of information technology (IT) to free movement of information to overcome the physical bounds of traditional paper and physical based systems" to "the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees" (Deloitte & Touche, 2003). Ultimately, e-government aims to enhance access to and delivery of government services to benefit citizens (Pascual, 2003). E-government needs to find a positive developmental role. Without this, e-government runs the risk of being a 21st century "rusting tractor," cast aside as it fails to fulfil its promise (Heeks, 2003). E-government services focus on four main customers: citizens, the business community, government employees, and government agencies. The focus of this article is on citizens in the (local government) EMA.

E-governance refers to a local government's inventiveness to electronically govern areas under its jurisdiction (Manyanga, 2002). This effectively means the public sector's use of innovative ICT (e.g., Internet) to deliver to all citizens improved services, reliable information, and greater knowledge in order to facilitate access to the governing process and encourage deeper citizen participation.

Research Goals

ICT can be defined as electronic means of capturing, processing, storing, and communicating information (Heeks, 1999). E-readiness can be defined in terms of availability of ICT infrastructure, the accessibility of ICT to the general population and the effect of the legal and regulatory framework on ICT use (Manyanga, 2002). In building a model of ICT, two separate elements exist: the technology itself and the information on which it operates. Heeks (1999) suggests that in order to make this model useful, two further processes should be added: processes of purposeful activity and the people to undertake those processes. Together these constitute an "information system," such as a support system that helps citizens interact with their local municipality. The authors suggest that the harmonious development of a