Chapter 7
The Promise and Potential of Streaming Media Technology

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ABSTRACT

Information is a valuable commodity, but only if it is shared. Through diversified technologies, the dissemination of information has been made possible for a number of government organizations around the world, but for some, developing efficient and effective e-government systems poses a variety of unique challenges. Key demographic and economic variables, such as income, education, language, human resources and lack of appropriate products and robust regulatory frameworks for information and communication technologies (ICTs) drive the policy questions surrounding electronic commerce in government operations. These variables are important because they are the most likely to have a differential impact on the consequences of delivering new and progressive ICTs to various segments in developing countries. Described and discussed are the advantages and limitations of streaming media technology, a form of new ICT, and the comparative benefits it has in both developing and developed countries. Indian and Northern Affairs Canada (INAC) serves as a point of reference, as for the role and impact ICT-specifically streaming media–can play-within a government sector. With limited resources, INAC, a Canadian federal government department, has improved access to information and enhanced communication by successfully executing streaming media technology in-house. The implementation of streaming media technology at INAC has resulted in a fundamental transformation in the nature of information and communication exchange within the organization.

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INTRODUCTION

Governments throughout the world are taking on new roles and responsibilities. With increasingly challenging mandates, governments at all levels require better access to information and the ability to disseminate their decisions and policies to citizens.

The potential of e-government as a development tool hinges upon three prerequisites - a minimum threshold level of technological infrastructure, human capital and e-connectivity - for all. E-government readiness strategies and programmes will be able to be effective and "include all" people only if, at the very minimum, all have functional literacy and education, which includes knowledge of computer and Internet use; all are connected to a computer; and all have access to the Internet. The primary challenge of e-government for development therefore, is how to accomplish this. (UN World Public Sector Report 2003: E-Government at the Crossroads, 2003).

The Canadian government strives to be accessible and scores highly internationally in its approach to e-government. Much of this has been made possible by developments in ICT, such as the Internet and mobile devices. ICTs open up vast possibilities for improving dialogue between government authorities and the populations they serve. As a result of the collective efforts of dozens of government departments and agencies in Canada, 130 of the most commonly used Canadian federal government services are online and can be accessed through the federal portal. With almost 600 million interactions between citizens and the federal government in 2004 – compared to 150 million in 2001 – e-government is now a key channel for the delivery of public services in Canada and represents almost a third of the total number of transactions (Petrov, 2005).

Indeed, the introduction of streaming media technology was expected to do no less than virtually transform the information society at INAC. The ability to access points of interest by way of audio and/or video over the Internet and/or Intranet in real-time (live webcast) or pre-recorded content (on-demand webcast) was an exciting communications distribution method for the department to undertake. What used to be a "nice to have" technology when it was initially implemented has evolved to become a delivery mechanism INAC often relies on to interact with clients both internally and externally (i.e., INAC employees, other government departments, Aboriginals, academics, historians, journalists, teachers, students, children, etc.). Important messages, seminars, panel discussions, conferences and online learning tutorials are a few of the more popular events/initiatives which are webcast. However, it's not enough to simply deploy streaming media hardware applications within the organization – in order to ensure quality delivery and a scalable solution that will support future growth, proper testing and infrastructure assessment strategies are essential (Rayburn, 2005). The process of implementing this type of technology also involves improving co-ordination and collaboration, clarifying roles and responsibilities and ensuring that the necessary skills and tools are available. Finally, streaming media services should be evaluated regularly over time using both a technological and value added approach.

BACKGROUND

Information Communication Technologies (ICTs)

Each day, new technologies impact an increasing number of citizens around the world. An imperative of development today is the deployment of ICTs for the attainment of economic advancement and social cohesion. ICT is any technology that

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