



Chapter II

Building Infrastructure for SME Adoption of E-Business: The Canadian Experience

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ABSTRACT

Challenged to increase the country's productivity, the Canadian government issued a 10-year innovation strategy agenda in January 2001. Canada's innovation strategy identifies goals, targets, and government priorities in four key areas: knowledge performance, skills, innovation environment, and community clusters. Complementing the government's agenda, Porter (2002) similarly recommends that businesses in Canada: "(1) collaborate with competitors/government to create specialized infrastructure and education, (2) invest in cluster development, (3) serve sophisticated and global markets with demanding customers, and create unique products/services, and (4) encourage local suppliers to meet global standards."

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The Canadian government has explicitly stated that e-business is part of its innovation strategy (Innovation, 2001). Here we describe a model to guide governments in building infrastructure for a knowledge-based economy. Using specific Canadian initiatives, we will make an empirical case to illustrate the model that countries around the world can use to facilitate SME e-business adoption.

INFRASTRUCTURE MODEL FOR GOVERNMENT SUPPORT FOR E-BUSINESS READINESS

A major government role is the building and maintaining of infrastructure, be it for physical transportation, energy, waste and water, or information highways. Technological advances, and new emphases on particular values, have often made existing infrastructure inadequate. In some instances, connection of existing infrastructure components is a problem. In other cases, some core infrastructure pieces must be built from scratch. For the purpose of e-business enabling their SMEs, governments around the world must build support infrastructure. Since a significant percentage of economic growth in most countries comes from the small and medium-sized enterprise (SME) sector, it makes sense for governments to focus on creating relative advantage for these firms. In Canada, 60% of economic output comes from the SME sector, which is also responsible for 80% of national employment, and offers 85% of new jobs (INSEAD, 2002).

We need a working definition of the term infrastructure before we introduce the different areas of infrastructure that is essential to e-business. We adopted Slootweg and Verhoef's (1999) definition of infrastructure, and modified it to include assets such as workforce, and skills. In e-business, physical facilities include physical network backbones, databases, and hardware/software.

"An infrastructure is a large-scale technological system, consisting of physical facilities and knowledge assets, and delivering (an) essential public or private service(s) through the storage, conversion and/or transportation of certain commodities/ services. The infrastructure includes those parts and subsystems necessary for fulfilling the primary storage, transportation and/ or conversion function(s) as well as those supporting a proper execution of the primary function(s)."

A knowledge and innovation-based economy is the desired outcome of effectively building the following six components' infrastructures and processes. Each component has associated process inputs and outputs, as infrastructure is

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