Wireless Communications

Canada's success in wireless communications has been driven by excellence in all parts of the wireless value chain, from infrastructure to data-centric devices to software and application development. Canada's wireless carriers invest more than $1 billion in mobile phone communications infrastructure each year. With rapidly growing wireless penetration, the industry has been enjoying an annual growth rate three times that of any other telecommunications sector.

The Inukshuk Wireless broadband network is currently available in 170 communities across Canada. Built in conjunction with Bell Canada and Rogers Communications, the Inukshuk Wireless network is one of the largest of its kind in the world. This next-generation IP wireless network, based on pre-WiMAX standards, enables portable megabit services, allowing subscribers in rural and northern communities to access the Internet and other applications such as VoIP, video streaming and a variety of data applications.

[1] Department of Foreign Affairs and International Trade. <http://investincanada.gc.ca/eng/publications/wireless-canada.aspx>. Downloaded March 25, 2010.

DEMAND FOR NEW APPLICATIONS and data-centric wireless technology continues to grow rapidly around the world. In Canada, emerging wireless applications are regularly used in sectors such as health (for mobile heart rate monitoring and remote patient support, for example), transportation (for mobile worker and fleet management, cross-border tracking of containers, mobile vehicle and assets tracking), and finance (for ATM machines).

At the forefront of innovative wireless technologies and applications, Canada is home to a quarter of North America's fastest-growing wireless companies, according to the Deloitte Technology Fast 50™.[1] It has also attracted major international players that have established operations in wireless industry clusters across the country.

Network Infrastructure Equipment and Services

As the lines between wireline and wireless connectivity blur in a 4G world, vast amounts of information and computing resources will be demanded by consumers, anytime and anywhere. More network infrastructure will be needed to handle these tasks. Canada is an important destination for global network infrastructure providers wanting to undertake core R&D activities here. Multinational investors such as **Alcatel-Lucent**, **LM Ericsson**, **Nokia Corporation** and **Nokia Siemens Networks** have established operations in major wireless clusters across Canada, including Toronto, Montréal, and Vancouver. These investors benefit from the availability of highly skilled technology workers,
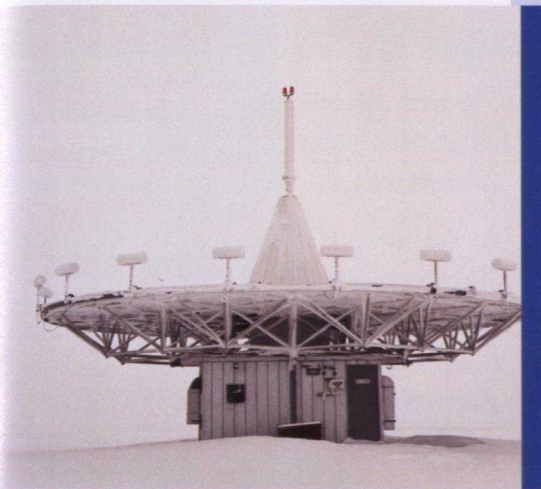
Canada's expansive clusters of high-tech companies, advanced educational institutions and R&D tax incentives that are among the most lucrative in industrialized countries.

Research undertaken in the wireless sector in Canada has had a tremendous impact on the global network infrastructure market. Canada has been a hotbed of R&D in Long Term Evolution (LTE) technology, with research in this area being done in Canada by **Alcatel-Lucent**, **Ericsson**, and **QNX Software Systems,** among other companies. As well, global network infrastructure providers undertake core R&D work in Canada. For example, Ericsson's Canadian operations fulfill worldwide mandates in the development, testing, and support of wireless networks, advanced end-user multimedia services, and subscriber management software used in its network routing products.

Mobile Devices Ecosystem

Data-centric mobile devices have a strong ecosystem in Canada. Taking the world by storm, the wildly popular BlackBerry® is a mobile device developed by Waterloo's **Research in Motion Ltd. (RIM)**. With this superstar product, RIM holds a significant share of the global smartphone market and was ranked the #1 fastest-growing company in the world in 2009 by *Fortune* magazine.

Supporting the mobile devices ecosystem in Canada are global companies engaged in innovative R&D in almost all aspects of the mobile-devices value chain. For example, **Autodesk Inc.** undertakes core