

ITAC ACTI

Canada's network infrastructure: connecting us, coast to coast to coast

ITAC, the voice of Canada's information and communication technology industry, is a prominent advocate for the strategic use of technology to expand innovative capacity and drive stronger productivity across all sectors of the Canadian economy. This is founded on our conviction that the products and services developed by our industry are enablers of prosperity, innovation, equality and excellence in all dimensions of modern life.

Canada is a networked nation

Canada encompasses a vast territory with a low population density, so by force of geography is a networked nation. Canadians have been early adopters of all forms of modern communication and have always been at or near the top globally in the use of advanced broadband networks. The network infrastructure sector that serves us – citizens, businesses, governments – is a significant part of Canada's economy, but of broader importance is its role in underpinning the ICT industry as a whole as the key driver of productivity in a modern economy.

Underpinning modern society

By 2011, virtually all Canadian households had access to broadband internet services, and 72% of Canadians had access to four separate broadband platforms.

Whether wired or wireless, Wi-max or satellite, Canada's network infrastructure is the nervous system of the nation. It conveys the crucial information that keeps us going and supports the data and internet environment upon which so much of modern commerce and social interaction are carried. Without the networks that knit them together, the millions of sophisticated and useful applications that we now rely on would be technologically impressive but largely useless tiny islands of silicon and code.

It is our networks that allow Canadians to surf the internet and connect with each other by email. It is our networks that allow us to take advantage of e-health, e-commerce, e-government, online banking and online education. And it is our networks that enable the machine-to-machine communication that lies behind so much of what we now call 'smart' – smart grid, smart transportation and smart buildings.

Investing in efficiency and stability

Canada's network infrastructure is often taken for granted – as are the companies that provide it.

This is partly due to the 'sexiness' of the applications that ride on top, but mostly because of the efficiency and stability of the infrastructure.

Canada's network infrastructure companies work hard to ensure that Canadians are provided with the world-leading networks they need and demand. The scale of their investment is astounding: in total, \$10 billion annually in capital expenditures and another \$1 billion annually in R&D expenditures.

Securing the network infrastructure

The rollout of broadband must be accompanied by a commensurate focus on security. While network infrastructure companies would prefer to see their enormous investment spent solely on providing enhanced communication services to customers, they increasingly find themselves investing sizable sums on securing their networks.

As internet usage has increased dramatically, so has the number of intrusions – and even full-blown attacks – from organised hackers, organised crime and rogue states that must be fended off and remedied. Beyond that, there are the totally unwanted packets of malicious, socially malignant or technologically dangerous code that must be removed from circulation.

While there are solid business reasons for undertaking such efforts, there is also a growing regulatory burden on network infrastructure companies. Government increasingly looks to them to police matters such as email spam, unwanted marketing telephone calls, copyright infractions and child pornography, and also to provide law-enforcement and national-security agencies with enhanced abilities to intercept email and browser traffic. This burden is not just regulatory: the cost to the companies is considerable, and is expected to grow significantly.

Reaping the benefits of greater connectivity

The availability of affordable broadband throughout the country has been a crucial factor in Canada's ability to take advantage of the benefits of greater connectivity – including enhanced access to government services, healthcare, education, etc. Canada's network infrastructure companies work relentlessly to complete the rollout of broadband to all Canadians across the country, while at the same time upgrading existing networks to provide higher capacity and speed. Canada continues to reap the great benefits of an integrated, world-class system.