ARTIFICIAL INTELLIGENCE in CANADIAN TELECOM

A MARKET OVERVIEW REPORT

2024 EDITION

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About this Report

NBI/Michael Sone Associates' **AI in Canadian Telecom, a Market Overview Report, 2024 Edition** is our first study published on this rapidly growing, revolutionary phenomenon. The report dives into this multi-faceted and oft-misunderstood subject and distills the very real opportunities and challenges offered to and faced by the telecom industry in particular, as well as touching on the concerns of society in general.

The report examines how Artificial Intelligence (AI) and Machine Learning (ML) are impacting the telecom market in Canada by focusing on the current state of research, product development and general application. Of particular importance is the current and expected future state of the technologies as they are applied to everyday human-machine interactions and their abilities to improve processes in business generally and the telecom industry in particular.

The report is divided into eight sections and opens with a question – What is AI? – and goes on the provide some basic answers. This is followed by a brief and high level overview of the technology involved in AI and its most recent iterations. Thereafter, is a discussion on Canada's global leading position in AI research, ethical and legal concerns regarding the proliferation of AI and generative AI in particular and a review of proposed Canadian regulations to help prevent illicit AI use.

Section 6 looks at typical telecom use cases while Section 7 provides profiles of ten major application providers and their AI-powered offerings. Particular emphasis is placed on current and immediate future AI products and strategies to expand their reach. Finally, Section 8 offers some insight into the end user AI-enhanced products offered by the three largest incumbent service providers.

Executive Summary

With opportunities abounding for the use of Artificial Intelligence (AI) in business, the Telecom Industry, a technology powerhouse, is particularly well-placed to take advantage of this phenomenon. By early-2024, AI was a well-established feature in the operational or structural systems of Canada's largest telecom operators – Bell, Rogers and TELUS.

Canada has been at the forefront of AI development for more than 10 years. Organizations such as the Alberta Machine Intelligence Institute (AMII) and the government-funded Vector Institute in Toronto have built on their pioneering work by continuing to push the envelope with ongoing research. AI has been a boon for start-ups also as the brightest minds apply themselves to develop products such as intelligent devices that could relieve stress on the network by moving AI to the edge.

But, like all technologies, AI is being greeted with a mix of enthusiasm and fear. This is especially so with the introduction of generative AI that displays more human-like qualities. This has prompted governments to propose/introduce legislation that would restrict and/or regulate the use of generative AI. The EU was first out of the gate, followed closely by Canada and the U.S. However, these proposals have yet to be enacted into law and tested in the courts.

Meanwhile, the telcos' traditional infrastructure providers such as Ericsson and Nokia, along with providers of other software and hardware products like Microsoft, Cisco and BlackBerry, continue to embrace and integrate AI at an ever-increasing pace. As such, networks are becoming self-regulating and self-healing, and in the back office, logistics, customer service and just-in-time ordering are increasingly AI-driven.

Finally, a major transition of chatbots, smart devices and IoT terminals is about to take place. Companies such as Apple, Google and Samsung are now endowing their products with generative AI functionality, thereby making them more humanlike in their interaction. This will allow users to engage them in natural conversation when requesting information or requesting a task to be performed.