The Race is on to Achieve Transformation Through Innovation

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Innovation is like a never-ending track and field race.

Over the years, the pace of innovation has been dazzling and today it's moving at a speed that often feels like an all-out sprint in a non-stop marathon. American astrophysicist Neil deGrasse Tyson observes that, "For most of human civilization, the pace of innovation has been so slow that a generation might pass before a discovery would influence your life, culture or the conduct of nations."

Times have definitely changed.

In today's modern world, innovation evolves so rapidly that the impact is felt almost immediately and incessantly. Think, for example, of all the innovation that's happened in the field of information technology (IT). The pace began somewhat slowly. Business mainframe computing dominated for almost 30 years until personal computing exploded in the 1980s. Suddenly innovation in IT accelerated like never before. The advent of simple local area networking that linked personal computing, paved the way for much more powerful wide-area networks and the Internet. Countless applications and processes driven by network communications proliferated. Computing became dependent upon connectivity. The Internet Age and World Wide Web that evolved in less than 10 years changed everything.

Mobility and computing portability that emerged since the late 1990s has revolutionized our lives in ways most of us could never have imagined. It raised the status of Internet connection to that of "must have." Cisco's global research in 2012 shows that, among those 30 years old and younger, Internet connectivity as essential – as vital as water, food and air. Most of us, and especially Canadians, would probably agree, since we are among the most avid online users, particularly in our personal lives.

What's perhaps most astounding about the breakneck pace of IT innovation during the past 20 years is that what we're witnessing today barely scratches the surface of the possibilities to come. The monumental innovations that have occurred in 20 or so years happened as a result of less than 1% of things that could be "connected" to the Internet actually being connected. What might the world look like if we connected 2% of things…or 10%...or the remaining 99% of things? It's almost unimaginable.

Cisco describes that future world as the Internet of Everything and much of Cisco innovation today is focused on creating that reality. The Internet of Everything is happening today, albeit at an early stage. More than 10 billion "things" connected in our world will, in 10 years or less, grow to 50 billion things. Can we even imagine the innovation that will be spurred by this magnitude of connectivity?

Let's try.

We'll build a smart electrical grid that uses network connections and sensors for electricity production and to better understand user behavior. It will improve the reliability, economics, production and distribution of electricity.

We'll construct smart buildings through intelligent and converged networks of electronic devices that monitor and control a building's facilities and services, including mechanical, electronics, HVAC, and lighting systems. It will achieve energy efficiencies, cost savings, and improved experiences for occupants.

We'll revolutionize healthcare – by finally eliminating the siloed-information sources plaguing the system with inefficiency today. In the future, all patient knowledge and information will be connected and brought to the point of care – where it's needed.

What an amazing world it will be. But from where will all of that innovation come?

Cisco believes Canada can and should have a significant, if not leading, role. That confidence stems from the Canadian innovation that's already made a significant contribution to Cisco – an estimated value that exceeds $10 billion and includes products for enterprise networking, optical routing, networking operating systems, and service provider video technologies.

In 2012, Cisco made the commitment to hire during the next five years an additional 300 engineers in Ontario to support our R&D efforts in Canada. Our company believes Canada is a great place for future investment.

Cisco's commitment to innovation in Canada is a five-point plan that, among other things, includes the establishment of research chairs and innovation centres right across the country. So far more than 10 research chairs have been announced and a commitment of $15 million has been made. We're also set to make direct investments and to work with venture-capital organizations supporting Canadian startup companies that come to market with innovative products, services and ideas. We seek to lend our business acumen and experience to help them create business cases to sell this great Canadian innovation. We want to be a catalyst.

The future of Canada will depend on our ability to be an innovative nation. We face current challenges around relatively poor labour productivity and weak investment in information technology to support business and innovation. That's a situation which needs to change. Cisco, like governments and other companies, is doing its part in Canada to make that happen.

The innovation marathon is a race we're all determined to win!