Interview: Reza Moridi – Minister for Research, Innovation and Science, Ontario



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Dr. Reza Moridi, Minister of Research, Innovation and Science of the province of Ontario presents the impressive scope of investments undertaken within the fields of innovation and life sciences in particular over recent years. The already impressive scope of excellence in Ontario's hospital, research and innovation, and investment landscape will be further driven by collaborations with international partners.

When we last met you four years ago, you highlighted Ontario's focus on science and innovation. How has the research and innovation ecosystem evolved since in this province?

The developments in research and innovation, as well as Ontario's economy as a whole, have been numerous. Ontario has adopted an approach that aims to see our economy move from a traditional economy to a science and knowledge-based economy. We consider research and innovation from an economic development angle and thus see it as the axis for future economic development in our province. This trend is being implemented on every level, as we are also working towards moving our decision-making processes towards ones that emphasize evidence, science and knowledge.

Our progress in that regard has been important within the last four years. For instance, we have established new programs to increase the capital available for companies to grow and develop their technologies. While we previously only had a few funds, such as the Ontario Venture Capital

Fund and the Ontario Emerging Technologies Fund, we have created and invested in a series of other funds since 2013: the Innovation Demonstration Fund, the Emerging Technologies Fund, the Clean Tech Equity Fund, the Northleaf Venture Catalyst Fund and the ScaleUP Venture Fund. The last, in particular, was created in order to enable start-ups to become billion-dollar companies on their own without being bought by big corporations.

We also created an ecosystem for the commercialization of innovation. We have 18 regional innovation centers in the province today, the most prominent ones being the Ontario Center of Excellence, Communitech in Waterloo, Invest Ottawa and, of course, MaRS Discovery District.

We are especially proud of MaRS. In the aftermath of the 2008 financial crisis, investors pulled out of the project resulting in a shortage of funds, but the government decided to step in with emergency funding. Today, MaRS is the biggest urban research and innovation commercialization hub in North America. It is home to many innovative companies. They have since repaid the construction loan — ahead of schedule.

The will to emphasize the importance of science is best illustrated by the fact that the ministry I am responsible for has added “science” in its description, now officially called the Ministry of Research, Innovation and Science.

To ensure the continuity of science-based innovation, we have created innovation and research centers in every university in the province of Ontario, known as Campus Link Accelerators (CLAs) and On-Campus Entrepreneurial Activities (OCEAs). Coming from an academic background myself, I am aware of the fact that most professors are scientists, not businessmen, and that students often come up with good ideas but are not directed to find solutions to properly commercialize their products. Therefore, we started innovation centers to help students with innovative ideas transform those ideas into commercialized projects.

Today, we have 44 academic institutions throughout the province, where students not only learn technical skills but also entrepreneurship. Thus, our graduates leave school not only with a set of skills someone will be wanting to pay for, but often with their own companies that will, in turn, create jobs.

To establish Ontario as the place for an entrepreneurial and knowledge-based economy could involve different sectors from artificial intelligence to clean energy. What is the significance of the life sciences sector in particular?

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Life sciences have long been a focus for Ontario's innovation economy and an important investment area for our government. If I may say so, life sciences are one of the jewels in the crown of Ontario when it comes to research and innovation, as it is amongst the four sectors in which Ontario stands out in North America. In fact, we rank within the top ten jurisdictions.

In the future, life sciences will — along with information communication technology and clean technology — remain a key focus area, similar to artificial intelligence. Of course, many of these sectors are linked. Artificial intelligence, for instance, will have an enormous impact on life sciences just like the Internet has had on every innovative sector. This permeability between the various sectors is the main reason why we are investing CAD 130 million (USD 101.6 million) in 5G acceleration projects.

Being so close to the US, Canada can be overshadowed by its southern neighbor. How should Canada – and Toronto – position itself when it comes to innovation?

I think it is essential to remind ourselves as well as the global public that in North America, there are not simply the two countries, the USA and Canada. Rather, there are states and provinces, and thus ultimately 63 autonomous or semi-autonomous jurisdictions.

If, instead of comparing the two countries, you compare those 63 jurisdictions, Ontario will be in the top three or five in a multitude of sectors, representing by itself an economy that is larger than Belgium with a GDP of CAD 800 billion (USD 629 billion) – nearly half Canada's total GDP. Toronto is the second largest financial city in North America, second only to New York. Toronto should not be underestimated.

What are some of the steps that have been taken in order to reinforce the positioning of Ontario as a life sciences and innovation hub?

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One aspect has been the focus on collaboration as no one single actor may achieve innovation. We thus created the Ontario Institute for Cancer Research as well as the Ontario Institute for Regenerative Medicine and the Ontario Brain Institute. Notably, the Ontario Institute for Cancer Research is the single biggest recipient of funding for cancer research in Ontario with some CAD 75 million per year (USD 58.6 million), amounting to CAD 1.16 billion (USD 0.9 billion) since its creation. Such scale of investment and the drive for excellence in institutes have placed Ontario on the innovation map.

One major element of innovation – and an asset we possess – is people, as they are the ones innovating. Every year, Ontario has nearly 40,000 graduates in the fields of science, technology, engineering and mathematics, from our universities and colleges. The University of Toronto's Medical School is regarded as the number one medical school in North America in terms of numbers of research publications, even before Harvard.

We are also actively funding the research bodies at our education centers, and they have about CAD 1.4 billion (USD 1.1 billion) from various sources, including our government, at their disposal to drive research in collaboration with affiliated hospitals. We have a pool of 24 academic hospitals, of which some are particularly recognized such as the University Health Network (Toronto General Hospital) or The Hospital for Sick Children (SickKids), at which 1,700 researchers work.

What will be some of the upcoming projects for Ontario to strengthen its positioning in innovation?

We will continue to drive the expansion of our international exposure as it is essential for Canada, and Ontario, to remain visible on the international scene. It was not so long ago that we gained full control over our foreign affairs, and we need to raise our visibility. We can do this by collaborating with partners in other countries.

We already collaborate closely with countries such as Germany, Singapore, China, Israel, India and very recently, the Czech Republic and the United Kingdom.

On a more personal note, could you share a highlight from your time as Minister?

There was a very funny situation a few years ago, when I was Minister of Research and Innovation as well as Minister of Training, Colleges, and Universities (now within a separate Ministry, the Ministry of Advanced Education and Skills Development). As part of this position, I attended a meeting with the various University presidents, where each one spoke in turn. At the end of the meeting, I was asked if I had something to add.

"Yes," I said. "As a government body funding all of you, I am well aware of the hard work you all do. However, we want you to produce Nobel Prize winners." There were a few moments of silence, and then everyone laughed, perhaps a little nervously.

Two weeks later, the president of Queen's University called me and said, "Minister, we delivered. Dr. Arthur McDonald has received the Nobel Prize in Physics!"

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