

anada can usher in an era of massive infrastructure investment to kick-start the economy, starting in 2016, as a result of the political alignment in place between Ottawa and Queen's Park.

With majority Liberal governments at both Queen's Park and Ottawa, and with those governments having strong relationships with Toronto Mayor John Tory among other Ontario mayors, there is an excellent opportunity to invest close to \$180 billion in public infrastructure over the next 10 years (\$130 billion from the province and \$48 billion from the federal government).

With the political stars aligning, a window has opened to incorporate evidence-driven research for a new era of cooperation between Ottawa, Queen's Park and the province's municipalities. Much better data, metrics and other analytics are essential for all of our government representatives to work closely together to deliver infrastructure projects in Ontario.

Strategic considerations and better funding approaches will be crucial to achieve socio-economic prosperity for Canadians. Choosing the proper methods of delivery and asset management will help to ensure that the Canadian economy continues to grow.



Panelists and organizers join together at the Economic Returns of Ontario's Investment in Public Infrastructure panel discussion. From left: Paul Smetanin, CANCEA; Mark Romoff, CCPPP, Janet De Silva, Toronto Region Board of Trade; John McKendrick, Infrastructure Ontario; Andy Manahan, RCCAO; Barrie Mayor Jeff Lehman; and Sean Strickland, OC

Public infrastructure catalyzes and fosters population and productivity growth by supporting the movement of people, capital and ideas; increasing the efficiency of capital and labour; and attracting more private sector investment.

INFRASTRUCTURE INVESTMENT

While there is a clear need for coordinated and effective policy, there are serious limitations with the traditional economic models currently available, such as input-output models; these do not properly recognize the unique characteristics of public infrastructure, resulting in a limited measurement, focused mainly on short-term stimulus effects.

That's what makes a recent independent research report by a Toronto-based research organization so timely. The study by the Canadian Centre for Economic Analysis (CANCEA) assesses Ontario's \$130-billion, 10-year pledge through the lens of agent-based modelling (ABM) and a systems approach. Investing in Ontario's Public Infrastructure: A Prosperity at Risk Perspective also illustrates how the shortterm, stimulus-focused traditional economic models cannot tell the difference between the impacts of public investment in infrastructure and ice cream. CANCEA's goal was to demonstrate how traditional models miss so much of infrastructure's benefits, especially the multi-decade contributions to GDP, incomes, private investment and public sector revenues.

The research found that for every \$1 billion invested in infrastructure as part of Ontario's 10-year plan, \$1.7 billion would be generated in provincial tax revenues, and \$1.6 billion would be raised for federal coffers.

Let's define ABM: it is a method of measuring an economy's potential performance based on its relationship with all socio-economic factors, including infrastructure, housing, banking and health care, as well as non-financial events that translate into financial outcomes. This "systems-thinking" framework acknowledges these interactions in order to understand that an economic system is more than the sum of its parts. It's a big data and analytics approach similar to that used by the Institute for New Economic Thinking at Oxford University.

Traditional evaluation approaches are incapable of fully assessing what is at risk tomorrow if an appropriate investment is not made today. An ABM measure of Ontario's 10-year infrastructure program demonstrates more than five times higher increases in job creation and total wages paid than traditional models.

A lot of Canada's public infrastructure is not in a state of good repair, which makes modelling the investment opportunities to support effective spending much more than just an academic exercise. As we move further into 2016, governments at all levels have important decisions to make for strategic infrastructure investment.

We all know that public infrastructure investments are important and that many projects - such as water systems, roads and transit - are essential to promoting our shared prosperity. But our evaluation techniques need to improve. In an era of deficits, the last thing anyone wants is for our limited funding to be misspent.