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Ontario's Future Infrastructure

## How Megatrends Shape Decisions

By Geordie Gordon

A new report warns that technological advances, which will impact the future of infrastructure, require changes in the way the province makes decisions. It urges the province to start addressing these trends for the future now.

“We should learn the lessons of the past, and try to anticipate the kind of infrastructure we’re going to need in the next 15 years, and not simply to rebuild what we’ve built before, or to look at the past and just simply project forward,” report author retired deputy minister **Michael Fenn** told NRU.



The [report](#), commissioned by the **Residential and Civil Construction Alliance of Ontario**, examines how new trends and infrastructure advances could shape Ontario's infrastructure

in the next 10-15 years, highlighting the need to begin to respond to future trends now. It comes on the heels of the Wynne government's pledge earlier this year to make inroads on the infrastructure deficit with \$130-billion in infrastructure funding over the next 10 years.

In the report, **Building Our Tomorrow: The Future of Ontario's Infrastructure**, Fenn highlights how megatrends could affect infrastructure decisions being made over the next 10 years and warns of the consequences of short-term infrastructure thinking.

"The main message is that the future looks very promising, but we need to rethink the way in which we are building our infrastructure to reflect that," Fenn told *NRU*.

Fenn talks about the need to reshape the framework in which infrastructure decisions are made.

"Some of our ways of thinking about infrastructure need to be part of the public decision-making process more than they are. We need to think much more horizontally about these things ... We have too much immediate and short-term thinking involved in making infrastructure decisions."

University of Toronto Department of Geography associate professor **Matti Siemiatycki** agrees with Fenn.

"Looking long term and seeing infrastructure not only as an investment for today, but as an investment in the future is really critical." Siemiatycki told *NRU*. "I think that the idea of trying things differently and taking that risk and using the research capacity in this region can really feed into better decisions."

Fenn focuses on six major trends: the pace of technological change, urbanization and globalization, social and demographic, economic and workforce, environmental and energy, and political and fiscal.

For example, he explains, due to the convergence of number of new technologies, including miniaturization, pre-constructed components and new building materials, future infrastructure may be much lighter on the ground. It will be more flexible, adaptable and resilient.

Fenn also suggests that a number of new technologies may change the future of transportation in the region. Automated vehicles, computer-assisted logistics and high-speed trains are just some of the technologies that could influence current planning. Innovations in public transit could also occur, including automated trains and time-of-day and distance-sensitive fares.

However, Siemiatycki cautions against reliance on a particular new technology, and instead he recommends piloting different options and creating the opportunity for further experimentation.

"When we're moving into new technologies that are somewhat preliminary, and also competing with many other technologies and there's not a clear winner yet, I think that this region and this province could really benefit from being a place where there's an openness to trying things. Part of the way you do that is by accepting not everything is completely permanent," said Siemiatycki.

Halton regional chair **Gary Carr** sees environmental trends and the impact of climate change as a motivation to do things differently when it comes to building infrastructure in Halton Region.

“Going forward, we’re looking at doing things differently in light of some of the concerns out there with the future and climate change and trying to build things for the future rather than the past,” Carr told *NRU*.

Carr also thinks that future development potential in Halton Region is an opportunity to get things right the first time around by learning from what has been done before.

“What we’re doing in Halton, based on some of the mistakes that have been made in the other regions, we’re taking a look at what we need to do as we build our next round of transportation to avoid some of those problems and to enable people to get around,” he said. “We’re fortunate in some ways ... because we are a growth area we are getting a chance to build it from scratch.”

City of Mississauga transportation and public works commissioner **Martin Powell** doesn’t think that the current infrastructure deficit and budget challenges should impact municipalities’ ability to do things differently.

“There is a deficit, I think there will always be a deficit, but hopefully I think what we can do is continue to invest in infrastructure, but also make sure that we’re making the right decisions,” Powell told *NRU*. “Change is just happening faster and faster, we really do need to start looking at this stuff , we need to work together in government, be more focused on what we’re investing in, we can’t waste investment dollars.”

Among Fenn’s recommendations is the creation of a standalone Infrastructure Policy Secretariat, with its own minister and deputy minister. He also recommends federal and provincial grants for the study of innovative infrastructure, and a Royal Commission on Ontario’s Future examining the role of infrastructure in creating a prosperous society.