

# **BIM Insights: COVID-19 crisis creating digital opportunities for construction**

**Arash Shahi and Richard Lyall**

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In the face of COVID-19, the need for e-permitting has come into sharp focus.

Many municipalities across Canada have shut their doors and closed business so employees can social distance. The health and safety of Canadians is the number one priority. It's important to note that a large portion of our economic operations could have continued uninterrupted if the proper digital infrastructure was in place. Unfortunately, like most businesses, Ontario municipalities were generally not ready for this pandemic and the value of building permits fell 50.5 per cent compared with March 2019, according to Statistics Canada.

This leads us to a question: while social distancing has led to a rise in working remotely, when will there be a better time for Canadian municipalities to go paperless than now?

E-permitting, connected with Building Information Modeling (BIM) and Geographic Information Systems (GIS) would streamline traditional paper-based processes for building departments across the country. The technology would allow those designers, permit applicants and plans examiners to be connected through an electronic platform. Solutions, such as FaceTime, Zoom and Web Ex, can allow municipal building officials and staff to provide services through remotely accessed computers and cellphones, enabling the building industry to proceed with obtaining approvals.

Ontario Minister of Municipal Affairs and Housing Steve Clark has suggested that municipalities and planning boards consider using electronic and virtual channels to engage and solicit feedback from the public on land-use matters. BIM- and GIS-based e-permitting platforms could also be used to facilitate properly focused online consultations.

This is not an original concept. Singapore, Finland and the U.K. have been using similar technology for years. Following their lead, at least 15 Ontario municipalities are either ramping up e-permitting programs, have acquired the technology or have launched online portals for electronic drawing submissions.

Through technology applications, e-permitting connectedness and by using digital inspection resources, building inspectors can complete their site reviews remotely. Several opportunities exist for automating data capture on site and remote inspection capabilities. The demand of these services is strong in housing hotspots like Vancouver, Toronto and their respective surrounding areas. This is also a good opportunity to improve the relationship between building inspectors and qualified professionals, and consider the most efficient, resilient path forward for the building industry. Delays in occupancy inspections hold up families from moving into new homes, condos and rentals, and that costs them money.

Meanwhile, Minister Clark is encouraging municipal building departments to use alternative online approaches to advance occupancy inspection techniques. A few municipalities, including Collingwood, Ont., have already developed protocols. He has expressed interest in digital solutions to help streamline the approvals process, an exciting prospect for residential construction. This could link all key approval agencies, speed up document management and enable remote inspections.

The Ontario Building Officials Association (OBOA) and Large Municipalities Chief Building Officials (LMCBO) have been champions of technological reform in municipalities, have supported high-impact research along with RESCON and the University of Toronto, and are expected to continue to support the move toward digitization.

RESCON's 2018 report on streamlining the development and building approvals process and RESCON/U of T publications investigating global e-permitting initiatives have consistently and strongly recommended expanded e-permitting. A 2019 City of Toronto report on the development review process identified a need to "leverage technology to find efficiencies in

outdated and paper-based work processes.” The report noted that technology (i.e., e-permitting) can modernize application management systems to optimize workflows, automate processes, enhance online application tracking, increase accountability and transparency, and enable greater internal and external collaboration.

Once the pandemic is over, can we shape a more resilient version of our industry in the coming months and years? Why not prepare for the second wave of COVID-19 or other future major interruptions? The virus will be a factor for months, but the economy’s players must find new ways of conducting day-to-day business or risk further repercussions. We should embrace the opportunity provided to us through this pandemic to digitize various aspects of our industry and challenge the construction industry’s long-standing reputation of being slow to adopt new technology.

Canada has been training entrepreneurs all along to help navigate this transition. It’s time to let the new generation of our industry talent shine through and build on the solid foundation built by the industry for decades.