

# THE RIGHT INVESTMENT AT THE RIGHT TIME

HOW PROPER ASSET MANAGEMENT CAN HELP MUNICIPALITIES BOTH BIG AND SMALL

BY BREANNA MROCZEK ILLUSTRATION SCOTT CARMICHAEL

**W**HEN A COMMUNITY INITIATES A NEW INFRASTRUCTURE PROJECT, the costs don't end with construction. Operating, maintenance and replacement expenses, in addition to environmental costs, can add up over several decades.

Shrinking budgets, potential provincial and federal regulations, and an international interest in sustainability are all reasons municipalities must develop alternatives to costly and time-consuming asset replacements. Engineers are poised to help municipalities get the most out of their infrastructure investments with meaningful asset-management strategies.

"Asset management is many different things," says Rob Radovanovic, chair of the Asset Management Technical Services Group at McElhanney Ltd. — a consulting engineering firm involved in projects ranging from infrastructure asset planning for small communities to coordinating federal-level highway projects. "It is a process that binds people, data, software and systems together into a recommendation engine that lets communities make intelligent investment decisions about their infrastructure that will support future community members. Its holistic nature brings a lot of different technical specialists together."



“Asset management is critical to making informed decisions on infrastructure investment,” says John Gamble, president and CEO of the Association of Consulting Engineering Companies Canada. The association is comprised of 12 provincial and territorial associations – including Consulting Engineers of Alberta.

“It allows taxpayers to receive a better return on infrastructure investments, and it ensures that we are investing in the right infrastructure at the right time to improve our quality of life socially, economically and environmentally.”

From a guidelines and regulations perspective, asset management is a relatively new field in Canada that has yet to be widely adopted. The City of Lethbridge was an early adopter, and has had an asset-management program in place for nearly two decades.

“Our asset management program was started in 2005 by an engineer who recognized the importance of these processes,” says Blair Richter, asset manager for the City of Lethbridge. “I have heard a lot of stories about organizations that make decisions about critical infrastructure without any data. We want to use all the data that we can to make decisions about, and have valid reasons for, spending money on things. Knowing what the lifetime costs of a project are helping us effectively communicate with the public and with city council.”

Once the City collects data, it enlists the help of engineers to apply it to real-world scenarios using many variables. “We provide systems and processes to capture information, and the engineers are the ones who actually have to make sense of it and make decisions based on the best approach,” Richter says. “For example, for our overlay program for our roads, we will collect all the conditions of the data, and

## **‘WE PROVIDE SYSTEMS AND PROCESSES TO CAPTURE INFORMATION, AND THE ENGINEERS ARE THE ONES WHO ACTUALLY HAVE TO MAKE SENSE OF IT AND MAKE DECISIONS BASED ON THE BEST APPROACH.’**

– BLAIR RICHTER, ASSET MANAGER FOR THE CITY OF LETHBRIDGE

then they have to use that data based on things like the types of roads, the material of roads, and traffic volumes to make a plan on how to best treat those roads.”

According to the Canadian Infrastructure Report Card that was released in 2019, 71 per cent of small communities (under 5,000 people) do not have documented asset management plans, nor do 44 per cent of medium-sized communities (5,000-30,000 people). Due to the quantity of infrastructure in smaller municipalities, there is an urgent need for all communities to begin to adapt asset-management strategies.

“Municipalities predominantly manage the majority of publicly-owned Canadian infrastructure, but they don’t often have the tools to be able to manage them in an optimal fashion, particularly in the smaller communities,” Radovanovic says.

One of the ways smaller municipalities can find support and guidance is through the federal Municipal Asset Management Program. “The federal government has allocated \$110 million [over eight years] to help increase the number of communities with documented asset-management practices,” Radovanovic says. “The program is dedicated to improving capacity for municipalities to implement asset-

management programs and adopting best practices.”

Recognizing the need for a trained workforce in this growing field, the University of Calgary – where Radovanovic serves as an adjunct professor in the Schulich School of Engineering – recently started offering graduate courses in asset management. “The courses are open to professionals as well as students, and we’re really encouraging as much industrial participation in the course as possible,” Radovanovic says.

Still, Gamble says that more support for municipal asset management is needed. “An important role of infrastructure is connecting communities, and a lot of assets transcend convenient political and geographic boundaries,” Gamble says. “There’s a need to set a long-term vision and to recognize the value of a consistent national approach.”

Currently, the association is supporting the federal government in the creation of a national infrastructure assessment in order to have a holistic, consistent approach across Canada. The assessment will ideally inform public policy to support infrastructure investment, facilitate information-sharing among municipalities, and assist with best practices. **AI**

## **IMPLEMENTING ASSET MANAGEMENT STRATEGIES**

British Columbia’s approach to a provincial asset management strategy is an example of how to successfully support municipalities that want to implement their own asset management strategies.

“In B.C., the conversation on advancing asset management came from the provincial level,” says Sara Anderson, a senior engineer with Urban Systems. “They realized that they could not

afford to fund every request to replace or repair failing infrastructure. Yet they also realized that the municipality didn’t really know what kind of asset they were operating and often didn’t know how to maintain them.”

To ensure that they were investing in sustainable infrastructure going forward, the provincial government offered planning grants to initiate

asset-management processes, no matter the sizes of the municipalities or projects. The province also provides financial support for asset-management training and education for staff, administration and councils. In subsequent requests for infrastructure funding, the province assesses the request based on whether the proposed project has an asset management component. More than 10 years into this asset management-

focused strategy, most municipalities in B.C. are now engaged in some sort of asset-management planning, implementation, assessment or reassessment. “B.C. has been absolutely fantastic to work with on asset management,” Anderson says. “Now they’re seeing the results of their efforts because every single municipality is investing in asset management.”