Built to Last

Intelligent solutions for Canada’s aging infrastructure crisis

Let’s do this.
Built to last, but not forever: How is our aging infrastructure impacting Canadian prosperity and success?

Let’s face it: Canada’s infrastructure is showing its age. As more and more of us cope with flooded basements, summer brownouts and longer commutes, the images of crumbling roads, closed beaches and shuttered buildings continue to add up on social media and the evening news. Aging infrastructure is a growing problem for all of us, and it’s putting our future at risk.

Regardless of the sector, poor choices and underinvestment in maintenance and renewal are obvious offenders. “Sweating our assets” in the name of efficiency, profit or holding the line on taxes, have been standard practice for many organizations. Rightly or wrongly, leaders have made the difficult decision to sacrifice longevity and performance for short-term savings, and are now left dealing with the consequences. But while more spending will be needed in order to soften the impact and reverse the trend, the problem isn’t nearly that simple, and several new complications will prevent traditional ‘more is better’ thinking from delivering needed outcomes.

Our world is changing and with it bringing a whole new set of aging infrastructure challenges. New economic, environmental, and social demands – many of which weren’t even known or considered when much of our current infrastructure was designed and built – are amplifying the strain on our assets, and the services they support. Strategic investments, driven by new thinking, data and advances in technology, will be critical to moving us forward – and for ensuring we’re able to understand, plan for and manage future risks.

Front-line impacts
Infrastructure exists for a purpose. Across the public and private sectors, we rely on complex systems of assets to deliver needed outcomes for our organizations and their “customers”. For cities, governments and public agencies, infrastructure plays a central role in the delivery of front-line public services that support us in living safe, prosperous, and fulfilling lives. For private enterprise, infrastructure assets support the efficient delivery of goods and services, driving profitability and value for investors and stakeholders. Faced with an aging asset base, evolving demands from regulators and end-users, changing environments, and growing fiscal constraints, what are these organizations doing to adapt, operate, and thrive in this new reality?

There is no magic spell or play book for overcoming aging infrastructure challenges, and simply throwing money at the problem won’t make it go away. To be successful, public and private sector leaders must open themselves to thinking differently about their infrastructure, and how it is planned, delivered and used by their organizations to create successful outcomes. By treating infrastructure as an integral part of their organizational value-chain, leaders can target and drive value through infrastructure investment, position for and capitalize on new opportunities, and better understand, plan for and manage short- and long-term risk.
In our “Aging Infrastructure” series, we’ll take an in-depth look at how an aging asset base is impacting Canada’s public and private sectors. By turning a spotlight on agencies and organizations that are already making progress, we’ll explore how leaders are thinking differently to position for future success.
Canada is a land of world-class communities, prized for their amenities and quality of life. Despite this however, the health of these centres of business, entertainment, and culture is in decline. Recent studies show that more than 13% of our ‘core municipal infrastructure (e.g., roads, pipes, treatment plants) is in poor or very poor condition, requiring $140 billion to return it to a state of good repair. That’s not even counting the further billions needed to repair and upgrade our infrastructure to accommodate urban growth and densification, enhance resiliency to extreme weather and climate change, or reflect the public’s changing demands and expectations for municipal service.

Whether a result of chronic under-funding, changing circumstances, or lack of political will, Canada’s cities face a complex problem requiring them to look beyond fixing what’s broken. The good news is there is still time to reverse the trend. By taking cues from some of Canada’s more progressive cities, we can tackle aging infrastructure by focusing efforts on the repair and revival of critical assets, allocating funds based on demonstrated value, investing in innovation, and gain better appreciation and understanding for the long-term impacts of short-term decisions.

In the first installment of our Aging Infrastructure series, our “Cities” feature will speak with Municipal leaders to learn about how aging infrastructure is impacting local service delivery, how environmental and social changes are magnifying problems, and what they are doing to understand, plan for, and manage their infrastructure related risks, what are their key take-aways and how can others learn from their experience?
Transportation

Our way of life pivots on the ability to keep people and goods moving. It’s how industries and communities thrive. The value of good roads, highways, and public transportation networks cannot be overstated; and yet it’s estimated that up to 40% of existing transportation infrastructure and 30% of existing transit infrastructure require remedial investment.

Changing course won’t come easy, but by leveraging technology to understand real-time movements, using data and analysis to demonstrate investment needs and priorities, and elevating aging infrastructure issues to the executive table, progressive transport agencies are already making the changes needed to lead the way.

In our upcoming “Transportation” feature, we will learn from some Canada’s leading transportation and transit agencies. How they are positioning to quantify their aging infrastructure problems and the associated risks. How can their experience help inform our infrastructure success?
Communities rely on access to safe, clean, and reliable water and sanitation. Many Canadians may take this for granted, but with a tenth of the country’s water infrastructure now over 80 years old, the risks of leakage, contamination and system breakdowns are on the rise. Recent estimates suggest that between $20B and $50B are needed to renew Canada’s aging water, wastewater, and stormwater systems and bring them to a state of good repair, and an additional $20B is needed to bring them up to federal guidelines. It’s no small task, but in the case of ensuring access to clean water, it can literally be lives and communities on the line.

With stories of Walkerton and Flint still fresh in the public’s mind, the pressure is on water service stakeholders to better assess their assets, prioritize repairs and replacements, and collaborate on long-term solutions.

In our upcoming “Water” feature, we will speak with the operators of some Canada’s largest and most complex water systems. What are they doing to overcome aging asset challenges to maintain safe and reliable service? How can their experience inform your plan?
Canada prides itself on delivering one of the best healthcare systems on the planet, but that reputation is at risk of eroding. Aging facilities, outdated systems, and growing need for repairs and expansions are reducing Canadians’ access to reliable, quality care. And with only 3.3% of the $230 billion-plus in annual healthcare funding being earmarked for capital projects, the gaps between the costs of deferred maintenance and available investments are widening.

Canada’s healthcare system is under considerable strain, and growing populations and expectations will only add to the pressure. It’s not all bad news, however. Progressive healthcare organizations are tackling the challenge by exploring more holistic out-patient alternatives, longer-term asset planning, and innovative financing and procurement options.

In our upcoming “Healthcare” feature, we examine what it will take to get Canada’s healthcare’s assets back on their feet. We will learn how aging infrastructure and deferred maintenance are impacting front line healthcare, how facility managers and healthcare executives are coping with growing infrastructure priorities and risks. How can their lessons benefit your organization?
Over the coming months we will examine the aging infrastructure challenge from the perspective of different asset intensive industries, and explore how owners, operators, and service providers can effectively work together to address Canada’s aging infrastructure crisis, and enable national prosperity and success.

Follow our journey at #aginginfrastructure.