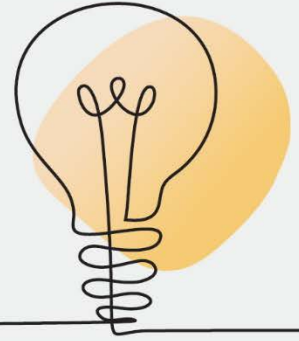


Advanced Education

COVID-19 and campus infrastructure



June 2020

The COVID-19 pandemic has had a major impact on Canada’s colleges and universities. In recent months it has disrupted nearly every aspect of campus business, operations, and daily life.

Navigating COVID-19-related disruption will require advanced education institutions to travel through four distinct stages. The plans and decisions made by leaders as they complete this journey will play a key role in shaping an institution’s focus, operations, and ability to position for long-term success.



As key enablers of program and service delivery, campus facilities and infrastructure will play an important role as institutions navigate the pandemic and position for post-COVID-19 success. Speaking with advanced education leaders, we've identified some key questions that institutions should be asking to understand current and coming implications, and how these may influence go forward plans and decisions.

- How has campus infrastructure impacted our ability to respond?
- How can our assets help in managing COVID-19 driven financial pressures?
- How can we capitalize on the coming wave of stimulus funding?
- How will COVID-19 impact our go forward plans?

In answering these questions, advanced education leaders must consider the role that infrastructure assets, and ongoing investments, play in enabling institutional programs and services, and how changes to plans and conditions will impact their ability to meet short and long-term needs. The following sections explore each step of the COVID-19 response framework, highlighting thoughts and insights gained from leaders as they navigate this journey.

Rapid reaction

For colleges and universities, the last two months have been focused on reaction, with institutions responding to the crisis by introducing protections and measures to maintain programs, while managing health-related risk. This has left many advanced education leaders scrambling to adapt their organizations to a new reality for programs, research, housing and campus service delivery.

While accommodations have largely been operational, these have raised questions about campus infrastructure, its importance to operations, and its ability to support needed change within the organization. Many institutions have found that the state and make-up of campus assets are impacting agility and their ability to respond. While every institution is different, several common issues have emerged:

- Antiquated technology and systems, and digital barriers have made the shift to remote working challenging.
- Ties to unique facilities and equipment have impacted or shut down some programs and research.
- The configuration and condition of some facilities have limited the ability to adapt workspaces for remaining on-campus personnel.
- Deferred maintenance backlogs have meant that many assets continue to require attention and repair, even though campus is largely shut down.

While most organizations have reached a steady state in their COVID-19 reaction, issues and their impacts can't be forgotten, and should play a key role to shaping future campus resiliency efforts. Institutions with strong, risk-focused cultures have fared better than most through initial response. For others, the experience will drive increased post-pandemic interest in risk management, resiliency and business continuity improvements.

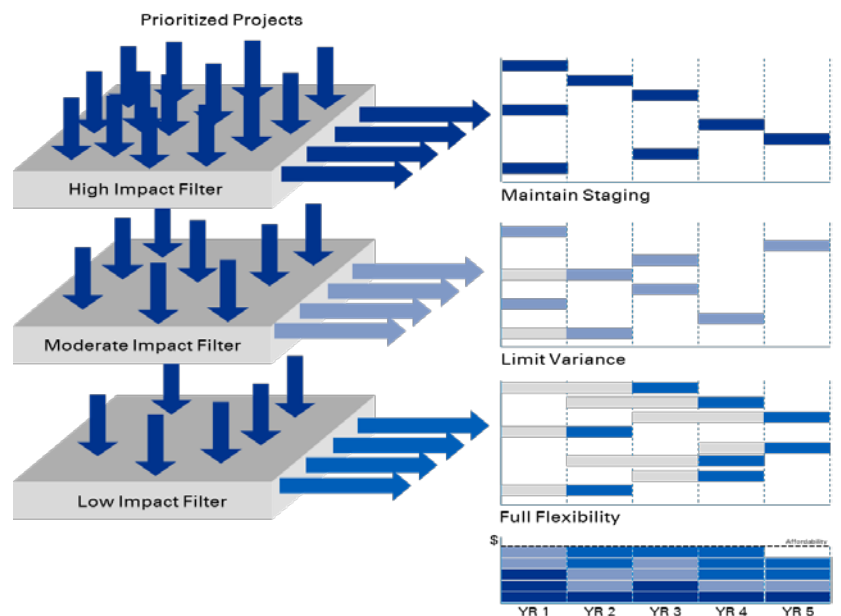
Resilience and continuity

Growing costs and shrinking revenues have placed colleges and universities, along with many of their funding partners, in a difficult financial position. To soften the blow, advanced education leaders are under growing pressure to shed costs or defer non-urgent spending, while minimizing further impact to programs and revenue streams.

While deferring infrastructure spending can provide some short-term relief, there are some key things that leaders should consider, if they are to meet current requirements, without getting into trouble over the long-term.

Maintenance and renewal.

While many colleges and universities are faced with substantial deferred maintenance backlogs, further temporary delay to sustaining capital works may be possible, in order to free up cash. Critical works, such as those impacting safety and business continuity, should proceed as planned, however those with lesser impacts may be good candidates for deferral, provided that the risk can be reasonably managed. Evaluating potential impacts of deferral should consider not only the immediate risk of physical asset failure, but also the longer term economic, environmental and social impacts of delay, on the institution. Establishing a common risk framework can be helpful in evaluating options for deferral.



Expansion and growth

Canadian colleges and universities have placed significant effort into developing master plans aimed at positioning their institutions for long-term success. Delaying or canceling these works can provide some flexibility in addressing the financial and operational strain facing institutions, but care must be taken to ensure that these actions don't lead to longer term pain.

For planned, but not yet initiated works, changes brought about by the COVID-19 crisis could require a significant rethink of campus development plans and priorities. Potential post-COVID-19 impacts are explored below, but changes in demand, and to program and service delivery models, could drive significant shift to the assumptions used in developing plans and designs, and in selecting delivery models.

For active projects, consideration must be given to potential design, logistical or contract issues, and how these may impact available options. Changes in the design basis could require a pause and significant rethink to plans and activities. Also, COVID-19-related impacts on site-works and supply chains may disrupt the timing and cost of ongoing works, and potentially require the need to seek out additional funding and supports.

It is important to recognize that risks associated with changing or deferring works can be significant and have a substantial impact on an institution. Having a plan to manage these challenges, through business, operational or other means, is important to ensuring that an institution does not become over exposed, and that current and future needs continue being met.

Positioning for recovery

It is widely understood that infrastructure spending will play a major role in restarting Canada's post-COVID-19 economic recovery, and already the federal and provincial governments are starting to push out billions of dollars in infrastructure-focused stimulus funds. While program specifics are being developed, strategies will be aimed at getting money out and into the market quickly, to produce a timely and impactful response.

Given the program's objectives, stimulus programs will have tight timelines, possibly as short as 18 to 24 months. Given that infrastructure-based projects flow through five stages (planning, design, procurement, supply, and construction) this could make it difficult to advance major builds, unless significant pre-work is already complete.

We're also expecting much of this funding will focus on four key areas.



Addressing issues that have challenged us through the pandemic like connectivity, science and research, laboratories and healthcare.



Building institutional resilience like asset hardening, climate change adaptation, risk reduction and mitigation, and adaptable / multi-use facilities.



Getting works out the door quickly like deferred maintenance, direct replacement, programmatic renewal and "shovel ready" projects.



Stated government priorities, like climate change and ESG improvement, economic development, public transportation and affordable housing.

While exact details aren't yet available, there are some key things that institutions should be doing to prepare for and take advantage of infrastructure stimulus programs, as they are released.

1. Review your capital maintenance, renewal, and new project requirements relative to institutional needs and program priorities
2. Proactively identify projects that can be accelerated and put forward, either by targeting scope or advancing pre-work – getting 'shovel-ready'
3. Consider opportunities to expedite delivery process – planning, design, procurement, supply and construction

Post-COVID-19 reality

COVID-19 will impact how future programs and services are delivered, and on the assets needed to support them. While most current restrictions will eventually be relaxed, it is expected that some level of physical distancing (regulated or expected) will be maintained indefinitely, to provide ongoing protection and prevent future outbreaks.

Some common themes have started to emerge on what the 'new normal' might look like for students, faculty and staff, and what factors should be considered as advanced education leaders rationalize and plan for future campus investment.

Campus facilities



The nature of program delivery and needs for supporting facilities will change the way campuses operate. Distancing will require broad retrofits or changes to the way in which facilities are used. This will impact the lay-out, protective features, or utilization of nearly all spaces.

Learning environments



Growing demand for remote learning will impact the number of on-campus offerings. Classroom requirements will change with an increased emphasis on connectivity. Will the future classroom look more like a lecture hall or a television studio?

Laboratories and research



Focus of research programs and use of laboratories will change. Shift in focus will lead to increased demand for some newly defined spaces, with a reduction in many others. Also, reduced occupancy rules will drive the need for flexibility and 24-hour space sharing.

Student housing



The nature of student housing will be impacted. Protective features will need to be incorporated into residences and common spaces. Changes to student housing policy will reduce or eliminate shared dorm rooms and washrooms, requiring broad conversion to single occupancy units.

Food services and public spaces



Food services and public spaces will adapt to enhanced safety criteria. Outlets will shift from cafeteria and buffet style service to pick-up and delivery. Seating will be spread out across locations and fit with protective shield retrofits to encourage distancing.

Sports and recreation



Expectations around personal recreation and team sports will shift, impacting the lay-out, utilization of, and demands for space and equipment. Preferences around distancing and air quality will shift more activities outdoors.

Building and construction



Protective measures could impact current and future, plans and priorities. Existing designs, construction practices and supply chains could change significantly, driving up the cost of construction. Master plans, business cases and designs may need a significant rethink, causing development priorities to change.

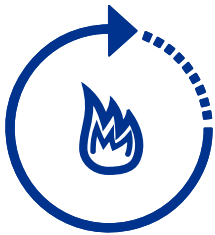
Moving forward

COVID-19 is having a huge impact on Canada's colleges and universities and will shape their organizations for years to come. In meeting this challenge, advanced education leaders will face some tough questions surrounding core programs and services, their underlying operations, and the facilities and infrastructure needed to deliver them.

While it won't be easy, honest reflection, and asking key questions can provide advanced education leaders with the clarity and insight needed to successfully navigate coronavirus-driven disruption and position their institutions for future success.

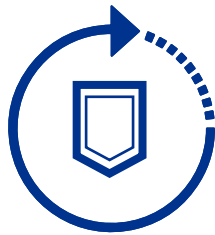
How KPMG can help

KPMG's Global Infrastructure Advisory team is comprised of Canada's leading infrastructure and construction advisors. Actively advising in all ten Canadian provinces and on over \$150 billion in infrastructure programs globally, we have the deep experience needed to provide solutions to your complex problems. Our multidisciplinary team can support you in all stages of a potential stimulus program:



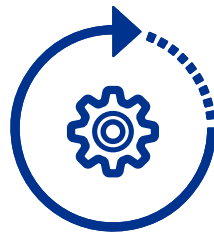
REACTION Respond to the crisis

- Understanding business, asset and operational risks
- Planning and introducing mitigation strategies
- Capturing and building lessons into plans and decisions



RESILIENCE Manage through uncertainty

- Defining critical services and supports
- Evaluating portfolio for urgency, impact, risks and opportunities
- Identifying and ranking deferrals and strategies for managing risk



RECOVERY Capitalize on opportunities

- Targeting investment where it matters most
- Maximizing and responding to stimulus and funding opportunities
- Streamlining delivery and oversight to drive value creation



NEW REALITY Adapt to a new world

- Understand current and emerging issues and requirements
- Evaluating impacts to assets, operations, plans and projects
- Introducing strategies to manage go-forward risks

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