

2015

Survey of Institutional Capacity, Facilities and Equipment Needs

Report



Colleges and Institutes Canada
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Colleges and Institutes Canada is the national and international voice of Canada's publicly supported colleges, institutes and polytechnics. We work with industry and social sectors to train 1.5 million learners of all ages and backgrounds at campuses serving over 3,000 urban, rural and remote communities in Canada. The Association operates in 29 countries via 13 offices around the world.

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EXECUTIVE SUMMARY

Colleges and Institutes Canada's (CICan's) 2015 Survey of Institutional Capacity, Facilities and Equipment Needs confirms that colleges and institutes continue to be in great need of infrastructure support.

PARTICIPANTS

- Over two thirds (66%) of member institutions completed the survey.
- Representation from British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Québec, New Brunswick, Nova Scotia, Newfoundland and Labrador, Prince Edward Island, Yukon and the Northwest Territories.

BUILDING AND OPERATING SYSTEMS

- In 2015, the average age of buildings reported by respondent institutions was between 41 and 50 years old. Almost two thirds (63%) of respondents indicated that their institutions' physical infrastructure had passed its useful service life (the average service life of education buildings is estimated to be 40 years).
- Just over half (51%) of respondents indicated that their major buildings were in a "fair" condition. Fourteen percent indicated that their infrastructure is in "poor" condition.
- Only 6% reported that their buildings were in "very good" condition.

THE COST OF DEFERRED MAINTENANCE

- The estimated cost of deferred maintenance reported by respondents is \$2.9 billion. When extrapolated to the total membership, the estimated cost of deferred maintenance is \$4.1 billion, more than double the amount reported in 2011 (\$1.4B).
- Many colleges have developed a triage system in order to address infrastructure renewal, as the budget to support aging infrastructure is not sufficient.
- Over 10,000 students are currently on a waitlist due to issues related to deferred maintenance in programs such as trades, healthcare and engineering technologies.

READY-TO-GO PROJECT FOR DEFERRED MAINTENANCE¹ AND NEW CONSTRUCTION

- CICan members' ready-to-go deferred maintenance projects² carry an estimated total cost of \$971 million. In total, 81% of respondent institutions have 458 ready-to-go deferred maintenance projects.
- For new construction, respondents reported 147 ready-to-go projects with an estimated cost of \$3.5 billion.
- When extrapolated to the total membership, the value of ready-to-go projects for deferred maintenance and new construction is \$1.6B and \$6B respectively.

ANNUAL BUDGET FOR INFRASTRUCTURE RENEWAL

- For the fiscal year 2014-2015, respondents reported a total annual budget for infrastructure renewal of \$496,522,216. New construction represents the largest proportion of this budget at 56%.

INSTRUCTIONAL EQUIPMENT

- 35% of programs at respondent institutions have equipment that is below current workplace standard.
- The cost to upgrade equipment reported by respondents is \$531M. When extrapolated to the entire membership, the total estimated cost of upgrading equipment is \$854M.

DONATIONS

- Colleges and institutes received approximately \$31M in equipment donations from the private sector in the last two fiscal years (2013-14 and 2014-15).

¹The term 'deferred maintenance' refers to maintenance, system upgrades, or repairs that are deferred to a future budget cycle or postponed until funding becomes available.

²"Ready-to-go" projects are infrastructure projects that are fully costed with architectural plans completed

1. INTRODUCTION

Colleges and Institutes Canada's (CICan) 2015 Survey of Institutional Capacity, Facilities and Equipment Needs provides a status report of the current infrastructure needs of its member colleges, institutes, cégeps, polytechnics and universities with a college mandate (hereafter referred to as "colleges"). As the third such survey, it provides a current snapshot of the college sector's infrastructure needs and enables the identification of trends, when compared to the infrastructure surveys conducted in 2008 and 2011. The 2008 survey substantiated CICan's (then the Association of

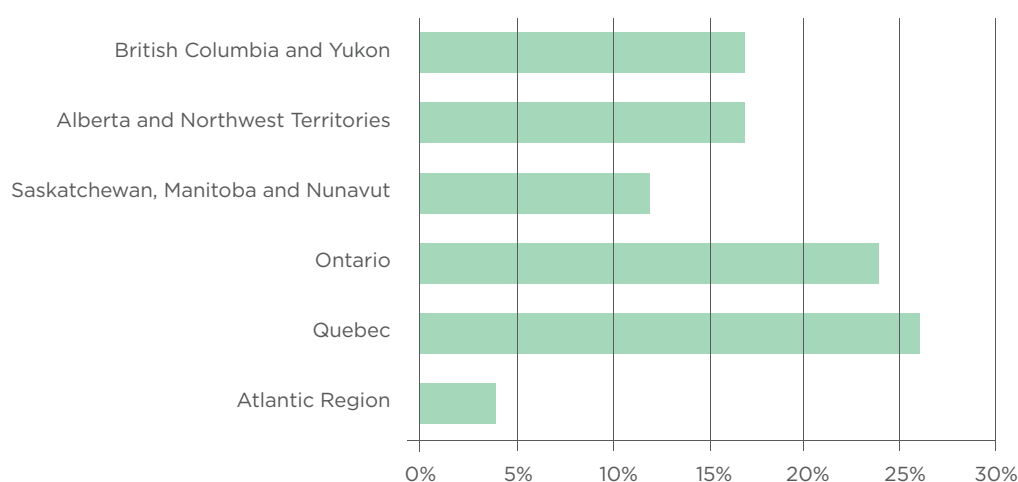
Canadian Community Colleges - ACCC) request for federal infrastructure funding that resulted in the Knowledge Infrastructure Program (KIP). The 2015 survey results reveal that colleges continue to be in great need of infrastructure support. This report provides a summary of the survey results including the status of buildings and funding needs, equipment needs, and fundraising efforts of colleges.

2. METHODOLOGY

The 2015 Survey of Institutional Capacity, Facilities and Equipment Needs was conducted amongst CICan's member institutions (n = 135) from May - July 2015. The survey had 89 respondents (66% of member institutions), with representation from British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Newfoundland and Labrador, Prince Edward Island, Nova Scotia, Yukon and the Northwest Territories. To enable

comparative analysis with previous infrastructure surveys in 2011 and 2008, the questions were unchanged. However, new questions were added to reflect current political and economic realities. Figure 1 shows the CICan regional distribution of respondent colleges.

FIGURE 1: DISTRIBUTION OF SURVEY RESPONDENTS BY CICAN REGIONAL CATEGORIES³



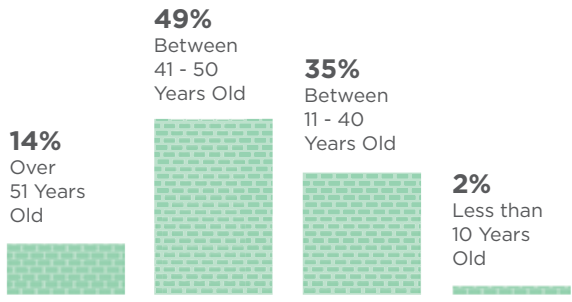
³The regional breakdown is based on CICan's membership list.

3. BUILDINGS AND OPERATING SYSTEMS

3.1. AGE OF BUILDINGS

In 2015, the average age of buildings reported by respondent institutions was between 41 and 50 years old. According to Statistics Canada, the average service life of education buildings is estimated at about 40 years. This means that, in 2015, 63% of respondents' physical infrastructure had passed its useful service life. The average age of buildings on college and institute campuses is similar to 2011, when the average age of infrastructure was estimated at 46 years. In 2008, the average age was estimated at 32 years.

FIGURE 2: AVERAGE AGE OF BUILDINGS



3.2. CONDITION OF BUILDINGS

Colleges were asked to report on the condition of their buildings. Just over half of respondents indicated that their major buildings were in “fair” condition. Less than one third indicated that their buildings were in “good” condition. Fourteen percent indicated that their infrastructure is in “poor” condition. Only 6% reported that their buildings were in “very good” condition.

TABLE 1: CONDITION OF BUILDINGS

Very Good	6%
Good	28%
Fair	51%
Poor	14%
Very poor	1%
Total	100%

⁴Investment Flows and Capital Stocks, Methodology: http://www23.statcan.gc.ca/imdb-bmdi/document/2820_D1_T9_V1_B.pdf

4. THE COST OF DEFERRED MAINTENANCE

The term 'deferred maintenance' refers to maintenance, system upgrades, or repairs that are deferred to a future budget cycle or postponed until funding becomes available. The survey found that the estimated cost of deferred maintenance reported by respondents is \$2.9 billion. When extrapolated to total membership, the estimated cost of deferred maintenance is \$4.1

billion, more than double the amount reported in 2011 (\$1.4B). While deferred maintenance costs have increased significantly, inflation in the cost of construction may also be a contributing factor to this major increase⁵. As indicated in Table 2, at the provincial level, Ontario and British Columbia have the largest deferred maintenance costs.

TABLE 2: ESTIMATE OF THE COST OF DEFERRED MAINTENANCE BY PROVINCE

Province	Amount	%
Ontario	\$953,544,472	33%
British Columbia	\$878,813,000	30%
Alberta	\$294,540,025	10%
Quebec	\$271,392,948	9%
New Brunswick	\$265,000,000	9%
Manitoba	\$119,660,000	4%
Nova Scotia	\$85,000,000	3%
Saskatchewan	\$24,814,000	1%
Newfoundland & Labrador	\$18,000,000	1%
Northwest Territories	\$899,000	0,03%
Total	\$2,911,663,445	100%

4.1. WAITLISTED PROGRAMS

Members were asked to identify programs that are impacted by the backlog of deferred maintenance at their institutions. Twenty-five per cent of college respondents indicated that their programs are impacted by the backlog of deferred maintenance. The condition of the physical infrastructure of these institutions has an impact on institutions' ability to deliver programs and support the learning environment. Many colleges have developed a

triage system to address infrastructure renewal, given that the budget to support aging infrastructure falls short. The survey results indicate that over 10,000 students are currently on waitlists due to issues related to deferred maintenance in programs such as trades, healthcare and engineering technologies.

⁵CAUBO, Deferred Maintenance at Canadian Universities: An Update, May 2014, prepared in collaboration with Sightlines, LLC: http://www.sightlines.com/wp-content/uploads/2014/08/CAUBO_Deferred_Maintenance_2014.pdf

4.2. READY-TO-GO PROJECTS FOR NEW CONSTRUCTION AND DEFERRED MAINTENANCE

“Ready-to-go” projects are infrastructure projects that are fully costed with architectural plans completed. Survey respondents reported a total cost of \$971 million in ready-to-go deferred maintenance projects. In total, 81% of respondent institutions have 458 ready-to-go deferred maintenance projects. For new construction, respondents reported 147 ready-to-projects with

an estimated cost of \$3.5 billion. When this data is extrapolated to the total membership, the value of ready-to-go projects for deferred maintenance and new construction is \$1.6B and \$6B respectively. From 2011 to 2015, ready-to-go projects increased by 15%. Table 3 provides a breakdown by province/territory of deferred maintenance and new construction costs.

TABLE 3: READY-TO-GO PROJECTS FOR NEW CONSTRUCTION AND DEFERRED MAINTENANCE⁶

Province	No. of institutions	Value for deferred maintenance	No. of deferred maintenance projects	Value for new construction	No. of new construction	Grand Total
British Columbia	12	\$243,224,751	70	\$577,986,000	35	\$821,210,751
Alberta	10	\$199,632,211	63	\$1,408,564,465	20	\$1,608,196,676
Saskatchewan	5	\$14,480,340	27	\$350,000	2	\$14,830,340
Manitoba	4	\$4,595,000	6	\$348,430,000	11	\$353,025,000
Ontario	19	\$323,832,464	185	\$926,785,500	54	\$1,250,617,964
Quebec	16	\$126,734,261	69	\$106,625,000	17	\$233,359,261
New Brunswick	2	\$2,790,000	20	-	0	\$2,790,000
Nova Scotia	1	\$43,250,000	10	\$70,000,000	6	\$113,250,000
Newfoundland & Labrador	1	\$10,900,000	5	\$78,000,000	1	\$88,900,000
Northwest Territories	1	\$891,000	2	-	0	\$891,000
Yukon	1	\$500,000	1	\$30,000,000	1	\$30,500,000
	72	\$970,830,027	458	\$3,546,740,965	147	\$4,517,570,992

The survey asked member institutions to report their annual infrastructure budget, broken down into constituent parts for maintenance, renovation and new construction. For fiscal year 2014-2015, respondents reported a total

annual budget for infrastructure renewal of \$496,522,216. As Table 4 shows, new construction represents the largest proportion of the budget at 56%.

TABLE 4: ANNUAL BUDGET FOR INFRASTRUCTURE RENEWAL

Project Type	Budget
Maintenance	\$102,261,606
Renovation	\$114,551,778
New Construction	\$279,708,832
Total	\$496,522,216

⁶This table shows the actual value of ready-to-go projects for new construction and deferred maintenance identified by the respondents.

4.3. KNOWLEDGE INFRASTRUCTURE PROGRAM

When asked whether member institutions would benefit from another KIP, respondents indicated their overwhelming support for such a program. The 2009 KIP invested \$686 million in post-secondary education infrastructure, matched by provincial and territorial governments, together with college and institute reserve funds and donations. KIP generated 246 college/institute projects valued at \$1.8 billion. These investments made a difference but six years on, this investment no longer

supports the capacity and growth required at colleges and institutes to meet the current and future needs of employers.

Colleges and Institutes are eligible to apply to the New Building Canada Fund launched in 2014. Asking how many institutions have applied for this funding, revealed that only 11% of respondent institutions have submitted applications to this fund, for a total amount of \$141.5 million.

4.4. INSTRUCTIONAL EQUIPMENT

Instructional equipment refers to the machinery, shop equipment, simulators and computers which are required to teach a particular skill or program. As shown in Table 5, the highest proportion of respondent institutions, almost two thirds, (61%) reported that instructional equipment is in “fair” condition, whereas one third (31%) reported the condition of equipment to be “good” to “very good”.

TABLE 5: CONDITION OF INSTRUCTIONAL EQUIPMENT

Very good	4%
Good	27%
Fair	61%
Poor	8%

Survey respondents reported that the cost to upgrade instructional equipment is \$531M. When extrapolated to the entire membership, the total estimated cost of upgrading equipment is \$854M, an increase of 84 percent from the 2011 survey. Colleges were asked to report how many of their programs are operating with equipment below current standards and equipment that is state-of-the-art. Over one third (35%) of programs at respondent institutions have equipment that is below current workplace standard

whilst just under a third (29%) of programs operate with state-of-the-art equipment. In 2011, the overall percentage was 22% and 14% respectively. While there has been a welcome increase in the number of programs operating with state-of-the-art equipment since 2011, of concern is the sizeable increase in the number of programs operating with equipment below current standards.

TABLE 6: PROGRAMS OPERATING WITH EQUIPMENT BELOW CURRENT WORKPLACE STANDARD AND WITH STATE OF THE ART EQUIPMENT

Overall percentage	Equipment below standard workplace	With State of the Art Equipment
2011	22%	14%
2015	35%	29%

⁷<https://www.ic.gc.ca/eic/site/ae-ve.nsf/eng/O3523.html>

5. EQUIPMENT DONATIONS

The survey asked members to report on the financial value of equipment donations received from the private sector in the last two fiscal years (2013-14 and 2014-15). Respondents reported that they received approximately \$31M in equipment donations. When extrapolated to the total membership, the total value of private sector

equipment donations is estimated at \$52M. Respondents overwhelmingly agreed (94%) that a federal government tax credit for private sector partners would lead to an increase in equipment donations to colleges and institutes.

Examples of equipment donations include:

- Geomatic Station
- Automotive Technical Equipment
- Used Truck
- Diesel Engine
- Digital Wheelchair platform scale
- Heavy Duty Technician Shop
- Rooftop Video Camera
- AS 350 Helicopter
- Education software
- Used marine engines
- Turbocharger
- Printer
- Brewery Equipment
- Aircraft
- Motorcycle
- Training Vehicle
- Automated External Defibrillator
- Flight Simulator Trainer
- Radiation Therapy software

5.1. FUNDRAISING

Fundraising campaigns have become a necessity for many postsecondary education institutions. The survey revealed that almost half (47%) of respondents have a fundraising campaign underway, a small decrease of 3 percentage points from 2011. Colleges were asked to identify the objectives of their fundraising campaigns. Table 7 summarizes the most frequently cited objectives, with the top three being funding awards, bursaries and scholarships (80%); trade and technology facilities (57%); and addressing deferred maintenance needs (31%).

TABLE 7: INSTITUTION'S FUNDRAISING GOAL (IN ORDER OF PRIORITY)

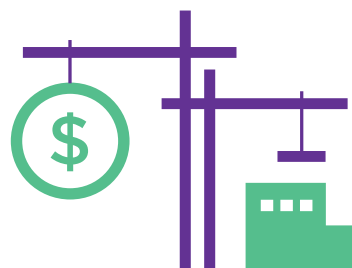
Awards, bursaries, scholarships	80%
Trade and technology facilities	57%
Address deferred maintenance needs	31%
Information technology laboratories	26%
Infrastructure to improve accessibility	23%
Address revenue shortfalls	20%
Infrastructure serving Aboriginal populations	20%

The combined financial goal of respondents' fundraising campaigns is \$536M. When asked to report on the current status of their fundraising campaigns, 19% reported their campaigns achieved their goals, 13% reported that their campaigns surpassed their goals, and over two thirds (68%) fell short of their goals.

6. CONCLUSION

The 2015 Survey of Institutional Capacity, Facilities and Equipment Needs confirms the need for timely, strategic investment in college and institute infrastructure. While accounting for inflation, the costs of both deferred maintenance and new construction at CICan member institutions have increased significantly since the last infrastructure survey in 2011, reflected in the finding that colleges and institutes overwhelmingly support a renewal of the KIP. The impact of under-investment in infrastructure is that many colleges and institutes are at, or near capacity, with waitlists for high demand programs. Furthermore, ongoing investment in instructional equipment is essential to keep up with technological advances in the workplace, in order to ensure that graduates are capable of using

state-of-the-art equipment when they enter the workforce and that college programs continue to meet the needs of employers. Adequate college and institute capacity to provide employers with skilled graduates is key to preparing Canadians for employment, cultivating Canada's talent, and keeping Canada's economy healthy. CIGan will continue to advocate for strategic federal investments in college and institute infrastructure as integral to growing Canada's economic and social success.



APPENDIX 1: LIST OF PARTICIPATING INSTITUTIONS

ALBERTA

Bow Valley College
Grande Prairie Regional College
Keyano College
Lakeland College
Lethbridge College
Medicine Hat College
NorQuest College
Northern Alberta Institute of Technology
Northern Lakes College
Olds College
Portage College
Red Deer College
SAIT Polytechnic

BRITISH COLUMBIA

British Columbia Institute of Technology
Camosun College
College of New Caledonia
College of the Rockies
Douglas College
Justice Institute of British Columbia
Kwantlen Polytechnic University
Langara College
North Island College
Northern Lights College
Northwest Community College
Okanagan College
Selkirk College
University of the Fraser Valley

MANITOBA

Assiniboine Community College
Manitoba Institute of Trades and Technology
Red River College
University College of the North

NEW BRUNSWICK

Collège communautaire du Nouveau-Brunswick
New Brunswick Community College

NEWFOUNDLAND AND LABRADOR

College of the North Atlantic

NOVA SCOTIA

Nova Scotia Community College

NORTHWEST TERRITORIES

Aurora College
Collège nordique francophone

ONTARIO

Algonquin College
Cambrian College
Canadore College
Centennial College
Collège Boréal
Confederation College
Durham College
Fanshawe College
Fleming College
Georgian College
Humber College
Lambton College
La Cité collégiale
Mohawk College
Niagara College
Northern College
Sault College
Seneca College
St. Clair College
St. Lawrence College
The Michener Institute

PRINCE EDWARD ISLAND

Holland College

QUEBEC

Cégep Abitibi-Témiscamingue
Cégep André-Laurendeau
Cégep Champlain-St. Lawrence
Cégep de Drummondville
Cégep de Jonquière

Cégep de la Gaspésie et des Îles
Cégep de La Pocatière
Cégep de l'Outaouais
Cégep de Matane
Cégep de Sept-Îles
Cégep de Sherbrooke
Cégep de Trois-Rivières
Cégep Édouard-Montpetit
Cégep Saint-Jean-sur-Richelieu
Cégep de Saint-Jérôme
Collège Ahuntsic
Collège de Maisonneuve
Collège Lionel-Groulx
Collège Mérici
Collège Montmorency
Collège Shawinigan
Dawson College
Vanier College

SASKATCHEWAN

Carlton Trail College
Cumberland College
Great Plains College
North West College
Parkland College
Saskatchewan Indian Institute of Technologies
Saskatchewan Polytechnic

YUKON

Yukon College