CICan Applied Research Survey, 2021-2022

Reporting Period: April 1, 2021 to March 31, 2022

Welcome to Colleges and Institutes Canada's (CICan) biennial survey on applied research activity undertaken by Canadian colleges, institutes, polytechnics and cégeps.

The information collected will enable CICan to highlight to the federal government, stakeholders and the public the valuable applied research activities conducted by colleges and institutes. The information will be used to support advocacy with the federal government for increased investments in college and institute applied research, and to respond to federal government consultations and various information requests.

For an optimal survey experience, we recommend you have information related to the following topics close at hand before starting the survey:

- Applied research centres;
- Products, processes, prototypes and services produced by your institution;
- Applied research funding, including sources of funding
- Numbers of faculty and students involved in applied research;
- Information related to applied research partnerships.

You can also <u>download the survey</u>, as well as the <u>definitions</u> used throughout in PDF format.

We also invite you to consult the results of the 2019-20 survey on our website.

Please note that you may save your work at any time and return to complete the survey later.

The deadline to complete the survey is **September 30, 2022**.

Clicking on words in purple throughout the survey will pop up the relevant definitions.

Data for Quebec Cégeps

For cégeps who have a Centre collégial de transfert technologique (CCTT), please do not provide data related to the CCTT as this will be provided by Synchronex. For the questions that follow, we would greatly appreciate receiving data about your cégep's other research **activities and centres not related to a CCTT**.

There are 28 questions in this survey

Section A: Contact Information

Please select your institution's name from the options below. $\ensuremath{^*}$

Choose one of the following answers

Please choose only one of the following:

Include the contact information for a person who is knowledgeable about your institution's responses to this survey and who could provide further details if required (e.g. Director of Applied Research or similar). *

Name Title

Telephone

Email

Province/Territory *

Choose one of the following answers

Please choose only one of the following:

Does your institution have a CCTT?

Only answer this question if the following conditions are met: Answer was 'Quebec' at question '3 [Q2a]' (Province/Territory)

Please choose only one of the following:

- O Yes
- O No

Is your institution involved in applied research activities that are not CCTT related?

Only answer this question if the following conditions are met: Answer was 'Yes' at question '4 [Q3a]' (Does your institution have a CCTT?)

Please choose only one of the following:

- O Yes
- O No

Section B: Applied Research Capacity

Select areas in which your institution engaged in **applied research and development**.

Areas are derived from the <u>North American Industry Classification</u> <u>System (NAICS) Canada 2017.</u> Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages.

You may list up to three additional areas of research and development at the bottom of the page.

Please select all areas that apply.

Only answer this question if the following conditions are met: Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Comment only when you choose an answer.

Please choose all that apply and provide a comment:

- Agriculture
- Forestry, fishing and hunting
- Mining, quarrying, and oil and gas extraction
- Utilities
- Construction
- Food and beverage manufacturing
- Textile and clothing manufacturing
- Materials and chemicals manufacturing
- Machinery
- Computer and electronic
 - manufacturing
- Transportation equipment
 manufacturing
- All other manufacturing
- Wholesale trade
- Retail trade
- Transportation and warehousing

- Information and cultural industries
- Finance and insurance
- Real estate and rental and leasing
- Management of companies and enterprises
- Administrative and support services
- Waste management and remediation services
- Educational services
- Health care
- Social assistance
- Arts, entertainment and recreation
- Accommodation and food services
- Public administration
- Repair and maintenance
- Other
- Other
- Other

Please ignore the text boxes unless you are adding "Other" fields.

Section B: Applied Research Capacity

The available answers for the following questions are determined by the areas that are selected in the previous section. You may return there using the "previous" button on the bottom of this page at any time to change your selections.

[]

Identify the number of **applied research projects** undertaken at your institution per area. If applicable also indicate the number of **"green projects"** that enhance positive environmental impacts of individual and collective activity or reduce environmental impacts.

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in these fields. Each answer must be at least 0

Only answer this question for the items you selected in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Only answer this question for the items you did not select in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Number of applied
research projects

Number of green projects

Agriculture Forestry, fishing and hunting

Mining, quarrying, and oil and gas extraction

Utilities

Construction

Food and beverage manufacturing

Textile and clothing manufacturing

Materials and chemicals manufacturing

Machinery

	Number of applied research projects	Number of green projects
Computer and electronic manufacturing	1 5	1 0
Transportation equipment manufacturing		
All other manufacturing+-		
Wholesale trade		
Retail trade		
Transportation and warehousing		
Information and cultural industries		
Finance and insurance		
Real estate and rental and leasing		
Management of companies and enterprises		
Administrative and support services		
Waste management and remediation services		
Educational services		
Health care		
Social assistance		
Arts, entertainment and recreation		
Accommodation and food services		
Public administration		
Repair and maintenance		
{Q4a_SQ029comment.shown}		

Number of applied research projects

Number of green projects

{Q4a_SQ030comment.shown}

{Q4a_SQ031comment.shown}

You may leave your answer blank if the question is not applicable.

Identify the <u>total</u> number of research projects conducted by your institution in 2021-22?

Only answer this question if the following conditions are met: ((Q3b.NAOK != "N"))

Only numbers may be entered in this field.

Please write your answer here:

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Section B: Applied Research Capacity

The available answers for the following questions are determined by the areas that are selected in the previous section. You may return there using the "previous" button on the bottom of this page at any time to change your selections.

Identify the number of **research centres** per area.

Only answer this question if the following conditions are met: Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in these fields. Each answer must be at least 0

Only answer this question for the items you selected in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

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Agriculture Forestry, fishing and hunting Mining, quarrying, and oil and gas extraction Utilities Construction Food and beverage manufacturing Textile and clothing manufacturing Materials and chemicals manufacturing Machinery Computer and electronic manufacturing Transportation equipment manufacturing All other manufacturing Wholesale trade Retail trade Transportation and warehousing Information and cultural industries Finance and insurance Real estate and rental and leasing Management of companies and enterprises Administrative and support services Waste management and remediation services Educational services

Health care

Social assistance

Arts, entertainment and recreation

Accommodation and food services

Public administration

Repair and maintenance

{Q4a_SQ029comment.shown}

{Q4a_SQ030comment.shown}

{Q4a_SQ031comment.shown}

You may leave your answer blank if the question is not applicable.

If applicable, provide the name of one research centre per area together with web links (if available).

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only answer this question for the items you selected in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Only answer this question for the items you did not select in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Name of Research Centre Web Link

Agriculture Forestry, fishing and hunting

Mining, quarrying, and oil and gas extraction

Utilities

Construction

Food and beverage manufacturing

Textile and clothing manufacturing

Materials and chemicals manufacturing

Machinery

Computer and electronic manufacturing

Transportation equipment manufacturing

All other manufacturing

Wholesale trade

Retail trade

Transportation and warehousing

Information and cultural industries

Finance and insurance

Real estate and rental and leasing

Management of companies and enterprises

Administrative and support services

Waste management and remediation services

Educational services

Health care

Social assistance

Arts, entertainment and recreation

Accommodation and food services

Public administration

Repair and maintenance

{Q4a_SQ029comment.shown}

{Q4a_SQ030comment.shown}

{Q4a_SQ031comment.shown}

You may leave your answer blank if the question is not applicable.

Indicate the total number of research centres at your institution.

Only answer this question if the following conditions are met: ((Q3b.NAOK != "N"))

Only numbers may be entered in this field.

Please write your answer here:

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Section B: Applied Research Capacity

The available answers for the following questions are determined by the areas that are selected in the previous section. You may return there using the "previous" button on the bottom of this page at any time to change your selections.

Identify the number of **research labs / specialized research facilities** per area.

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in these fields. Each answer must be at least 0

Only answer this question for the items you selected in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.') Only answer this question for the items you did not select in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Agriculture Forestry, fishing and hunting

Mining, quarrying, and oil and gas extraction

Utilities

Construction

Food and beverage manufacturing

Textile and clothing manufacturing

Materials and chemicals manufacturing

Machinery

Computer and electronic manufacturing

Transportation equipment manufacturing

All other manufacturing

Wholesale trade

Retail trade

Transportation and warehousing

Information and cultural industries

Finance and insurance

Real estate and rental and leasing

Management of companies and enterprises

Administrative and support services

Waste management and remediation services

Educational services

Health care

Social assistance

Arts, entertainment and recreation

Accommodation and food services

Public administration

Repair and maintenance

{Q4a_SQ029comment.shown}

{Q4a_SQ030comment.shown}

{Q4a_SQ031comment.shown}

You may leave your answer blank if the question is not applicable.

If applicable, provide the name of one lab or specialized research facility per area.

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only answer this question for the items you selected in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Only answer this question for the items you did not select in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Agriculture Forestry, fishing and hunting Mining, quarrying, and oil and gas extraction Utilities Construction Food and beverage manufacturing Textile and clothing manufacturing Materials and chemicals manufacturing Machinery Computer and electronic manufacturing Transportation equipment manufacturing All other manufacturing Wholesale trade Retail trade Transportation and warehousing Information and cultural industries Finance and insurance Real estate and rental and leasing Management of companies and enterprises Administrative and support services Waste management and remediation services Educational services Health care Social assistance

Arts, entertainment and recreation

Accommodation and food services

Public administration

Repair and maintenance

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{Q4a_SQ030comment.shown}

{Q4a_SQ031comment.shown}

You may leave your answer blank if the question is not applicable.

Indicate the total number of labs at your institution.

Only answer this question if the following conditions are met: ((Q3b.NAOK != "N"))

Only numbers may be entered in this field.

Please write your answer here:

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Section C: Partnerships

The available answers for the following questions are determined by the areas that are selected in the previous section. You may return there using the "previous" button on the bottom of this page at any time to change your selections.

Identify the number of **distinct partners** per area:

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in these fields. Each answer must be at least 0

Only answer this question for the items you selected in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Only answer this question for the items you did not select in question Q4a ('Select areas in which your institution engaged in applied research and development. Applied research is undertaken in order to apply new knowledge, directed primarily towards a specific practical aim or objective. Areas are derived from the North American Industry Classification System (NAICS) Canada 2017. Clicking on relevant boxes will enable you to answer more targeted questions on the subsequent pages. You may list up to three additional areas of research and development at the bottom of the page. Please select all areas that apply.')

Agriculture	Private Sector SMEs (< 500 employee s)	Private Sector Large Enterpris es (> 500 employee s)	Governme nt.	Not- for- prof it	Internatio nal
Forestry, fishing and hunting					
Mining, quarrying, and oil and gas extraction					
Utilities					
Construction					

	Private Sector SMEs (< 500 employee s)	Private Sector Large Enterpris es (> 500 employee s)	Governme nt.	Not- for- prof it	Internatio nal
Food and beverage manufacturing					
Textile and clothing manufacturing					
Materials and chemicals manufacturing					
Machinery					
Computer and electronic manufacturing					
Transportation equipment manufacturing					
All other manufacturing					
Wholesale trade					
Retail trade					
Transportation and warehousing					
Information and cultural industries					
Finance and insurance					
Real estate and rental and leasing					
Management of companies and enterprises					

	Private Sector SMEs (< 500 employee s)	Private Sector Large Enterpris es (> 500 employee s)	Governme nt.	Not- for- prof it	Internatio nal
Administrative and support services					
Waste management and remediation services					
Educational services					
Health care					
Social assistance					
Arts, entertainment and recreation					
Accommodation and food services					
Public administration					
Repair and maintenance					
{Q4a_SQ029comment.sh own}					
{Q4a_SQ030comment.sh own}					
{Q4a_SQ031comment.sh own}					

You may leave your answer blank if the question is not applicable.

Identify the number of **distinct partners**, organized by the identity group of the partner's leadership:

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in these fields.

Private Sector SMEs (< 500 employees)	Total Distinct	Women	Indigenous	Black or Persons of Colour
Private Sector Large Enterprises				
(> 500 employees)				
Government				
Not-for-profit				
International				

Section D: Funding

Report all funding information for applied research and development activities at your institution from April 1, 2021 - March 31, 2022.

What was the **core budget** of your applied research office (in dollars \$) for the survey period?

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in this field. Only whole numbers (no decimals or commas) may be entered in this field.

Please write your answer here:

Please indicate the total funding (in dollars \$) your institution allocated for release time to support faculty involved in applied research during the reporting period.

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in this field. Only whole numbers (no decimals or commas) may be entered in this field.

Please write your answer here:

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Section D: Funding

Report all funding information for applied research and development activities at your institution from April 1, 2021 - March 31, 2022.

Identify funding received from all levels of **government**.

(federal, provincial/territorial and municipal).

Please EXCLUDE funding received from the Tri-Council College and Community Innovation Program (managed by National Sciences and Engineering Research Council), Social Sciences and Humanities Research Council, Canadian Institutes of Health Research, Canadian Foundation for Innovation and National Research Council - Industrial Research Assistance Program. This data will be provided directly by these organizations.

Only answer this question if the following conditions are met: Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

1.	Level of Government	Name of Ministry or Department	Name of Grant, Fund, Program	Funding received in \$
2.				
3.				
4.				
5.				

	Level of Government	Name of Ministry or Department	Name of Grant, Fund, Program	Funding received in \$
6.		-		
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				

Enter an amount to reveal a new line

Identify financial and in-kind contributions from:

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in these fields. Only whole numbers (no decimals or commas) may be entered in these fields.

Financial Contribution in \$

In-kind Contribution in \$

SMEs Large Enterprises

Identify financial and in-kind contributions from not-for-profit organizations:

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

	Name of Organization	Financial Contribution in \$	In-kind Contribution in \$
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Enter the name of an organization to reveal a new line

Identify financial and in-kind contributions from international organizations:

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

1.	Name of International Organization	Country	Financial Contribution in \$	In-kind Contribution in \$
2.				
3.				
4.				
5.				
6.				
7.				

	Name of International Organization	Country	Financial Contribution in \$	In-kind Contribution in \$
8.				
9.				
10.				

Enter the name of an organization to reveal a new line

Identify any other financial or in-kind contributions:

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

	Source of Contribution	Financial Contribution in \$	In-kind Contribution in \$
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Enter the name of an organization to reveal a new line.

Section E: Research Results

Identify the number of new/improved prototypes, products, processes, services and derived enterprises completed or launched from applied research projects and the timelines from inception to completion.

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in these fields.

Completed in less than 6 months Completed between 6 months and 1 year

Example 3

Completed in over 1 year

Prototypes Products

Processes

Services

Derived Enterprises

You may leave your answer blank if the question is not applicable.

Provide up to three examples of new/improved prototypes, products, processes and services which were **completed in less than one year**, as well as up to three derived enterprises launched as a result of your applied research activities.

Only answer this question if the following conditions are met: Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Example 1 Example 2 Prototype(s) Product(s) Process(s) Example 1 Example 2 Example 3

Service(s)

Derived Enterprise(s)

You may leave your answer blank if the question is not applicable.

Section F: Professional Capacity

For the following questions, report the total number of people involved for 2021-2022 (not Full-Time-Equivalent count).

How many **teaching staff** participated in applied research activities?

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in this field.

Please write your answer here:

How many **research staff** participated in applied research activities?

Only answer this question if the following conditions are met: ((Q3b.NAOK != "N"))

Only numbers may be entered in this field.

Please write your answer here:

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How many **non-teaching/non-research staff** participated in applied research activities?

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in this field.

Please write your answer here:

•

Section G: Student and Entrepreneurial Capacity

For the following questions, please report the number of people involved for 2021-2022 (not Full-Time-Equivalent count). []Indicate the total number of unique students involved in applied research activities by how they identify.

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Only numbers may be entered in these fields.

Total	Total	Paid	Unpaid	Entrepreneurial Activities	Recent Graduates
Women					
Indigenous Peoples					
Members of visible minority groups					
Persons with disabilities					
Members of LGBT2+ communities					

Recognizing that some students might have paid and unpaid involvement in applied research activities, and may also be involved in entrepreneurial activities. If you do not collect data on students' self-identification, please just provide summary (i.e. "total") data. If you have any questions or need clarification, please reach out to DataSupport@collegesinstitutes.ca.

Comments

[]Any additional comments?

Only answer this question if the following conditions are met:

Answer was NOT 'No' at question '5 [Q3b]' (Is your institution involved in applied research activities that are not CCTT related?)

Please write your answer here:

Thank you for taking the time to complete our survey!

Submit your survey. Thank you for completing this survey.