2023 Innovation Fund competition: By the numbers

March 2024

INNOVATION
Canada Foundation for Innovation
Fondation canadienne pour l'innovation

Table of contents

About the Canada Foundation for Innovation

With a bold, future-looking mandate, the Canada Foundation for Innovation equips researchers to be global leaders in their fields and to respond to emerging challenges. Our investments in state-of-the-art tools, instruments and facilities at universities, colleges, research hospitals and non-profit research institutions underpin both curiosity- and mission-driven research that cuts across disciplines and bridges all sectors. The research infrastructure we fund mobilizes knowledge, spurs innovation and commercialization, and empowers the talented minds of a new generation.

The Canada Foundation for Innovation acknowledges that its office is located on the Traditional Territory of the Algonquin Anishinaabe people.

What is the purpose of the Innovation Fund?

Research infrastructure projects funded through the Canada Foundation for Innovation's (CFI) Innovation Fund help Canada remain at the forefront of exploration and knowledge generation while making meaningful contributions to generating social, health, environmental and economic benefits and addressing global challenges.

What were the objectives of the 2023 Innovation Fund competition?

The objectives of the 2023 Innovation Fund competition were to:

- Enable internationally competitive research or technology development through the equitable participation of expert team members
- Enhance and optimize the capacity of institutions and research communities to conduct the proposed research or technology development program(s) over the useful life of the infrastructure
- Lead to social, health, environmental and/or economic benefits for Canadians

What was the competition timeline and review process?

The CFI released the draft call for proposals for the 2023 Innovation Fund competition in October 2021 and launched the competition with the final call for proposals in November 2021. Notices of intent were due in February 2022 and proposals were due in July of that year.

Proposals underwent three stages of review to ensure a fair, competitive, transparent and in-depth process. Between September 2022 and January 2023, 116 Expert Committees reviewed small groups of proposals from the same area of research to assess their strengths and weaknesses in relation to the assessment criteria for the competition. Only proposals that the Expert Committees found to meet the competition's threshold of excellence advanced to the Multidisciplinary Assessment Committees (MACs).

In March 2023, 13 MACs reviewed groups of proposals for research infrastructure projects of similar size and/or complexity and assessed them against the competition objectives.

In May 2023, a Special Multidisciplinary Assessment Committee (S-MAC) reviewed reports for the proposals that the MACs had recommended for funding to make sure the committees were consistent in their assessment. Since recommendations from the MACs exceeded the available budget, the S-MAC recommended to the CFI Board of Directors the proposals that best supported the CFI's mandate, met the objectives of the competition and represented the most beneficial portfolio of investments for Canada.

Final funding decisions were made by the CFI Board of Directors in June 2023.

Figure 1: Competition timeline
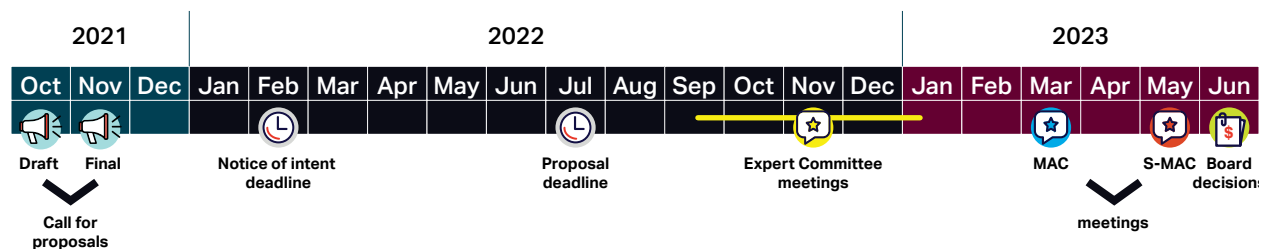
What were the results of the competition?

297 proposals were submitted to the 2023 Innovation Fund competition. Each of these was assessed by Expert Committees during the first stage of the review process. 57 proposals did not meet the threshold to advance to the MACs. The MACs recommended 116 proposals for funding. These represented a CFI investment of $460 million, which exceeded the competition budget. The S-MAC suggested 100 proposals for the CFI Board of Directors to approve for funding, which they did. This represents an investment by the CFI of $392 million in research infrastructure at 32 research institutions across Canada. In addition, $689 million was leveraged in matching funds from private-sector, provincial and other partners to bring the overall investment to $1.1 billion in support of Canada's research community.
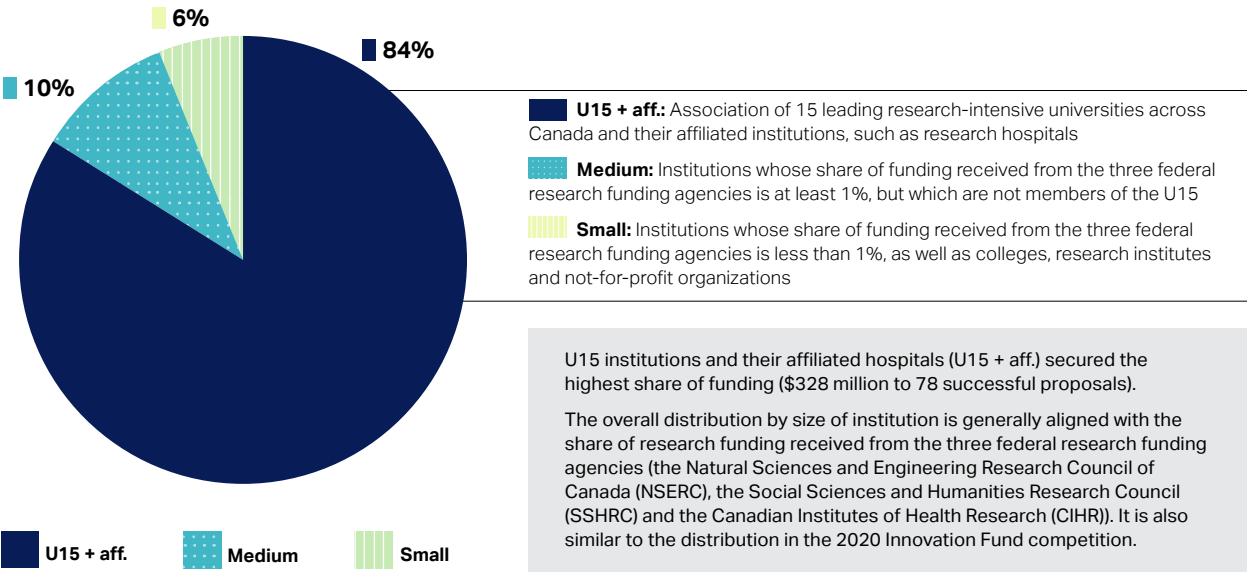
In the analyses shown in this report, the success rate is the number of awards versus the number of proposals submitted, and the funding rate is the amount awarded versus the amount requested.

**Figure 2:** Overview of the 2023 Innovation Fund competition results
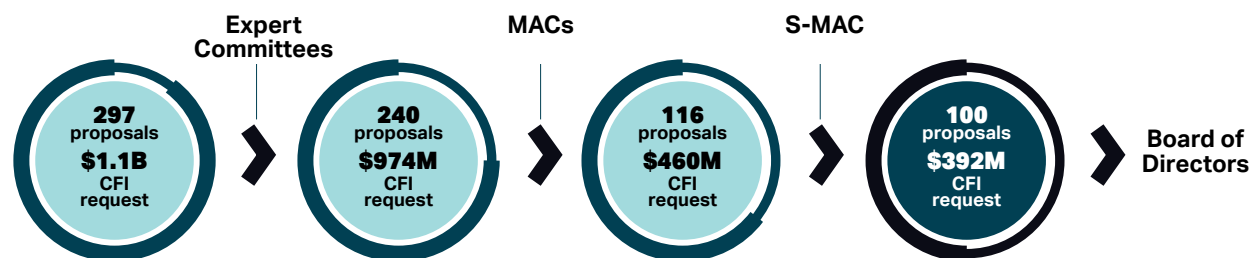
Results by size of institution

Figure 3: Percentage of total amount awarded by size of institution

- **6%**
- **10%**
- **84%**

U15 + aff.: Association of 15 leading research-intensive universities across Canada and their affiliated institutions, such as research hospitals

Medium: Institutions whose share of funding received from the three federal research funding agencies is at least 1%, but which are not members of the U15

Small: Institutions whose share of funding received from the three federal research funding agencies is less than 1%, as well as colleges, research institutes and not-for-profit organizations

■ U15 + aff.   Medium   Small

U15 institutions and their affiliated hospitals (U15 + aff.) secured the highest share of funding ($328 million to 78 successful proposals).

The overall distribution by size of institution is generally aligned with the share of research funding received from the three federal research funding agencies (the Natural Sciences and Engineering Research Council of Canada (NSERC), the Social Sciences and Humanities Research Council (SSHRC) and the Canadian Institutes of Health Research (CIHR)). It is also similar to the distribution in the 2020 Innovation Fund competition.

Figure 4: Success rates by size of institution in competitions since 2015

■ U15 + aff.   Medium   Small
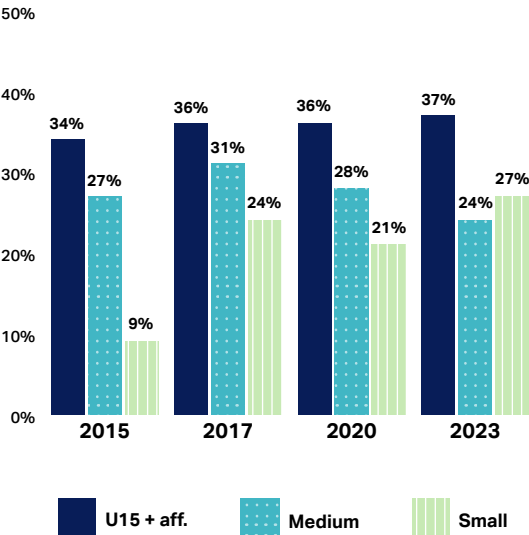
Figure 5: Funding rates by size of institution in competitions since 2015


■ U15 + aff.   Medium   Small
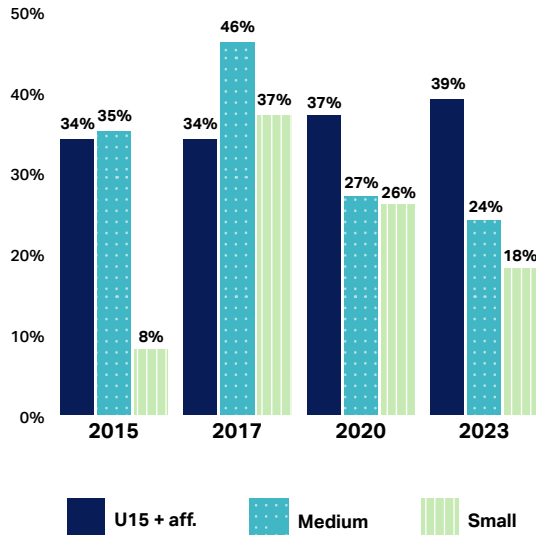
The success rate of U15 institutions and their affiliated hospitals was higher than for medium and small institutions in the 2023 competition. This is in keeping with previous competitions. The funding rate of those institutions has also generally been higher since the 2020 competition.

Small institutions have experienced a boost in success rate since the 2017 competition. This is the result of the introduction of MACs that specifically review proposals from small institutions.

The number of proposals from institutions other than U15 institutions and their affiliates is generally small (11 awards for medium and small institutions in the 2023 competition). Consequently, decisions on a few high-value proposals will have a considerable impact on the funding rates and will lead to greater variations across competitions.

Results by region

Figure 6: Percentage of total amount awarded by region

- **Atlantic provinces** — 3%
- **Ontario** — 42%
- **Quebec** — 28%
- **Western provinces** — 27%
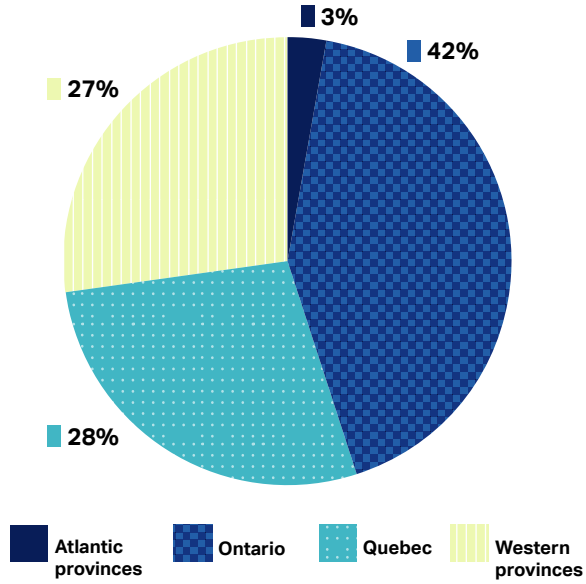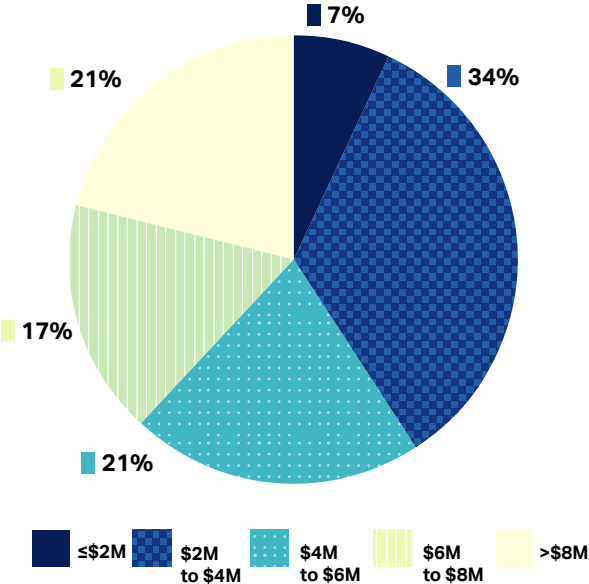
Figure 7: Success and funding rates by region
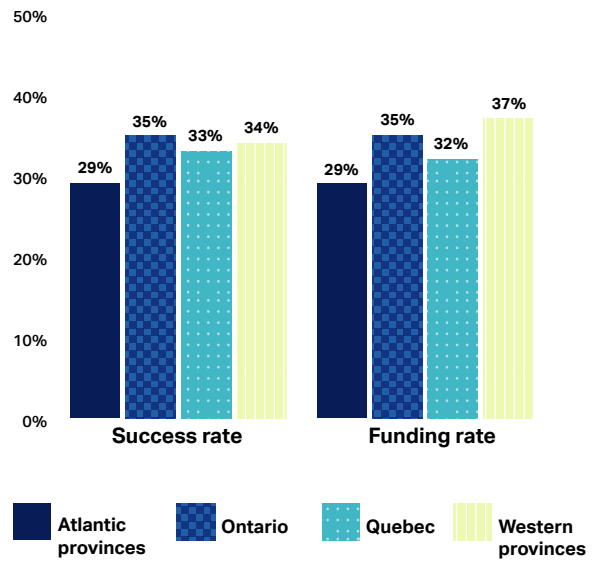
In the 2023 competition, Ontario received $166 million, which represents the highest share (42%) of the total CFI investment among regions. The distribution of the amount awarded by region is similar to the results of the 2020 competition and aligns with the overall distribution of funding from the three federal research funding agencies.

42% of the CFI investment in the Western provinces went to British Columbia, while 94% of the CFI investment in the Atlantic provinces went to Nova Scotia.
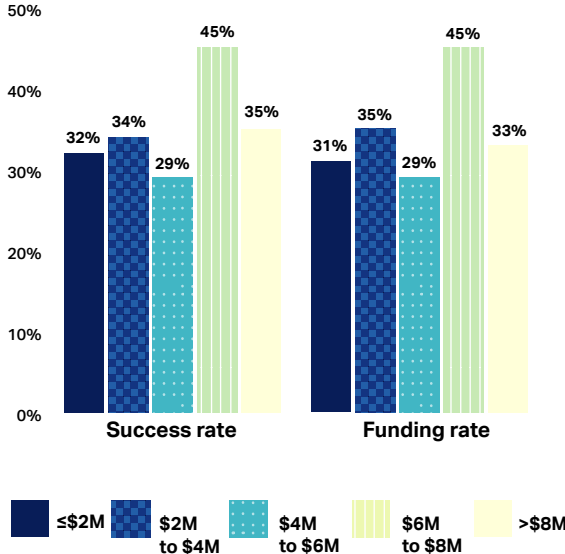
Success rates were similar to funding rates across regions.

Results by size of proposal

Figure 8: Percentage of total amount awarded by size of proposal

Figure 9: Success and funding rates by size of proposal

The amounts awarded to successful proposals in the 2023 competition range from $400,000 to $18 million, with an average of $3.9 million. These results were similar to the 2020 competition. Proposals requesting between $2 million and $4 million from the CFI received the highest share of funding ($133 million, or 34% of the total).

Although only 8% of proposals requested more than $8 million, that category accounts for 21% ($83 million) of the total CFI investment.

Success and funding rates both ranged between 29% and 35%, except in the instance of proposals requesting between $6 million and $8 million. Success and funding rates in this range were slightly higher (45%). This category comprises the smallest number of proposals. Success rates of smaller proposals (requesting less than $2 million) went from 24% in the 2020 competition to 32% in the 2023 competition.

# Results by field of research and socioeconomic objective

The Canadian Research and Development Classification (CRDC) provides a common approach to classifying research projects across institutions and governments. Using the CRDC, researchers self-classify their projects by fields of research (FOR) and by socioeconomic objectives (SEO). An FOR describes the type of research, while an SEO corresponds to the benefits the research generates. In the following analyses, researchers' selections of both FOR and SEO were grouped into the broad sectors of health, natural sciences and engineering (NSE), and social sciences and humanities (SSH) for reporting purposes. The results presented here only refer to the researchers' primary selections.

Figure 10: Percentage of total amount awarded by field of research (FOR)
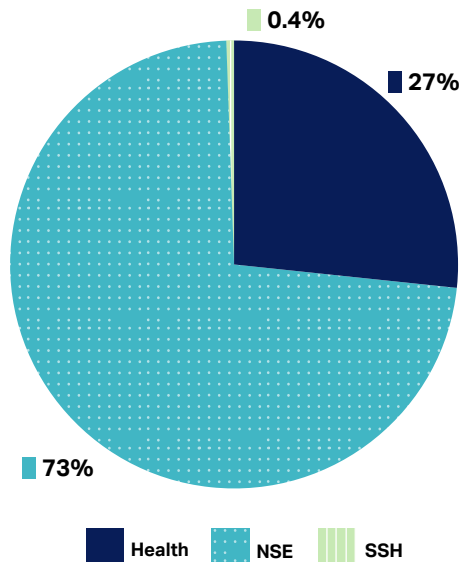
Figure 11: Success and funding rates by field of research (FOR)
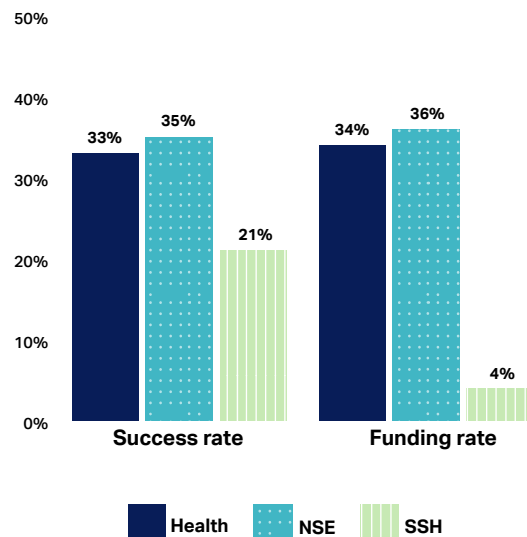

The majority (73% or $285 million) of the total CFI investment made through the 2023 competition is associated with successful proposals where the primary field of research is in natural sciences and engineering (NSE). Conversely, only a small fraction (0.4% or $1.7 million) of successful proposals relates to social sciences and humanities (SSH).

While the success and funding rates for proposals in health and NSE were around 35% in the 2023 competition, those of proposals in SSH were considerably lower (21% and 4% respectively). However, the success rate for the latter was much more sensitive as the sample size is small (14 proposals were submitted, three of which were successful). This same effect is compounded for funding rate where the sample includes some high-value proposals. For example, proposals in SSH had similar success rates in the 2020 and 2023 competitions (18% and 21%) but completely different funding rates (42% and 4%) thanks to the funding of a couple of high-value proposals.

Figure 12: Percentage of total amount awarded by socioeconomic objective (SEO)

- Health — 53%
- NSE — 47%
- SSH — 0.2%
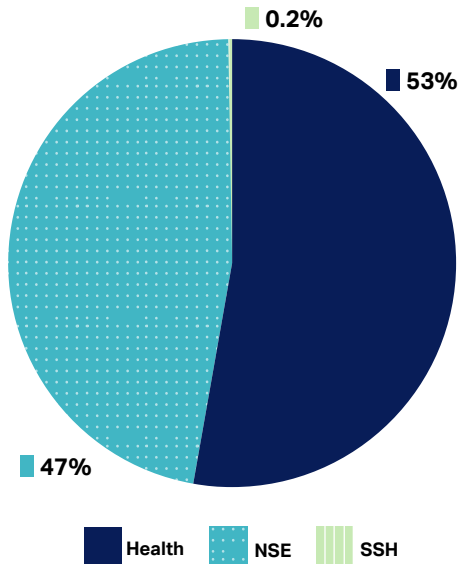
Figure 13: Success and funding rates by socioeconomic objective (SEO)

|	Health	NSE	SSH
Success rate	34%	34%	20%
Funding rate	35%	34%	5%
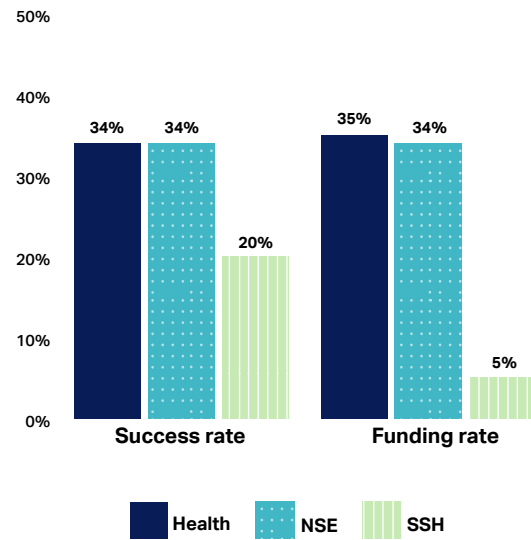
By comparing figures 10 and 12, we observe that although the majority of proposals were in FORs in NSE, this does not carry through to SEOs where health was the majority sector. This switch from an FOR in NSE to an SEO in health was particularly evident in the biological sciences, chemical sciences and medical and biomedical engineering. This is likely indicative of the multidisciplinary nature of several proposals.

Success and funding rates for the different sectors of SEOs follow a pattern similar to that of FORs with the success and funding rates for proposals in health and NSE around 35% and those of proposals in SSH considerably lower, especially for the funding rate.

Results by single versus multi-institutional projects

Figure 14: Percentage of total amount awarded for multi-institutional and single institution proposals

- 36% ■ Multi-institutional
- 64% Single institution
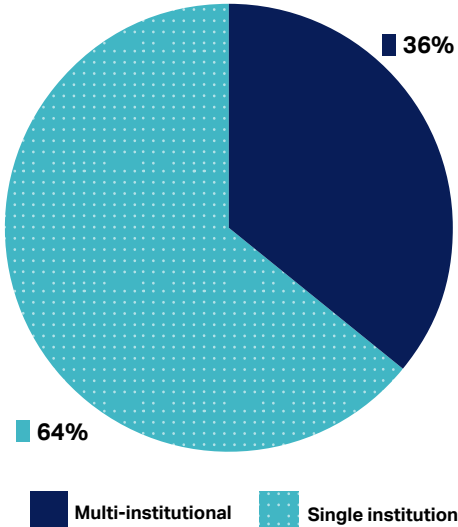
Figure 15: Success and funding rates for multi-institutional and single institution proposals


■ Multi-institutional Single institution
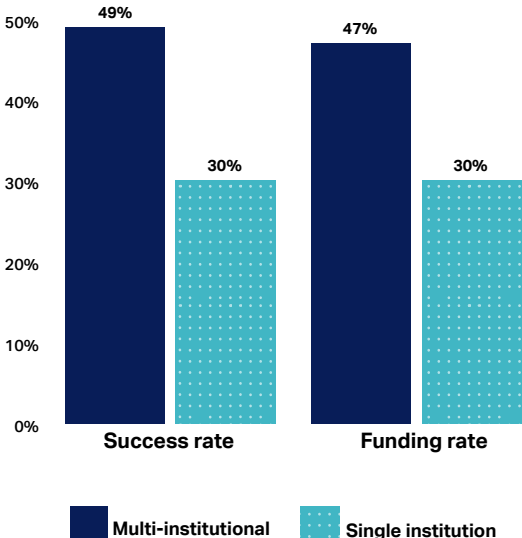
A multi-institutional proposal brings together two or more CFI-eligible collaborating institutions (in addition to the administrative institution) that will each house part of the infrastructure and/or pool resources.

Proposals that were funded and that involved a single institution received the majority of the total investment CFI made through the 2023 competition ($250 million or 64%). This is a slight decrease from the 2020 competition ($264 million or 67%).

However, multi-institutional proposals had significantly higher success and funding rates.

Results by integration into a core facility

Figure 16: Percentage of total amount awarded by whether or not the research infrastructure will be integrated into a core facility

- 42%
- 58%

■ In core facility ⬚ Not in core facility
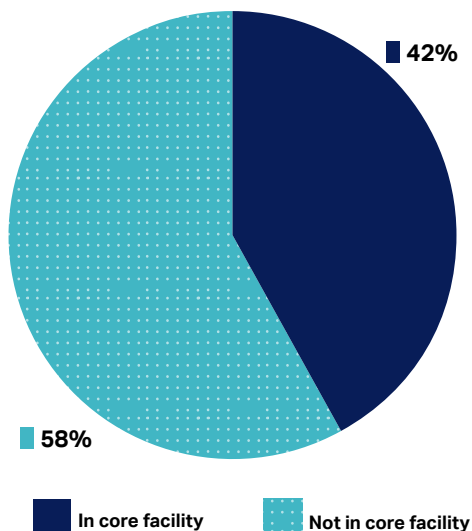
A core facility provides research services, analyses and access to instruments, technology and expertise that are used by many investigators, but that are generally too expensive, complex or specialized for investigators to cost-effectively manage on their own. Out of the 100 successful proposals in the 2023 competition, 51 indicated that some or all of the research infrastructure requested would be integrated into a core facility.

The percentage of the total CFI investment in each of those 51 successful proposals that will go to research infrastructure in a core facility varies between 4% and 100% (with an average of 79%).

Overall, this represents an estimated CFI investment of $167 million in core facilities, which represents approximately 42% of the total CFI investment made through the 2023 competition. This is a slight decrease from the 2020 competition, when that amount was $204 million.

Results by research team leadership

Figure 17: Percentage of total amount awarded by number of team leaders

- 16%
- 84%

■ One team leader ⬚ Two team leaders
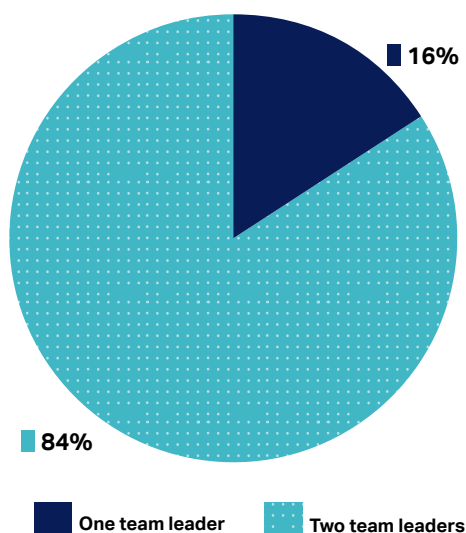
Figure 18: Success and funding rates by number of team leaders

■ One team leader ⬚ Two team leaders
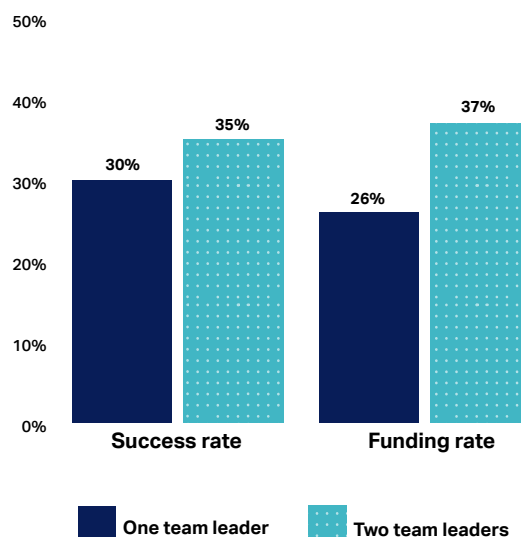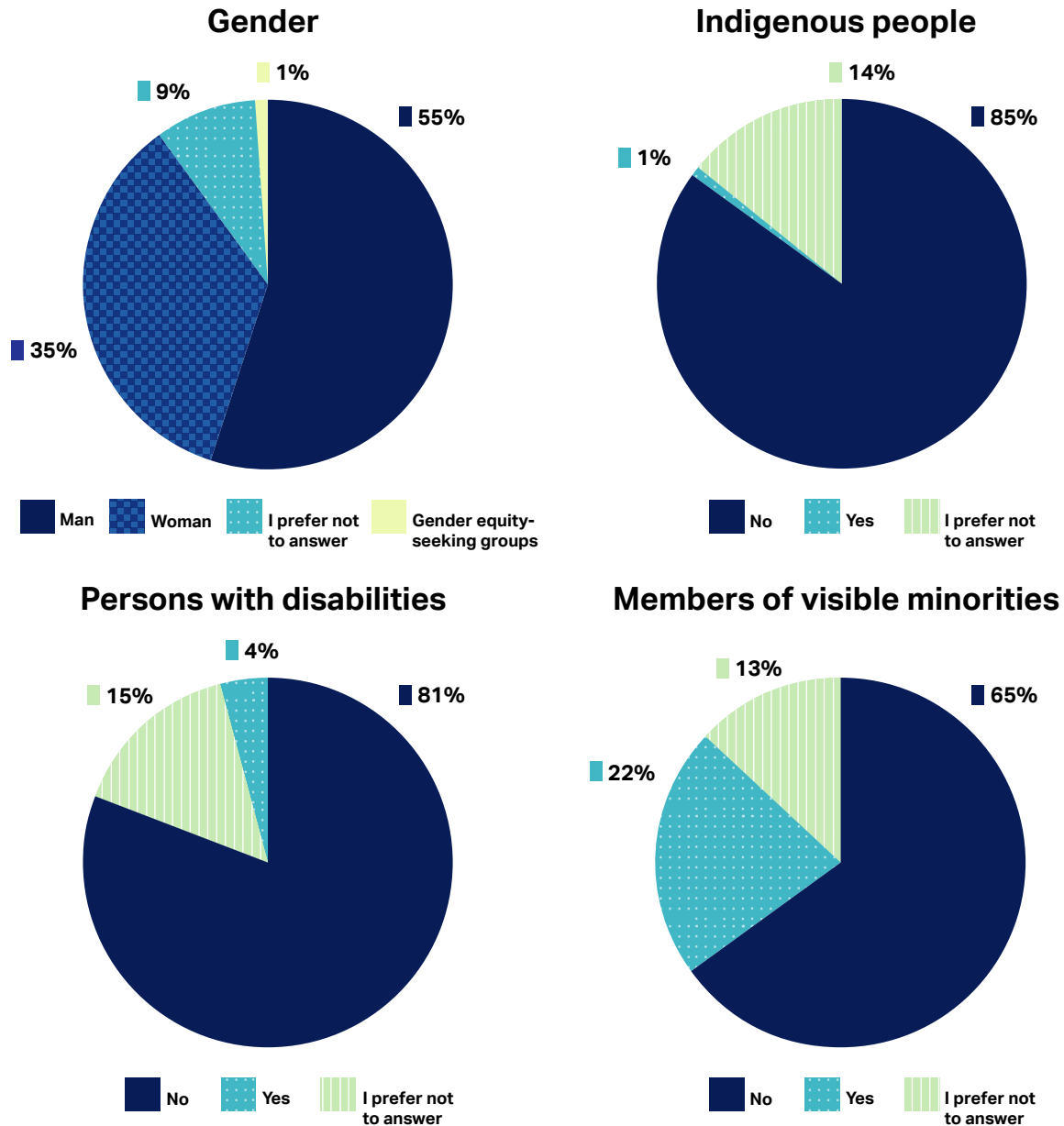
The option to name two team leaders on a proposal was implemented in 2020 to promote diversity in team leadership.

In the 2023 competition, 84% ($330 million) of the CFI investment was awarded to proposals with two team leaders. This represents an increase of 9% from the 2020 competition.

Proposals with two team leaders had higher success and funding rates. This is similar to the results of the 2020 competition.

Results by gender and representation of Indigenous people, persons with disabilities and members of visible minorities

Figure 19: Distribution of team members by gender and representation of Indigenous people, persons with disabilities and members of visible minorities

Gender

- 1%
- 9%
- 55%
- 35%

Legend: Man | Woman | I prefer not to answer | Gender equity-seeking groups

Indigenous people

- 14%
- 1%
- 85%

Legend: No | Yes | I prefer not to answer

Persons with disabilities

- 4%
- 15%
- 81%

Legend: No | Yes | I prefer not to answer

Members of visible minorities

- 13%
- 22%
- 65%

Legend: No | Yes | I prefer not to answer

The proportion of the total number of team members listed on all succesful proposals (983) who self-identified as a woman, a member of a gender equity-seeking group, an Indigenous person, a person with a disability or a member of a visible minority is generally aligned with the proportions of these groups among Canadian faculty according to Statistics Canada.

Compared with the results of the 2020 competition, the percentage of women (31% in 2020 and 35% in 2023), persons with disabilities (1.5% in 2020 and 4% in 2023), and members of visible minorities (17% in 2020 and 22% in 2023) slightly increased, while the percentage of Indigenous people stayed approximately the same (1%).

Similar proportions were observed when considering all of the 297 successful and unsuccessful proposals submitted to the 2023 competition, suggesting there was no apparent bias in the review process.

Results by career stage

Figure 20: Distribution of team members listed in successful proposals by career stage

Legend: Not ECR | ECR | Not applicable

4%
18%
78%
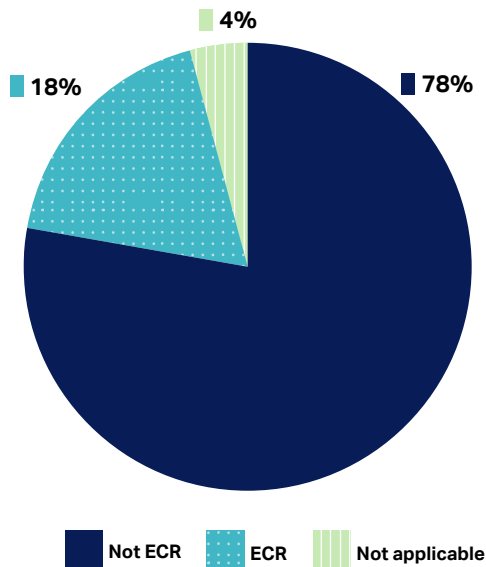
An early-career researcher (ECR) is defined as a researcher who is within five years of the date of their first independent research-related appointment.

18% of individuals listed as team members on successful proposals are early-career researchers. This is a 5% increase from the 2020 competition. Overall, 86% of successful proposals had at least one early-career researcher as a team member (ranging from one to five per proposal).

Results by language of proposal

Figure 21: Success and funding rates by language of proposal

Legend: English | French

Success rate: 33%, 55%
Funding rate: 34%, 49%
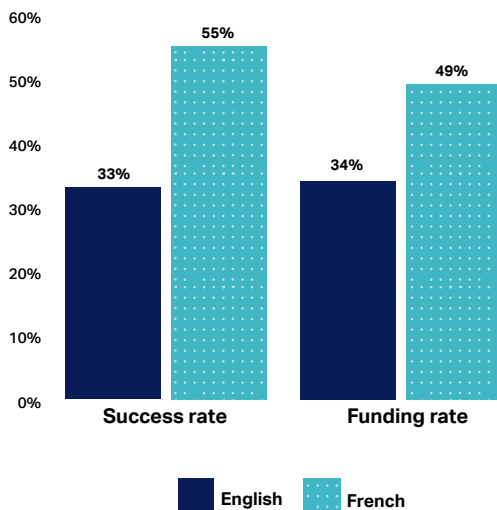
Success and funding rates were higher for proposals submitted in French. This result is in part due to the fact that only eleven proposals were submitted in French.