INDIRECT **COSTS**
PROGRAM

PROGRESS REPORT

FOR APRIL 1, 2010 TO MARCH 31, 2011

Canada

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Background

In 2001, the federal government provided a one-time investment of $200 million to alleviate some of the financial pressures associated with federally-funded research in Canadian postsecondary institutions. Subsequently, in 2003, the Indirect Costs Program (ICP) was established on a permanent basis and investments in the program have risen gradually, from $225 million in 2003-04 to $330.08 million in 2010-11.

These investments are used to cover a portion of the indirect costs[1] of research supported by the three federal funding agencies (the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council) at universities and colleges, and at their affiliated research hospitals and institutes.

Program objective

The objective of the Indirect Costs Program is to help universities, colleges, and their affiliated research hospitals and institutes maintain a research environment that will enable them to make optimal use of the federal investment in academic research.

ACCOUNTABILITY AND EVALUATION

The program has adopted the following approaches to address the issue of accountability:

- institutions receiving program grants must prepare yearly reports;
- the Program requiresthat institutions have current and valid agreements with their research affiliates;
- during site visits, program officials review how the institutions manage their grants; and
- the program itself undergoes internal audit and evaluation on a periodic basis (usually once every five years).

Outcomes reports

The program requires participating institutions to submit a yearly report on their outcomes, including a statement of account. The information obtained from the reports is intended to provide an account of federal funding and is a key element in the program's performance strategy.

The outcomes report provides quantitative and qualitative information on the impact that expenditures have had in five expenditure categories: research facilities; research resources; research management and administration; regulatory requirements and accreditation; and intellectual property management. The statement of account presents the amount of expenditures made with program funding invested by the institutions in each of the five areas.

[1] Indirect research costs are an institution's administrative expenditures that support research but are not chargeable to specific research projects.

Institution-Affiliate Agreements

In cases where institutions share their indirect costs grant with affiliated hospitals and health research institutes the program requires that institutions have up-to-date institution-affiliate agreements which clearly indicate the nature of the relationship between the two and their roles and responsibilities in managing the grant. Affiliate institutions must report annually to the institution. The institution specifies the exact format and required contents of the report, integrating the information received from each affiliate into its outcomes report.

Site visits

Since September 2006, program managers have visited a total of 47 institutions: 21 major research-intensive universities and their affiliated research institutes, four large universities, seven mid-size universities, and 15 small universities, colleges and CEGEPs. The visits have had the following objectives:

- to assess the effectiveness of the control measures and systems used to ensure compliance with the program's policies and regulations;
- to review the expenditures or the methods used to allocate funds, in order to ensure that they follow program guidelines;
- to discuss program-related issues and challenges; and
- to obtain feedback on the program's policies and guidelines and its financial management practices.

The visits also provide opportunities to observe the working relationships between universities and their affiliated research institutes; to share with them other institutions' best practices; to encourage them to give more details about the impact of their grants in their annual outcomes reports; and to adopt new approaches for communicating program outcomes.

Internal audit and program evaluation

An internal audit of the program was carried out in the fiscal year 2008-09, and a sixth-year summative evaluation of the program was completed in 2009. Overall, the reports on these activities presented a positive picture of the program in terms of its administration and relevance.

The summative evaluation included recommendations for strengthening the information base used to assess the program's impact (the report is available on the program's website at http://www.indirectcosts.gc.ca/publications/index-eng.aspx). In response, the program's management staff established a working group of representatives of various organizations, including universities, the Association of Universities and Colleges of Canada (AUCC), the Canadian Association of University Business Officers (CAUBO), and the Canadian Association of University Research Administrators (CAURA). The working group has been mandated to define a set of parameters for use in assessing the state of the research environment at Canada's universities every five years.

The program is scheduled to undergo an evaluation in 2013-14.

OVERVIEW OF INSTITUTIONS' EXPENDITURES IN FISCAL YEAR 2010-11

As a whole, institutions funded by the program use their grants largely for research management and administration, and for research facilities. These two categories combined accounted for 68 per cent of total spending in 2010-11. Figure 1 shows the proportion allotted to each of the five expenditure categories. This breakdown has remained fairly stable since the program's inception, with a gradual increase in the proportion of funds allotted to complying with regulatory requirements and accreditation, as well as to management and administration. However, as funding from the program covers only a portion of the indirect costs of research borne by institutions, this may not reflect trends in the actual costs or total investments of institutions in these areas.

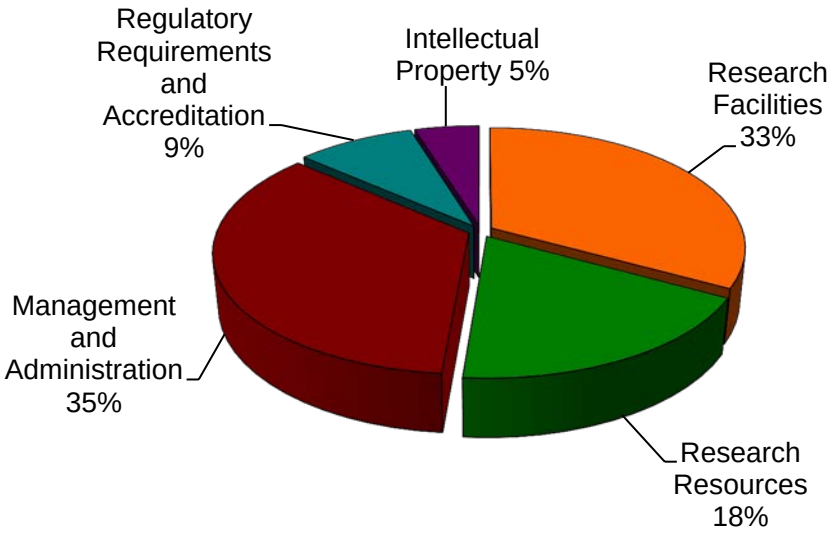

Figure 1: Proportion of grants allocated to each expenditure category, fiscal year 2010-11.

Institutions of different sizes tend to allocate their funding differently with respect to the five expenditure categories. Figure 2 illustrates this difference, comparing the investment patterns of the four sizes of institutions described in Table 1 and their affiliated research institutes. In general, small institutions allotted a larger share of their Indirect Costs grants to the management and administration category than did large and research-intensive institutions; large and research-intensive institutions directed a greater proportion of their funds to the facilities category than did small institutions. Differences in the proportion of the grant allotted to each expenditure category can be observed among institutions of the same type. This variability is greater for the intellectual property management category and could be explained, in part, by the fact that some institutions do not have a technology transfer office and do not allocate funds towards this area.

In the fiscal year 2010-11, 20 institutions signed agreements with research hospitals or health research institutes. Expenditures by these affiliates accounted for 17% of the program's total budget and were spent primarily in management and administration. Affiliates also invested more heavily in regulatory requirements and accreditation than did all other types of institutions.

Table 1: Institution types and proportion of total program budget received by each type

Type	Criterion[2]	Number of institutions	Proportion of program budget
Small	ICP grant of less than $100,000	51	0.5%
Mid-size	ICP grant of $100,000 to $1 million	27	3.6%
Large	ICP grant of $1 million to $3 million	15	7.8%
Research-intensive	ICP grant of more than $3 million	28	88.1%

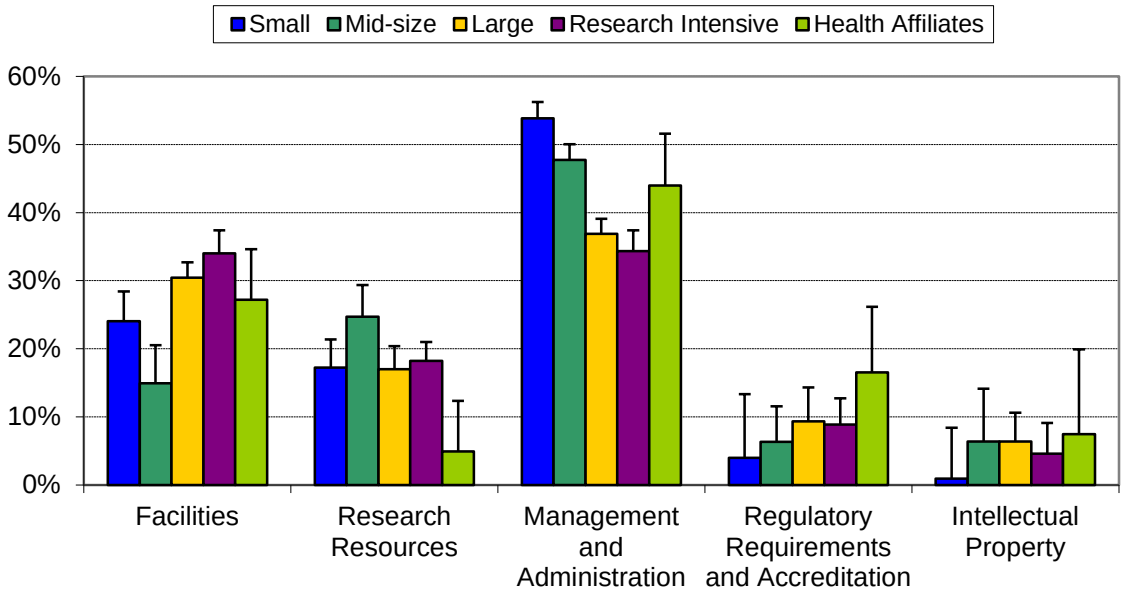

Figure 2: Proportion of grants allotted to each expenditure category, by size of institution. The bars represent standard deviation of the means.

IMPACT OF EXPENDITURES

Impact by expenditure category

Canadian research institutions consider the funding provided by the ICP to be indispensable to the success of their research enterprises. Due to the synergies the ICP intentionally creates with other federal funding and its multi-year nature, however, the annual impact of the program can be difficult to isolate and evaluate. In order to account for this, the institutions' Outcomes Reports provide very helpful qualitative information and examples regarding their investment in the five expenditure categories. These are examined in the following sections.

[2] Institutions have been categorized according to the amount of program funding they received. The figures shown are used solely for purposes of analysis in this report.

Research facilities

Maintaining modern working space and equipment is critical for a successful research enterprise. From investing in laboratory renovations to recruiting the required skilled technicians, institutions of all sizes face the challenge of maintaining suitable research facilities in the face of increasing research costs. The majority of institutions cited operating costs, including items such as renovations, electricity and heating as the largest category of expenditures in this investment area. Other highlighted spending included the costs associated with the maintenance of specialized research equipment, as well as the basic up-keep of research space, animal facilities, and laboratories. All these factors contribute directly to researchers' productivity and ability to obtain more research funding, as well as to the institutions' overall ability to attract new talent. This also enables institutions to provide a better work environment to their researchers in order to remain on the cutting edge of technology, and to facilitate research excellence.

"Experience has shown that when badly-deteriorated labs are renovated, additional 15-35% intensification in research personnel numbers can be accommodated. The condition of laboratory space at UBC is one of the hindrances to research growth and Indirect Costs are a great assistance to limiting that hindrance. Further, improved infrastructure assists researchers in meeting regulatory and accreditation requirements. The bottom line is that improved infrastructure significantly contributes to enabling leading edge research".

[The University of British Columbia, British Columbia]

« La subvention a permis d'offrir à nos chercheurs en biologie, en physique et en chimie un milieu de travail propre, fonctionnel, adéquat et sécuritaire. Nous avons pu aussi moderniser les équipements utilisés dans nos laboratoires. Le bureau de recherche a pu acquérir un soutien technique plus apte à répondre aux besoins des chercheurs. Les coûts liés à la surveillance des laboratoires, tout comme à l'entretien des appareils, ont été pris de cette subvention…Ces investissements sont essentiels dans la mesure où ils nous permettent d'assurer l'entretien nécessaire de nos laboratoires ».

[Université de Saint-Boniface, Manitoba]

"As in previous years, a continuing challenge for the University's research program is to meet the ongoing demand for new, reliable and efficient utility and physical infrastructure delivery systems. The increasingly complex nature of research equipment and related operating demands of research operations have exposed the limitations of older support services. These include a number of utility and operational support services ranging from the delivery of distilled water, reliable power (electricity, natural gas), waste disposal, custodial and security services for research space etc, as well as a push to develop more sustainable and energy efficient long-term approaches to managing our costs. The ICP enables the University to not only maintain existing capacity but also to undertake improved services that focus on both reliability and efficient delivery. Without this infrastructure "platform", researchers would be exposed to a significant decline of support service levels and, of a more serious nature, loss or disruption of vital services. The ICP has greatly reduced this risk and encouraged and promoted research activity by providing reliable and effective facilities".

[University of Guelph, Ontario]

Research resources

Access to up-to-date and comprehensive knowledge resources is vital to generating the high-quality, high-impact studies that benefit Canadians. Accordingly, the majority of institutions spent the largest portion of ICP funds in this category on library and journal holdings. In particular, many institutions cited maintaining or upgrading electronic journal access as a major cost driver. This has become increasingly important as the availability of online resources provides researchers with access to hundreds of journals and thousands of articles across a wide range of disciplines right at their desktop, saving time and increasing efficiency. Larger institutions also commonly used a portion of the funds for the enhancement of high-speed networking capabilities that allow for the quick and effective sharing of large amounts of data between researchers, institutions and regions. All of these initiatives help to support researchers' work and are important factors in recruiting and retaining faculty and attracting research funding.

« Encore une fois en 2010-2011, le total des dépenses inscrites à la catégorie « ressources de recherche » relevait des coûts de bibliothèques. Quelque 34 % (340 000 $) de la subvention ont été attribués aux coûts d'abonnements, aux bases de données et aux revues savantes. Cette somme continue de représenter environ le quart des dépenses de fonctionnement des bibliothèques et la moitié des abonnements électroniques. La subvention demeure essentielle pour permettre à l'Université de Moncton de munir ses chercheurs et chercheures des ressources de recherche efficaces dont ils et elles ont besoin pour leurs travaux ».

[Université de Moncton, Nouveau Brunswick]

"Libraries play a crucial role in modern research-intensive universities. Not only do they serve as an accessible collection or repository for all kinds of printed and electronic materials, they provide access to enormous external resources such as databases, statistical information and external collections and offer expert services to understand information needs, to navigate vast external information resources to find, and tools to organize and reference information. They act as a window to global research and, through Open Access programs, they offer a window to the results of the work we conduct…Without Indirect Costs Program support, we would be less able to extend and improve our collection, to keep up to date and maintain high levels of customer service. This would undoubtedly have a negative effect on the quality of the research environment and on graduate student learning experience".

[University of Ottawa, Ontario]

"Keeping in line with the shift to augmenting operating costs, in 2010 / 2011 the University of Calgary dedicated $5,653,041 in salaries and benefits to Libraries. The difference the grant investment makes ensures there is expert staff available to support research at the undergraduate, graduate and faculty level. These expenses are vital to university research administration as at the very core, library operation and staffing costs provide a foundation for the research enterprise…If the expenditures had not been possible, providing consistent, quality support and service would have been compromised. With the support of these funds, the Collections in Libraries and Cultural Resources at the University of Calgary, continues to bring their expertise to acquire traditional and digital resources and makes them available to clients in support of learning, research and teaching".

[University of Calgary, Alberta]

Research management and administration

Institutions agree that administrative support is an essential service for productivity because it relieves researchers of many administrative tasks. Across institutions of all sizes, administrative support aids researchers in preparing grant applications and managing grant funds. Given the growing complexity of research administration, institutions must often expand their professional staff and rely on their expertise to maintain the quality of services to researchers. The largest portion of funding in this category went to recruiting and retaining the human resource expertise required in the complex environment of research management. For smaller institutions, this typically meant the recruitment and establishment of a dedicated research administrator or office. For larger and research-intensive institutions, funding was associated with the recruitment and training of specialized research managers and investment in IT systems to streamline grant applications and research funding tracking.

"The ICP funding remains key to our ability to support our research community – at a time when university funding in the country is in a state of transition, and when small institutions, with small research budgets and limited graduate programs, are vulnerable. Without the Indirect Costs Program funding, we believe research productivity would be significantly impacted and Acadia's strong research community would suffer. The Indirect Costs Program funding continues to allow us to enable a strong research program. Without the Indirect Costs Program funding towards Research Management and Administration, it is unlikely that Acadia could sustain or grow its research enterprise".

[Acadia University, Nova Scotia]

« Une portion importante de la subvention des coûts indirects sert à défrayer le personnel de la Direction de la recherche…Le programme des coûts indirects à la recherche nous permettra de nous doter du personnel et des systèmes d'information adéquats afin d'offrir un bon support aux chercheurs et de nous assurer que nous les appuyons le mieux possible dans la préparation des demandes de subvention et conséquemment, à l'augmentation du taux d'obtention de subvention de recherche par nos professeurs ».

[HEC Montréal, Québec]

"This area of our grant continues to be the most critical for the success of Niagara Research. We have used the grant to support salaries of part-time staff to support research administration. The grant has allowed us to focus on the writing of new proposals and the development of new processes thus enabling Niagara Research to increase its portfolio of projects and its capacity to meet the needs of local enterprises. This grant continues to positively impact on the success of Niagara College's overall research program. The cost drivers for this area of expenditure are largely the nature of college-level research administrative support".

[Niagara College, Ontario]

Regulatory requirements and accreditation standards

In an effort to ensure the safety of researchers and research staff, and the ethical treatment of research subjects, institutions must meet an increasing number of regulatory and ethical standards. In recent years, the different levels of government have introduced new regulatory requirements regarding, for example, the protection of animals, the use of human beings in research and the use of hazardous substances. Accordingly, the amount of time and resources that must be expended in order to comply with these standards has also been increasing. For this reason, institutions directed the largest share of their spending in this expenditure category towards the creation and support of regulatory bodies such as research ethics boards and committees, and to provide teaching relief to those faculty members who sit on these boards. For research-intensive institutions, a large portion of the funds was most frequently devoted to technical support for animal care, especially for the salaries of veterinarians. The upgrading and maintenance of animal housing facilities to conform to new regulatory requirements was also a frequently mentioned use of funds. Overall, institutions report that the amount of Program funds allocated to this expenditure area is increasing steadily with the ongoing adoption of new legislation and standards governing research.

"The ICP grant funds have allowed the University to invest in personnel to support the Health, Safety & Environment area on campus. The Health, Safety and Environment (HSE) Unit, Human Resources, is responsible for supporting and monitoring the University's safety related policies, procedures and systems to ensure on-going compliance and efficacy. It also investigates incidents and responds to health and safety concerns by providing guidance and direction through line management. These expenditures are important to research administration to ensure University researchers can apply for funding to conduct research using such materials or special handling facilities. They are also vital to ensure our compliance with federal, provincial and municipal regulations and laws. Failure to observe these regulations and law can lead to closure of research laboratories, removal of animals or hazardous substances and major fines".

[University of Regina, Saskatchewan]

"Researchers at the University of Victoria submit over 750 applications for research ethics approvals and renewals each year. The ICP program supports the Human Research Ethics Coordinator and the Human Research Ethics Liaison, two full time positions critical to the effective review and tracking of human research ethics applications. These positions also provide administrative support to the Human Research Ethics Board, Chair and Co-Chair. The increasing number of applications has made the effective management of the ethics review process increasingly important. In the absence of these positions, the response time would increase, resulting in significant delays in research activity".

[University of Victoria, British Columbia]

« Ces investissements sont essentiels pour assurer un encadrement adéquat de certains projets de recherche qui peuvent comporter des risques pour la sécurité/santé du personnel de recherche ou encore le public. L'encadrement étroit de ces projets est une importante préoccupation pour notre institution. Sans ces investissements, l'ÉPM n'aurait pu investir autant de ressources en matière de sensibilisation et de formation de ses professeurs-chercheurs et étudiants quant aux risques entourant certains projets et les précautions/mesures à prendre pour les minimiser. Elle aurait également eu des difficultés à répondre aux exigences gouvernementales en la matière ».

[École Polytechnique de Montréal, Québec]

Intellectual property management

Transferring knowledge from academia to a broader range of sectors, including the private, public, and not-for-profit sectors, creates many economic, social, and cultural benefits for Canadians. Institutions recognize the importance of transferring knowledge, sharing their research discoveries through such activities as publishing, licensing, forming spin-off companies, and other forms of engagement with non-academic sectors. With the help of ICP funding, many research institutions continue to strive to maximize the impact of their research and the return on the money invested in research grants. Across institutions of all sizes, the greatest portion of funds in this category was devoted to the development and support of technology transfer offices, thereby enabling researchers to protect their inventions and to exploit their economic and social potential as needed. Primarily invested in the payroll for specialized technology transfer personnel, funding was also devoted to technology licensing and private sector partnerships. By providing funding in support of these services, institutions underscored the significant economic and social benefits the ICP program has on them and the local community.

"In 2010-11, ICP funds were used to support the technology transfer function and, through that support, to underpin the administration of patent applications and agreements with industry. Funds from the ICP provide support for gap areas that may not be supportable through other funders' programs. With our recent substantial growth in research funding, we now have an increasing portfolio of intellectual property to administer. ICP funds have made it possible to recruit and retain experienced technology transfer and IP professional personnel, and to access professional and legal expertise where required. Without such funding, our ability to address the major cost would be restricted".

[University of Prince Edward Island, PEI]

« À l'UQO, la gestion de la propriété intellectuelle et de son exploitation est abordée dans le cadre plus large de la valorisation de la recherche. Les activités de valorisation de la recherche et de la création visent à faciliter le transfert ou l'application d'innovations pour le bénéfice des communautés ou de la société en général ».

[Université du Québec en Outaouais, Québec]

"The ICP funds enabled OCAD University to seek external legal advice pertaining to collaboration agreements with both the private and public sectors, intellectual property agreements, and technology licensing. As a small university, OCAD U does not currently have the internal capacity and expertise needed to review complex agreements. These expenditures were vital to protecting the rights of researchers and students and to safeguarding the institution".

[Ontario College of Art and Design (OCAD), Ontario]

General impact of investments

While the five expenditure categories demonstrate the immediate and direct outcome the program has on postsecondary research, the ICP ultimately aims to improve the overall ability to conduct research and to recruit and retain world-class researchers. Table 2 shows the institutions' responses regarding three general impact categories. Larger institutions, because they receive larger grants, appear to be more able than smaller institutions to identify positive impacts. In general, however, small and mid-size institutions also identify the ICP funds as having a positive effect on their overall research capabilities, playing a key role in implementation and maintenance of their emerging research programs.

Table 2: Proportion of institutions reporting general positive impacts of their grants, by institution size

General impact	Small	Mid-size	Large	Research-intensive	Total
Securing additional funding	73%	85%	93%	100%	88%
Making strategic investments possible	41%	70%	80%	82%	68%
Recruiting and retaining researchers	95%	93%	93%	100%	96%

A number of institutions noted the growth in their research capabilities since the inception of the program. Some went further to emphasize that many of the research services and funding opportunities they now enjoy would not have been realized without the support of the ICP funds. These institutions recognize the vital role played by the program grants over the years in helping them to develop their research activities.

The majority of institutions agreed that the ICP funds contributed to their ability to attract and retain world class researchers. Many factors come into play when recruiting researchers and the institutional research environment and services offered to the researchers is usually one of them. The ICP funds can help institutions provide an adequate and supportive research environment that will attract new researchers and retain established ones. Given that ICP funds generally cover a portion of the expenditures being incurred by institutions, the ICP funds often enable institutions to free up funds and reallocate them to other initiatives—the most common being the creation of internal grant and scholarship programs. The ability of institutions to more fully address the indirect costs of research also contributes to their capacity to attract new funding.

Whether it is directly through supporting research administration and grant writing, or indirectly by helping to maintain the infrastructure necessary to support new initiatives, the program is cited by many institutions as an important factor in gaining new sources of funding. For some larger institutions, the ICP grant was especially supportive in producing new, sustainable research revenue through technology licensing and the attraction of international investors.

> *"Memorial University benefits greatly from the Indirect Costs Program. These funds ensure that researchers are supported in all areas of research. In 2010, Memorial released a 50-page report, entitled "The Shining: Research Stars 2010" which describes some of the significant university research projects of 2009-2010 and depicts some of Memorial's research stars. These stories help depict some of the ground breaking research that is currently ongoing at the university. The continued growth of research at Memorial and the many success stories that result are greatly assisted by the ongoing support received by the Indirect Costs Program".*
>
> ***[Memorial University, Newfoundland]***

CONCLUSION

The Indirect Costs Program complements the research funding investment provided by the three federal research funding agencies by helping postsecondary institutions ensure that their federally-funded research projects are conducted in world-class facilities with the best equipment and administrative support available. Despite the variances in how the grant is used by the different institutions, the program has helped to increase or maintain their research capacity in all five expenditure categories. Investments in three of the five expenditure areas appear to provide the most assistance to institutions, making their research environment attractive not only to researchers but also to students and research technicians. In descending order, these areas are research management and administration, research facilities, and research resources. Overall, the program has allowed Canadian research institutions to raise their research profiles both at home and abroad, by supporting public outreach and private partnerships. This has been especially true for small and mid-size institutions with relatively young research programs.

While the program has received predominantly positive feedback from institutions, many institutions estimate that current indirect costs far exceed their allocation of funds. Generally, however, institutions highlighted the indispensable contribution the ICP has made during these difficult economic times in ensuring that they are able to achieve both their research and teaching mandates and to continue to enhance their vital role in Canadian society.