

FINAL REPORT

**EVALUATION OF THE
NETWORKS OF CENTRES OF EXCELLENCE
INTERNATIONAL PARTNERSHIP INITIATIVE**

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For:
The Networks of Centres of Excellence Program
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EXECUTIVE SUMMARY

In 2006, the Networks of Centres of Excellence (NCE) program, with the collaboration of the International Development Research Centre (IDRC), launched the International Partnership Initiative (IPI) as a pilot initiative. A total competition budget of approximately \$7 million over two years was allocated to this initiative. IDRC allocated an additional \$2 million to support the research and networking costs of the low and middle-income countries' (LMIC) participation.

The IPI's objectives are to:

- raise Canada's profile on the world stage and ensure that Canada is part of international cutting edge initiatives;
- provide a richer training environment to develop highly qualified people with skills and awareness critical to Canadian productivity, economic growth, public policy and quality of life;
- stimulate or reinforce partnerships with foreign organizations to develop large coordinated and concerted efforts leading to economic and social impact; and
- enhance the sharing and dissemination of knowledge, resources and technology to Canada.

Based on these objectives, the main goal of the IPI is to provide Canadian NCEs with resources to facilitate networking activities outside of Canada. While in the long term, these activities are expected to lead to economic and social impact, in the short term, the goal of the IPI is to stimulate the formation of partnerships with organizations outside of Canada.

In 2008, the NCE Steering Committee and IDRC agreed to commission an evaluation of the IPI to inform decision-making regarding the future of this pilot initiative.

The purpose of this evaluation is to examine the following elements:

- The extent to which the IPI funded activities have contributed to the achievement of the IPI objectives;
- The extent to which the IPI has contributed added value to advancing the goals of the funded networks;
- Major achievements arising from the IPI;
- Lessons learned on the benefits and challenges of programs promoting international collaboration of this type.

Highlighted below are the key findings associated with the Evaluation of the Networks of Centres of Excellence – International Partnership Initiative (IPI). The evaluation findings are based on a review of program and network documentation, as well as interviews with key stakeholders associated with both funded and non-funded networks and their international partners. It should be noted that the evaluation design focused on information obtained through key informant interviews.

Overall value and impact of the IPI funding:

1) Findings from key informant interviews and program documentation suggest that the funded networks have achieved several positive outcomes that collectively contribute to achieving several of the IPI objectives.

Almost all stakeholders were of the opinion that the IPI funding had enabled Canadian researchers and networks to expand and build relationships with organizations in other jurisdictions. Although researcher-to-researcher networking existed (and continues to exist) before and irrespective of the IPI funding, the funding allowed Canadian networks to establish relationships with other organizations on a consortia-to-consortia level. Compared to peer-to-peer contacts, it was reported that consortia-to-consortia level relationships are more formalized in structure and enable interactions across the organization (including other international partners that might be part of a larger consortium), rather than with an individual researcher.

The IPI funding was also reported to have generated other positive outcomes, including the following:

- Knowledge/awareness of Canadian research capabilities and research competence was enhanced for international partners.
- Knowledge/awareness of global research and knowledge transfer, as well as policy implementation issues, was enhanced for network researchers.
- Ability to promote Canadian research expertise at the international level.
- Support for organizations in low and middle-income countries to develop their own networking activities in their home country that had not been previously undertaken.
- Development of partnerships with international partners, some of them leading to the submission of joint proposals.

2) The activities undertaken by the networks indicate progress toward in-depth partnerships with organizations outside of Canada. It is too early to ascertain the full extent of the initiative's impact on the networks' ability to develop large coordinated and concerted efforts leading to economic and social impact.

Networks reported successes with respect to establishing partnerships with organizations outside of Canada and initiating the exchange of knowledge and experiences.

While information from key informants and program documentation suggests that a number of activities aimed at meeting the IPI objectives have occurred, many key informants noted that it may take some time to be able to detect the full impact of the initiative. For example, several networks reported that they recently submitted joint research proposals with their international partners and noted that it was still too early to identify the success of these proposals.

3) To date, not all of the IPI funded networks were able to implement Highly Qualified Personnel (HQP) training as initially planned.

Some international HQP training activities were implemented, including summer schools and some HQP exchange activities, although based on information provided by key informants and on a review of network documentation, it appears that some networks, especially newer or smaller networks without established relationships at an international level, have faced challenges with respect to meeting the IPI objectives and goals. For example, some networks reported difficulty with respect to the exchange of HQP (due to difficulties navigating the complex requirements, including immigration and contractual issues).

This challenge can be interpreted in the context of a tight time frame for the IPI funding that was designed to allow networks to establish relationships on an international level.

Added value of the IPI for NCEs and their international partners

4) The IPI has allowed NCEs and their international partners to pursue their strategies globally, enabling a more concerted approach to finding solutions to problems that are of global importance.

Overall, the impact of the IPI to date has been a focus on building the foundation for joint research to address common problems, particularly in areas/fields of global relevance, where solutions to problems require global strategies (e.g., research on climate change, research on common health issues such as obesity or stroke, research in new areas where researchers can benefit from internationally accumulated expertise such as stem cell research or research on prions, spread of diseases, and other areas/issues).

5) Given the focus of the initiative on stimulating and enabling partnerships, networks that have positioned themselves in a strategic advisory role in terms of influencing public policy, awareness and knowledge about a particular issue appeared to benefit more clearly than other networks from the IPI with respect to advancing their overall strategic mission.

The networks receiving IPI funding differed with respect to their overall positioning as a network focussing more on influencing policy or a network more oriented toward technological advancement. The initiative was not designed to immediately lead to joint research outputs, but rather to stimulate international partnerships. Evaluation findings indicate that NCEs with a more advisory/policy focus were able to benefit from networking activities funded through IPI faster than NCEs with a strategic missions that focus on research outputs with respect to technological advancement. This may suggest that those networks focussing on an advisory role were better able to incorporate IPI into their overall strategic mission.

Utilization of the IPI funding

6) The IPI funding was used to support activities designed to establish relationships with organizations outside of Canada and initiate sharing of knowledge and tools. Funded networks reported a broader range of activities with respect to international collaboration than non-funded networks.

While representatives from non-funded networks reported that even without the IPI funding they were able to engage in some activities for collaborating with researchers outside of Canada, these activities were mainly limited to participation in regular annual conferences and contacts between individual researchers. Representatives from funded networks reported a range of activities in addition to regular conferences and meetings. Types of activities supported with the IPI funding included:

- special workshops (in Canada and in country of partner organization). Examples include: workshops on international and intra-national networking, workshops designed to facilitate collaboration between NCEs and partner organizations at conference proceedings, as well as topic-based workshops to collaborate on issues addressed by the NCEs and their partner organizations. Workshops were held in Canada, Europe, the U.S.A., Africa and China, for example.
- special conferences outside of regular conferences in the field. Examples include topic-based conferences and symposia on issues such as global health crises or environmental issues. Conferences were held in Canada, Europe and the U.S.A., among others.
- sharing knowledge (through conference calls, in-person meetings, or documentation developed by one of the partners).
- sharing tools and data. Examples include sharing “pocket tools” designed to provide health care providers with condensed information, sharing data for mathematical modeling and replicating a cohort study in Canada that was initially undertaken in an LMIC.
- some development of joint research projects and resulting publications (reported by mature NCEs and therefore likely based on pre-existing cooperation infrastructure that has been enhanced further through the IPI funding). Examples include research projects on the global spread of diseases, as well as the development of clinical research trials. However, it was not possible to fully determine the exact extent to which the IPI funds contributed to these activities, as they had been initiated prior to the IPI.
- some opportunities for international HQP exchange. Examples include a math summer school, training workshops that involved graduate level students in health related research, student exchanges and special student workshops as part of larger conferences on health and environmental issues.

Key informants believed that these activities would lead to ongoing and in-depth research partnerships with organizations outside of Canada and were seen as steps toward joint research outputs, including dissemination of knowledge, resources and technology.

Lessons learned from IPI Design and Delivery

7) IPI design and delivery was seen as appropriate; however, networks reported that the time required to establish relationships with international partners has adversely affected their ability to meet some of the IPI objectives within the funding time frame.

The NCE-IPI was found to be a funding initiative unique in design and focus in Canada. Overall, key informants noted that the design and delivery of the initiative was appropriate. However, the funding timeframe for implementing the initiative was seen as too short, generating uncertainty with respect to meeting planned expenditure levels, as well as with respect to continuation of funding to support ongoing collaborations

Evaluation findings suggest that networks experienced some difficulties due to the time frame allocated to the preparation of the networks' proposals for the IPI funding. Some key informants reported that they did not have time to establish clear guidelines/processes to select and recruit suitable international partners, and that planned activities were generally behind schedule.

Informants noted that establishing international partnerships and fully launching proposed international activities required more time than they had originally anticipated. Several key informants reported that they were surprised by the amount of time and resources required to develop international contracts, MOUs, and other agreements with partner organizations. These logistical challenges likely accounted for some of the delay in launching the IPI activities that was reported by all of the networks. The program has since been extended to March 2010 to enable networks to complete their IPI projects and meet proposed targets.

These concerns were raised in the context of overall NCE design issues, reflecting perceptions that some networks have access to larger amounts of funding over a longer period of time than others, which was seen as an advantage for the larger or established NCEs with respect to the ability to build on existing international infrastructure compared to other networks that had to use the IPI funding to develop this infrastructure. It may be helpful to provide networks, particularly those that cannot fall back on pre-existing structures for and experience with international collaboration, with tools and best practices to assist them in the development of internal processes to identify suitable partners and establish linkages with foreign organizations (for example, such as MOUs, legal documents, processes to identify partners and projects fitting networks strategic plans, reporting, best practices)..

In addition to a funding time frame that was viewed as too short to fully engage in all the activities networks had proposed in their applications for the IPI funding, expectations with respect to who will fund ongoing collaborations resulting from the IPI activities remain unclear. There is a need for a longer-term perspective to allow networks to reap the full benefits of the partnerships that have been established under the IPI. As well, information and guidance is needed for networks to determine the availability of resources and define expectations with respect to continuing collaborations that were started with the IPI funding.

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SECTION 1: BACKGROUND

The Networks of Centres of Excellence (NCE) and the International Development Research Centre (IDRC) are two important components of Canada's overall integrated approach to research, development and innovation. The goal of the NCE program is to mobilize Canada's research talent in the academic, private and public sectors to improve the economy and the quality of life of Canadians. The IDRC is a Crown corporation, overseen by an international Board of Governors, reporting to Parliament through the Minister of Foreign Affairs. Specifically, the IDRC's *Corporate Strategy and Program Framework* focuses efforts on local capacity building in developing regions, funding research that affects public policy and creating relationships and partnerships between research organizations in developing countries and Canada.

In 2006, the NCE and IDRC launched the International Partnership Initiative (IPI). The IPI provides the NCE networks with additional funding to develop relationships and work in partnership with other organizations around the world to address critical scientific, social, economic, or other issues. Up to \$7 million over two years is made available to the NCE networks on a competitive basis. Networks can use the IPI funds to cover the Canadian partners' costs of additional networking with foreign organizations and network administration and are not to be used for direct research, per se. Foreign partners are expected to contribute funding or in-kind support to the collaboration as well. The IDRC provided up to \$2 million in funding to the initiative to support collaborations with organizations in low or middle-income countries (LMICs) to cover the otherwise prohibitive costs of their participation in the IPI.¹

The IPI was designed as a pilot project. Seventeen IPI applications were received, and funding has been distributed to seven networks (10 networks who submitted an application were not funded). Successful applicants were chosen on the basis of their proposed project's contribution to enhancement to the Excellence of the Research Program, Development of Highly Qualified Personnel (HQP), Networking and Partnerships, Knowledge and Technology Exchange and Exploitation, Management of the Initiative.²

The IPI's objectives are to:

- raise Canada's profile on the world stage and ensure that Canada is part of international cutting edge initiatives;
- provide a richer training environment to develop highly qualified people with skills and awareness critical to Canadian productivity, economic growth, public policy and quality of life;
- stimulate or reinforce partnerships with foreign organizations to develop large coordinated and concerted efforts leading to economic and social impact; and
- enhance the sharing and dissemination of knowledge, resources and technology to Canada.³

Based on these objectives, the main goal of the IPI is to provide Canadian NCEs with resources to facilitate networking activities outside of Canada. While in the long term, these activities are

¹ Eligible counties can use IDRC funding for research and costs of research support. Partnerships should contribute to at least one of its program areas.

² Selection Criteria as outlined at http://www.nce.gc.ca/comp/IPI/IPI-guide_e.htm#3.

³ Terms of Reference: International Partnership Initiative Evaluation.

expected to lead to economic and social impact, in the short term, the goal of the IPI is to stimulate the formation of partnerships with organizations outside of Canada.

1.1 Evaluation Context

The International Partnership Initiative is a pilot initiative launched within the overall framework of the Networks of Centres of Excellence program. As such, the general structures and objectives of the NCE program provide the background in which the IPI operates.

The NCE program is a joint program administered jointly by the Natural Sciences and Engineering Research Council of Canada (NSERC), the Social Sciences and Humanities Research Council of Canada (SSHRC), the Canadian Institutes of Health Research (CIHR) in partnership with Industry Canada. The NCE program is administered through a Secretariat housed under the aegis of NSERC. The Secretariat is responsible for managing the overall NCE Program, which includes managing the network selection process, program monitoring and program evaluation, as well as providing advice and guidance to the networks regarding their development and ongoing activities.

The goal of the NCE program is to mobilize Canada's research talent in the academic, private and public sectors to improve the economy and the quality of life of Canadians. The NCE program had a 2006/2007 budget of \$82.4 million (less the operational budget of \$2.9 million). The budget is dispersed among the various networks on the basis of the NCE Selection Committee's recommendation and the decision of the NCE Steering Committee. The Boards of Directors of individual networks then manage this annual budget, using it to leverage funding from partners and cover the costs of network research and knowledge and technology transfer and exploitation (KTTE) (\$81 million in 2006/2007).⁴

The program currently lists 18 active networks; 15 established NCEs, as well as three networks funded as NCE-New Initiatives (NCE-NI) with different objectives compared to the established NCEs.⁵ Networks research and activity areas cover a diverse range of topics and include networks focusing on technological development, as well as networks directing more attention to informing public policy. Established NCEs can use NCE funds to do research. NCE-NIs cannot use NCE funds for direct research activities but are funded to develop partnerships with receptor communities. As such, the goals with respect to achievements, as well as the extent of NCE funding, are different for NCE-NIs and established NCEs⁶. These differences, as well as considerations regarding the overall design of the NCEs, provide the context of the current evaluation.

The International Development Research Centre, through the IDRC Research Partnerships Challenge Fund, committed to contributing up to \$2 million to the IPI. Funds contributed through IDRC were designed to specifically support collaboration between Canadian NCEs and organizations in low and middle-income countries. To be eligible to receive IDRC funding, collaborations were required to be consistent with the programming areas approved by IDRC's Board of Governors. This presented a limitation for some NCEs with network foci that were outside of the programming areas of IDRC.

⁴ The Winning Advantage: NCE Annual Report, 2006-2007.

⁵ http://www.nce.gc.ca/nets_e.htm

⁶ NCE-NIs receive up to a maximum of \$1 million annually for up to four years, whereas in 2007-2008 NCEs received up to \$7.5 million annually.

SECTION 2: METHODOLOGICAL APPROACH

This section includes an overview of the methodological approach and the various activities that were undertaken to conduct the evaluation.

2.1 Evaluation Design

Overall, the objectives of the evaluation were to synthesize the major achievements of the IPI, assess the value-added of the IPI to advancing the goals of the IPI funded networks, and to document the lessons learned from Canadian and international partners on the merits and challenges of promoting international collaborative science. The evaluation was designed to provide evidence and analysis that will inform decision-making on whether to continue, maintain or alter the design of this pilot initiative.

The evaluation addressed the following issues and questions:

- How was the IPI funding used and were the IPI objectives fulfilled? Was the IPI an effective vehicle in facilitating international collaborative science? Should the design be continued, maintained or altered?
- What has been the overall value and impact of the IPI funding on the Network and stakeholders? What has been the value-added of the IPI for (i) NCEs and (ii) their international partners? What outputs and outcomes did the NCEs and their international partners achieve that they might not otherwise have achieved in absence of the IPI funding?
- What important lessons were learned in developing international collaborative science? What was the experience of Canadian researchers and those managing networking activities? Were these lessons similar or different to the views held by international partners? What similar networking /research development programs are informants aware of that might offer lessons to the sponsors in designing and evaluating such programs.

As indicated in the questions above, the evaluation concentrated on assessing the impact of the IPI. While some questions addressed program design and potential alternatives to the current design, questions concerning program administration and implementation were not a key focus of the current evaluation.

In order to assess the impacts of the IPI, the evaluation was designed as a comparison of NCE networks that have received IPI funding and networks that have not received the funding. This design allowed a comparison of activities and outcomes with respect to international collaborations of the network in order to assess to what extent the IPI funding has been responsible for different outcomes in networks that received the funding compared to networks that did not receive IPI funding.

One of the objectives associated with the funding provided by IDRC for the initiative was to encourage collaborations with organizations from low and middle-income countries. In order to assess whether, and to what extent, this objective was met, and whether the initiative impacted these collaborations differently than collaborations with organizations in developed countries, the evaluation was also designed to allow for a comparison of collaboration activities and outcomes for those two groups of countries.

In addition to an overall comparison of groups of networks (funded/non-funded, collaborations with organizations in developed vs. low to middle-income countries), findings of the evaluation were also analyzed at the network level. This approach enabled the analysis of findings in the context of the size and lifespan of the network to account for the fact that larger networks with more resources, as well as more established networks, are in a different position with regard to connecting with other organizations internationally.

2.2. Research Activities

The data collected for the evaluation is primarily qualitative in nature, derived from key informant interviews with Canadian representatives of funded and non-funded networks, as well as with international organizations that were identified as partners of the funded and non-funded networks. In addition, documents and administrative data for each network were reviewed to support and supplement findings generated through the interviews.

2.2.1 Document and Administrative Data Review

The review of documents and administrative data associated with the networks and the IPI served a dual purpose in the current evaluation: to assist in the development of data collection instruments and to provide additional information about each network, its objectives and proposed project and activities for the IPI funding. In addition to documents and data provided by NCE Secretariat, the research team reviewed the networks' annual reports and other publicly available information such as Web sites and reports (other than annual reports) published on the networks' Web sites to gain insight into the networks' activities and strategic plan with respect to international collaborations. Table 2.1. provides a summary of documents and data that were reviewed for the evaluation.

Table 2.1 Documents and Data Reviewed for the Evaluation

Description of Item	Reviewed for Funded Networks	Reviewed for Non-funded Networks
2006 NCE International Partnership Initiative Proposals	✓	✓
Additional Information provided by Successful IPI Applicants and NCE Staff Review.	✓	
List of Potential Contacts (Scientific Directors, Network Managers, and international partners)	✓	✓
Network Budget Information (moneys awarded)	✓	✓
Annual Reports of Networks	✓	✓
IPI Funded Networks Progress reports	✓	
Other public documents	✓	✓

2.2.2 Key Informant Interviews

The main focus of the evaluation was the collection of qualitative information through key informant interviews. Identified interview partners included the Scientific Directors and Network Managers of NCEs, as well as representatives of their international partner organizations.

Based on the evaluation design, a total of four different key informant interview guides were developed to capture information from the Scientific Directors / Network Managers and from international partners of funded and non-funded NCEs.

Overall, a total of 35 key informant interviews were completed. Table 2.2 below provides a summary of interview completions by category.

Table 2.2 Key Informant Interviews – Targets and Completions

Category		Target Number of Interviews	Number of Completed Interviews
Funded Networks	Canadian network representatives	7	11
	International partners	14	12
Non-funded Networks	Canadian network representatives	10	8
	International Partners	No target defined*	4
Total		31	35
Funded Networks	International Partners from low to middle income countries	5	4
	International Partners from other countries	9	8
Non-funded Networks	International Partners from low to middle income countries	No target defined*	1
	International Partners from other countries	No target defined*	3

* Based on network's willingness to provide contact information.

2.3. Limitations and Challenges

Using the described evaluation design, some challenges and limitations to the data collected for the evaluation should be noted. As stated above, the main line of evidence for the current evaluation was data collected through key informant interviews with network representatives and their international partners. While some secondary documentation and data were reviewed to support the information collected through the interviews, and to provide additional context information, the evaluation was not designed to triangulate results from multiple lines of evidence. As such, the findings in the report reflect the views and opinions of informants and will be interpreted within this specific context only.

A further hindrance was the limited amount of current information. While, in general, the Consultant had access to the project funding proposals and progress reports, the reports only reflected activities up until March 2008, as 2008/09 reports had yet to be submitted at the time of the evaluation. The networks were given an extension until 2010 to complete planned IPI activities and spend remaining IPI funds. Final reports and financial tables are expected in 2010. Current information on progress in the proposed activities for each network was collected through key informant interviews. However, it should be noted that information provided in key informant interviews does not always capture progress in all areas of proposed activities and reflects information that each informant remembered and/or had access to at the time of the interview.⁷

Another challenge of the current evaluation was contacting the international partners of both funded and non-funded networks within the timeline of the evaluation. In some cases, contact information provided to the Consultant was no longer accurate. In those cases, efforts were undertaken to collect current contact information from the NCEs or through general searches. Tracking informants was time consuming and affected the ability to complete the required number of interviews. In addition, particularly with respect to non-funded networks, not all networks were willing to provide contact information of their international partners. It was stated repeatedly by Canadian network representatives that they did not feel it was within their authority to provide contact information of their international partners for the evaluation.

In addition to tracking challenges, the evaluation encountered difficulties with respect to contacting international partners in low and middle-income countries. In some cases, attempts to contact the suggested individuals by phone or e-mail were unsuccessful. As such, input from these participants was somewhat limited for the current evaluation; however, a total of four interviews with representatives from organizations in low and middle-income countries were completed. In order to address the issues that are unique to collaborations with organizations in this group of countries, the evaluation relied on information provided by the participants that could be contacted, as well as on information provided by Canadian representatives of networks that engage in collaborations with organizations from low and middle-income countries.

⁷ Interview guides were distributed to informants via e-mail ahead of time to ensure that participants had time to prepare/gather information for their responses. Due to busy schedules of participants and tight timelines for the project, informants may not have had opportunity to review the interview guide in detail prior to the interview.

SECTION 3: RESULTS

The following section will present the findings of the evaluation broken down by two main themes: findings with respect to program design, including views on whether or not the IPI was an appropriate vehicle for facilitating international collaboration and information on possible alternative designs as perceived by key informants, and findings with respect to program impacts.

3.1 IPI Design and Delivery

The current evaluation was designed to focus on the assessment of program outputs and outcomes. However, a number of program design elements, including the application process, the selection/award process, eligibility criteria for expenses and the reporting process, were explored with representatives from funded and non-funded networks during key informant interviews. Informants were also asked whether they were aware of alternative funding programs with similar objectives as the IPI, with a view to providing any lessons learned for program design.

In addition to information from key informants, administrative data and documents were reviewed to determine whether the current program design is associated with specific challenges. This information was reviewed to provide insight into the overall funding mechanism and the ability of the networks to make full use of the funds that were awarded to them.

3.1.1. Views on the IPI Design and Delivery

Overall, the majority of key informants interviewed for the evaluation did not express any fundamental concerns about the design of the IPI. Many informants reported that the current design with respect to the application process, selection/award process, eligibility criteria for expenses and the reporting process was appropriate and did not create any significant problems for most of the networks.

Some informants reported concerns or problems encountered during the application or the implementation phase; these issues differed for funded or unfunded networks.

Reporting:

Some representatives of funded networks noted that the reporting requirements were cumbersome, especially for newer or smaller networks that do not have the same resource capacities as established NCEs to meet these reporting requirements. It was also mentioned that there was some confusion or conflicting information about eligible expenses and whether or not the IPI funding would be rolled into the overall NCE budget of the networks.

Criteria:

Some representatives of non-funded networks reported some concerns with respect to the criteria for awarding the funds. The process was not perceived to be transparent enough to allow networks to meet the criteria in order to be successful in this competition. Additionally, some informants believed that the IPI selection process was aiming at very specific items and strategies in the proposals that did not align with the networks' overall mission and strategic

goals. These informants felt that the reasons they were given as to why their proposal for the IPI funding had not been successful was unclear with respect to meeting or not meeting required criteria to receive the funding. While it is unclear whether these networks sought clarification on the criteria prior to submitting their proposals, the reported inability to clearly identify and/or understand application requirements indicates that criteria may need to be communicated more clearly to networks wishing to apply for the funding.

It should be noted that most networks awarded IPI funds did not report any difficulties understanding the application criteria.

Application Time Frame and Partners:

One network reported that they thought the time frame to submit the initial proposal was too short to allow them to identify suitable international partners. As a result, not all of the partners they identified in the proposal were found to be the best fit for the network in terms of collaborations.

A specific concern that was expressed by some informants of non-funded networks related to the focus of the IDRC's contribution to the initiative in order to encourage collaboration with organizations in LMICs. While this approach was viewed as an interesting idea with respect to fostering relationships with countries outside the G8 group, some informants stated that this particular focus might not be the right one for every NCE network with respect to establishing partnerships. It should be noted, however, that applying for IDRC funding through IPI was optional, and that NCEs with a thematic focus outside of the IDRC programming areas could apply for the IPI funding provided by the NCE program. In fact, five of the seven funded networks had partners in LMIC countries, and three of those networks successfully applied for IDRC funding.

In addition, some informants of non-funded and newer networks expressed their concerns that it was uncertain to what extent research collaboration with LMICs would generate downstream impacts of research collaboration. However, progress reports of several networks who partnered with organizations in LMICs indicate that impacts were achieved in Canada and LMICs, and that further impacts from these collaborations can be expected in the future. As such, views expressed by some key informants are in contradiction with findings of successful collaborations between NCEs and organizations in LMICs as documented in network progress reports.

3.1.2. Alternative Funding Programs

Key informants were asked whether they were aware of other network/research development funding programs, and whether or not these other programs could provide lessons for the IPI in terms of program design and success.

The NCE-IPI was found to be a funding initiative unique in design and focus. Only very few programs appear to exist worldwide that provide funding for international collaborations, which, due to different program design and foci, were not viewed to be actual alternatives to the IPI. The majority of informants were not aware of any other network/research development funding programs. If informants were aware of other programs, it was due to the fact that the international partners of a Canadian network, made them aware of funding opportunities in their

own country or region that are designed to support international collaborations. The most frequently cited example was funding through the European Union (EU) Framework Programme, which has a specific pillar that funds cooperation.⁸ However, informants noted that the overall scope of the EU Framework Programme of covering many large research areas often presents a significant hurdle for securing funding through the program. As an example, one international informant reported that for the most recent competition within the program's subsection on health research, for the area of regenerative medicine alone, which encompasses a wide range of research including biotechnology research, innovations in therapeutic approaches or gene and cell research,⁹ a total of 79 proposals (including 1,005 partners) were submitted. The funding for this one subsection would be sufficient for only seven or eight projects. As a result, success within the EU Framework Programme is difficult and, in addition, entails a focus on cooperation within the EU. The informant also noted that due to the scope, the level of bureaucracy is high, placing a large administrative burden on networks and organizations that receive funding.

Another program mentioned by some of the Canadian informants was the International Science and Technology Partnership Program (ISTPP) by Foreign Affairs and International Trade Canada. The program is designed to provide seed money for building stronger science and technology relationships with Israel, India, China and Brazil. Key informants who mentioned this program noted that it is associated with a higher administrative burden with respect to reporting and performance monitoring requirements and as such, IPI was viewed as the preferred model with better return on the effort.

Due to the difficulties associated with other programs mentioned above (e.g., limited chances of grant success, administrative burden, focus on specific countries that might not provide the most suitable base for partnership for all networks), many key informants felt that there is no real alternative to the IPI.

3.1.3. IPI Expenditures

The IPI was launched as a pilot initiative, with the bulk of the funding provided through the NCE program (\$7 million), plus \$2 million contribution from the IDRC. The funds were awarded as incremental funds earmarked for international activities for a term of two years ending on March 31, 2009.

Table 3.1. below summarizes the amounts granted to each of the networks that receive IPI funding and their expenditures up to March 31, 2009.

⁸ See <http://cordis.europa.eu/fp7/>.

⁹ See http://cordis.europa.eu/fp7/health/abouthealth_en.html for a list of areas covered under the three strategic pillars of health research under the program.

Table 3.1. Awards and Expenditures by Network

Networks	Funds Awarded (Fiscal year)			Funds Expended (Fiscal Year)				% Funds Expended To-Date
	2006-2007	2007-2008	Total	2006-2007*	2007-2008	2008-2009	Total	
AllerGen	\$0	\$828,000	\$828,000	\$0	\$242,186	\$340,806	\$582,992	70.4%
ArcticNet	\$480,000	\$335,000	\$815,000	\$0	\$43,357	\$771,643	\$815,000	100.0%
PrioNet	\$434,000	\$362,000	\$796,000	\$0	\$160,632	\$316,368	\$477,000	59.9%
CAN	\$99,999	\$600,001	\$700,000	\$0	\$114,103	\$273,816	\$387,919	55.4%
MITACS	\$445,000	\$455,000	\$900,000	\$0	\$422,934	\$477,066	\$900,000	100.0%
SCN	\$153,999	\$841,001	\$995,000	\$0	\$230,443	\$269,999	\$500,442	50.3%
NICE	\$87,512	\$72,488	\$160,000	\$0	\$26,844	\$109,744	\$136,588	85.4%

Source: NCE IPI Administrative Data

* Payment received late March

As summarized in the table, the amount awarded to NCEs ranged from \$160,000 for the NCE New Initiative NICE to \$995,000 for the StemCell Network (SCN). Funds were provided through the three granting agencies (CIHR, NSERC and SSHRC), with most of the funds flowing through NSERC at \$4,957,000, followed by CIHR at \$131,250 and SSHRC at \$105,750.¹⁰ Of the funded networks, three received additional IPI funding through IDRC: AllerGen (\$262,000), MITACS (\$240,000) and NICE (\$236,000).

With respect to funds expended, the figures show that none of the networks reported expenditures in the first fiscal year of the initiative. This is due to the fact that the first of the two award payments was made in late March 2007. The second payment was made in 2007, with the networks' NCE funding over the course of year. As a result, at the end of the 2007-2008 fiscal year, the majority of networks had spent less than one-quarter of the funds. Data from the 2008-2009 fiscal year indicates that only two networks have expended all funds within the initially allocated time frame for the IPI, whereas five networks requested an extension to complete their IPI activities. This pattern was reflected in the key informant interviews with network representatives who reported that it takes time to establish relationships with international partners, and in many cases, networks reported that activities had only recently started to increase in extent and depth due to challenging logistics of arranging international events, exchange of researchers and HQP and other international collaborations.

In response to the challenges encountered by the networks with respect to establishing multi-national relationships, representatives of the NCE Secretariat reported that the grantees have been offered a one-year extension to March 2010 for using unspent funds to complete the IPI activities. To date, no decision has been made how unspent funds will be handled at the end of this one-year extension.

The expenditure pattern reveals a significant challenge associated with the initiative. All networks reported delays with respect to the initiation of the IPI activities. In addition, several key informants noted that due to the complex nature of international collaboration, a longer-term funding perspective is required to achieve the IPI's objectives and contribute to measurable impacts for the networks. Most networks reported that they were well underway in establishing

¹⁰ Source: NCE IPI Administrative Data

connections internationally as a first and required step expected by the IPI program, but that it would take time to see impacts in terms of actual collaborations on projects and long-term outcomes associated with that.

3.2. IPI Outcomes

With respect to program outcomes, the current evaluation focused on determining what impact the IPI funding had on Network activities vis-à-vis international collaborations. In particular, the following elements were examined:

- The extent to which the IPI activities and funded activities have contributed to the achievement of the IPI objectives;
- The extent to which the IPI has contributed added value to advancing the goals of the funded networks;
- Major achievements arising from the IPI;
- Lessons learned on the benefits and challenges of programs promoting international collaboration of this type.

A comparison of funded and non-funded networks was used to determine whether outcomes reported by the networks could have been achieved or have been achieved even without the funding provided through the IPI. In addition, views on impacts and outcomes were compared for Canadian networks and their international partners, with a focus on the impact of the IPI funding on collaborations with organizations from low and middle-income countries for those networks that received IDRC funding through the IPI.

3.2.1 Impact on Nature of International Collaborations

Despite the initial delay experienced by networks in launching the activities they had proposed for the IPI funding, the comparison of funded and non-funded networks revealed some key impacts the IPI funding has had on the nature and extent of the international collaborations of NCEs.

Overall, key informants unanimously reported that their contacts with international researchers and organizations were formed based on pre-existing researcher-to-researcher ties. As stated by one informant “You cannot mandate research collaborations, especially not at the senior researcher level. They all read the relevant publications in their field and if they run into an issue or a project where cooperation would be helpful, they will go and contact who they need to contact based on expertise.” This was true for funded and non-funded networks. However, a key difference was identified in follow-up activities. Whereas non-funded networks reported that their collaborations were limited mainly to ties on an individual level, and that they could not expand beyond this level of collaboration due to limited funding, representatives from funded networks reported that the IPI funding has been instrumental in formalizing existing researcher-to-researcher ties and “taking collaborations to the next level”. In fact, several representatives of funded networks noted that as a result of the IPI, they are now able to collaborate at a consortia-to-consortia level internationally, and that they would not have been able to do this without the IPI.

Examples of cooperation reported on the consortia-to-consortia level, include access to the knowledge, expertise, infrastructure and data of all researchers tied to the consortium, rather

than just a connection to one individual researcher. Only one instance was reported where a non-funded network was able to fully launch the activities they had proposed in their IPI application by tapping into their own resources. However, it was noted that due to limited funding, it took significantly longer to implement planned activities. All other non-funded networks that were interviewed for the evaluation reported that they had not been able to engage in international collaborations beyond researcher-to-researcher contacts and participation in regular conferences, despite attempts to build on initial contacts established during the IPI application process.

Added-value for International Partners and NCE Networks

Many of the international partners reported that a key impact of their collaboration with the Canadian network has been a new or increased awareness of research activities and infrastructure in Canada. In many cases, this awareness was viewed as very beneficial for the international partner, particularly with respect to expanding their opportunities for partnerships with Canadian researchers and learning from Canadian experiences with a particular issue or topic. For example, a representative of an international partner organization of a health network reported that a key impact of partnering with the Canadian network was to learn from the network with respect to their strategies and infrastructure within Canada. The informant stressed that input from the Canadian network had been particularly valuable with respect to addressing jurisdictional challenges in the interaction between the federal and the provincial level. In addition, several key informants reported that partnering with a Canadian network had raised the profile and reputation of the partner organization in their own country, particularly in areas where Canada is seen as a leader internationally with respect to research and knowledge exchange.

Another key impact of the IPI funding was examined in comparing the responses of international partners in LMICs to responses of partners in other countries. Informants from LMICs expressed that the partnership with the Canadian network provided the impetus for more formal networking activities nationally that had not been undertaken previously and provided guidance and support in expanding and improving their research and networking capabilities. For example, an international partner of a health network reported that their collaboration with the Canadians on “pocket tools,” which were developed as decision-support tools for caregivers, led them to develop similar tools and adapt existing tools to suit the cultural context within the partner organization’s country and region. In addition, it was reported that representatives of the Canadian network had organized a meeting where for the first time all health care providers in the focus area of medicine in the partner country had come together to establish linkages among each other as well as with the Canadian network. Similar effects were reported for partners of the network in other low and middle-income countries.

Despite these key impacts on the overall research and networking environment in LMICs, some Canadian networks also reported some unique challenges in partnering with organizations in this group of countries. It was mentioned that communication infrastructures aren’t always as well developed, and that interactions with partner organizations required additional management efforts.

Canadian interviewees also identified specific benefits of collaborating internationally. In particular, benefits were reported with respect to access to knowledge and existing research tools and results internationally, as well as learning from international experiences with

collaborations or with a specific issue/topic or approach to research. In addition, one key informant noted that findings generated in other countries regarding population health concerns could inform Canadian strategies for addressing these health concerns in immigrant populations in Canada.

Overall, key informants agreed that while basic researcher-to-researcher collaborations happen and are pursued regardless of whether or not the networks received the IPI funding, the IPI was seen as instrumental in expanding basic collaborations on an individual level and raising partnerships to a higher level and increased depth and scope, compared to networks that did not receive any IPI funding. In order to fully capture the differences between funded and non-funded networks with respect to international collaborations, it would be of interest to collect ongoing information on progress with international collaborations from all networks. However, it might be difficult to convince non-funded networks to engage in additional administrative tasks with respect to reporting progress on collaborations in light of the fact that they did not receive any IPI funding.

In addition to information about the general approaches to and nature of collaborations, NCEs reported a number of specific activities and resulting impacts.

3.2.2 Activities Undertaken With the IPI Funds and Impacts

Activities

When asked about the kind of activities that were undertaken internationally, representatives from non-funded networks reported regular conferences and meetings in their field as the main activity beyond e-mail or phone contact between researchers. It was mentioned that, while there was potential for considerably more collaboration, the lack of funding made it difficult for those networks to better support and expand existing ties between researchers or research groups. Representatives from funded networks reported a range of activities in addition to regular conferences and meetings that varied by network. Examples are described below:

Workshops

All networks reported that they utilized the IPI funds to organize and participate in workshops with their international partners. Some workshops were organized as part of regular meetings and conferences in the fields/areas of research the networks are active in; other workshops were organized and held separately, either in Canada or in the country of the partner organization. Workshop foci included those designed specifically around networking between NCEs and partner organizations to further build and facilitate collaboration between the networks and their partner organizations, as well as topic-based workshops to collaborate on issues addressed by the NCEs and their partners. In addition, some networks reported having organized workshops that were aimed at assisting their partner organizations in establishing connections with other organizations nationally or internationally. For example, workshops were held in Canada, Europe, the U.S.A., Africa and China.

Conferences

Many network representatives reported that the IPI funds were used to organize and/or participate in conferences. In addition to regular annual conferences in the field the network is

active in, network representatives reported that they were able to participate in additional conferences, some of which were specifically designed and organized around the partnerships between the network and international organizations. Examples of conferences that were organized with the IPI funds include topic-based conferences and symposia on issues such as global health crises or environmental issues. Conferences were held in Canada, Europe and the U.S.A., for example. Some of these conferences and symposia led to publications of conference proceedings and first steps toward peer reviewed publications. However, it appears that mainly established NCEs were able to work toward publication resulting from these conferences. Activities of newer NCEs appeared to revolve mainly around conferences that were designed to facilitate networking and encourage future collaboration between the network and partner organizations.

Knowledge Transfer

All networks reported that they had used the IPI funds to engage in or organize activities aimed at knowledge transfer between the NCEs and their partner organizations. Activities reported by all networks included conference calls and in-person meetings with representatives of their partner organizations, as well as the sharing of documents between the NCEs and their partners. In addition, some networks reported that they had started sharing data or tools that had been developed by the NCE or their partner organizations. For example, one network reported that they were sharing data for mathematical modelling with their partners. Another network noted that they had received access to, and were sharing information regarding data collected on a cohort of study participants for a study developed by a partner organization. One network also reported that they had shared “pocket tools” that were designed to assist health care providers by allowing them to access condensed information on a condition or disease at a glance.

Some key informants also provided evidence of existing joint research projects and resulting publications. However, this was only reported by representatives of mature/established NCEs and is therefore likely based on pre-existing cooperation and cooperation infrastructure between those NCEs and their partner organization that was enhanced through the IPI funds. The exact extent to which the IPI was responsible for these outcomes could not be ascertained. Examples of existing joint research projects include research projects on the global spread of diseases as well as the development of clinical research trials.

Highly Qualified Personnel (HQP) Exchange

Some networks reported that they had been able to implement opportunities for HQP exchange. While many networks noted that this aspect of their planned the IPI activities has been challenging with respect to actual implementation, resulting in delays in enabling HQP exchange between NCEs and their partner organizations, some networks were able to offer training workshops, summer schools, student workshops at conferences or direct HQP exchanges between the NCEs and their partner organizations for research project work, including unique data collection experiences on large expedition projects and the involvement in health research in Canada and internationally.

The number and scope of the IPI funded activities varied by network. Overall, the variation of activities by network can be interpreted to be a reflection of:

1. The strategic mission of the network – some networks have positioned themselves more in an advisory role in terms of influencing public policy, awareness and knowledge about a particular issue or topic whereas others are more oriented towards technological advancement. As a result, activities of the former group of networks focused more on establishing linkages, networking and sharing strategies with organizations that have a similar role in their countries. Examples include networks focusing on prevention strategies (health), research ethics (health) or policies and strategies for addressing global challenges (environment). Networks with less focus on an policy/advisory role were more likely to report direct research activities and less collaboration on policy development or prevention in areas of health or environmental issues.
2. The size and maturity (length of time the network has existed) – larger and established networks (that have received funding for five or more years) were found to report more activities/success with respect to actual joint projects and publications or other outcomes, whereas younger or smaller networks reported a stronger focus on activities that provide the foundation for joint projects and publications and other outcomes. It is likely that larger or established networks benefited from existing infrastructure with respect to national and international collaborations as part of their overall NCE mandate that newer or smaller networks are currently in the process of establishing.

Impacts

Almost all representatives from international partner organizations noted that collaborating with Canadian NCEs has enriched their ability to conduct research in the field. Partner organizations reported that they benefited from existing knowledge, documentation and experiences with respect to developing strategies to inform and influence public policy as a result of collaborating with Canadian NCEs. In addition, it was noted that being exposed to different countries with their own specific issues within the area of interest to the organization, as well as exposure to different research cultures, has been a lesson that partner organizations will be taking into future international research cooperation. As such, the lessons learned within the IPI activities were reported to be valuable lessons for any international collaboration activities for the networks and their partner organizations.

Additional impacts of the IPI were reported in the context of contributing to the reputation of Canada as a leader in research and knowledge transfer internationally. Several international partner organizations reported that partnering with a Canadian NCE has increased their awareness of Canadian research achievements and Canadian practices and strategies in the field. These informants reported that prior to their contact with one of the funded networks, they were not aware of the networks and their achievements with respect to research and influencing public policy in their field. As a result of collaborating, representatives from several international organizations stated that they were very interested in learning about the network structures and their achievements, and in some cases partner organizations noted that they were looking into options to implement similar structures in their organizations. The Canadian networks were referred to as best practices with respect to structures and internal organization and in many cases are viewed as leaders in research and knowledge transfer. Informants reported that they had not been aware of many of these aspects about Canadian NCEs prior to collaborating with them through the IPI funding. It was noted that this increased awareness of the Canadian research environment within the NCEs was seen as stepping stone for further collaborations with Canadian researchers and, as such, opened up many new opportunities for the partner

organizations. Canadian network representatives reported similar benefits when asked about the value the international collaborations have added for the network. It was mentioned that the partnerships “put Canada on the map” internationally and therefore open up opportunities to benefit from existing international knowledge and existing international infrastructure.

In addition, Canadian informants reported that the IPI provided them with the ability to leverage their own resources (funds) with additional contributions (cash and in kind). Informants stated: “Being able to bring money to the table changes our position to do things internationally. It opens up many doors that would otherwise remain closed.” Examples of leveraging include matching funding from European Networks of Excellence for joint projects and meetings, and in another instance joining a global consortium, which resulted in matched funding from 32 members of the consortium. It is too early to determine the impact of this global collaboration on the achievement of objectives of the networks and organizations involved in the consortium. Other examples of successful leveraging include a Canadian health network that had submitted a joint proposal for a \$10 million research project, as well as \$1.5 million released by Genome Canada, with a further \$20 million contingent on progress, as reported by another health network. In addition to leveraging dollars for joint activities, informants stated that partnerships can result in benefiting from existing equipment, data and general research infrastructure in partnering countries, leading to costs savings for the Canadian networks and limiting the duplication of efforts for all partners involved with the network.

However, examples for success in leveraging other research funding were also reported from some non-funded networks. For example, a network focusing on engineering was able to form an international society that includes partner organizations in the U.S.A., Germany, Japan, Hong Kong, Austria and Switzerland. The society has been able to leverage research funds throughout its member countries. Other examples include jointly funded research projects between a non-funded NCE and Russian researchers and collaboration between a non-funded NCE and a research organization in Korea that is based on matched funding and designed to further leverage funding. Although there are many examples of additional funds leveraged by the IPI funded networks, it is unclear to what extent it can be concluded that successful leveraging of research funding can be seen as a result of the IPI funding.

Overall, the impact of the IPI to date has been a focus on building the foundation for joint research to address common problems (diseases, environmental issues, etc.). The partnerships that have been established and expanded as a result of the IPI funding have contributed to enabling Canadian networks to raise the profile of Canadian research internationally, as well as gaining access to existing research clusters and networks internationally. Canadian as well as international informants reported mutual benefits and stressed the importance of increased international collaboration, particularly in areas/fields of global relevance, where solutions to problems require global strategies (e.g., research on climate change, research on common health issues such as obesity or stroke, and research in new areas where researchers can benefit from internationally accumulated expertise such as stem cell research or research on prions).

3.2.3. Lessons Learned from International Collaborations

Canadian representatives of funded NCEs as well as several of their international partners stressed that it took more time to establish international partnerships and deal with the logistical challenges of multi-national collaborations than originally anticipated by the networks. While all

NCEs reported these challenges, NCEs that partnered with organizations in LMICs reported additional challenges due to a (perceived) requirement to provide organizational/administrational assistance to the partner organization in establishing and overseeing the partnership. Particularly those activities that went beyond conferences and meetings were reported to have been challenging with respect to logistics. Examples of general challenges include immigration legislation in Canada and abroad that made organizing the exchange of personnel (HQP and senior researchers) more complex and time consuming than originally anticipated, as well as legal challenges of drafting international contracts for more formalized partnerships between Canadian networks and their international partners. As a result of these and similar challenges, activities proposed by the networks in their original proposals for the IPI funding have been delayed and several networks reported that they were only now able to roll out some of their IPI activities.

Representatives from non-funded networks also reported some lessons learned from the international collaborations they had been able to establish. Due to the complexities of working internationally and establishing contacts and partnerships, it takes time and funding dedicated to allowing activities similar to those reported by funded networks. A key finding here was that while some level of collaboration was still possible, almost all representatives of non-funded networks and their partners indicated that it is difficult to collaborate internationally when funding for these activities is limited or does not exist. Informants mentioned that the logistical challenges alone (e.g., international travel, remote organization of workshops and meetings, establishing and maintaining connections beyond the researcher-to-researcher level through ongoing communication) require time and effort for which funding is often not available. Only one non-funded network reported that they were still able to launch the activities proposed as part of their IPI application by tapping into their own resources, however, it was noted that implementation was a lot slower than originally projected and that the scope of the activities and collaborations may have been increased with the IPI funding.

It is noteworthy that the type of lesson learned differed across networks. While the more established networks had the benefit of experience in terms of developing international relationships and facilitating HQP exchanges, new networks often had to rely on “trial and error” in terms of developing protocols/approaches. In this context, it is clear that the program should examine the feasibility of developing appropriate “tool kits” that could assist new future IPI recipients in terms of managing the IPI funds. Examples of such resources include:

- Development of resources/tool kits that would provide information to networks as to how to apply, and manage the exchange of Highly Qualified Personnel (HQP) between Canada and other partner countries (immigration, legal liability, other). The development of these resources/tool kits could be based on input provided from all networks based on their experiences with the IPI to ensure that future IPI recipients can benefit from lessons learned and experiences with successful strategies of networks that were able to fully implement their IPI activities within the funding time frame.
- Development of resources that would aid networks in the development of bilateral/other association contacts/agreements/MOUs at the consortium level as opposed to at a specific institution.
- Identification of resources and management structures needed to implement international activities, including best practices and lessons learned from networks that were able to fully

implement their planned IPI activities within the two-year funding time frame and managed to integrate the IPI activities into the network's strategic plan.

- Examples of detailed performance report templates that would enable all funded IPI networks to provide common data with respect to expected outcomes such as HQP exchanges, research projects (bid and awarded), publications and/or other activities.

Based on responses provided by many key informants regarding uncertainty around the sustainability of collaborations initiated through the IPI, future implementations of the initiative or similar funding programs should provide more guidance on how partnerships are expected to be funded in the longer term. The case of the non-funded network that was still able to launch the proposed the IPI activities, albeit with significant delays and reduced scope, indicates that this network included the proposed the IPI activities in its strategic plan even without the IPI funding. Interviewee comments and questions with respect to how to maintain the IPI activities after the initiative indicate that some funded networks have not been able to incorporate the IPI activities into their strategic plan beyond the IPI funding time frame. This may be due to a lack of knowledge/awareness of whether or not follow-up funding might become available, but could also be a reflection of the fact that at the time of the evaluation, many networks were behind schedule in implementing their planned IPI activities and as a result more concerned with completing their IPI activities than with sustainability of activities beyond the IPI.

3.3 Conclusions

Based on the findings presented in the report, a number of conclusions can be drawn for the *Evaluation of the International Partnership Initiative*.

Overall value and impact of the IPI funding:

Findings from key informant interviews and program documentation suggest that the funded networks have achieved several positive outcomes that collectively contribute to achieving several of the IPI objectives.

Almost all stakeholders were of the opinion that the IPI funding had enabled Canadian researchers and networks to expand and build relationships with organizations in other jurisdictions. Although researcher-to-researcher networking existed (and continues to exist) before and irrespective of the IPI funding, the funding allowed Canadian networks to establish relationships with other organizations on a consortia-to-consortia level. Compared to peer-to-peer contacts, it was reported that consortia-to-consortia level relationships are more formalized in structure and enable interactions across the organization (including other international partners that might be part of a larger consortium), rather than with an individual researcher.

The IPI funding was also reported to have generated other positive outcomes, including the following:

- Knowledge/awareness of Canadian research capabilities and research competence was enhanced for international partners.
- Knowledge/awareness of global research and knowledge transfer, as well as policy implementation issues was enhanced for network researchers.
- Raising the profile of Canadian networks and the ability to promote Canadian research expertise at the international level.

- Support for organizations in low and middle-income countries to develop their own networking activities in their home country that had not been previously been undertaken.
- Development of partnerships with international partners, some of them leading to the submission of joint proposals.

The activities undertaken by the networks indicate progress toward in-depth partnerships with organizations outside of Canada. It is too early to ascertain the full extent of the initiative's impact on the networks' ability to develop large coordinated and concerted efforts leading to economic and social impact.

Networks reported successes with respect to establishing partnerships with organizations outside of Canada and initiating the exchange of knowledge and experiences. International partners noted that their connection with Canadian NCEs has increased their awareness of research activities in Canada and, as a result, has enabled them to tap into existing knowledge and strategies to stimulate research in their own countries. Many informants stated that the partnerships have led to an increased awareness on both sides that Canada has a leadership role with respect to initiating and supporting knowledge transfer.

While information from key informants and program documentation suggests that a number of activities aimed at meeting the IPI objectives have occurred, many key informants noted that it may take some time to be able to detect the full impact of the initiative. For example, several networks reported that they recently submitted joint research proposals with their international partners and noted that it was still too early to identify the success of these proposals.

To date, not all IPI funded networks were able to implement HQP training as initially planned.

Some international HQP activities were implemented, including a summer school and some HQP exchange activities, although based on information provided by key informants and on a review of network documentation, it appears that some networks, especially newer or smaller networks without established relationships in an international level, have faced challenges with respect to meeting the IPI objectives and goals. For example, some networks reported difficulty with respect to the exchange of HQP (due to difficulties navigating the complex requirements, including immigration and contractual issues).

This challenge can be interpreted in the context of a tight time frame for the IPI funding that was designed to allow networks to establish relationships on an international level.

Added value of the IPI for NCEs and their international partners

The IPI has allowed NCEs and their international partners to pursue their strategies globally, enabling a more concerted approach to finding solutions to problems that are of global importance.

Overall, the impact of the IPI to date has been a focus on building the foundation for joint research to address common problems, particularly in areas/fields of global relevance, where solutions to problems require global strategies (e.g., research on climate change, research on common health issues such as obesity or stroke, research in new areas where researchers can

benefit from internationally accumulated expertise such as stem cell research or research on prions, and other areas/issues).

Given the focus of the initiative on stimulating and enabling partnerships, networks that have positioned themselves in a strategic advisory role in terms of influencing public policy, awareness and knowledge about a particular issue appeared to benefit more clearly than other networks from the IPI with respect to advancing their overall strategic mission.

The networks receiving the IPI funding differed with respect to their overall positioning as an advisory network or a network more oriented toward technological advancement. Since the initiative was not designed to immediately lead to joint research outputs, but rather to stimulate international partnerships, evaluation findings indicate that NCEs with a greater advisory/policy focus were able to immediately benefit from networking activities funded through the IPI than NCEs with focus on technological advancement. This may suggest that those networks focussing on advisory strategies were better able to incorporate the IPI activities into their overall strategic mission as a value-added element to their mission.

Utilization of the IPI funding

The IPI funding was used to support activities designed to establish relationships with organizations outside of Canada and initiate sharing of knowledge and tools. Funded networks reported a broader range of activities with respect to international collaboration than non-funded networks.

While representatives from non-funded networks reported that even without the IPI funding they had been able to engage in some activities for collaborating with researchers outside of Canada, these activities were mainly limited to participation in regular annual conferences and individual projects. Representatives from funded networks reported a broader range of activities.

Key informants believed that the reported activities would lead to ongoing and in-depth research partnerships with organizations outside of Canada and were seen as steps toward joint research outputs, including dissemination of knowledge, resources and technology.

Lessons Learned From the IPI Design and Delivery

The IPI design and delivery is seen as appropriate, however, networks reported that the time required to establish relationships with international partners has adversely affected their ability to meet some of the IPI objectives within the funding time frame.

The funding timeframe for implementing the initiative was seen as too short, generating uncertainty with respect to meeting planned expenditure levels, as well as with respect to continuation of funding to support ongoing collaborations. Evaluation findings suggest that networks experienced some difficulties due to the time frame allocated to the preparation of the networks' IPI funding proposals. Some key informants reported that they did not have time to establish clear guidelines/processes to select and recruit suitable international partners, and that planned activities were generally behind schedule.

Informants noted that establishing international partnerships and fully launching proposed international activities required more time than they had originally anticipated. Several key informants reported that they were surprised by the amount of time and resources required to develop international contracts, MOUs, and other agreements with partner organizations. These logistical challenges likely accounted for some of the delay in launching the IPI activities that was reported by all of the networks. The program has since been extended to March 2010 to enable networks to complete their IPI projects and meet proposed targets.

These concerns were raised in the context of overall NCE design issues, reflecting perceptions that some networks have access to larger amounts of funding over a longer period of time than others, which was seen as an advantage for the larger or established NCEs with respect to the ability to build on existing international infrastructure compared to other networks that had to use the IPI funding to establish this infrastructure. It may be helpful to provide networks, particularly those that cannot fall back on pre-existing structures for international collaboration, with tools and best practices to assist them in the development of internal processes to identify suitable partners and establish linkages with foreign organizations, (for examples, MOUs, legal documents, processes to identify partners and projects fitting networks strategic plans, reporting, best practices). In addition to a funding timeframe that was viewed as too short to fully engage in all the activities the networks had proposed in their applications for the IPI funding, expectations with respect to who will fund ongoing collaborations resulting from the IPI activities remain unclear. There is a need for a longer-term perspective to allow networks to reap the full benefits of the partnerships that have been established under the IPI. As well, information and guidance is needed for networks to determine the availability of resources and define expectations with respect to continuing collaborations that were started with the IPI funding.