

Audit of the Networks of Centres of Excellence Program

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Natural Sciences and Engineering Research Council of Canada
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1 EXECUTIVE SUMMARY

Background

The NCE Program was created in 1989 with a goal to mobilize Canada's research talent in the academic, private and public sectors as a means of developing the economy and improving the quality of life of Canadians.

The Networks of Centres of Excellence (NCE) Program is a federally funded \$ 62.1 million (current annual) program administered jointly by the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes of Health Research (CIHR), and the Social Sciences and Humanities Research Council (SSHRC) in partnership with Industry Canada and Health Canada. The program is managed through the NCE Secretariat which also manages several other tri-agency programs and initiatives.

Why it is important

An audit of Networks of Centres of Excellence was identified in NSERC's Risk-Based Audit Plan (RBAP) 2013-16. The NCE program was included in the RBAP because it is regarded as a flagship NSERC program and represents an annual funding envelope which is one of NSERC's largest. Furthermore, although this program has been in place since 1989, it has never been audited.

Audit objective and scope

The objective of this audit was to provide assurance that key risks related to this tri-agency program are adequately and effectively controlled in the areas of governance, program administration, adjudication and award payment.

The scope of the audit work covered key areas of the program from governance through to award payment. During the planning stage, a decision was made to scope out monitoring of the award, as a larger and more comprehensive audit of financial monitoring was being planned for January 2014, as per the Risk-Based Audit Plan (RBAP). Furthermore, all aspects related to information systems and platforms were scoped out because at the time of this audit NSERC and SSHRC were transitioning to a new Research Portal. It was also beyond the scope of this audit to examine any approval or account verification controls within CIHR. The audit examined documentation from September 2010 to September 2013.

Key audit findings

The audit identified several positive findings in areas linked to the core activities of the program, most noteworthy were findings related to the adjudication of applications and award payment. The program's peer review assessments were found to be consistent, well documented and decisions were supported by thorough justifications, highlighting the quality of the peer reviewer's work, as well as the diligence and professionalism of the current complement of staff. The audit also found that award payments were supported by the appropriate approvals prior to disbursement and payment amounts were accurate in the selected sample. This provides

management with reasonable assurance that controls for award approval and payment are effective and operating as intended.

The audit also noted a number of areas where opportunities for improvement could be considered:

1. Newly developed Terms of Reference for Management Committee and Steering Committee have provided greater clarity as to the role of these bodies in relation to program design, award approvals, evaluation and communications, as well as how decisions are made. However, key roles and responsibilities concerning risk management and performance monitoring of the overall program were found to require further clarification. Furthermore, the audit found limited evidence in minutes to suggest that these committees had explicit discussions around risk managing the administration of the program, overall NCE Program performance expectations/targets from year to year or strategic planning.
2. While NCE Program competition deadlines have been consistently met by staff from year to year, the Corporate Internal Audit (CIA) Division was informed that workload was heavy and the Secretariat was operating in a very lean environment. The audit found that the NCE Secretariat had increased its program portfolio in recent years and overtime was significantly higher than in the rest of the Agency. That said, the audit also noted the Program has consistently lapsed between 6-9% of its operating/maintenance and salary budgets since 2010-11, suggesting that resources are available to explore options. Despite the increase in program administration workload and high overtime costs, the NCE Secretariat had not conducted recent analyses to ensure that the program is adequately resourced and efficiencies have been explored to optimize the administration of the program.
3. There is currently no formal risk management process for the program. Rather, the current approach to risk management within the NCE Program is informal and based largely on the sharing of information between colleagues, discussions at the NCE Secretariat management table—which are not captured in minutes—with follow-up on issues as they arise. In the absence of a more formal risk management process, the program has faced risks over the years that have not been formally assessed, mitigated or monitored.
4. As outlined in the terms and conditions, the NCE program has 5 broad objectives (see footnote 4, p. 11). The audit noted that the annual reports did not explicitly report against these objectives to determine the extent to which the program is achieving its goals. In addition, it was noted that the NCE annual report changed its format, style and the type of data presented, making it very difficult to follow performance trends over time. As such, management has limited assurance that the program is meeting all of its pre-established objectives.
5. Additional areas of improvement identified in the audit include documenting the NCE budgeting and annual reporting processes; clarifying the security classification of the Secretariat's information holdings and enhancing control over the flow of NCE funds.

Other findings (below) require the attention of the broader NSERC management cadre and represent areas of improvement which can impact NSERC beyond the NCE Secretariat.

6. In compliance with the Emergency Management Act (2007), all departments are required to develop effective response planning to emergencies. These plans are intended to minimize loss and ensure the timely resumption of business in the event of unforeseen circumstances. While the NCE Secretariat has not faced emergency events such as infrastructure loss or any known compromises to its information holdings, it relies on NSERC's broad plans to resume business and ensure the availability and integrity of its data should an event occur. The audit found that NSERC had developed 3 main plans to manage such circumstances. However, these plans were at different developmental stages and some key plans were not updated or monitored, suggesting their effectiveness may be diminished in the event of an emergency.

Conclusion

The NCE program has existed for more than 24 years, and the program has been continually improved over the years, contributing to its successful delivery. Nonetheless, the audit identified areas of continued improvement. Some of the more critical areas identified in this audit for management's consideration include completing a human resource and process efficiency analysis to ensure that the program is still being administered optimally; and strengthening risk management and overall performance monitoring (against the program's objectives) of the program. Other improvements noted in the audit will require broader consultation with NSERC management, such as the sufficiency of IT disaster recovery and business continuity planning. Since 2007 in particular, the NCE Secretariat has experienced significant changes to its portfolio of programs and administrative responsibilities have increased. Given this, the audit is timely and represents an opportunity for management to reflect on the changes to date and consider strategic improvements going forward.

2 BACKGROUND

The Networks of Centres of Excellence (NCE) Program is a federally funded \$ 62.1 million (current annual) program administered jointly by the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes of Health Research (CIHR), and the Social Sciences and Humanities Research Council (SSHRC) in partnership with Industry Canada and Health Canada. The program is managed through the NCE Secretariat which also manages several other tri-agency programs and initiatives.

The NCE Program was created in 1989 with a goal to mobilize Canada's research talent in the academic, private and public sectors as a means of developing the economy and improving the quality of life of Canadians.

The NCE Program goal is accomplished by investing in research networks that are unique partnerships among universities, private and public sectors and not-for-profit organizations. These nation-wide, multidisciplinary and multi-sectoral partnerships connect excellent research with end user know-how and strategic investment. Since the creation of the program, 45 networks have been funded by the NCE Program, 20 of which have been funded since 2007¹.

An audit of Networks of Centres of Excellence is necessary since it was identified in the Risk-Based Audit Plan (RBAP) 2013-16 as requiring further examination. Furthermore, the NCE Program is regarded as a flagship program and represents a significant annual total funding envelope, one of NSERC's largest. Although this program has been in place since 1989, it has never been audited.

3 AUDIT OBJECTIVE AND SCOPE

The objective of this audit was to provide assurance that key risks related to this tri-agency program are adequately and effectively controlled in the areas of governance, program administration, adjudication and award payment.

The scope of the audit work covered key areas of the program from governance through to award payment. During the planning stage, a decision was made to scope out monitoring of the award, as a larger and more comprehensive audit of financial monitoring was being planned for January 2014, as per the Risk-Based Audit Plan (RBAP). Furthermore, all aspects related to information systems and platforms were scoped out because at the time of this audit NSERC and SSHRC were transitioning to a new Research Portal. It was also beyond the scope of this audit to examine any approval or account verification controls within CIHR. The audit work examined documentation from September 2010 to September 2013.

¹ Review of Relevance and Effectiveness of the Networks of Centres of Excellence (NCE) Program, 2013.

4 AUDIT METHODOLOGY

The CIA Division used the following methodology to conduct its work:

- File and document review of various sources of information including: committee Terms of Reference, minutes, program guidelines, process descriptions, manuals, NCE Website, etc. This also included testing of financial verification procedures and award adjudication documentation.
- Interviews with internal key stakeholders such as NCE Secretariat staff (i.e., Associate Vice-President, Deputy Director, Senior Program Managers, Senior Advisor Planning and Operations, and other program staff) and managers and staff from different sectors (i.e., Accounting Services, Financial Monitoring, Awards Administration).

The audit engagement was conducted in conformance with the Treasury Board's (TB) [Policy on Internal Audit](#), the [Internal Auditing Standards for the Government of Canada](#), and the Institute of Internal Auditors (IIA) [International Standards for the Professional Practice of Internal Auditing \(Standards\)](#). These standards require that sufficient and appropriate audit procedures be conducted and that evidence be gathered to provide a high level of assurance on the findings contained in this report. The conclusions were based on a comparison of the situations as they existed at the time against the audit criteria (Appendix I).

5 KEY AUDIT FINDINGS

5.1 Governance

Governance has a myriad of definitions and depends on a variety of organizational, structural, and cultural factors. While no one definition is used as a 'golden standard', the IIA standards defines governance as:

"the combination of processes and structures implemented by the board² to inform, direct, manage, and monitor the activities of the organization toward the achievement of its objectives" (2011).

Guidance provided by the Office of the Comptroller General (2011) expands on the above definition and suggests that oversight bodies should have clear roles with respect to risk management and control to ensure objectives are achieved. Furthermore, oversight bodies should also develop plans and communicate strategic directions.

5.1.1 Refining the risk management and performance monitoring responsibilities of governing committees would ensure greater oversight.

The audit found that the two governing committees for the NCE program—Steering Committee (SC) and Management Committee (MC) had new Terms of Reference (ToR) which were

² It should be noted that while the majority of departments within the Public Service do not have a 'board', senior management is acknowledged as playing this role.

refreshed in 2013 to provide greater clarity regarding general roles and responsibilities. Furthermore, these committees met on a periodic basis as per their ToR and maintained minutes to ensure that key award and policy decisions were documented, facilitating the committees' ability to monitor the program.

According to the Office of the Comptroller General (2011)³, one of the key roles of governing bodies is to provide effective risk management and monitoring. Newly developed ToRs for MC and SC have provided greater clarity as to the role of these bodies in relation to program design, award approvals, evaluation and communications, as well as how decisions are made. However, key roles and responsibilities concerning risk management and performance monitoring of the overall program were found to require further clarification. Furthermore, the audit found limited evidence in minutes to suggest that these committees had explicit discussions around program risk management, overall NCE Program performance expectations/targets from year to year or strategic planning.

Recommendation 1: It is recommended that SC and MC further clarify their roles and responsibilities regarding risk management and performance monitoring of the NCE Program to ensure that key risks and performance challenges impacting the achievement of the program's objectives are systematically identified, monitored and addressed.

5.2 Program Administration

The NCE Secretariat is currently led by an Associate Vice-President and includes 2 deputy directors, with a complement of program officer and assistant staff from NSERC, SSHRC and CIHR. The NCE Secretariat is a matrix environment and staff may hold a cross-section of the NCE Secretariat's 4 programs and 2 initiatives within their portfolio. The Secretariat is responsible for delivering the program (i.e., processing proposals, logistics of peer review, supporting MC and SC, award decisions, acting as observers on various network committees etc.), as well as annual reporting. In addition, key services that are required to support the NCE Secretariat's administration of the program are provided by the Corporate Administrative Services Directorate (CASD), and include:

- the Finance and Awards Administration Division that is mainly responsible for the payment process; and
- the Information and Innovation Solutions (IIS) Division that is responsible for technical aspects, including the awards management systems/databases and access rights to these systems.

5.2.1 Award applications are consistently assessed against pre-established criteria and decisions are documented and justified.

The core activity of the NCE program—the peer review process—is a complex activity that involves numerous steps and points of assessment. At the center of this process is the assessment work of Expert Panels and the Standing Selection Committee. These bodies consist of volunteer experts from academia, government and industry, and come from across Canada and around the world. Their quality assessments of network proposals against pre-

³ Audit Criteria Related to the Management Accountability Framework. Office of the Comptroller General (2011).

established criteria are critical in the final approval of awards made by the Steering Committee. It was noted that the program material available on the NCE website, as well as peer review material was a key resource for evaluating, selecting and renewing meritorious networks, facilitating efficiency and promoting clarity and transparency of the peer review process.

The audit found that award applications in the sample were consistently evaluated against pre-established criteria, suggesting that applications were assessed in a fair and uniform manner. Furthermore, the audit found that SC's final decisions for funding (both successful and unsuccessful) were consistently documented and justified in the sample. This demonstrates that the program exercises due diligence in the adjudication of awards and funding decisions are clear and well supported.

5.2.2 Award payments are supported by the appropriate approvals and are accurate.

Due to the tri-agency nature of the NCE Program, award payments are made through each Agency's database system, one used by CIHR, NSERC (NAMIS) and SSHRC (AMIS). NAMIS and AMIS are databases which capture key award information, including the amount and duration of an award and track the funding status throughout the duration of the award. In order to issue award payments, the status of an award must be "transferred", this initiates the payment process in NAMIS and AMIS into the Financial, Procurement and Asset Management (FPAM) system, since both systems work independently of one another. This transfer of financial data from NAMIS/AMIS to FPAM is done through a utility/function. The FAAD team processes the payment of awards on a monthly basis. However, before the payment is completed, a verification is performed to ensure Funding Agreements and Section 34 approvals are in place for all networks. In addition, business object (BO) reports are printed and an institution-based verification is completed to ensure that the information in NAMIS and AMIS matches the information that has been transferred into FPAM. In addition, there are ad hoc and year end reconciliations in which FAAD reviews how much has been paid to institutions, how much has been received and how much is left for each agency by institution.

The audit found that award payments were supported by the appropriate approvals prior to disbursement and payment amounts were accurate in the selected sample. This finding suggests management has reasonable assurance that FAAD controls for award approval, payment and account verification are effective.

5.2.3 The program would benefit from an analysis of human resource requirements and business process efficiency.

While NCE Program competition deadlines have been consistently met by staff from year to year, the Corporate Internal Audit (CIA) Division was informed that the workload associated with on-time program delivery was heavy. Some of the workload may have been due to the NCE Secretariat on-boarding new programs in recent years (i.e., Knowledge Mobilization Initiative, piloted in 2005 and made permanent in 2010; Canada-India Research Initiative, 2011), while legacy programs such as the NCE Program have developed new delivery models (as of 2012, staff manage two different NCE processes- 7 year model networks as well as 5 year model networks) and have seen an increase in monitoring requirements (i.e., 5 year model networks now report on progress annually).

The audit examined a number of available NCE Secretariat human resource indicators to gain a better understanding of the impact of workload on staff, including leave (vacation, sick leave, compensatory leave), indeterminate turnover and overtime⁴. The audit found that the results were varied and inconclusive. While leave and turnover data did not suggest that the impact of workload was greater from the rest of NSERC over time, it was noted that in 2012-13 NCE Secretariat staff claimed almost double the average amount of overtime than the rest of NSERC (\$1294 vs. \$675/employee). Furthermore, average overtime costs for NCE Secretariat staff have been consistently higher than those of NSERC staff over the past 3 years, suggesting a trend⁵. CIA Division was informed that much of the overtime cost could be attributed to the requirement of NCE Secretariat staff to attend network committee meetings specifically for the NCE Program, many of which require travel outside the National Capital Region. In 2012-13, 9 employees made 26 trips to NCE Program network committee meetings across Canada, ranging between 1-6 days in duration (75 days cumulatively). A large amount of travel was also noted for 2011-12 and 2010-11.

The audit found that despite the increase in program administration and high overtime costs, the NCE Secretariat had not conducted recent analyses to ensure that the program is adequately resourced and efficiencies have been explored to optimize the administration of the program. Furthermore, the NCE Program has consistently lapsed between 6-9% of its operating/maintenance and salary budgets since 2010-11, suggesting that resources are available to explore options.

Recommendation 2: It is recommended that the NCE Secretariat complete a human resource/process efficiency review to determine the level of human resources necessary to meet the current needs of the program and identify business process efficiencies.

5.2.4 Several sources of risk information are collected but have not been used to develop a formal risk management approach.

The audit found that there is currently no formal risk management approach for the program. Rather, the current approach to risk management within the NCE Program is informal and based largely on the sharing of information between colleagues, discussions at the NCE Secretariat management table—which are not captured in minutes—with follow-up on issues as they arise. In the absence of a formal risk management process, the program has faced risks over the years that have not been formally assessed, mitigated or monitored. Some of these have been identified in this audit.

Despite the lack of formality in risk management, the NCE Program receives valuable risk information from a variety of sources. Perhaps the greatest source of information comes from attendance of NCE Secretariat staff at network committee meetings. Senior Program Managers (SPM) or Deputy Directors (DD) attend all committee meetings for their portfolio of networks. Their role is one of observer. During these meetings, SPMs or DDs are made aware of network issues, some of which may concern performance, budgeting and governance. CIA Division was informed that while this information is shared with NCE Secretariat management there have not been clear expectations to record or monitor key issues identified from these meetings for the

⁴ Note that due to the matrix working environment, it was not possible to obtain data only for employees working with the flagship NCE program.

⁵ Data provided by NSERC/SSHRC Human Resource Division, October 16, 2013.

purpose of assisting networks in improving their performance or providing strategic support. As a result, key information gleaned from these meetings may or may not get communicated. Other potential sources of information the NCE Secretariat collects include network annual reports, e-mails and phone calls received from the network administrative centres and the scientific directors.

Collectively, the information gleaned from these sources provides valuable information on network performance (achievements, budget, and governance issues) and therefore has operational implications for how the NCE Secretariat risk manages individual networks. The information also has strategic implications for how the NCE Secretariat administers the NCE Program as a whole (i.e., changes to policies). However, the potential for mining this information and using it to develop a more formal risk management process has not yet been fully realized.

Recommendation 3: It is recommended that the NCE Secretariat formalize its risk management process to ensure that risks are systematically identified, mitigated and monitored. It is also recommended that the NCE Secretariat develop clear information collection (particularly in relation to governance and risk management) and reporting expectations for attending network committee meetings.

5.2.5 NCE Secretariat annual reporting is not explicitly aligned with program objectives and does not facilitate the measurement of trends.

The audit found that while the program has 5 broad objectives as outlined in the terms and conditions⁶ and several outcomes as outlined in the NCE logic model, the annual reports did not explicitly report against these objectives to determine the extent to which the program is achieving its goals. In addition, every year the reports were found to change in format, style and the type of data presented, making it difficult to follow performance trends over time.

Regarding the content of the reports themselves, the audit noted that analyses and metrics were often not clearly explained or defined, further limiting the report's ability to explicitly demonstrate achievement against objectives. For example, the NCE Secretariat 2012 annual report [Delivering Results That Matter to Canadians](#) identifies a 160% increase in industry contributions from 2009-12. However, it is not clear which NCE Secretariat program is being referenced (i.e., CECR, NCE, BL) or which industries are factored into this analysis. While part of the problem may be a simple lack of description within the annual report, it is noteworthy to mention that a 2013 evaluation of the NCE Program identified some data reliability issues with the program's performance metrics. CIA Division was informed that some data reliability issues could be related to differing interpretations of data field definitions (i.e., contributions, partners). At the time of this audit, management was aware of data limitations and had responded with a remediation plan.

⁶ The NCE Program's 5 objectives are as follows: 1. Stimulate internationally competitive, leading-edge research in areas critical to Canadian economic and social development. 2. Develop and retain world-class research and research translation capabilities in areas essential to Canada's productivity and economic growth. 3. Create nationwide and international partnerships that bring together the key individuals and organizations needed to generate and implement multifaceted solutions to complex Canadian challenges. 4. Accelerate the exchange or research results within the network and the use of this knowledge by organizations within Canada to produce economic and social benefits. 5. Increase Canada's international visibility and reputation by attracting world-class collaborations, and developing partnerships with international organization counterparts, when applicable.

Apart for the annual report, some stakeholders reported that the program's 5 year evaluation could provide assurance on achievement against objectives. In 2013, the NCE Program was evaluated and the report determined that the program was still relevant and effective. However, the audit found that the evaluation did not assess two of the five program objectives—increasing the visibility and reputation of Canadian researchers or the ability of the networks to attract and/or retain research personnel in Canada. Furthermore, coverage of the five program objectives was incomplete in the 2007 NCE Program evaluation as well.

The lack of alignment between the program's objectives and the annual reporting process could suggest several things. First, it is possible that MC and SC's expectations for the NCE Secretariat's annual report, as well as the report's target audience have not been clearly defined. Second, it is possible that over the years different objectives have become more relevant gauges of effectiveness than the original program objectives. Nevertheless, in the absence of explicit, clear and consistent measurement against objectives, management has limited assurance that the program meets all of its pre-established objectives.

Recommendation 4: It is recommended that the NCE Secretariat clarify the objective of their annual reporting process, identify a target readership and develop a format that is clear and consistent year over year which allows the tracking of performance trends over time.

5.2.6 Specialized knowledge of manual budgeting/forecasting processes and the coordination of network annual reporting rests with one individual.

The audit found that specialized knowledge of certain manual budgeting processes and the coordination of network annual reporting rests largely with one position—the Senior Advisor, Planning and Operation. Regarding the NCE budget process, CIA Division was informed that this position was responsible for maintaining, manipulating and analyzing excel spreadsheet data relating to Agency allocation breakdowns, as well as network payment schedules over their lifecycle. These responsibilities were noted to be important for the tracking of funds and forecasting budgets. Regarding annual reporting, CIA Division was informed that the Senior Advisor was solely responsible for the coordination of the annual reporting process, including quality assurance over the final product.

One way to mitigate the risk of overreliance on one individual is to document detailed processes, procedures and create guides. The audit found that while various procedures and guides existed, these documents were at various stages of development and some appeared esoteric, limiting their practical utility to staff outside the function. As such, loss of the employee in the senior advisor position could result in delays in the budgeting/forecasting and annual reporting, as well as errors if staff is not familiar enough with the data and processes.

Recommendation 5: The audit recommends that the NCE Secretariat fully document the budgeting and network annual reporting processes; and develop clear guides which explain the spreadsheets and how to manage/analyze the information.

5.2.7 The security classification of peer review information requires clarification.

The audit found that the NCE Secretariat would benefit from clarifying the security classification of its information holdings, particularly its peer review information (i.e., full applications, assessment ratings, final funding decisions) and formalizing practices to ensure all staff

members manage the information in a uniform manner. In the absence of clear security classification and the implementation of appropriate security policies and procedures (i.e., locked cabinet and clean desk policies) consistent protection cannot be guaranteed. The security of peer review information is important because these documents contain details of sensitive and valuable research as well as the substantiation for funding decisions which often amount to tens of millions of dollars over the course of an award.

Recommendation 6: It is recommended that the NCE Secretariat determine the security classification of its information holdings and implement the appropriate policies and procedures to ensure their protection.

5.2.8 Plans for business information system recovery exist, but have not been updated or monitored.

In compliance with the Emergency Management Act (2007), all departments are required to develop effective response planning to emergencies. These plans are intended to minimize loss and ensure the timely resumption of business in the event of unforeseen circumstances. It should be noted that while the likelihood of such events is not high, recent events across Canada and the world, particularly related to cyber security, prove they do happen and can be catastrophic, emphasizing the importance of the effectiveness of these plans. Within the context of the Government of Canada, it is understood that the role of NSERC and SSHRC is not critical to the safety and security of Canadians and emergency planning needs to be appropriate to the mandate and objectives of the Agencies.

The audit found that the Agencies had developed an Emergency Management Plan (a general all-hazards response plan for all government tenants of the building), a Business Continuity Plan (business recovery specific to the recovery of common services between NSERC/SSHRC such as IT, Security, Finance and Procurement) and an IT Disaster Recovery Plan (plan for the recovery of the NSERC Award Management Information System (NAMIS) and SSHRC Awards Management Information System (AMIS) data, e-mails and the network). Review of the most recent documentation available demonstrates that these 3 plans are in different developmental stages. Furthermore, the Business Continuity and IT Disaster Recovery plans have not been monitored or updated in several years, suggesting that their effectiveness may be diminished in the event of an emergency. While the NCE Secretariat has not faced emergency events such as infrastructure loss or any known compromises to its information holdings, it relies on these plans to resume business and ensure the availability and integrity of its data should an event occur.

Recommendation 7: It is recommended that NSERC management discuss the progress made on these plans and determine if plans are sufficient or require further updating and monitoring.

5.2.9 Control of the transferring of funds could be enhanced.

The program involves the transferring of funds from the Agencies to various institutions. Due to the number of possible transfers, control over the flow of NCE Program funds is critical.

When funds are awarded to a meritorious network, the Agencies transfer funds to the institution hosting the network, known as the Host Institution (HI). Funds are transferred to the HI and not the network's scientific director directly because HIs have an established control framework for managing the funds. This framework is periodically monitored by a Tri-Agency Monitoring team.

Each network has a network administrative centre which is housed at the HI. These administrative centres are the central point where funding disbursements are made to institutional members (IM) —universities that are signatories to the network. When funding decisions are made by the network committees, the administrative centre informs the HI that funds can be transferred to the IMs for the purpose of network research. Once these funds are transferred from the HI to the IM, eligible researchers involved in the network (requiring funds for specific NCE research activities) can access the funds by submitting invoices and receipts to the IM for eligible expenses.

The audit found that there were a number of key agreements which set out the general terms and conditions governing the administration of funds to control their flow. These key agreements included,

- Institutional Agreement - between the Agencies and the HI;
- Funding Agreement - between the Agencies, HI and the network (administration of the network is at the network administration centre housed in the HI);
- Host Agreement - between the HI and the network (administration of the network is handled by the network administration centre, housed in the HI);
- Network Agreements - between the network, IMs and individual researchers/investigators.

While a number of agreements are intended to be in place to control the flow of funds, the audit found that the documentation at the network and host agreement level was incomplete in a sample of networks selected, suggesting some networks were more formally controlled by agreements than others. The true extent to which the full complement of networks is formally controlled by host and network agreements is actually unknown by the Secretariat given that it does not retain copies. In addition, documentation describing how funds should, and should not flow between these users (Agencies, HIs, Administrative Centres, IMs, investigators) was found to be unclear. This issue was noted as a potential source of confusion, impacting how appropriate transfers are understood and managed. Furthermore, it is important to note that the ability of an agreement to control the flow of funds is only as effective as it is applied, and the only way to determine whether an agreement is applied is through verification. At the time of the audit, CIA Division was informed that compliance with the agreements was not verified on a risk-based or periodic basis to ensure that funds were not transferred to institutions or parties which were not part of the network. While there is no evidence of inappropriate transfers to date, this finding suggests that the transfer of NCE network funds to non-network members (for purposes which may not be directly related to the research of the network) is possible and could go undetected by the Agencies.

Recommendation 8: The NCE Secretariat could consider clarifying and documenting how funds flow between users of the funds. Documentation should also identify eligible and ineligible transfers of funds.

Recommendation 9: It is recommended that a risk-based verification be considered for selected networks on a periodic basis to ensure that funds are used only by institutional members and investigators who are part of a network. Tri-Agency Monitoring and the NCE Secretariat should discuss how to best perform the verification.

6 CONCLUSION

The NCE program has existed for more than 24 years, and a number of improvements have been made to the program and its controls over the years, contributing to the effective management and successful delivery of the program.

The audit identified several positive findings in areas linked to the integrity of the program, most noteworthy were findings related to the adjudication of applications. The peer review process is a complex activity that involves numerous steps and points of assessment, and a number of stakeholders. Despite the complexities of this activity, the audit noted that the peer review process was well documented and communicated, which helped ensure the timeliness of assessments and award administration. Furthermore, the program's peer review assessments were found to be consistent, well documented and decisions were supported by thorough justifications, highlighting the quality of the peer reviewer's work, as well as the diligence and professionalism of the current complement of NCE staff.

Nonetheless, the audit identified areas of continued improvement. Some of the more critical areas identified in this audit for management's consideration include completing a human resource and process efficiency analysis to ensure that the program is still being administered optimally; and strengthening risk management and overall performance monitoring (against the program's objectives) of the program. Other improvements noted in the audit will require broader consultation with NSERC management, such as the sufficiency of IT disaster recovery and business continuity planning.

Since 2007 in particular, the NCE Secretariat has experienced significant changes to its portfolio of programs and administrative responsibilities have increased. Given this, the audit is timely and represents an opportunity for management to reflect on the changes to date and consider strategic improvements going forward.

7 MANAGEMENT RESPONSE TO AUDIT RECOMMENDATIONS

ITEM	RECOMMENDATION	ACTION PLAN	TARGET DATE
1.	It is recommended that SC and MC further clarify their roles and responsibilities regarding risk management and performance monitoring of the NCE Program to ensure that key risks and performance challenges impacting the achievement of the program's objectives are systematically identified, monitored and addressed.	<p>The Terms of Reference for both the NCE Selection (SC) and Management Committees (MC) will be reviewed with the other tri-agency program management groups to clarify as appropriate the roles and responsibilities of each committee regarding risk management and performance monitoring of the NCE program.</p> <p>A Strategic Planning exercise will be undertaken to identify key risks and performance challenges of the NCE program and the ongoing relevance of the program objectives to the overall goal of the program.</p>	<p>January 2015</p> <p>Fall 2014</p>
2.	It is recommended that the NCE Secretariat complete a human resource/process efficiency review to determine the level of human resources necessary to meet the current needs of the program and identify business process efficiencies.	<p>A workload and organizational review was carried out for the NCE Secretariat by a human resources consultant in 2008.</p> <p>Since the review, a number of new initiatives (Knowledge Mobilization and CIRCE) and processes (NCE yearly monitoring) have been introduced to the NCE program in addition to a number of new clients and ad hoc corporate projects. An analysis of current human resources and process efficiencies will be undertaken to explore options for optimizing program administration.</p>	October 2014
3.	It is recommended that the NCE Secretariat formalize its risk management process to ensure that risks are systematically identified,	Although a formal risk management process for individual networks is in place via the NCE Monitoring Committee, a risk management process at the NCE program level that utilizes the findings and observations of both the NCE	November 2014

	<p>mitigated and monitored.</p> <p>It is also recommended that the NCE Secretariat develop clear information collection (particularly in relation to governance and risk management) and reporting expectations for attending network committee meetings.</p>	<p>Monitoring and NCE Selection committee has not been formalized. The implementation of a risk management process will be undertaken and include the identification and implementation of mitigation measures. The approach will include 1) Risk identification assessment and remediation; 2) Documentation; 3) Reporting and 4) Monitoring.</p> <p>All NCE liaisons are required to produce reports, identifying key issues from network committee meetings for the purpose of assisting networks and updating NCE Secretariat management. The current report template will be reviewed to clarify information collection and a process will be implemented to review key issues and program risks on a quarterly basis with NCE Secretariat staff.</p>	<p>May 2014</p>
4.	<p>It is recommended that the NCE Secretariat clarify the objective of their annual reporting process, identify a target readership and develop a format that is clear and consistent year over year which allows the tracking of performance trends over time.</p>	<p>A review of the objectives of the annual reporting process will be undertaken as part of the Strategic Planning exercise.</p>	<p>January 2015</p>
5.	<p>The audit recommends that the NCE Secretariat fully document the budgeting and network annual reporting processes; and develops clear guides which explain the spreadsheets and how to manage/analyze the information.</p>	<p>The processes for the annual budgeting and network reporting are being documented in a procedure manual for the Senior Advisor, Planning and Operations. Guides on how to manage and analyze the information will also be developed.</p>	<p>December 2014</p>
6.	<p>It is recommended that the NCE Secretariat determine the security</p>	<p>The NCE Secretariat utilizes the paper record and electronic record keeping of its administrative host, the Natural</p>	<p>June 2014</p>

	classification of its information holdings and implement the appropriate policies and procedures to ensure their protection.	<p>Sciences and Engineering Research Council. The NSERC IT platform is aligned to all Government of Canada standards that are meant to ensure the security of information and the security of information technology assets.</p> <p>In consultation with the Information and Innovation Solutions Division, the NCE Secretariat will review the NCE program information holdings, and if applicable, update its handling procedures in accordance with the appropriate security classification.</p>	
7.	It is recommended that NSERC management discuss the progress made on these plans and determine if the Emergency Management Plan, a Business Continuity Plan and an IT Disaster Recovery Plan are sufficient or require further updating and monitoring.	The NCE Secretariat will consult with NSERC management and the Common Administrative Service Directorate on the progress made on the Emergency Management, Business Continuity and an IT Disaster Recovery Plans, and ensure the NCE programs are appropriately covered.	April 2014
8.	The NCE Secretariat could consider clarifying and documenting how funds flow between users of the funds. Documentation should also identify eligible and ineligible transfers of funds.	Allowed funding flow from the Network Host to the Network Members is clearly stipulated in both the Funding and Network agreement. The NCE program guide will be updated to provide a section on funding flow and provide an example of an ineligible second-order transfer. The flow of funds and examples of second-order transfers is also communicated to new NCE grantees at their inaugural Best Practice session to which the Host University research administration is invited.	October 2014
9.	It is recommended that a risk-based verification be considered for selected networks on a periodic basis to ensure that funds are used	The NCE Secretariat will consult with the Tri-Agency Monitoring division to work-out how best to implement enhanced verification activities.	June 2014

	only by institutional members and investigators who are part of a network. Tri-Agency Monitoring and the NCE Secretariat should discuss how to best perform the verification.		
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8 APPENDIX I – AUDIT AREAS, CRITERIA & SOURCES

AUDIT AREA	AUDIT CRITERIA	SOURCES
Governance		
Examine key controls related to the resourcing, risk management and oversight of the program.	The program is sufficiently resourced and oversight is provided by management to ensure objectives are met and risks are managed.	Audit Criteria related to the Management Accountability Framework (<i>Office of the Comptroller General, 2011-Sections G1-G4, RM7 and PPL1-2</i>)
Program Administration		
Examine key controls related to the submission of application information.	Application information is managed with regard for data security and integrity.	Audit Criteria related to the Management Accountability Framework (<i>Office of the Comptroller General, 2011, Section ST9</i>)
Examine key controls related to the review and adjudication of awards.	Applications are consistently adjudicated against established criteria and funding decisions are supported by justified rationale.	Audit Criteria related to the Management Accountability Framework (<i>Office of the Comptroller General, 2011, Sections AC1 and AC3</i>)
Examine key controls related to the payment of awards.	Award payments are supported by the appropriate approvals and payments are accurately dispersed.	Audit Criteria related to the Management Accountability Framework (<i>Office of the Comptroller General, 2011, Section AC1, AC3, ST9, and ST10</i>)
Examine key controls related to the sufficiency of the NCE's annual reporting process.	Annual reporting is sufficient to satisfy the established reporting expectations of the stakeholders.	Audit Criteria related to the Management Accountability Framework (<i>Office of the Comptroller General, 2011, Sections ST20, RP3 and G6</i>)

9 AUDIT TEAM

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