

The 2005 Selection Committee Report – Networks of Centres of Excellence New Initiative (NCE-NI)

March 2006

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Remarks from the Chair

Introduction

In the 2005 competition – Networks of Centres of Excellence New Initiative, which has just closed, 42 proposals for the creation of new networks were evaluated. The NCE Selection Committee was composed of 22 members from Canada and abroad, whose collective expertise covered all the fields of the competing networks. Throughout the deliberations, each network was evaluated against strict requirements for excellence on the basis of five criteria established for the NCE program: Expected impacts – social, cultural and economic and/or health-related well-being improvement; Excellence and contributions of the researchers; Development of partnerships; Knowledge and/or Technology Transfer to receptor communities Strategy (KT and/or TT Strategy); and Management of the network. Committee members evaluated each submission individually; they then engaged in several rounds of group discussion and drafted recommendations.

Recommendations of the Selection Committee

The Selection Committee recognized the national importance of the research fields represented by the 42 submissions. It was clear that the networks were, in general, composed of many outstanding researchers, who had prepared innovative submissions. Overall, the Committee was impressed by the large number of researchers and partners from different sectors in each network. It was also impressed by the quality of the strategies for knowledge or technology transfer to receptor communities.

In accordance with a program requirement, each submission was evaluated against each of the five program criteria. Our recommendations represent the judgement of the Committee as to the relative value of each network against the established criteria and the added value that could result from investments in these networks.

Following members' reviews and lengthy group discussions, the Selection Committee recommended that five networks be funded at the level requested for a maximum of four years. It

is understood that the amounts recommended for years 3 and 4 are dependent on a successful review in the second year, and will be the subject of a future submission.

At the same time, the Committee encourages all the researchers and partners from the other networks to continue their efforts to obtain funds by contacting appropriate granting agencies and other funding sources.

Conclusion

Finally, the recommendations of the Selection Committee show that all the members believe in the principle of excellence, which is the trademark of the NCE program. As chair, I would like to thank all the members of the Selection Committee for their dedication, their commitment and their concern for ensuring the achievement of the goals of the NCE program through the networks for which funding is recommended. I would also like to thank the NCE management for its support throughout the process.

Camille Limoges, Consultant

Selection Committee, 2005 competition – Networks of Centres of Excellence New Initiative

Background

The Networks of Centres of Excellence (NCE) program is a federal 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), together with Industry Canada. A Steering Committee composed of the chairs of the three granting agencies and the Deputy Minister of Industry Canada oversees the management of the program. Ongoing administration is provided by the NCE program directorate, consisting of members of the staff of the three granting agencies.

The NCE program seeks to mobilize Canadian researchers in the university, private and public sectors, with the aim of developing the country's economy and improving the quality of life of Canadians. This aim is consistent with the three pillars of the federal science and technology strategy, and strengthens them by creating lasting jobs and contributing to economic growth, quality-of-life improvement and the advancement of knowledge.

The NCE Steering Committee launched the Networks of Centres of Excellence New Initiative (NCE-NI) as a pilot project. NCE-NI was established to support networking activities among well-established researchers or research teams so as to encourage them to form new partnerships with receptor communities. The funding is not supposed to be used for research since the teams should already have research funding. Instead NCE-NI funds should serve to support networking activities among researchers whose work has the ultimate goal of improving Canadians' social, economic or health-related well-being.

The NCE-NI program was designed to meet a need of both researchers and receptor communities – a need for interaction, partnership and networking. Some groups already have the necessary components for networking, but they lack the infrastructure or resources to support their networking activities. The goal of this new initiative is to facilitate the creation of networks. The NCE-NI program differs from the Research Management Fund (RMF). It is not intended for existing networks, or for networks in the process of successfully completing an NCE funding cycle.

Some 42 submissions were received by September 12, 2005, under the 2005 NCE-NI competition.

In the NCE program, rigorous peer review is employed to evaluate proposals against the five criteria used:

- Expected impacts – social, cultural and economic and/or health-related well-being improvement
- Excellence and contributions of the researchers
- Development of partnerships
- Knowledge and/or Technology Transfer to receptor communities Strategy (KT and/or TT Strategy)
- Management of the network

The NCE program criteria are presented in Appendix I. The mandate and membership of the Committee are presented in other appendices.

Each proposal was examined by the Selection Committee, which was composed of experts tasked with evaluating network strengths and weaknesses in depth. The Selection Committee drafted a final recommendation to the NCE Steering Committee.

Competition Stages

Date	Stage
May 2005	Announcement of the competition
July 25, 2005	Deadline for NCE program directorate pre-selection services
September 12, 2005	Deadline for submissions
September 2005	Peer review of submissions
March 2006	Announcement of funded NCE-NI submissions

Funding Recommendations of the NCE Selection Committee

The Selection Committee for the 2005 competition – Networks of Centres of Excellence New Initiative found that five proposals exceeded the threshold of excellence of the NCE-NI program and recommends funding be provided for the following networks: the Canadian Obesity Network (CON); the Emerging Dynamic Global Economies Network (EDGE); the Promoting Relationships and Eliminating Violence Network (PREVNet); the National Initiative for the Care of the Elderly; and the Canadian Design Research Network.

It is a matter of priority for Canada to fund these networks now. It is recommended that they be funded until the mid-term review in the second year (2007-08). Recommendations concerning the amount of funding for years 3 and 4 will depend on a successful review in the second year.

The network leader of the Canadian Obesity Network is Arya Sharma; its host institution is McMaster University.

The network leader of the Emerging Dynamic Global Economies Network is Debra Steger; its host institution is the University of Ottawa.

The network leader of the Promoting Relationships and Eliminating Violence Network is Wendy Craig; its host institution is Queen's University.

The network leader of the National Initiative for the Care of the Elderly is Lynn McDonald; its host institution is the University of Toronto.

The network leader of the Canadian Design Research Network is Rob Woodbury; its host institution is Simon Fraser University.

Summary of the Networks Recommended for Funding

CON – THE CANADIAN OBESITY NETWORK

Obesity is a major threat to the health and economic well-being of Canadians. It is estimated that about 5.5 million Canadian adults and half a million Canadian children are obese. In 2001, obesity costs represented \$4.3 billion (or 2.2% of Canada's total health care budget). There are also substantial costs to Canada's economy in terms of absenteeism or short- or long-term disability. Like other chronic diseases of civilization, obesity results from complex interactions between environmental and biological factors. The determinants of this epidemic are entrenched social trends, including urban sprawl, sedentary lifestyle, unhealthy diets, stress and nutritional illiteracy.

The vision of the Canadian Obesity Network (CON) is to reduce the humanistic and economic impact of obesity on Canadians through collaborations that will help advance knowledge in obesity prevention and treatment. The CON mission is to become the primary Canadian network of health professionals, researchers, policy makers, and other commercial and non-commercial stakeholders interested in preventing and reducing the mental, physical and socioeconomic consequences of excess body weight.

Canada's industry has a major role to play in these efforts: new nutritional formulations, innovative methods of encouraging physical activity inside and outside the workplace, and novel pharmaceutical targets and advanced surgical techniques are providing new opportunities to Canada's agri-food, life sciences and medical devices industries.

The multidisciplinary nature of obesity is reflected in the broad support of the network by more than 130 leading Canadian obesity health professionals and researchers from the social sciences and humanities, health sciences, natural sciences, engineering, and agriculture. The network also has the support of public advocacy groups, professional associations, and other non-profit and governmental bodies. CON seeks to engage and mobilize Canadian industry as a responsible partner for health and wellness innovation in the market place, workplace, and community.

EDGE – EMERGING DYNAMIC GLOBAL ECONOMIES NETWORK

One of the biggest challenges facing Canada in the 21st century is to position itself to be productive and competitive in the face of massive transformation of the global economic landscape. The large emerging economies – China, India, and Brazil – are rapidly transforming the world, as we know it. The rapid growth of these new economic powerhouses poses major challenges and opportunities to Canadian businesses and governments at a variety of levels: economic, social, and legal.

The goal of the Emerging Dynamic Global Economies (EDGE) Network is to ensure that the Canadian economy remains competitive and productive while, at the same time, preserving the

social fabric of our communities, protecting our environment, and ensuring energy and resource security for future generations.

The Network's mandate is to:

- produce multidisciplinary, relevant analysis leading to practical and effective public policy proposals;
- encourage extensive, informed public discussion and debate; and
- provide targeted training and exchange programs.

The EDGE Network brings together major research institutions from across Canada and internationally, including the Faculty of Law at the University of Ottawa, the Asia Pacific Foundation of Canada, the York Centre for International and Security Studies, the Canadian Foundation for the Americas (FOCAL), the Shastri Indo-Canadian Institute, the Institute for Asian Research at UBC, the China Institute at the University of Alberta, and le Centre d'Études de l'Asie de l'Est à l'Université de Montréal, with federal and provincial government departments, such as International Trade Canada, Export Development Canada and the Government of British Columbia. The Network also involves key business associations, including the Canadian Association of Importers and Exporters, the Canada-Brazil Chamber of Commerce, and the Canada Eurasia Russia Business Council, as well as leading Canadian companies.

PREVNet – PROMOTING RELATIONSHIPS AND ELIMINATING VIOLENCE NETWORK

Healthy relationships form the foundation for healthy development of children and youth. Bullying is a relationship problem and a critical issue in Canada. In recent years, there have been many severe cases of Canadian children who have died or were seriously injured due to bullying. These tragedies have elicited recognition of the seriousness of bullying problems both for children who bully and children who are victimized. In a recent World Health Organization Health Behaviours in School-Aged Children survey, Canada ranked 26th and 27th out of 35 countries on the measure of bullying and victimization. Across all ages and categories of bullying and victimization, Canada consistently ranked at or below the middle of the international group. These data expose Canada's need for a national strategy on bullying.

PREVNET – Promoting Relationships and Eliminating Violence Network provides the groundwork for this national strategy. PREVNet brings together 23 researchers from 17 Canadian universities and 34 NGOs and other partners to promote safe and healthy relationships for Canadian children and youth. The goal of the network is to create socio-cultural change in Canada by reducing the negative use of power and aggression in relationships. This goal will be achieved by providing NGOs and governments with the capacity to tailor and disseminate scientifically-based resources to build awareness, change attitudes, assess bullying, implement evidence-based strategies, and develop policies that promote and support these activities within every community in Canada.

The expertise from NGOs, government ministries and the diverse fields of research expertise will be integrated and linked in a multidisciplinary network. Researchers will collaborate with NGOs, governments, and other partners to exchange and translate knowledge for the development of education, assessment, intervention, and policy related to bullying. As network partners, NGOs and government ministries offer channels to disseminate knowledge to their constituents across Canada. Through these partnerships, the outcomes of improved understanding and practice will enhance social capital, and promote mental and physical health, healthy relationships, school engagement, and crime prevention.

NICE – NATIONAL INITIATIVE FOR THE CARE OF THE ELDERLY

Seniors (those adults 65 years of age, or more) are Canada's fastest growing population group. It is expected that the senior population will grow to approximately 6.7 million by 2021, and grow to 9.2 million by 2041 then accounting for nearly one in four Canadians. The fastest growth is occurring among those adults aged 85 and over.

Canada faces numerous challenges to deal with this impending demographic shift, including a shortage of doctors who specialize in the care of older persons and of students enrolling in these specialties. Education programs in medicine, nursing and social work sometimes do not offer even basic training in geriatric care and, when they do, their coverage is sometimes limited. As people age, they tend to develop more complicated health and social problems requiring more complex care that is best performed by interdisciplinary teams.

The National Initiative for the Care of the Elderly (NICE) is a national network of researchers and practitioners involved in the care of older adults through medicine, nursing and social work. The network aims to influence the care of Canada's seniors by:

- transferring knowledge about best practices for the care of the elderly;
- encouraging students to specialize in the care of older persons;
- refining existing practitioners' skills in the care of the elderly;
- shifting other practitioners' attention to the importance of caring for older adults; and
- influencing policy initiatives affecting Canada's seniors.

NICE will establish links between university researchers community practitioners in medicine, nursing and social work to help develop and improve practices for the care of Canada's seniors. The network will also help develop and improve educational initiatives aiming at introducing basic geriatric knowledge into core courses in medicine, nursing, and social work, and at providing specific training programs in geriatric specializations

CDRN – CANADIAN DESIGN RESEARCH NETWORK

A key to productivity, innovation and sustainability, design constitutes a critical competitive advantage in the 21st Century. With application in all areas of building and manufacturing, design informed by research is an essential enabler of long-term economic growth and social benefits.

The Canadian Design Research Network (CDRN) brings together over 100 researchers from across the country along with partners in the private and public sectors to improve Canadian design through research, outreach, and collaboration. Its goal is to foster and undertake world-class research in themes such as sustainability, advanced design technologies, digital fabrication, design visualization and simulation, and interactive technologies. The multidisciplinary network includes the key disciplines of architecture, landscape architecture, engineering, urban design, planning, industrial design, interaction design, computer science and human-computer interaction.

The network will:

- strengthen the Canadian industrial base through the introduction of new tools for visualization and fabrication;
- provide a forum for the exchange of ideas, expertise, best practices, hardware, software, staff and researchers;
- significantly increase the number of graduate students, faculty members, and other highly qualified personnel in the field of design;

- ensure that design expertise stays in Canada by providing a stimulating and rewarding environment and opportunities in design; and
- facilitate participation in global outreach through international design initiatives.

APPENDIX I – Program Criteria and Evaluation Process

Program Criteria

To ensure that the program objectives are met, proposals will be assessed against the five criteria outlined below. **They must exceed the threshold of excellence for each criterion.** The five program criteria are described below:

1) *Expected impacts – Social, cultural, economic and/or health related well-being improvement*

The applicants have to describe expected impacts. The value-added or impact of the network can be in one or more of the following areas:

- Likelihood that new products, processes or services derived from University research can be commercialized by firms operating in Canada and that these will strengthen the Canadian industrial base, enhance productivity, and contribute to long-term economic growth and social benefits;
- Prospect for social and/or health related innovation from the knowledge generated by University research and the implementation of effective public policy through collaboration with the public sector;
- Effective collaboration with the private and public sectors in technology, market development, and public policy development; and
- The impact, or potential impact, on the partners' science and technology, social and/or health related capabilities and practices;

There is another way of transferring knowledge to groups of users. Public policy-makers draw on the expertise of networks of researchers who have researched different issues of scientific, intellectual, social, economic and/or cultural significance in areas of strategic importance for Canada. Networks of experts either feed in ideas and analysis to the policy-making process or proactively develop new policy agendas. Another important way by which knowledge is spread is through the training that higher education offers to industry.

The transferred knowledge should:

- Fulfill the needs of the policy-makers;
- Be internalized by the policy-makers. It should guide their actions into the policy-making process; and
- Be applied not only by the policy-makers who requested the knowledge, or by those approached, but also by all the stakeholders involved in the concerned policy field.

The NCE-NI supports networking activities among researchers whose work seeks ultimately to improve the well-being of Canadians, be it social, health related and/or economic.

2) *Excellence and contributions of the researchers*

- The achievements of the researchers;
- Past experience in collaborative research;
- Past experience at training future researchers;
- Past experience at grant management, ability to establish and maintain a solid management structure that will ensure the effective integration of team members; and
- Leadership and necessary skills for managing a complex, multidisciplinary and multi-institutional program.

3) Development of partnerships

One of the key areas of the NCE-NI is Dissemination and Outreach. In order for the project to succeed, it is vital to proactively raise awareness of the network, attract interest and ultimately participation in the network from the academic community, business, government, other organizations and communities.

- Effective research and technology development links between academic institutions, federal and provincial agencies, private sector participants, other organizations and communities;
- Promotion of the development of links with appropriate receptor communities;
- Multidisciplinary, multi-sectorial approaches in the network activities;
- Evidence that an effort has been made to include all suitably qualified groups;
- Optimization of resources through the sharing of equipment and research facilities, databases and personnel; and
- Presence, nature and extent of contributions from the private sector and federal and provincial agencies, and prospects for increasing commitments as the work progresses.

4) Knowledge and/or Technology Transfer to receptor communities Strategy (KT and/or TT Strategy)

One of the main goals of the NCE-NI is to serve the needs of the receptor and partner communities, as well as those of the academic community. Researchers are encouraged to create practical applications for their research. It is crucial to increase knowledge and/or technology transfer skills among academics and professionals to promote research/evidence-based decision making.

Therefore the NCE-NI should provide training to researchers and to students to transfer knowledge to receptor communities, to educate them in the field of knowledge transfer with the aim of building capacity.

The network members will have:

- To identify appropriate research findings and to engage the researchers involved to support knowledge transfer and/or technology transfer; and
- To implement an effective knowledge transfer and/or technology transfer program, including means to engage their receptor communities;

Training of HQP through multidisciplinary and partnership activities is an important component of the KT and/or TT Strategy.

- Ability to encourage young researchers to transfer to receptor communities the knowledge they have acquired in areas and technologies critical to Canadian productivity, economic growth, public policy and quality of life;
- Training researchers to work with partners;
- Development of the entrepreneurship qualities of the HQP; and
- Training strategies that promote multidisciplinary and multisectorial research approaches and encourage trainees to consider the economic, social and ethical implications of their work.

5) Management of the network

Each network must possess an organizational structure appropriate for the management of the business functions of a complex multidisciplinary, multi-institutional program. These elements must include:

- The presence of effective leadership and expertise in the business management functions, in particular with respect to managing and partnership;
 - A structure to ensure that appropriate policy and financial decisions are made and implemented;
 - Effective internal and external communications strategies; and
 - Effective budgeting mechanisms.
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APPENDIX II – Mandate of the NCE Selection Committee

The Selection Committee:

- reviews completed submissions;
- drafts evaluation reports;
- presents to the NCE Steering Committee the list of networks recommended for funding.

APPENDIX III – Membership of the NCE Selection Committee

Chair:

Camille Limoges, consultant, Outremont, Quebec, Canada

Members:

Jacques Albert, Carleton University, Ontario, Canada

Lajos Balogh, Roswell Park Cancer Institute, New York, USA

Janine Brodie, University of Alberta, Alberta, Canada

Katy Campbell, University of Alberta, Alberta, Canada

Margaret Coopey, Agency for Health Care Research and Quality, Maryland, USA

David Castle, University of Guelph, Ontario, Canada

Eric Fong, University of Toronto, Ontario, Canada

Michael Geist, University of Ottawa, Ontario, Canada

G. Sarwar Gilani, Health Canada, Ontario, Canada

Claude Hillaire-Marcel, Université du Québec à Montréal, Quebec, Canada

Gordon Huang, University of Regina, Saskatchewan, Canada

Diane Ingraham, Cape Breton University, Nova Scotia, Canada

Penny Jennett, University of Calgary, Alberta, Canada

Natacha Joubert, Health Canada, Ontario, Canada

Ahmed Koubaa, Université du Québec en Abitibi-Témiscamingue, Quebec, Canada

Janet E. McElhaney, University of British Columbia, British Columbia, Canada

John McHugh, Dalhousie University, Nova Scotia, Canada

Ellen Moss, Université du Québec à Montréal, Quebec, Canada

Edward J. Mullen, Columbia University, New York, USA

Kenneth W. Neale, Université de Sherbrooke, Quebec, Canada

Brigitte Schroeder, Université de Montréal, Quebec, Canada

APPENDIX IV – Biographical Note of the Chair of the NCE Selection Committee

2005 Selection Committee – Networks of Centres of Excellence New Initiative

Camille Limoges (Chair)

Dr. Limoges recently retired as Deputy Minister of Quebec's Ministère de la Recherche, de la Science et de la Technologie. His three decades of work, both as a scholar and a civil servant, has made an indelible mark on science and technology research. Well known as a pioneer in the field of the history of science and technology in Quebec, Dr. Limoges founded the Institut d'histoire et de sociopolitique des sciences at the Université de Montréal in 1973. Ten years later, he became the Deputy Minister of Quebec's newly created ministère de la Science et de la Technologie. Returning to academia in 1987, this time to the Université du Québec à Montréal, Dr. Limoges joined a multi-university team, the Centre de recherche en évaluation sociale des technologies. He then went on to found and serve as director of the Centre interuniversitaire de recherche sur la science et la technologie. He also served from 1989 to 1990 as President of ACFAS (Association canadienne-française pour l'avancement des sciences). In 1997, he became President of the Conseil de la science et de la technologie (CST) and in 2000 was appointed Deputy Minister for Research, Science and Technology. Dr. Limoges received his doctorate from the Sorbonne in 1968.