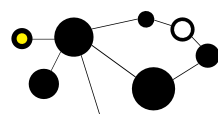


ALLIANCE SANTÉ QUÉBEC / **Strategic Plan
2014-2017**



Alliance
santé Québec

An innovative Health Research Network

Founding Partners



Centre de santé et de services sociaux
Alphonse-Desjardins

Centre de santé et de services sociaux
de la Vieille-Capitale



Faculté of Law
Faculty of Graduate and Postdoctoral Studies
Faculty of Medicine
Faculty of Dentistry
Faculty of Pharmacy
Faculty of Business Administration
Faculty of Agriculture and Food Sciences
Faculty of Science and Engineering
Faculty of Nursing
Faculty of Social Sciences

Foreword

During the past year, we have been privileged to lead the work of a unique collective journey to provide the greater Québec City area with a first comprehensive and inclusive strategy for research and innovation in health. The “Health” that we are speaking about here, refers to a state of complete physical, mental and social well-being as defined by the World Health Organization.

The process used to develop the first strategic plan is comprised of the talent and commitment of more than one hundred key players who all individually contributed to the knowledge and energy needed to design such a plan, able to gather and mobilize human resources from the twenty institutional partners and their research centers, all of which revolve around Université Laval.

This ambitious goal could not have been achieved without giving the Alliance, from the outset, DNA largely comprised of four genes: gathering, mobilizing, facilitating and developing. This DNA will also be the basis of the critical consensus to achieve the strategic plan from the results of this collective work.

We would like to thank all of the participants who made it possible to achieve these results and especially the co-chairs of the three projects that have given an exceptional momentum to our work.

We fervently hope that Alliance santé Québec’s strategic plan will be able to help address the significant challenges facing us in health and social services in Québec and elsewhere in the world. In proposing to adopt the concept of “sustainable health”, the Alliance is introducing new, global perspectives on a comprehensive and cohesive healthcare ecosystem that combines the dimensions of health and well-being of individuals and populations, teaching and research, organization and service delivery with the citizen’s ability to take action and the creation of economic wealth, essential to maintaining a health care system based on collective financing and universal access.

In closing, we wish to acknowledge the unwavering support of a high quality coordinating team that has supported us throughout this ambitious initiative and has contributed greatly to its success.

Thank you for all the precious Alliance santé Québec collaborators.

Sincerely,



A handwritten signature in blue ink, appearing to read 'Michel Clair'.

Michel Clair
Chairman of the Alliance santé
Québec



A handwritten signature in blue ink, appearing to read 'Sophie D'Amours'.

Sophie D'Amours
President of the Partnership
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INTRODUCTION

Alliance santé Québec (AsQ) is derived from the willingness of key stakeholders in the field of health and social services in the Québec City area. They wished to join forces and work together to increase their performance in research and innovation and to make their grouping and its signatory members a worldwide reference in this field.

The founding partners of the Alliance are proud to present their first strategic plan. This plan is the result of a process that lasted more than eight months, during which several members of the scientific community, industry representatives and managers of health facilities and social services were able to express their vision and expectations of the Alliance.

These reflect an awareness of the major international issues in the health field and demonstrate a desire to act together, to ensure long-term competitiveness of our research teams on a global scale, to maintain the highest standards of quality in our training environments in health and social services and, most importantly, to position the Québec City region as an area of experimentation and showcase innovation.

Creating Alliance santé Québec will enable us to increase the impact of research on the health of individuals and populations, to better meet the needs of continuous improvement of health services and boost the greater Québec City area's economy.

For the purpose of this first Strategic Plan, the greater Québec City area includes all the territory covered by the four health and social services centers (CSSS) of the Agence de la santé et des services sociaux de la Capitale-Nationale on the north shore of the St. Lawrence River and the territory of the CSSS Alphonse-Desjardins on the south shore. The Alliance's actions directly affect a population of over 925,000 people, spread over 24,000 km², in some 120 municipalities, including Québec City and Lévis.

1 / HEALTH: INTERNATIONAL CHALLENGES AND OPPORTUNITIES

1.1 / Issues

In all western societies, including the Québec society, health is an important item of government spending. Far from decreasing, the associated costs are constantly growing, and it is often faster than the growth of collective wealth.

The World Economic Forum reports that over the last 50 years, in OECD countries, spending on health systems has grown faster than the GDP, with an average annual growth of 2%¹. This organization believes in 2040, total spending allocated to health could increase by 50% to 100%. In Québec, a 2013 report² provides projections of health spending through 2030 and predicts that public spending in this area will increase by \$ 31.3 billion in 2013 to \$ 61.1 billion in 2030, from 8.4 % to 13.5 % of the GDP. This would represent an increase of 42.9% to 68.9% of total revenues of the Québec Government.

The World Health Organization (WHO)³ considers that the financial burden, increasingly difficult to bear by public finances, is attributed, by two thirds, to chronic and non-communicable diseases such as cancer, cardiovascular disease, neurodegenerative, respiratory and autoimmune diseases and diabetes. However, most of these health problems can be prevented and are associated with, among others, the conditions and lifestyles found in Western countries (physical inactivity, poor diet, stress, etc.).

To this, the issue of mental health must be added, which according to the Mental Health Commission of Canada (2011), affects one out of five, or more than 6.7 million people. Such problems also have an important economic burden of \$ 51.1 billion per year in Canada, an amount that could reach \$ 90 billion by 2021.

The aging of the population must also be considered. Indeed, it is associated with, on the one hand, an increase in complex diseases that affect many aspects of health and well-being (such as neurodegenerative musculoskeletal, eye diseases, etc.) and, on the other hand, a decrease in the proportion of active workers, who must bear higher health costs.

¹ World Economic Forum. *Sustainable Health Systems: Visions, Strategies, Critical Uncertainties and Scenarios* (prepared in collaboration with McKinsey & Company). Healthcare Industry 2013, 31 p.

² Clavet, N. J., Duclos, Jean-Yves Fortin, B., Marchand, and S. Michaud, P., C. (2013). *Health expenditures of the Québec, Government 2013-2030: determinants and projections*. Science Series: 2013s-45. Center for Interuniversity Research and Analysis on Organizations (CIRANO), 12 p.

³ World Health Organization (WHO), <<http://www.who.int/fr>>, Web site consulted April 2014.

1 / HEALTH: INTERNATIONAL CHALLENGES AND OPPORTUNITIES

Moreover, the phenomenal technological advances in recent years have helped provide solutions to many health problems, promoting early detection, more accurate diagnoses, access to more powerful treatments and the advent of more personalized medicine. But access to these beneficial health advances also generates significant costs that governments find increasingly difficult to bear.

Information technology has also contributed to the transformation of medicine by giving more weight to the citizen's point of view. It is used to learn about their symptoms, possible treatments and available drugs. The public is now better informed and claim that it takes into account their views in managing their health. Expectations are therefore high and it requires all those involved in the health systems "to find solutions": to develop the drug or the technology, understand the origin and decrease the incidence of the problem, reduce costs, ease pain better and faster and prevent disease. The use of increasingly widespread access to information technology and the growing affluence of the entire population – regardless of age – using various forms of technology, substantially changes the power of the public to take charge their own health. These technologies could be further exploited in the search for solutions that would reduce health care costs.

In addition, more and more studies show that 15% to 30% of health care spending could be reduced without affecting the quality of services, and better assessing the appropriateness of services used.

All financial analysts predict that if no drastic and rapid changes are made to our health policies and our modes of clinical practice and management, public finances will be unable to support this long-term burden. In January 2012, Standard and Poor's rating agency also announced that it would take into account the financial sustainability of the health system of a country to establish its credit rating.

The question of the effectiveness and efficiency of service systems and health care could not be more timely, and it requires significant paradigm shifts.



1.2 / Outlook

In 2012, the World Economic Forum⁴ involved more than 200 world leaders and experts in health systems from five countries: China, Germany, the Netherlands, Spain and England. These experts were from backgrounds as varied as the food and soft drinks industries, information and communications technology, urban planning, the Ministries of Health, Finance, Education and Environment, as well as civil society and academia. They were asked the following question: what is your vision of the ideal health system for your country in 2040?

Although gathering the information was conducted independently in different countries, a convergence of ideas and suggestions emerged. It can be summarized as:

Maximize the potential of information technology

- > Full use of available data and information to transform health and care by ensuring the creation of common and consistent data that can be handled by operating systems that communicate with each other at regional, national and international levels, and for which confidentiality issues have been resolved by the highest authorities.

Prioritize innovation and fully integrate it into the health system

- > Innovation in the provision of care by valuing innovation and encouraging openness to original ideas and new ways of doing things, by making innovation profitable for the entire health system and by changing the rules so that innovation can thrive.

Implement the shift in prevention and empower society as a whole

- > Designing healthy cities and countries in order to slow down the growing demand for health care, by ensuring that each of the stakeholders contributing to “better health for all.” It is therefore up to the leaders of health systems to work with elected officials, with representatives of civil society, industry and the public to develop joint actions with the health of individuals, families and communities in mind. This shift will have implications for cultural norms, urban planning, environment, lifestyle, education and personal and professional development.

⁴ World Economic Forum. *Sustainable Health Systems: Visions, Strategies, Critical Uncertainties and Scenarios* (prepared in collaboration with McKinsey & Company). Healthcare Industry 2013, 31 p.

1 / HEALTH: INTERNATIONAL CHALLENGES AND OPPORTUNITIES

For the authors of this report, a significant paradigm shift must occur. Currently, when people think about health, they tend to closely associate it with disease and the treatment and care provided by the health care system. They do not think, more broadly, of a health system encompassing policies, products and services for disease prevention and wellness.

Transforming a system of health care into a health system would respond to the needs of governments to ease the ever-increasing burden of providing health care while improving health services.

The current approach, which is to address the problems in health and provide short-term solutions, will, according to experts, do nothing to solve the problem of rising health care costs and the growing and widespread inability to afford them.



2/ HEALTH RESEARCH: CONTEXT AND CHALLENGES

The greater Québec City area enjoys an enviable reputation in the field of life sciences, as it can count on the presence of several proficient research centers, many internationally recognized researchers and a significant number of innovative biopharmaceutical companies, medical technology, information technology and nutraceuticals.

To optimize and recognize these strengths, the region must take into account the (international, Canadian and Québec) contexts as well as its own dynamics.

2.1 / Some international trends

Technological advances in recent years have certainly been beneficial in the research community: they have facilitated communication between research teams and have enabled dramatic breakthroughs, but have at the same time increased global competition.

Donors of public and private funds, whether at a national or international level, have come to expect, in addition to scientific excellence, that research teams be multidisciplinary, interdisciplinary, transdisciplinary, multicentric, connected to the world, able to bring together the best in the field and to justify to policy makers, investors and the public, the magnitude of the amounts granted to them.

These various aspects of context therefore require more effective coordination of research efforts, more productive interactions between researchers from different disciplines, the establishment of research environments that are closer to actual environments that will henceforth guide the future actions of health promotion and disease prevention.

The global pharmaceutical industry is undergoing major transformations. With the development of pharmacogenomics and personalized medicine, the traditional business model of the flagship product (blockbuster) is endangered in the industry. New drugs will be developed based on genetic predispositions on more targeted subpopulations, and will depend on the response of these subpopulations to a particular treatment. Large pharmaceutical companies are closing their research centers, which do not correspond to this new paradigm. Increasingly, they are investing in centers of academic and hospital research and are developing partnerships, which will enable them to have access to ensuing research results and innovations.

2/ HEALTH RESEARCH: CONTEXT AND CHALLENGES

Finally, major research groups keen to increase their research performance and better meet the health needs of the population have emerged in recent years. For example:

- > The **Alliance for Biomedical Research in Europe**⁵ consists of 22 medical research companies involving more than 400,000 European researchers. It aims, in addition to previously mentioned objectives, to facilitate and improve the funding of biomedical research in Europe, to develop a framework to better train its young researchers and to facilitate their mobility, to help people better understand medical research and to improve the innovation cycle in health, the early stages of research integrated into clinical settings.
- > We would also like to mention **Aviesan**⁶, which brings together the major stakeholders in academia, life sciences and health research centers in France, in order to increase French research performances for the sake of consistency, creativity and excellence.
- > On a smaller scale (because there are fewer participants), two other models are worth mentioning: the **Health Universitat de Barcelona Campus (HUBc)**⁷ in Spain and the **Center for Integration of Medicine and Innovative Technology (CIMIT)**⁸ Boston. Both favor a closer ties between medical schools, other health-related schools, teaching hospitals, industry and government, in order to provide training in health research that is of high quality and more related to clinical settings, with a faster transfer of research results to the media and to the industry, which benefits the patient and boosts the regional economy.

This is a trend for Alliance santé Québec.

⁵ Alliance for Biomedical Research in Europe, <<http://www.biomedeuropa.org>>, website consulted in April 2014

⁶ National Alliance for Life Sciences and Health (Aviesan), <<http://www.aviesan.fr>>, website consulted in April 2014

⁷ Health Universitat de Barcelona Campus (HUBc), <<http://hubc.ub.edu>>, website consulted in April 2014

⁸ Center for Integration of Medicine and Innovative Technology (CIMIT), <<https://www.cimit.org>>, website consulted in April 2014



2.2 / A favorable Canadian research environment

Since the 2000s, the Canadian Institutes of Health Research (CIHR), the main funding body for health, favour an interdisciplinary and collaborative approach focused on solving problems in health. To do this, the organization has implemented and maintains 13 PanCanadian research institutes with more than 13,000 health researchers and trainees working in universities, affiliated hospitals and research centers across the country. The 2009-2014 CIHR⁹ strategic plan highlights, on one hand, a challenge facing all research networks on a global scale: significant delays between the scientific discovery, the marketing of the treatment, drug or product and its integration into the practice or clinic. It also sheds light, on the other hand, on some features of the Canadian research environment: the immense territory, the low population density, the complexity of health systems and political structures managed at the provincial level.

Taking these elements into consideration, the CIHR Strategic Plan has set the following milestones: health research should be a stepping stone to better health and a stronger economy, it must contribute to the sustainability of the research community and should build on the international collaboration to maximize the impact of research.

To do this, CIHR promotes the following:

- > Develop the ability to attract and retain the best researchers;
- > Break the professional and sectoral barriers in health research;
- > Orient care on the patient and improve clinical results through scientific and technological innovations;
- > Support an accessible and sustainable first-rate health care system;
- > Promote health and reduce the burden of chronic disease and mental illness.

⁹ Institutes of Health Research Canada. *Innovation for Health - Better health through research*. CIHR Strategic Plan 2009-2010 - 2013-2014. Government of Canada.

2.3 / The PNRI 2014-2019: opportunities in Québec

Provincially, the 2014-2019 National Research and Innovation Policy¹⁰ (PNRI) puts people at the center of its concerns. It advocates a balance between all types of research, from fundamental to applied, and stresses the importance of collaboration and cooperation among all stakeholders in the world of knowledge. Its goal is to ensure that the benefits of research meet the needs of individuals, families and communities, so that it develops and markets innovative products, making a name internationally for our knowledge and know-how.

Through its strategic direction, PNRI invites the scientific community to be concerned with demographic change and favors large multidisciplinary and multisectoral initiatives, both in research and innovation. The policy also intends to give priority to issues of health and aging, while focusing on issues surrounding the quality of life.

Sustainable development is one of PNRI's priorities. It states that the choices we make today will affect the generations that follow. It encourages researchers to develop and promote social innovations in order to transform certain aspects of people's lifestyles and to encourage Quebecers to be actively involved in the sustainable development of society.

The PNRI also advocates international influence and intends to increase the presence of Québec researchers in global research networks. It is committed to fostering scientific entrepreneurship and promote industrial innovation. To do this, it intends to promote intersectoral approaches to overcome the problems of increasing complexity; create synergy between research and innovation, business and practice settings; maintain support to major research platforms and support their access to a greater number of actors; and support the implementation of innovations (marketing and promotion of innovative products, support the transfer of research results).

Finally, in this Policy, the Québec government is committed to promoting access to public data. This openness will be particularly crucial so that, in compliance with all the rules of ethics and confidentiality surrounding the access to information, research and innovation can truly be the key for improving health systems.

¹⁰ Québec Ministry of Higher Education, Research, Science and Technology. *Job priority - Investing in research and innovation is an investment in Québec. 2014-2018 National Research and Innovation Policy.* Québec government. **Note: Certain Measures of the Québec budget 2014-2015 tabled June 4, 2014, could affect the PNRI.**

3 / THE PROCESS OF THE ALLIANCE'S STRATEGIC PLANNING

3.1 / Preparations

In recent years, several initiatives of cooperation in research and innovation have contributed in gathering the vital forces in health in the greater Québec City area and to develop a global vision. This led to Alliance santé Québec's first discussion, which was held on October 1st, 2013. This meeting brought together more than a hundred leaders from the region, ten from faculties of Université Laval as well as fifteen institutions and health research centers.

Subsequently, three projects were implemented to address the following issues: defining the vision and mission of the Alliance, establish areas of strategic and mobilizing research and determine courses of action to facilitate the development and the transfer of knowledge from the people to the laboratory and from the laboratory to the people. Each project was chaired by two Alliance member representatives and approximately twenty participants.

A meeting was also held in December 2013, to gather the views of more than thirty representatives from the private sector, particularly in the health industry, about the major issues that characterize the environment research in human health. These various studies have clarified the roles of the Alliance, how to prioritize its actions and how it should exercise its influence.

The proposals from the working groups were presented as part of a second forum, held on April 25th, 2014, which brought back more than a hundred participants. These suggestions were validated and expanded during discussion workshops. International and national experts also participated in the event. Different models of strategic groups were presented and they were asked to make suggestions and recommendations on the proposals put forward by the Alliance.

3.2 / The emergence of a mobilizing concept: sustainable health


The consultation process has confirmed the vision, mission, priority issues, values and strategies for the development of the Alliance. It has created a unifying concept for the greater Québec City area: **sustainable health**.

The concept of sustainable health proposed by the Alliance is inspired, among others, by the discussions that took place at the Summit on Sustainable Development in Johannesburg¹¹ in 2002, which already advocated the idea that “good health” was based on the three pillars of sustainable development: economic, ecological and social. Applied to health, these three components were thus set forth as: preserving the health of future generations, reaching a holistic approach to health and adopting an approach that respects the natural balance in the treatment of disease.

Worldwide, in recent years, several governmental and quasi-governmental agencies, dedicated to public health, adopted policies based on the concept of sustainability. It was then that the emergence of great concern to the enormous costs of the so-called non-communicable diseases (cancer, diabetes, lung disease, heart problems, etc.) and the burden that these costs would represent for future generations. This awareness has facilitated the passage of medicine that focuses on the treatment of diseases with an emphasis on the health of individuals and communities, in an effort to be proactive on various factors associated with “good health” throughout life. Added to these concerns was an interest in the effective use of resources to ensure more efficient and effective care and health services.

Recognizing the important influence of social factors on inequality and the health of the population, the WHO adopted the WHA62.14 resolution in 2012, which supports the Rio Political Declaration on Social determinants of health (SDH). With this resolution, member States acknowledge the existence of the social determinants of health and commit to follow the recommendations of the Rio Declaration, including “monitor progress and increase accountability for better-informed policies on the SDH”. The success of this monitoring is based primarily on access to demographic information about their quality and careful analysis using methods for causal inference.

¹¹ World Health Organization (WHO), <<http://www.sommetjohannesburg.org/institutions/frame-oms.html>>, Web site consulted April 2014



Unlike the inequalities caused by biological differences related to age or genetics, social inequalities in health can be modified and even prevented. To do this, we must encourage debate between the main stakeholders or organizations that produce the data, researchers and users involved in policy development and civil society.

Several participants at the workshops of the Alliance are members of the Université Laval community and, given the “sustainable development” change as adopted by the institution a few years ago, they have become aware of economic, environmental and social issues that arise from this notion. It is not surprising that discussions have highlighted the concept of sustainable health as a motivating factor, likely to provide further impetus to do research and health innovation in greater Québec City area. The Alliance is part of this global trend and proposes the following definition:

Sustainable health is a state of complete physical, mental and social well-being that is achieved and maintained throughout life through healthy, rewarding and fulfilling living for all and through access to appropriate high quality resources, used responsibly and effectively.

Complete state of physical mental and social well-being, *Definition of health by the WHO, which covers all aspects of health.* **is achieved and maintained throughout life** *Refers to different stages of the life cycle, from conception to end of life.* **Thanks to healthy, rewarding and fulfilling conditions of life,** *Refers to the various factors associated with health and well-being (healthy lifestyles, safe environment, education, employment, income, social support, etc.).* **for all, thanks to access** *Accessibility concepts and equal opportunities are important in sustainable health and are based on a principle of fairness.* **to appropriate resources** *Who meets the needs of people who are available in the right place at the right time.* **By quality** *Who meets the highest standards of quality.* **used responsibly and efficiently** *Who are not overused or misused or underutilized in the interests of economy of financial and human resources and the best cost-performance ratio, and with respect for the environment, which will benefit future generations.*

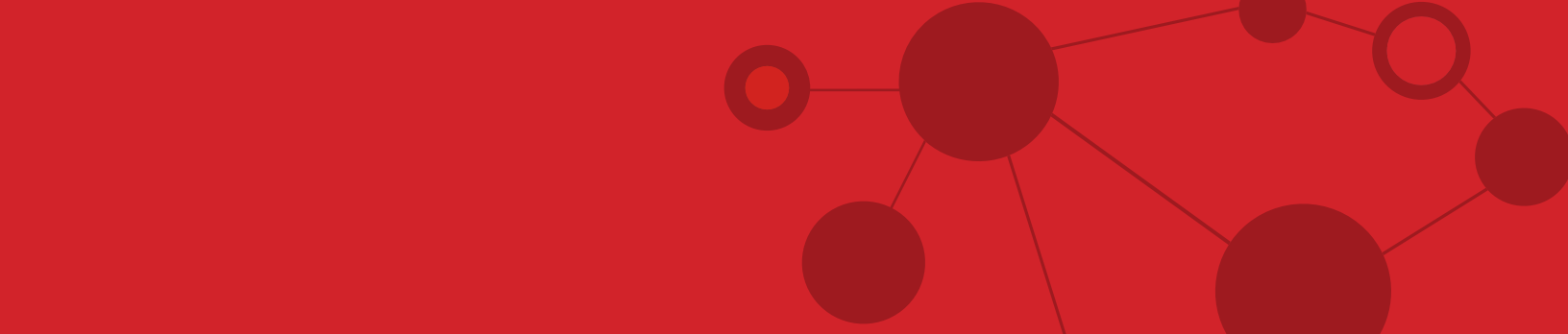
3.3 / Strengths of the greater Québec City area in the field of health research

To update this sustainable health guide, the greater Québec City area has significant assets on which it can rely. In particular it may rely on a number of university research centers and institutes and nationally and internationally renowned hospitals, including four research centers funded by FRSQ (Fonds de recherche du Québec – Santé) and affiliated with Université Laval:

- > The Centre for Interdisciplinary Research in Rehabilitation and Social Integration (CIRRS) is a model of interdisciplinary and knowledge transfer;
- > The CHU de Québec Research Centre (CRCHU), the largest Francophone biomedical research center in Canada, is known for its research on neurodegenerative diseases, Cancer, Infectious Disease, tissue Engineering and regenerative medicine (the Laboratory of Experimental organogenesis is the largest research center in Canada in this area);
- > The Québec Heart and Lung Institute Research Center (CRIUCPQ) is a world leader in research on obesity and on cardiovasculaires and respiratory complications;
- > The Centre de recherche de l'Institut universitaire en santé mentale de Québec (CRIUSMQ) is internationally recognized for its research in mental health that integrates neurophotonics in the study of the brain.

The greater Québec City area also has a wide variety of skills and expertise dedicated to improving the health of people and communities:

- > Four affiliated research circles: the Youth Centre of Québec, the Centre de santé et services sociaux (CSSS) Alphonse-Desjardins, the Centre de santé et services sociaux (CSSS) Vielle-Capitale and the Institut national de santé publique du Québec (INSPQ);
- > Four multifaculty research institutes: the Institute of Integrative Biology and Systems (IBIS), The Institute of Nutrition and Functional Foods (INAF), the Institute on Aging and Social participation of Seniors (IVPSA) and the Institute for Information Technology and Society (ITIS)
- > 16 research centers recognized by Université Laval: the Interuniversity Centre for Aboriginal Studies and Research (CIERA), the Center for Optics, Photonics and Lasers (COPL), the Centre for Research in Regional Planning and Development (DARC) the Centre for Research in Reproductive Biology (CRBR), the Cancer Research Center (CRC), the Molecular and Oncology Endocrinology and Human Genomics Research Center (CREMOGH), the Infectious Disease Research Center (CRI), the Interdisciplinary Research Center on Family Violence and Violence against Women (CRI-VIFF), the Neuroscience Thematic Research Center (CTRN), the Respiratory Health Research Group (GESER)



Interdisciplinary Research Group on Obesity at Université Laval (GIROUL), the Oral Ecology Research Group (GREB), The Research Unit on Children's Psychosocial Maladjustment (GRIP-Laval), The Research Centre on the Adjustment of Youth and Families at Risk (JEFAR), the Tissue Engineering Laboratory (LOEX) and the Québec Network for Research on Protein function, Structure and Engineering (PROTEO);

- > An up-and-coming Center: the Laval University Community Healthcare Research Centre (CERSSPL-UL);
- > More than 30 Canadian Research Chairs;
- > Nearly 30 research chairs in partnership.

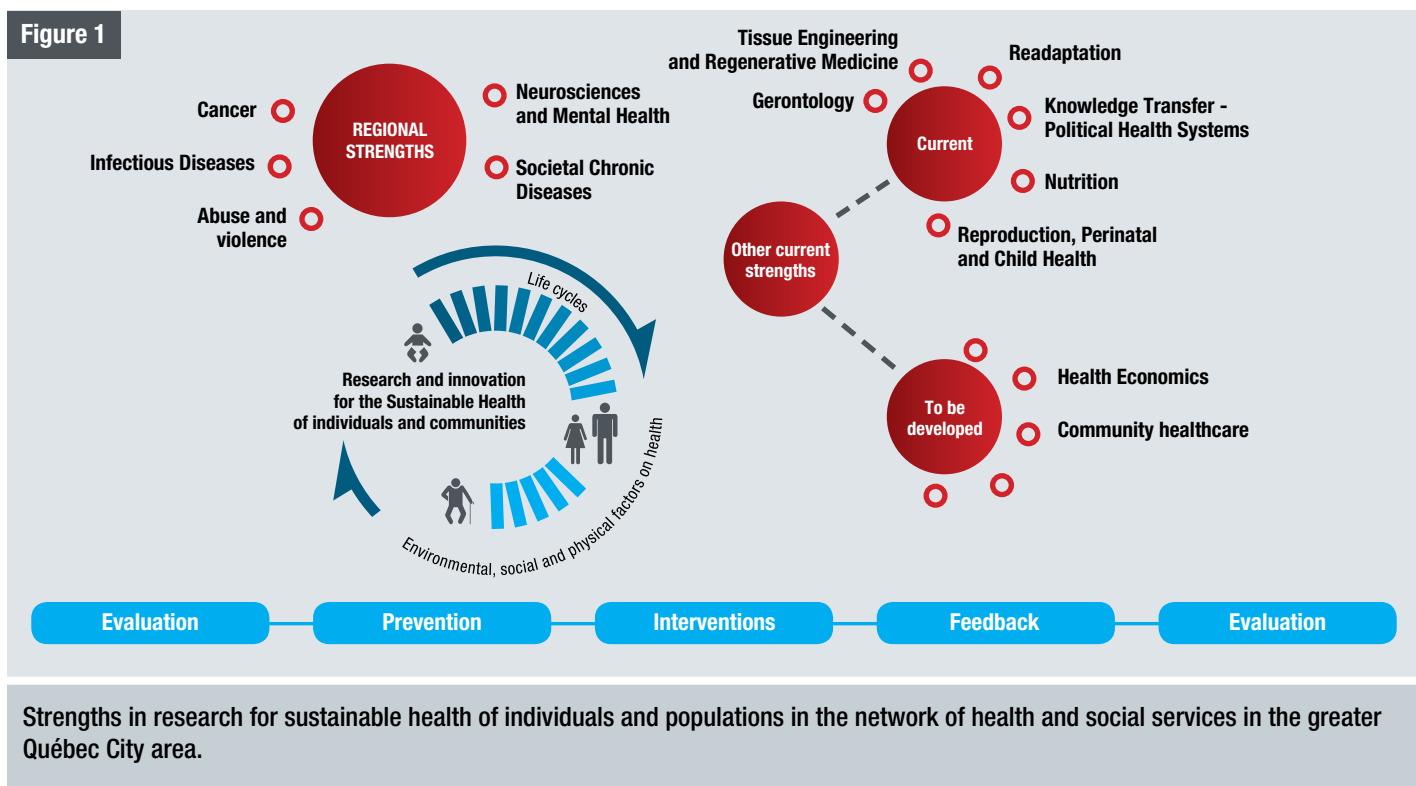
Aware of the importance of research resources available at Université Laval and its associated network, the Alliance has established niches of excellence on which to base its future actions in research and innovation. The consultation process carried out in recent months, as well as the work done by the working group "Portrait and impacts" (consisting of representatives from Université Laval, some affiliated FRSQ research centers and Québec International), will have an opportunity to clarify these niches.

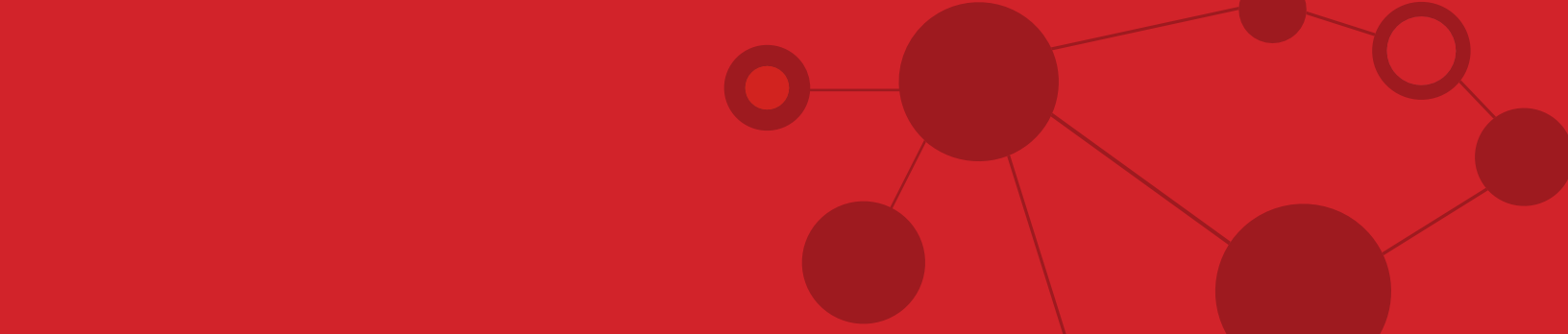
Using performance indicators, including the amounts of grants and research contracts, the number of researchers and staff and the number of publications and citations, the following areas are the confirmed strong points: **societal chronic diseases, neurodegenerative diseases and mental health, infectious disease, cancer, child abuse and violence**. These analyzes also identified other areas that stand out on the national and international scenes: they are **transferring knowledge - political health systems; reproductive, perinatal and child health; gerontology; rehabilitation; and nutrition**.

The Alliance will use these strengths to help bring about the changes implied by the adoption of a model of research and innovation that is part of sustainable health. These strengths make it possible to do research on people throughout their lives, from conception to end of life; taking into account environmental, social and physical factors associated with health; to focus on interdisciplinary and transdisciplinary approaches to advance knowledge in order to benefit the people and communities; to focus on preventive approaches, concerned with the quality of life and well-being; and ultimately help improve the effectiveness and efficiency of the health system and social services, as well as the health of the population.

3 / THE PROCESS OF THE ALLIANCE'S STRATEGIC PLANNING

Figure 1 illustrates the strengths in research for sustainable health of individuals and populations in the network of health and social services in the greater Québec City area. It leaves room for the development of research in other areas, including the economics of health as well as health and primary care services.





The working group “Portrait and impacts” has also compiled an inventory of platforms, advanced equipment and biobanks available at Université Laval and its affiliated research centers. This inventory demonstrates the diversity and richness of the infrastructure enjoyed by researchers and students to conduct research of a high level. This highlights the tremendous leverage that infrastructure could be for innovation, if it were better known and more widely shared. The Alliance will see that it gets promoted.

Data compiled by the Communauté-University Liaison Office (BLUM) from Université Laval completes this portrait and confirms the entrepreneurial dynamism of University researchers in all disciplines: the establishment has 256 active technologies, including 137 licensed, more than 620 active patents and 47 spin-off companies.

The private sector

As part of the preparation of the first Strategic Plan, emphasis was placed on describing the research strengths within the network of health and social services.

The Alliance is aware that, in addition to its internal network strength, the greater Québec City area can also count on more than 125 innovative companies and cutting-edge expertise in areas related to health: biopharmaceutical and diagnostic, nutraceutical, medical technology and information technology. Amongst these, some stand out in the areas of vaccines and infectious diseases, development of new drugs, clinical research, telehealth, clinical mobility and medical equipment.

The life sciences industry has been recognized as an area of excellence for the region of Québec and is part of the ACCORD program, as are the insurance industry and applied technologies. These three areas, perceived as complementary in terms of the objectives of the Alliance, already contribute significantly to the regional economic dynamism. Their impact, however, could be increased by the acceleration and systematization of the Alliance links with these stakeholder groups.

3 / THE PROCESS OF THE ALLIANCE'S STRATEGIC PLANNING

3.4 / The assets of the greater Québec City area

The various meetings, as well as interactions with national and international experts, have also helped to clarify the specifics of Québec City area, which can be very advantageous:

- > The highest number of researchers per capita in Canada (research is also the largest employment sector in the region)¹²;
- > One of the largest concentrations of research and technology transfer in Canada (more than 6,000 researchers and partners, and 400 laboratories, groups, consortiums, institutes and research centers)¹³;
- > Québec City is the City of Technology: 540 companies, 19,500 jobs (2,000 research), more than 65 centers, chairs, groups and research institutes¹⁴;
- > Québec ranks first in Canada and the United States for its low operating costs, below the average of American cities in clinical trials (27%), in Biomedical R & D (20%) and pharmaceutical manufacturing (6%)¹⁵;
- > Québec is the champion of R & D: it spends 2.6% of GDP in private and public spending;
- > Québec is a world leader in the field of vaccines; it has several successful companies in the development of diagnostic tools;
- > The regional population is homogeneous and stable, which facilitates cross-generational and longitudinal studies;
- > Nearby government decision-making centers;
- > A comprehensive university that has made interdisciplinarity a priority, which translates into tangible involvement of ten faculties in the Alliance (Law, Graduate and Postdoctoral Studies, Medicine, Dentistry, Pharmacy, Business Administration, Agricultural and Food Sciences, Science and Engineering, Nursing, Social Sciences);
- > Faculties of Health Sciences (Medicine, Pharmacy and Nursing) together under one roof, already engaged in a process of interdisciplinarity;
- > Centers for Health Research recognized by the FRSQ and is fully integrated into the health facilities;
- > An integrated, unified and strong university health network (RUIS UL), that reaches a population of 1.7 million people;
- > Entrepreneurship Training, well integrated into several bachelor programs, including the doctoral degree in medicine and in pharmacy (entrepreneurial profile), and more than thirty workshops for graduate studies;
- > A recognized devoted company to the development and commercialization of new technologies derived from university research and from partnering research centres (SOVAR);
- > An established partnership between Université Laval, Québec International and the Québec Métro High Tech Park;

¹² Québec International, <www.Québecinternational.ca>, Web site consulted April 2014.

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ *Ibid.*

3.5 / Several challenges

The work of the Alliance was also an opportunity to identify various challenges that it will enable it to structure its action plan and prioritize its interventions in the coming years.

- > Promoting the distinctiveness of the greater Québec City area, which would allow it to stand out compared to other similar groups in the world;
- > Adopting an inclusive approach, which can lead to the mobilization of the population;
- > Join the next generation of researchers in all components of the Alliance;
- > Initiate and maintain the trust and support of partners;
- > Work with a light governance structure that is open and creative;
- > Persuading decision makers to support experimentation with new ways of doing research and innovation as well as health and social services;
- > Facilitate the paradigm shift from “patient” to “a person’s living environment” for each of the members of the Alliance organizations;
- > Ensure that the definition of research needs and problems to be solved come as much researchers as they do from those who are concerned: institutions, expert patients, the public, etc.;
- > Objectively evaluate the performance of the Alliance.



Photo: Marc Robitaille

4/ STRATEGIC GUIDELINES 2014-2017

VISION To be an internationally recognized leader, among the most effective groups to **host, develop and support research and innovation, to accelerate the sharing of knowledge and technology transfer** in health and social services.

MISSION To **increase performance in research and innovation** in the greater Québec City area, in the field of health and social services and to **maximize its positive impact on the health and well-being of the population, on the ecosystem of health care and social services and on the regional economy**, that is fully consistent with **sustainable health**.

PRIORITY ISSUES

- Strengthen the competitive position of research teams and increase their notoriety;
- Attract and retain the region's top research talent;
- Enhance and facilitate the integration of new knowledge and technologies in practices;
- Promote multidisciplinary, interdisciplinary and transdisciplinary models in research and innovation initiatives;
- Contribute to the training of a new generation of excellence to fuel research and innovation;
- Use all activities related to research and innovation in health and social services as a driving force for creating collective wealth.

VALUES

Leadership: we exert significant influence on the development of research and innovation in the greater Québec City area and unite all stakeholders in these sectors.

Commitment: we have consistently invested in the Alliance and in our respective organizations to achieve common goals.

Creativity: we demonstrate originality and confidence in our actions.

Openness: we recognize the importance of making room for different views within the Alliance and we welcome new ideas and unconventional ways of doing things.

Flexibility: we give ourselves the ability to act quickly, seize favorable opportunities and adapt our methods accordingly.

Respect: we listen to and consider a diversity of viewpoints and contributions.

Rigor: we act with integrity, fairness and ethics.

STRATEGIC GOALS AND OBJECTIVES

To achieve its mission and objectives, the Alliance **unites and mobilizes** all regional stakeholders in health and social services; it facilitates the creation of favorable environments in research and innovation; it **highlights** the strengths of the region in these areas and supports, if necessary, the development of new markets.

1/ Gather	2/ Mobilize	3/ Facilitate	4/ Highlight
Promote a culture of collaboration and sharing of expertise.	Develop and implement a comprehensive regional strategy for research and innovation for the sustainable health of populations and individuals that are audacious and nationally and internationally competitive.	Create conditions conducive to the reception, development, support and diffusion of research and innovation in health.	Promote the skills, resources, results and impacts of research and innovation in the greater Québec City area.

Strategic Guideline 1 :

Gather... by the regrouping, networking and consulting of all key players and by the establishment of regional resources to achieve leading-edge research and innovation.

Strategic Objective: To strengthen the culture of collaboration and sharing of expertise.

Objective 1.1

Ensure the participation of all key regional stakeholders concerned by the mission of the Alliance.

Courses of action

- > Ensure the participation of young scientists (graduate students and postdoctoral) in the structure of the Alliance;
- > Ensure public participation and that of patients in the structure of the Alliance, and formally integrate the public in all consultative processes and all research teams;
- > Ensure the participation of the private sector in the structure of the Alliance;
- > Ensure the active participation of the clinical setting;
- > Ensure the participation of international experts during crucial phases of the implementation and development of the Alliance and for developmental projects;
- > Expand the network of partners to include other academic institutions in the region and colleges, as well as other public, private, or governmental associations challenged by the mission of the Alliance.

Objective 1.2

Create opportunities for meetings, promoting interdisciplinary and inter-sectoral exchanges; encourage networking and the creation of alliances between researchers, clinicians, policy makers, patients, representatives of the public and the private sectors.

Courses of action

- > Organize forums, seminars, conferences and events such as “Québec in solution mode”;
- > Create a platform for citizens, patients, clinicians, researchers and the private sector;
- > Support the physical grouping of public health and front-line researchers with experts from the Institut national de santé publique du Québec, the Direction régionale de santé publique and the Department of Social and Preventive Medicine from the Faculty of Medicine.

Strategic Guideline 2:

Mobilize... by original, ambitious and inclusive projects that build on regional strengths and by committing to a unifying concept: sustainable health.

Strategic Objective: Develop and implement a comprehensive regional strategy for research and innovation for the sustainable health of populations and individuals that is nationally and internationally bold and competitive.

Objective 2.1

Encourage the development of unifying research and innovation projects and to ensure the consistency of their development.

Courses of action

- > Prioritize the development of federated projects and contribute to their implementation: regional center for clinical research data, population-based and informational, including biobanks; cohort focused on the individual and its ecosystem, and the factors associated with health;
- > Contribute to the creation of a platform for social innovation;
- > Provide the Alliance's seal for federated projects.

Objective 2.2

Promote the concept of sustainable health and direct the activities in a consistent manner with the resulting principles.

Courses of action

- > Support the creation of the University Institute of front-line health and social services;
- > Contribute to improving the effectiveness and efficiency of the services and health care system by supporting the development of research in health economics, management of health services, health policy, knowledge transfer and evaluation of health technologies and intervention methods (ETMIS).



Strategic Guideline 3:

Facilitate... by establishing favorable conditions for research and innovation in the region.

Strategic objective: create favourable conditions for the reception, development, support and dissemination of research and health innovation.

Objective 3.1

Help achieve harmonization and simplifying of administrative procedures associated with the various stages of research and innovation.

Courses of action

- > Make the necessary representations to the concerned authorities to alleviate the constraints (including regulations), which are applicable to researchers and industries, and make Québec a Territory where constraints would be eased (TCA) for research and health innovation, while maintaining strict standards of integrity and ethics.

Objective 3.2

Help accelerate the development cycle of knowledge and its transfer to the health care system.

Courses of action

- > Monitor the needs, challenges and capabilities of research and innovation in health and social services;
- > Help establish a culture of “innovators” in health care and social services facilities;
- > Support the emergence of incubator projects on target audiences, using generalized or export models;
- > Involve all stakeholders in the health value chain and promote contact between the users and producers of innovation;
- > Promote targeted networking with national and international networks and businesses;
- > Identify the factors that promote clinical research and help eliminate the barriers.

Objective 3.3

Provide support to start federated projects that are sustainable in health and promote interdisciplinarity, and support efforts to find funding for these projects.

Courses of action

- > Ensure that the existing foundations allocate the amounts dedicated to supporting innovative projects in sustainable health;
- > Support the processes for national and international partnerships.

Objective 3.4

Contribute to training a highly skilled next generation to support research and innovation.

Courses of action

- > Attract top talent and take the necessary actions needed to ensure their retention;
- > Ensure the integration of young researchers in their host environment and their “longevity” in research.

Objective 3.5

Ensure national and international research competitiveness and regional innovation.

Courses of action

- > Regularly use national and international experts for evaluation purposes.



Strategic Guideline 4:

Highlight... by using diversified strategies to promote research and innovation.

Strategic Plan: To promote the skills, resources, results and impact of research and innovation in the greater Québec City area.

Objective 4.1

Promote regional strengths in research and innovation both in Canada and around the world; promote and publicize the associated teams.

Courses of action

- > Make the greater Québec City area a showcase of research and innovation;
- > Establish a permanent inventory of skills in the region with respect to health research and as a tool to promote and attract;
- > Use a variety of tools for communication and promotion and develop new ones as needed.

Objective 4.2

Promote social and economic benefits of research and innovation.

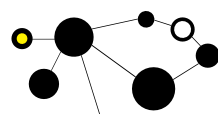
Courses of action

- > Be a distillation agent of knowledge, serve as a credible forum and intermediary with the media, ensure that the research results are well disseminated and give the accurate facts to the population.



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