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# Strategic Research Plan 2009-2014

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## High Impact Research

### Institutional Context

Vibrant and dynamic, nestled in the very heart of the city, yet open to the world, UQAM is a major intellectual, scientific and cultural centre for the creation and dissemination of the newest knowledge and culture, devoted to preparing students and society for some of the global challenges of the 21st century: sustainability, cultural diversity, globalization, the promotion of human rights, as well as peace and security.

The university is in a strong position, due to the rapid renewal of the academic staff – 306 new professors have been hired since 2003-2004 – and the sustained increase in research funding to its current level of \$66 million, placing UQAM in sixth position among large comprehensive universities in Canada. Therefore, our university is in a position to assume leadership role among Canadian universities.

UQAM University is made up of seven faculties:

- Faculty of Arts
- Faculty of Communications
- Faculty of Education
- Faculty of Social sciences
- Faculty of Political Science and Law
- Faculty of Science
- School of Management

### Strategic Objectives

The objectives of the present strategic research plan submitted to the Canada Research Chairs program and the Canadian Foundation for Innovation for the period 2009-2014 are:

- Maintain a strong presence in the arts, the humanities and the social sciences, including law, education, management, media studies and distance education, coupled with the targeting of a presence in the health sciences and the natural sciences in areas where the university's research strengths can be applied and its excellence brought to bear.
- Maximize the strategic advantage conferred by the renewal of academic staff to intensify the university's research and research/creation efforts, especially through the emphasis on setting up means to support new professors and facilitate their start-up efforts.
- Optimize the impact of research in all of its manifestations: social, economic and cultural, quality of life, public discourse and debate and on our understanding of the world, as well as the quality of teaching at all levels of higher education.

- Position UQAM as the leading Canadian university in the area of promotion and development of research/creation.

## Strategy and Guiding Themes

To prepare the present strategic plan, the university invited the faculties to reaffirm or redefine their research and artistic strengths, and set out the principal areas of research that they hope to develop in the next five years. A synthesis of the new faculty plans resulted in the selection of seven interdisciplinary themes for development. These promising fields were selected because of their strong potential for success and the attainment of our overall strategic objectives. The themes are:

- The Foundations of Cognition and Action
  - The Environment and Sustainable Development
  - Health and Well-Being
  - Social, Economic and Organizational Stakes
  - International Political, Legal and Social Transformation
  - Culture, the Arts, Communication and Media
  - Education and Knowledge Mobilization
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## Priority Research Themes

### 1. Foundations of Cognition and Action

At UQAM, research in this area extends to disciplines as diverse as mathematics, computer science, linguistics, literature, the arts, communication and philosophy. Thus, it is inherently and intentionally a major research priority in the Faculty of social sciences, where the exploration of the workings of the human mind and its symbolic, cultural, historical and institutional constructions add to the store of knowledge in this field. Specific areas of inquiry relate to: asymmetry in language; the language of signs; religious consciousness; and studies relating to the concept of "self". The self is also the subject at the heart of several large-scale projects in the creative arts.

In the Faculty of Science, UQAM supports two institutional research centres in mathematics, both affiliated with the prestigious *Centre de recherches en mathématiques de Montréal*. This centre has obtained national recognition for its work in the areas of combinatorics and typology.

The Institute of Cognitive Sciences is an incontestable centre for research and studies in the foundations of cognition and action. Here, artificial intelligence is approached via computer science, data drilling, and tutorial systems, together with broader approaches that bring together and unite researchers from various disciplines, such as linguistics, philosophy, cognitive computer science and education.

### 2. Environment and Sustainable Development

UQAM's innovative approach in the area of the environment is illustrated by the creation, fifteen years ago, of the Institute for Environmental Studies, now attached to the Faculty of Science and comprised of researchers from six different faculties at UQAM. Our research strengths in the area of global change are concentrated in a number of interuniversity centres and networks with a focus on addressing climate modeling, mineral resources, ecology, forest ecology, limnology and environmental health. Seven Canada Research Chairs (CRCs) support five of these inter-institutional centres of research.

Recent developments have seen the coming together of several Quebec research centres of expertise to form the Centre for Forest Research (CFR), based at UQAM, and increasing links with experts on fresh water ecosystems who are members of the Inter-institutional research centre in limnology and aquatic environment (GRIL). An objective of this interdisciplinary collaboration is to acquire a better understanding of the stakes involved in adapting to climate change.

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### 3. Health and Well-Being

UQAM emphasises an integrated approach to health that includes a full range of disciplines including the social sciences, the natural sciences and education. This approach is a fundamental part of UQAM's environment and strongly imbued with the mission of service to the community that has been an integral part of the university's ethos from its founding. Research of the highest calibre is carried out in the area of the health of populations by researchers in the faculties of Social sciences, Education, Communication, Arts and the School of Management. The multidisciplinary nature of this research facilitates the identification of groups in critical areas such as mental health, social disparities, management of health systems, occupational health and safety, and intervention strategies, in particular in at-risk populations. Research is conducted on suicide, intellectual delays, global developmental and behavioural problems, youth and families in difficulty, injustice towards and abuse of children, sex and violence, to name several of these areas.

Developments in the field of health are organized around the following lines of inquiry: **1) social factors and health (prevention, intervention, individual and collective well-being); 2) management and communication of health and telehealth; 3) public health, global health and well-being; 4) health education; 5) biotechnologies, especially therapeutic chemistry, retrovirology, integrative genomics and molecular oncology; 6) at-risk populations, in particular children.**

### 4. Social, Economic and Organizational Stakes

In a knowledge-based society, innovation is at the heart of development and the transformation of social structures. From this central tenet a range of themes emerge. The rise in inequality, economic fragmentation, notably between cities and the countryside, the ability to combine development and solidarity, the capacity to confront the risks that these transformations entail, our own understanding of society's transformation – all of these are examples of questions that engage researchers at UQAM.

Clusters of expertise exist in the fields of social economy, in gender studies, at the **Institute for Feminist Studies**, in the sciences, in technology and innovation, in macroeconomics, via the **Interuniversity Centre for Risk Management, Economic Policy and Employment**, in organizational governance and, lastly, in operational research.

In science and technology, the **Interuniversity Centre on Science and Technology (CIRST)** is a leading interdisciplinary group of researchers whose work is devoted to the study of the historic, social, political, philosophical and economic aspects of scientific and technological activity. Their research projects target the advancement of knowledge and its contribution to resolving societal problems with a scientific or technological dimension. The CIRST harbours the **Science and Technology Observatory (OST)**, dedicated to the evaluation of science, teaching and innovation, and hosts six CRCs, three of them at UQAM, as well as one university chair.

Risk management has been one of the major concerns of modern societies, and recent events (natural or man-made catastrophes) have highlighted requirements for decision-makers, researchers and all participants in the maintenance of civil security. This multidisciplinary theme draws on research expertise in law, communication, management, geography, psychology, physical, human and social processes, natural risks, both accidental and deliberate. It unites researchers from every faculty and several research projects have emerged from this theme, including the creation of a centre on risk management and a chair in public security.

## 5. International Political, Legal and Social Transformations

There are many pressing issues related to shifts in global equilibrium: the pace of change is accelerating, the mediatization of the results of rapid transformation increasingly influence the social, economic and cultural divides that are rapidly appearing at all levels. Due to its cosmopolitan character and its position at the confluence of Anglo-Saxon and European academic traditions, of civil law and common law, Montreal possesses a rich ability to recognize these types of differences and thus to serve as a model for numerous urban centres.

UQAM's strengths in this theme are clustered around the broad areas of citizenship (CRC Chair in Globalization, Citizenship and Democracy), immigration and ethnicity, questions of indigenous territory, democratic practices and their renewal, governance and the study of international politics, law and strategic issues. Questions of identity vis-à-vis the effects of globalization are also paramount. Transformations can only be understood fully over time; an understanding of the past is an essential key to the present and the future. It follows, then, that research into the history of cities, into social inequality and political and cultural history are important, in order to define our identity through the prism of the significant blending of peoples in our society. Transformations also invite geographic analysis, in terms of the study of territory. UQAM therefore intends to reinforce the structural underpinnings for this research in several of its faculties, especially in the areas of ethnic studies, public policy, security, consumer protection and the role of NGOs.

## 6. Culture, Arts, Communication and Media

From the ultra-traditional to the avant-garde, cultural manifestations form one of the integral and appealing elements of the Montreal region. In this context, culture plays a dual role: it is a reflection of identity and a strong component of the economy.

UQAM's strengths in this area are found in artistic innovation, in the analysis of the critical role of the arts and culture in society, in studies on patrimony and methods of community intervention in the arts, and in studies on the methodology of creativity. Another area of concentration under this theme relates to communication strategies, virtual communities, cultural policies and industries and the phenomenon and use of media culture. The question of mediatization is a common thread in all of these areas.

This theme is actively supported by four research centres, not only in literature, arts and culture (**CELAT**, **FIGURA** and **CRILCQ**), but also in the media arts (**CIAM**), as well as three research chairs, two of which are CRCs - one in Urban Heritage and a second in Aesthetics and Poetics. In addition, UQAM is the locus for **ORBICOM**, the secretariat of the international network of UNESCO chairs in communication.

UQAM supports the setting up of data warehouses (particularly in environmental and social sciences) as well as the establishment of an integrated system for digital asset management that will promote the use of innovative tools to categorize, archive and analyze enriched multimedia documents. Significant expertise is also forming at UQAM due to several facilities working in the area of text forms, media arts and representations of the North, expertise that will contribute to numerous research initiatives at the university and in the community.

## 7. Education and Knowledge Mobilization

Education constitutes a major stake in the evolution of societies. Training must be available to all, on an ongoing basis, without regard to social inequalities. Service and community connection are priorities that are enshrined in UQAM's approach to research. For some time, many of the university's research projects related to this theme have also specifically encouraged interdisciplinarity and social engagement.

Research projects in the Faculty of Education revolve around four areas of inquiry: learning, teaching and training; at-risk populations and their educational milieu; educational policies and administration; and lifelong education in citizenship, science and environment. UQAM has created two CRCs related to this last topic, one related to health and the other to environment. UQAM has also just announced support for a development project on literacy in research in the context of university learning.

Projects conducted in fields at the forefront of knowledge place UQAM at the centre of educational innovations required to move the knowledge society forward (scientific education, the measurement and

evaluation of education using computer and communications technologies, cognitive and educational engineering, etc.).

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## Conclusion

UQAM has celebrated its 40th anniversary in 2009. In the years since its founding, the university has developed a mature vision of its role in research.

The Université du Québec à Montréal's research priorities defined in this strategic plan fit firmly within the framework of strategic areas where it has a comparative advantage. While maintaining a strong presence in the arts, humanities and social sciences, UQAM intends for the next five years to focus on the most promising research fields in the natural and health sciences, where it can also claim to excellence.

UQAM's international strategy will support the consolidation and development of international research networks and academic partnerships with institutions and researchers that are leaders in one or more of the seven themes that UQAM has identified as its priorities.