STRATEGIC RESEARCH PLAN
BISHOP'S UNIVERSITY
2017-2022

Introduction

Research is a fundamental part of Bishop University's institutional mandate as a University in the Quebec and Canadian post-secondary landscapes and beyond. Bishop's student and faculty researchers contribute, and must continue to contribute to the generation of new knowledge, to mobilizing this knowledge to relevant community partners and users of the research and, in doing so, contribute to innovation and economic development of the region, province and country. Bishop's must continue to enhance its research activity and scholarly reputation in Canada.

Opportunities to participate and succeed in research and creative scholarship is critical to our ability to recruit and retain exceptional faculty and students, our ability to link excellence in teaching and research, as well as the quality of research experiences we offer to our students. Our integrated model of teaching and research, involving the direct training of undergraduate and graduate students by faculty researchers, is highly experiential, intimate and effective in producing well-trained graduates who excel in the next stages of their research training or careers.

Our strategic plan recognizes that there are many different approaches to research and creative activity. Some researchers work alone; others work in collaborative teams with colleagues on campus and/or at other universities. Some research programs require performance, creation, and laboratory spaces and equipment; others require access to field locations near and far; all require access to information resources. Our strategic plan further recognizes that some of our science-based research programs provide opportunities for integrating graduate students owing to the presence of a science-based master's degree program, and that researchers in the arts, humanities, social sciences, and in some sciences do not have access to graduate students on campus and some of them choose to engage graduate students from other institutions. Regardless of the discipline, subject matter, and resource requirements and use, all activities are valued and contribute to our collective knowledge and development.

VISION, MISSION, VALUES of Bishop's University

The Vision, Mission and Values of Bishop's University serve as a backdrop for this Strategic Research Plan. In fact, it is clear that research, scholarship and creative activity are integral to the mission, vision and values of the University.

Vision
Our goal is to offer Canada's foremost undergraduate education.

Mission

In 1843, the founders of Bishop's University declared their intention "to offer to the country at large the blessing of a sound and liberal education". Today, our primary focus remains the liberal education of undergraduate students.

We aspire to be the institution of choice for outstanding young people seeking academic excellence and a comprehensive undergraduate experience in a community that instils confidence, courage and a sense of responsibility in its students.

At the heart of the Bishop's experience is close interaction between professors and students, within the classroom and elsewhere, **in research, scholarship and creative activity**[1].

We seek to engage our students in their own intellectual and social development by offering programs of study and extracurricular activities that foster intellectual curiosity and a life-long commitment to learning.

As a learning community, we are engaged in **the advancement and dissemination of knowledge**. We encourage both breadth and depth in our students' academic programs, to equip them to explore and solve complex problems.

We are committed to maintaining our intimate size and residential nature in order to foster the social development of our students, encourage the creation of lasting friendships and engender a true sense of community.

We invite our students, who come from Quebec, elsewhere in Canada, and around the world, to practice the respectful and informed dialogue that sustains democracy, to exercise the rights and responsibilities of good citizenship and to realize their potential for leadership.

We encourage our students to engage with individuals from different social, cultural and linguistic backgrounds and to take advantage of opportunities to open themselves to the world.

Values

Community

We value our welcoming and inclusive community, which fosters deep engagement in the life of the University and the exceptional dedication of our alumni.

We value individual integrity, mutual respect and collegiality.

We value the self-reliance, ethical engagement and accountability that are essential to responsible leadership.

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[1] Bolding and underlining are not present in the original Mission Statement but serve to draw the reader's attention to these sections in this document.

We value service to our local and global communities**, and research and scholarship that contribute to their growth and betterment**.

Discovery
We value the curiosity, creativity and innovation that lie at the core of the intellectual endeavour: **the search for truth and the discovery and transmission of knowledge in research and scholarship**.

We value a liberal education, which combines the sustained study of a particular field of knowledge with the ability to approach it critically through exposure to different intellectual traditions and points of view.

We value active engagement in learning on the part of our students, and their contributions to innovation in our programs and pedagogical activities.

We value the academic freedom that is essential to the discovery and transmission of knowledge, the development of critical approaches, and true engagement in learning and discovery.

We value the opportunity to learn from and with each other, in our classrooms laboratories, libraries, theatres, residences, dining and sports facilities, as well as in the broader community.

Excellence
We value outstanding teaching, research and creative expression.

We value **the pursuit of excellence in all that we undertake**, and we aim to instill the aspiration to excel in our students and in all other members of our community.

Sustainability
We value principles of sustainability and seek to integrate them into our academic programs and our individual and institutional activities.

We value the natural beauty of our surroundings and exceptional architectural quality in our built environment.

Link to the Bishop's University Strategic Plan
Bishop's University's Strategic Plan (SP), adopted in 2014, includes a number of priority areas and research is a salient part of this plan. More specifically, the second goal of the first strategic priority is to foster and support a vigorous research climate. The institutional Strategic Plan refers to the Strategic Research Plan (SRP) adopted in 2013 by Senate and the Board of Governors and lists a number of actions to be taken. Moreover, the SP includes research as an important factor for enhancing Bishop's reputation in Quebec, Canada and abroad (Strategic

Priority III, Goal 6) and for developing strategic partnerships with the Maple League institutions and with Quebec universities (Strategic Priority VIII, Goals 1 and 2).

Organization of the SRP for 2017-2022

This document builds on five earlier strategic plans for research developed since 2000 at Bishop's University - the first from 2000 and the most recent from 2013-2016. The plan begins by setting an overall vision statement for the next five years. Thereafter, six key priority areas, associated goals and actions are then presented along with indicators or targets to be used for assessing our success in 2022.

Overall vision for this Strategic Research Plan

Bishop's will continue to build and enhance an environment that supports peer-reviewed scholarly research and creative activity in many different forms. Undergraduate and graduate students will be meaningfully engaged in research of all kinds. Research and creative scholarship will be part of every student's experience at our University and will be an integral part of the role of our Faculty members and librarians.

Bishop's University is committed to excellence in research and creative practices, to the support of our researchers and students in the pursuit and dissemination of new knowledge and creative activity, and to the development of the next generation of researchers, creative artists, and leaders

Strategic Priority I: Identify and support key research priority areas

Goal
That a large majority of funded researchers be associated and active within one of the following key priority areas:

Stellar Astrophysics and Relativity Cluster
This cluster specializes in the study of gravitational fields applied to cosmology and the study of compact objects in various astronomical contexts, with a focus on topics relating to high-energy astrophysics and binary stellar systems. This field has been a traditional strength at Bishop's; indeed, one cluster member (Dr. Lorne Nelson) held a Tier I Canada Research Chair for seven years and many other cluster members, such as its current coordinator Dr. Valerio Faraoni[2], are funded by NSERC. World-class research infrastructure is already in place and includes, among other things, an astronomical observatory on the Bishop's campus used by students in the undergraduate and graduate Physics programs for their studies and research. The Observatory also opens its doors to the public for tours and stellar evenings. It is located within the International Dark Sky Reserve of Mont-Mégantic, a cooperative project that includes the Government of Quebec, local municipalities and interested institutions, and that aims to reduce

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[2] Dr. Lorne Nelson will coordinate in fall, 2017, while Dr. Faraoni is on sabbatical.

light pollution. A Tier 2 Canada Research Chair in Exoplanet Astrophysics (Dr. Jason Rowe) was added to this cluster in July, 2017.

Climate and Environmental Change Cluster
This cluster studies the mechanisms driving climate and environmental changes at small, intermediate and large scales, and also addresses questions related to climate change impacts on land, water, biodiversity and society, as well as vulnerability assessment, mitigation and adaptation measures. The cluster includes Tier 2 Canada Research Chair Dr. Matthew Peros (renewed in July 2016 for five years) as well as professors from the divisions of natural sciences and social sciences. Dr. Peros' cutting-edge laboratory has been built and equipped with the help of the Canada Foundation for Innovation, the Government of Quebec and other partners.

Psychological Health and Well-being Cluster
This cluster takes a multidisciplinary approach to the study of psychological health and well-being of individuals and communities. Its aim is to offer the means to ensure that individuals, and the communities in which they live, are healthy, sustainable and vibrant through research and dissemination of findings. Research foci have included chronic illness and pain management, well-being in the workplace, use of health services, and promoting well-being. Currently led by Dr. Jamie Crooks[3], it includes a multidisciplinary team from the social sciences, natural sciences, and business. This cluster is committed to working in collaboration with the Eastern Townships community, while being active at the national and international level. The Psychological Health and Well-being Lab, a research space made available thanks to contributions by the Canada Foundation for Innovation, the Government of Quebec and other partners, regularly welcomes research participants who come to complete surveys, to participate in interviews and focus groups, and to provide psychophysiological data.

Crossing Borders Cluster
This cluster is in the process of reorganizing itself around the mandate of "social justice" – a theme that is in many ways already expressed in much of its current work. The Cluster is thus entering an innovative period of development and growth. New projects, including a partnership with the Institute of Research on Rights and Social Movements of Brazil that closely shares the goals of the CB cluster will combine with ongoing events and projects on indigeneity, race, gender, Canada's 150th anniversary, Transformative Praxis in Malawi, etc. After the resignation of Dr. Berco, Tier 2 CRC in Social and Cultural Difference in spring 2016, Dr. Bruce Gilbert became the coordinator of the cluster.

Actions for further support of these clusters:

> 1.1 Over the first two years of the 2017-2022 Strategic Plan, the University will review and clarify the purpose, goals and expectations of Research Clusters at Bishop's, including financial support for the clusters;

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[3] Dr. Crooks assumed leadership of the cluster as of September, 2017. Dr. Heather Lawford coordinated the cluster from 2015-17.

1.2 Conduct a formative (mid-way) assessment of clusters every two years and a formal summative evaluation of existing clusters by 2022;

1.3 By 2020, create up to two more clusters or research groups in new and/or emerging priority areas;

1.4 Increase the number of Faculty researchers formally associated with and active within one or more research clusters, with the ultimate goal of increased productivity and funding associated with the cluster, and improvement on non-traditional metrics for assessing the impact and innovation of research and creative activities (to be identified by the Senate in consultation with researchers and cretors).

We will know we have succeeded if, by 2022:
- ✓ purpose, goals and expectations of Research Clusters at Bishop's are clarified and approved by Senate;
- ✓ formative assessments have been conducted, improvements made as a result of these assessments and a formal evaluation of existing clusters has been completed;
- ✓ two more key priority areas have been established (potential areas to emerge);
- ✓ 20% more faculty researchers are formally associated with and active within at least one cluster.
- ✓ Each cluster has improved, by 20%, on all identified metrics for measuring impact and innovation of research and creative activity.

Strategic Priority 2: *Increase the number of and supports for Research Chairs*

Currently, and based on the University' Tri-Council research funding results, Bishop's has been allotted three Tier 2 Canada Research Chairs.

In 2000, Bishop's University was allocated one Tier I CRC which was awarded to Dr. Lorne Nelson in 2002. In 2008, a re-allocation exercise resulted in a gain of one Tier II CRC after. Dr. Nelson decided not to renew his position. The University then decided to split the Tier I Chair into two Tier II CRCs in order to have three Tier II CRCs. To that end the University proposed a series of principles and criteria by which the CRCs would be allocated which takes into account research priorities, but integrates some teaching, and disciplinary distribution. These three Tier II CRCs are central to our research success and for developing our research infrastructure, attracting and retaining additional strong researchers, increasing our collaborations, and enhancing our overall research profile.

Current and future CRCs:

Chair Level	Number	Category	Research Area	Time Period
Tier II	1	Special	Environmental and Climate	2016-2021

			Change	
Tier II	1	Special	Health and Well-being	TBC
Tier II	1	Special	Stellar Astrophysics and Relativity	2017-2022

As of July 1, 2017, two of the three CRC positions will be occupied: Dr. Mathew Peros who was renewed as a Tier 2 CRC in Climate and Environmental Change and Dr. Jason Rowe recently approved by the CRC Secretariat as CRC in Stellar Astrophysics and Relativity. The third CRC position remained unassigned; a nomination will be made in fall 2017.

Goal

That the number and types of research chairs are increased and supports for them are enhanced.

Actions

> 2.1 While CRCs will remain overall leaders and visionaries for the research clusters with which they are affiliated, CRCs will no longer assume responsibility for administration of cluster activities;
> 2.2 The Research Office will work more closely with new CRCs and other types of research Chairs, especially those coming from outside the University and those who have significant set-up and equipment needs, to help facilitate the beginning stages of the Chair's term and to help kick start productivity;
> 2.3 Research Chairs will be supported and mentored by the Vice-Principal Academic (responsible for research) at regular intervals during the Chair's mandate;
> 2.4 The Research Office, supported by the Vice-Principal Academic and SRC, will ensure compliance with new requirements of the national CRC program with regards to equity and transparency of recruitment and appointment processes and planning for future CRC positions;
> 2.5 The Research Office and Vice-Principal Academic will work with the Advancement Office to seek private donor funding for up to three additional University Research Chairs or University post-doctoral research` positions in priority areas.

We will know we have succeeded if, by 2022:
- ✓ Clusters are successfully lead by scholars other than CRCs;
- ✓ There is a clear and systematic framework and process for Research Office supports for new Research Chairs;
- ✓ There is an established mentoring program for all Research Chairs;
- ✓ There is gender and equity balance among the appointed Chairs and the University has clarified its recruitment and appointment process to be in line with CRC expectations;

✓ At least one, and ideally three, University Chairs and/or Post-doctoral research positions have been established because of endowed gifts from private donors.

Strategic priority area 3: Enhance supports for Faculty researchers and creators

Goal

That administrative supports and professional development for faculty and librarian researchers and creators are increased and enhanced to facilitate tracking budgets and reporting so time is freed up to actually do research and so researchers receive state of the art training in areas of identified need.

Actions

3.1 Implement a new research information system to facilitate grant tracking and reporting, ethics reviews and submission of internal research forms;

3.2 Enhance the Research Office's professional development workshops relating to researcher needs;

3.3 Continue to enhance supports for and professional development on knowledge mobilization (see also Strategic priority areas 5 and 6);

3.4 The Research Office, the Senate Research Committee and the Senate Research Space Committee will move quickly to advocate the University to identify more space for conducting research and for accommodating student research assistants;

3.5 Provide enhanced administrative and learning commons support for the institutional repository, open access and data management.

We will know we have succeeded if, by 2022:

✓ A new research information system has been fully implemented and researchers are fully trained for its use;

✓ There is a 50% increase in targeted and tailored professional development related to researchers' needs;

✓ Analysis of and advocacy for more research space has begun by the end of the 2017-18 academic year and available research space is closer to meeting active and funded researchers' needs by 2022 ;

✓ A data management policy has been developed and data management plans are submitted by researchers. The use of the institutional repository to comply with the requirements of the Tri-Council in terms of open access and data management has been enhanced.

Strategic priority area 4: Increase internal and external research funding

Goal

Increase and diversify internal and external funding, especially contracts with industry and government agencies, for research and creation by 20% by 2022.

Actions

4.1 Attract increasing amounts of monetary support from granting programs, governments, communities, and foundations for all types of research and creative activities;

4.2 Double, document and promote the number and kind of research connections among Bishop's researchers and creators, and colleagues in other universities, including but not limited to the following :

- o researchers obtaining adjunct status at other universities, especially research-intensive institutions, starting at l'Université de Sherbooke, but well beyond;
- o increasing the number of Bishop's researchers on Quebec-based research teams in order to apply for FRQ team research funds;
- o increasing collaborative efforts with Maple League universities, including but not limited to common research projects among faculty and students;
- o Increasing the number of visiting researchers (international and domestic) to Bishop's and increase the number of Bishop's researchers who become visiting scholars at other universities;
- o Joint advocacy initiatives with our Maple League partners to highlight and lobby for supporting research in small universities.

4.3 To better support research creators, the Senate Research Committee will create a separate competitive research creation fund, and will differentiate criteria for assessing research creation, travel and publication grant applications for research creators[4];

4.4 Enhance faculty mentoring for research, including continued efforts to support early researchers in restricting their University service activities, and advocate for increased course relief for new scholars while they establish their research program at Bishop's;

4.5 Establish a start-up research grant fund for new tenure-stream faculty members within two years.

We will know we have succeeded if, by 2022:

- ✓ there has been a 20% increase in funding for research and creative activities from all sources, including but not limited to contract research and agreements with private foundations;
- ✓ there has been a 50% increase in Bishop's researchers and creators who are connected with research and creation colleagues in other universities;
- ✓ A formal policy for visiting scholars/researchers has been established and the number of visiting researchers (incoming and outgoing) has doubled;

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[4] Ideally by attracting additional donor funding. However, if additional funding is not forthcoming, a portion of existing funds would be targeted to this separate competition fund.

- ✓ A separate internal competitive research creation fund has been established and SRC evaluation criteria for assessing grant applications for research creators have been tailored to the realities of these contexts;
- ✓ A faculty mentoring program is established for researchers who are interested and increased teaching relief for new scholars is considered at the next round of contract negotiations;
- ✓ A start-up research fund is available for new tenure-stream Faculty members.

Strategic priority area 5: Pride in and promotion of Bishop's research excellence

Goal

Increase internal celebration of and pride in Bishop's research and creative successes and strengths.

Actions

5.1 By the end of 2018, the Research Office will present a formal communication strategy to the Senate Research Committee and to the Bishop's Communications Office. This strategy shall focus on championing the profiles and stories of professors and students who represent what the University has to offer in terms of research and creative activity, across all disciplines. The following will be target audiences for this communication strategy: researchers at other institutions, the media, prospective students and their parents, current students and the general Québécois public (anglophones and francophones in Sherbrooke, across the Eastern townships and around the province).

5.2 Double the number and diversity of activities such as but not limited to the following :

A) Research and creativity focused messaging in recruitment and advancement communications materials;

B) Internal communications to celebrate Bishop's successes in research and creation (including the outputs of funded <u>and unfunded research</u> and creative activity);

C) Internal and external awards to recognize outstanding achievements.

We will know we have succeeded if, by 2022:
- ✓ The Research Office has formalized an effective communication strategy, and plan for collaboration with the University's Communications department;
- ✓ The number and variety of promotional activities designed to highlight research have doubled.

Strategic priority area 6: Knowledge mobilization

Goal

Demonstrate to the internal Bishop's community as well as the outside world that the research done at Bishop's is relevant and useful. Focus on supporting our researchers to mobilize their research and creativity with intended end users.

Actions

Bishop's Research Office will develop a full knowledge mobilization plan by the end of 2017 with an overall aim of doubling the number and diversity of knowledge mobilization activities over the next five years, including but not limited to the following:

6.1 An experts list on the University website;
6.2 Media presence: interviews given by our faculty members, articles profiling research activities, research U-tube videos;
6.3 Social media activities by Bishop's faculty members, the Research Office and Bishop's Communications department;
6.4 Cafés scientifiques and other forms of knowledge mobilization activities organized by faculty members and their students;
6.5 Local, national and international research and creation conferences and symposia on Bishop's campus.

We will know we have succeeded if, by 2022:
- ✓ Bishop's has developed a full knowledge mobilization plan;
- ✓ We have doubled the number and diversity of knowledge mobilization activities;
- ✓ We have hosted at least one local-level, one provincial-level, one national-level and one international-level conference relating to at least one of the key research priority areas.

Strategic priority area 7: Increase and enhance research experiences and training for Bishop's students

Goal

As a key way to help develop students' 21st century skills and competencies, especially critical thinking, we aim to ensure that more students, undergraduate as well as graduate, are engaged directly in research activity during their time at Bishop's and we aim to enhance the quality of available research and training opportunities for students.

Actions

7.1 The Senate Research Committee shall advocate to the Senate Planning Committee and academic departments and programs to include research-focused activities among those experiential activities that would qualify for the University's Sustainability

recommendation that each Bishop's undergraduate student be required to engage in at least one experiential or capstone activity before graduating from Bishop's;

7.2 The Senate Research Committee, the Senate Committee on Graduate Studies and the Student Representative Council shall collaborate to formalize a transparent and equitable research employment advertising, recruiting and hiring process for student research assistants;

7.3 The Senate Committee on Graduate Studies shall collaborate with academic departments to develop 1-2 innovative research-based graduate programs that align with Faculty research expertise as well as student need and interest;

7.4 The Research Office shall enhance, and report on, its promotion of research opportunities for students at Bishop's and beyond, including scholarships and bursaries available for student research and graduate studies;

7.5 The Senate Research Committee shall collaborate with the Senate Committee on Graduate Studies and the Teaching and Learning Centre to develop a professional development program to support researchers who supervise and mentor students in research and creative activities.

7.6 The Research Office and Vice-Principal Academic will work with the Advancement Office to increase the number of internal financial supports available for researchers and creators, across all disciplines, by creating a competitive undergraduate student research assistantship program, similar to NSERC's USRA program, and by increasing funding to provide research stipends for full-time research-based graduate students;

We will know we have succeeded if, by 2022:
- ✓ Research-focused activities feature among all program-specific experiential or capstone activities required before graduating from Bishop's;
- ✓ Bishop's has developed a transparent and equitable research employment advertising, recruiting and hiring process for student research assistants;
- ✓ 1-2 innovative research-based graduate programs have been established;
- ✓ The Research Office has increased its activities to promote research opportunities for students at Bishop's and beyond, including scholarships and bursaries available for student research and graduate studies;
- ✓ There is increased funding for full-time research-based graduate students;
- ✓ A professional development program to support researchers who supervise and mentor students in research and creative activities has been developed.
- ✓ A competitive undergraduate student research assistantship program for students in all Bishop's academic programs has been established.

Outcomes and assessment

The University's Strategic Research Plans must be approved by the Senate and the Board of Governors. The new Strategic Research Plan (2017-2022) will be assessed informally in three years and formally in 2022 as a way of laying the foundation for subsequent plans. Included in the assessment process will be an analysis of the revenues and costs dedicated to research at Bishop's compared to Maple League universities. All stated objectives will be evaluated on an

annual basis by the Vice-Principal Academic. Since all components of the plan are integrated with the actions of the Senate Planning Committee and the Senate Research Committee, the functions of the Advancement and Research Offices, and the activities of various other committees (e.g. Graduate Studies, Experiential Learning) the Vice-Principal Academic will be responsible for institutional coordination.

Approvals
Senate Research Committee on October 18, 2017
Approved by Senate on October 23, 2017
Approved by the Board of Governors on November 24, 2017