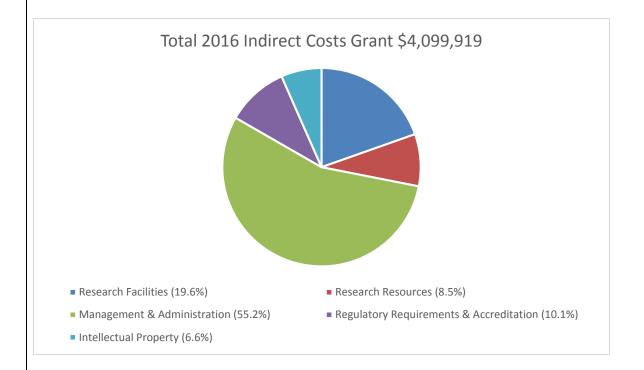**Memorial University of Newfoundland Research Support Fund Report 2015-16**

The grant provided through the Government of Canada Research Support Fund (RSF) is essential to Memorial's research success. Funding is allocated among a variety of activities that support the research enterprise. In 2016, Memorial received $4,099,919. The distribution of this funding is outlined in the chart below, and further details on specific activities and impact can be found in the table below.

Total 2016 Indirect Costs Grant $4,099,919

- Research Facilities (19.6%)
- Research Resources (8.5%)
- Management & Administration (55.2%)
- Regulatory Requirements & Accreditation (10.1%)
- Intellectual Property (6.6%)

Eligible expenditure category	Institutional performance objective	Indicator	Output	Outcomes reported at year end
1)Research facilities	-Provide significant capacity and availability of network connectivity internally and globally via R&E networks including CANARIE and ACORN-NL. -Availability of ACEnet facilities as a research tool.	-Traffic volumes internally and externally. Request for new/increased connectivity. New environment builds. -Volume of users of ACEnet.	-Investment in infrastructure and resources assigned to carry out work -Investment in ACEnet -Statistics on system users and traffic -Statistics on Network Uptime and availability -Adequate power and environmentals in the ITS data center to support ACEnet infrastructure	- 13 FTE's supporting ACEnet hardware. - Statistics on CANARIE network uptime, 99.9% average uptime - Traffic volumes for CANARIE research data 151 terabytes of data. -There has been one major addition to the ACORN-NL network in the past year, the CHIA data center. It is not a direct connection to ACORN, but does access the ACORN/CANARIE networks via the Memorial networks.
	Repair of research equipment and the maintenance of research facilities. Renovation of space to accommodate additional Grants Facilitation Officer.	Equipment that is in usable condition and facilities that operate to support research.	Productive research activity and additional office space.	-Renovations added an additional office in the Dean of Science area to accommodate an incremental Grants Facilitator, hired during the 15/16 fiscal year. -Funding also provided for key technical support for the maintenance and operation of computer systems used within research laboratories and the purchase of computer upgrades for research equipment.
	Final installation of BERI labs, growth chambers. Acquisition of greenhouse space and farmland. Ongoing science lab renovations and social science space. Space for graduate students	Award of tenders for research infrastructure.	BERI labs and growth chambers operational. Access acquired to greenhouse and experimental farmland. Graduate students using renovated space.	-4 BERI faculty working on multiple projects in the BERI lab along with 9 graduate students. -Almost all instrumentation installed and operational -graduate students using space in the Arts and Science building which has been renovated for their use.
	Increase the availability of research space by sharing access across throughout the institution	Number of shared research space made available throughout the institution	Categorizing research space as 'Shared'	-Created new shared research space for a number of HKR social sciences faculty to facilitate sharing of research equipment.
	-Renovation of laboratory to consolidate and optimize research space and activities of faculty members (Dr. Guang Sun and Dr. Wayne Gulliver) -Provide secure on site access at MUN to Canadian Statistical Data	-Renovations needed to laboratory space. - Contributions of funds by FoM to MUN's operation of Research Data Centre - Statistics Canada	-More suitable and efficient space for research and the training of highly qualified personnel. - Functional Research Data Centre at MUN	-Research labs of 5 faculty were upgraded including various upgrades to electrical, plumbing, lighting, flooring and storage.
	Maintain suitable laboratory for graduate students.	-Reduce lab downtime. -Maintain graduate student track.	Portion of Research Support Fund utilized to bridge the operation of the lab between grants.	-Continued operation of lab with minimal disruption to grad student progress. Water filtration system also maintained.

1)Research facilities (continued)	-To provide improvements in air quality, biocontainment and bioexclusion through the purchase and maintenance of additional individually ventilated caging (IVC's) for mice and rats; for biosafety cabinets; and for mobile change stations. To evaluate operating costs including utilities, security and custodial assistance of the animal facilities through a review of two shared services agreements.	-The number of rooms with air quality improvements. -The percentage of costs allocated to Animal Care Services in comparison to other units.	-To have all rodents housed in IVC's and all rodent rooms equipped with either a Biosafety cabinet or a mobile change station. -A portion of the Research Support Fund is allocated to ongoing operations and maintenance apart from that required to meet regulatory requirements. The goal is to reduce the overall line item.	-Additional ventilated cages (IVC's) purchased and put into operation; shortfall assessed; evaluation of requirement for additional biosafety cabinets vs mobile change stations is in progress - In progress by Eastern Health and MUN. Some tasks, like security, have been transferred, resulting in a reduction of operating funds required for transfer to Facilities Management
	-Maintain stable reliable temperature regulated operating environment for research equipment.	-Equipment downtime; service calls.	- Research productivity.	-research buildings located on 3 campuses of Memorial University were kept operational.
2)Research Resources	-Provide Research data backup. -Availability of Research data storage -Security of Research data stored on ITS secure servers	-Volume of data backed up. -Volume (Terabytes) of research storage used -ITS compliance audit on access to research data stored on ITS secure servers	-Investment in research data storage and Backup -ITS security audit results	-Numbers of research clients using ITS backup services. 10 depts at MUN use the RDB in some way -Volume of research data stored on ITS servers. 5 TB of used active storage - Zero audits of access to research data were undertaken this year. Account login and logout data is available should it be needed for investigation or audit. -Extensive vulnerability assessment and remediation of ROMEO (2011) and of ROMEO and the new Researcher Portal (2015) were conducted to ensure they were free of obvious security defects before they were released for production.
	-Create 'fast track to research' as a mechanism for connecting researchers, funders and industry. -Prioritize thesis-based graduate and doctoral programs	-Collaboration faculty, funders and industry -Number of new graduate programs	-Fast track to Research Established. -Graduate programs proposals.	-New graduate program underway, MSc in Boreal Ecosystem and Agricultural Sciences -Fast Track to Research delayed in Oct due to personnel issues but restarted in May 2016
	Partial support for the operations of Memorial's Statistics Canada Research Data Centre.	Memorial's Statistics Canada Research Data Centre continues to operate.	Increased levels of research activity utilizing StatCan RDC data and facilities.	-a number of Arts faculty and graduate students continued accessing the StatCan RDC's services. - Use of Statistics Canada Research Data Centre by 6 faculty researchers and highly qualified personnel from FoM
	-To improve communications and turnaround time between researchers and Animal Care staff through the improved use of cell phone technology	-The number of messages sent to researchers regarding animal health issues, and the turnaround time to resolution.	-A portion of the Research Support goes to the purchase and plan costs for telecommunications equipment	-Very good feedback has been received by research community on the communications of animal health issues.
3)Management and administration of an institution's research enterprise	-Staffing hours in support of Research Data Backup -Staff hours in support of Research Specific Network Administration	-Percentage of FTE time managing research data backups managed by ITS -Percentage of FTE time managing research networks managed by ITS	-Adequately managed research data backup environment -Network availability for research activities.	- 10% of 1 FTE managing backup of central research data storage - Time spent managing network environments for research specific purposes 230 hours.

	-Achieving effectiveness and efficiencies in research grant and contract facilitation at Memorial University. -Development and execution of Memorial University's Strategic Research Intensity Plan (SRIP) 2014-2020.	-Research grant and contract facilitation - ensuring grant facilitation is available to every school, faculty and campus through a coordinated network between staff within the academic units and the research support staff within the units under the Vice-President (Research) portfolio. -Various metrics have been developed for SRIP which will measure the Plan's success and provide targets for intended outcomes.	-Funding from the Research Support Fund was provided by the Vice-President (Research) to cost-share salaries of grants facilitators in the academic units. A further investment in Research Grant and Contract Services to ensure adequate staffing of those responsible for grant administration. -A portion of the Research Support Fund assists with the operational costs of the Vice-President (Research) office for costs associated with the Plan's production (generation and promotion) and implementation (salary costs) of those in support of the research enterprise.	-Grant facilitator network expanded to 12 FTEs located in various academic units -One incremental position added to Research Grant and Contract Services to facilitate expansion of the research inventory system. -Annual reporting completed on metrics associated with SRIP.
3)Management and administration of an institution's research enterprise (continued)	Ensure ongoing operation of sophisticated network of research instruments and equipment using highly skilled, technical staff in support of research output and strategic research outcomes across Memorial.	Number of FTE's dedicated to instrument and equipment operation. Number of analyses performed and research projects impacted. Number of contributions to research publications.	Portion of RSF directed to management and administration of core research equipment and instrument training network. Minimization of cost for analytical laboratory services in support of research oriented teaching, training and project deliverables. Maximization of contribution to research via access to highly skilled, scientific laboratory expertise.	-CREAIT continued its strategy of internal cost rationalization and operational improvement. -These initiatives have contributed to lower salary costs, improved economy and efficiency in research output, and improved focus on research deliverables ensuring strategic contribution to research outcomes. -The salary cost allocation is instrumental in ensuring high quality laboratory specialists are available in support of instrument training & research capacity. -CREAIT has maintained core service delivery as measured by the number of annual users across a spectrum of academic interests. -User fee rates remain low in relation to other service providers and contribute to ongoing sustainability of key laboratory services at Memorial.
	Increase the internal processing and legal reviews of grants and awards using in-house administrative and legal staff.	Number of grants and awards applications processed in FY 2015-16.	Portion of Research Support Fund grant invested in the cost of in-house and legal reviews.	-30% increase in number of new clinical trials processed by Eastern Health in 2015-16 from previous year.
	Enhance processing and internal approval of grants and awards by upgrading the institutions electronic information system through implementation of a researcher portal.	Ease of use by researchers & administrators and improve transparency for processing.	Feedback from users and processing metrics.	-25% improvement in processing time for contracts as measured by average age of queued contract files in progress. -ROMEO researcher portal deployed for all REB and animal care boards.
	Certification of Fume Hoods and Biological safety cabinets. Operating Cryogenics facility. Maintaining OSC refrigeration system. Maintaining laboratory equipment. Fabricating custom apparatus.	Fume hoods and biological safety cabinets fully certified. Reliable supply of cryogens, laboratory equipment maintained.	Equipment up-time maintained.	-Fume Hoods and Biological Safety Cabinets fully certified. -All Liquid Helium fills performed by Cryogenics facility. -No downtime reported for OSC refrigeration plant. -Client satisfaction for equipment repairs and custom fabrications maintained above 90%

	Increase the volume of grants and awards applications reviewed by hiring additional Grants Facilitation Officer. Also, travel to applicable conferences for Grants Facilitation Officer.	Decreased time to review grants and contracts and increased success rate for applications.	External research support provided to the institution.	-Salary support for 2 Grants Facilitators who provide advice to approximately 200 faculty making application for tri-agency support -assistance with professional development for Grants Facilitators and Associate Dean (Graduate and Research). -Investment provides support to key personnel to assist faculty with accessing research funding, and insuring the research funds are used in the most efficient manner possible.
3)Management and administration of an institution's research enterprise (continued)	-Increase volume of grants and award applications Increase profile of Grenfell Research Office -Enhance Research, marketing, communications and support for student research -Develop Collaborations and Research Engagement	Number of grants and awards applications processed Establish Research Chairs and dialogue on collaborations, networking and engagement.	-Research Support Fund to support more grants-writing workshops for faculty. -Print and social media highlighting researchers - Research Chair applications, networking and engagement events	-Publicly released research report on 12 projects and 2 labs at Grenfell. -"Field Notes" newsletter series on research and creative activities of Grenfell faculty initiated. -Working relationship with Memorial's Office of Engagement established to work on joint projects related to community engagement of researchers
	-Support for completion of grant applications. -Support for research enterprise	-Grant facilitation for faculty members and highly qualified personnel. -Human resources for purchase of research related expendables.	-Assistance with completion of grant applications and proposals. -Placement of orders from researchers for laboratory material.	-Three Grant Facilitator staff positions maintained during FY16-17. They assisted with the formulation of grants to both government agencies e.g. CFI, NSERC, CIHR; and non-governmental agencies e.g. Heart and Stroke, Canadian Cancer Society. Procurement position provided ongoing purchasing and administrative support to over 60 research faculty. -Three Academic Assistant staff positions maintained during FY16-17 in support of Graduate Students' programs.
	Increase the professional knowledge of the Grants Facilitator.	Professional satisfaction.	Portion of Research Support Fund utilized to send Grants Facilitator to CARA conference for professional development.	-Established networks at other universities and increased job satisfaction.
	-Increase the number and quality of grant applications submitted by Arts faculty; achieved partially through the use of a Grants Facilitator (salary support from this fund).	Number of grants applications processed in FY 2015-16; increased grant application success rates.	Grant applications.	-Increased number of grant applications submitted and increased success rate for grant applications submitted by Arts faculty: (comparison of 2014-15 and 2015-16 rates). -One senior grants facilitator and one grants coordinator partially supported. -Supported grants crafting, offered workshops on NSERC, SSHRC, and CIHR funding opportunities on the CCV.
	-To improve operational, clinical and financial management through the acquisition of an information management software that will integrate financial billing with daily animal care operations and records.	-Access for researchers and Animal Care personnel to operational, clinical and financial records through a secure portal.	-A portion of the Research Support Fund will go toward the purchase and maintenance of the software system.	-This is ongoing, with Animal Care Services coordinating the project with MUN's Information Technology Services (ITS)

4)Regulatory requirements and accreditation	The university strives to ensure that those conducting research involving human participants achieve a proper balance between respect for the dignity and welfare of the participants on the one hand and the need for advancement of knowledge on the other. The Interdisciplinary Committee on Ethics in Human Research (ICEHR) Office ensures such research proposals are reviewed thoroughly and in a timely fashion.	Researcher satisfaction with ICEHR service; institutional compliance in terms of ethics/compliance regulations.	Portion of Research Support Fund grant in support of ICEHR staff salaries and operations.	-197 ICEHR applications received and processed -91 ICEHR amendments received and processed and -490 ICEHR annual updates received and processed,
	Fume hood inspection fees and biological safety cabinet certification fees.	Passing of annual inspections.	Creating a safe working environment appropriate to the work being conducted.	-Funding was provided for the required yearly inspections of fume hoods and biosafety cabinets.
	Ongoing support for Grenfell Campus Research Ethics Board (GCREB).	Number of applications to GCREB for new and renewal of clearances.	GCREB outputs.	-Grenfell REB trained on the newly deployed researcher portal system for ethics submissions and reviews. -faculty engaged with respect to the portal and REB continues to operate efficiently for all Grenfell researchers.
	Maintain functionality of lab space and ensure adherence to regulations.	-Reduction maintenance calls. -Reduction downtime of equipment.	Portion of Research Support Fund grant utilized to meet regulatory requirements: Annual inspection of fume hoods, fire extinguishers, lab telephones, ad hoc maintenance to ensure efficient operating of shared research equipment.	-Maintained compliance with OHS and other regulatory standards. fume hood inspections, waste disposal, and checks on ventilation completed
	B support for SafetyNet operations; SafetyNet is integral to the operations of the On the Move Partnership Grant.	SafetyNet continues to operate.	Increased research collaboration in the strategic area of social sciences research on health and safety.	-financial support provided to SafetyNet, a community alliance for multidisciplinary research -a number of faculty benefitted from support within Safety Net and several researchers participated on 2nd round of CFREF the proposal.
	-To commence the Design-Development phase for the capital improvement of the Health Sciences Center replacement animal facility in order to meet accreditation standards. -Improve the support to the Institutional Animal Care Committee by revising and upgrading the role Animal Care Committee Coordinator.	-Board of Regents to assess and approve the proposal and preferred bid. -Work with Human Resources to create a revised job description with a scientific background as prerequisite	-A portion of the Research Support Fund is allocated to maintaining infrastructure to meet regulatory requirements and accreditation. -A portion of the Research Support Fund is allocated to this role and function.	-Project is in Design Development now; scope change to include the Biotechnology Building users in the new Animal Resource Center project required a delay; approval was granted by the Board of Regents; application to the federal Strategic Infrastructure Fund has been submitted; deadline for substantial completion of the project is 30 April 2018
5)Intellectual property	-Maintain and sustain an office of licensing and IP Professionals who are responsible for technology transfer and industry liaison. -Successfully commercialize university technologies. -Support and create spin-off companies utilizing university technologies.	-Staffing level -Execution of new licence agreements -Creation of new spin-off companies -Support provided to existing spin-offs	- # of FTE's - # of licence agreements executed - # of spin-off companies created - # of existing Spin-off companies supported	- 4FTEs - 8 new licence agreements - 1 new spin-off companies formed - 4 existing spin-offs supported
	Develop and deliver workshops targeted to faculty on Intellectual Property.	Number of workshops.	Research funding to support workshops.	-decision made to switch focus to grants crafting workshop and one was carried out with 12 participants.