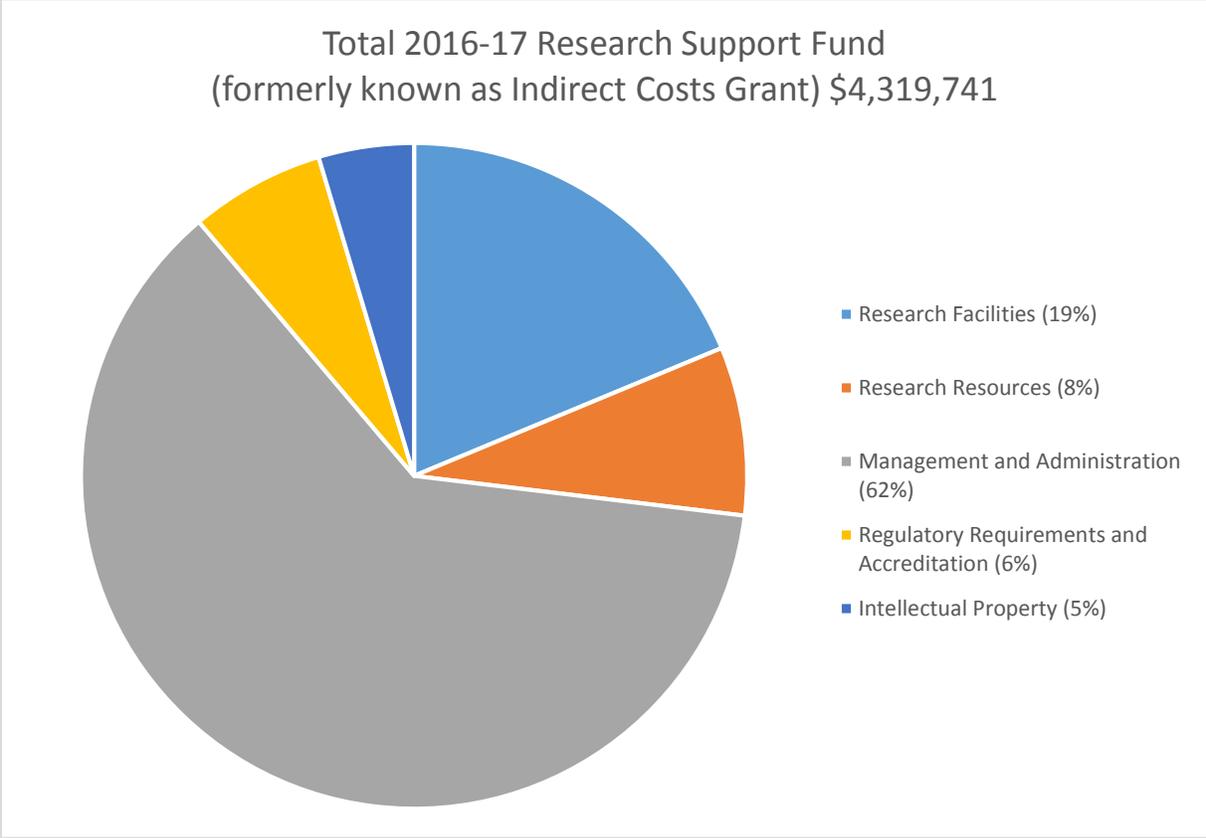


**Memorial University of Newfoundland Research Support Fund
(formerly known as Indirect Costs Grant) Report 2016-17**

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 2016-17, Memorial received \$4,319,741. The distribution of this funding is outlined in the chart below.



Eligible expenditure category	Institutional Performance Objective	Indicator	Output	Outcomes reported at year end
1) Research Facilities	Improve network capacity with upgrades to core infrastructure	Capacity, stability and redundancy increase and additional client connectivity	Investment in infrastructure Reports on network usage, uptime and availability environments Increase ITS Security maturity ranking.	ACORN- NL Connectivity map was updated June 12, 2017 and is available for release should it be required. Memorial's data centre is currently supported by 2, 80KVA UPS systems on South Campus in the Henrietta Harvey building. There is also one 80KVA UPS on the North side (redundant data Centre).
	Continuation of ACEnet as the mechanism for research support in Atlantic Canada	ACEnet usage statistics.	Expansion of MUN's Virtual Server and Storage	The ITS data centre backs up >483.34 TB
	Investigate a CANARIE link upgrade for TPMI (Halifax to HH)	Volume of data backup	Roadmap for network connectivity for Halifax to St. John's	CANARIE network utilization remained constant from August to April with an average of 387.72 M inbound and 52.53 M outbound CANARIE Network Uptime is estimated to be 98.95% based on the list of outages over the last year.
	Continue infrastructure planning (Core Science and Animal Care)	Project the status on the build.	Network infrastructure planning for new facilities (Core Science, Animal Care.	Projects are progressing. Core Science final drawings are completed. Re-engaging on it in June 2018.
	Repair of research equipment and the maintenance of facilities with the Faculty of Science.	Equipment that is in usable condition	Productive research activity.	In 2016/17 the RSF did not have to fund any major equipment repairs in the Faculty of Science, so some funds were used for costs associated with technical support to maintain computers used for research and research equipment; database maintenance; web site maintenance; and other IT related issues.

	Final installation of growth chambers associated with the BERI lab. Potential acquisition of greenhouse space on Grenfell campus. Ongoing science lab renovations and social science space.	Installation of research infrastructure	Growth chambers operational. Access acquired to greenhouse.	Growth chambers are currently being installed in the former RecPlex on Grenfell campus.
	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'.	Over \$17K was spent on renovations to the Gown Room to convert this space into Research Space for the School of Human Kinetics.
	Renovation of laboratory in Faculty of Medicine to consolidate and optimize research space and activities of faculty members (Dr. Kensuke Hirasawa, development of Level 3 research space and level 6, relocation of glass wash and sterilization facility).	Renovations needed to laboratory space	More suitable and efficient space for research and the training of highly qualified personnel.	Repairs to various research laboratories in the Faculty of Medicine to improve functionality, including: plastering, and painting, shelving, plumbing, and various other improvements/upgrades.
	Provide suitable space and renovated space of research accounts administration to accommodate increased number of staff to monitor the postaward administration of grants and contracts in the Faculty of Engineering.	Effective use of space and resources of research / finance staff to allow the sharing of information.	Portion of research related funding used for renewal and renovation of existing facilities to allow collaborative work environment for staff.	Productivity has continued to increase in this area with the Faculty of Engineering.
	Maintenance of equipment purchased to improve and preserve efficiency in the School of Music.	The life expectancy of equipment will be extended with regular maintenance.	Equipment is more useful.	Purchase of livestreaming equipment to enable broadcast of performances and creative activity. Maintenance to DF Cook Recital Hall (purchase of lights (bulbs) and new podium. Maintenance to Music Electronic Acoustic Research Lab (purchase of adapters).

	To continue to roll out improvements in air quality, biocontainment and bio exclusion through the purchase and maintenance of additional individually ventilated caging (IVC's) for mice and rats for the Biotechnology facility, along with animal transfer stations in Animal Care Services.	The number of rooms with air quality improvements. Improved breeding performance expected	To have all rodents housed in IVC's, and to have all rodent rooms equipped with either a Biosafety cabinet or a mobile change station	All rodents (mice and rats) are now housed in IVC's in the Biotechnology facility. Not all rooms have Biosafety cabinets or mobile change stations yet, but the use of the IVC's has resulted in improved air quality.
	To address the deficiency in emergency power in several animal housing rooms and procedure spaces within the Health Sciences Center animal facility.	Ventilated caging for rats, as well as zebrafish racks require emergency power to be safeguarded against animal distress and loss, which would in turn affect research outcomes and output	Sufficient emergency power to ensure there will be no animal welfare issues in the event of power failures affecting regular power	Emergency power has been provided to the zebrafish room and to the rat rooms in the Health Sciences facility. There is still a gap in provision of emergency power at the Biotechnology building and in HSC mouse rooms, though mice can survive for up to 72 hours without active ventilation to the cages. E-power is planned for all areas of the Animal Resource Center.
	Maintain stable reliable temperature regulated operating environment for research equipment.	Equipment downtime; service calls.	Research productivity.	Maintained 99.9% availability with ITS recording a 5 minute outage in the 2017 year.
	Certification of Fume Hoods and Biological safety cabinets	Fume hoods and biological safety cabinets fully certified	A safe working environment appropriate to the work being conducted	Technical Services' client satisfaction maintained above 90% All Fume Hoods and Bio-Safety Cabinets have been certified and kept in service.
	Operating Cryogenics facility	Reliable supply of cryogen	Ensuring productive research programs	LHe & LN2 supply maintained, critical repairs performed and maintenance training completed.

	Maintaining OSC refrigeration system	Laboratory equipment maintained	Reliable equipment ensures productive research programs, and protects data integrity	OSC Refrigeration Plant fully operational
2) Research Resources	Improve facilities and enhance security efforts in support of research. Provide upgraded infrastructure in support of Research data backup. Provide support and metrics for the Torngat HPC research cluster in Earth Sciences	Amount of data stored within the SAN environment increases. Volume (Terabytes) of research storage used	Improved support for HPC -ITS security audit results	ACENET saw an average inbound transfer rate of 14.82Mbits/sec, with a peak of 1.11Gbits/sec, and an average outbound rate of 7.63 Mbits/sec with a peak of 198 Mbits/sec for the year 2016-2017.
	Operationalize the project "fast track to research" as a mechanism for connecting researchers, funders and industry.	Collaboration among faculty, funders and industry partners.	Fast track to Research established	Fast Track to Research program has been revised, in collaboration with ACOA, and will be resubmitted.
	Increase the availability to research equipment in HKR by cataloguing and creating a database of shared resources	Amount of equipment listed in the database available for shared access.	Catalogue research equipment available for shared access.	Over \$33K was spent on shared equipment for the School of Human Kinetics and Recreation. This including a stimulators, jump mats, computers, etc.
	To create new research dissemination vehicles for sharing extended research results that do not align with commercial publisher criteria for publication in traditional sponsored publications.	Number of research proposals and grants in which Memorial Libraries agrees to assist in research dissemination	Number of discrete publications (print or electronic) produced under Memorial Libraries Imprint	This year the Libraries Open Access Author's Fund paid author processing charges supporting the publication of 67 peer-reviewed OA scholarly articles by Memorial researchers. Two monograph titles were published under the Libraries imprint.
	Provide secure on site access at MUN to Canadian Statistical Data.	Contributions of funds by FoM to MUN's operation of Research Data Centre - Statistics Canada.	Functional Research Data Centre at MUN.	The Faculty of Medicine has seven faculty members and six students with a number of on-going projects at the MUN's Research Data Centre.
	Support current capacity (at a minimum) and create further capacity for Memorial users of Statistics Canada data at MUN branch RDC	Number of individuals accessing data and volume of usage.	Provide \$22,500 to MUN branch RDC.	Number of users and volume of data accessed in 16/17 increased over 15/16

	<p>Creation of a new database to track successful and non-successful proposals in the Faculty of Engineering and Applied Sciences.</p>	<p>Collection of proposals made available as a reference and assistance for the development of new proposals</p>	<p>Portion of research support funding used for input of data.</p>	<p>The Faculty of Engineering continues to find funding opportunities for researchers to submit proposals</p>
	<p>To outfit surgical spaces with new surgical tables and equipment in Animal Care Services.</p>	<p>Surgical suites operational and with related standard operating procedures in place.</p>	<p>Improved training for animal users -Safer work practices -Reduction of variability in surgical studies</p>	<p>ACS staff has been trained to train research technical staff in basic techniques. The new large animal anesthesia equipment, donated by Eastern Health, has been serviced and certified. It has been deployed for numerous research and teaching protocols and is a significant improvement over the outdated equipment used previously. There is excellent feedback from users, and improved health and safety for staff, research and teaching personnel. A portion of the Research Support dollars goes to ongoing equipment maintenance.</p>
	<p>Support for the research holdings at the Dr. CR Barrett Library, particularly with the new master program in marine spatial planning and proposed masters and PhD programs in fisheries science</p>	<p>Research holdings in the Dr. CR Barrett Library meet the needs of current and proposed Marine Institute programs</p>	<p>Research Support Fund grant invested in library holdings as an additional budget allocation estimated to be \$14,000</p>	<p>Research Support Fund grant invested in library holdings as an additional budget allocation estimated to be \$14,000. Subscription costs for the Aquatic Sciences and Fisheries Abstracts (ASFA) is currently \$12,000 and is cost shared between the Marine Institute and the QEII Library. The full cost of this subscription will come from MI for 2016/17. The use of this periodical index can be monitored for usage by the database administrator. Any funds remaining will be invested in other library materials.</p>

3) Management and administration of an institution's research enterprise	ITS staffing hours in support of Research Data Backup	Percentage of FTE time managing research data backups managed by ITS	Adequately managed research data backup environment	On a typical day ITS has >95% success rate. 318 nodes, 305 successful backups, 5 failed backups.
	ITS staff hours in support of Research Specific Network Administration	Percentage of FTE time managing research networks managed by ITS	Network availability for research activities	Network availability for campus remains at 98.5%. ITS has recorded a 5 minute outage in this period.
	Increase the volume of grants and award applications at Grenfell Campus.	Number of grants and awards applications processed	Research Support Fund to support more grants-writing workshops for faculty	Grants and Contracts Facilitation Officer has been hired at Grenfell Campus and is working with researchers.
	Enhance Research, marketing, communications and support for research activity, including student research at Grenfell Campus.		Print and social media highlighting researchers	Grants and Contracts Facilitation Officer has been hired at Grenfell Campus and is working with researchers.
	Increase the volume of grants and awards applications review in the Faculty of Science.	Decreased time to review grants and contracts Increased success rate for applications	External research support provided to the institution.	RSF supported the replacement hiring of a retired grants facilitation officer in the Faculty of Science which is decreasing the time to review grants and contracts for faculty members.
	Travel to applicable conferences for Grants Facilitation Officer in the Faculty of Science.	External research support provided to the institution.	Increased research capacity as evidenced by peer reviewed publications and communications, and the training of highly qualified personnel.	RSF supported annual membership registrations and conference attendance for continuing education of grants facilitation officers in the Faculty of Science.
	The Office of the Vice-President (Research) is responsible for overseeing and tracking the growth, development and promotion of research activities undertaken at Memorial. The Strategic Research Intensity Plan (SRIP) 2014-2020 was developed to build upon Memorial's Strategic Research Framework	Various metrics have been developed for annual measurement through the creation of SRIP. Examples include # grants/contracts processed and awarded each year, growth of publications and artistic creations per faculty unit per year, # chairs at Memorial, increase in # of master and	A portion of RSF provides operational support to the VPR office and other units with the VPR portfolio to assist with salary costs and operations which in turn supports the research enterprise.-A portion of the Research Support Fund assists	Annual reporting to be completed on metrics associated with SRIP by September 2017.

	to provide an integrated approach for strengthening and growing all aspects of research including scholarship and creative activities.	doctoral graduates per year, Tri Agency success rates.	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.	
	Ensure continuity of laboratory operations within "CREAIT" Memorial's "Core Research Equipment and Instrumentation Training Network"	Number of laboratories in operation and FTE's dedicated to instrument and equipment operation Number of clients served and number of students trained in operation of equipment / instrumentation Number of contributions to research publications	Portion of RSF allocated to direct laboratory salary cost to ensure efficient operation of core research equipment and instrument training at Memorial	Year-over-year consistency in contribution to scientific research as measured by stability in the number of laboratory users and internal and external recoveries. This is significant in the context of increasingly challenging research and business environments and effectively supports the CREAIT Network as offering high, cost-effective laboratory research.
	Using highly skilled, technical staff in CREAIT in support of research output and strategic research outcomes.	Number of analyses performed and research projects impacted	Reduced unit costs for lab performance and increased access to analytical laboratory services	Highly trained and competent laboratory professionals representing a strategic investment in scientific capacity: contribution to student training in support of academic programming and scientific excellence. Strategic RSF investment in scientific personnel combined with cost rationalization initiatives contribute to sustainable laboratory operations and scientific research output and outcomes.
	Increase the internal processing and legal reviews of grants and awards using in-house administrative and legal staff in Eastern Regional Health Authority.	Number of grants and awards applications processed in FY 2016-17.	Portion of Research Support Fund invested in the cost of in-house and legal reviews.	A total of 89 Clinical Trials Grant Funded Research

	Enhance processing and internal approval of grants and awards in RGCS by continuing to upgrade the Institution's electronic information system with Phase II of a researcher portal and deployment of a new funding opportunities database.	Ease of use by researchers and administrators and improve transparency for processing and identifying funding opportunities.	Feedback from users and processing metrics	New Funding Opportunities Database launched in May 2017.
	Support for completion of grant applications in the Faculty of Medicine.	Grant facilitation for faculty members and highly qualified personnel	Assistance with completion of grant applications and proposals	Three Grant Facilitator staff positions maintained in the Faculty of Medicine 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.
	Support for research enterprise	Human resources for purchase of research related expendables	Placement of orders from researchers for laboratory material	Procurement position in the Faculty of Medicine provided ongoing purchasing and administrative support to over 60 research faculty.
	Increase the professional knowledge of the Grants Facilitator in the School of Pharmacy.	Professional satisfaction	Portion of Research Support Fund utilized to have Grants Facilitator participate in professional development webinars.	Grants facilitator in the School of Pharmacy attended 2 webinars offered by CAURA
	Support research grants coordinating capacity and expand to more in-depth grants-crafting capacity through staff salaries in the Faculty of Humanities and Social Sciences.	Number of grants and awards applications processed and number of individuals researchers submitting applications. Submission of higher-quality applications.	Provide balance of award above \$22,500 to administrative staff support.	Continued use of staff services for funding applications by faculty in HSS;
	Hire additional staff resources to assist with the preparation of proposals for grants and contracts, and annual research report.	Increased number of proposals submitted -New enhanced website that better presents FEAS	Portion of Research Support Fund used towards research staff salaries.	The visits to the FEAS website continue

		research activities, and annual research report		
	Research promotion and international collaborations	Increase in grants and international reputation for faculty	Travel to research based conferences to facilitate grant applications	Filming of Music, Media and Place Research Centre's lecture series for broadcast completed by Studio Coordinator. Digitization of multiple recordings for CD (research promotion) also completed by Studio Coordinator.
	To address organizational gaps in skills training in Animal Care Services. Development and roll-out of standard operating procedures, as well as administrative assistance for the extremely tight schedule for the Animal Resource Center.	Operational shortcomings have been identified in a number of areas including support for the Animal Resources Center project, for training, and for the Director.	A portion of the Research Support Fund will go towards effective staffing to ensure that the new animal facility is completed in a timely manner. The new facility is needed to enable improved research conditions. Delivering on time is needed to qualify for federal matching dollars.	The administrative support position in ACS has been modified, and has been staffed with an individual with some project management experience. The incumbent provides administrative support for the project Steering Committee in addition to her principle role supporting the unit and the Director.
	Contract renewal and professional development of the Research Officer to increase the volume of grants and awards applications processed in the Faculty of Business Administration.	Number of grants and awards applications processed in FY 2016-2017.	Portion of Research Support Fund grant invested in renewal and professional development.	Continued tracking of metrics to highlight increasing numbers of grant and contracts processed and research intensity and success in the Faculty of Business Administration.
	These funds will be used to fund or hire staff members, such as a grants facilitation officer, to increase the volume of grants and award applications completed and submitted by the Faculty of Education.	Number of grants and awards applications processed in FY 2016-2017	Number of grants and awards or total dollar value of the grants and awards issued to Faculty members will increase.	Funds were used towards the hire of a Grants Facilitation Officer in the Faculty of Education, 0.6 FTE in October 2016 for FY17. GFO has been working on establishing a framework of support for the faculty, previously there has been no internal guidance in place. Will track metrics going forward to determine if there is an increase in research awards/dollar value received.

				Position is now 1.0 FTE since April 2017 to be fully utilized in FY18 to increase the number of applications out, including a CRC Tier II application.
	Increase the volume of grants and awards for faculty members in the School of Social Work.	Number of grants and awards applications processed and awarded to Social Work faculty members in FY 2016-17	The Research Support Fund grant will be utilized to provide support for the completion of grant and award applications/ research proposals. Specifically to support the salary and benefits of a grants facilitator	The RSF was used to partially fund the salary costs associated with our Grants Facilitator in the School of Social Work. This position was implemented in November 2015 and since that time we have had 17 successful internal and external research grant awards which represents a significant increase in research productivity.
4) Regulatory requirements and accreditation	Development of an Information Management Program for Memorial.	Revised IM Policy, Ensuring legislation is upheld	IM standards, guidelines and tools to support the protection of information and the security of IT systems and services at Memorial.	The Office of the CIO in consultation with Memorial University's Policy Office created the new Information Management Policy to provide policy direction for the management and protection of university records. The Information management policy approved by Board of Regents in July 2016
	A portion of the Research Support Fund is provided to the Interdisciplinary Committee on Ethics in Human Research (ICEHR) Office. The ICEHR Office normally receives proposals for research in the social sciences, humanities, sciences and engineering, including some health-related research in these areas, originating at the St. John's campus.	The service provided by ICEHR to researchers at Memorial University -Institutional compliance in terms of ethics/ compliance regulations.	A portion of the Research Support Fund ensures that the ICEHR office is properly staffed and operationally supported to carry out its regulatory functions to ensure compliance	The Interdisciplinary Committee on Ethics in Human Research received 240 ethics applications for fiscal year April 1, 2016 - March 31, 2017. Applications are submitted by researchers via Memorial's Researcher Portal.

	Fume hood inspection fees and biological safety cabinet certification fees	Passing of annual inspection	Creating a safe working environment appropriate to the work being conducted.	The Faculty of Science was compliant with federal regulations by maintaining annual inspections of all fumehoods and biological safety cabinets.
	Ongoing support for Grenfell Campus Research Ethics Board (GCREB).	Number of applications to GCREB for new and renewal of clearances.	GCREB outputs.	Research Office continues to provide support to the Grenfell Research Ethics Board
	Ensure research activities are appropriate to the thesis requirements of graduate student degree programs in the Faculty of Engineering.	Successful completion of graduate student thesis degrees as per the Faculty growth plan.	Successfully completed theses and peer reviewed dissemination such as journal and conference papers.	The number of scholarly publications, reports, patents and other forms of scholarly output continues to increase.
	Maintain functionality of lab space in Pharmacy and ensure adherence to regulations	-Reduction maintenance calls -Reduction downtime of equipment -Maintain appropriate safety level in labs	Portion of Research Support Fund grant utilized to meet regulatory requirements: Annual inspection of fume hoods, fire extinguishers, lab telephones, chemical disposal.	Maintained compliance with OHS and other regulatory standards. Exception – eyewash stations but this is pan university issue and working collaboratively with Medicine to determine a solution
	To continue with the project to develop a replacement animal facility, the Animal Resource Centre (ARC)	Board of Regents approval for funding for the design development of the project. Senior administration classification of infrastructure priorities the scope was changed to add the program from the existing Biotechnology facility	Shovel in the ground by Q4 2016	The Design-Development phase was awarded and work has progressed well, but more slowly than anticipated, in part due to the change in scope. The design has gone out for construction tender. The expectation is that work will start Q3 2017. Project budget approved by President, along with application for federal matching dollars under the Strategic Infrastructure Plan
	Improve the support to the Institutional Animal Care Committee by creating a	Improved ACC workflow processes for both the Principal	Position filled	The challenges of the new ethics awards software, implemented by RGCS, have required a

	dedicated Animal Care Committee Coordinator role.	Investigators and committee members		dedicated IACC staff member. Ongoing assessment continues regarding the need for a full-time regulatory committee coordinator, especially given gaps in other program areas, and in the current budgetary reductions. At present, the position is definitely required.
5) Intellectual Property	1) Maintain and sustain an office of licensing and IP Professionals who are responsible for technology transfer and industry liaison 2) Successfully commercialize university technologies 3) Support and create spin-off companies utilizing university technologies	1) Staffing level 2) Execution of new licence agreements 3a) Creation of new spin-off companies 3b) Support provided to existing spin-offs	1) - # of FTE's 2) - # of licence agreements executed 3a) - # of spin-off companies created 3b) - # of existing Spin-off companies supported	137 Technology and Knowledge Transfer activities including Intellectual Property assignments; licenses; Grant of Rights; and Material Transfer Agreements. As well as 7 new spin-off companies formed; and 23 spin-off companies supported.
	Develop and deliver workshops targeted to faculty on Intellectual Property.	Number of workshops.	Research funding to support workshops.	Materials on the new MUN intellectual property regulations have been disseminated. We are awaiting the roll-out of the final version of the regulations.
	Increase the number of publications, articles, etc. in the School of Human Kinetics and Recreation.	Number of graduate students, collaborations, research grants etc. per faculty member.	Expansion of Research Database to include listings of publications, articles etc. per faculty member.	Although HKR has seen more graduate student publications etc., these are primarily being funded through faculty research grants
	Transfer of knowledge to the community and industry through outreach events like "Speaking of Engineering Lecture" series - open to the general public.	Number of attendees.	Portion of funding used towards travel costs of speakers and meet / greet at the conclusion of functions.	FEAS continues to create opportunities for transfer of knowledge. In addition to the "Speaking of Engineering Lecture" series, FEAS now offers an Annual Research Day for

				graduate students to showcase their research
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