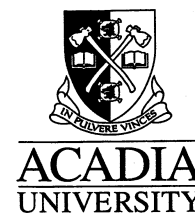


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Minutes of the Senate meeting of Monday 13th January, 2014

A meeting of the Senate of Acadia University occurred on Monday 13th January, 2014 beginning at 4:00 p.m. with Chair Diane Holmberg presiding and 46 present, plus one guest.

1) Approval of Agenda

Motion to approve the agenda. Moved by A. Smith, seconded by D. Benoit.

The Chair confirmed that even if item 6)d *Graduate Curriculum Changes* was not reached during this Senate meeting, there would still be time to get a decision at the February Senate meeting and therefore meet the University Calendar deadline.

MOTION TO APPROVE AGENDA CARRIED.

2) Minutes of the Meeting of 9th December, 2013

Motion to approve the Minutes of Monday 9th December, 2013 as distributed. Moved by S. Major, seconded by D. MacKinnon.

MOTION TO APPROVE THE MINUTES CARRIED.

3) Announcements

a) From the Chair of Senate

Regrets were received from B. Perrins, I. Hutchinson, K. Morrison, C. Rushton, H. Gardner. S. McCullough would be arriving late.

New and returning Senators were welcomed: N. Clarke, P. Hobson, A. Vibert and M. Corbett (not present) and G. Bissix.

The Chair also welcomed D. Silver who would be speaking to the motion to approve the Acadia Institute for Data Analytics.

The Chair noted that the Budget Advisory Committee would meet later in January.

The Chair followed up with the Faculty Development committee and asked them to look into faculty support that was available on campus and elsewhere, and had asked them to report back to the March Senate meeting.

The Academic Technologies committee had also been asked to address another issue and had agreed to do so.

Finally, the Registrar had asked for information on how to convene the Academic Integrity committee. If these meetings occur, all Senate committees will be active.

b) From the President

President Ivany reported that the Liberal Government in Nova Scotia had now committed to negotiate a new version of the MOU prior to the current MOU finishing. President Ivany expected that conversations around the next MOU would start before this MOU expired. Discussion about the funding formula and how it was formulated continued to be on the agenda for the current MOU.

President Ivany informed Senators that the Nova Scotia Government had also announced the creation of a Provincial Graduate Scholarship. The criteria remained undecided at present but the Government had expressed the intention to have this activated by September 2014.

President Ivany reminded Senate that the Ontario government had recently issued a new differentiation policy framework for post-secondary education, and suggested again that the APC or another Senate committee might wish to study the document and evaluate the impacts that a policy such as this might have on Acadia, were it to be introduced in Nova Scotia.

President Ivany explained that the Higher Education Quality Council of Ontario (HEQCO) had developed the policy and that this had now been adopted by the Ontario Government. Strategic mandate agreements had been submitted by every college and university in Ontario. President Ivany expected that the government would now respond to institutions and noted that the most common construct of differentiation was still mostly along individual disciplinary/program lines. President Ivany felt that if institutions were to declare their focus to be e.g. Business and Kinesiology (therefore excluding some other areas), this would not serve an institution like Acadia well. President Ivany believed that the differentiation needed to be at a more aggregate level, in the liberal education tradition of Acadia, including the full range of undergraduate programs.

C. Stanley asked whether Acadia had been consulted about the Graduate Student Scholarships to date.

President Ivany responded that enrolment data had been requested and had been forwarded to the government.

A. Quema noted that there were similarities between the construct of differentiation that concerned President Ivany and the exercise that Acadia faculty and departments had recently been asked to engage in with regard to the Strategic Research Plan.

President Ivany responded that he was concerned about the exclusionary aspect of this and felt it to be quite different from what had been requested by Research and Graduate Studies, which was a request to declare areas of emphasis, but not necessarily at the exclusion of others. A. Quema responded that if opposition had been encountered to the Strategic Research Plan it was because of the perception that there was an exclusionary approach.

c) From the Vice-President Academic

T. Herman announced that a call for applications would be coming for the next round of Harrison McCain awards and that this would come from D. MacKinnon's office. T. Herman noted there had been great success with the program to date, partly because of the latitude of the program and because of the tremendous take up by faculty members.

G. Whitehall asked when there would be a full-time Dean of Arts again.

T. Herman noted that the present Dean of Arts had also taken on additional duties but that he was full time. T. Herman agreed to report to Senate, should that situation alter.

4) Priority Items

a) Calendar Dates for 2014-2015

The Chair noted that this was a motion and that it was therefore appropriate for Senators to make amendments if they wished to.

Motion to approve the Calendar Dates for 2014-2015. Moved by P. Williams, seconded by B. Latta.

D. Serafini spoke to the motion. He summarized the following changes:

- The addition of a one week Fall break for students
- Extension of the Add/Drop deadlines by one week
- Extension of the date to publish the Examination timetable by one week.

D. Shea asked why Homecoming was no longer in the Calendar.

D. Serafini responded that the Alumni Association had originally asked for other events such as the Golf Tournament to be included in the Calendar, but that since these were not considered to be academic events, it was agreed that Homecoming would be removed from the Calendar.

H. Wyle requested clarification around the way in which the last day of classes was being described in each term. In order to be consistent with the Fall term description, April 7th, 2015 should be listed as the last day of classes and also listed as the make-up day for Good Friday.

The Chair agreed that this would be a good alteration to make to the timetable.

D. Benoit pointed out for clarification that whatever day of the week April 7th, 2015 fell upon, if it was make-up day for Good Friday, it followed that a 'Friday' class schedule would be followed on that day.

D. Benoit asked about the February statutory holiday that had been proposed by the Liberal Government and questioned when it would occur during the month.

D. Serafini expected that it would occur during the 2015 Study Break, but that if in future years it did not, an additional day of study would be added to the end of the term, using the criteria as above.

G. Whitehall noted inconsistency in the language around the last day to add/drop courses, and asked for clarification about the decision to extend the add/drop date. G. Whitehall had expected that there would be more discussion of this issue, since some Senators had found the decision to extend the add/drop dates to be contentious.

The Chair asked the Registrar to speak to this.

D. Serafini agreed to make changes to the language in order that it be consistent.

D. Serafini noted that the TIE committee had discussed at length the decision to extend the add/drop dates and to introduce the Fall break. The committee had compared both the U4 universities and other universities in Nova Scotia and found that this made Acadia consistent with other institutions. It was felt that these changes were beneficial to the students and not detrimental to the faculty members.

B. Ells was a member of the TIE committee and noted that with the introduction of a Fall study break, the extension of the Last day to drop 3h first term courses without a failing grade "F" would prove helpful to students in their decision-making.

D. Seamone voiced concerns about the extension, suggesting the following amendment to the motion:

Motion that the last day for course additions for Fall and full year courses change from September 17th to September 10th, 2015. Moved by D. Seamone, seconded by S. Major.

D. Seamone felt that the add/drop date moving two weeks into the term created too much of a stir in a course and was too difficult for the pedagogy.

B. Anderson requested feedback from the student body.

M. Rios felt that although faculty concerns were legitimate, the potential benefit to students would seem to outweigh those concerns. M. Rios pointed out that few students would be adding courses, and talked about the financial implications of students adding or dropping courses. M. Rios felt that this allowed students extra time to decide whether they were making the right academic decisions.

E. Callaghan felt that additional disruption to the first two weeks of class would not be welcome and did not feel that an extension of the add/drop dates would necessarily solve problems for the students.

H. Rode stated that some classes were only held once a week, and that at the first class it was not possible to know whether the student would want to remain. This allowed for attendance at the second class before having to make a decision.

A. Quema pointed out that some professors start their course material very quickly and felt that students needed to understand this. A. Quema also suggested that Acadia look carefully at the way in which students were advised, since there was currently only one first year advisor, which was clearly not enough.

M. Rios noted that the onus was on the student to catch up on missed material.

P. Williams agreed that there would be a lot of catching up to be done by students joining late.

D. Benoit did not support the amendment and pointed out various reasons why students enrolled in courses that they expected to drop at some point. This change allowed students to graduate with fewer 'W's on their transcript.

D. Shea felt that the students should be given the opportunity to prove that they could catch up on the extra work that would be needed if joining after two weeks.

S. Bethune agreed that students were adults and should be given the freedom to choose as they wished.

S. Henderson noted the importance of pedagogical variety and stated that if students were giving presentations by the third week of his classes, those students joining late would not be able to take part.

D. Seamone felt that this was the wrong tool to use to solve some of the student difficulties around course selection. With only 13 weeks of classes, if the first two weeks were missed, this would equate to a sixth of the course, in addition to the fact that the experience of the first two weeks was now being missed.

G. Whitehall noted that this was the normalizing of a schedule and was concerned that with the wide range of students, some might take advantage of the later deadlines and start planning their return to Acadia at a later date. G. Whitehall felt that this would have a negative effect on the students that were just 'getting by'.

D. Benoit felt that a percentage of students routinely missed classes for a number of reasons, but still did well in the course. Only students coming in with problems, who needed additional assistance, would take advantage of this change to the dates. D. Benoit pointed out that in the area of group work, disruption was also caused when students dropped out of a course at a later date.

E. Callaghan asked whether a mechanism was in place for a student to be either admitted late into a class, or dropped out of a course without receiving a "W" in extenuating circumstances.

D. Serafini confirmed that this was the case.

B. Ells understood the professors' position but noted that there were students that definitely needed this change. B. Ells did not feel that it would be used by a great number of students.

A. Quema noted that although various different approaches were adopted by professors in their course delivery, this device would be applied across the board, which could have negative effects on some. A. Quema suggested taking more time to study and resolve the problem.

J. Wood felt that the syllabus was generally posted prior to the start of the class in the Master's courses that he was enrolled in. J. Wood asked whether there was a deadline by which the syllabi had to be posted.

D. Serafini was not aware of any deadline.

The Chair noted that generally the syllabus would be handed out during the

first day of classes, though in some cases it might be available earlier.

V. Zamlynn supported the amendment and felt that this change could be discussed again next year.

P. Williams discouraged faculty members from working around the add/drop requirements, since these could rapidly become 'suggested' add/drop dates.

D. Serafini noted that he had already been surprised at the fact that deadlines did not really matter at Acadia. He noted that the TIE committee had found that other institutions had found a way to be flexible with dates for the students. D. Serafini suggested that an attendance policy would be something to consider. Noting that it was a challenge to administer 'post modernism', he stated that if the desire was to adopt the 10th September date that needed to become a firm deadline with almost no exceptions.

AMENDMENT TO THE MAIN MOTION FAILED.

Discussion returned to the main motion.

G. Phillips questioned whether the July 3rd and July 24th dates were correct for Examinations – Intersession 2 (Summer).

D. Serafini confirmed that these dates were correct.

R. Murphy asked about consistency between the Fall and Winter term for the add/drop dates, since the fall was now two weeks and the winter was 9 days.

D. Serafini stated that he would prefer to see consistency with a two week period, but noted that this was a compromise coming from the TIE committee.

A. Quema asked whether students require longer in the Fall term than in the Winter term to come to a decision about their course selection.

D. Serafini agreed that there were inconsistencies, but did feel that students might generally have a better sense of their academic direction in the Winter term.

E. Callaghan asked what sort of data had been used by the TIE committee to support these recommendations.

D. Serafini noted that the committee received information from students, Student Services and also scans of other institutions' websites.

Motion to amend the last day to add/drop to January 20th, 2015, to mirror changes made to the first term add/drop dates. Moved by D. Shea, seconded by S. Bethune.

D. Shea felt that it would be a good idea to mirror the first term add/drop dates.

A. Quema asked what sorts of institutions were surveyed when the TIE committee carried out its scan, wondering whether they were large institutions or small ones.

D. Serafini responded that the U4 and Nova Scotia institutions were surveyed.

AMENDMENT CARRIED.

Motion to change the last day of classes before exams from April 6th to April 7th, 2015. Moved by V. Zamlyunny, seconded by W. Slights.

J. MacLeod noted potential problems with there being two different days, one of which was a make-up day, because if a professor or student had a class on the one day there could be a conflict when overlaying the make-up day classes.

D. Serafini felt that the only challenge was to create the correct language around this scenario and that this year there would be no conflict.

P. Williams suggested that for the 6th April the statement “Last day of regularly scheduled classes before exams”, and for the 7th April the statement, “make up classes for good Friday”.

Motion to refer the issue to the TIE committee. Moved by A. Quema, seconded by V. Zamlyunny.

D. Serafini requested clarity on what was being referred back to the TIE committee.

The Chair noted that the September 17th, 2014 date for add/drop was staying, as the proposed amendment had failed, and that the change in add/drop date to January 20th, 2015, in the Winter term had been approved.

The Chair stated that clarification was needed in the language surrounding the last regular day of classes and the make-up classes, in both terms.

D. Serafini believed that clarifying that language would be straightforward, and asked whether it needed to go back to the committee for more discussion.

C. Stanley requested that the Calendar describe both that there was a last day of regularly scheduled classes, and a last day of class.

B. Latta suggested adding information in brackets to explain for which days’ schedule the make-up days would be.

MOTION TO REFER TO COMMITTEE CARRIED.

MOTION TO AMEND THE “LAST DAY OF CLASSES BEFORE EXAMS” STILL PENDING.

b) Motion that Senate approve the formation of the Acadia Institute for Data Analytics

Motion that Senate approve the formation of the Acadia Institute for Data Analytics. Moved by D. MacKinnon, seconded by D. Benoit.

D. MacKinnon pointed out that comprehensive material had been circulated and noted that this was the last of the institutes that had been planned for the Acadia Entrepreneurship Centre (formally the Centre for Rural Innovation).

D. MacKinnon explained that the mission and mandate was to advance knowledge in data analytics, and noted that the institute would initially focus on agriculture, food production, the environment and green energy.

D. Silver was asked to take questions.

A. Mitchell asked whether the existing budget was firm.

D. Silver discussed a number of programs and grants such as the NS START Program and NSERC that would be providing funding for the Institute.

D. MacKinnon stated that all institutes at Acadia were required to be self-sufficient.

A. Quema asked a number of questions:

- Was there a proposal to create new courses?
- How would funding and resources be allocated, and how did that fit with APC priorities?
- What would be the internal governance and membership structure?

D. Silver responded that new courses would not be created. The intention was to create educational training programs of an outreach nature. There was inter-disciplinary interest in the workshops and outreach.

D. MacKinnon stated that while a Research Centre focused on research, an Institute could have a research component, but also have outreach associated with it.

T. Herman saw no conflict with the funding process and noted that the institute would be funded with external money. This would bring external funding into the university that would not otherwise be available.

D. Silver stated that the Advisory Board would capture a diverse set of stakeholders. This should have a positive influence and effect on the Acadia institution.

D. MacKinnon noted that the Advisory Board was merely advisory. The Steering committee would be entirely internal.

B. Anderson asked what the effect might be several years out.

D. Silver stated that this would provide an opportunity for data analysis in ways that Acadia had not been able to do until now. This could be carried out in the social sciences area and would allow other institutions and companies in the area to gain new insight into many areas. There was an opportunity here to bring together people from Math, Business, Nutrition, Biology, Comp Science etc.

H. Wylie asked about the requirement that the institute be self-sustaining so that there would be no further pressure on already scarce resources.

D. MacKinnon noted that each of the Centres had been self-sustaining.

T. Herman confirmed that this had been the practise to date and expected that this Institute would be an externally funded self-supporting entity. T. Herman also noted that this presented an opportunity to generate a significant amount of external funding, much of which would flow into internal projects and programs, as the Tidal Energy Institute had done.

D. MacKinnon added that an annual report was being put together to cover all

of the Institutes at Acadia, which would be brought forward to Senate. Eight formal centres exist on campus at present.

W. Slights asked whether as the Director would be part-time and would be receiving course release, who would pay for this?

D. Silver responded that for this year, the funding would be provided by the ERDT (Economic and Rural Development and Tourism), but that for the future a formula would need to come into play, whereby events that were offered provided funding for the Director.

T. Herman stressed that any course relief would be externally funded.

G. Phillips appreciated the initiative and felt that the word “rural” needed to be stated more strongly and forcefully in the mission and mandate, since there was an emphasis on ‘rural’ throughout the document.

D. Silver felt that the larger description of the mission statement would have a rural theme, but that that this should not be a limiter to what could be done.

G. Phillips was pleased that the theme was rural but felt that the mission and mandate did not reflect some of the body of the document.

G. Whitehall was concerned about the urgency for bringing the institute forward, and wondered whether the campus was ready to embrace this sort of institution. G. Whitehall pointed out that this institute would need an admin assistant, while the Department of Politics did not have an admin assistant at present.

G. Whitehall noted that there were resource and planning failures operating on the campus at present and felt that a document such as this needed to be part of a broader well thought out planning structure.

G. Whitehall was concerned that an institute such as this that could bring capital into a cash strapped system could affect values. G. Whitehall felt this to be an ad-hoc mechanism for approval, and requested that approval of the motion be postponed.

The Chair explained the various options around tabling or postponing the motion.

G. Whitehall requested that the motion be tabled until the APC and other motions on the agenda had been debated. This would allow Senate to see where the institute would fit in the broader planning process.

The Chair clarified that if the motion was tabled it could be called back any time during the remainder of the current Senate meeting, or at the next Senate meeting, but that if it was not called back by the end of the next Senate meeting, the motion would die. Another option was for it to be postponed to a definite time, e.g. to a time when the report from the APC had been received by Senate. presented.

G. Whitehall asked if there was a way to test the feeling in the room and the Chair suggested that a straw poll be carried out. Senators were asked whether they were in favour of postponing the discussion of this item. There was no support for postponement.

D. Benoit stated that the School of Computer Science fully supported this initiative. ICT was viewed as the third pillar and would be broadly accessible to all of the campus. It was expected that this would open many doors.

MOTION APPROVED.

c) Motion to add Library representation to the APC

The Chair stated that because this motion required a change to the Senate By-laws it had required a 30 day *Notice of Motion*, which had been met. This motion would also require a two thirds majority for approval.

Motion to add Library representation to the APC. Moved by A. Smith, seconded by H. Wyle.

A. Smith requested that a Librarian or Archivist, in addition to the University Librarian, be added to the Academic Planning Committee when matters relating to the University Library were to be discussed. A. Smith felt that in areas such as hiring for the Library, there was little representation on the APC at present. The Librarians were members of the Faculty and had many shared goals, but their unique interests were not represented by the current structure.

C. Stanley asked about the wording of the motion and whether a Librarian or Archivist and the University Librarian were only present at the APC when matters were being discussed relating to the Library; or whether the Librarian or Archivist would serve on the committee and the University Librarian only be present if matters related to the Library.

The Chair clarified that both individuals would only be present if Library matters were being discussed at the APC. The Chair noted that there were precedents for this, citing the fact that H. Gardner only attended a Senate Executive meeting if the Divinity College was being discussed.

P. Williams was concerned that there were already three faculty members on the committee. Librarians were members of Faculty and could therefore be elected to serve on the APC. P. Williams noted that when the committee was set up, there was a conscious attempt to remove any designation of where committee members came from, and noted that it was important that committee members remove their hats. P. Williams felt that much of the business to be discussed could in theory affect the Library, and that there was potential for the committee to get overly large as others also requested representation.

D. Benoit agreed that one of the key points in the building of this committee, was the intention that people took off their hats when they entered the room. D. Benoit believed that a Librarian had as good a chance of being elected to this committee as anyone else.

D. Benoit pointed out that the proposal stated that if a Librarian got voted onto the committee, then there would be no need to add one for discussion of Library business; but that this would mean that either an Arts, Science or Professional Studies person would not be on the committee. Since there was no designation for every one of those to be on the committee, all groups could not be represented.

D. Benoit felt that other groups would start asking for representation. D.

Benoit noted that there was already a requirement in place for the APC, that when matters were being discussed that related to a certain field, the committee would invite representatives to come in and meet with them, with a case in point being the recent discussions with the TIE committee.

D. Benoit was in favour of Archivists being added to the list of faculty members that could be elected to the committee.

The Chair noted that it was 6:00 p.m. and asked whether Senators would prefer to postpone definitely debate of this motion to the next Senate meeting.

**Motion to postpone definitely the discussion to the next Senate meeting.
Moved by D. Shea, seconded by H. Rode.**

J. Banks asked where in the agenda this matter would be discussed.

The Chair stated that it would be placed in “time sensitive items”, but discussed after ‘Curriculum Changes’.

MOTION TO POSTPONE DEFINITELY APPROVED.

Motion to adjourn at 6:00 p.m., moved by D. Shea.

ORIGINAL SIGNED

R. Hare, Recording Secretary

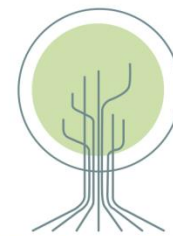
MOTION

I move that the Senate of Acadia University approve the establishment of the Acadia Institute for Data Analytics (description appended).

David MacKinnon
Dean of Research & Graduate Studies

The following is a proposal for the establishment of the Acadia Institute for Data Analytics (AIDA).

Rural Canada feeds our nation literally, economically, and environmentally. It provides the food, fiber, minerals, water other bio-resources and natural resources on which our country depends and the arteries of transportation by which are delivered. Digital technologies and data analytics can us shape how we work with these resources and their impact our local communities and our planet.



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**ACADIA INSTITUTE
FOR DATA ANALYTICS**
digital harvest

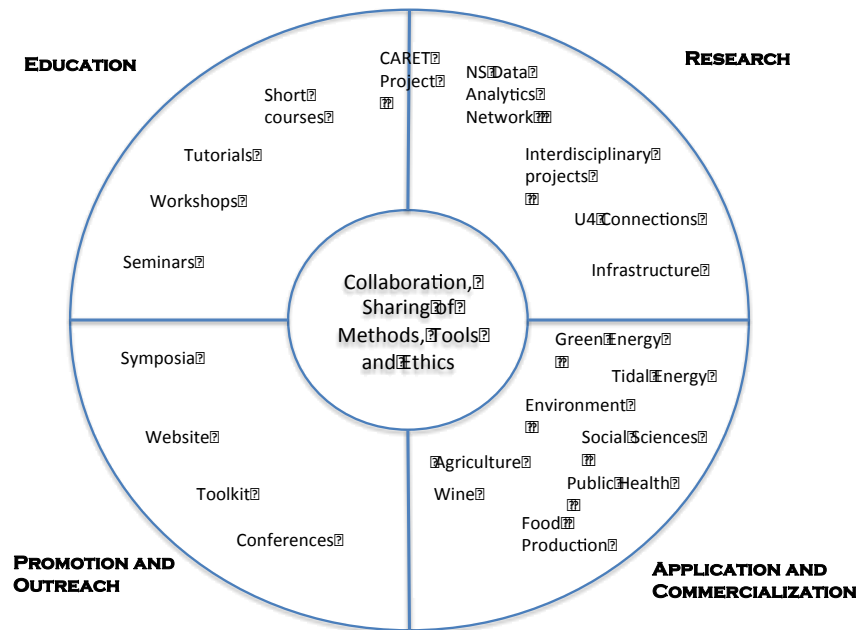
1. Mission and Mandate

To advance knowledge in data analytics through collaborative and interdisciplinary research, education, and outreach, and to foster the ethical application and commercialization of data analytic solutions to challenges facing industry, government, and rural Canada. The institute will initially focus on agriculture, food production, the environment, and green energy.

2. Goals and Objectives

The goals of the Acadia Institute for Data Analytics are to foster collaboration and the sharing of data analytics methods, technologies, and ethical practices among its stakeholders.

ACADIA INSTITUTE FOR DATA ANALYTICS



More specifically, the Institute will gather active stakeholders as members (academic researchers, teachers, associations, companies, government departments, etc.); foster communications and collaboration among members; communicate and coordinate relevant meetings and other events; and make connections with other data analytics organizations. The Institute will share knowledge of technologies and methods and promote the ethical use of data analytics methods that protect the privacy of individuals and the security and integrity of data.

The objectives of the Acadia Institute for Data Analytics can be divided into four categories:

- *Promotion and Outreach:* To provide visibility for data analytics initiatives undertaken by members and communicate relevant events to industry, government and the public. To make the institute relevant to rural business and industry. To foster sharing of knowledge and use of data analytics through vehicles such as web inventories of member competencies and resources.
- *Research:* To encourage, facilitate, and leverage fundamental and interdisciplinary research and to attract high quality visiting scholars. To work with members to provide shared technical infrastructure for research and development where possible.
- *Education:* To facilitate the development and delivery of educational programs such as short courses, training workshops, and seminars that are focused on the needs of members.
- *Application and Commercialization:* To foster the development of innovative applications for use in academia, industry, and government. To establish Nova Scotia as a leader in the

application of data analytics to rural problems. To stimulate technology transfer, commercialization, and the development of new startups.

3. Rationale for Creation

The Acadia Institute for Data Analytics is proposed in response to the growing demand for expertise, products, and services for discovering knowledge from data in problem domains of rural Canada.

What is Data Analytics?

Data analytics covers a broad spectrum, including data management, mathematical, statistical, and machine learning methods for data modeling, and techniques for data visualization in support of enterprise-wide decision making. This emerging field is being driven by the unprecedented amount of data now available to organizations. With the emergence of “Big Data”, there is a pressing need for professionals with strong quantitative skills and an understanding of how analytics can be applied with speed and accuracy to the critical decisions facing organizations.

Rural Canada – Feeding our Nation and the World

Rural Canada feeds our nation literally, economically, and environmentally. It provides the food, fiber, minerals, water, and other bio-resources and natural resources on which our urban centers depend. It also houses the arteries of transportation that supply these vital resources to locations across Canada and to the world. Rural Canada has provided significantly to Canada’s GDP in the last 100 years and will do so into the next 100 years. Perhaps more importantly, how we access and use the bio- and natural resources directly affects local communities and our planet.

Why is Data Analytics Important to Rural Canada?

In Nova Scotia and Atlantic Canada approximately 45% of the population lives in rural areas (400,000 and 2.3 million people, respectively). The success of rural Canada and our nation, in general, over the next 50 years, both economically and environmentally, will depend largely on how well we manage while producing products from our bio- and natural resources on land, in the water, and in the air. To do this we must better collect, integrate, analyze and disseminate data on how we extract/produce, process, manufacture, and distribute related products and services. Fortunately, we are now entering an era of data capture, analysis, and sharing that is unprecedented in human history – the era of Big Data and Data Analytics.

Data are being created at unimaginable rates that will only continue to increase. Billions of new users will be connecting to the Internet over the next few years with more and smarter devices, driving online transactions and data-based products and services. The flow of digital information within and among businesses is also growing rapidly. Many companies are integrating sensors into their products and processes, creating new sources of high-volume data flow. These devices are appearing on shop and office floors, farm equipment, food processing plants, and in buildings, vehicles, and even clothing. All these data hold tremendous potential value. Organizations and countries that can identify, collect, prepare, filter, and analyze these data effectively will gain new knowledge and business/strategic advantages. This move toward real-time, data-driven processes is fueling a revolution in the way organizations operate internally and interact externally. Customer relationship management and online sales and marketing represent the first wave of data analytics integration, but the potential for integration spans the full spectrum of organizational management —from production and service optimization, sales forecasting, human resource planning, and inventory management, to tactical agricultural activities, the prediction of

energy production and use, and the modeling of environmental factors and outcomes. The challenges are daunting, but the opportunities are enormous.

A Pillar of the Acadia Entrepreneurship Centre – Incubation and Innovation Services

The Acadia Institute for Data Analytics will be part of the Acadia Entrepreneurship Centre's Incubation and Innovation Services unit. This Centre is focused on three theme areas [tidal energy, agri-food/wine, and ICT] and the Acadia Institute for Data will anchor the ICT theme. Data analytics nicely spans a number of activities that are underway in the tidal and agri-food/wine areas. Young ICT companies being nurtured in the Entrepreneurship Centre, such as Colibri Software, have interests in applied data analytics. The greater Acadia Entrepreneurship Centre has and will continue to facilitate advances in the agri-food, green energy, tourism, and environmental areas, which will be primary initial areas of focus for AIDA.

Interdisciplinary Nature of Collaborative Work

Work in data analytics is interdisciplinary by its very nature. Knowledge of one or more application domains along with expertise in mathematics and computer science are required to capture, integrate, and process data into information. For example, a group at Acadia has envisioned the development of inexpensive technology developed by the Department of Physics that can capture tidal data that can be integrated and analyzed by our mathematical modeling and machine learning groups for our tidal energy team.

External Connections, Partners, and Industry Engagement

The Institute will connect curriculum and research across the campus and with other academic institutions, industry partners, and associations. It will work collaboratively with similar bodies in Canada, in particular the Institute for Big Data Analytics at Dalhousie University and with St. Mary's University initiatives in data analytics. Acadia and Dalhousie are the founding members of the Nova Scotia Data Analytics Network. AIDA will also collaborate closely with the Atlantic Food and Horticulture Research Centre in Kentville and the NSCC's Centre of Geographic Sciences (COGS) in Lawrencetown. These connections will make the Institute attractive to a wide variety of businesses, organizations, and associations.

4. Available Expertise and Resources

Acadia is well positioned geographically, culturally, and from a resource perspective to form an institute for data analytics.

Internal Resources – Work on data analytics is widespread at Acadia. In the Faculty of Pure and Science, Acadia has nationally and internationally recognized researchers who do work in data collection, database management, data mining, machine learning, statistics, mathematical modeling, simulation, and data visualization. Data analytics expertise resides in the Jodrey School of Computer Science and the Department of Mathematics and Statistics. Data analytics is applied in all other departments and schools of FPAS, particularly Biology, Physics, Chemistry, Nutrition and Dietetics, and Earth and Environmental Science. The Faculty of Professional Studies uses data analytics in areas as diverse as Business, Kinesiology, Environmental Studies, and Community Development. For example, the Human Motion Lab in Kinesiology records megabytes of data from motion capture technology. In the School of Business, Business Analytics, an integration of business analysis and data analytics, is of growing importance because of the impact of Big Data on organizations and IBM's new Global Delivery Center for Business Analytics in Halifax. The Faculty of Arts has departments which traditionally have done substantial data collection and

analysis, such as Economics, Politics, and Sociology. Over the last ten years the Department of English and Theatre and the School of Music have made increasing use of digital technologies for collecting, analyzing, and visualizing data.

The University has several research groups in which data analytics plays a major role. Most notable of these are the Acadia Centre for Mathematical Modeling and Computation (ACMMaC) and the Intelligent Information Technology Research Lab (IITRL). The Department of Mathematics and Statistics also offers a Statistical Consulting Centre (SSC) that provides expertise to internal and external projects involving Acadia faculty and students.

In terms of physical resources, Acadia has a series of central computing servers, a shared high performance computing cluster managed by ACMMaC, and various specialized laboratory computing systems. The University also offers courses in data analytics from several units, including Mathematics and Statistics, Computer Science, Business, Biology, Physics, and Economics.

Acadia provides several administrative resources that will be utilized by the Institute. AIDA will be housed in the Incubation and Innovation Services unit of the Acadia Entrepreneurship Centre, located in Patterson Hall, and it will use the administrative and business expertise of the Centre in its development. The Acadia Entrepreneurship Centre will also assist with new start-ups that emerge from AIDA outreach activities and work to attract new ICT related industry to the Wolfville area. Acadia's Division of Research and Graduate Studies (RGS), under the direction of Dean David MacKinnon, will provide important links to the research community at Acadia and facilitate the connection between Acadia students and AIDA projects. The Office of Industry & Community Engagement (ICE), led by Ms. Leigh Huestis and part of RGS, will assist AIDA in connecting faculty, industry, and government in the pursuit of applied research and commercialization opportunities.

External Resources – Acadia has access to a wealth of external resources in the area of data analytics. The University is a member of the Collaboration for Analytics Research, Education, and Technology (CARET) project started in November of 2012, which is a joint effort between IBM and a Nova Scotia Postsecondary Education Consortium (PSEC), which includes NSCC, Dalhousie, CBU, St. FX, and SMU. The intent of the CARET project is for IBM and PSEC to work together to facilitate cooperative (1) curriculum development and delivery, (2) research and development, (3) associated technology installation and support, and (4) concerted public communications. Acadia has faculty and staff members on all CARET committees, including Dr. Tom Herman, Vice-President Academic, who is on the Executive Committee. CARET recently announced the installation of a multi-million dollar high performance data center at Dalhousie University in early 2014 for shared use by the consortium members.

Acadia has worked with Dalhousie University to propose the Nova Scotia Data Analytics Network (NSDAN). The purpose of NSDAN is to create a point of communication and collaboration among all non-profit data analytics players in Nova Scotia and to provide a point of contact for data analytics work in the Province, particularly for the Governments of Nova Scotia and Canada. The network will provide additional visibility for data analytics work done by NSDAN members, foster cooperation among NSDAN members, work jointly to provide state-of-the-art infrastructure for research, communicate member events, promote knowledge and use of data analytics in business, industry, and government, and encourage commercialization of proven technologies and methods.

Acadia will continue to work closely with Dalhousie's Institute for Big Data Analytics as NSDAN develops.

Acadia is a member of the Atlantic Computational Excellence Network (ACEnet), a consortium of Atlantic Canadian universities providing researchers with high performance computing (HPC) resources, collaboration and visualization tools, software, training, and support. ACMMaC support at Acadia is integrated with ACEnet, enabling researchers to use high performance computing locally and in the region as a means of accelerating discovery and innovation, keeping Atlantic Canada at the forefront of scientific research.

Acadia is located only 50 minutes from the NSCC's Centre of Geographic Sciences (COGS) in Lawrencetown. The COGS is Canada's largest geomatics-focused learning environment offering post-secondary programs in surveying, mapping, land-use planning, and related computer technology. The Centre also offers advanced diplomas in marine geomatics, remote sensing, geographic information systems (GIS), and business geomatics. COGS and Acadia collaboratively offer a MSc. in Applied Geomatics.

The Atlantic Food and Horticulture Research Centre, located in Kentville, is one of Agriculture and Agri-Food Canada's (AAFC) national network of 19 research centres. It serves the needs of the rapidly developing agricultural economy of south western Nova Scotia, particularly the fruit growing industry. The Centre also supports research in agri-environmental science and the identification of beneficial management practices in intensively farmed land. Its key areas of research include crop production technology, food safety and quality, and environmental stewardship. All of these areas involved data collection and analysis.

Acadia is a member of the Canadian Institute of Statistical Sciences (CANSSI), which seeks to develop all areas of the statistical sciences, including interdisciplinary research. Dr. Hugh Chipman, CRC Tier II Chair in Mathematic Modeling, is the CANSSI Associate Director for Atlantic Canada.

Acadia's ICE Office is a member of Atlantic Canada's commercialization and industry liaison network called Springboard Atlantic. Springboard provides resources to Atlantic Canadian universities and colleges to help them transfer knowledge and technology to our region's private sector. Springboard's network members work to connect publicly-funded research with industry experts through a range of programs and services. Springboard also connects skilled professionals in academia and industry to create new collaborations.

5. Value and Relevance to University Mission and Objectives

The mission of Acadia University is to provide a personalized and rigorous liberal education; promote a robust and respectful scholarly community; and inspire a diversity of students to become critical thinkers, lifelong learners, engaged citizens, and responsible global leaders.

The proposed Acadia Institute for Data Analytics provides value to all strategic planning themes for the University. It promotes interdisciplinary teaching and learning, including the stimulation of new course content at the undergraduate and graduate level, and life-long learning for members external to the university. It will provide excellent opportunities for Acadia faculty to work with each other on interdisciplinary, community-relevant topics, and to collaborate with researchers at other universities and in industry and government.

The Institute is meant to engage the rural community of Nova Scotia with an initial focus on agriculture, food production, the environment, and green energy. It will partner with other post-secondary institutions on research and educational initiatives and broadly promote ethical use of data analytic methods.

The Acadia Institute for Data Analytics will attract high quality undergraduate and graduate students to Acadia from across Canada and around the world by publicizing activities and member successes and using this information to help solicit funding for educational programs, research projects, and student scholarships. One of the Institute's key goals will be to attract high quality visiting scholars to Acadia to work on data analytic projects.

The Institute will further Acadia's long history of appreciating, preserving, protecting, and sustaining the natural environment through fostering the use of modern digital technology to collect and analyze large quantities of data on our natural world and our impact on the planet.

Acadia is a recognized leader in applying digital technology to teaching, learning, and research in higher education. An institute focused on ethical data analytics will continue this tradition while emphasizing and proactively promoting integrity and privacy of stored data.

6. Benefits to the Annapolis Valley, Nova Scotia, and Canada

The proposed Acadia Institute for Data Analytics will provide many benefits to our local region, Nova Scotia, and Canada. There will be immediate benefits to the Annapolis Valley by providing fundamental knowledge of Big Data and Business Analytics to local businesses. The intent is to introduce these concepts by business/ thematic topic such as livestock production, crop management, harvest data collection and analysis, trucking and transport, food production, food safety, water management, and green energy production. Mid-term benefits will come in the form of tutorials and workshops on methods and tools that can be used across various domains, as well as large symposia and events that bring world class expertise to our region to inspire local talent. Long-term benefits to the region will include the growth of new products and services by existing and successful new start-up companies.

Successful events and methods employed at the Acadia Institute for Data Analytics can be shared via the website and through organizations such as NSDAN. AIDA will complement the Big Data Analytics Institute at Dalhousie University and work with other post-secondary institutions through CARET to transfer knowledge and approaches across the province.

Rural Canada provides the bio-resources and natural resources vital to the products and services that our nation delivers. The Acadia Institute for Data Analytics is unique in being the first center to focus the use of data analytics on problems of rural Canada. Our intent is to become a model of how to connect academia and industry around rural problems that can be solved through data collection, analysis, and knowledge dissemination. Key to the motive for applying data analytics to problems in rural Canada is the truth that "if you can measure it, then you can work to improve it".

7. Resource Needs

The following provides summary details for the items shown in the budget table on the next page. All numbers are annual amounts, unless otherwise indicated. Year 4 is expected to be the same as Year 3.

Human Resources

- Director – To lead and administer. Part-time, up to course releases per year.
- Assistant - to handle communications, help build connections, coordinate and events, assist in creation and documents, assist with management, and manage website.

Office Space

- Main Office, meeting areas in *Incubation and Innovation* and use of office space in Hall for the Director

Material Resources

- Office equipment including assistant, printer, stapler, etc. would be most expensive.

Expenses

- Weekly meetings –that bring industry and faculty partners; planning meetings; proposal from students, faculty or businesses; project status
- Monthly events - information for university community and presentations by faculty and students to industry, presentations by businesses to faculty and students, invited speakers, networking sessions, training sessions and workshop for practitioners.
- Annual events - at least two events, one of which will be aligned with an annual Advisory Board meeting; e.g. symposium on Data Analytics in the Agri-Food Industry; Acadia – NSCC COGS data projects round-up; Acadia-SMU-Dalhousie Data Analytics mini-conference.
- Travel to meetings in NS (e.g. NSDAN meetings)
- Travel and accommodations for one person to conferences/meetings per year (e.g. Big Data T4G Conference, St. John. NB; IBM Big Data EdCon, USA)

Income

- NS START Program – The START program (Employment NS) encourages employers to hire Nova Scotians requiring work experience or apprenticeship support resulting in good jobs for

3-Year Budget for the Acadia Institute for Data Analytics

(based on Acadia's fiscal year end of March 31)

Expenses	Year 1 / Q1	Year 2	Year 3
<i>Human Resources</i>			
Director	7500	15000	15000
Assistant	7245	31395	31395
<i>Office Space in AEC</i>			
Main Office in AEC (Assistant)	no charge	no charge	no charge
Meeting areas in AEC	no charge	no charge	no charge
Director Office in Carnegie	no charge	no charge	no charge
<i>Material Resources</i>			
Office equipment	3000	1000	1000
Photocopying	170	500	500
Office supplies	170	500	500
Telephone, fax, internet	170	500	500
Publications	200	400	400
<i>Event Expenses</i>			
Weekly meetings	350	1040	1040
Monthly event	600	2400	2400
Annual events	5000	10000	10000
<i>Travel Expenses</i>			
Meetings in NS	900	3600	3600
Travel to conferences	2500	5000	5000
<i>Website</i>			
ISP / domain annual fee	100	100	100
Website dev/maintenance	3000	1200	1200
TOTALS	30905	72635	72635
<i>Income</i>			
Employment NS START Program	7245	14490	14490
NSERC ROF	2500	2500	2500
Springboard Atlantic	2500	2500	2500
NS ERDT	20000	25000	25000
ACOA		30000	30000
TOTALS	32245	74490	74490
Income less Expenses	1340	1855	1855

two

meetings of reports financial the

AEC – Services, Carnegie

laptop for First year

together AIDA reviews

meetings. sessions public,

Nova Scotians and good employees for employers. The START program will fund up to 24 months for an employee.

- NSERC ROF - NSERC's regional offices each administer a Regional Opportunities Fund (ROF) that can support regional events and activities related to the natural sciences and engineering.
- Springboard - Promotes the development of effective regional partnerships with industry.
- ERDT – Economic and Rural Development and Tourism NS invests in efforts to grow the economy across the Province and partners with Labour and Advanced Education on workforce development.
- ACOA - Business Development Program, Young Entrepreneur Development Initiative, and Innovative Communities Fund are all potential sources of funding for AIDA for specific projects.

8. Internal Governance and Membership Structure

Responsible Administrator for Reporting – Dean, Research & Graduate Studies

Director of AIDA – initially, Dr. Danny Silver, for a three year period

Steering committee

Director of AIDA

Dean of Research & Graduate Studies

Director of the School of Computer Science

Head of Mathematics & Statistics

Director of the Office of Industry & Community Engagement

Advisory Board

Steering committee members

Representative from major funders (1)

Acadia academic representatives (2)

ICT industry representatives (2)

Provincial government representative (1)

Federal government representative (1)