

Sault Ste. Marie-The Heart of the Great Lakes

Fresh air, blue waters and wide open skies – Sault Ste. Marie is located in a spectacularly beautiful part of Ontario. The community of 75,000 has been designated an International Safe Community by the World Health Organization (WHO).

You can enjoy all the comforts of city life, while still making it to one of the most beautiful beaches or the highest ski hill in the province in 45 minutes. There are dozens of hiking trails nearby, with over 50 km of trails within the city borders at Hiawatha Conservation Area, and Lake Superior Provincial Park is well within a day's drive. The city is at the northern border of the mixed hardwood forest region and therefore yields a blindingly beautiful fall display, with the hills nearly bursting into flame with colour.

Also known as “The Sault” (pronounced “Soo”), the city boasts a vibrant arts scene and affordable standards of living. From the Bon Soo Winter Carnival to Rotary Summer Fest, you’ll find exciting and entertaining activities throughout the year!

Sault Ste. Marie, Michigan lies on the other side of the St. Mary’s River, just a short trip over the International Bridge. Travel to and from “the Soo” is a snap, as major airlines from large urban centres fly daily to the Sault Ste. Marie airport. The highway system connects the city with both Trans Canada Highway 17 and the U.S. I-75.

We encourage applicants to explore all that Sault Ste. Marie has to offer at (www.city.sault-ste-marie.on.ca and www.discoverthesault.ca/SaultSteMarie)

About Algoma University

Algoma University offers a wide variety of liberal arts and sciences degree options including programs in Psychology, Computer Science, Business Administration, Fine Arts, Community Economic & Social Development, and Biology; AlgomaU is committed to offering a personal education experience unlike any university in Ontario. As the Canadian home of the internationally recognised MSc CGT from the University of Abertay Dundee, Algoma University is at the forefront of computer games technology education. Algoma University also offers accelerated second degree programs in Business Administration and Computer Science on its Brampton campus.

Algoma University is proud to offer the only Masters of Science in Computer Game Technology Program in Canada and is host to a newly established serious game development studio focusing on the application of video game technology to the health and rehabilitation industries. The studio is currently developing a video game enhanced telepractice solution to help individuals recover language skills after having suffered a stroke. The software will help connect health professionals to individuals in need, regardless of geographic boundaries, while also assisting individuals to follow necessary therapies by making them more engaging and enjoyable.

To learn more about Algoma University, visit www.algomau.ca.

About the National Institutes of Health Informatics

NIHI (www.nihi.ca) is a Canada-wide, virtual institute of institutes bringing together academic experts in Health Informatics. NIHI serves as a catalyzer, co-ordinator and facilitator that assists in defining, fostering and bonding together local Health Informatics (HI) initiatives in academia and industry dedicated to Health Informatics research and education.

About ESRI Canada

Established in 1984, ESRI Canada is a Canadian owned company specializing in geographic information systems (GIS) solutions. ESRI Canada distributes the world's leading GIS software including solutions from ESRI Inc., Miner and Miner, I.S.M. International Systemap Corp. and Azteca. In order to provide organizations with complete industry-specific solutions ESRI Canada has established an extensive business partner program that includes more than 130 Canadian organizations. ESRI Canada also provides professional services including consulting, training, technical support, and enterprise GIS implementation. ESRI Canada is a leader in providing world-class enterprise GIS solutions for many industries including public works, land management, utilities, defence, public safety, business demographics, education, natural resources and transportation. ESRI Canada has sixteen regional offices across the country, with headquarters in Toronto, Ontario.

For more information, please visit <http://www.esricanada.com/> or call 1-800-447-9778.

Nature of the Chair

The following are suggestions regarding what might be expected of a Chair:

- A recognized, experienced, published, and respected contributor to the field.
- A leader who will bring others together and seed collaborations, multi-disciplinary projects, and new ventures.
- A magnet for good people, good projects, and good funding.
- A researcher focused on the advancement of the field.
- Willing to take risks to meet visions and goals.
- Someone who sees above and beyond.
- A person who believes in people and sees their success as his/her success.

The following is a partial list of characteristics of an ideal recruit:

- Primary interest is some valued aspect of HI.
- Track record in field: research, peer-reviewed funding, publication, presentation.
- Recognized as a major contributor and leader; will enhance local profile.
- Track record as dedicated collaborative researcher.
- Experience in above areas or willingness to learn; lifelong learner.
- Interest in program development (e.g., incorporation of HI into Algoma program, developing a multi-faceted research program).
- Curiosity and interest in others' research areas.
- Engaging personality, outgoing, and excellent team skills.
- Facilitator and motivator; energetic; credible speaker and promoter of program.
- Builder of bridges to the health system, to industry and to other academic centers.

Unique Community Strengths in Health Informatics

The community of Sault Ste. Marie is host to the Group Health Centre (GHC), Ontario's longest established alternatively funded primary care organization, nationally recognized for advanced leadership in the use of health IT. Most notably, the GHC is celebrated for the innovative use of its comprehensive electronic medical record (EMR) solution. Utilizing the EMR as a tool, the GHC has worked on developing methods for tracking and monitoring chronic disease in patients with the intent of improving health outcomes through improved

managed care. Nationally recognized projects include (a) the Canada Health Infoway/Ontario Pharmacists Association EMRxtra project that provided EMR access to pharmacists for the first time in Canada enabling pharmacists to provide patient's with improved medical care and (b) the provincially funded Eprescribing project that implements a solution to make it possible for physicians to submit prescriptions to pharmacies electronically, eliminating written prescriptions.

The community is also host to the Sault Area Hospital, soon to relocate to a new state-of-the-art facility currently under construction, and the Sault Ste. Marie Innovation Centre, internationally recognized for its work in GIS Public Health and Human Services; specifically, for developing methods for syndromic surveillance, combating West Nile Virus, and tracking infectious disease outbreaks.

Northern Ontario is also home to the Northern Ontario School of Medicine.

For more information see the section on Unique Community Strengths in Health Informatics in the [Health Informatics Institute Document Brief](#) attached below.

The Health Informatics Institute

Please refer to the [Health Informatics Institute Document Brief](#) attached below for more information.

Algoma University

Health Informatics Institute

Document Brief

September 2009

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Background

In 2006, Sault Ste. Marie completed a Community IT Strategy that identified the health sector as a critical niche opportunity to be pursued. Shortly following, the Sault Ste. Marie Innovation Centre was handed the mandate to action this strategy and ensure opportunities were aggressively pursued. Beyond specific opportunities, it was felt that the formation of a Health Informatics Cluster Committee was an essential component of this strategy.

The Health Informatics Cluster Committee was formed in 2006 and established a vision that Sault Ste. Marie would capitalize on its nationally recognized strengths to establish a vibrant, world-class health informatics cluster that includes private and public sector organizations leading in the application of information technology to health data, services and research. Committee members include senior representatives from the following organizations:

- Algoma Public Health
- Sault Ste. Marie and District Group Health Association
- Algoma District Medical Group
- Algoma University
- Northern Ontario School of Medicine
- Sault Area Hospital
- Sault College of Applied Arts and Technology
- Sault Ste. Marie Innovation Centre

Since formation, the committee has identified a number of projects in the Health Informatics sector, one of which was to establish a Health Informatics Research Chair and Health Informatics Institute (providing governance, management and promotion) for conducting research based on the community's strengths in Health Informatics.

It was envisioned that the Health Informatics Institute (HII) would be formally established as a not-for-profit organization within Algoma University, governed by a Board of Directors and Advisory Committee that would consist of Deans and Directors of key institutions and organizations, industry leaders, health sector leaders from the community, and health sector government officials. Institute membership would be available to include individuals and organizations with mission and research interests/goals that are shared with the Institute.

In 2007, Algoma University started work to secure external funding by working with the Sault Ste. Marie Innovation Centre's Health Informatics Development Manager and Executive Director to draft funding proposals for the establishment of the Institute's Chair/Scientific Director position, Institute management staff, and additional Institute start-up costs. As a result, funding was secured from FedNor, Northern Ontario Heritage Fund Corporation (NOHFC) and ESRI (a private sector GIS company).

Ongoing operating expenditures including space, costs associated with conducting research and capital expenditures will be acquired from research grants and capital grants, much like other research Institutes located across Northern Ontario and the rest of the province.

Unique Community Strengths in Health Informatics

Sault Ste. Marie has an impressive track record for innovation in the healthcare field and possesses some unique characteristics that no other community in Canada can claim:

GIS in Health and Human Services

- Methods for Combating West Nile Virus
- Methods for Tracking Infectious Disease Outbreaks
- Methods for Syndromic Surveillance
- GIS Awards and Achievements

Primary Care Informatics- Group Health Centre

- Electronic Medical Records (established over 10 years ago)
- Online Patient Portal- My Health Matters (some of Canada's first patients to have secure access to their Health records on-line)
- Canada Health Infoway Nationally Sponsored: EMRxtra Program (Canada's First System Linking Pharmacists to Electronic Medical Record Information)
- Ontario's Ministry of Health and Long-Term Care and eHealth (Ontario)'s ePrescribing Demonstration Project
- Healthcare Communications and Technology Centre
- Health Informatics National Recognition and Award Winners

Health Informatics- Sault Area Hospital (SAH)

- Meditech
- Wait time Information System
- New Hospital with Advanced IT Infrastructure

Local Health Area Network (LHIN) and Local Health IT Collaboration

- Health Informatics Cluster Committee
- ONe-Health Steering Committee
- Pan-Northern Ontario PACS Project (PNOPP)

For more information on each of the above achievements please read below.

GIS in Health and Human Services

i) Methods for Combating West Nile Virus

In working with the Public Utilities Commission (PUC), Algoma Public Health and the city's Public Works, the Sault Ste. Marie Innovation Centre Community Geomatics Centre (CGC) identified potential risks for breeding of West Nile Virus throughout the community. Sharing GIS data, tools and resources between organizations enabled a quick, efficient and coordinated response to address a serious health risk in the community. This approach of combining health and social-related data with municipal and utilities data brought about improvements in services from all sides. These services can now be optimally delivered to areas where they are most needed.

ii) Methods for Tracking Infectious Diseases Outbreaks

Based on its reputation, the CGC is now conducting work across Ontario with private sector, public sector and academic partners. One of the projects conducted with Algoma Public Health and the Sault Area Hospital utilized GIS to better understand an outbreak of *c. difficile* in a local hospital. This groundbreaking project has led to numerous collaborations including a partnership with the Toronto-based firm Infonaut to develop a commercial solution.

iii) Methods for Syndromic Surveillance

Queen's University researchers at Kingston, Frontenac and Lennox & Addington (KFL&A) Public Health have also recently completed a project with the SSMIC CGC. The purpose of the project was to enable viewing of staff Respiratory and Gastrointestinal-related Occupational Health visits for each floor and department of Kingston General Hospital (KGH). The information was presented to KFL&A Public Health through predetermined symbology and classification by floor and department in 2D and 3D formats. The information outputted is intended to provide enhanced early warning for communicable disease outbreaks which may help to characterize the occurrence and transmission of infectious diseases within the hospital and allow for implementation of appropriate infection control measures. Consequently, this

information is intended to be used to mitigate the spread of disease within the hospital and minimize the risk to health care workers thereby reducing health care worker absenteeism.

iv) GIS Awards and Achievements

In 2007, the CGC received a major international Special Achievement Award (SAG) for GIS work in health and human services. The SAG is one of the highest awards in the world for GIS whose past winners in the international category have included the United Nations, New Zealand Ministry of Health and the Geneva International Centre for Humanitarian Demining (GICHD). The awards were presented at a special ceremony on Wednesday June 20th at the San Diego Convention Centre at the largest conference in the world devoted to GIS and attended by close to 16,000 people from more than 120 countries.

The CGC has also put Sault Ste. Marie on the map with international coverage of its unique community model. Coverage in major GIS publications such as ESRI Healthy GIS, ArcNews North, URISA, the Ontario Technologist, Decima's Telemangement and Canadian Health Care Technology demonstrate the world-class nature of the solution operated in SSM.

Owing to its unique position within the Innovation Centre, the CGC is able to provide a number of benefits to the community. A "GIS in Health Day" is held in SSM annually which attracts visitors from across the province to hear expert speakers in the emerging field of utilizing GIS within a health and social services context.

SSMIC has been working with private sector companies to conduct technology transfer and build capacity. Recently, a number of RFP's and opportunities have been pursued by partnerships consisting of private sector GIS firms and SSMIC.

Primary Care Informatics - Group Health Centre

As Ontario's largest and longest established alternatively funded healthcare organization, Group Health Centre (GHC) serves over 62,000 Sault Ste. Marie and Algoma District residents. The Group Health Centre is comprised of a partnership between the Sault Ste. Marie and District Group Health Association and the Algoma District Medical Group.

i) Electronic Medical Records:

The GHC is touted as the most technologically advanced health service organization in Canada and operates using a comprehensive electronic medical patient record solution implemented over ten years ago. This solution is considered a model for primary care across Canada.

ii) Online Patient Portal- My Health Matters:

Beyond its pioneering role in adopting electronic medical records, the GHC has also been involved in innovative programs in preventive medicine and the rollout of an advanced web based patient portal. The patient portal originally provided Vascular Intervention Program patients with a tool for tracking their health status and sharing this data with their healthcare provider but has expanded to include a number of initial patients access to their static electronic medical records and a place for patients to record their own personal health information. It is anticipated that in the future all GHC patients (and all those they have granted access to their records) will have access to the on-line patient portal, My Health Matters.

iii) Canada Health Infoway Sponsored: EMRxtra Program

(Linking Pharmacists to Electronic Medical Record Information):

One of the most recent projects is the EMRxtra Program. The first of its kind in Canada, this program expands the continuum of care to include the community pharmacists in Sault Ste. Marie, in a secure and confidential manner, through electronic systems. With a focus on cardiovascular disease, pharmacists in Sault Ste. Marie will be fully integrated into GHC's health care programs. With the consent of patients pharmacists will have access to their medical records in order look up patient drug profiles, lab test results, clinical intent of prescribed medications and the patient's care plan to provide the best medical care. Pharmacists will no longer need to decipher doctor's hand written prescriptions and prescriptions can more easily be filled after the physician's offices are closed. This project is being completed in partnership with Canada Health Infoway and the Ontario Pharmacists Association.

iv) Ontario's Ministry of Health and Long-Term Care and eHealth (Ontario)'s ePrescribing Demonstration Project

The Group Health Centre (GHC) is part of the Ontario's eHealth strategy to improve patient safety.

GHC is one of two sites participating in a ePrescribing Demonstration Project being hosted by Ontario's Ministry of Health and Long-Term Care and eHealth (Ontario). Electronic prescribing involves the physician or nurse practitioner using his or her computer to electronically generate, authorize and transmit prescriptions, through secure computer systems to pharmacists and other dispensers.

v) Healthcare Communications and Technology Centre:

In 2005, the Group Health Centre partnered with the Sault Ste. Marie Innovation Centre (SSMIC) in the completion of the Healthcare Communications and Technology Centre. This state of the art facility includes the GHC server room and IT office facilities, a GHC call centre for scheduling appointments and houses the operations of the SSMIC's Community Geomatics Centre.

vi) Health Informatics National Recognition and Award Winners:

The Group Health Centre (GHC) was the recipient of one of six Celebrating Innovations in Health Care Expo 2007 Awards and has been recently acknowledged in the October 2007 Ministry of Health and Long-term Care's E-health newsletter where it was stated,

"GHC has been nominated for a CIPA award. The Canadian Information Productivity Awards (CIPA), now in their 15th year, are a celebration of IT and innovation implementation excellence in all types of organizations across the country. A CIPA award constitutes the highest form of recognition for the capabilities of an organization and its executives, and simply getting nominated is an honour in itself. GHC has long been recognized as a trailblazer in integrating e-Health into the delivery of primary care. In his landmark 2002 report on the future of health care in Canada, Roy Romanow singled out GHC, calling the centre's integrated health care system the most advanced he had seen to date" .

In addition, in November 2007 Dr. Lewis O'Brien of the Group Health Centre won the Canadian Health Informatics "Community Based Physician Leader/Innovator" Award- for being a role model for using technology to improve the quality of patient care".

Health Informatics- Sault Area Hospital (SAH)

i) Meditech

The Sault Area Hospital (SAH) is currently undertaking a major IT project with the implementation of a complete Meditech Hospital Information System (HIS). This project will be the first hospital in the world to implement Meditech's new version (5.6). As a beta site for this software version, SAH will be a model site for other hospitals. This project is also unique as SAH will be a "greenfield" site since then entire IT infrastructure is being replaced as part of this project.

ii) Wait time Information System

The SAH is also part of a group of 50 hospitals implementing the Wait Time Information System. This project is on very aggressive timelines and involves staff from many departments in the hospital as well as physicians and their staff. An important piece of this implementation is SAH becoming part of the provincial enterprise Master Person Index (eMPI).

iii) New Hospital with Advanced IT Infrastructure

Further, the SAH has stated building a new hospital in 2007, which will be a state-of-the-art facility that incorporates an advanced IT infrastructure and leverages modern building design.

Local Health Area Network (LHIN) and Local Health IT Collaboration

i) Health Informatics Cluster Committee

Sault Ste. Marie has an impressive track record of cooperation among its health care agencies and local health organizations are committed to moving the Health Informatics Cluster agenda forward.

The GHC/SSMIC partnership to build the Health Communications and Technology Centre; the development of a collaborative GIS environment and the recent formation of the Algoma Healthcare Solutions group all point to a community that is willing to work together to achieve greater goals.

ii) One-Health Steering Committee

Another example is the collaboration between the SAH and GHC. These two organizations share human resource departments in an effort to streamline operations and create efficiencies. The SAH and GHC also participate in the Ontario North eHealth (ONeHealth) committee, which is ensuring the implementation of the Northern Ontario ICT Blueprint.

The mission of the ONe-Health Steering Committee is to build on existing investments to provide partner organizations with coordinated and interoperable information systems, building toward an integrated information system - as outlined in the Pan Northern Ontario ICT Blueprint - that supports the provision of care within Northern Ontario.

iii) Pan-Northern Ontario PACS Project (PNOPP)

The Pan-Northern Ontario Picture Archiving and Communication Systems (PACS) Project (PNOPP) is aimed at bringing a digital imaging service to healthcare providers in the North. The hospitals of LHIN's 13 and 14 have voluntarily agreed to enter into a joint venture for the purpose of the implementation and operation of a shared digital diagnostic imaging repository (DI-r).

Description

The Health Informatics Institute (HII) for Algoma University builds on world-class initiatives already in place in the fields of Health Informatics and Geographic Information Systems (GIS).

Health Informatics is defined as a trans-disciplinary field that seeks to discover how information, the management of information, and information/ communication technology can add value to health.

In the Northern Ontario School of Medicine 2005 commissioned report entitled, *Creating a Sustainable Health Research Industry in Northern Ontario*, it was stated, "Innovation occurs when interdisciplinary research intersects with highly qualified graduate students and research personnel. Northern Ontario has historically lacked some of the enablers to promote these strong collaborations, and now desires to aid in promoting academic excellence" (SHI Consulting, 2005). The Health Informatics Institute would serve as the supportive base for the Chair and collaborative partners from the other educational institutions, community, government, and industry.

The development of this Institute and the establishment of a Health Informatics Research Chair has already attracted significant investment from the private sector company ESRI Canada, a leader in the provision of GIS systems throughout the world.

The Waterloo Institute for Health Informatics Research is an important partner in this initiative. Dominic Covvey, NSERC/AFGA Research Chair and his team have and continue to provide invaluable assistance in the formation of the Institute and ongoing collaboration on research projects.

In addition, Northern Ontario focused economic development organizations recognize the potential for this project to generate significant returns and are being asked to contribute to ensure Sault Ste. Marie takes advantage of its early leadership position in this important sector.

The Health Informatics Institute (HII) is a new initiative for Northern Ontario that will under-take research that will contribute to building knowledge for the reinvention of the health care system, to better serve patients. Change will be promoted within the healthcare system through research projects that will involve the implementation of health informatics solutions. The knowledge gained will be disseminated by presenting research findings (in forums such as peer-reviewed journals, conferences, classes, workshops and government meetings) to educate the public, health professionals and policy makers.

The work of the Institute will provide a number of important benefits to Northern Ontario and also the Canadian health care system as a whole, by leveraging the community's established health informatics strengths, through the further development and implementation of best practices and advanced technology, supported by research.

The Institute will leverage existing industry contacts, advice from key advisors (WIHIR, etc.), health technology media outlets (Canadian Healthcare Technology Magazine, etc.); conferences, Internet sites; peer reviewed research journals, and word of mouth to attract and maintain the Institute.

Research funding obtained by the HII staff will enable R&D activities which will result in new products, services and methods that can be commercialized. Engaging the LHIN and other health organizations can also ensure new innovations and practices are adopted in the health sector. As new technology is developed and commercialized a host of professionals will be required to support the development, licensing and commercialization of this technology.

Economic development will be stimulated through the creation and improvement of health informatics solutions to the issues faced by the healthcare sector and the Northern Ontario health care community in particular. The HII will promote regular interactions between researchers, educators, Northern Ontario clinicians, and the Local Health Integration Network board members and managers. The Institute will lead their collaboration to implement researched supported health informatics solutions across Northern Ontario and the health care sector and transform health informatics solutions into products (where applicable), via spin-off companies, licensees and equity

partnerships. The Institute will also participate in recruiting human capital and identify and secure necessary financial resources through fostering partnerships with investors, educational institutions, organizations, companies and government.

The HII plays a critical role in developing research capacity at Algoma University (AU) and in attracting quality faculty and students. As newly independent university, it is important that Algoma University build its ability to attract research funding. The research of Algoma University's Northern Ontario Research Development Ideas and Knowledge Institute (NORDIK) is largely community based economic development and some technologies employed by the HII will be useful to their research. Further, building research capacity and partnerships will enable both to raise awareness and attract new funding.

The HII will also provide high exposure for AU as they build awareness and marketing around their new university and the exciting programs that they will offer. AU hopes to develop further courses and programs in the HI field, which will also help to attract students and drive revenue to the organization.

AU and Sault College are very interested in pursuing the development of educational programs and research projects that will contribute to the Health Informatics Cluster. Programs are in the planning stages but discussions have taken place with the Computer Science program at AU and Nursing program at Sault College. Both of these institutions are examining options for rolling out complementary programs. Sault College has already begun teaching Meditech (Health Information System) software skills within their nursing program. On a side note, other universities have been engaged in developing applications for GIS/health research projects. These centres are interested in collaborating on further GIS/health research projects and they include University of Laval, University of Calgary and Ryerson University.

Research Benefits and Opportunities

- Build research capacity
- Attract research funding to the region
- Attract skilled research and management professionals
- Drive job creation
- Develop commercial opportunities which will:
 - Foster new business
 - Support the start-up of new businesses
 - Drive job creation
- Attract and retain youth
- Provide worthwhile research which will benefit the healthcare system in Canada
- Foster global research collaboration
- Enhance reputation and standing of Algoma University
- Attract students to AU
- Build on niche strengths existing in SSM
- Contribute to achievement of Community IT Strategy

Accomplishments Within 5 Years

- (a) Members of the HII will be key participants and advisers in Health Informatics initiatives at the provincial, national, and international levels.
- (b) At least one major research project per year will involve at least one private sector company and will involve researchers that are Aboriginal people, Francophones, youth and or women.
- (c) 1-2 new businesses will be created in Northern Ontario as a direct result of Institute start-up funding that planted the seed for much greater business creation as the HII developed.
- (d) 30 new jobs will be created including the Institute's initial 5 jobs, student researchers hired as a result of research grants; the increase in member staff due to research projects and spin off company employees.
- (e) Research facilities for R&D will be created or enhanced for:
 - Algoma University (AU)
 - Sault College
 - Group Health Centre (GHC)
 - Community Geomatics Centre (CGC)
 - Northern Ontario School of Medicine (NOSM)
 - Health Informatics Institute (HII)

Mission

“To undertake, develop and support health informatics research that improves the efficiency and effectiveness of the health system and advances the strategic interests of Algoma University (AU), leveraging Northern Ontario's established health informatics strengths to further develop, implement and commercialize research based innovative technology solutions and best practices”.

Strategic Goals

1. To serve as the supportive body by which Northern Ontario health informatics researchers, industry, innovators and government officials will collaborate as members under one prominent umbrella to create and implement solutions that bring value to health
2. To produce innovative health informatics concepts, methods, techniques, tools, and systems
3. To provide evidence that comprehensive health informatics solutions can improve the efficiency and effectiveness of the health system.

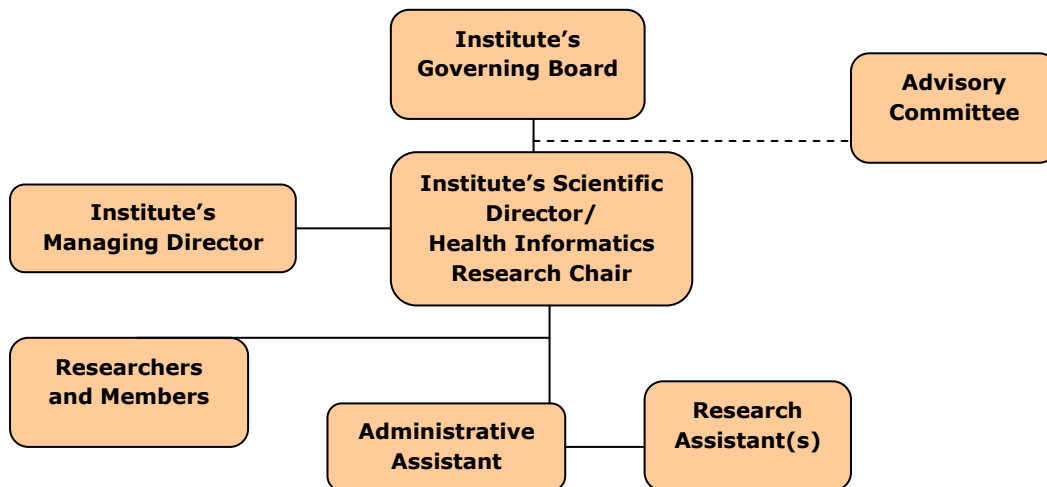
4. To position Northern Ontario as a leader in research and development in the emerging field of health informatics by leveraging and further developing the established health informatics cluster and its unique health informatics community based strengths
5. To attract peer-reviewed grants that drive intellectual property development in the form of peer reviewed research that will stimulate the creation and adoption of innovative health technologies and practices that will affect cultural change and improve health outcomes and patient satisfaction with the delivery of health care
6. To stimulate economic development in Northern Ontario through the creation of highly skilled and specialized employment opportunities and related spin-off opportunities based on the research and health informatics solutions generated

Proposed Corporate Structure

It is proposed that the Institute will be internally organized within Algoma University . This will require that this proposal be presented to Senate for approval. This structure will allow the institutions to take full advantage of the funding opportunities available to academic (not-for-profit) institutions. As part of Algoma University the Institute will also be able to take advantage of its already existing financial and administration infrastructure.

Proposed Governance/Management Structure

Organization Chart



Governing Board of Directors

The Governing Board of Directors will be comprised of a leading representatives from Algoma University, Northern Ontario School of Medicine (NOSM), Sault College, and the Sault Ste. Marie Innovation Centre (proposed members include Algoma U Dean,

Algoma U President, NOSM President, Algoma U and NOSM Department Chairs, Sault College President, Sault College Dean of Nursing, Algoma U and NOSM Head of Research, (HII Directors as *ex officio* members), and SSMIC Executive Director. Other future partners are possible.

The Governing Board of Directors will receive reports on progress and provide strategic suggestions and advice. They will be responsible for ensuring that the Institute's mission and goals are upheld. The Governing Board of Directors will meet at least once a year to:

- Review the progress of the Institute
- Approve updated goals, objectives and work plans
- Establish policies and guidelines governing the Institute's operation

Advisory Committee

The Advisory Committee will be comprised of leaders from the health system, companies that support the health system (e.g. Industry Leader representative), non-health informatics academics, (HII Directors as *ex officio* members), and Health Informatics Cluster Committee Members (proposed members include Local Area Health Network Northeast and Northwest E-Health Leads, Director Waterloo Health Informatics Research Institute, President ESRI Canada, President Infonaut Inc. , CIO Sault Area Hospital, CIO Group Health Centre, etc.)

The Committee will meet to identify health industry/sector needs and foster relationships with the health industry/sector. Meetings will be held at least once a year to provide advice ensure the Institute's objectives are met, including:

- Assisting to define the Institute's research themes and recommend future programs and directions
- Ongoing assistance in conceptualizing and developing Health Informatics Institute and its specializations definition, planning, obtaining funding, defining goals and constitution, pitfall avoidance.
- Guidance in definition of research and development agenda.
- Advice on developing profile and promoting the Institute.
- Helping to establish AU partnership with the National Institutes for Health Informatics (NIHI).
- Providing advice on connecting with key, relevant organizations (e.g., HI organizations) and individuals (e.g., HI academics worldwide).
- Access to collaborators and potential partners.
- Collaboration on proposal submissions.
- Guidance and problem solving re curriculum design and development (e.g., related to Algoma and any partner universities and colleges).
- Sharing various existing frameworks for proceeding with the establishment of the Research Chair and procedures for the evaluation of Institute membership.

Management Structure

The management structures of the following Institutions and organizations were explored and some key leaders were consulted in order to propose an appropriate management structure for the Health Informatics Institute:

- Waterloo Health Informatics Research Institute (WHIRI: headed by Health Informatics Research Chair Dr. Dominic Covvey at Waterloo University)
- Integrated Centre for Care Advancement through Research (iCARE: a joint venture between Capital Health and the University of Alberta)
- Professional Assessment of Technology in Healthcare Research Group (PATH: headed by Health Informatics Research Chair Dr. Nicola Shaw supported by iCARE, Capital Health and University of Alberta)
- Northwestern Ontario Cancer Research Institute (NWOCRI: at Lakehead University)

Principle Investigator/ Institute Scientific Director:

Industry sponsored Health Informatics Research Chair

The Health Informatics Research Chair will be appointed by Algoma University and will report to Algoma University through the Health Informatics Institute's Governing Board of Directors.

The Health Informatics Research Chair will be responsible for providing general leadership regarding the strategic direction of the Institute, for managing the achievement of Institute goals and objectives, for finding new opportunities for research and funding, for catalyzing and facilitating research programs, for enacting the plans of the Management Team, and for coordinating intra- and inter-theme planning and resource allocation.

Responsibilities will also include:

- Leading the Health Informatics research program at Algoma University
- Chairing Institute's Governing Board of Directors and Advisory Committee meetings
- Promoting the Institute nationally and internationally
- Actively seeking and attracting new Institute Members
- Overseeing the budget and funding related to the infrastructure of the Institute

Management Staff:

1. Managing Director

The Managing Director will manage the operations of the Institute, provide organizational and logistical support, serve as a public relations officer, serve as the initial point of contact between the Institute and internal and external individuals and organizations and will provide key support related to the finding of funding sources, the development of grant applications and contracts and the day-to-day management of the Institute's budget.

2. Administrative Assistant (Assistant to the Directors)

The Administrative Assistant will be responsible for distributing general announcements, taking calls, managing mailing lists etc.

3. Programmer/Analyst

The Programmer/Analyst will be responsible for development and up-keep of website, software and web casting

Researchers and Members:

Membership will be granted through an application process to ensure that those granted membership follow the mandate of the Institute.

Eligibility:

- Faculty members of all Northern Ontario Accredited Educational Institutions (Algoma University , Laurentian University, Lakehead University, Nippising University, Northern School of Medicine etc.)
- Management of LHIN 13 and 14
- Individuals and Organizations with mission and research interests/goals that are shared with the Institute

Supported by:

Research Support Staff:

4. Research Assistant(s)

The Research Assistants will be hired on by the members conducting research as research grants for their specific research projects become available.

Classes of Memberships and Process for Membership Selection

Similar to the Waterloo Health Informatics Research Institute Members Classes of Memberships are proposed as follows:

- **General Members:** General members are AU researchers participating in HI research in one of the Institutes Themes. The criteria for General Membership are: one must be an AU researcher where an aspect of one's research is in the HI area or is applicable to HI, and be willing to work within one or more of the Institute Themes. Candidate General Members will propose their involvement to the Institute's Management Team (via a letter of application and a CV). Additions to the general membership will be selected by simple majority vote of the existing Institute Staff and General Members based on the candidate's submission of a letter of application and a CV.
- **Student Members:** Student Members are students working on an HI-related project. These include undergraduates with Undergraduate Research Assistantships (URAs), graduate students participating in Masters and Ph.D. programs (AU or affiliated universities), and Postdocs. All students must be actively pursuing research in an HI-related area.
- **Affiliate Members:** Affiliate Members are non-AU researchers who contribute to the goals and objectives of the Institute by participating in Institute projects. The criteria for being admitted as an Affiliate Member are: one must be a recognized and funded researcher in HI or in an area that supports HI, one must participate in one or more of the projects of the Institute, and one must recognize involvement with the Institute in any HI-related publications.
- **Industry Partners:** Industry Partners are companies and health organizations that provide infrastructural or project-related resources to the Institute. Criteria for being an Industry Partner are: the organization must contribute financial or in-kind resources to the support of the Institute or to one or more projects carried out by the Institute, must agree to co-participate as an industry sponsor in relevant proposals, must provide a liaison person to relate with the Institute, and must agree to

recognize the Institute in communications relevant to its co-operation with the Institute.

Term of Membership

Each Member will be assessed for continued membership every three years by the Institute staff and the other general members. Continued membership will be determined based on the level of Health Informatics research participated in.

Research Themes

The Institute's activities will be focused within a number of research "Themes". The set of Themes will be reconstituted from time-to-time based on the interests of researchers, the success of Themes in securing resources, and external factors. The current proposed themes leverage community strengths and are:

1. Geospaital Health
2. Primary Care Informatics
3. Electronic Health Record (EHR)
4. Rural and Remote Health
5. Serious Games for Health (training and rehabilitation)
6. Change Management/Patient Safety
7. Economics and Health Informatics: Social Determinants of Health and GIS
8. System Development Topics:
 - Games for Health- Serious Games:
 - assessment of effects and value of:
 - playing games on health outcomes
 - educational games for health
 - implementation of games for health in hospitals
 - Health Portals
 - GIS applications

Potential Technology Solutions for Commercialization

- 3D GIS for Health Facility Management
- RFID Technology for Location Based Equipment/Patient/Staff tracking
- Web-based patient portals

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- Technology to facilitate home-based care
 - Video game technology for training and education purposes
 - GIS for epidemiology and Syndromic surveillance
 - Advances in electronic medical records
 - Advances in rural/remote healthcare
 - Advances in Telemedicine
 - Advances in PACS systems

Financial Sustainability Plan

Initial start-up costs

Initial start-up costs include salaries, Institute branding expenses, space and network technical assistance, and purchase of the following hardware and software not current available at Algoma University for use by the proposed new Institute staff:

Computer hardware and software licenses for staff

Network servers

Network licensing (e-mail licenses, anti-virus software etc.)

Teleconferencing, videoconferencing and web conferencing/ web casting support

Presentation Equipment

Printers/Fax machines

Scanners

Shredder

The initial start-up costs were sought from:

FedNor

Northern Ontario Heritage Fund Corporation (NOHFC)

ESRI Canada (GIS Industry Leader)

Algoma University

Ongoing Operating Expenditures

Ongoing Operating Expenditures including space, costs associated with conducting research and capital expenditures will be acquired from, research grants and capital grants. In the short term, office space will be secured by AU as committed in their in-kind contributions. Long-term, the Health Informatics Institute will move to its new location within AU's Biosciences building which is currently under construction.