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# **Strategic Research Plan 2011 - 2015**

**Cape Breton University  
Sydney, Nova Scotia, Canada**

**Prepared for the Canada Foundation for  
Innovation and the Canada Research Chairs program**

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## **Background and Major Objectives**

Cape Breton University is a relatively young educational institution, having been in existence only since the mid 1970s. The local community was instrumental in the conception of the institution and still has a significant impact on its programming and research interests. Many researchers are influenced by the local environment, geography, history and culture. Over the last decade, CBU has allocated significant resources to developing and expanding its research culture. Despite being young, CBU is a thriving educational institution with a broad and innovative array of degree, diploma and certificate programs, primarily at the undergraduate level. CBU has gained a strong reputation for the engagement of undergraduate students in research. Many undergraduate students receive an experience similar to graduate students at other institutions, making our undergraduates highly sought after by other institutions for graduate studies. Our students have successfully competed for Canada Graduate Scholarships, and SSHRC and NSERC postgraduate scholarships.

Currently, at the graduate level, CBU offers an MBA in Community Economic Development and, in co-operation with Memorial University, an MEd in Information Technology. A graduate program development committee, chaired by the Dean of Research and Graduate Studies, with a broad range of faculty representation, is currently examining proposals and establishing priorities and structures to enhance graduate programming. Proposals are currently in development for an MA in Heritage Studies, an MA in Social Justice and an MSc related to environment and energy. Over the next five years a significant emphasis will be placed on developing graduate programs with the research areas outlined in this plan being key components of that development.

The main thrust of this strategic research plan is to continue to develop a culture of research and scholarship. The core objective of this research plan is to build on our current research strengths and to expand into developing areas. This will require partnering with local, regional and national industrial and private sectors in addition to the traditional government funding agencies.

In existence for a little over 30 years, CBU is now undergoing a transformation. Many areas are developing research cultures and programs at the same time. To be a strong and vibrant university, CBU encourages and supports research in all avenues of its programs from arts and social sciences to natural sciences to health sciences to professional programs. It is important to state that the research concepts and foci identified in this document are only a subset of the full research activities within CBU and that to the best of its abilities CBU will encourage and support research in all areas pursued by its faculty. CBU also fully supports the academic freedom of its researchers. It is hoped that the areas identified here will generate synergy among researchers in a variety of disciplines rather than force any particular researcher into a specific area of research. The research themes identified in this document are only those that have been recognized as a priority over the next five years that will require significant infrastructure and strategic development.

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Today, from quantity and quality perspectives, CBU's research record is impressive, especially for an undergraduate institution. CBU ranked\* 51<sup>st</sup> among the 76 Canadian post-secondary institutions in total research funds received and 46<sup>th</sup> in total research funds per full-time faculty member. East of Quebec, CBU ranked 10<sup>th</sup> in total research funds received and 8<sup>th</sup> in total research funds per full-time faculty member. With respect to the 22 primarily undergraduate universities, CBU ranked 16<sup>th</sup> in total research funding and 9<sup>th</sup> in funding per full-time faculty member. CBU had the 14<sup>th</sup> largest increase (3<sup>rd</sup> largest east of Quebec) in research funding from 2007 to 2008. CBU researchers have attracted more than \$10 million in external funding since 2004.

It is also recognized that by its very nature, research is constantly evolving. What is cutting edge today may be obsolete in a few short years. What will be the hot topics of research in a year or two may not even be in the picture now. Thus, it is necessary for a strategic plan to allow for flexibility and to encourage emerging fields. It is also important that strategic research plans be reviewed, updated and refreshed in a timely manner. While a formal plan may only be updated every five years, it is an ongoing commitment and a dynamic rather than static action plan.

### **Undergraduate Research Engagement**

CBU prides itself and has gained an excellent reputation for engagement of undergraduate students in research. Students are active members of many research teams. In many disciplines our undergraduate students receive a research experience that rivals graduate level programs. While this naturally varies according to discipline and some disciplines lend themselves more to the involvement of undergraduates than others, CBU has made it a priority to encourage the involvement of undergraduates in research activities. These undergraduates are active members of the research teams and make a real and lasting contribution to the research being involved in all aspects of the research from developing the research questions, to active research and dissemination of the research results. Undergraduates are given the opportunity to carry out independent research and present their findings at institutional, regional, national and international symposia. During the summer of 2010, more than 60 undergraduate students were active members of research teams at CBU. To support undergraduate research, CBU has created the Student Undergraduate Research Forum (SURF), the Student Summer Lecture Series and a Student Research Newsletter. SURF gives undergraduate students the opportunity to present their original research findings to CBU faculty and staff as well as the general community. A natural part of its maturation will encompass the development of a broad offering of graduate programs. Nevertheless, CBU is committed to remain true to its roots and keep participation of undergraduates as an essential component of its research agenda.

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\* Data from the *CAUT Almanac of Post-Secondary Education 2010-2011*. All values are for the 2008 fiscal year.

## Graduate Programs

Currently, CBU offers an MBA in Community Economic Development and, through a partnership with Memorial University, an MEd in Information Technology. Both of these programs have research components and have students and faculty actively engaged in cutting edge research. In addition, numerous CBU faculty hold adjunct appointments with various universities across Canada (from Memorial University to the University of British Columbia). These appointments give faculty the capacity to supervise graduate students even in disciplines that do not have graduate degrees. Despite a limited array of graduate programming, there are graduate students actively carrying out research in many disciplines across the CBU campus.

While not all of the research concepts described below will lead to graduate programs in the immediate future, a long term goal is to expand the graduate level programs and the research concepts and foci will be the cornerstones of these programs. The research infrastructure provided through the Canada Foundation for Innovation (CFI) and the expertise of the research chairs will be key components of this development. The graduate development committee, chaired by the Dean of Research and Graduate Studies, is currently working with the Senate By-laws committee to establish terms of reference for a Graduate Education committee of Senate. The Graduate Education committee will be charged with oversight of graduate programs including vetting new programs, new courses and appointment of faculty to graduate studies. A proposal for an MA in Heritage Studies is currently in the final stages of development. It should be presented to the CBU Senate in Spring 2011, and then to the Maritime Provinces Higher Education Commission early Summer 2011 with formal approval and start of the program by Fall 2013. A proposal for an MA in Social Justice is early in the development stage and will follow the MA in Heritage Studies. It is anticipated that the proposal should make its way through the CBU approval process during the 2011/2012 academic year.

When the four research chairs attached to the Centre for Sustainability in Energy and the Environment (see below) are in place in 2011/2012, an interdisciplinary working group with membership including the research chairs and the academic departments in the sciences will be established with a mandate to develop an interdisciplinary Masters program (either MSc or MASc) with a focus on sustainability in energy and environment. The proposal should be submitted to the CBU Senate during the 2012/2013 academic year.

In conjunction with the MBA and MEd, the MA and MSc (or MASc) will be the heart of graduate programming in the near future at CBU. They are soundly rooted in the **Established and Emerging Research Concepts and Foci** and provide diverse and core areas for development of interdisciplinary research.

## Established and Emerging Research Concepts and Foci

Being a primarily undergraduate institution that is just starting to develop graduate programs, it is absolutely essential that the research concepts and foci be interdisciplinary and interconnected. Individual departments are generally too small and do not have the critical mass

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to “go it alone”. Neither does CBU have the resources to support major research and graduate programming in all disciplines at once. There has to be a gradual and incremental increase in both of research and graduate programming.

### INSTITUTIONAL SUPPORT NETWORK

A major objective of the CBU Strategic Plan for 2011 - 2015 is to develop a framework to expand research and innovation. To meet this objective, several simultaneous tactics are being pursued. For example: financial and human resources are being allocated to increase involvement in research and innovation; the institution is strengthening its efforts to obtain outside funding for research; industrial and community research partnerships are being enhanced; continuous improvements are being made to research facilities; and procedures are being developed to involve students, in particular to give faculty access to graduate students, more extensively in research projects. CBU has a very progressive system of internal research grants that can be used to supplement start-up grants and external funding, and serve as seed funding to develop projects for external funding. There is a system of teaching release for research and an evergreen computer lease program that provides faculty and researchers access to computer equipment that is refreshed on a three year cycle.

In 2011, several changes have taken place within the internal structure of CBU to enhance research and graduate programming. First, the mandate of the Office of Research has changed to focus on research services rather than research administration (responsibility for research financial accounting and reporting have been moved to the business office). Second, the responsibility for graduate programming and development has been added, creating the Office of Research and Graduate Studies headed by the Dean of Research and Graduate Studies.

To support researchers and help build the research culture, a full time research support officer (RSO) and industry liaison officer (ILO) have been hired and the focus has shifted to the support and promotion of research. The roles of the RSO and ILO are to work with and support faculty in identifying funding sources, the preparation of grant proposals, the pursue of commercialization and the dissemination of their research. CBU is a full participating member of Springboard Atlantic (a consortium of Atlantic Canadian universities and community colleges with funding from the Atlantic Innovation Fund to support research commercialization and technology transfer). In addition to the RSO and ILO, the office has a Research Officer who is responsible for undergraduate research and graduate fellowships as well as the administration of the research ethics and animal care approvals.

For the near future, one of CBU’s major goals is to be recognized and respected regionally, nationally, and internationally as an emerging university with substantial research expertise and productivity. The identification of research concepts and foci should in no way interfere with a faculty member’s ability to choose what to study. The aim of a concept designation is to identify areas of strength and emerging capacity and to identify areas that are likely to have significant activity in the near future thereby warranting a research chair and/or major research infrastructure.

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Over the last decade, CBU has used its Canada Research Chairs (CRC) and CFI allotment to build world class capacity in the sciences, culture & heritage and health research with a goal of building the necessary research capacity to make CBU attractive to top-notch researchers not only in these disciplines but also across the institution. The CRC and CFI awards were and continue to be the cornerstones of many of the emerging areas of expertise and research concepts and foci identified in this document.

CBU currently has a recognized or emerging expertise in four interconnected research concepts: “Cultural and Ecological Heritage”, “Fundamental Knowledge and Innovation”, “Social and Political Processes and Change” and “Sustainability and Community Development”. Each of these general concepts is multidisciplinary and presents areas of established and emerging strength. They are not independent, many research programs and researchers can identify with more than one theme and there is interconnectivity between them.

The relationship of the research chairs (see below) to the **Established and Emerging Research Concepts and Foci** and the interconnectivity of these areas is shown in Figure 1. While all of the chairs fit within at least two of the concepts and foci, many of the chairs fit within three or four. Each of the concepts and foci are described in the sections that follow.

### 1. CULTURAL AND ECOLOGICAL HERITAGE

Cape Breton has a strong vibrant culture and pride in itself. A rich industrial heritage has permeated the entire fabric of Cape Breton life and culture from music and theatre to commercial and business activities. A century of industrial activity around coal mining and steelmaking still are major influences in the lives of its people. Despite this industrial activity, Cape Breton Island is still a relatively pristine environment, and is often listed as a top vacation destination or a “wonder of the world”. A strong connection to the environment and how we are impacting the world around us is one of the driving forces behind the Centre for Sustainability in Energy and the Environment (CSEE).

There is also diversity in cultures on this small island and much of the research at CBU can be classed as transcultural and transdisciplinary. Cape Breton University has enjoyed a strong partnership with the Aboriginal communities of Atlantic Canada since its earliest beginnings. Today, after 30 years of relationship building, program development and mutual commitment; more than 250 Aboriginal students attend CBU.

A strong sense of culture and connection to our past and our environment has influenced the research activities at CBU. Five of the current research chairs have identified aspects of their research within *Cultural and Ecological Heritage*. Three of the planned chairs (see Figure 1) will have some aspect of their research in this area.

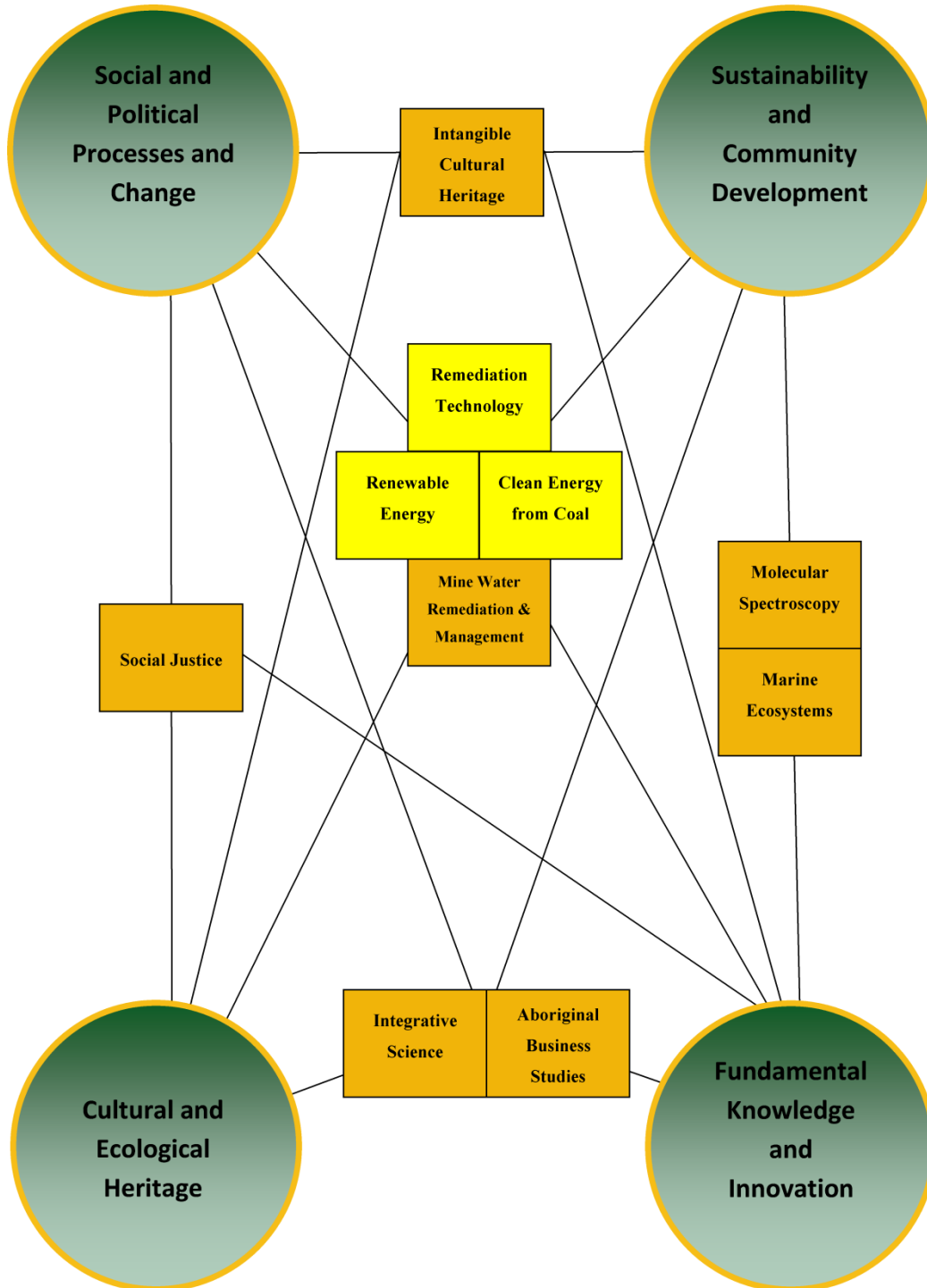


Figure 1. Interconnectivity of research chairs and research concepts and foci (yellow colour are planned, darker gold colour are current).



## 2. FUNDAMENTAL KNOWLEDGE AND INNOVATION

Fundamental knowledge and innovation are key components of all university research. The desire to understand what is currently not understood and to push the boundaries of knowledge are the key driving forces behind advances that impact the people's day-to-day lives. The peoples of Cape Breton have always been innovative and had a desire to expand fundamental knowledge. This was one of the driving forces within the community that started the push for an institution of higher learning and its evolution from a junior college to a college to a university college and now a university. Many of the CBU CFI projects over the last decade have created world class research facilities in such areas as biology, chemistry, cultural heritage, integrative science and nutrition that fall within *Fundamental Knowledge and Innovation*. As a result, CBU's research capacity and productivity across the institution have dramatically increased. There has been significant faculty renewal and expansion, particularly tied to this concept.

All of the current research chairs have identified "Fundamental Knowledge and Innovation" as part of the mandate of their research programs. Some aspects of the three planned chairs will also fall within this concept making it the foundation of research activity.

## 3. SOCIAL AND POLITICAL PROCESSES AND CHANGE

CBU researchers in the area of social and political change are not only active within the local community but also are making a difference nationally and internationally with important faculty research and humanitarian projects from Colombia to Zambia. Four of the current research chairs and three of the planned chairs have or will have activity in *Social and Political Processes and Change*. Three of the chairs can be identified as the key chairs in this area. The Viola Desmond Chair in Social Justice, the CRC in Integrative Science, and the Purdy Crawford Chair in Aboriginal Business Studies are all focused on some aspect of Social or Political processes and making constructive changes.

The major programming development in this concept during the period 2011 – 2015 will be the development of an MA in Social Justice. The MA in Social Justice will be a multidisciplinary and transdisciplinary degree that focuses on the theory and practice of social justice in a variety of contemporary settings.

## 4. SUSTAINABILITY AND COMMUNITY DEVELOPMENT

Five of the current and all three of the planned chairs are active in *Sustainability and Community Development*. The activities within this concept can be divided into *Community Economic Development* and *Sustainability in Energy and the Environment*.

### COMMUNITY ECONOMIC DEVELOPMENT

There is a long productive history of community economic development research at CBU. CBU offers an MBA in Community Economic Development and in addition, various

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institutes and resources have been established to facilitate such inquiry. For example, the Community Economic Development Institute promotes, encourages, and supports community economic development research and initiatives within a participatory framework. It has established a national and international presence through a network of research associates. The Small and Medium-Sized Enterprise Institute provides a base from which research into small and medium-sized businesses can be undertaken. The Marketing Research Centre offers research and business services to the regional communications, financial, manufacturing, retail, service, and tourism sectors. The Centre for Housing Initiatives carries out research on housing issues and initiatives, with special attention to Cape Breton.

### SUSTAINABILITY IN ENERGY AND THE ENVIRONMENT

Two of the biggest challenges of the current generation are successfully managing industrial pollution and finding sustainable sources of clean energy. The CSEE represents a \$20 million initiative (\$7.5 million from Government of Canada, \$7.5 million from Government of Nova Scotia, \$5 million from private sector partners) to find solutions to these challenges. The CSEE includes a new \$12 million state-of-the-art research facility that will be operational in 2011. The CSEE vision is to create a cutting-edge and *green* facility that will act as a nexus, attracting the finest researchers and experts from around the world. As outlined below, the CSEE will be a major research focus over the coming years with one industrial chair already in place and three more to be announced in 2011/2012. The CSEE is evidence of the success of CBU's strategy of using the CRC to build a research culture with a goal of attracting other chairs to CBU from a national and international domain.

During the period covered by this plan, a Masters level degree in either science or applied science will be developed with a focus on sustainability in energy and environment. The research chairs connected with the CSEE along with researchers in chemistry, biology, geology and engineering will be instrumental in the development and delivery of this new degree.

### RESOURCES SUPPORTING THE RESEARCH CONCEPTS AND FOCI

There are a number of resources at CBU that align well with these research concepts and foci at CBU. For example:

- Through the **CBU Library**, CBU is a member of the **Canadian Research Knowledge Network** which provides equal access to more than 1000 scholarly journals for over 650 000 university researchers across Canada. In addition, the CBU library has several specialized collections (**Bras D'or, Jacobite, Khattar**) available to researchers. These provide access to approximately 11 000 items on various aspects of the economy, culture, and living conditions of Cape Breton. In addition they provide both rare and unique items on 18th century Scottish and Canadian History; the political and social history of New France, Nova Scotia and Canada; geography; literature; and the history and culture of the Middle East.
- CBU is a member of the **Atlantic Computational Excellence network (ACE-**

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net), providing access to high performance computing as well as high quality video conferencing equipment.

- CBU has an active **Evergreen Computer Policy** that renews office computers for faculty and other researchers every three years.
- A wealth of archival information on Cape Breton's unique cultural heritage is available to researchers at the **Beaton Institute**, a major facility at CBU dedicated to the collection and conservation of the social, economic, political, and cultural history of Cape Breton Island.
- The **Unama'ki College** at CBU oversees research conducted in Mi'kmaq communities and administers the **Mi'kmaq Resource Centre**, which houses an extensive collection of manuscripts, documents, and photographs on Mi'kmaq history and culture.
- The **Centre for Research on Employment and Work** includes research on the history of labour-management relations in Atlantic Canada in its mandate.
- The **CBU Art Gallery**, which has an extensive permanent collection with an emphasis on contemporary Canadian works and the artistic traditions of Cape Breton, also offers research facilities. The CBU art gallery is one of the largest untapped resources in the region. There are holdings that are the envy of much larger galleries. A research thrust over the next five years will be to engage both internal and external researchers in using these resources.
- The **Boardmore Playhouse**, the centre for theatre arts at CBU, is fully equipped for theatrical and live music productions and houses state-of-the-art lighting and sound systems.
- The **Louisbourg Institute** was established at CBU in 1980 to facilitate collaboration between CBU and the Fortress of Louisbourg on mutually beneficial projects which utilize the strength and resources of both organizations. The proposed MA Heritage Studies is a direct result of this partnership.
- CBU also has an exchange memorandum of understanding with the Scottish University of the Highlands and Islands which also may lead to shared research initiatives on Gaelic language and culture.
- The **Bras d'or Institute** provides capacity for marine research and ecosystem-based management of natural resource available to the academic, public and private sectors.
- The **CSEE** will provide an effective means for public education in sustainable practices through public engagement, outreach research and community applications
- Two CFI awards and a CRC in intangible cultural heritage have lead to the creation of the **Centre for Cape Breton Studies** at CBU, which possesses significant resources, including a state-of-the-art performance space, recording studio, digitization lab, and video teleconferencing suite. New classrooms and smaller seminar spaces perfect for graduate students are also located in the centre. The Centre for Cape Breton Studies is home to the highly regarded scholarly

journal *Material Culture Review*.

- The **Centre for Natural History** develops and promotes research on the natural history and biodiversity of Cape Breton Island and provides a base for students and researchers studying Cape Breton natural history.
- The **Community Economic Development Institute** offers community economic development training, policy advice and evaluation, organization and community strategic planning and information about community consultative processes. The Institute has established a national presence across Canada through a network of research associates.
- The **Centre for International Studies** is responsible for promoting internationalization and global awareness both within Cape Breton University and in the community.
- The **Children's Rights Centre** conducts research on children's rights. The Centre also monitors the implementation of the United Nations Convention on the *Rights of the Child* in Canada, particularly in Nova Scotia.
- The work of the CRC in Integrative Science and the corresponding CFI award have lead to the creation of the **Institute for Integrative Science and Health** which works to integrate the strengths of Indigenous knowledge with the strengths of the Western scientific knowledge.
- The **Marketing Research Centre** offers research and business services throughout Atlantic Canada.
- The **Small and Medium-sized Enterprise Institute** provides faculty and students with a base from which research into the SME sector can be undertaken.
- The **Small Business Development Centre** offers support and services in three key areas: training, business counseling and networking opportunities.
- The **Tompkins Institute for Human Values and Technology** investigates the impact of technological change on society in general and, more particularly, on the Cape Breton community.

## Research Chairs

Currently, CBU has research chairs in Integrative Science, Intangible Cultural Heritage, Molecular Spectroscopy, Marine Ecosystem Research, Mine Water Remediation and Management, Aboriginal Business Studies, and Social Justice. Chairs in Remediation Technology, Clean Energy from Coal, and Renewable Energy are planned in the near future. In total, currently there are seven research chairs at CBU with plans to add three more chairs over the next year or two. The chairs and their research concepts/foci are summarized in Table 1 and illustrated in Figure 1. Generally, the research chairs fit within more than one concept and foci, frequently in three or four of them. CBU has used the CRC to seed the development of a strong research culture in those areas and others in the university. As a result, other non-CRC chairs have been created and have magnified the impact of the CRC program. CBU has successfully used the CRC to have a much further reach than one would associate with the direct chair

allocation.

#### CANADA RESEARCH CHAIRS

During the period from 2001 to 2005, CBU nominated highly successful existing CBU researchers with the goals to develop the research culture and to make CBU attractive for other researchers. This resulted in a Tier I chair in Integrative Science, a Tier I chair in Intangible Cultural Heritage and a Tier II chair in Molecular Spectroscopy. These have been tremendously successful and the departments with CRC have seen a large growth of research activity and have attracted other very strong researchers to CBU. In particular, the departments of chemistry, biology, and culture & heritage have several very active new researchers that have been successful in receiving CFI, NSERC, and SSHRC as well as other funding. While these departments have seen a direct impact of the CRC, there has been a ripple effect throughout the university resulting in increased research activity and other chairs across the institution.

During the 2008 reallocation exercise CBU saw a reduction in its allocation and when the Keefe CRC expires in 2011, it will not be renewed. A consultation process has begun and an advisory panel of the Vice-President Academic (chair), the Academic Deans and the Dean of Research and Graduate Studies has been established to advise the President on the allocation of future CRC as they become available. Since CBU's allotment of CRC is small, the allocation of CRC will not be tied to individual departments but rather will be viewed holistically for the university. When a CRC becomes available the advisory panel will seek input and proposals from the academic departments within the university as to areas in which a chair can be established within the concepts and foci in this strategic research plan. After receiving such input, the panel will provide advice to the President on the proposals. This process will start 8 – 12 months prior to a chair becoming available (whenever possible) and will include an international search for the nominee.

CBU's first CRC was a female candidate working with Aboriginal communities to integrate Indigenous knowledge with western science. Currently, the CRC at CBU are one female and two males. Gender and minority equity are a priority and all chair appointments will be an open and transparent process, with the principles of equity at the forefront. However, with such a small number of chairs, one has to realize that the distribution may fluctuate. To the best of its ability CBU will try to maintain a 50% distribution of female CRC at all times.

#### INDUSTRIAL AND OTHER RESEARCH CHAIRS

As our CRC allotment is fully subscribed, the plan for the coming years is to use the CRC as a foundation to build other research chairs such as industrial and private sector chairs. This is already showing benefits in that CBU has established, through both internal allocation of resources and successful partnerships with external partners, an Industrial Research Chair in Mine Water Remediation and Management, (Christian Wolkersdorfer, Department of Engineering), a University Research Chair in Marine Ecosystem Management (Bruce Hatcher, Bras d'Or Institute & Department of Biology), the Purdy Crawford Chair in Aboriginal Business

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Studies (Keith Brown, Shannon School of Business), and the Viola Desmond Chair in Social Justice (Graham Reynolds, Department of History & Fine Arts).

As part of the Centre for Sustainability in Energy and the Environment (CSEE), new industrial research chairs in the areas of Clean Energy from Coal, Remediation Technology, and Renewable Energy are planned. Discussions are underway with several industrial partners and these chairs should be in place during 2011/12.

### **Plan for Canada Foundation for Innovation**

To date, CBU researchers have been awarded 15 infrastructure grants from the CFI totaling more than \$4.3 million. These projects have created and are creating world-class research facilities in many areas at CBU. They were instrumental in the fostering of the research activities in those areas and have had an impact not only in their specific disciplines but across the institution.

In the period covered by this plan, it is expected that major infrastructure projects will be coming forward to support research in the concepts and foci identified above. The CSEE will no doubt be a major part of this starting in the latter half of 2011. However, it is anticipated that other areas within these concepts and foci will also be developed through the CFI program. The focus will be on emerging areas rather than further applications from researchers that have had previous success. The intent is to use the CFI programs to maximize the impact across all disciplines within the institution.

### **Measures of Success**

The success of any strategic plan has to be measured in both short and long term goals. In the short term, success of this plan will be measured by the development of graduate level programs, an increase in research activity and a resulting increase in funding applications. Over the long term, success will be measured through increased graduate student programs and research; recruitment and retention of outstanding researchers; increased research activity and capacity; increased external funding; increased private sector partnerships; increased commercialization, knowledge transfer and dissemination of research through publications and conference presentations; and the development of a vibrant research culture.

### **Planning Process to Develop this Plan**

While the research directions are continually evolving in any university and establishing a plan is often a moving target, it is vital and necessary for any university to have an inclusive process that allows input from all areas of the university. A plan that is developed without faculty input is doomed to fail and may be a futile exercise. This plan was developed in collaboration between the Dean of Research and Graduate Studies and the Research Committee of the CBU Senate. The Research Committee includes faculty from all CBU academic schools

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as well as student representation. Once approved at the Research Committee, the plan was presented to the full CBU Senate which includes representation from the CBU administration (including all the Academic Deans) and faculty. A notice of motion for approval of this document was given at the May 6, 2011 Senate meeting. The document was made available to the CBU community and a town hall meeting was held on May 12, 2011 for feedback. The document was revised based on feedback received, reapproved by the Research Committee and approved unanimously at the June 17, 2011 Senate meeting.

### **Future Strategic Research Plans**

As mentioned near the beginning of this document, the research concepts and foci identified in this plan do not represent the totality of research at CBU. As research programs evolve and new faculty members are hired, such existing areas, and others not yet recognized, indeed may be emphasized in future versions of the institutional research plan. In fact, it is hoped that the Strategic Research Plan will both guide and motivate the continuing development of a rich and productive research culture. The CBU Strategic Research Plan is dynamic and open to annual update as necessary with a complete re-examination every five years.

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Table 1. Research Chair Summary (as of June 2011)

<b>Research Concepts &amp; Foci</b>	<b>Chair Title</b>	<b>Chairholder</b>	<b>Chair Type</b>	<b>Funding</b>	<b>Time Period</b>
All 4	CRC in Integrative Science	Cheryl Bartlett	Tier I CRC	SSHRC	2002 – 2009, 2009 – 2016
All 4	CRC in Intangible Cultural Heritage	Richard MacKinnon	Tier I CRC	SSHRC	2005 – 2012
2 & 4	CRC in Molecular Spectroscopy	Dale Keefe	Tier II CRC	NSERC	2006 – 2011
2 & 4	University Chair in Marine Ecosystem Research	Bruce Hatcher	University	University	2004 –
All 4	Industrial Research Chair in Mine Water Remediation and Management	Christian Wolkersdorfer	Industrial	Enterprise Cape Breton Corporation / Cape Breton Development Corporation	2008 – 2013
All 4	Purdy Crawford Chair in Aboriginal Business Studies	Keith Brown	University	Private Sector / INAC / Province of NS / Enterprise Cape Breton Corporation	2010 –
1, 2 & 3	Viola Desmond Chair in Social Justice	Graham Reynolds	University	Private Sector	2010 –
All 4	Chair in Remediation Technology	TBA	Industrial	TBD	2011 –
All 4	Chair in Clean Energy from Coal	TBA	Industrial	TBD	2011 –
All 4	Chair in Renewable Energy	TBA	Industrial	TBD	2011 –