

AGING IN PLACE:

Optimizing Health Outcomes
Through Technology, Design
and Social Inclusion

2010–2016

Acknowledgments



During my time as President of Sheridan, it has been a privilege to witness the incredible work of the Centre for Elder Research. It has been especially exciting to see the Centre build and grow a strong community partnership network with a wide variety of collaborators through the support of NSERC. These partnerships have already resulted in many remarkable technologies, strategies and services that will not only support our older adults and their caregivers, but boost our local economies by enhancing innovation.

Dr. Jeff Zabudsky,
President and Vice Chancellor



The Centre for Elder Research holds an important place in our institutional history as one of the first of Sheridan's Research Centres. Through hard work and visionary leadership, the Centre has become a model of applied research excellence for our community. As we progress on our journey to become Sheridan University, the Centre will continue to play a vital role in providing opportunities for our students and professors to engage with our communities, and contribute to social innovation through Sheridan's distinct approach to creativity.

Dr. Mary Preece,
Provost and Vice President, Academic



The Centre's projects over the life of this NSERC grant have created many high quality research opportunities for Sheridan students. One of the key impacts of the Centre's work is the way it has brought together students from different disciplines, ranging from computer science, to gerontology, project management, marketing, social service and more, in order to improve the quality of life for older adults. We are very proud to share their successes in this report.

Brian Jervis,
Associate VP, Scholarship, Research and Creative Activities (SRCA)

Message from the Centre

October 2016

In 2010, the Centre was awarded a five-year, \$2.3-million grant from the Natural Sciences and Engineering Research Council (NSERC) to collaborate with small- and medium-sized companies to support them in the design of products, services and processes intended to benefit older adults and their families. This grant was subsequently extended for a sixth year, allowing us the extra time to conclude certain projects and undertake new ones.

It is hard to believe that six years have passed since the launch of this research initiative, and even longer than that since the project was originally conceived. Since our launch, there have been many advances in technology and how it can benefit older adults, including:

- The explosive rise in the use of mobile technologies.
- New design considerations that focus on form and function.
- An increased recognition of the health and well-being benefits of social inclusion.

We would like to acknowledge the foresight, imagination and dedication of the 14 businesses that have collaborated with us throughout the lifetime of the grant. In addition to our formal business partners, we had the opportunity to work with 84 Sheridan student Research Assistants who brought their diverse skills and experiences and their enthusiasm to over 40 unique NSERC projects. More difficult to quantify is the number of older adults who contributed to this body of work by testing products, completing surveys, participating in focus groups, etc. Even more difficult to estimate is the potential reach of the research results to benefit older adults in the future.

We would be remiss if we didn't acknowledge the financial support we received from NSERC, without which the work of the last six years would simply not have been possible. Finally, we would like to acknowledge the ongoing and steadfast support of many different departments and individuals at Sheridan, particularly the Office of Undergraduate Research.

You can be assured that the Centre will build on the achievements of the last six years and that the results will inform new and emerging areas of inquiry.

We extend our profound thanks to each of you who has contributed to our work and look forward to continuing to conduct meaningful, innovative, Lab to Life® research.

Pat Spadafora, MSW
Director
Centre for Elder Research
Sheridan College

Lia Tsotsos, PhD
Principal Researcher
Centre for Elder Research
Sheridan College

Welcome to the Sheridan Centre for Elder Research

The Centre for Elder Research conducts innovative Lab to Life® research that enhances the quality of life of older adults while serving as an education and research hub for Sheridan and the broader community.



Creating possibilities that contribute to the quality of life for older adults – not just in our local communities, but everywhere – is what you will discover at the Centre for Elder Research.

The Centre was launched in 2003 at the Oakville, Ontario campus of Sheridan College. Sheridan was ‘first out of the gate’ among Canadian colleges in establishing a campus-based applied research centre dedicated to enhancing the lives of older adults and their families. The Centre has an established track record in applied research and a reputation as a leader that challenges traditional thinking, creating possibilities that transcend historical boundaries.

The applied research conducted at the Centre has contributed to the implementation and evaluation of programming at all levels of society, from the general public and industry partners to regional and municipal policy-makers. Recognizing that population aging impacts every sector of society, the Centre conducts research related to many aspects of aging; however, four overarching research themes have evolved over the past 13 years. These include

- An emphasis on technology to support healthy aging.
- The experiences of older immigrants.
- The global business of aging.
- The physical, psychosocial and cognitive benefits of participation in the creative and performing arts.

Underpinning all initiatives at the Centre is our commitment to promoting positive images of aging and challenging outdated stereotypes and ageist attitudes and beliefs.

Embracing an interdisciplinary approach and, working closely with faculty and staff from all Sheridan campuses, the Centre is able to directly support the scholarship of teaching and learning at Sheridan. As a result, the student experience is enhanced through opportunities to address contemporary societal matters, in this instance a rapidly aging population and the challenges and opportunities inherent in this demographic shift.

Our applied focus, Sheridan's institutional strengths and our strong network of academic, community and industry stakeholders positions the Centre to ensure that knowledge is effectively translated into goods, services, programs and policies that directly benefit older adults and their families. Our goal is to be the leader in transforming research results into practical solutions.

Overview of the grant

Aging in place: Optimizing health outcomes through technology, design and social inclusion

In 2010, the Centre for Elder Research was awarded a five-year, \$2.3-million grant by the Natural Sciences and Engineering Research Council (NSERC) to work with small- and medium-sized companies to help them to effectively reach an aging demographic and to create products, services and processes to help older adults age in place.

Overall Project Goals:

- To design, create, validate and implement a variety of age-friendly technology applications, including those that support healthy cognition. By developing novel, field-tested technologies, and incorporating them into services and programs, older adults can continue to age well in a range of settings, from living independently in the community to living in long-term care homes.
- To improve the quality of, and access to, web- or mobile-based technologies and services for older adults. Meaningful social interactions are positively correlated with health outcomes; ensuring that older adults remain connected to society (and their families) digitally can be expected to enhance their health and well-being. Additionally, this will create innovative opportunities for service provision as online tools can be customized to benefit older adults who live in a variety of geographic locations, or who present with unique personal challenges that may prevent them from accessing services in person.
- To open channels of communication and facilitate dialogue between different market segments, community service providers and mature consumers. Population aging impacts everyone; the best way to prepare for the future is to create it by promoting effective collaboration that furthers shared goals. This grant was explicitly designed to cultivate and support interdisciplinary, collaborative opportunities between partners representing sectors that, historically, had not worked together.

NSERC Partners:

Acclaim Health | Attune Aging Strategies & Solutions | DynamicBrain & Posit Science |
iCare Home Health | Jibestream | LifeTimes | *pigeon brands | PointerWare | Recreational Respite |
Schlegel Villages | Sienna Senior Living | Tertec Enterprises | Vintage Fitness & Spirit50

Acclaim Health



Acclaim Health is committed to helping people live independently in their homes with the best possible quality of life. By providing individuals of varying abilities and needs with quality, community-based health care solutions, Acclaim Health is able to help over 24,000 people per year with their suite of programming and support options. In addition to offering Adult Day Programs for individuals living with Alzheimer's disease or dementia, Acclaim Health arranges for home health care support, hospice and bereavement support, volunteer visiting, palliative care consultation, caregiver education and support and memory visiting programs.

As one of Acclaim Health's locations is in the same building as the Centre for Elder Research, both groups have benefited from a long-standing and productive partnership. In addition to taking part in the field-testing of newly developed technologies supported by the NSERC grant (including the LifeTimes Game of Reminiscence app), the specific research conducted with Acclaim Health has explored factors that contribute to the timing in a caregiver's decision to seek help, and how technology might support the caregiving experience. Of particular interest was the issue of long-distance caregiving, and how Acclaim Health could play a role in helping those caregivers who live far away from the individuals they care for. In continued partnership with the Centre, the Acclaim Health team is working towards innovative ways to use technology to support their work and the individuals they serve.

We have been fortunate to be a partner in the NSERC grant through our project "The Caregiver Experience: Accessing Timely and Beneficial Supports." The results of the research reinforced the need for early support in the progression of the disease and the role technology can play in enabling timely support to caregivers, potentially mitigating or reducing burnout or crisis.

There is no doubt that this partnership has helped to enhance the quality of life of both our caregivers and the individuals being cared for and strengthened our Caregiver Support and Education program by allowing us to continue to be progressive and responsive.

Nancy Fazzalari, former Director, Acclaim Health Alzheimer Services

Attune Aging Strategies & Solutions



Attune Aging Strategies & Solutions supports aging in place through programs and instructional workshops created by a Physiotherapist and an Occupational Therapist to meet the specific needs of older adults and their caregivers. With a focus on enhancing safety and promoting independence, Attune founders Jim and Anita Salituri have developed a suite of exercise programs that are designed to allow older adults to build and maintain strength, improve their balance and cardiovascular ability and gain flexibility. They also work closely with home care providers to develop custom education and training programs, enhancing the ability of the staff to provide high quality care to adults of varying abilities.

With the results gained from extensive investigative and pilot work conducted with the Centre for Elder Research, the Attune team was able to further its understanding of the clients they serve, providing them with a solid foundation for their business and product development. Attune Aging Strategies & Solutions proudly launched as a new Canadian business at an event held at the Sheridan Centre for Elder Research in November 2014, and celebrated the release of its first product, the Exercise Essentials DVD Program for Seniors. They are continuing to share their 'tips of the trade' as they build their product offerings and continue their outreach into the community and health care space.



Attune Aging Strategies & Solutions may have remained in the “idea-stage” without the expertise and resources received from the Sheridan Centre for Elder Research via financial support provided by the NSERC grant. We are now in a strong position to address the growing needs of older seniors and their caregivers through our programs and instructional workshops. We are excited to continue on towards the next stage of our journey!

Anita Salituri, Owner and Founder, Attune Aging Strategies & Solutions

DynamicBrain and Posit Science



DynamicBrain is the Canadian partner of Posit Science Corporation, the leading provider of clinically-proven brain fitness programs. Both companies are passionate about educating the public on the importance of cognitive health and supporting ways for Canadians to include brain training as part of their overall healthy lifestyles. Through individual, yet coordinated, partnerships with the Centre through the NSERC grant, both DynamicBrain and Posit Science have been able to raise awareness and increase their visibility in Canada through various conferences, public forums and organization-specific events.

Specifically, with support from the Centre, DynamicBrain was able to establish the very first 'brain fitness centre' in a public space at the Oakville Public Library, conduct educational and hands-on workshops to help older adults understand the relationship between cognition and fall risk and explore collaborative partnerships with retirement and long-term care providers to offer cognitive training programs to their residents. Furthermore, structured outreach to a group of Toronto-based audiology clinics has resulted in a strategic partnership that leverages the link between hearing and cognition to support audiology patients as they work to regain and maintain their auditory function. Together, the research and implementation outcomes of this project have resulted in an improvement in the cognitive health of countless older adults across Canada and a set of novel ways that DynamicBrain and Posit Science can both ensure their products reach the individuals who could benefit from them the most.

The applied research on our brain training program, BrainHQ, that led to establishing 'brain fitness centres' in public libraries and community centres, conducting workshops on driving cognitive training and fall prevention, as well as applying the program to hearing centres, retirement residences and other organizations were absolutely priceless – Thank you Sheridan Centre for Elder Research!

Frieda Fanni, President, DynamicBrain

iCare Home Health



iCare Home Health's mission is to deliver 'best in class' personalized home health care services, with a strong emphasis on client advocacy and giving back to the community. In addition to their comprehensive suite of services, which includes home-based nursing and caregiving support, 'handyman' services and therapeutic art programs, iCare also offers a Navigator service that can provide education and support to clients and their families as they navigate the complexities of the Canadian health care system. Through iCare's partnership with Pharmaceutical Innovation Ltd., and supported by the NSERC grant, they were able to work with the Centre to develop a new, mobile-based app called Health Espresso.

Health Espresso integrates with, and complements, iCare Home Health's existing services while also standing on its own as a comprehensive medication and health management app. It can track medication intake, provide audible reminders for medication timings and medical appointments, use location-based technology to locate the nearest hospital or health care facility, ensure prescriptions are automatically refilled and track body readings in real time using Bluetooth pairing. Secondary users (either family members or health care professionals) can also be authorized to access the app's information, allowing them to act as 'virtual caregivers' and, in some cases, help prevent adverse health outcomes. The prototype version of the app was launched in July 2016, and the iCare Home Health team is looking forward to pilot testing the app with local hospitals in the fall of 2016.

While iCare Home Health and its partner, Pharmaceutical Innovation, worked on the development of the Health Espresso app, the Centre provided valuable research data that helped us to better leverage technology to meet our targeted demographic's needs. The Centre team supported the process throughout in several ways including liaising with the development team, providing valuable input on Health Espresso's direction and co-hosting the recent successful soft launch event. We are very fortunate to have had the opportunity to work with a truly dream team at the Sheridan Centre for Elder Research and look forward to other collaboration opportunities in the future.

Rick Menassa, President, iCare Home Health

Jibestream



JIBESTREAM



Jibestream's mission is to make complex spaces instantly familiar. They accomplish this by combining location-aware indoor navigation technology, business rules about the use of space and detailed, interactive maps to develop universally accessible ways for individuals to more effectively navigate through spaces. Their way-finding software is being used by hospitals, shopping malls and corporate spaces around the world. They also offer app-based pairing so users can benefit from indoor turn-by-turn navigation and context-based messaging.

In partnership with the Centre, Jibestream achieved much more than their original goals. They conducted market research to investigate new product and market opportunities and consolidated research regarding accessibility standards for digital media, which resulted in the publishing of a Jibestream Accessibility Standards Guide. They also conducted focus groups with older users to evaluate the accessibility of their software, along with its compliance to accessibility standards. These outcomes helped Jibestream establish new internal standards for Universal Design to accommodate all user types within one user experience whenever possible. Together, these projects, and the related product and user experience enhancements, opened the door for new business opportunities for Jibestream, helping them grow into larger and more visible markets.



The grant through the Centre for Elder Research has allowed Jibestream to take significant steps to evolve our software to be accessible for the broader community, including the elderly. Without this grant, we would not have been able to create a universal and accessible product that is helping Jibestream be more competitive and to better serve the community.

Chris Wiegand, CEO, Jibestream

LifeTimes

lifetimes™
games of reminiscence



LifeTimes The Game of Reminiscence was born out of the unique challenges facing two sisters as they supported their mother who was living with dementia. While searching for ways to facilitate deeper and more emotional connections to their mother, they began using old photographs as the jumping off point for structured conversations. These photos and conversation ideas eventually became a card-based game and then a mobile app called LifeTimes. Using photographs from their childhood, along with conversation prompts with increasing levels of complexity, LifeTimes can help deepen relationships between family members and friends, or between staff and clients in supportive care environments. The photographs encourage social interaction, stimulate memories and conversation, and also enrich memoir and family legacy writing.

With the Centre for Elder Research, the LifeTimes team conducted a thorough usability analysis of the app in order to improve its design and function. The Centre also completed a comprehensive competitive analysis of other reminiscence-based games currently on the market, in order to better understand LifeTimes' unique offering within this space. In addition, the LifeTimes app was used for an intervention study with a group of Social Service Worker - Gerontology students from Sheridan at their field practicum sites and with clients and staff at Acclaim Health. These intervention studies provided critical feedback about the private and group use of the LifeTimes app. These projects culminated in a launch event for the app, which gave the LifeTimes team the opportunity to share their story and products with a diverse audience of potential users and community agencies.



A big shout out to our partners at the Sheridan Centre for Elder Research for hosting our official app launch at Sheridan College. The event was well attended with representatives from Acclaim Health, Alzheimer Society, Gerontology professors and a cross section of professionals from within the field of aging. And a personal thank you to our outstanding student Research Assistant, Paola Hernandez Soto, for all her organizing. It was a great afternoon... especially the cake!

Carol and Mary Jane McPhee, Developers and Co-owners, LifeTimes The Game of Reminiscence

*pigeon brands

***PIGEON BRANDS**
BRAND DESIGNERS SINCE 1977



*pigeon brands builds and reinvents powerful brands to create meaning for consumers. In nearly 40 years of business, *pigeon has partnered with over 4,000 brands in a wide range of different categories. They believe strongly in creating impactful connections for shoppers, and have worked to develop smart and targeted point of purchase initiatives.

Since many of *pigeon's clients directly or indirectly target older consumers, it was important for members of *pigeon's studio to gain a better understanding of this older demographic. In that way, they can both bring awareness to their current client base of the unique challenges and opportunities of marketing to older consumers, while leveraging this information to attract new clients who are entering this space.

With the Centre's support, *pigeon took part in a valuable, in-depth market analysis that explored the preferences and interests of older consumers as well as the barriers and facilitators they experience when it comes to making purchases in person or online. An additional exploration into the 'cost of waiting' to target older consumers helped *pigeon understand the potential impact (financial or otherwise) on their clients if they are not able to adjust to the changing demographic. Together, these results and findings will help *pigeon maintain its position as Canada's premier branding and design agency, offering effective and meaningful branding experiences for individuals of all ages.

The exposure to the current and future state of the maturing Canadian consumer will allow us to leverage this knowledge to bring relevant awareness and become an industry leader in this area.

*Rob Morrone, VP Operations, *pigeon brands*

PointerWare



PointerWare's goal is clear – to make computing simpler for older adults. Its software has a very simple and easy to use interface, with a limited number of functions that represent those most requested by older adult users. For example, rather than navigating through a browser, to an email client and then logging in, PointerWare bypasses those steps and brings a user to their email with one click. One of its most noteworthy features is that PointerWare can be operated entirely through a touch screen. Using text to speech and dictation tools, a user can fully use PointerWare's suite of features without the complexity of operating a mouse or keyboard.

The Centre helped PointerWare to further explore older adults' needs and preferences, design and test new features and engage different sectors of the older adult population (and their caregivers) by providing mobile versions of the software and translations in the dominant languages of the Greater Toronto Area. A pilot study, hosted in partnership with Schlegel Villages, also evaluated PointerWare's impact on the socialization and well-being of older users. This pilot study was a tremendous success, demonstrating the impact of having access to the Internet and a computer through PointerWare's simplified interface. The rapidly changing online marketplace, which is primarily driven by the increase in the number of older adults using computers, highlights the importance of PointerWare's work, and the lasting contribution of this partnership.

The [staff] have been vital to allowing PointerWare to continue growing its feature set so it can stay relevant in a rapidly changing marketplace.

Raul Rupsingh, *Co-Founder and CEO, PointerWare*

Recreational Respite



Recreational Respite believes that every individual should have a person-centred approach to their care needs that takes into account the challenges they may be facing, while maximizing their level of inclusion and enhancing their quality of life. Recreation therapists work with clients to identify ways to successfully engage individuals with a variety of needs and to work towards targeted goals through recreational participation. Recreational Respite's programming focuses on multiple domains in order to achieve these goals for individuals of all ages including development and learning, mental and emotional health, rehabilitation support, memory impairment and hospice and palliative care.

Over the past five years, the support from the Centre has helped Recreational Respite develop and implement various immediate and long-term company strategies related to serving older clients. These included client research and program evaluation, engagement and innovation through new technologies, appropriate dissemination strategies through social media and other communication channels, and opportunities to connect with other companies to form the foundation for collaborative relationships. Recreational Respite's global presence has been steadily rising, a testament to founder Amy MacFarlane's ability to connect with audiences and inspire meaningful changes for her clients.

In December 2014, Recreational Respite was chosen as an international expert in the field of therapeutic recreation and asked to take part in a number of projects in Kuwait City. It was at the University [of GULF for Science and Technology] that I had the opportunity to talk about our involvement in the NSERC grant with a large group of Business and Science students. They were most interested in NSERC and what it was about and how it worked in Canada. We were able to talk about the student involvement from the college, community partners and the Sheridan Centre for Elder Research that has helped our growth and development because of the innovation and partnership with all involved.

Amy MacFarlane, Founder and CEO, Recreational Respite

Schlegel Villages



Schlegel Villages' mission is to provide holistic health care in a home environment, using a neighbourhood design that promotes a caring community. As the owner-operators of 16 retirement and long-term care homes across southwestern Ontario, Schlegel Villages is committed to a social model of living, rather than an institutional model of care. Through the NSERC grant, the Centre has helped Schlegel Villages to increase access to technologies for residents within their long-term care and retirement homes. This included, as a first stage, a comprehensive survey with staff and residents to determine the current status of technology use and access within the Villages and identify what was missing. This subsequently resulted in the development of technology training manuals for both staff and residents, allowing them to more effectively use the technology tools already at their disposal, while exploring ways to learn about new ones.

One specific project really changed one resident's life. A gentleman who was quite reclusive due to extreme physical limitations would not pursue any social interaction. Nevertheless, he agreed to participate in a pilot project with a touch-screen computer and PointerWare software. This technology opened up a new world for him, and he even started a men's group which proved to be a great success, and a wonderful opportunity for other men living in that particular Village. Taken together, the outcomes of the partnership with the Centre have resulted in great strides forward in the way that Schlegel Villages are able to use, and benefit from, technology.

The partnership with Sheridan was a wonderful synergistic way to draw on the expertise of Schlegel Villages employees, the Centre and fellow NSERC partner PointerWare to respond to the needs and interests of residents within our Schlegel Villages. The result was the valuable step forward in our ability to use technology to promote independent living and enhanced well-being for residents living in our Villages.

Mike Sharratt, *Senior Director for University Relations, Schlegel-UW Research Institute for Aging*

Sienna Senior Living



Sienna Senior Living helps their residents live fully, every day by awakening their communities to positive possibilities through a variety of innovative programs. Sienna Senior Living shares the Centre's belief that opportunities for lifelong learning should not be 'date stamped' and should extend, in a purposeful way, to non-traditional learning environments such as retirement homes and long-term care communities. In partnership with the Centre, Sienna Senior Living has developed a 10-week, twice weekly program exploring how technology can be used to support lifelong learning and build relationships. The program pushes the boundaries of geography to connect residents with shared interests across the country and introduces them to a new way of learning.

Through several iterations of the Community of Learners program, residents in Sienna Senior Living retirement homes in Ontario and British Columbia have met face-to-face and online to learn about shared topics of interest including health, music, nature and current events. The Centre team, along with Sienna, explored different technology tools to support the learning and human connection in the program, and also different models of program delivery including a peer-led model. Participants reported that they have developed new friendships through the program, learned to use new technology and enjoyed stimulating discussions. This program is expected to have far-reaching impacts on all Sienna residents, becoming a uniquely Sienna programming option.

Older adults exploring senior living options for the first time are thrilled to see the Pacifica Retirement Residence is offering a lifelong learning program. Seniors are looking for avenues to continue learning later in life. They are seeking out discussion groups and other such formats that expose them to sharing ideas and exploring new ways of thinking. Lifelong learning opportunities support healthy aging.

Allison Giuliani, Lifestyle Consultant, Sienna Senior Living's Pacifica Retirement Residence (Surrey, British Columbia)

Tertec Enterprises



Tertec is a specialized engineering firm that has been designing and manufacturing solutions for over 30 years. Their products range from video dispensing machines to instrumentation and automation for the automotive industry. They also have a passion for addressing social needs and community engagement. To this end, Tertec has developed its Mon Ami™ platform, which is an integrated, touch-screen based support system that enables a caregiver to remotely support someone through a host of services and functions. The comprehensive Mon Ami™ platform, which includes a web-based portal, can reduce the stress associated with caregiving while also enhancing quality of life for someone requiring care.

As part of their partnership on the NSERC grant, Tertec has leveraged the expertise of the Centre to validate ideas, test hypotheses and to also actively support the design and coding of test frameworks. In addition, the Centre conducted a project to explore 'a day in the life' of a caregiver, providing valuable insight from members of Mon Ami™'s specific target market. These results and findings have allowed the Tertec team to enhance the Mon Ami™ product line while also developing other innovative products and services.

The Centre is unique in its role of mediating between the developer and the needs of the public, many times acting as the glue that marries them into a truly useful package that the developers would have been hard put to accomplish on their own. The Centre has been an integral part of the development cycle of our social products upon whom we relied heavily, for aspects that were not hard core engineering.

Terry D'Silva, President & CEO, Tertec Enterprises Inc.

Vintage Fitness and Spirit50



Vintage Fitness energizes the lives of adults 50+ by offering convenient and fun exercise programming. Personal trainers, all of whom are certified Older Adult Specialists, are able to offer personalized classes, workshops and learning opportunities in a home, condo or other residential setting. In an effort to expand beyond the geography of the Greater Toronto Area, Vintage Fitness founder Erin Billowits worked with the Centre for Elder Research to launch an online personal training website for individuals over 50 called Spirit50.

As part of the development of Spirit50, Erin worked with the Centre to conduct extensive and in-depth research with her target market to better understand their needs, particularly as they related to motivation to exercise and the use of technology. The team also worked to develop nearly 40 different exercise programs at three different levels of intensity, to suit a variety of user needs. Additional development and evaluation of Spirit50's online portal, as well as the photo and video materials, allowed Spirit50 to enter this growing marketplace and expand on the already successful offerings of Vintage Fitness.

As an entrepreneur, the access to students with a diverse range of skills from graphic design, computer programming, kinesiology to photography allowed me to expand my business into the online world in a way that I never could have without the support of the Centre for Elder Research.

Erin Billowits, *Founder, Vintage Fitness & Spirit50*

Business of Aging Global Network

One key deliverable proposed in the original NSERC grant application was the creation of a regional business network to raise awareness about an aging population and to also support small- and medium-sized enterprises (SMEs) who either served an older demographic or wished to do so. In addition, the network was to function as an information dissemination tool for the Centre's researchers and NSERC business partners to share research products, programs and processes resulting from grant activities. Informed by a pilot study conducted in the summer of 2011, the Business of Aging: Information Exchange Network (BA:IEN) was officially launched in January 2012 and has met on a quarterly basis since that inaugural event. In addition to the regular BA:IEN meetings, two 'special' business of aging forums have been hosted, one in 2012 and one in 2014.



Globally, the number of older persons (aged 60 years and over) is expected to more than double, from 841 million people in 2013 to more than 2 billion in 2050¹. Concurrent with this shifting demographic, business and industry opportunities associated with an aging population have become more widely acknowledged over the last few years, and requests to support and collaborate with SMEs have increased at the Centre. The Centre recognized that it was time for BA:IEN to evolve to respond to the business of aging on a much broader scale than can be achieved with a face-to-face network. As a result, BA:IEN has become the Greater Toronto and Hamilton Area (GTHA) chapter and the network is in the process of transitioning to its new identity as a virtual Business of Aging Global Network.

The mission of the Centre's global network is to 'connect businesses and industry leaders by providing a platform for collaboration, training and resource sharing related to the needs and wants of an aging population.'

Through the network, members have a forum to:

- Share best practices, ideas and resources with other business and industry leaders.
- Explore opportunities to develop strategic alliances and partnerships.
- Access relevant research material, industry experts and experienced guest speakers.

The creation of the global network is an important legacy of the NSERC grant. The Centre will continue to share information and opportunities related to this innovative network through their webpage (elderresearch.sheridancollege.ca).

¹ World Population Ageing Report (2013). Department of Economic and Social Affairs. Population Division. United Nations.

Impact of the grant

14

companies
worked with

18

additional organizations
involved

55+

reports written

12+

prototypes/products/
models supported

40+

events/workshops
hosted

24+

presentations/
conferences/invited talks

REPUTATION AND PROFILE

Sheridan has chosen personality traits to describe its unique brand of education, as published in the 2013-2020 Strategic Plan. One of these is 'real'. In describing that trait, reference is made to creating change that benefits faculty and staff, students, industry partners and communities near and far. Further, it describes an approach that is unpretentious and based in reality.

This personality trait also describes the Centre. Our research is rooted in, and benefits, the community. With this grant in particular as an example, the Centre has created a very effective model for college-community-business partnerships. These partnerships contribute to Sheridan's profile and reputation by showcasing the tremendous work done by Sheridan students and faculty as part of applied research endeavours. An enhanced profile and reputation, resulting from successful research projects, differentiates Sheridan from its competitors and helps the institution to carve its niche in the postsecondary space.



**Older adults
impacted by the grant
and its outcomes**

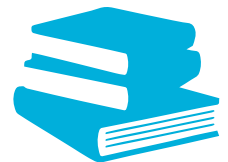


9 faculty members involved in NSERC related efforts

FACULTY

Similar to the opportunity for students, participating in applied research represents added value for faculty, growing their skills and knowledge base. It also helps to ensure that their curricula are leading edge and that their students are working on topical, relevant issues. These enhancements to teaching and learning at Sheridan help make the college a premier destination for undergraduate education.

23 programs represented by student hires



STUDENTS



84 students hired under the NSERC grant

With the support of the NSERC grant, Sheridan has greatly increased its capacity for student engagement in applied research. After six years of funding, over \$1 million have directly supported student salaries. This financial investment, while impressive on its own, is much more meaningful when one considers the diverse training and experiential learning opportunities that resulted from this funding.

Student Research Assistants consistently report that engaging in applied research at the Centre has enhanced and complemented their classroom learning while providing them with opportunities to address contemporary 'real world' industry and community needs. These research experiences help to prepare job-ready graduates and to equip them with the soft skills and resilience they will need to succeed in a labour market that has dramatically changed and will, in many ways, be shaped by a shrinking youth market and an aging population.



My two years at the Centre provided me with the required knowledge and experience to launch my career as an IT professional. Designing, developing, and maintaining software products for older adults helped me acquire not only the technical know-how of the software industry but also the ability to interface with clients and meet their expectations. The work that I did for the Centre directly helped me to secure a full-time job as a Programmer Analyst for Scotiabank even prior to the completion of my studies at Sheridan College. I am very thankful that the NSERC grant gave me the opportunity to apply the knowledge that we gained in the classrooms to the real world.



Dilip Muthukrishnan. *Computer Systems Technology: Software Development and Network Engineering Program, 2014. Programmer Analyst, Scotiabank*

Student quotes



The skillset and experiences I gained working with the Centre have been critical for my career development in the health care field. More than anything, my experience at the Centre taught me the value of working effectively with an interdisciplinary team, and the importance of stretching your mind to think outside the box.

Shannon N. Knelsen.

*BA, Social Service Worker Program, 2012 RSSW.
Ger Discharge Resource Specialist University Health
Network – Toronto General Hospital*

Working at the Centre gave me the tools and courage to step into a very challenging position in the so-called “real world.” I was given the freedom of doing my job at my best, while also being mentored by amazing professionals at the Centre.

Paola Hernandez Soto. *Advertising and Marketing Communications Management, 2015. Marketing Coordinator at Beltone Canada*

The opportunity to work in the area of applied research has really changed my life in many ways. I have learned to understand the world differently – working with the Centre through the NSERC grant has been a fantastic opportunity!

Kateryna Yavorska-Vietrova.

Bachelor of Business Administration: Global Business Management Program, 2016. Project Manager at Neezo Renders

Working at the Centre contributed to my nomination for Sheridan’s Applied Research Leader award, and in part, helped me to gain acceptance to my Master’s program and has influenced my choice to continue my studies in the PhD program at Brock University.

Brandon McKinlay. *Bachelor of Applied Science: Exercise Science and Health Promotion, 2014.
PhD Student, Brock University*



Looking to the future



We are proud to have had the opportunity, through this publication, to highlight the achievements of the research initiatives relevant to our NSERC partners, and to congratulate them all on the successes we have achieved together! As we conclude this funding period, however, we must look to the future in order to stay 'ahead of the curve' and to continue to grow. As aforementioned in the 'Message from the Centre,' we fully intend to learn from, and build on, the research completed to date. This will allow us to respond to the fluctuating realities of our world and the changes in interests, needs and wants of an ever-increasing older population.

And so, to wrap things up, we'd like to leave our readers with a snapshot of some of the research areas that we plan to pursue in the coming years.

By considering the accessibility and intuitiveness of technologies, as well as the physical design considerations of living environments, the Centre for Elder Research will investigate new products, approaches and guidelines for ensuring that technology can be seamlessly adopted by, and integrated into, a diverse range of family systems. Particular consideration will be given to ways in which technology can transcend time and distance to support family systems that are geographically separate from one another.

Collaborating with Sheridan's Screen Industries Research and Training Centre (SIRT), the Centre for Elder Research plans to explore the ways in which immersive and interactive technologies (such as virtual and augmented reality systems) and content creation expertise can support the well-being of older adults.

The Centre will continue to investigate the ways in which technology can support healthy aging, especially as we consider the growing importance of mobile devices and solutions for health care systems. This will include products ranging from home monitoring systems and robotics to personal health management and fitness tracking tools.

We will expand our study of the ways in which technology and the arts intersect, and how this intersection can be leveraged to increase engagement with the creative and performing arts by older adults.

Overlaying specific research interests is our continued commitment to supporting community organizations, SMEs and to designing additional workshops in our Lab to Life® series. These customized experiential workshops can be expected to continue to raise awareness about an aging population and the potential of technology to better support individuals throughout their life journey.

We invite you to continue to join us on our journey!

Sheridan Centre for Elder Research

1430 Trafalgar Road
Oakville, Ontario L6H 2L1
T 905-845-9430, x2977

Contact us at:

elder.research@sheridancollege.ca



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