



# Changing lives with technology



University of Victoria

**Our values:** innovation, client focus, passion, accountability



## **Our vision**

In partnership with the disability and academic communities, CanAssist will be a leader in creating technologies, programs and services that contribute to a truly inclusive society, where everyone has the opportunity to participate and contribute.



# What sets CanAssist apart?

Unique in North America, CanAssist is a university organization that takes a client-focused approach to providing customized technologies and innovative programs to people with disabilities where there are gaps in existing services.



## At CanAssist, we...

- are a core team of about 20 professionals dedicated to helping people of all ages and from across the disability spectrum to improve their quality of life;
- are part of UVic's vibrant campus, with ready access to its outstanding faculty, students, research facilities and administrative resources;
- have engaged thousands of students and faculty over the years in our activities, in areas such as: technology development, working with clients, research, volunteering, classes and workshops;
- raise awareness of disability issues among students, faculty, the local community and beyond; and
- reflect the University of Victoria's commitment to community engagement and disability issues as well as its leadership in these areas.

# Executive Director's message



CanAssist has grown from a small, volunteer venture that was formed in 1999 to a full-fledged and highly respected organization at the University of Victoria. We are grateful to UVic, not only for supporting our program but also for fully embracing it.

At CanAssist, our goal has always been to address the unmet needs of the disability community while raising awareness of disability issues and providing rich opportunities for academic and community engagement.

During 2012 and 2013, CanAssist took part in extensive strategic planning and business development activities aimed at enhancing our contributions to the university's academic and research missions, as well as to the disability community. This work has been instrumental in charting CanAssist's course over the next few years as we prepare to move into CARSA, UVic's high-profile Centre for Athletics, Recreation and Special Abilities.

We invite you to work with us to create a more inclusive society – where everyone has the opportunity to participate and belong.

Robin Syme, Executive Director  
CanAssist at the University of Victoria



Many of us take for granted the simple pleasure of riding a bicycle or taking a stroll in the park. Yet Statistics Canada reported in 2006 that 4.4 million Canadians live with disabilities, and many of them are unable to enjoy such basic experiences. In fact, the national disability rate for all ages is 14.3%, an increase of almost 2% from five years earlier, confirming that disability rates increase with advancing age.

With disability rates almost 10 times higher in seniors than in children, these numbers are projected to increase dramatically as Canada's population continues to age over the next decade.

At CanAssist, we work with clients of all ages and levels of ability to help them improve their independence and quality of life.





## The need

We recognize that many people with disabilities face significant challenges in areas such as learning, developing and improving life skills, finding meaningful and rewarding employment and overcoming social isolation. The fact is, in many cases, disabilities can be devastating in terms of diminished quality of life and lost opportunities.

As part of a compassionate society, we recognize that resources must be directed towards the development of assistive technologies and services that will help increase the independence, functioning and participation of those with disabilities.



## Filling the gap

To help meet this growing need, CanAssist focuses on three key areas:

### TECHNOLOGY DEVELOPMENT

For many individuals with disabilities, commercially available assistive technologies are perfectly appropriate. However, many others are unable to find a solution that meets their specific requirements. This is where CanAssist comes in. Our engineering team develops a wide range of customized assistive technologies in response to requests from individuals with disabilities, their families or health-care providers. We also offer this service to organizations to help them better assist their patients, clients or employees with disabilities.

### ACADEMIC ENGAGEMENT

A pillar of our activities involves engaging students and faculty at the University of Victoria. Our relationship with UVic is very much a two-way street: CanAssist provides rich experiential learning and research opportunities to the UVic community, while our team's work is greatly enhanced by the expertise and participation of those on campus.

### COMMUNITY ENGAGEMENT

Our community engagement includes raising awareness of disability issues on and off campus; working with partners in the disability community to promote a more inclusive society; and providing a small selection of specialty programs that support unmet community needs.

# Technology development

At CanAssist, we develop innovative and practical customized technologies for people of all ages and from across the disability spectrum.

The requests we receive vary greatly, but in order to be considered, a solution must be unavailable commercially or through other providers. Projects range from the relatively simple – such as an adjustable umbrella holder for wheelchairs and walkers – to the highly complex; for example, a system that allows people with severe disabilities to control a range of devices simply by contracting their facial muscles.

Over the years, we've discovered that the best technological solutions flow from fully understanding each client's needs. As such, our starting point is never the device or software, but always the goals of the individual. We engage each client – along with key family members, support workers and health-care providers – to ensure that they are all members of the development team. This is what makes our technologies so effective.

Sometimes a particular CanAssist technology has significant commercial potential – such as our adapted iPod system and some of our software applications. Such technologies provide excellent opportunities to support both our financial sustainability and our goal to reach larger numbers of people. For the same reason, we also enter into service contracts and funding agreements with organizations requiring customized technologies for their clients, patients or employees. All proceeds from such activities are reinvested into CanAssist.

Increasingly, CanAssist is looking for opportunities to develop “platform technologies” – devices or software applications that address the common needs of many people. After their initial development, such technologies require little customization and thus can be distributed to many people easily.

Ultimately, CanAssist's goal is to make its assistive technologies available as widely as possible. So, while a particular technology may initially be developed for a single client, many other people may eventually benefit from the same or a similar solution.



## Software program keeps family connected

In the fall of 2008, CanAssist was contacted by a Victoria woman whose elderly mother lived in a care facility hundreds of miles away.

The woman, Ann, asked whether CanAssist could develop an easy-to-use system that would facilitate regular communication between mother and daughter. Her mother, Marion, was a 92-year-old with dementia. The care facility had taken away the older woman's phone because she had been making too many unnecessary emergency calls.

So CanAssist created a simple program based on Skype, the software that lets people make free calls over the Internet. CanConnect takes Skype a step further by making the technology accessible to people who have never used computers, who are intimidated by them, or who are unable to use





## Marion

a regular mouse or keyboard. Simply by touching a computer screen and selecting from a gallery of photos, users enjoy an audio and visual connection with the person they have chosen to contact.

Since that first call, which connected mother and daughter, CanConnect has benefitted hundreds of people with a range of cognitive and physical disabilities living in Canada and as far away as Denmark and Romania.

In addition, the software has been expanded to support a variety of input devices, multiple users in group settings, people with hearing impairments, and components that enable photo sharing and calendar access.

Several years later, at age 96, Marion is still using CanConnect.

"It's fantastically good," said her daughter, Ann. "She is so happy to see us and we are so happy to see her. Just seeing her is such a pleasure and such a relief."

## Technology helps teen hit all the right notes

Josh Yates, a gifted musician, was passionate about playing in two school bands.

But the young man's severe tunnel vision prevented him from simultaneously seeing the music in front of him and using his peripheral vision to see the conductor standing further away.

In response, CanAssist engineers placed a live video feed of the conductor into Josh's very limited field of vision. The team then connected a camera to a set of goggles that have an LCD screen embedded in each lens. By focusing the camera on the conductor, a real-time video feed could be projected onto the two LCD screens.

When Josh put on the goggles for the first time, he was thrilled to be able to see the conductor's image in the lenses, while still being able to peer over the glasses to read the sheet music in front of him. For the first time, he was able to participate in music sessions without the help of an adult support person.

"I couldn't really talk to other students before because there was an adult sitting next to me," Josh explained. "Now they talk to me more, which is a big deal."

Today, Josh is a first-year student in UVic's School of Music, playing both the trombone and French horn.



# Academic engagement

A critical component of CanAssist's mission is its engagement of students and faculty at the University of Victoria. In fact, CanAssist's integration with the university community is what makes the organization unique in North America among providers of assistive technologies.

As part of a bustling campus, CanAssist recognizes the importance of giving university students, faculty and staff the opportunity to support and interact with people with disabilities and to learn about disability issues. As students, in particular, make their way in the world and assume leadership positions in society, those who have had such experiences are much more likely to be passionate and effective supporters of increased inclusion and accessibility.

To date, several thousand students from virtually every discipline, and from middle school to university level, have been provided with deeply rewarding learning opportunities through their participation in CanAssist activities.

Students can participate at CanAssist as:

- part of their academic course work
- foreign exchange or overseas visiting students
- graduate students
- co-op employees
- volunteers
- work-study students

Likewise, many members of UVic faculty – representing numerous departments across campus – have engaged in CanAssist activities over the years. Their participation takes place primarily through research partnerships, complementary classroom activities, requests for the development of technologies, and an ongoing sharing of ideas and expertise.



## Co-op students gain experience and make a difference

Landing an engineering co-op position at CanAssist is considered quite an accomplishment at UVic.

Not only are such students given the chance to practice their skills, develop new ones and take on challenging technical projects, they also gain the tremendous satisfaction of having a direct impact on the quality of life of the people with whom they work.

Not long ago, two friends, Andy Huerlimann and Alex Vargas, were hired to work at CanAssist during the summer session.





## Andy & Alex

Each worked on a range of projects that they delivered to people with disabilities in B.C. And both say they loved the practical, hands-on approach at CanAssist.

“The best part of the job was interacting with the clients, designing a technology that works for them, manufacturing it and then delivering it to the clients,” says Alex, whose projects included a paper shredder adapter, a voice amplification system, and a remote control modification for a toy car, among others.

“It’s really practical engineering – you get to do the design and the fabrication,” says Andy, who worked on a horseback riding support, a mounting system for a dog ball launcher, and other projects.

“In other jobs for young engineers, you’re not always given a lot of responsibility. But CanAssist is a great learning environment. You’re given guidance, but also a lot of freedom and independence.”

## Professors benefit from CanAssist expertise

Since its inception in 1999, CanAssist has worked closely with many UVic faculty members on numerous projects that benefit people with disabilities.

One longer-term initiative has involved building miniature sensors for the biology department that are being used for research into stroke and other conditions. Another recent project, for Dr. Kimberly Kerns of the psychology department, involves refining software games that help assess children’s cognitive abilities.

“Working with CanAssist on my current project has been wonderful – they are professional, enthusiastic and understand the specific needs of research,” said Dr. Kerns.

“Not only are their people aware of the best software and technologies to use, but if changes or upgrades are needed in the next few years, the ongoing support is readily available.”

## Course highlights disability issues

By the time students in Mechanical Engineering have completed their degrees at UVic, each of them knows about the kind of work CanAssist does and has gained insight into some of the challenges faced by people with disabilities.

That’s because a core course in their program – called Mech 350 – requires that they design and build an assistive device based on requirements set out by CanAssist.

Each year, the 75 to 100 students who take the course are divided into groups of five or six and presented with a handful of options on which to base their major design project for the term.

Having access to so many students and their collective creativity is a great benefit to CanAssist and its clients with disabilities, while the students themselves benefit from a unique, hands-on experience and increased awareness about disability issues.

# Community engagement

The University of Victoria is strongly committed to community service and engagement, and CanAssist shares this mandate. In addition to its many activities on campus, CanAssist increases awareness of disability issues both in the local community and further afield through a wide range of initiatives.

For example, we work closely with many other disability-related organizations and public agencies that share common goals around increasing awareness and accessibility. Our location at the university means we have tremendous capacity to facilitate such partnerships.

In addition, CanAssist is committed to developing and supporting a small number of specialty programs that directly address unmet community needs and illustrate UVic's commitment to community service.

CanAssist's community engagement activities include:

## JUST FOR KICKS

JFK is a free weekly program that gives children with special needs the opportunity to learn soccer skills, experience being part of a team and have fun. Each year, about 30 children and 20 volunteers meet on Sundays to take part. No matter their age or what challenges they face, all children are welcome to participate.



## Working builds confidence and independence

When Drew was 15, he became a participant in CanAssist's TeenWork program. With the help of his TeenWork job coach, the young man spent his first few months preparing a cover letter, fine-tuning a résumé, researching the job market and applying for positions.

Drew, a student from Stelly's Secondary in Victoria, was thrilled when he landed a job at Peninsula Co-op as a weekend lot attendant at its commercial gas station and car wash.

When Drew first started, continuous on-the-job support from a TeenWork job coach was required to help him learn the job's responsibilities and prompt him when moving between tasks. As he





**Drew**

became more comfortable, Drew learned how to independently perform his duties, and TeenWork was able to reduce his job coaching support.

“Drew is doing a great job and is our most steady and reliable person in this position,” said supervisor Jake Petterson. “Every Monday, the site looks awesome!”

Because he is such a stellar employee, when another shift became available recently, it was offered to Drew first.

“Drew has really impressed everyone with his ability to work independently,” said Hamish Black, TeenWork’s program manager. “Not only has working given him a sense of pride and accomplishment, but it has really expanded the expectations he and his parents have about his future.”

## TEENWORK

TeenWork is a small innovative program designed to help young people with disabilities find and retain meaningful, paid employment while attending high school. The program was developed with the aim of filling a gap in employment supports for youth as they near transition to adulthood. It is hoped that this program will eventually serve as a model for replication throughout B.C.



## VOLUNTEER PROGRAM

CanAssist relies on the passion, skills and energy of numerous volunteers. In several instances, people who started as volunteers at CanAssist have eventually become valued employees. Some volunteers are UVic students, who typically participate in our specialty programs; and some of those who offer their time and enthusiasm live with disabilities themselves.

## OUTREACH AND AWARENESS

Over the years, our staff members have participated in numerous events to increase awareness both of the CanAssist program and of disabilities issues in general. Events have included hosting workshops, conferences and resource fairs, volunteering for speaking engagements, and participating in events hosted by other organizations, both locally and elsewhere in Canada.

# How we are funded



CanAssist is an organization of the University of Victoria and would not exist without the university's ongoing generosity and vision.

UVic provides a very significant annual in-kind contribution, which is equal to about 25 per cent of CanAssist's total operating revenues, and encompasses costs related to use of space, utilities and access to various central administrative services.

Because CanAssist is not part of the university's base-budget framework, it is responsible for generating its own annual operating budget and for living within its means on a year-to-year basis.

For fiscal 2013–14, CanAssist's core operating budget was \$1.2 million. Primary funding sources for this amount include: public sector project funding; philanthropy; fee-for-service agreements with a variety of agencies; commercialization; and, of course, the University of Victoria.

As awareness of our unique program grows, demand for our services is also increasing. We recognize that many of our clients and their families have very limited financial resources – along with other stresses – and, as a result, we generally do not charge individuals and their families for our services. Instead, we seek to provide our services to individuals through our various funding sources.

Ultimately, our overall strategy for sustainability involves diversifying our revenue stream through long-term and predictable partnerships so we are not reliant on any single source of funding. Our goal in this regard is to create a sustainable and excellent resource for the disability community, as well as for UVic students, faculty and others on campus.





# Our funding sources

CanAssist benefits enormously from working with a range of organizations in a variety of ways. Typically, CanAssist initiates a partnership – for example, with organizations from the public, private, philanthropic and not-for-profit sectors – to create solutions that address unmet community needs. Over the years, such initiatives have proven beneficial to all partners involved, to CanAssist’s ongoing sustainability, and, most importantly, to the disability community as a whole. We deeply appreciate the critical role our partners play in helping us bring innovative and practical programs and technologies to individuals with disabilities.

## Our partners fall into the following broad categories:

### UNIVERSITY OF VICTORIA

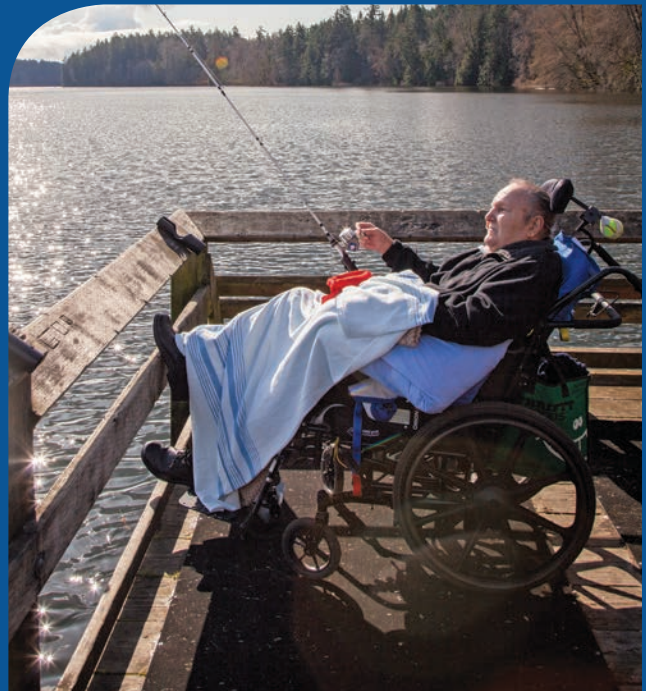
UVic is a vital partner and is fundamental to our success. After all, it is CanAssist’s relationship with UVic and our location on campus that make our organization unique. The university provides CanAssist with direct and indirect support, including the physical space where we do our work. The campus also provides us with many of the people who help us accomplish our goals, including students, volunteers and faculty.

### DONORS

CanAssist is deeply grateful for the support of the many individuals, foundations and organizations that have provided donations and grants over the years. Simply put, CanAssist would not exist without their generosity.

### FUNDING AGREEMENTS

CanAssist works with some partners on an ongoing basis to provide customized assistive technologies to their clients or employees. Current examples include WorkSafeBC, the BC Ministry of Health, Northern Health, and Community Living British Columbia.



### LICENSING AGREEMENTS AND COMMERCIALIZATION

When a technology developed by CanAssist has the potential to be of use to many people with disabilities, we sometimes consider a licensing agreement. An example is our switch-activated iPod system, which is being sold as “The Hook” by AbleNet Inc. In another case, we sell software apps such as CanPlan and CanTunes on Apple’s App Store. All revenues from these ventures are fully reinvested to support our programs.

### UVIC RESEARCH COLLABORATIONS

CanAssist works with other groups on campus to share knowledge and to further research. We focus on meaningful multi-disciplinary projects in areas that have included: biological implant technology, aging and dementia, gait analysis research and computer games for cognitive assessment. CanAssist recently established an interdisciplinary academic steering committee to increase opportunities for collaboration at UVic that support disability research and education.

# UVic's commitment

A leader in research, the University of Victoria is also committed to serving the needs of its local and global communities by applying and sharing its knowledge for meaningful social change.



Several programs at UVic exemplify advances in the use of technology and research to enrich communities and better our world. For example, through CanAssist, UVic has become a leader in the development and delivery of customized technologies for people with disabilities. CanAssist's activities are guided by its core team of professionals, who benefit from having direct access to the university's highly talented and motivated student population, as well as from the expertise of UVic faculty and research staff.

In 2008, UVic formally recognized CanAssist as a unique organization of the university, while at the same time significantly increasing direct and in-kind support for the program. This support includes: CanAssist's current facility on campus; the use of specialized equipment; and access to research and administrative services.



## A new home in CARSA

UVic recently reaffirmed its commitment to CanAssist by identifying the organization as a cornerstone of the new Centre for Recreation, Athletics and Special Abilities.

Construction of this high-profile centre, known as CARSA, began in May 2013 and is expected to be complete in the spring of 2015.

CanAssist's current 4,500 square-foot space on campus will nearly double to 7,000 square feet in CARSA. The new space will include offices, labs and a machine shop, all specifically designed to meet CanAssist's unique requirements. The increase in space will also give CanAssist the capacity to engage more students and faculty in its programs and operations, while also helping the organization meet the growing demand for its services.

Locating CanAssist front and centre within CARSA also exemplifies the university's commitment to connecting the academic and research resources of UVic with the broader community.



This photo is an artist's rendering of CanAssist's new space in CARSA.



CanAssist's ability to provide students and faculty with a rich experiential environment for education and research not only improves the quality of life for our clients with disabilities, but also inspires our society as a whole to realize what's possible.



## Our vision for the future

What started in 1999 as a very small volunteer-based project at UVic has since grown into a vibrant organization that has provided direct assistance to thousands of people with disabilities and their families.

In CanAssist's early years, the majority of our projects and services were focused on clients in the Greater Victoria area. But as awareness of CanAssist continues to grow, we now routinely support people and organizations across British Columbia, and are working to expand our support by engaging with key partners across Canada and even internationally.

Whatever new program, partnership or technology project we undertake, ultimately our objectives are always the same: to help bring about increased independence for people with disabilities so they are better able to make a meaningful contribution and to enjoy a true sense of belonging; to increase awareness of disability issues; to develop fruitful partnerships with faculty at UVic and with partners in the wider community; and to provide meaningful experiential learning opportunities for students that will ultimately serve to enrich society as a whole.

In its 2011 World Report on Disability, the World Health Organization reported that there are more than one billion people with disabilities. The prevalence of disability is growing at an increasing rate due to an ageing population and the increased incidence of chronic disease.

Together with our partners, donors, student participants, university colleagues and volunteers, CanAssist will work with determination, intelligence and passion to address the complex challenges associated with disabilities that we face as a global society.

# We can change lives with your help



[canassist.ca/donate](https://canassist.ca/donate)



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