

# Labrador Life

Vol. 14 No. 3

Fall 2020

**SmartICE:**  
A Dream  
Worth Pursuing

*Centuries  
of Whaling*

**Finding restorative  
isolation during COVID**



**Labrador Ghosts**

Things that go  
bump in the night

**Breaking  
New Ground**

Planned School of Arctic and  
Sub-Arctic Studies to focus on  
Indigenous and Northern-led  
research and education

ISBN 097831960-5



9 780978 319601

paperback \$14.95

# A Dream Worth Pursuing

SmartICE: A community sea-ice monitoring service for the North



Stock Photo

# A Dream Worth Pursuing

## SmartICE: A community sea-ice monitoring service for the North



Stock Photo

The sea-ice season has traditionally been a time of opportunity in the Arctic. Transportation routes freeze up and hunting opportunities expand. Indigenous knowledge of seasonal changes has been key to using ice-based routes safely. However, a changing climate has introduced new concerns. The later onset of winter, shorter periods of deep freeze, more rain, and changeable snow and wind can make sea ice less predictable.

story by Penny Taylor

Dr. Trevor Bell, a geographer with Memorial University in St. John's, has studied the impact of climate change on northern communities. His research collaborations led him to develop and adapt technologies for testing ice temperature and thickness. The project became known as SmartICE – Sea-ice Monitoring And Real Time Information for Coastal Environments. Today SmartICE is a non-profit, social enterprise business, successfully blending traditional ice monitoring knowledge and modern technology to the benefit of many coastal communities in Canada's North. For Dr. Bell and his team, spending several years developing the SmartICE initiative led them to be nominated for the Arctic Inspiration Prize (AIP). In 2016 that effort was rewarded with a \$400,000 prize. It was a journey he undertook in collaboration with many partners and communities.

The project's origins go back to 2010, a year which brought unusual winter weather to Labrador. There was persistent rain in February – normally unheard of. The sea ice turned to slush, severely limiting the ability to travel across the frozen bays and inlets. Unfortunately, this meant that many people didn't have their normal access to country food or firewood – negatively affecting food and energy security in communities. There were also many incidents of people going through the ice along traditional travel routes, which naturally increased people's fear of travelling on the ice.

This led Dr. Bell and the SmartICE team to consider developing two sensor

technologies that could measure the sea-ice thickness: one stationary, which once deployed operates independently on the ice; the other mobile, pulled by an operator behind a snowmobile to provide real-time measurements. In both cases, local Inuit knowledge informed sensor design and continues to direct sensor deployment and operations. In fact, SmartICE technology was never intended to replace Inuit knowledge of safe ice travel, which has been passed down through generations and continues to be shared through lived experiences on the ice.

Once prototypes of the devices were successfully developed and tested in the pilot communities of Nain (Nunatsiavut) and Pond Inlet (Nunavut), more northern communities became interested in the SmartICE monitoring system and asked how they can acquire it too. It

was difficult to ignore these requests, especially given the unprecedented ice conditions and the growing number of search-and-rescue incidents across Inuit Nunangat.

For Dr. Bell and his team, this growing interest raised a number of critical questions: how can SmartICE evolve from what was essentially a community-university-government-industry research partnership to an organization capable of delivering sea-ice monitoring services to every community that wants and needs them? The funding that supported the research and development phase of SmartICE – for example, the Research Development Corporation of Newfoundland and Labrador – could not be used to finance its expansion.

There was also the question of which business model should guide SmartICE expansion, given its strong commitment to community and environment, and its chosen responsibility to youth training that is grounded in Inuit ways of knowing. Following consultation with partners, a non-profit social enterprise model was adopted.

Although rapidly growing in Southern Canada, a social enterprise approach to business is not as well known or employed in the North.

*continued...*



@SmartICE, SmartBUOY Deployment, Nain, Nunatsiavut, February 2020

## science and nature

Unlike a normal business, a social enterprise focuses beyond simply sales generation and profit. It measures its performance on the positive impact it makes on society – whether social, cultural or environmental. Any profits are used to fund these impactful programs.

The breakthrough for SmartICE came with its successful nomination by Inuit business leaders Clint Davis and Harry Flaherty for the 2016 Arctic Inspiration Prize (AIP). The prize was an injection of essential seed money that launched a new phase of development for the project. Carolann Harding, spokesperson for SmartICE, says the prize money gave them a kick-start. “Winning the AIP set the dream in motion,” she states.

The AIP is unique as it is a purely private source of funding. The Arctic Inspiration Prize Charitable Trust governs the AIP with a permanent fund to ensure its long-term sustainability, while also overseeing the award of prize money.

As the largest annual prize in Canada with a specific focus on the Arctic, each year the Arctic Inspiration Prize recog-



@SmartICE, SmartBUOY Deployment, Nain, Nunatsiavut, February 2020

nizes diverse teams with innovative, community-driven projects in the fields of education, sustainable housing, health, performing arts, traditional knowledge, language, and science. And the prize money is significant. The top prize is \$1 million. There are also several smaller prizes of up to \$500,000, and up to \$100,000 for youth projects. The range of prizes means that projects both large and small are eligible, and leaders for projects of all sizes are encouraged to apply. The \$400,000 AIP prize that SmartICE received in 2016 was a game changer.

“The Prize not only provided SmartICE with the funding needed to get off the ground, but afforded us the opportunity to really make an impact within the community by engaging and

working with youth”, says Ms. Harding.

For instance, a centrepiece of their AIP knowledge-to-action plan was the establishment of a SmartICE production centre in Nain. The Northern Production Centre was launched in 2019, the first of its kind in Inuit Nunangat. There, Inuit youth are trained to assemble components of the SmartICE stationary sensors, which are then shipped to communities across the North. Training is provided in both technical and social competencies. It is a holistic approach, incorporating Inuit values and traditional knowledge. Young people learn skills that are transferable to other workplaces and future education.

Another AIP objective was to expand SmartICE services to other communities that requested them. This past 2020 ice season trained Inuit were operating SmartICE equipment and services in 17 communities from Nunatsiavut to Inuvialuit, with a further seven communities in the planning stages. The economic impacts are significant when you consider the training and employment opportunities SmartICE brings to each community, but more important are the impacts it is having on safety and well-being through improved knowledge of ice conditions and potentially greater access to the land for hunting and travelling.

Technology start-ups are emerging as an important sector in Canada’s economy, but they face many challenges. The availability of funding and capital is a key concern.

“You need money to get money,” says Ms. Harding.

“Winning the AIP prize gave the organization a lot of credibility. It has been a passport to other opportunities,” says Dr. Bell.

*continued on page 16...*

# POOLE ALTHOUSE

BARRISTERS AND SOLICITORS

## Proudly Serving the Happy Valley-Goose Bay Area

### Our Practice includes:

Personal Injury  
Real Estate  
Criminal Law  
Corporate and Commercial  
Labour and Employment Law  
Family Law  
Wills and Estates  
Family Trusts  
Civil Litigation

49A Grenfell Street  
P.O Box 1450, Stn. B  
Happy Valley-Goose Bay, NL  
A0P 1E0

**Tel:** 709-896-8777

**Toll-free:** 1-877-634-3136  
(Corner Brook office)

**Fax:** 709-896-8779

**Email:** [goosebay@poolealthouse.ca](mailto:goosebay@poolealthouse.ca)



@SmartICE, SmartBUOY Deployment, Nain, Nunatsiavut, February 2020

SmartICE has been able to leverage the prize money in hand to access other funding and investment.

They are particularly proud of the social enterprise component of SmartICE. It makes SmartICE stand out when seeking funding opportunities. Not only do they give youth the chance to learn both traditional and modern skills; SmartICE also seeks to hire Inuit operators of the technology. Using local knowledge and observations in the data collection process fosters community confidence in the information.

The data gathered helps select the safest routes to travel by sea-ice, and so directly supports traditional hunting and fishing activities.

“Community members become effective environmental monitors for their own communities”, says Dr. Bell.

There are opportunities for entrepreneurs to work with SmartICE, allowing Inuit to develop their own businesses in their own communities. And awareness of the success of the project is expanding. The technology is growing in popularity, with a waiting list of communities who want to participate and gain the economic and social opportunities it provides.

“SmartICE is by Inuit and for Inuit”, says Dr. Bell.

There is a growing and urgent need for projects like this. In the face of climate change and the need for adaptation, “we can’t afford for SmartICE to

fail,” adds Dr. Bell. The social enterprise and economic development approach is putting tools directly in the hands of Inuit to help them take it over. His goal is to have it 100 per cent Inuit operated and managed.

The AIP is different from other funding sources, Dr. Bell observes. Importantly, the Selection Committees are primarily made up of Northerners.

“They can understand what you are trying to do and appreciate the challenges you are trying to overcome”, he says.

In compiling the nomination, he leaned on mentors in the community. While he had a vision for the social enterprise and business aspirations for the project, it was not his area of expertise. The Selection Committee was looking for vision, excitement, and sustainability for the future. Dr. Bell relied on the relationships he had built through

the development of SmartICE to that point to help him put together a compelling nomination. Partners and mentors wrote letters of support, making it a true community effort.

Being a laureate of the AIP has brought many benefits to SmartICE. It strengthened the reputation of the organization and enabled them to network at a different level, including with other laureates.

“We are proud to say we are a laureate of the Arctic Inspiration Prize,” says Ms. Harding. “There is something about being a laureate – a sense of community. It’s all about building capacity in the north and northern communities.”

Dr. Bell notes that they are starting to collaborate with other AIP winners to do some very exciting things. They are looking at further opportunities to develop training that is culturally contextualized for Northern communities. There are ideas for virtual training modules and adaptable “train the trainer” initiatives, and perhaps a joint application to AIP in the future.

“It’s an invitation to dream,” says Ms. Harding, adding that the prize reflects a culture of saying “get to yes” and that “we would never be where we are today without that prize.”

The work that SmartICE does is significant, in terms of jobs and economic impacts in the communities they have partnered with. The social benefits are many, and span generations.

“The Arctic Inspiration Prize does bring ideas to reality,” states Dr. Bell. “SmartICE is proof.” ❄️



**Canon**

AUTHORIZED DEALER



*Serving All of Labrador*

- We Service What We Sell
- We Provide in-house Printing of Wide format Photos, Plans and Canvas Printing

- Digital Copiers/Printers
- Multi-Function Printers
- Wide Format Printers
- Mobile Document Shredding

**VALLEY BUSINESS EQUIPMENT INC.**

24 Burnwood Drive, Happy Valley-Goose Bay, Labrador

Tel: (709) 896-4006 Fax: (709) 896-4008 Email: [vbel@bellalliant.com](mailto:vbel@bellalliant.com)

Labrador West Representative: Cliff Lush 709-282-3941

