Title
Dr.
Last Name of PRESENTING Author
Bell
Middle Name or initials of PRESENTING Author
First Name of PRESENTING Author
Trevor
Email of PRESENTING Author
tbell@mun.ca
Country of PRESENTING Author
Canada
Institution, organization or general address
Memorial University of Newfoundland
Theme
• Sub-Theme 1: The need for the Observing System
• Sub- Theme 3: Operating Observing Systems and Networks
Author list (in order)
Bell, Trevor; and the SmartICE Team
Poster title (brief)
SmartICE: application of a social enterprise model to the delivery of sea-ice monitoring and information services
Abstract - text box

SmartICE (smartice.org) is a northern social enterprise that puts into the hands of communities the technology that helps them adapt to unpredictable sea-ice changes, resulting from climate change. Inuit knowledge of sea ice has been acquired from centuries of observation and use. But in the last decades this traditional knowledge has become less dependable in the face of unprecedented environmental changes.

SmartICE is the World's first climate change adaptation tool that integrates on-ice technology, remote sensing and Inuit knowledge to generate near real-time information on sea-ice conditions. It maintains a network of stationary and mobile sensors that measures and transmits sea-ice thickness data from community trails. It also maps sea-ice surface conditions from satellite imagery to inform safe travel choices. It uses information technology to generate accessible products that match the needs of community users.

In response to increasing community demand for its services and with the

support of the 2016 Arctic Inspiration Prize (arcticinspirationprize.ca), SmartICE is expanding across the Arctic through a social enterprise business model. This business plan is consistent with Inuit societal values such as caring for the environment and community and being innovative and resourceful. It also commits to maximizing social impact and creating positive change in Arctic communities, while applying an entrepreneurial approach to the delivery of novel sea-ice information services for the public and private sectors.

The SmartICE information system not only benefits public safety, food security, and health and wellbeing, but also enables and supports economic activities for communities and industries alike. For example, winter shipping, ice-based fisheries and tourism, environmental monitoring, and emergency response are typically carried out in the landfast ice zone where SmartICE operates. SmartICE services therefore reduce risk and improve performance and safety.