# SmartBay Project Assessment

Presentation to
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# Outline of Presentation

- Purpose and Methodology
- Project Description
- Safety Improvements
- Cost Savings
- Ocean Technology Benefits
- Suggested Enhancements
- Future of SmartBay

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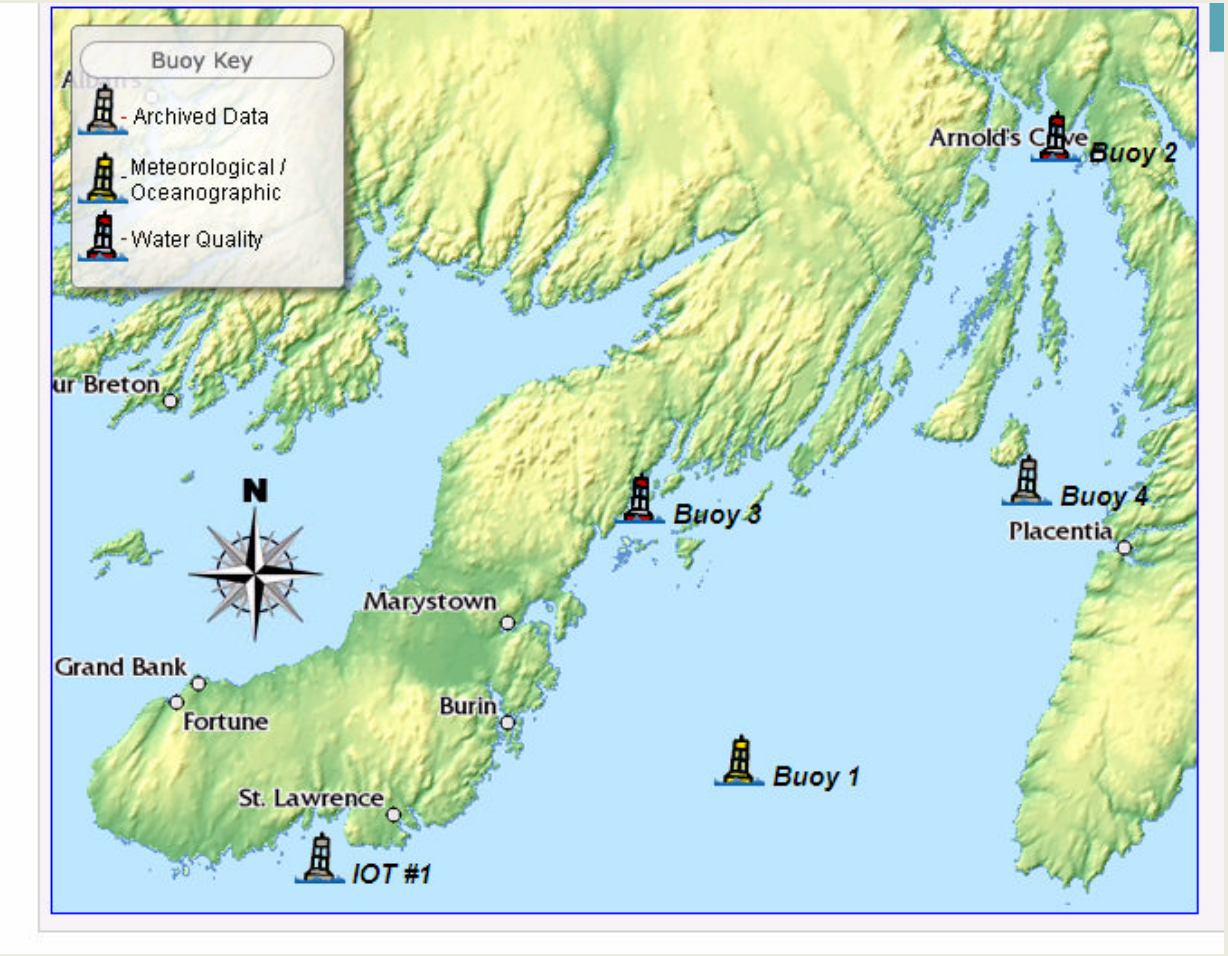
# Purpose and Methodology

- Meet  Evaluation Requirements
- Interviews with 45 Stakeholders
- Web Portal Statistics
- Project Files

# Project Description

- AIS (Automatic Identification Systems) installed on workboats/fishing vessels
- Buoys deployed to provide real-time weather, oceanographic and water quality information
- Portal provides access to layers of information in support of Integrated Management (IM)

# Buoy Access Most Important Feature

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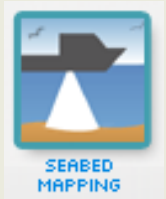
# Website Information Layers - SmartBay.ca

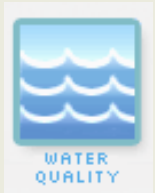
(Average Daily Visitors = 350 users)


*Real-time* info on sea state, atmospheric conditions and water quality




3-D flythrough of bay and seafloor map customization


Small Craft Harbours info, aerial photos

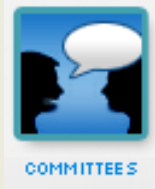



Water column data from 11 provincial sites


Detailed profiles of all Communities in Bay


Locations/links to existing and proposed major sites


Regional and site-specific forecasts at 4 locations




Host for Placentia Bay Integrated Management Committee


Source info on 85+ DFO databases


Repository for Placentia Bay news items

*Source: Earth Information Technologies (Nfld) Ltd*

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# Safety Improvements

Buoy information improving safety in the Bay:

- Better wind/wave information improving decision making by tanker operators, Atlantic Pilotage Authority, fishers, etc. on ‘when to go’
- Those deploying Automatic Identification Systems (AIS), reported “greater sense of security” while fishing in tanker ‘traffic lanes’; AIS provides back-up for radar in heavy rain/wind conditions
- Canadian Coast Guard operations big user of SmartBay

# Actual and Potential Savings

Actual and *potential* benefits in the order of $1M on an annual basis:

- Tanker savings in demurrage charges ~ $660K
- Fuel savings for fishers ~ $225K
- Fuel savings to tanker operators ~ $93K
- Savings to Atlantic Pilotage Authority ~ $21K
- (Un-quantified) savings to Environmental Impact Statement (EIS) process
- ECS (electronic chart system) allows fishers to mark exact location of lost gear – reducing retrieval costs

# Ocean Technology Benefits

All project partners reported ‘enhancements’ to capabilities:

- Data management and display systems (ICAN)
- Emergency response technologies / buoy enhancements (AMEC)
- ‘Became Eastern Canada leader in web-based GIS’ (EIT Ltd)
- Increased capabilities in OOS design, buoy communications and sensor set-up (CCMC)
- MUN/MI School of Ocean Technology demonstration platform

Incremental projects being undertaken include:

- HF Radar project
- Sensor Bay project (Compusult)
- Fish tracking  (Lotek)
- SmartBuoy development

# Suggested Enhancements

- Requirement for buoy at the Red Island Pilot Boarding Station
- Archived and published data, including aids to navigation, notices to mariners, tide data, bridge clearances, etc.
- Daily reporting of vessels departing and arriving
- Fisheries licensing information
- ECS should include ability to add depths from fishers soundings to charts
- AIS-lite for smaller boats operating in the Bay

# Suggested Enhancements *(cont'd)*

- SmartBay needs to 'go into the schools'
- Environment Canada's environmental sensitivity maps should be accessible through portal
- Should develop specific applications for aquaculture
- Habitat and geology layers from the Geological Survey of Canada should be added; ditto Canadian Hydrographic Service charts
- Include time series on fish quotas, biomass, etc. to create biotic layer
- Fog forecast using observers and land station systems

# Summary of Findings

- Marine safety in Bay improved
- Vessel operators realizing savings
- Has expedited EIS work on major projects
- Serving as catalyst for ocean technology industry
- Strong ties to MI's School of Ocean Technology
- Has *potential* to become world class tool in support of integrated management

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# The Future

- ACOA funding in place for next 6-8 months
- MI proposal to Province - to move to *operations phase*
- ‘Fee for Service’ approach being suggested for Transport Canada / Environment Canada / Fisheries and Oceans Canada
- Placentia Bay marine users willing to contribute

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