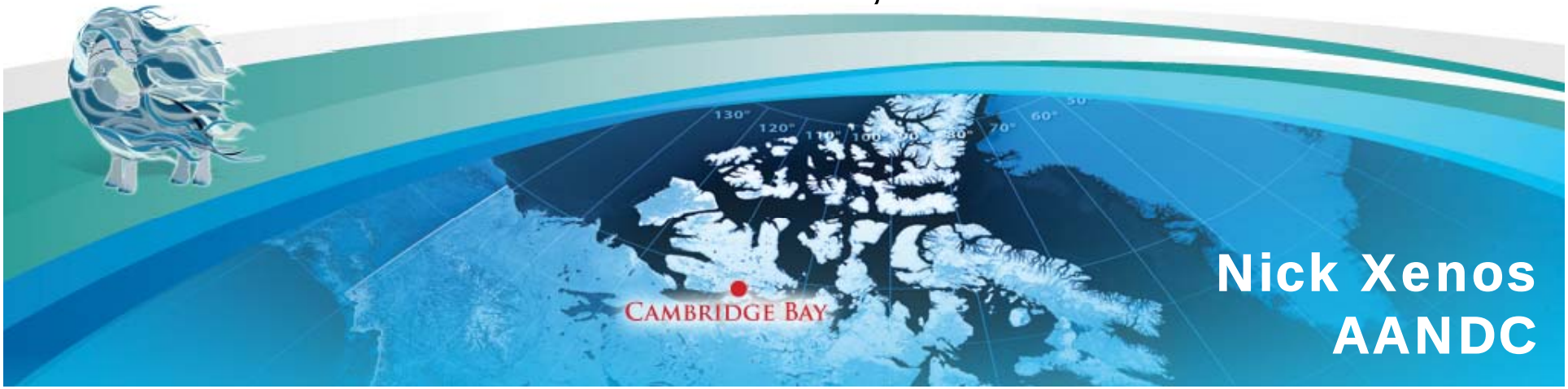
CANADIAN HIGH ARCTIC RESEARCH STATION

www.science.gc.ca/CHARS

Presentation to Bidders of Construction Management Services

Winnipeg, Manitoba
November 22, 2012



Nick Xenos
AANDC

Canada's Northern Strategy

Sovereignty	Social and Economic Development	Environmental Protection	Governance
DOMESTIC AND INTERNATIONAL DIMENSION			
Exercising our Arctic sovereignty as international interest in the region increases.	Encouraging social and economic development and regulatory improvements that benefit Northerners.	Adapting to climate change challenges and ensuring sensitive Arctic ecosystems are protected for future generations.	Providing Northerners with more control over their economic and political destiny.
SCIENCE AND TECHNOLOGY UNDERPIN ALL FOUR PILLARS			

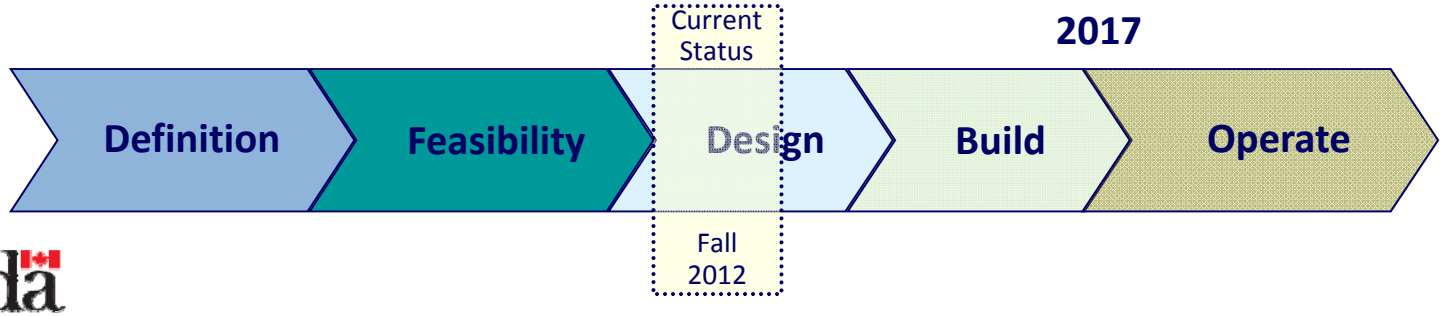
"To ensure Canada remains a global leader in Arctic science, the Government of Canada committed to establish a new world-class research station in the High Arctic."

Canada's Northern Strategy

Canada

CHARS mandate: components

1. **World-class facility** that is a hub for Canadian and international Arctic S&T
2. **Cutting-edge science and technology** that delivers excellence and relevance
3. **Strong research presence** across Canada's vast and diverse North



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CHARS Milestones - Achieved

Milestone	Date achieved
$85 million through Economic Action Plan (EAP) to reinforce existing network of Arctic research facilities	2009
Funding approved for design phase	January 2010
PM Announces Cambridge Bay as location for CHARS	August 2010
CHARS mandate and S&T priorities announced	December 2010
Feasibility study completed	March 2011
Establishment of expert advisory group on science and technology programming	Spring 2011
Request for Proposal (RFP) for design firm	September 19, 2011
Announcement of design firm, construction funding and S&T funding	August 23, 2012
RFP for construction management firm	November 9, 2012

Canada

CHARS Anticipated Milestones

Milestone	Target date
First design charette in Cambridge Bay	January 2013
Building site selection	2012/13
Award construction management contract	Winter 2013
Design concept developed	Spring 2013
CHARS S&T plan finalized by AANDC	Spring 2013
Design development	2013
Construction document preparation	2013/15
S&T services and programming initiated in Cambridge Bay	2013/14
Construction of Station complete	July 2017

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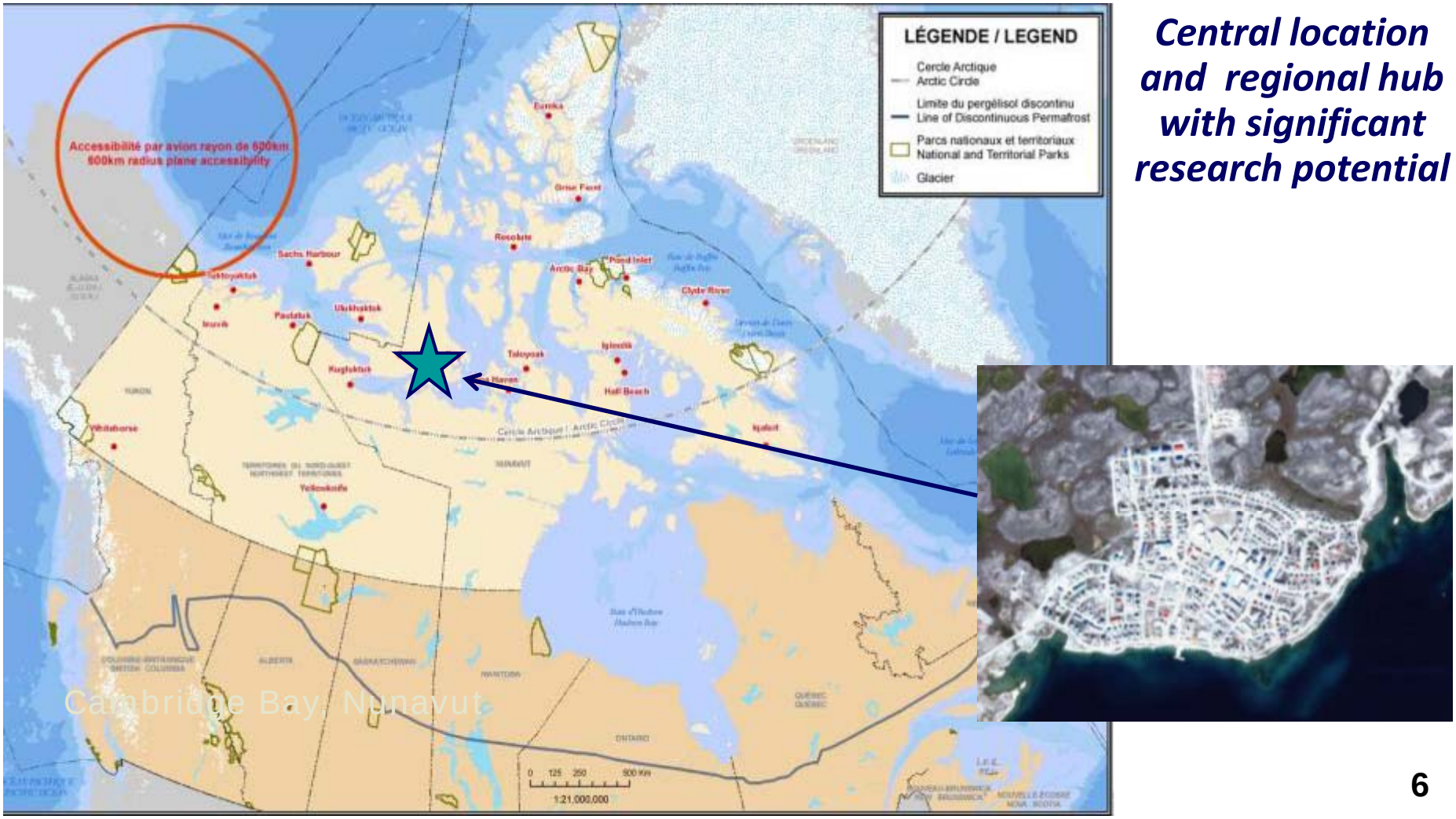
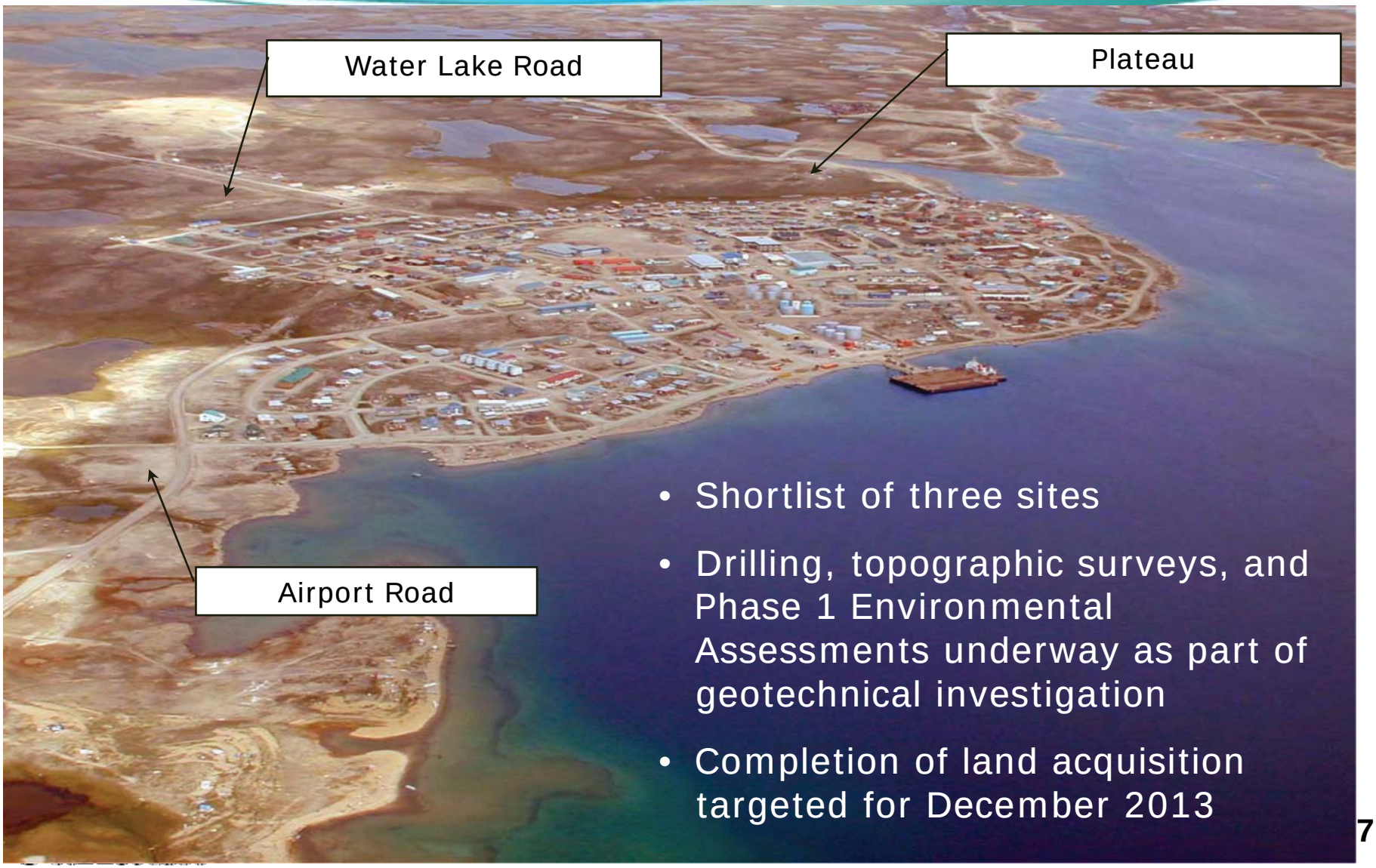
Cambridge Bay, Nunavut: future location of the Canadian High Arctic Research Station



Central location and regional hub with significant research potential

Site Selection



- Shortlist of three sites
- Drilling, topographic surveys, and Phase 1 Environmental Assessments underway as part of geotechnical investigation
- Completion of land acquisition targeted for December 2013

World-class facility

Feasibility phase

- Benchmarked against other polar stations, laboratories

Design phase

- Competitive process, evaluation included stakeholder engagement
- FGMDA/NFOE architectural and engineering team (SNC Lavalin)
- Integrating with existing infrastructure in Cambridge Bay
- Testing and applying green technologies in the North
- Tender for construction manager posted on MERX.

INTERACT
- Meeting rooms
- Teaching space
- Video/conferencing
- eLearning
- Telecommuni-cations
- Science display
- Auditorium

WORK
- Labs
  - GIS
  - Marine
  - Wet
  - Dry
  - Analytic
  - Computing
  - Mobile
  - Engineering
  - eHealth
  - Social sciences and humanities
- Tech incubator
- Business incubator
- Workshops
- Experimental site
- Traditional knowledge centre
- Logistics
- Offices

RESIDE
- Accommodation
- Dining
- Recreation

STORE
- Data/Info
- Photos
- Maps
- Library
- Samples
- Equipment
- Specimens
- Vehicles
- Supplies

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Sustainability

"CHARS will serve as an inspiration for future Arctic sustainable development"

CHARS mandated to be a world leader in green technologies for the Arctic

- Cambridge Bay will be a pilot site for alternative and renewable energy in the North
- Development and demonstration site for new technologies
- Implement sustainable measures in all aspects of the Station

Sustainability of CHARS will be achieved in a number of ways including:

Renewable Energy

- Displace fossil fuels through renewable energy that works in the Arctic

Conservation

- Reduce energy consumption through technical innovation

Community Integration

- Compliment existing community resources

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Research and Technology

Priority themes	Long–term outcomes
Resource Development	▪ Resource development that is economically and environmentally sound and promotes social development ▪ Renewable resources and unconventional energy sources that contribute to greater energy security and sustainability
Exercising Sovereignty	▪ Efficient and effective monitoring and surveillance of Canada's vast Arctic ▪ Effective management of Canada's Arctic waters under changing conditions ▪ Improved response to, and mitigation of, environmental and other disasters.
Strong and Healthy Communities	▪ Improved infrastructure and diversified economic opportunities ▪ Improved health outcomes and community wellness and resiliency
Environmental Stewardship and Climate Change	▪ Effective environmental stewardship through greater knowledge of natural and human systems and their interconnections ▪ Strengthened mitigation efforts through greater understanding of changes in the Arctic climate and the links to global systems, and increased capacity to adapt

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S&T Activities

- Developing 5 year Science & Technology Plan in coordination with an Advisory Panel

S&T activities will include:

Research and technology centre • Addressing local, regional national and international issues **Monitoring** • Brokering standards and running experimental and reference sites **Logistics** • Ensuring researchers get into the field **Traditional Knowledge**	**Networking** • Fostering collaborations nationally and internationally • Catalysing synergies across sectors **Knowledge application** • Brokering and ensuring S&T is useful and used **Education and outreach** • Building the next generation • Development of Northern research capacity

ALL FOCUSED ON NATIONAL PRIORITIES

Examples of
ARIF Funded Facilities


Nunavut Research Institute in Iqaluit


PCSP in Resolute


Yukon College in Whitehorse

Strong research presence

- Through Canada's Economic Action Plan, Arctic Research Infrastructure Fund (ARIF) invested $85M in 20 projects at more than 40 sites to upgrade the Arctic S&T network

- ARIF provided significant learning for CHARS on realities of Northern construction


WARC in Inuvik


Govt of Nunavut Vessel

Churchill Northern Studies Centre

Centre d'etudes Nordiques Whapmagoostui-Kuujuarapik

Nunavut Land Claims Agreement

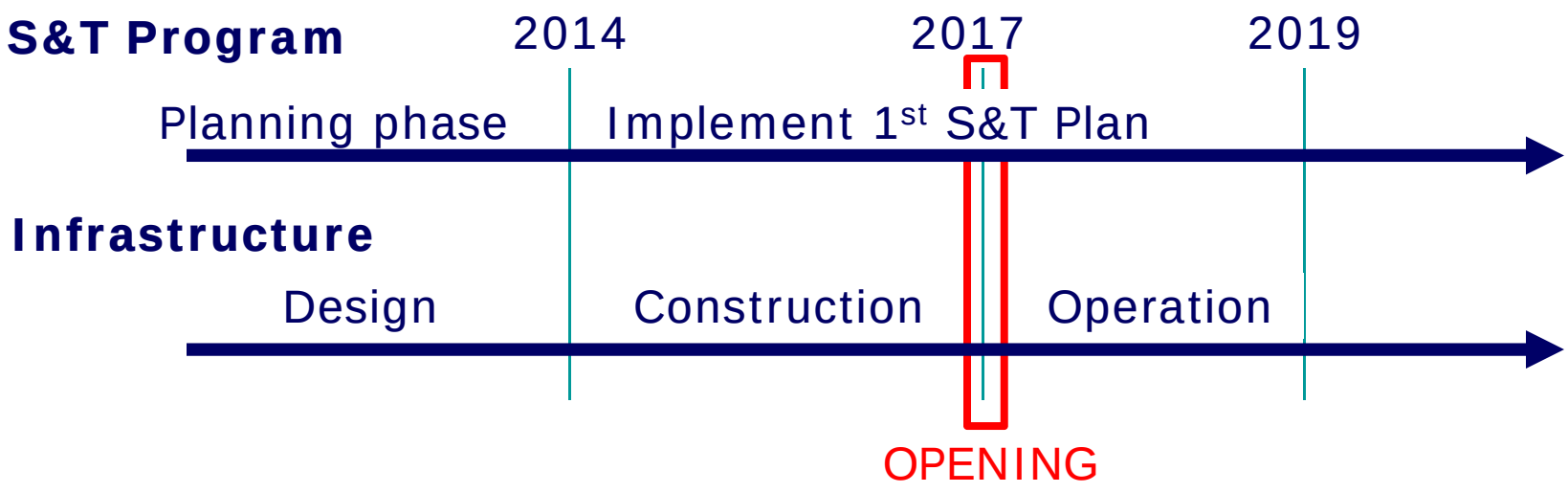
- Working to develop a Pre-Employment Training Plan and Inuit Employment Plan for CHARS to ensure a representative workforce, respect Article 23, and build capacity for the launch of the station.

- Employing a Construction Management procurement approach to enable flexibility – the RFP is posted on the MERX.

- Article 24 Inuit Benefits support – Construction Management RFP.

Next Steps for CHARS

- Facility design
- Contract Construction Manager
- Finalize S&T Plan for approval
- Site selection and establishing a presence in Cambridge Bay



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