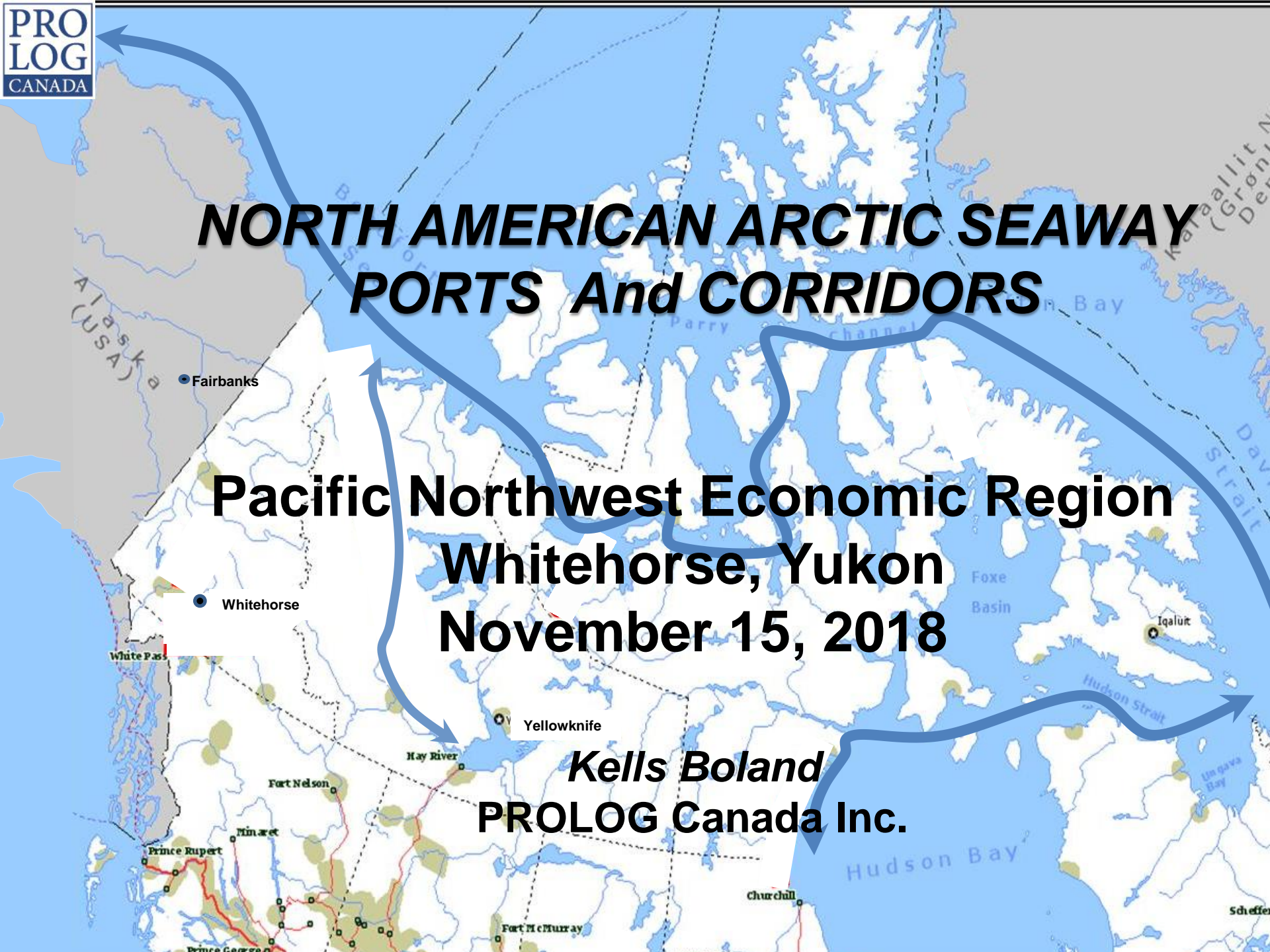


# **NORTH AMERICAN ARCTIC SEAWAY PORTS And CORRIDORS**

**Pacific Northwest Economic Region  
Whitehorse, Yukon  
November 15, 2018**

***Kells Boland*  
PROLOG Canada Inc.**



# *Ice Melt = More Ships Longer*



- Not for a Northern Europe to North Asia Shortcut
- But for Partial Transits: Resource Exports/Resupply
- As well as Full Transits from East or West Coast
- Plus Research Expeditions/Cruise Ship Sailings
- And the Possibility of “Suspicious” Ships

# Arctic LNG Terminals and Tankers?



LNGC *Vladimir Rusanov*



Yamal LNG Sabetta Port

# ***Ice Melt = New Arctic Seaway Reqmts***



- **For Surveillance/Interdiction**
- **For SAR, Salvage and Spill Response**
- **For Ice Navigation and Escort assistance**

# North American Arctic Seaway

*Deep Draft Ports  
All in Eastern Arctic*



# North American Arctic Seaway

## *Eastern Arctic Deep Draft Ports and Potential Western Arctic Deep Draft Ports*



**King Point**

**Tuktoyaktuk**

**Nanisivik**

**Milne Inlet**

**Grays Bay**

**Iqaluit**

**Churchill**

Alaska  
(USA)

Fairbanks

Whitehorse

White Pass

Yellowknife

Hay River

Fort Nelson

Prince Rupert

Minaret

Fort McMurray

Churchill

Iqaluit

Scheffer

# Ice Melt = Shorter Ice Road Season



***Tibbet to Contwoyto Winter Road***



***From Winter Road Extensions***



***To All-Weather Road Construction***



# Northern American Arctic Seaway

## Current and Proposed Highway Corridors



Track structure – ballast, ties, rail

# New Technology Applications Changing Transport Modal Choice

## Baffinland Iron Ore From Truck to Rail

Embankment  
Thaw Stable Sand and Gravel  
Ice Rich Soils



## Bitumen/Oil From Pipe to Rail



# *Stranded Alberta Oil Sands/CANOL Shale Oil*

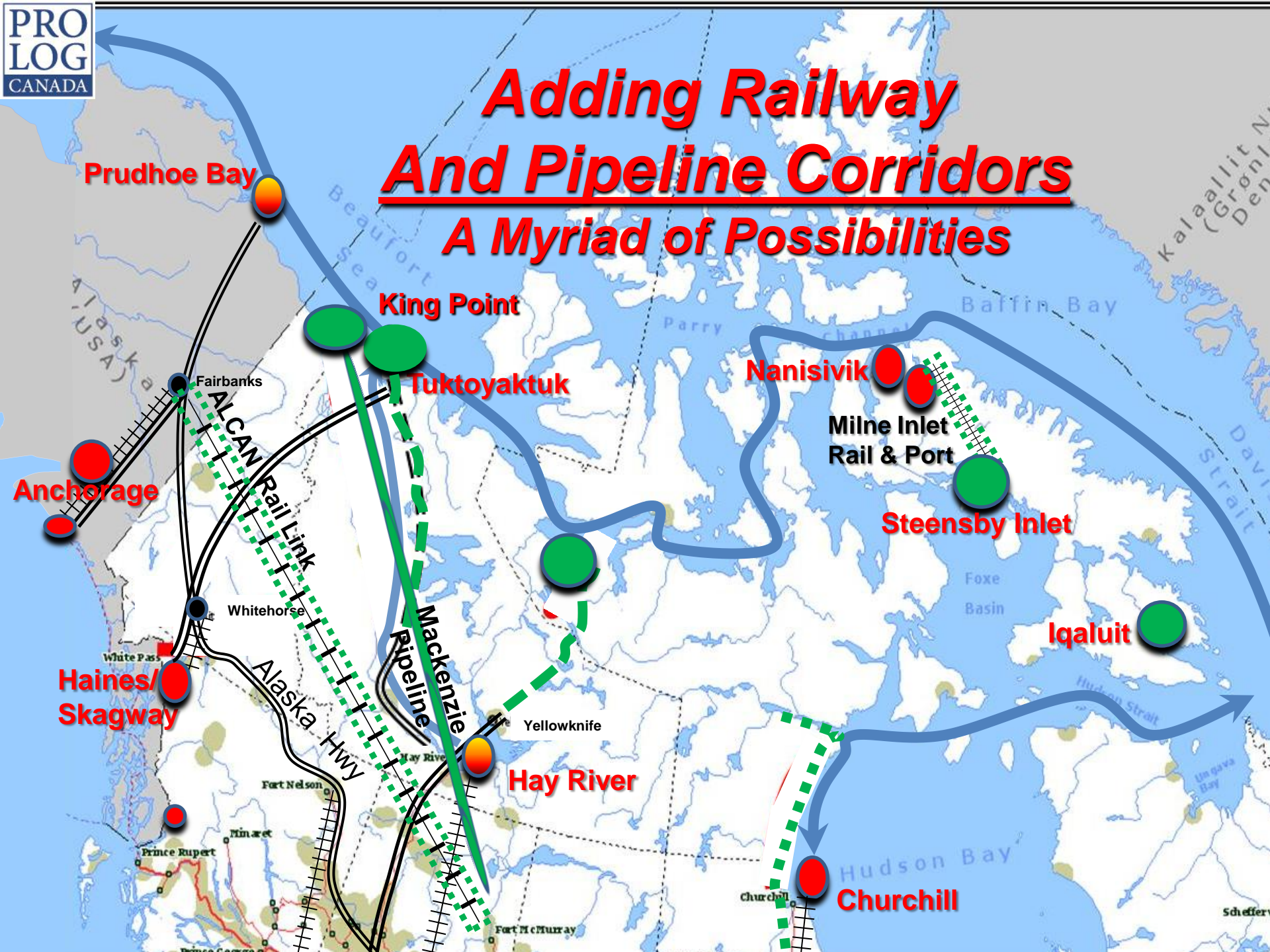


Bitumen by Rail to Northern Ports?



OR Pipelines to the Arctic?

# **Adding Railway And Pipeline Corridors** ***A Myriad of Possibilities***



# Northern Transportation And Infrastructure *Planning Lapses*

- **Arctic Ports and Northern Corridors Suffer Dis-integrated Plans, Single Project Focus, Spotty Investment and No Coordination.**
- **Northern Infrastructure Investment Is Unfolding Hapazardly, Typically Tied to a Politically Popular Project of the Moment;**
- **Projects Are Often Multi-Jurisdictional, but lacking a coordinating entity – or comprehensive funding facility**

# Northern Transportation And Infrastructure

*Suggestions for an Actionable  
Northern Infrastructure Development Strategy  
- that does not yet exist*

- 1) *Umbrella Planning, Financing & Collaboration  
In a Pan Arctic Infrastructure Coordinating Agency***
- 2) *Incubating Seaway, Port & Corridor Authorities  
Among Public and Private Partners***
- 3) *Collectively Advancing Northern infrastructure  
with Multi-User, Cross-Jurisdictional Cost Sharing***