



Transportation Economic Assessment (TEA)

Non-road Transportation for the
Canadian Arctic
2019 - 2024

Problem

Southern transportation solutions are **not as effective** in the Canadian Arctic.



120,000 people spread over **3,535,263** km² of land.



Approx. **~35%** of people **do not** have access to year-round roads.



Harsh climate inhibits access to natural resources extraction.



Permafrost presents challenges in construction and waste disposal.



Much **higher costs** to build and maintain conventional ground transportation



We Need a Non-Road Transportation Logistics Solutions



To do that, we need:

1. To articulate a comprehensive vision of near future transportation logistics solutions.
2. To articulate social, technological, economic, political and environmental viability.
3. To recruit entrepreneurs, investors and enterprises to build it.

Concept

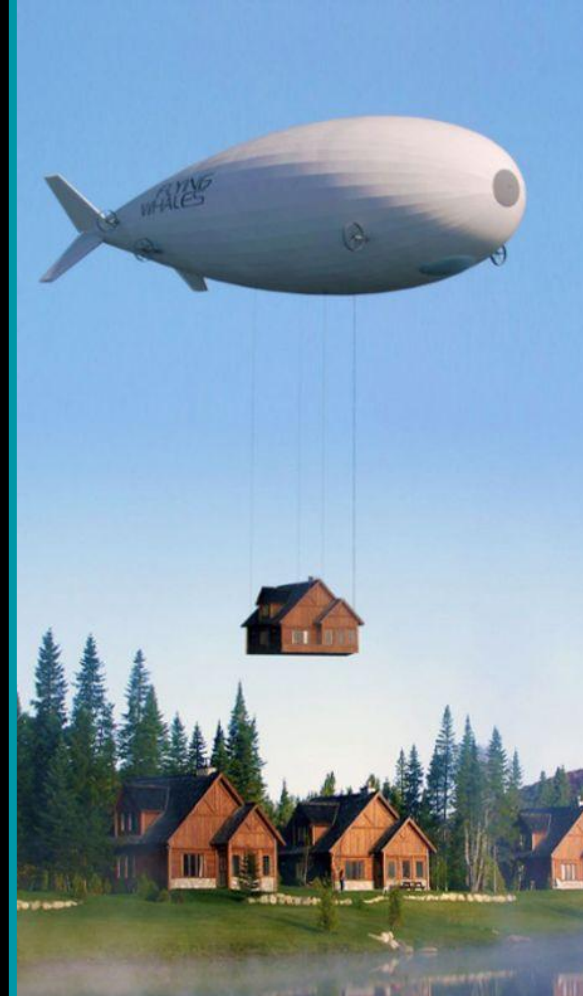
An integrated **non-road** transportation logistics system adopting airships, amphibious tractors, hoverbarges, hovercraft and arctic marine shipping.



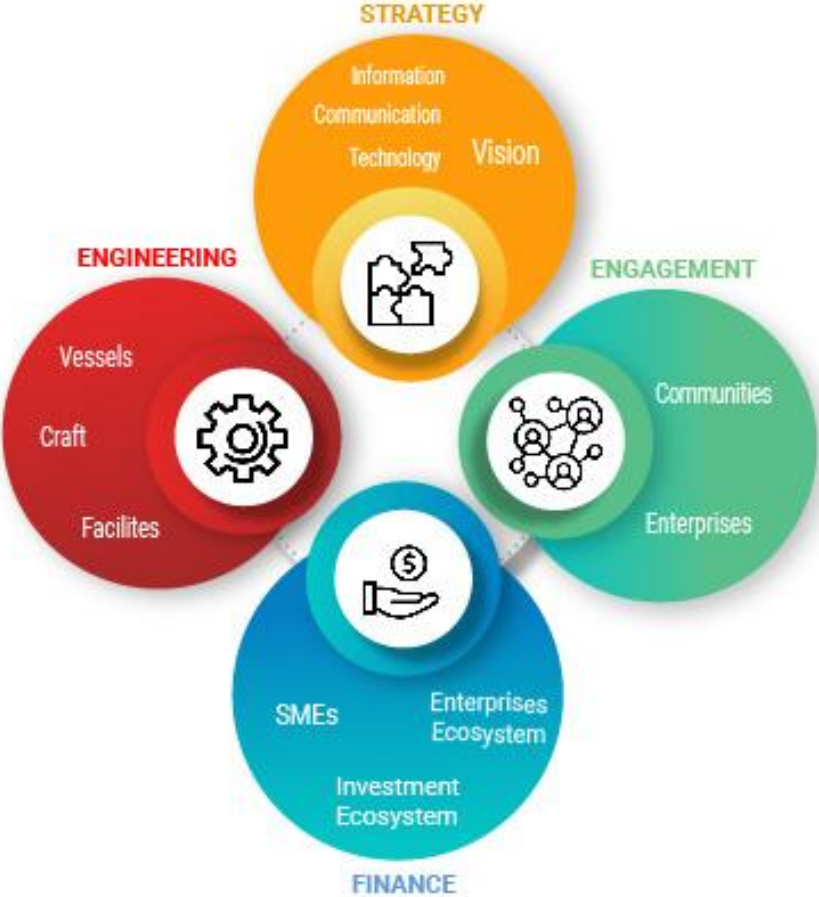


Solution

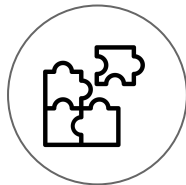
Studies, simulations and tools that help **create a community of practice** that **builds** transportation logistics solutions for the Canadian Arctic.



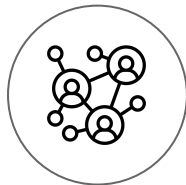
Communities



Communities



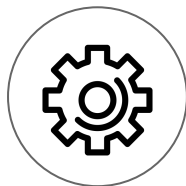
Strategy - The Strategy community encompasses the vision community that will formalize needs such as cargo capacities and growth scenarios. The Information Communication Technology community will deal with the development of simulators, communications infrastructure and cyber-security issues.



Engagement - The Engagement community will have a focus on engaging with Communities and Enterprises in the three Territories. This community will handle the Digital Media and a development of a Web Series to communication concerns and opportunities.



Finance - Finance community connects the Small and Medium Enterprises (SME) that form a significant source for the external solutions evolving from this projects as well as the large Enterprises and Investment communities.



Engineering - The Engineering community will explore practical near-future non-road transportation logistics solutions. This is separated into climate resistant facilities, vessels and craft communities.

Opportunity

120,000



People

\$2.3B



Mining GDP*
To be moved

3,535,263 23.4%
km²



To be monitored



Global Natural
Gas Reserves in
the Arctic

* Includes mining, and oil and gas extraction.

Opportunity

Russia plans to attract **€167.8B (\$253.4B Cdn)** of private investment by 2050 in the Arctic to develop its regional infrastructure and natural resource development.

TEA is a project to **develop a transportation logistics** plan that can support a level of development in a manner that is more considerate of **cultural** and **environmental factors** while managing the economic risks.



Key people

E v. Stackelberg, MSc-IS : Entrepreneur with over thirty-years experience in technology and management. He has held senior management positions with Anethum Corporation (2001-2016), M5 Airborne Solutions Inc (2015-2016), 24Seven-Inc. (2003-2006), Chimera Visions Corporation (2001), Cogent Technologies Corporation (1990 – 2001) and worked extensively with databases, software design and innovation for clients in industry, academia and government.

K. Debu, ACA, CAIA : Finance and investment professional with over 15 years' experience and proven track record spanning consulting, venture capital, special opportunities, private equity, investment banking, corporate finance, and auditing across North America and Asia. As a Associate Portfolio Manager at AIMCo, he invested over \$500 Cdn million in private-equity and venture-backed companies across various industries. As an investment banker with Citigroup, he worked on over \$60 Cdn billion worth of transactions including equity, debt and M&A.

D. Ionescu, P.Eng : Professional engineer with a progressive career established in Consulting Engineering, Owner and Supplier environments addressing industries varying from Infrastructure, Mining (uranium, nickel, gold, coal, iron ore), to Oil & Gas (Pipeline, Facilities & Rail Transportation). Roles in these fields have extended from Project Engineer to Senior Engineering Manager and to Construction Manager.

L. Barreto : Designer and creator of mixed realities. Experience building and managing teams to produce animation television series, films, art exhibitions, live events, video games, advertising, and online experiences. Broad experience in leading teams that merged storytelling with digital and traditional art techniques such as illustration, 2D and 3D animation, stop motion, motion graphics, interactivity, VFX, projection mapping, set design, VR installations in Canada, USA, Spain, England, France and Colombia.

Context

A stylized map of Canada is shown in the background. A circular inset on the left side of the map provides a closer look at a snowy, mountainous landscape. In this inset, a small settlement with several buildings is visible, along with a yellow container in the foreground. The overall theme is transportation and logistics in a northern, cold environment.

Canadian Territorial North has limited ability to connect:

- Large distances with sparse population
- Infrastructure is built on permafrost that is impacted by climate change
- Natural resources are expensive to get to market.

Issues

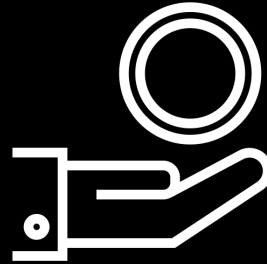
- Limited financial resources
- Conventional solutions are expensive due to conditions
- Need local jobs

We Can

- Continue with limited development
- OR
- Pursue our non-road transportation logistics solution.



What we are looking for



\$11,787,000
National Trade Corridor Fund



Risk



Social - Integrating the change into culture and finding a path to acceptance..



Technical - Effectively transitioning and adapting early stage technologies into production.



Economic - Securing sufficient funding and capital throughout the supply chain.



Political - Regulatory environments that inhibit innovative solutions.



Environmental - Designing solutions that are adaptive and responsive to a changing Northern Climate.

Reward



Investment and revenue target is **\$31,739,000 CDN** in revenue or investments over five years or approximately **2.7 times** the requested contribution.



Estimated **150 Full and Part-time** jobs for knowledge workers developing the non-road transportation logistics solutions.



The potential for **new industries** in Airships, Amphibious Tractors, Hoverbarges and the **related supply chains**.



Supports better **multi-mode** transportation links **domestically** and **internationally**.

Contact



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Transportation Economic Assessment



“A man can do all things if he will”

Leon Battista Alberti (1404-72)

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