Written Submission for the Pre-Budget

Consultations in Advance of the
2021 Federal Budget

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Recommendation 1: That the government provide funding in the amount of $ 70,000,000,000 for the construction of a Naval base, International airport, and Hyperloop station that will be located in the artic as well as a Hyperloop route from the artic down through Alberta.

Recommendation 2: That the government provide funding in the amount of $ 1,000,000,000 for the orbital space fabrication system.

To restart the Canadian economy and obtain profit requires vision, leadership, and determination. It requires the vision to perceive that which is unseen. It takes leadership to inspire the masses forward, and it takes determination to keep them moving forward even when the barriers that block the path forward seem unrelenting. The following projects will move Canada and its people forward as unemployed workers embrace newly formed employment opportunities. With each determined stride, Canadians will be bound together as we embrace a common goal, the environment, and a more prosperous future.

Let Canadians go to work! Canadians need a national project to rally behind. Something that is such a massive endeavor that to succeed it will require every individual, province, and territory, as well as the Federal government working in unison. Canada needs to build a Naval base, International airport, and Hyperloop station in the artic. To be more precise, the aforementioned needs to be constructed at the following coordinates, Latitude 69.5366153 Longitude -125.4025671.

Russia is already building up their forces in the artic and laying claim to the Northern Sea Route (NSR) by having armed ships, hypersonic cruise missiles, nuclear-powered undersea drones, and rebuilding their base in the artic.[1] [2] Canada agreed as a member of NATO to spend two percent of its GDP on defense.[3] The GDP of Canada is around 1.73 trillion dollars,[4] so two percent would be $34,600,000,000. This project would allow Canada to meet its obligations to NATO while enabling the funds to stay in Canada. Plus, Canadians will find employment opportunities with the companies hired to make this project a reality. If shares are offered, Canadians will be able to buy in and enjoy profit when everything is built. The other benefit is since Canada will have a significant presence up north, Canada will have a seat at the negotiation table if resources are found in the artic and negotiations take place as to what country owns them.

The Naval base will also incorporate the ability for cargo freighters to export Canadian goods to other countries and international cargo freighters to import products into Canada. The NSR will melt even more than it has, and as that happens, the ships of the world will take advantage of that route.[5] That is

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1 Matthew Melino and Heather A Conley, “The Ice Curtain: Russia's Arctic Military Presence,” The Ice Curtain: Russia's Arctic Military Presence | Center for Strategic and International Studies (Center for Strategic and International Studies, March 26, 2020), https://www.csis.org/features/ice-curtain-russias-arctic-military-presence.

2 Vladimir Isachenkov, “Russia Revamps Arctic Military Base to Stake Claim on Region | CBC News,” CBCnews (CBC/Radio Canada, April 5, 2019), https://www.cbc.ca/news/canada/north/russia-arctic-military-tool-1.5085101.

3 Nato, “Funding NATO,” NATO (NATO, May 5, 2020), https://www.nato.int/cps/en/natohq/topics_67655.htm.

4 Caleb Silver, “The Top 20 Economies in the World,” Investopedia (Investopedia, March 18, 2020), https://www.investopedia.com/insights/worlds-top-economies/.

5 Jessica Murphy, “Is the Arctic Set to Become a Main Shipping Route?,” BBC News (BBC, November 1, 2018), https://www.bbc.com/news/business-45527531.

important from an economic and environmental standpoint. If a freighter can dock at the Naval Base, and unload its cargo, it will have reduced the amount of pollution it would have expelled into the atmosphere due to the fact it would not have to sail as far. From an economic standpoint, it would bring billions of dollars to the communities in the Arctic. The Vancouver Port enables "the trade of approximately $240 billion in goods, port activities sustain 115,300 jobs, $7 billion in wages, and $11.9 billion in GDP across Canada."[6] The communities in the north would flourish even if only a small percentage of the wealth that went through the Port of Vancouver was redirected up north. Plus over a few years the port would be paid off and making a profit.

> "YVR's operations—together with tourism and cargo—contribute more than $20.2 billion in total economic output, $10.4 billion in total GDP and $1.4 billion in government revenue across B.C. Each new flight through YVR creates hundreds of jobs and contributes millions of dollars in economic benefit to the province."[7]

An international airport will cost over fifteen billion dollars to build8 and will allow flights to land that normally would fly over the north pole.[9] Airplanes are some of the worst polluters on the planet.[10] To reduce the amount of pollution from airplanes the passengers will disembark from a plane and board the Hyperloop, which will be docked at the Hyperloop station. The Hyperloop runs on electricity not jet fuel like the airplane. The Hyperloop will not pollute the air and it is able to travel at an average speed of 600-760 mph,[11] 966-1223 kph. The Hyperloop can transport both people and cargo. Both will be transported down through Alberta and from there the people can fly, if needed, to other destination. The cargo can be loaded onto other transport systems to continue its journey.

New equipment, NE, will need to be fabricated in order to build the Hyperloop without building roads, wreaking habitat, and engage in precise cut and cover from Alberta to the final destination. The NE that will need to be fabricated will be able to cut and cover in such a way to lift the topsoil up while keeping it intact. The lower levels of soil will be scrapped and sucked into a tank. Once the Hyperloop tubes, HT, are installed, the soil will be sprayed and packed into place around the HT. Then the topsoil will be placed back like it was before the construction. Except for two rails that follow the NE, the landscape

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6 "About Us," Port of Vancouver (Port of Vancouver, April 30, 2020), https://www.portvancouver.com/about-us/.
7 "FAQ," YVR (YVR), accessed July 19, 2020, https://www.yvr.ca/en/airport-improvement-fee/faq.
8 Laurie Cowin, "7 Giant Airport Projects around the World Take Flight," Construction Dive (Construction Dive, October 11, 2018), https://www.constructiondive.com/news/7-giant-airport-projects-around-the-world-take-flight/539244/.
9 "Do Planes Fly Over the North Pole? (Transpolar Flights)," PilotMall.com (PilotMall.com, March 24, 2020), https://www.pilotmall.com/blogs/news/do-planes-fly-over-the-north-pole-transpolar-flights.
10 "Airplane Emissions," Airplane Emissions (The Center for Biological Diversity), accessed July 19, 2020, https://www.biologicaldiversity.org/programs/climate_law_institute/transportation_and_global_warming/airplane_emissions/index.html.
11 Trevir I Nath, "Hyperloop vs. High Speed Rail: Comparing the Differences," Investopedia (Investopedia, April 27, 2020), https://www.investopedia.com/articles/investing/050815/elon-musks-hyperloop-economically-feasible.asp.

will return to its original setting. The NE will not only be used to construct the Hyperloop route; it will be able to be sold domestically and internationally.

The two rails will allow equipment, fuel, and other necessaries to be sent to the work crew. To transport gear around and near the worksite, Textron Inc. has built some hovercrafts that were constructed for the United States military that would suffice. They have a range of 321 Kilometres.[12] [13] [14] A hovercraft will stay above the ground as to not damage the environment. Plus, they can traverse land and water.

Orbital Space Fabrication System

President Trump stated that "the administration does not view space and celestial bodies as global commons." Nasa is going back to the Moon in 2024. Once there, if President Trump has his way, the United States will start claiming parts of the Moon.[15]

To restart the Canadian economy Canada needs to look to space. According to the Luxembourg Space Agency “The Moon, other planets and asteroids contain a rich diversity of minerals, gases and water that could be used to provide raw materials, energy and sustenance to sustain human life and enable exploration deeper into space.”[16]

However, the next real hurdle to space exploration is breaking the mindset that has us chained to this planet. The world races to launch, from the earth, reusable rocketships. That is like owning a world war one plane and trading it in for a Cessna. Yes, a Cessna will get you from A to B. However, it is still just a small slow plane. Canada needs to break from tradition and build automated manufacturing, fabrication, and foundry systems in the earth's orbit. Automated manufacturing, fabrication, and foundry systems will project Canada to the forefront of space exploration in two ways. First, Canada will be able to build equipment in space. Second, the systems will be able to processe any raw resources regardless if they are mined from space or on earth.

Canada would need to use traditional rocketships to move the Automated manufacturing, fabrication, and foundry systems into orbit. Once the systems were in the earth's orbit, Canada will be able to use an 1100-meter-long barrel of a gun that uses hydrogen gas to thrust a 450kg payload into the sky. Once

12 Textron Systems, “Ship-to-Shore Connector,” 2020, https://www.textronsystems.com/products/ship-shore-connector.
13 Dan Petty, “Navy.mil Home Page,” January 17, 2019, shorturl.at/prGP3.
14 “United States Fact File,” October 10, 2007, https://web.archive.org/web/20071221152137/http://www.navy.mil/navydata/fact_display.asp?cid=4200&tid=1500&ct=4.
15 Jordan Davidson, “Trump Signs Executive Order to Mine the Moon for Minerals,” EcoWatch (EcoWatch, April 10, 2020), https://www.ecowatch.com/trump-moon-mining-2645687877.html?rebelltitem=4.
16 “Resources in Space,” Luxembourg Space Agency (Luxembourg Space Agency, June 17, 2020), https://space-agency.public.lu/en/space-resources/ressources-in-space.html.

the payload had reached a certain altitude, smaller thrusters will allow the rocket to dock with the systems. The payload will cost US$651.046 per kilogram to launch it into orbit.[17] Right now, it cost US$1411 per kilogram to launch something into orbit.[18] The cost to deliver a payload into orbit is not the main selling feature; the main selling features are the frequency at which payloads can be put into orbit and that when the system is in orbit, it will be completely automated.

The automated systems will refine the raw resource from the earth in space. For example, a company that wished to build a satellite and have it placed in the earth's orbit would supply the satellite's schematic. Canada's space team would calculate the materials that the satellite requires. Once the materials and the qualities of the materials have been identified, the team would upload the satellite's plans to the automated systems. The team would then load the gun with the 1100-meter-long barrel with the raw resources and fire them up to the automated systems in orbit. The systems would then break down and refine the materials. Once the parts of the satellite were manufactured, the system would assemble the satellite and place it in the correct orbit. That would also remove the risk of a satellite being destroyed as it was transported into space.

At first, the raw resources will originate from earth. Once Canada had created, using the procedure outlined above, robots that are capable of mining the Moon, Mars, asteroids, rings of planets, and anywhere else Canada chooses to mine, the raw resources from space will come back to the earth. Depending upon what is being built in space, the raw resources may not need to pass through the earth's atmosphere. For example, if Canada wished to send people to Mars, the raw resources mined in space could be delivered to the automated systems, and the systems could transform the raw materials into the parts needed for Canada's Mars spaceship and once the parts were created the systems would assemble the parts into the finish product.

Canada will be able to outrace the United States, China, and any other country into space if it starts looking ahead.

17 Lin Edwards, "Space Cannon to Shoot Payloads into Orbit (w/ Video)," Phys.org (Phys.org, January 18, 2010), https://phys.org/news/2010-01-space-cannon-payloads-orbit-video.html.

18 Wendy Whitman Cobb, "How SpaceX Lowered Costs and Reduced Barriers to Space," The Conversation (The Conversation, March 1, 2019), https://theconversation.com/how-spacex-lowered-costs-and-reduced-barriers-to-space-112586.