



INFORMATION PACKAGE
2017

MISSION

GROWING NORTH

68% of families living in Northern Canada live with food insecurity, without reliable access to a sufficient quantity of affordable, nutritious food. We see this as a systemic issue, a product of how food is grown, supplied and transported to Canada's North.

Growing North's mission is to sustainably provide fresh, locally grown produce to families living in Northern Canada, at a fraction of the current price, while positively contributing to the educational infrastructure and job market.

We want to decrease the gap between income and affordable food through a multi-pronged approach that can be grown and replicated in any community within Northern Canada. Our methods and efforts stem directly from community identified issues and result in positive social, economic and environmental change. We focus on the long term sustainability in all that we do.

FIRST PILOT COMMUNITY SNAPSHOT

Naujaat, Nunavut : Arctic Circle



Population
1,256



Climate
Summer 10°C - 25°C
Winter: -35°C to -50°C



Transportation
Airplane and annual sea lift

63%

Community
Under the age of 18



Ethnic Distribution
95% Inuit

77%

Unemployment
Rate

1/40

High school grads
per year

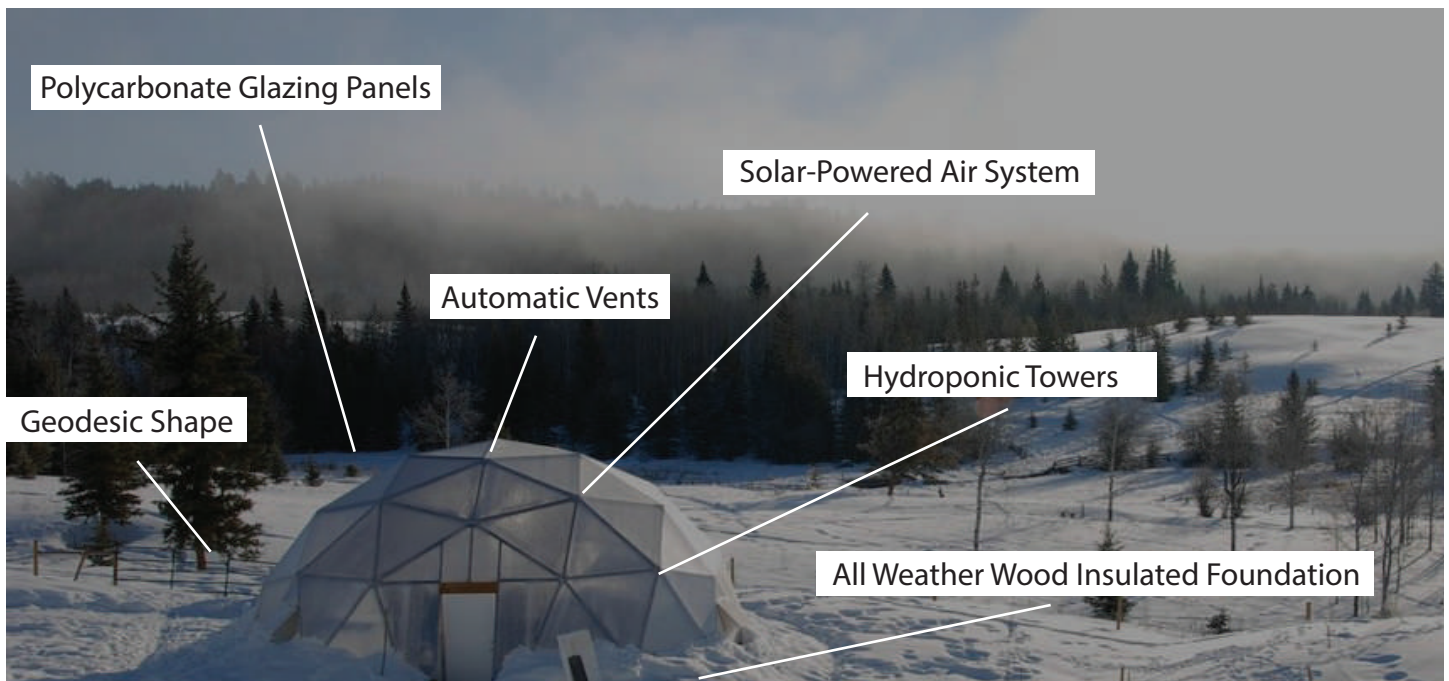
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Food Insecurity Rate
Across Naujaat households

Primary data collection was conducted by the Repulse Bay Community Health Centre (August, 2014). Data on population was retrieved from 2007-2008 Inuit Child Health Survey, and information on ethnic distribution can be found from city-data.com



HOW IT WORKS



Combined
3 technologies
to build the
GREEN IGLOO

Can withstand
180 kp/h winds
and can handle
7 ft of direct snow

Hydroponics grow
3X more
produce than
horizontal farming

Uses **20X**
less water than
traditional methods

Northern Canada's cold temperatures and infertile land prevent the growth of fruits and vegetables. A solution that could maintain warm temperatures, circumvent harsh weather conditions, while providing sufficient nutrients was needed in order to make local food growth in Northern Canada a reality.

A solution exists within the Geodesic Greenhouse; a dome shaped structure created to grow fruits, vegetables and herbs in harsh and cold weather conditions. With a polycarbonate exterior, and insulated north facing wall outfitted with a reflective barrier, the greenhouse is able to maintain temperatures 30°C degrees warmer, relative to the outside climate, entirely from sunlight.

ON THE INSIDE

Within the dome lives our hydroponic system, a collection of water pumping towers designed to mechanically provide growing plants with water and nutrients. The towers, standing at 5ft tall, grow fruits and vegetables vertically, allowing up to 3 times more growth than traditional methods, while using 20 times less water due to its water recycling capabilities. In all, we are able to fit just over 300 towers, allowing us to grow roughly 13,250 lbs of produce annually. This amount is capable of feeding over 500 people, per unit. In Naujaat, that's 51% of the community.

To ensure consistent temperature and atmospheric control through all seasons, a combined heat and power unit (CHP) can be installed. The CHP unit simultaneously generates electricity and heating through the combustion of a solar heat collector. The CHP will aid in maintaining warm temperatures during summer months, and providing all needed heat during the winter.

SUSTAINABLE OPERATIONS

CO-OP PROGRAM & GROCERY STORE



Launched a co-op program:
graduating 3 students
20+ Students
in 2017



Local partnerships offering
51% price reduction for
fresh produce

30% profit margin
to be reinvested into
community initiatives

To ensure sustainability, Growing North must continue Greenhouse operations, and provide locally-grown food to the community without the influence of project members. Thus, a system consisting of the local high school, grocery store and Health Center, has been established to allow the community to embrace the responsibilities and ensure continuous growth.

1. The greenhouse will be operated by our arctic team consisting of a local community members. In Naujaat, the greenhouse is managed by Luke Angotialuk. The greenhouse manager will manage the production, greenhouse maintenance and distribution.
2. Greenhouse operations will also be conducted by the students of the community. The school in Naujaat has incorporated a greenhouse growing program as a co-op opportunity for grades 10 to 12, where students receive credits for building and operating the greenhouse. The creation of this course has allowed teachers to watch their class attendance double as the curriculum becomes a tremendous incentive for students to stay in school.
3. For selling and distribution purposes, Growing North has partnered with the locally owned grocery store. The local grocer has agreed to purchase 80% of our produce, offering it the community at a price reduction of up to 51% .

COMMUNITY OUTREACH

2

additional revenue streams:



Profits will be
reinvested into the
community through
microloans
for Inuit
entrepreneurs



The Naujaat
women's
collective group
where 25 local
women share
profits



Women's Collective

As a compliment to the greenhouse, Growing North has created the Naujaat Women's Collective where local women come together to cook and sew traditional goods. These goods are then sold to locals in the community and down south, with the profits going back to the women in the collective.

This year, we worked with 25 women to cook bannock and caribou stew that was then sold to the community during Nunavut Day. We are also working on sewing goods that will be sold at a Growing North event in Toronto during October 2016. The women are excited to see the collective take off and become a sustainable source of income.

Bursaries and Education

With 63% of the community being under the age of 18 and a low graduation rate, Growing North has implemented a co-op program where high school students from grades 10-12 can gain school credits for volunteering in the greenhouse. Edmund, our first graduate from this program is now on the greenhouse management team. In the upcoming school year we will be accepting 20 new co-op students into our program with hopes of helping them graduate.

In addition, we also teach healthy eating and business to young mothers and adults to help inspire entrepreneurial ventures within the community, helping to boost the local economy. With the profits from the greenhouse we hope to provide bursaries for aspiring entrepreneurs to help them start their

PROJECT OUTCOMES



\$500,554

Funding raised to-date



26

Advisory resources



817

Inuit Canadians impacted



8,512

Volunteer hours



106

Mentions in national media



51%

Price reduction in produce



5

Advisors



13,250lb

Fresh locally produce per year

TEAM FOUNDERS



Last year my team and I conducted healthy eating seminars in partnership with the local health center, teaching mothers as young as 13. Most new parents were adding sugar to formula. As a result, children often became addicted to sugar, then graduated from dosed formula to pop.

Yet when I came back this year, I was overjoyed to find that one of our 14 year-old students, had had her baby boy and not only had she opted for sugar-free formula, she had also grown fond of the vegetables and produce we'd be growing in the greenhouse to help give her baby a healthy start! My favourite part of my job is seeing the direct impact we have when working within these communities.

STEFANY NIETO
CO-FOUNDER



Every year I'm always amazed by the openness and friendliness of the community and without fault, I always make new friends. Working in the greenhouse I am always delighted with people's curiosity, surrounding how plants grow and where food comes from. This process is very unfamiliar for most Northern Canadians, due to the permafrost.

My favourite part of my job is teaching people how vegetables, fruits, and flowers grow, and seeing people's curiosity develop into determination to solve food insecurity. This is true empowerment and that's exactly what we have been able to accomplish in Naujaat.

BEN CANNING
CO-FOUNDER

TEAM SPOTLIGHT



CHRIS D'ANTONIO
EDUCATION



LISA MANCUSO
WOMEN'S COLLECTIVE
DIRECTOR



ERIN SOLMUNDSON
CORPORATE



ANJALI RAVI
ADMINISTRATION

TIMELINE



MAY 2016 - SEPTEMBER 2016 | HARVESTING

From May to September 2016, Growing North harvested its first batch of crops including kale, tomatoes, lettuce and strawberries. The community was thrilled, the harvest was given to the community free of charge to help boost community adoption and establish the next set of produce to be planted!

OCTOBER 2016 - SEPTEMBER 2017 | EXPANSION - ARVIAT

In October 2016, Growing North began expansion plans into Arviat, Nunavut, a community experiencing similar food insecurity challenges as Naujaat, with double the population size. In July 2017, We will begin building the foundation for a double dome system while also setting up a co-op program for students to begin learning about horticulture.



AUGUST 2018 | CHP UNIT INSTALLATION - NAUJAAT

In August 2018 we will begin to build a double dome system as the main feature in Arviat's upcoming Eco Park project. Together, the domes will be able to feed over 1,115 people!

SEPTEMBER 2018 - OCTOBER 2018 | CHP UNIT INSTALLATION - NAUJAAT

To help extend our growing season into the winter in Naujaat, Nunavut, we will build and install a CHP Unit. This will help us grow year-round, providing fresh produce for the community even during the harshest months!



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