Yannick Mainardi, Jake Martin, Huy Nguyen, Qian Xie, Jiadong Yu
GNG1103[D]
January 30th, 2020

Project Deliverable B: Needs Identification and Problem Statement

Client Statements (group similar together)	**Interpreted Needs**	**Priority (5=highest, 1=lowest)**
● Community is generator powered ● Generator is at maximum capacity	● Our product must be self-powered	5
● Community has no running water	● Our product cannot require a constant supply of water	5
● Community has children, pets	● Our product must be safe	5
● Outside is subject to wild animals/pests ● Climate varies; minimum of -35C, maximum of 35C ● Client expects 3-season functionality; 4-season is bonus	● Our product must be sealed to prevent pests entering ● Our product must be resilient enough to function in exterior temperatures	4
● Community does not have access to many tools ● Unreasonable to expect community members to be skilled with electronics/construction	● Our product must be easy to assemble with minimal tools	2
● Product must be shipped from Ottawa to Rapid Lake inside a Ford Transit	● Our product must disassemble into small parts that can fit inside a light cargo van	3
● $100 limit for the costs	● All the materials and components for the hydroponic system should be less than the expected cost	2

Problem statement:
Since the lake is near the residential area, it is vital that the product needs to be safe for the residents, especially the children, at all times. Secondly, it must be self-powered and must not require a constant supply of water since there is no running water source close to the area. Furthermore, it needs to be resilient enough to function in exterior temperatures so that it is able to work all year round. Moreover, the product needs to be sealed to prevent unwelcome beings from entering such as wild animals or pets. Lastly, to minimize the effort of transportation, it should be disassembled into small parts that can fit inside a light cargo van and be easy to assemble with minimal tools. The total costs should be controlled to fit our budget of under $100.