(1)   Introduction: Part 1

a. PROBLEM STATEMENT

What problem is your project trying to solve? Use non-technical jargon as much as possible. You may find the Problem Statement Worksheet helpful.

> People with paralysis or other nerve issues, specifically veterans in the case of our project, struggle to perform physical activities in extreme heat or cold. They are unable to properly monitor the temperature in the affected areas, leaving them at an increased risk of heat stroke or frostbite. Our device is trying to solve this problem by monitoring the temperature in these areas and alerting the user(s) if temperatures are on pace to become dangerous.

b. INTENDED USERS AND USES

Who will use the product you create? Who benefits from or will be affected by the results of your project? Who cares that it exists? List as many users or user groups as are relevant to your project. For each user or user group, describe (1) key characteristics (e.g., a persona), (2) need(s) related to the project (e.g., a POV/needs statement), and (3) how they might use or benefit from the product you create. Please include any user research documentation, empathy maps, or other artifacts as appendices.

Who will use the product: Any person suffering from a disability that prevents the sensation of various body parts as well as supervisors of these individuals.

Key Characteristics of People Suffering with Disabilities:

1. Active outside in cold/hot weather
2. Loss of sensation to areas of the body
3. Bad circulation to various appendages due to paralysis
4. Limited movement of appendages

Needs Related to Project for People Suffering with Disabilities:

1. Ability to monitor vitals while performing various activities in cold/hot temperatures
2. Ability to be alerted when vitals are at dangerous levels
3. Ability to maintain contact with local hub or supervisor
4. Ability to examine data related to previous experiences
5. Ability to utilize the product on various areas of the body without the purchase of additional products
6. Ability to put on the product without help
7. No irritation to areas of the body the product is used upon (friction caused by the product, etc.)
8. Water and Heat resistance
9. Easy to understand application paired with the product
10. Ability to customize alert settings for various temperatures (i.e., soft alert when within 10 degrees of threshold, medium alert at 3 degrees, hard alert when past threshold)
11. Ability to be alerted when loss of connection between the product and application occurs
12. Ability to be alerted when product is outside the range between them and supervisor
13. Ability to utilize product more than once (i.e., rechargeable)

14. Ability to remain comfortable when utilizing the product (i.e., wireless, frictionless)
15. Ability to receive alerts without auditory devices placed in ears or vibrations on areas of the body without sensation
16. Ability to calibrate the product to specific individuals
17. Ability to be alerted when the device is at a low level of battery
18. Ability to confirm the product is retrieving correct data from the user
19. Ability to place sensors within various forms of clothing (i.e., ski boots, rash guards, socks, sleeves, etc.)

Benefits for Individuals Suffering from Disability:

1. Ability to feel safe when performing various outside activities
2. Ability to enjoy more time with family members
3. Ability to examine data from previous experiences to make corrective adjustments for future
4. Ability to perform activities outside without the need for constant supervision

Key Characteristics of Supervisors:

1. Monitor the safety of individuals with disabilities
2. Trained to respond to various harmful conditions
3. Maintain communication with individuals while performing activities
4. Familiar with technology related to providing safety to disabled individuals

User Needs of Supervisors:

1. Ability to monitor vitals of individuals in real-time
2. Ability to historize data to examine past experiences
3. Ability to be alerted for loss of connection to individual
4. Ability to be alerted when vitals are approaching/approach dangerous levels
5. Ability to monitor vitals over long distances to allow for the performance of various activities
6. Ability to confirm the product is retrieving correct data from the user
7. Ability to contact/alert the user at any point

Benefits of Supervisors:

1. Ability to provide better care and supervision for users
2. Ability to allow users more freedom
3. Ability to examine past experiences to provide better future experiences