**Project Design phase-1**

**Proposed Solution Template**

**Date:** 13 Oct 2022 **Team Id:** PNT2022TMID49366

**Project Title**: Hazardous Area Monitoring for Industrial Plant powered by IoT.

**1. Problem Statement (Problem to be solved):**

To monitor and alert the Industrial workers the risk of toxic or hazardous gases present within the area of an industry, ensuring the safety of the workers.

**2. Idea/Solution description:**

Providing a wearable device which collects the data (temperature) via beacon sensors and display it. An alert message is also sent to mobile whenever high temperature or toxic gases are detected within the area through SMS using API. Ensuring precautions and safety of the workers. Providing them with an electronic wristwatch can help them escape from a hazardous environment such as a hazardous area or a toxic gas.

3. **Innovation / Uniqueness**

- ✓ Makes it easy for the worker to know the temperature (or) hazardous gases in the area without having to constantly perform manual checks.
- ✓ Provides various solutions to ensure safety of workers.
- ✓ Wearable devices display the current temperature in the area at all times.
- ✓ Alerts via SMS to workers' mobiles when high temperature is detected.
- ✓ Alerts occur simultaneously on both the wearable device and the mobile app to prevent worker entry into hazardous areas.

## 4. Social Impact / Customer Satisfaction

- ✓ Ensures safety.
- ✓ Saves lives of workers.
- ✓ Comfortable & User-friendly.
- ✓ Simple and reliable.
- ✓ Helps in taking necessary precautions to avoid the risk of endangering human lives.
- ✓ Necessary updates and more functions can be added to the mobile application to make it easier to use.

## 5. Business Model (Revenue Model)

- ✓ Through our mobile application the revenue can be made in the form of pop-up advertisements, overlay ads from third party services.
- ✓ Wearable devices can be priced and sold by the industry to the workers.

## 6. Scalability of the Solution

- ✓ Large number of people can be supplied with the wearable devices to ensure their safety.
- ✓ Beacon sensors cover large amount of area and supplies data accurately and more readily.
- ✓ Multiple users can receive alert messages and notifications simultaneously regarding hazardous gases without any delay.
- ✓ Each user has individual wearable device and mobile devices which provide information accordingly.
- ✓ It ensures the safety of each and every worker working in harmful gases and high temperature environment.