

**Project Design Phase-I**  
**Proposed Solution Template**

Date	21 October 2022
Team ID	PNT2022TMID20013
Project Name	Hazardous Area Monitoring for Industrial Plant powered by IoT.
Maximum Marks	2 Marks

**Proposed Solution Template:**

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	To monitor and alert the industrial workers the risk of toxic or hazardous gases presents 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 displays 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.
3.	Novelty / Uniqueness	<ul style="list-style-type: none"> <li>• Makes it easier to know the temperature (or) any hazardous gases present in the area without the worker having to constantly doing manual checks.</li> <li>• Provides different solution to ensure the safety of the workers.</li> <li>• Wearable devices display the current temperature present in the area all the time.</li> <li>• Alerts via SMS to mobiles of the workers when high temperature is detected.</li> <li>• Alerts on both the wearable device and mobile application occurs simultaneously to prevent the worker from entering into hazardous areas.</li> </ul>
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"> <li>• Ensures safety.</li> <li>• Saves lives of workers.</li> <li>• Comfortable &amp; User-friendly.</li> <li>• Simple and reliable.</li> </ul>

		<ul style="list-style-type: none"> <li>• Helps in taking necessary precautions to avoid the risk of endangering human lives.</li> <li>• Necessary updates and more functions can be added to the mobile application to make it easier to use.</li> </ul>
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> <li>• Through our mobile application the revenue can be made in the form of pop-up advertisements, overlay ads from third party services.</li> <li>• Wearable devices can be priced and sold by the industry to the workers.</li> </ul>
6.	Scalability of the Solution	<ul style="list-style-type: none"> <li>• Large no. of people can be supplied with the wearable devices to ensure their safety.</li> <li>• Beacon sensors cover large amount of area and supplies data accurately and more readily.</li> <li>• Multiple users can receive alert messages and notifications simultaneously regarding hazardous gases without any delay.</li> <li>• Each user has individual wearable device and mobile devices which provide information accordingly.</li> <li>• It ensures the safety of each and every worker working in harmful gases and high temperature environment.</li> </ul>