**Project Design Phase-I**

**Proposed Solution Template**

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| Date | 24 September 2022 |
| Team ID | PNT2022TMID33005 |
| Project Name | Project - Hazardous Area Monitoring for Industrial Plant powered by IoT |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | * It is difficult to identify the hazardous gases like methane, propane, LPG, CO all the time by the people. In the same way it is difficult to monitor the temperatures in coal mining areas, pharmaceutical industries etc. It is difficult to monitor the people who are entering into prohibited areas. * For example, combustible gases can occur in chemical factories, paint factories, when solvents are used, in the vicinity of fuel storage tanks, in power plants, in the oil and gas industry, as well as in wastewater treatment and sewage treatment plants. * For this we have arranged a system for monitoring hazardous areas in industry by IOT |
|  | Idea / Solution description | * Real time location systems (RTLS) are indoor tracking systems capable of location and monitoring people and company assets operating within a defined zone covered by a radio frequency (RF) network. They work through a connected network of RF receivers and active RFID transmitters to provide precise and accurate indoor tracking services for each staff member. * In industry and mining, positioning brings great benefits and by knowing the exact location of people and objects is often vital and can be achieved with monitoring system |
|  | Novelty / Uniqueness | * In this the exact location information can be shared periodically and also the environmental conditions of the each and every area can be monitored. * It will be also very helpful at the pandemic situation to monitor the hazardous area from a safer place. * It will also help to rescue the workers at the dangerous situation and guide them to safer place or to get out from the danger. |
|  | Social Impact / Customer Satisfaction | * Avoids large scale hazards in industries and saves the environment & people * By this solution we increase the safety of the workers and also the security of the workers * The workers are in the healthy and perfect environmental conditions. * And the peoples surrounded by this kind of industries or environment can be rescued before any danger caused. * Through this we can rescue the peoples get struck in mining as monitoring their positions and also help from the heavy production losses and there by provide affordable or value for money services to the customers. |
|  | Business Model (Revenue Model) | * We can sell this technology to the industries and also to the small scale and large scale industries to develop their industrial security and wellness. * We can also provide it as a service based to earn money out of it. * For example like for the rescue operation we may offer our services to the team as a contract for a period of time to make revenue. |
|  | Scalability of the Solution | The scalability on this model is high as there are involves more demand on safety and security of workers and the companies too.so, the danger the losses caused are get reduced by this system. And we need lesser man power to work with this kind of activities |