

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

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| Date | 16 OCTOBER 2022 |
| Team ID | PNT2022TMID21389 |
| Project Name | Gas Leakage Monitoring and Alerting System |
| Maximum Marks | 4 Marks |

Functional Requirements:

Following are the functional requirements of the proposed solution.

| FR No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task) |
|--------|-------------------------------|--|
| FR-1 | User Registration | Registration through Form Registration through Gmail Registration through LinkedIN |
| FR-2 | User Confirmation | Confirmation via Email Confirmation via OTP |
| FR-3 | GPS Access | GPS access to know the location |
| FR-4 | Business Requirements | The device is intended for the use of industries or factories and also for cylinder storage areas. It detects the leakage of gas and sends the data over to a site and preventive measures can be taken to avoid the loss of properties. |
| FR-5 | User Requirements | The Gas leakage detecting system with upgrading technologies which identifies the leakage of gas and also ensures the workers safety. |

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

| FR No. | Non-Functional Requirement | Description |
|---------------|-----------------------------------|---|
| NFR-1 | Usability | The sensors used to detect the gas leakage which helps to prevent the high risk of gas explosion and also can prevent the causalities within and outside the covering area of the industries. |
| NFR-2 | Security | The device is intended for the use of industries or factories, where there is a use of explosive gas is a source of risk. This device will help and secures from the causes. |
| NFR-3 | Reliability | Gas leakage detecting system detects the gas leakage at industries or factories which detects the small amount of gas leakage as soon and sends the alerting SMS to users. |
| NFR-4 | Performance | The Gas leakage detecting system is a device with an alarm setting. Whenever there is a gas leak ,which is greater than the threshold level, the in-built sensor detects and alerts the user within a minute much before it can cause any accidents. |
| NFR-5 | Availability | The gas leakage detecting system is readily available in the market which is extremely expensive, but here we are providing a low-cost circuit for gas leakage detecting system and also it is user friendly |
| NFR-6 | Scalability | The system is very simple and easy to maintain with cost efficient. A backup power supply will be included in the design to prevent from the power failure conditions. It has the capability to works for a period of time without any damage in the system components. |