**Project Design Phase - II**

**Solution Requirements Functional**

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| Date | 19 October 2022 |
| Team ID | PNT2022TMID54081 |
| Project Name | Gas Leakage Monitoring And Alerting System For Industries . |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | Gas detection design coverage | The gas detection function shall provide reliable and fast detection of flammable and toxic leaks before a gas cloud reaches a concentration and size which could cause risk to  personnel and installation. |
| FR-2 | Leak detection | Flammable gas detection shall be provided in all areas where flammable gas leakages could occur. In these areas the smallest gas cloud that has the potential to cause unacceptable damage shall be specified as the minimum  cloud size for confirmed gas detection. |
| FR-3 | Gas detection location | Detectors should be positioned in different levels in an area or module . |
| FR-4 | Gas detection actions | The alarm starts ringing when the gas gets leaked , Doors will be opened automatically and the data’s will be stored in cloud and alert message will be displayed on the LCD  display . |
| FR-5 | Gas detection calibration | Gas detectors shall be individually identifiable with a self  test function. It shall ensure the presence of gas concentration and amount of gas leakage |
| FR-6 | Gas detection levels | * Low alarm limit for IR open path detector is maximum 1 LELm . * High alarm limit for IR open path detector is maximum 2 LELm . |