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

| Date | 30 October 2022 |
|---|---|
| Team ID | PNT2022TMID54434 |
| Project Name | Emerging Methods for Early Detection of Forest Fires |
| 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 | Video/Image surveillance | Capture surveillance through cameras. |
| FR-2 | WSN | Continuous monitoring of forests through sensors. |
| FR-3 | Detection of Fire | Fire is detected via a CNN model and Computer Vision. |
| FR-4 | Cloud | Detected values are sent to the cloud. |
| FR-5 | Alert | Alert the people through a fire alarm system. |
| FR-6 | Mobile app | Users get a notification when the fire is detected. |

**Non-functional Requirements:**

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

| FR No. | Non-Functional Requirement | Description |
|---|---|---|
| NFR-1 | **Usability** | By detecting the Forest Fire earlier. Alerts according to the user location. |
| NFR-2 | **Security** | This project doesn't contain any secured information so there is no role of security factors. There are no requirements for privacy. |
| NFR-3 | **Reliability** | Since we are using a deep learning algorithm, the system is really good and has better accuracy. |
| NFR-4 | **Performance** | The performance mostly depends on monitoring the forest by WSNs and giving alerts immediately without any delay. |
| NFR-5 | **Availability** | The system shall take real input images of the surveillance camera and it should be helpful in a great way to suppress the fire without any great damage. |
| NFR-6 | **Scalability** | The cost of establishing the cameras for the entire forest may be high. The system can be fitted anywhere in the forest. |