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

Date	16 October 2022
Team ID	PNT2022TMID34407
Project Name	Emerging Methods for Early Detection of Forest Fire
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 Application
FR-2	User Confirmation	Confirmation via Email or message Confirmation via OTP
FR-3	User Alert	The warning to user is provided through Alarm
FR-4	User Connection	Surveillance is provided by Camera or Drone
FR-5	Fire Detection	The camera output is verified by Artificial Intelligence

FR-6	Signal Transmission	The information processed can transferred to destinationsdifferent by internet and network towers

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Provides early warning of forest fire to avoid massive forest damage and to protect life in forest
NFR-2	**Security**	Provides protection and security to the tribal people , animals in the forest and also the entire forest
NFR-3	**Reliability**	The system is reliable and trust worthy due to fast and accurate fire detection process via camera using Artificial Intelligence and wireless transmission for signal and alert over areas . The system components and cameras are durable that can mostly survive disaster conditions
NFR-4	**Performance**	The system detects small sparks of fire in a location and identified by Artificial Intelligence with high accuracy and speed
NFR-5	**Availability**	The surveillance provided by system camera are 360 degree and also can be drones watch over the forest 24*7 (all the time). The power source for camera and transmitting components can be taken from solar energy , so they don’t run out of battery.

NFR-6	**Scalability**	A large area of the forest can be covered under surveillance by using Drones and 360 degree cameras.