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

Date	20-October-2022
Team ID	PNT2022TMID01326
Project Name	Project – 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.	Non-Functional Requirement	Description
NFR-1	**Usability**	This project as a service can be utilized by the governments who control reserve forests, giant corporations who controls acres of land in which they cultivate trees for commercial purposes and NGOs who try to protect forests and it can also be used by NGOs and forest department to monitor behavior of endangered animals.
NFR-2	**Security**	In order to ensure security in the monitoring process the server is used as IBM cloud which has very good encryption standard. These files can be only accessed by officials from the government of corporations. There will be further security check by OTP for confirmation. The backup videos will be saved in the IBM cloud server.

NFR-3	**Reliability**	The project is very much reliable compared to an previous generation open-source forest monitoring system where the data

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through the registered government ID
FR-2	User Confirmation	Confirmation via OTP
FR-3	Overall Surveillance Report	Helps to understand the current scenario in the forest by giving report as “no fire” or “negative”.
FR-4	Cloud Server Access	To save and run the model from the camera footage
FR-5	Live Camera Feed	Real-time monitoring by the forest officials
FR-6	GSM Module	To alert the nearest forest range officer and the local fire department

Non-functional Requirements:

		can be easily manipulated and this is much robust as the initial cost is higher while there will be no need for any maintenance cost
NFR-4	**Performance**	This project works better compared to other methods to detect forest fires like satellite monitoring, IOT sensors or use of IR sensor-based cameras. The accuracy of this model also increases over the period of time.
NFR-5	**Availability**	This data can be only accessed by the officials as this is very sensitive information regarding thousands of acres of forest lands. So this can be opened anywhere by the authorized person as the AI model is connected in IBM server.
NFR-6	**Scalability**	The initial cost to setup is expensive compared to other methods while there will be less or no maintenance cost and the cost to stop a forest fire and the pollution and wildlife lost is much significant compared to the initial setup costs. The project can be easily scaled to larger parts of the forests as they are much simpler to implement.