Project Design Phase-I
Proposed Solution Template

Date	24 September 2022
Team ID	PNT2022TMID30023
Project Name	Emerging Methods for Early Detection of Forest Fires using Artificial Intelligence
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	• Forest fires have been and still are serious problem for the European Union and for all other countries in Europe. • The most important factors in the fight against the forest fires include the earliest possible detection. • Over the years the detection of forest fires has been conducted in different ways. • The platform is completely automated since both drones have on-board computers and processing capabilities.
2.	Idea / Solution description	• In the last decade many improvements in the forest fire detection technologies have been made. • The modern IR cameras provide steady and reliable detection of the fires, but the real focus is set on the possibilities to detect the fires. • Analysing wider areas for smoke or by sensing the environmental parameters before the actual spread of the fire. • To provide an overall overview of the park and to observe the difficult terrain we have decided to use a fixed-wing.
3.	Novelty / Uniqueness	• Artificial intelligence has become extremely popular in the recent years as it has the ability to perform tasks. • The neural networks are specialized computer models, which can be trained to perform different tasks.

		• the most widely used for image detection and computer vision are the convolutional neural networks. • Input is an image the input neurons might represents the values for each pixel.
4.	Social Impact / Customer Satisfaction	• Forest fires are occurring throughout the year with an increasing intensity in the summer and autumn periods. • These solutions have greatly decreased the direct involvement of humans in the forest fire detection process. • Our preliminary considerations for social impact from wildfire are drawn from the synthesis of the literature on wildfire and other hazards.
5.	Business Model (Revenue Model)	• We discuss multiple methodological strategies for collecting and analysing data. • Establish plantations only in accessible sites by using fast-growing species in order to speed up carbon sequestration. • Concentrate and prioritize planning and implementation of forest cultures in protection forests
6.	Scalability of the Solution	• Overall biodiversity status in all three sites of burnt areas was significantly less than unburnt sites. • Livestock grazing breaks up potential fuel and establishes trails through the forest that can be used as fire breaks.