Ideation phase:

To fight forest fires, different solutions were employed throughout the years.

They ware primary aimed at the early detection of the fires. The simplest of these solutions is the establishment of a network of observation posts - both cheap and easy to accomplish, but also time-consuming for the involved people.

The constant evolution of the information and communication technologies has led to the introduction of a new generation of solutions for early detection and even prevention of forest fires.

ICT-based networks of cameras and sensors and even satellite-based solutions were developed and used in the last decades.

These solutions have greatly decreased the direct involvement of humans in the forest fire detection process, but have also proven to be expensive and hard to maintain.

In this paper we will discuss and present two different emerging solutions for early detection of forest fires. The first of these solutions involves the use of unmanned aerial vehicles (UAVs) with specialized cameras.

Several different scenarios for the possible use of the drones for forest fire detection will be presented and analysed, including a solution with the use of a combination between a fixed-wind and a rotary-wing UAVs.