

The SILVANUS proposal, promoted by Z&P and its 49 partners from the European Union, Brazil, Indonesia, and Australia under the coordination of Università Telematica Pegaso, has been approved and will be funded by the European Commission under the Horizon 2020 programme between 2021 and 2024

**SILVANUS - Integrated Technological and Information Platform for Wildfire** envisages to deliver an environmentally sustainable and climate resilient forest management platform through innovative capabilities to prevent and combat against the ignition and spread of forest fires. The platform will cater to the demands of efficient resource utilisation and provide protection against threats of wildfires encountered globally.

The project will establish synergies between (i) environment, (ii) technology and (iii) social science experts for enhancing the ability of regional and national authorities to monitor forest resources, evaluate biodiversity, generate more accurate fire risk indicators and promote safety regulations among citizens through awareness campaigns.

The novelty of SILVANUS lies in the development and integration of advanced **semantic technologies** to systematically formalise the knowledge of forest administration and resource utilisation. Additionally, the platform will integrate a **big-data** processing framework capable of analysing **heterogeneous data sources** including earth observation resources, climate models and weather data, continuous on-board computation of multispectral video streams. Also, the project integrates a series of sensor and actuator technologies using innovative wireless communication infrastructure through the coordination of **aerial vehicles** and **ground robots**.

The technological platform will be complemented with the integration of **resilience models**, and the results of environmental and ecological studies carried out for the assessment of fire risk indicators based on **continuous surveys of forest regions**. The surveys are designed to take into consideration the expertise and experience of frontline fire fighter organisations who collectively provide support for 47,504x104 sq. meters of forest area within Europe and across international communities. The project innovation will be validated through 11 pilot demonstrations across Europe, Asia, South America and Oceania using a two sprint cycle.

The SILVANUS consortium consists of **49 partners** from **18 countries**. The SILVANUS consortium map interdisciplinary expertise to complement the industrial strength to achieve the project objectives. The consortium contains a broad scope of expertise and technical knowledge in the analysis of climate pattern, IoT devices and edge sensing, cloud computing, ecological and biodiversity resilience, fire suppression systems and big-data analytics.

