



Horizon2020
European Union Funding
for Research & Innovation



SILVANUS

DISASTER MANAGEMENT IN SLOVAKIA Integrated Technological and Information Platform for Wildfire Management

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Disaster Management, Budapest, 30.11.2023



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SILVANUS

- SILVANUS Project – Introduction and Overview
- SILVANUS Platform – Technological Components
- Citizen Engagement Programme



SILVANUS – Fact Sheet

- Funding: H2020 Innovation Action
- Timeframe: October 2021- March 2025
- Project cost: € 24 186 845
- Requested funding: € 19 902 190,26
- Planned effort: 3441.50 PMs
- Total partners: 49
- No. of countries:
 - 15 EU Member States
 - 3 International countries

SILVANUS Consortium



Industrial partners

THALES
Atos
SIMAVI
Software Imagination & Vision

FINCONS
FINCONS GROUP
DELL EMC
netcompany
intrasoft

Stakeholders

POHARS DE L'URGENCE INTERNATIONALE
PUI
asset
ASFOR
TEPIORA
SMURO
KeMeA
REPUBLICA HRVATSKA
Hrvatska vatrogasna zajednica
TERRAPRIMA
LETSi
AGUAS DE PORTUGAL
SERVICIOS
AdP VALOR
Grupo Águas de Portugal

SME organisations

Venaka TReLeaf
Zanasi & Partners
Security Research and Advisory
MASSIVE DYNAMIC SWEDEN
EXPERT SYSTEM
SEMANTIC INTELLIGENCE
cmcc
Centro Euro-Mediterraneo sui Cambiamenti Climatici
ITTI
Micro Digital
catalink
EXUS
edp
NEW
EDP & CTG
SYNTHESIS
CENTRE FOR RESEARCH AND EDUCATION
3MON
RiniGARD
Smart technology

Academic Partners

PEGASO
UNIVERSITY OF THESSALY
creative years
IST-ID
Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento
VELEUČKLISTE
VELIKA GORICA
INSTITUTE OF INFORMATICS
SLOVAK ACADEMY OF SCIENCES
ARISTOTLE UNIVERSITY OF THESSALONIKI

International partners

CSIRO
COPPE
UFRJ

SILVANUS in a nutshell

Phase A - Prevention and Preparedness

Fire ignition models, stakeholder engagement and advanced training programme for firefighters, simulation of real-world environments and life-saving scenarios, citizen engagement framework, mobile application for citizen engagement.



Phase B - Detection and Response

Weather data analytics, on-site device integration, calculation of available fuel and weather data to model fire behaviour, coordination between unmanned ground vehicles and unmanned aerial vehicles for detecting forest fire, wireless communication infrastructure for coordinating first responders



Phase C - Restoration and Adaptation

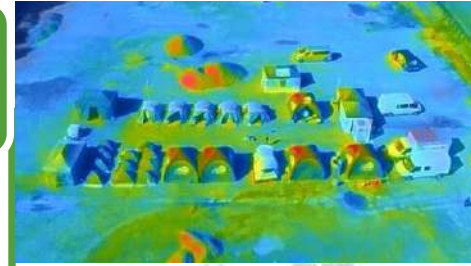
Knowledge on geographic data, biodiversity models, forest growth models, ecological site classification, policy recommendations on forest governance, soil rehabilitation strategy recommendation, restoration roadmap services for natural resources.



Pilots (European)

Forest Fire with Industrial accident in highly explosive plant

- La Jonchère St Maurice, France



Prevention, detection and restoration of accidental fire due to environmental and weather conditions

- Gargano National Park, Italy



Fire detection, Monitoring, Crowdsourcing mobile application

- Podpolanie Region, Slovakia



Promotion of fire safety and ecological resilience programme

- Euobea Island, Greece



Pilots (European)

Improving wildfire resilience programme

- Rodna Mountains National Park, Romania



Eliminate accidental fires from energy distribution and protect environmental resources

- Cova da Beira, Portugal



Wildfire response preparedness and training

- Moravian-Silesian Beskydy Mountain, Czechia



Wildfire prevention strategies against environmental causes and human negligence

- Centre for Intervention Training, Šapjane, Croatia



Pilots (International)

Forest restoration framework after wildfire impact

- Sebangau National Park, Central Kalimantan Province, Indonesia



Climatic and weather impact on Amazonian fires

- Pantanal, Brazil



Effectively combating against wildfires using UGVs and advanced computing technologies

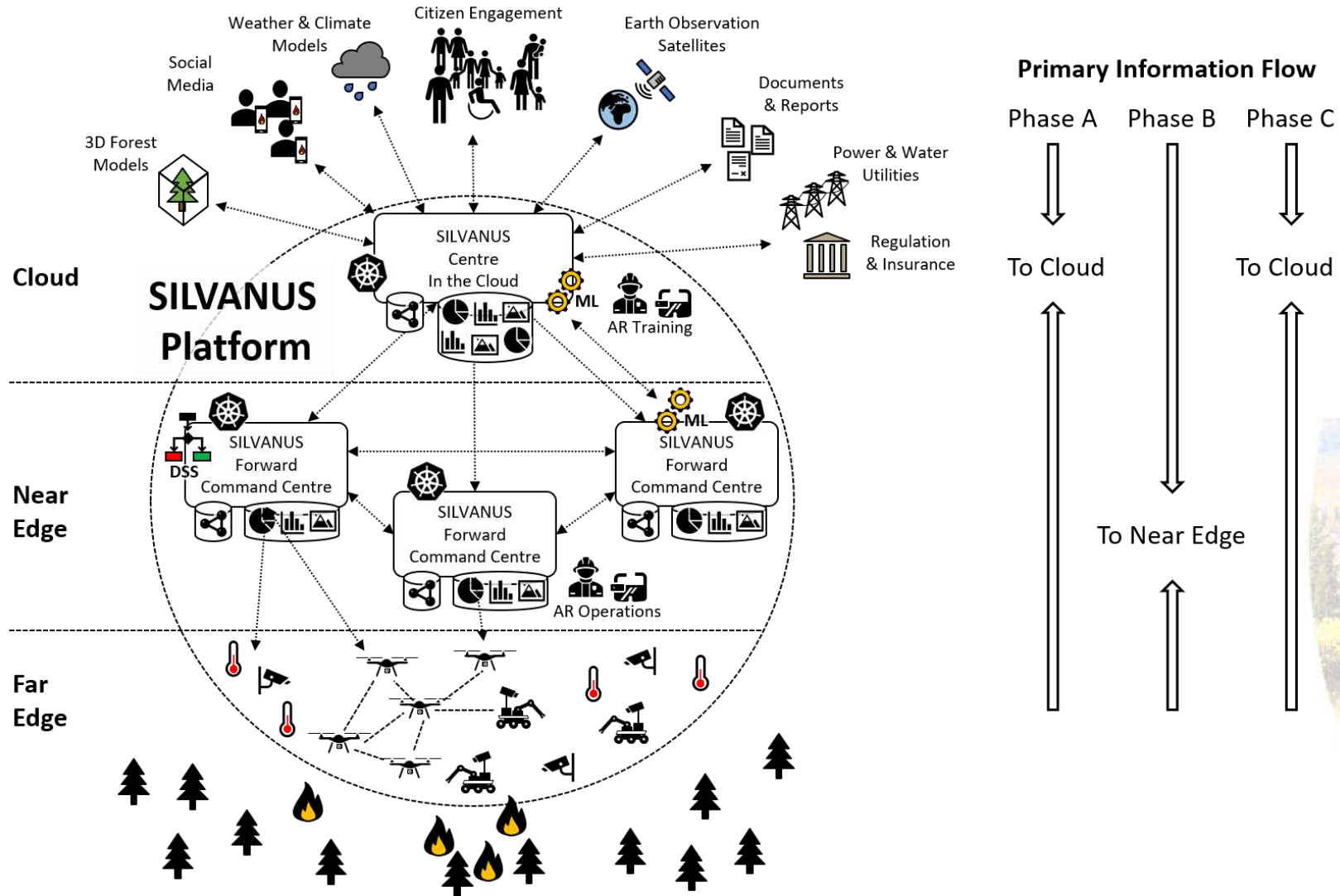
- Queensland Centre for Advanced Technologies, Australia



SILVANUS PLATFORM TECHNOLOGICAL COMPONENTS



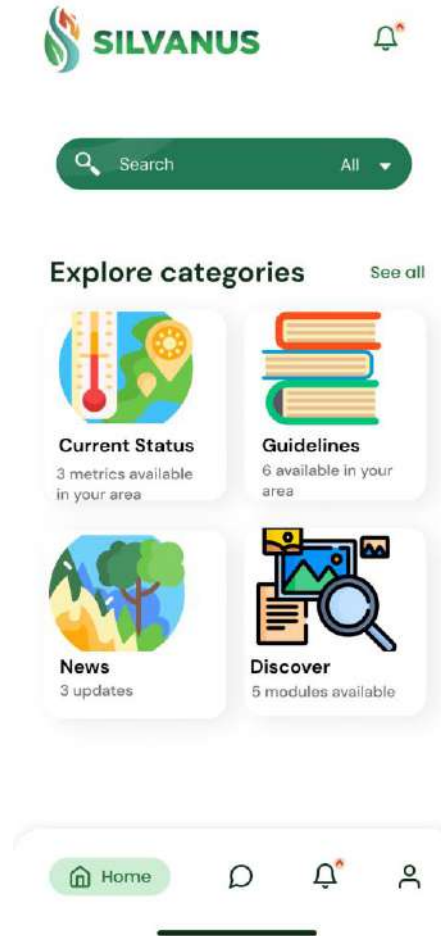
SILVANUS Framework



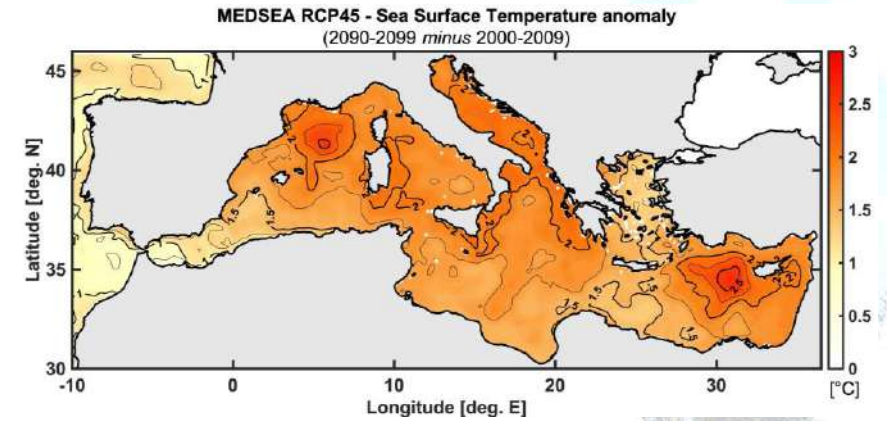
SILVANUS User Products – Results [Phase A]



AR/VR Training Toolkit for Trainers



Citizen Engagement Programme and Mobile App



Fire Danger Risk Assessment using Earth Observation data sources



Wood App for capturing biodiversity

SILVANUS User Products – Results [Phase B]

Media Sensing

Gargano Park, Italy
41.85870090382234, 16.07455410435554
01/10/2022 12:10
Description: Possible forest fire in Gargano Park, Italy
Type: emergency
Tags: fire,smoke,trees,buildings

Post 1
Post 2

Platform: twitter

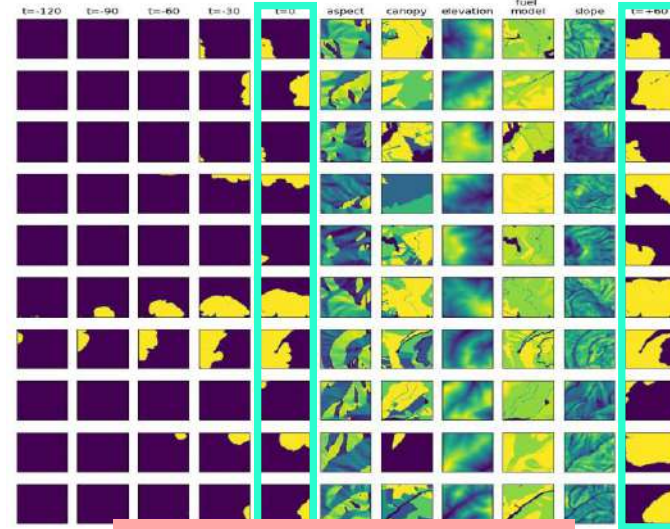


01/10/2022 12:10
Fire in Gargano Park #Gargano Park #fire #Italy

Fire Detection Based on Social Sensing



Fire Detection from IoT/in-situ Devices



Fire Spread Forecast



Fire Detection and Inspection from UAVs and UGVs

CITIZEN ENGAGEMENT PROGRAMME

10/01/2024



PREVENT FOREST FIRES DIRECTLY FROM YOUR PHONE



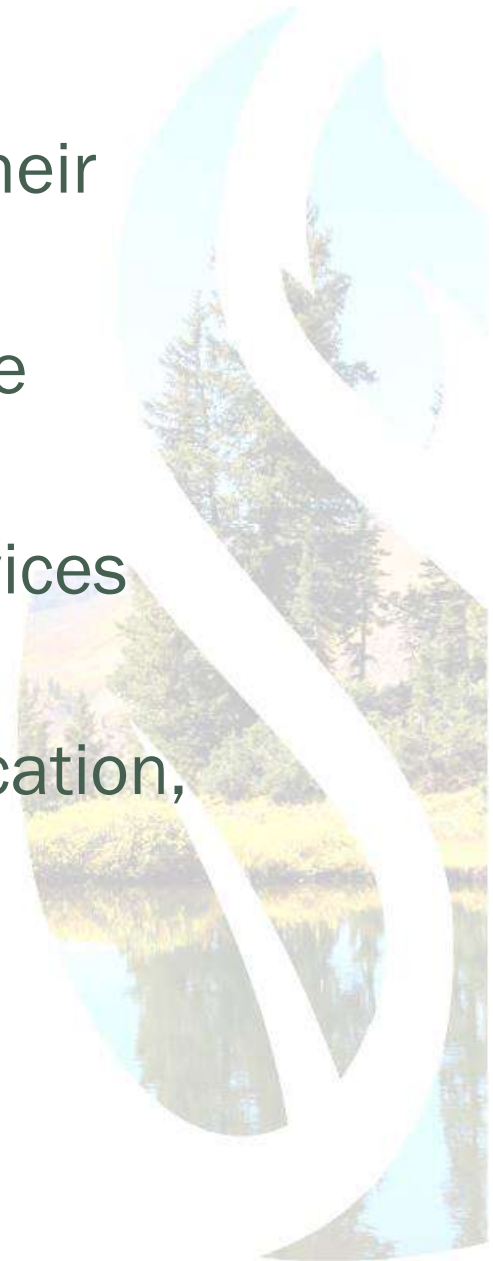
THE CITIZEN ENGAGEMENT APP

COMING SOON FROM SILVANUS

1/10/2024

Findings of a user need study

- Citizens should be notified about the fire occurrence in their vicinity.
- Citizens should be able to notify fire to the fire and rescue service.
- Citizens should be able to notify forest management services of human negligence.
- Citizens should be able to report a suspect fire by geo-location, photos, and description.



Findings of a user need study

- Fire and rescue services should be able to ask citizens in the fire vicinity for help by voice call
- Forest management services should be able to contact citizens in the fire vicinity for help by chat or voice call.
- Citizens should be provided with the content on forest fire impact.



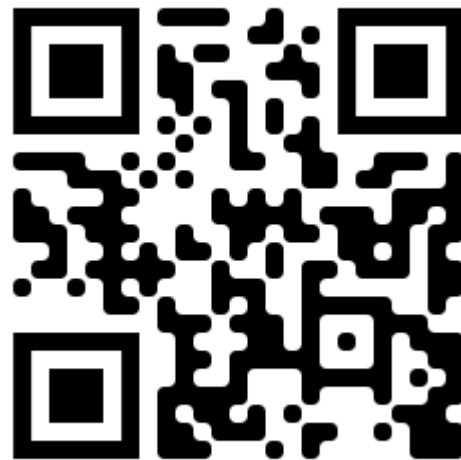
What is the Citizen Engagement App?

- ❖ *A mobile application that is part of the Citizen Engagement Program. It features a variety of educational and situational awareness modules*
- ❖ *It is aimed at citizens to increase their awareness regarding wildfires and their impact as well as engage them in fire-prevention and rehabilitation actions*



SILVANUS – Modern and Innovative Protector against Extreme Wildfire, For the Benefit of Forests and Humankind

Discussion / AOB



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