



R&D

Software Imagination & Vision

SIMAVI

Software Imagination & Vision

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SIMAVI Business Card

+ 70

R&D projects
awarded

Horizon EUROPE
Horizon 2020

DEP
EDF
ERASMUS+

ISF
ERA-Net

EUREKA
Eurostars

SIMAVI develops solutions for
various industries

10 Projects Coordinated

Security

Environmental monitoring

eHealth

eLearning

eGovernment

eAgriculture

eTraining

Green Deal

Mobility & Smart cities

Energy

Circular economy

Industry 4.0

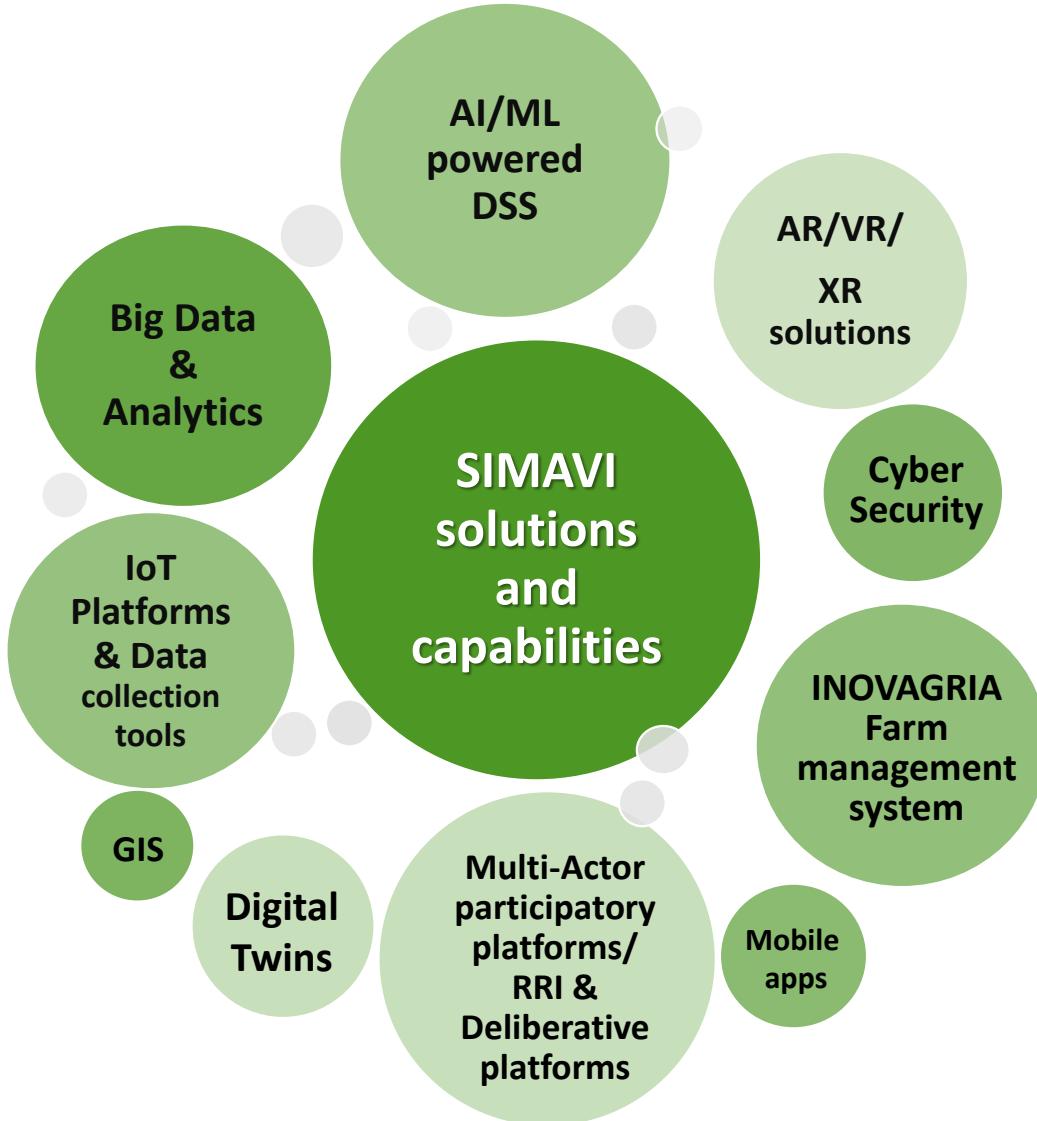
Research & Development Projects

Enterprise Application Suite

eCustoms

Customized Applications

SIMAVI Overview



COMPETENCES

- ✓ **Platforms development, Integration and Interoperability**
- ✓ **AI/ML powered Software Tools, DSS and Analytics**
- ✓ **AR/VR/XR** development for awareness, immersive simulations for field-support and training
- ✓ **User-center design (UX, UI, UJ)**
- ✓ **Pilot deployment and implementation** in Eastern Europe, by engaging key partners:
 - Cities & Public Authorities
 - NGOs & Clusters & Research Centers
 - Farmers & farm associations
 - Industry 4.0
 - Energy DSO/TSO
 - Hospitals
 - LEAs & FRs
 - Ministry of Environment, Water and Forests
 - Ministry of Agriculture and Rural Development



SOLUTIONS & EXPERIENCE

Security Infrastructures and Frameworks

- ✓ Real-time Early Detection and Alerting Framework for Operation Control Systems
- ✓ Operational Cybersecurity Risk Management Platform
- ✓ Big Data Integration Platform with real-time alerts
- ✓ Physical threat response Optimization (PTRO) tool
- ✓ Data Fusion Tool for multi-source comprehensive data view
- ✓ Analytics for real-time border event alerts

Data Acquisition, Analysis, and Visualization

- ✓ Social Media Data Acquisition Engine
- ✓ Multimedia Analysis for Crime prevention and Investigation
- ✓ Mobile apps monitoring or for on Field Guidance
- ✓ AI/ML-powered Prediction & Visual Intelligence
- ✓ Stream data collector
- ✓ Biometric data integration & analysis

Training and Skill Development

- ✓ XR Training dedicated to LEAs, First Responders and Cybersecurity experts

REFERENCES:



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ODYSSEUS
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EU



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SOLUTIONS & EXPERIENCE

- ✓ Adapting technologies from civil applications or addressing hybrid warfare
- ✓ Measurement and monitoring of physiological and cognitive state of soldiers
- ✓ AR/VR/XR
- ✓ Collection and sharing of sensor data
- ✓ User interfaces to help users and in particular pilots to understand and anticipate the system behaviour
- ✓ Common simulation framework for wargames/combat simulations with the potential to facilitate reinforcement learning for mission planning and execution support
- ✓ Computer-based decision support system that leverages AI, machine learning, wargames/combat simulations and digital twins of the battlespace

REFERENCES:

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ProjectsFEDERATES -

FEDeratedEcosystem of
euRopean simulation Assets
for Training and decision
Support

FEDERATES project has the objective of building the first prototype of a European MSaaS (Modelling & Simulation as a Service) Ecosystem, to support decision making and training of European Armed Forces. The project, led by Rheinmetall Electronics, is a multinational activity funded by the EU Commission, with the support of 15 European Nations.

SOLUTIONS & EXPERIENCE

- ✓ **ICT platforms** → WhiteGoods Platform, Automotive Platform and collaborative Private Cloud Platform
- ✓ **Data collection tool** from IoT & sensors
- ✓ **AI-based Decision Support System** for manufacturing
- ✓ **AI-Analytics Designer** targeted at sustainable consumption patterns
- ✓ **Digital Twins**
- ✓ **Analytics tool** – for process modelling, predictive downtime, failure, critical events
- ✓ **MaaS – Manufacturing as a Service**
- ✓ **Augmented Reality (AR) based inspection and maintenance tool**
- ✓ **Cybersecurity solutions** (data encryption, authentication, authorization)
- ✓ **Cloud to edge solutions**

REFERENCES:



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SOLUTIONS & EXPERIENCE

Environmental monitoring

- ✓ GIS
- ✓ ICT Toolkit for simulating and assessing the impacts and risks of climate change
- ✓ Toolbox for Decision Support and adaptive control of air quality monitoring, Soil Pollution monitoring

Forest and Ecosystem Management

- ✓ AI based DSS for optimizing forest management decisions for a low-carbon, climate resilient future in Europe
- ✓ Platform for efficient resource utilization and prevention against global wildfire threats
- ✓ Authoring tool with AR/VR content curation

Urban Safety and Management

- ✓ Integrated toolkit for intelligent management of processes, ethics and technology for Urban Safety
- ✓ ICT framework for flood environmental emergency & awareness

Forest and Ecosystem Management

- ✓ Support large-scale, cross-border demonstrators of ecosystem restoration, focusing on degraded terrestrial, freshwater, coastal or marine ecosystems
- ✓ ECOSUNT – Efficient solutions for waste management

REFERENCES:



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SOLUTIONS & EXPERIENCE

- ✓ IoT Platform development & Data integration from IoT sensors
- ✓ EIIS (Energy Integrated Information System) application
- ✓ Predictive Analytics Tool to anticipate downtime, failure, critical events
- ✓ Software Architecture for small and medium distribution system operators (DSOs)
- ✓ Integrated Smart GRID Cross-Functional Solutions
- ✓ Cybersecurity domain solutions (vulnerability assessment, threat detection, risk mitigation):
 - Heatmaps to represent vulnerable components or malware/intrusion activity
 - Dashboard and Attack Graphs displaying how an intruder can traverse a network of nodes through vulnerabilities
 - Dark Web Monitoring tool (MT) for potential threats
 - SIEM (System Information Event Management) for collecting and analyzing security event data

REFERENCES:



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DEM4PED



SOLUTIONS & EXPERIENCE

- ✓ **AI-based Decision Support Systems** dedicated to policymakers and communities
- ✓ Smart City **Digital Twins**
- ✓ Data collection tool from **IoT & sensors**
- ✓ **Citizen participatory** platform / **RRI** platform
- ✓ **Social Media Data Acquisition Engine**
- ✓ AI-powered **credit risk assessment** and **factoring indicators**
- ✓ **Mobile Application** for citizens engagement
- ✓ **Augmented & Virtual Reality**
- ✓ **Interactive & educational games** development, **serious games** & **gamification**
- ✓ **ICT Framework** for water ecosystems

REFERENCES:



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ITHACA
AI To Enhance Civic Participation

ACAB



SOLUTIONS & EXPERIENCE

- ✓ **INOVAGRIA farm management system** created for managing the activity of agricultural, vegetable or animal farm
- ✓ **AI-based Decision Support Systems (DSS)** on crop management, pest control, and irrigation
- ✓ **Community participatory platforms/ RRI platforms**
- ✓ **Geographic Information Systems (GIS)** for mapping and spatial analysis
- ✓ **Interactive Dashboards** to provide real-time visualizations of key indicators, helping stakeholders make informed decisions
- ✓ **Digital Twin**
- ✓ **IoT platforms and real-time data collection from IoT sensors**
- ✓ **Mobile apps**
- ✓ Data driven **AR/VR/XR** immersive simulations

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Beneficiary: Payment and Intervention Agency for Agriculture

Integrated Administration and Control System (IACS)

Figures and Facts:

The system ensures consistency and compatibility between national schemes for farmers, covering:

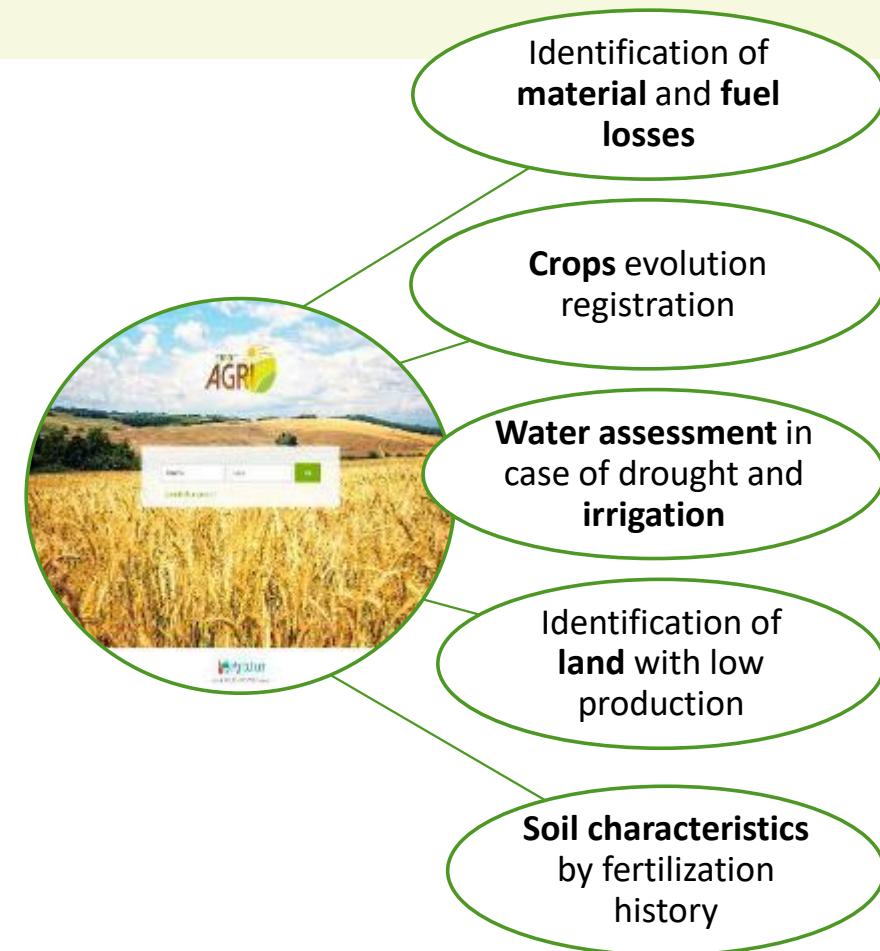
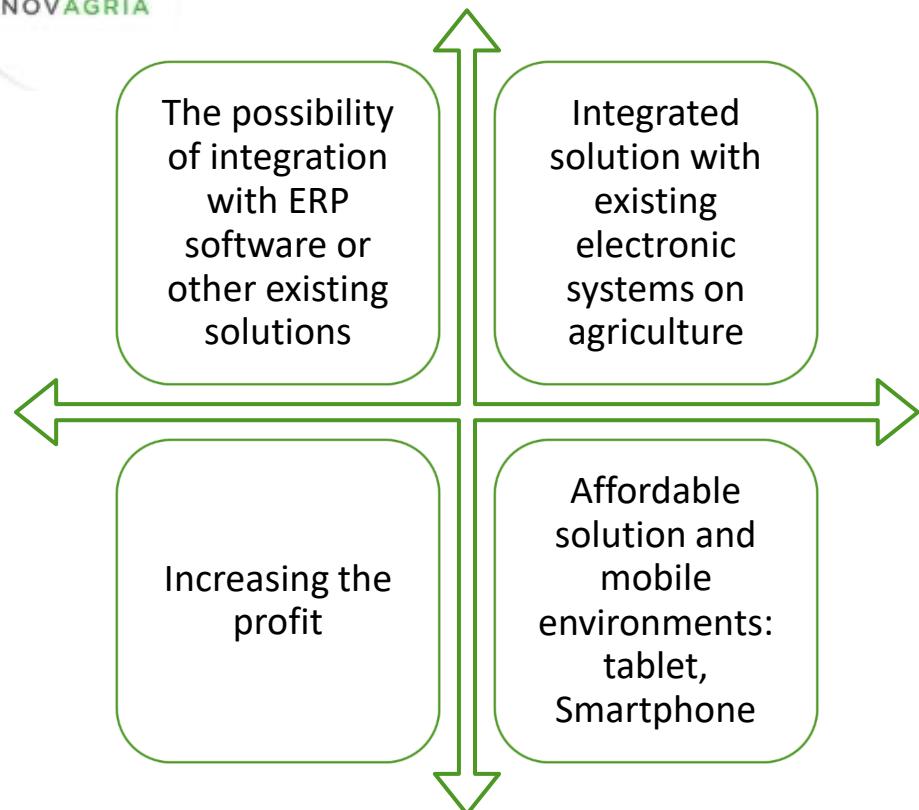
- 944 076 unique applications submitted for a yearly campaign
- 34,55 million agricultural physical blocks, for all schemes required
- 1,45 million farmers in the database
- Over 13,4 billion EUR paid
- Over 83 million operations performed in the APIA's information system

Organizational structure:

- 42 county centres
- 5,000 internal users
- +900,000 beneficiaries



The software created for farmers, for managing the activity of an agricultural, vegetable or animal farm



SOLUTIONS & EXPERIENCE

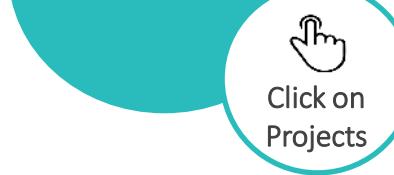
Healthcare and Patient Support

- ✓ Tele-monitoring & Tele-rehabilitation applications
- ✓ Integrated and interactive Patient Care Ecosystem that supports quality of life for elderly people
- ✓ Monitoring solution for patients with neurodegenerative diseases
- ✓ Serious Games for brain training
- ✓ AR/VR for rehabilitation support

Advanced Technology Solutions

- ✓ Decision Support Tool for monitoring and controlling of air quality
- ✓ AI based DSS to foster evidence-based pain relief methods for cancer patients
- ✓ Multi-source real-world clinical information access and integration framework
- ✓ ML Anomaly Detection Component and NLP services
- ✓ Virtual Assistant and Application for Patient' Treatment Journey dedicated for healthcare professionals and carers use
- ✓ Diagnostic Support Tool to assist healthcare professionals

REFERENCES:





Integrated Health Information System in Romania – SIUI

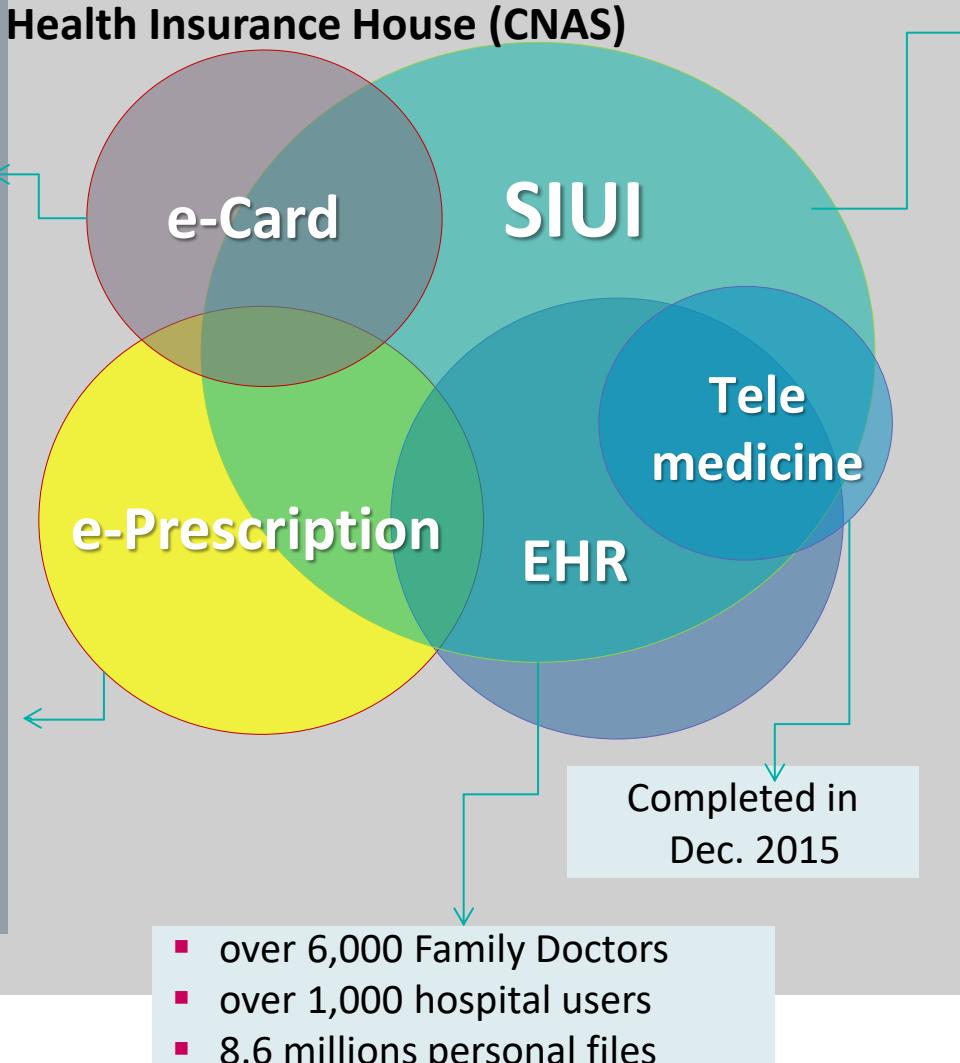
Beneficiary:

National Health Insurance House (CNAS)

15,5 millions
persons registered
with cards



- 150+ millions prescriptions registered in 3 years;
- 16,000 prescriptions daily.



Covers all population of Romania

- all Health Insurance County Houses
- **62,968** doctors
- **14,812** family doctors
- **111,783** nurses
- **5,799** clinical services providers
- **2,672** laboratory services providers
- **893** home care providers
- **1,126** providers of ambulatory recovery services
- **802** hospital services providers
- **179** ambulance services providers
- **302** suppliers of medical devices
- **5,398** providers of pharmaceutical services
- **6,799** dental care providers

SOLUTIONS & EXPERIENCE

1. **AI-powered Virtual Tutor & Assistant** - Personalized guidance and continuous real-time support for learners.
2. **AI-Powered Authoring Tool** - Automates the creation of digital lessons using AI.
3. **Serious Games & Gamified Learning** - Interactive learning through immersive, game-based scenarios.
4. **Mobile Learning Applications** - On-the-go, bite-sized learning for quick knowledge delivery.
5. **XR/AR/VR Simulations** - Augmented and Virtual Reality environments blending digital information with real-world scenarios for practical learning.
6. **eTraining courses development** - including microlearning, MOOCs, video learning to address diverse learning needs.
7. **Learning Experience Platform (LXP)** - promotes engagement with interactive and personalized educational content.

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LAW-GAME



Higher Education Classroom Of the Future



ISOLA



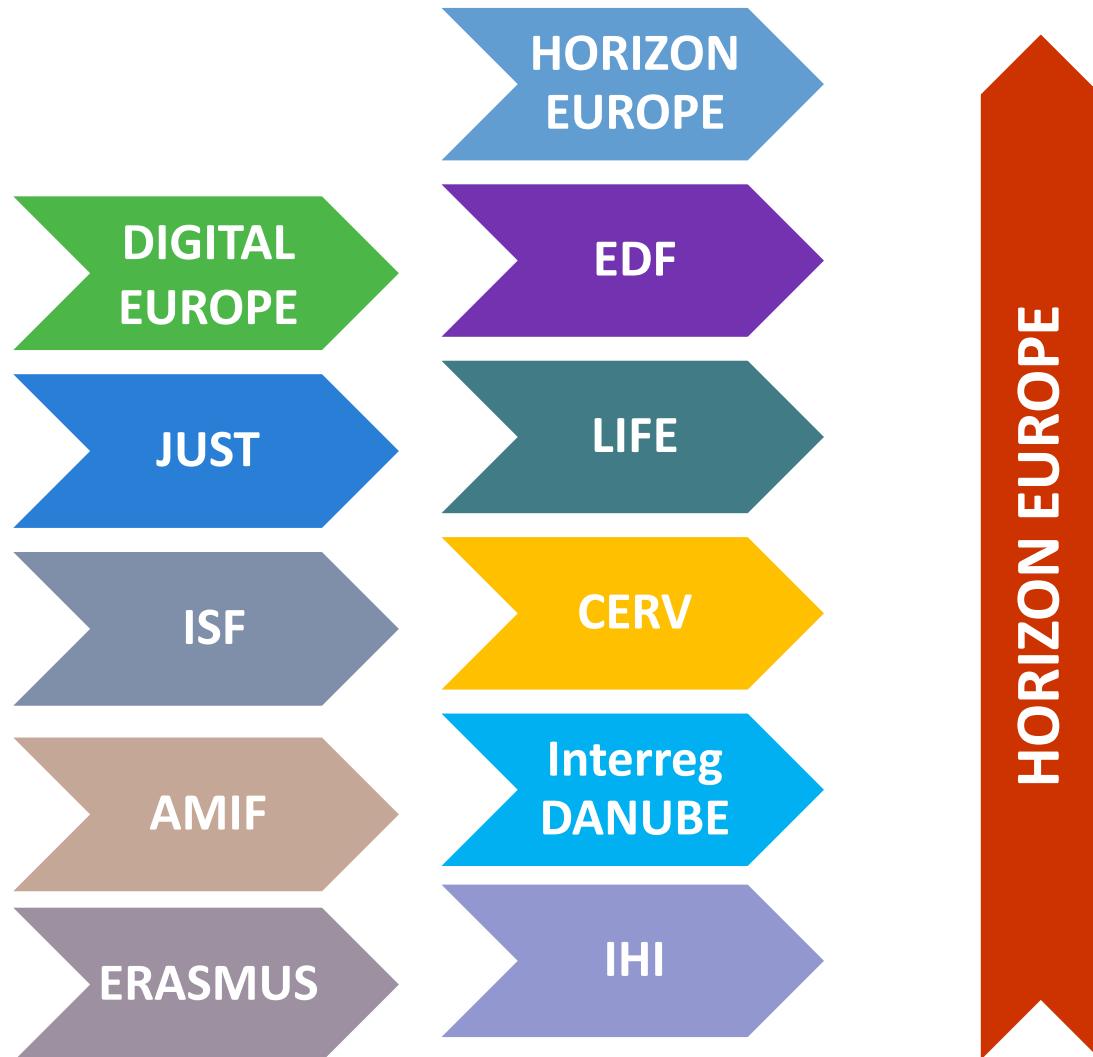
SPIRIT

S&R
SEARCH & RESCUE

PALAEMON



EU R&D Programs of interest



- CL 1. Health**
- CL 2. Culture, Creativity and Inclusive Society**
- CL 3. Civil Security for Society**
- CL 4. Digital, Industry and Space**
- CL 5. Climate, Energy and Mobility**
- CL 6. Food, Bioeconomy, Natural Resources, Agriculture and Environment**

European Affiliations



CyberEPES CLuster



The Romanian Business Association of
the Military Technique Manufacturers

Thank you!

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<https://www.simavi.ro/en/rd-projects>



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