



# Green Technologies

Software Imagination & Vision

**S I M A V I**

*Software Imagination & Vision*

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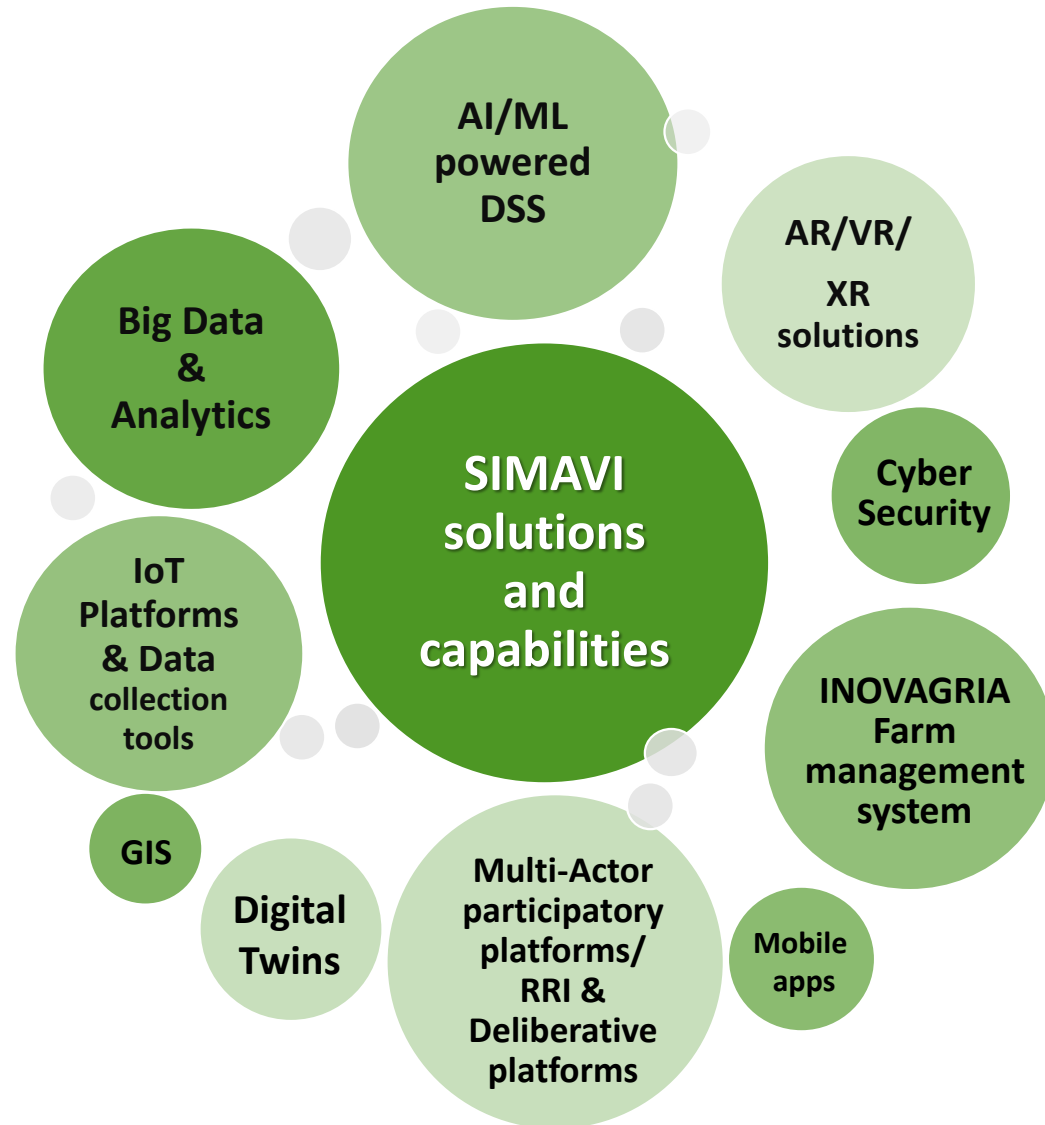
# SIMAVI Business Card

**+ 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****eGovernment****eLearning****eAgriculture****eTraining****Research & Development Projects****Enterprise Application Suite****Green Deal****Circular economy****Mobility & Smart cities****Energy****Industry 4.0****eCustoms****Customized Applications**



## 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

### 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

## REFERENCES:

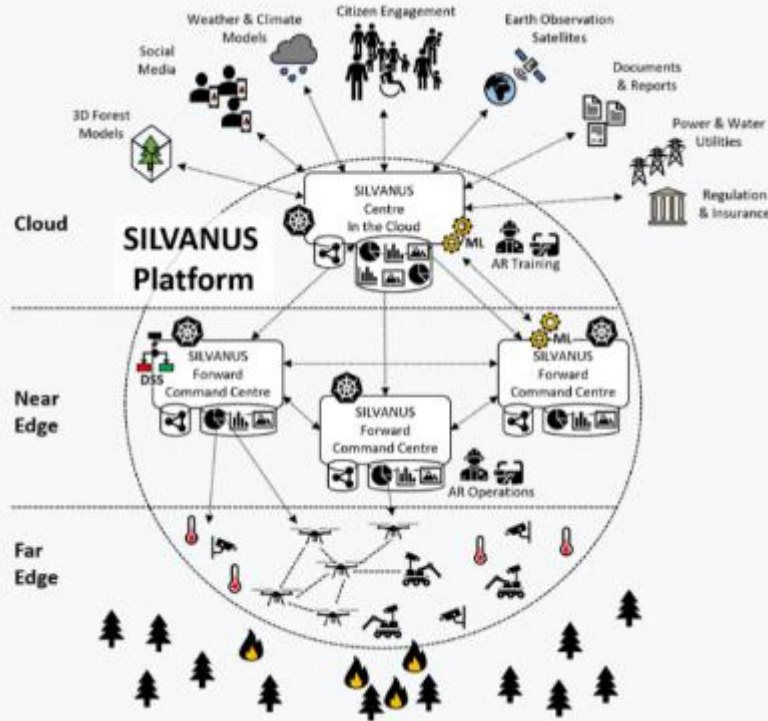


[Coordinator SIMAVI]



## SILVANUS - 'Integrated Technological and Information Platform for Wildfire Management'

- **SIMAVI Role:** Authoring tool with AR/VR content curation for training firefighters, Forest fire ignition models, Pilot deployment and implementation in Romania (Rodna Mountains National Park)



**SILVANUS** platform will cater to the demands of **efficient resource utilization** and **provide protection against threats of wildfires** encountered globally. **SILVANUS** will establish synergies between **environmental, technology and 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.

The novelty of **SILVANUS** lies in the development and integration of **advanced semantic technologies** to systematically formalise **the knowledge of forest administration and resource utilization**. The project innovation are validated through **11 pilot demonstrations across Europe and internationally**.



### TREEADS - 'A Holistic Fire Management Ecosystem for Prevention, Detection and Restoration of Environmental Disasters'

- **SIMAVI Role:** Integrated Fire Management systems, practices and services, Virtual Reality simulators, pilot deployment and implementation in Romania (Macinului Mountains National Park)



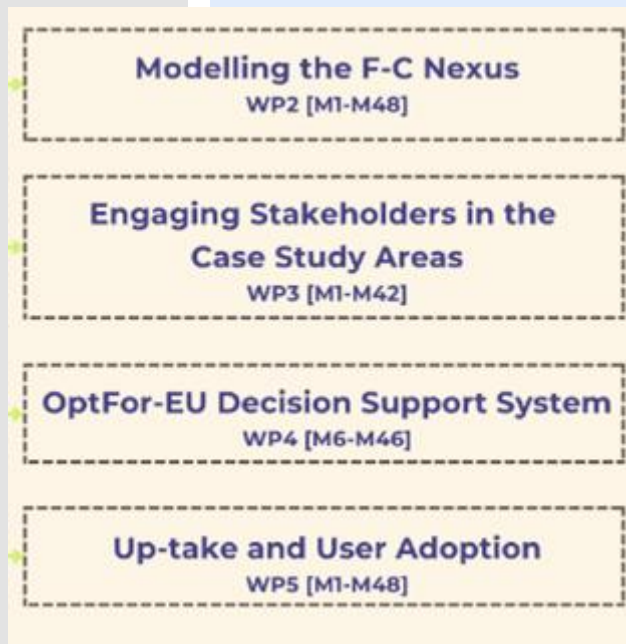
**TREEADS** proposes the use of a **real-time risk evaluation tool** that can receive multiple classification inputs. To create a model of **Fire adapted communities (FAC)** in parallel to insurance incentives, **TREEADS** will use **alkali activated construction materials (AAM) integrating post-wildfires wood ashes (PWA) for fire-resilient buildings and infrastructure**. Uses a variety of technological solutions such as: the Copernicus infrastructure, drones customized for accurate forest supervision, VR for training, wearables for the protective equipment, UAG and airships;

Will be demonstrated and validated under real operating conditions that will involve **8 complex pilot implementations executed in 7 EU countries and in Taiwan**.



## Opt4EU - 'OPTimising FOReSt management decisions for a low-carbon, climate resilient future in Europe'

- **SIMAVI Role:** OptFor-EU Decision Support System, architecture and technical specifications, DSS backbone framework and ML based scenarios, pilot implementation & deployment in Romania.



The **OptFor-EU** project is developing a **Decision Support System (DSS)** to help **forest managers** and stakeholders **optimize decarbonisation strategies** and enhance **Forest Ecosystem Services (FES)** across Europe.

Leveraging **digital technologies**, the DSS integrates:

- **BigData & existing datasets;**
- **Novel essential forest mitigation indicators;**
- **Climate & forest response modelling;**
- **AI-driven decision-making tools.**

For the **8 case study areas**, the DSS will provide a **ready-to-use digital solution** to support **climate-resilient forest management**, ensuring **sustainability, business adoption, and societal impact**.



### NEVERMORE - 'New Enabling Visions and tools for End-useRs and stakeholders thanks to a common MOdeling fRamework towards a climatE neutral and resilient society'

- **SIMAVI Role:** ICT Toolkit design, development and deployment, pilot implementation in Romania for wetland in Danube Delta Region.

The **NEVERMORE** project advances **integrated models** and **interactive digital tools** to assess **climate change risks** and enhance **mitigation and adaptation policies**. It fosters dynamic collaboration among **public and private stakeholders** through **local and transnational councils**, driving **co-design, innovation, and impactful policy-making**.

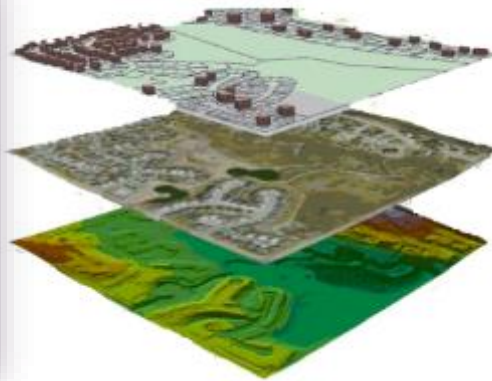
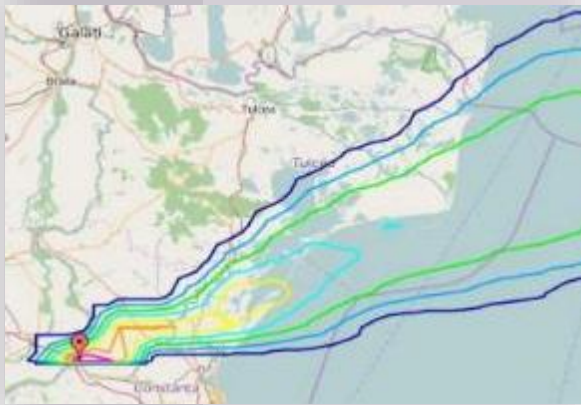
It focuses on **5 case studies**, including **climate change hot-spots** such as an islands, the **Boreal, Mediterranean and Alpine regions**:

- Island – Sitia, Crete island (EL);
- Mountain region – Trentino region (IT);
- Boreal region – Norrbotten County (SE);
- Mediterranean region – Murcia region (ES)
- Wetland – Danube Delta (RO).

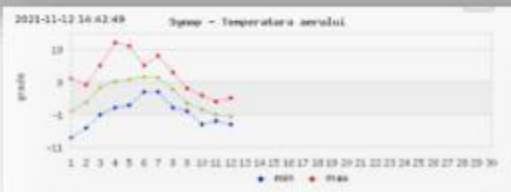
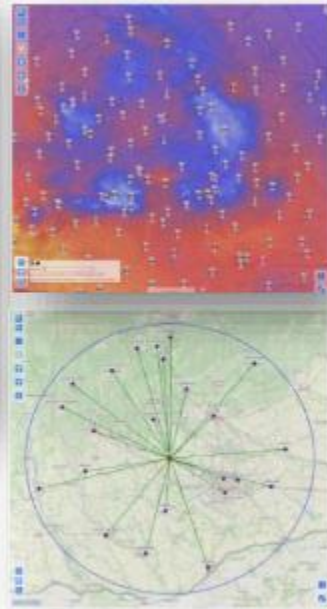
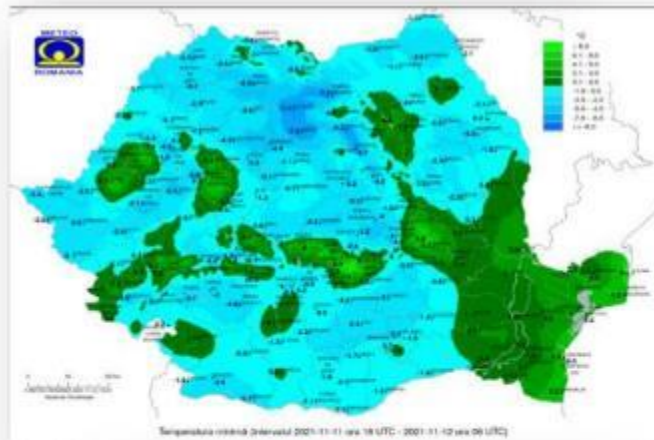




## GEOPORTAL - GIS solution



- ✓ Interactive map interface for displaying and visualizing geospatial data resources;
- ✓ Management and visualization of vector and raster datasets and WEB services;
- ✓ GIS-specific map navigation functionality;
- ✓ Simulation scenarios using spatial analysis tools;
- ✓ Manage and display geospatial datasets in the map using configurable legend;
- ✓ Toolbar access for manipulating data displayed in the map interface and representation of geospatial data using **symbolization techniques/display styles** depending on the type of vector data geometry;
- ✓ Ability to connect **GIS Desktop solutions** to the database to extend **WEB capabilities (e.g. QGIS, ESRI ArcGIS, etc.)**.





- ✓ Web-based solution for **waste management** activities, providing organizations with a significant reduction in the IT infrastructure spending;
- ✓ With the help of the **ECOSUNT** application, companies can monitor and manage:
  - Waste generation;
  - Waste collection;
  - Waste transportation;
  - Waste treatment;
  - Waste disposal by authorized firms;
  - Waste recovery through authorized firms.
- ✓ Customized Reporting for: **NAPM (National Agency for Environmental Protection and County Agencies), ADI - Intercommunity Development Associations, County Councils** according to concession contracts;
- ✓ ECOSUNT is also a **statistical tool** that delivers **precise data on waste generation and management**, enabling continuous assessment and strategic optimization.

## 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

### REFERENCES:



Click on  
Projects





## DEMETER – ‘Building an Interoperable, Data-Driven, Innovative and Sustainable European Agri-Food Sector’

- **SIMAVI Role:** IoT Corn Decision Support System for farmers with focus on water and energy management, pilot implementation & deployment with Romanian Maize Growers Association (APPR).



ARABLE CROPS

FOCUS: Water and Energy  
Management.

### DEMETER aims to put digital means at the service of farmers:

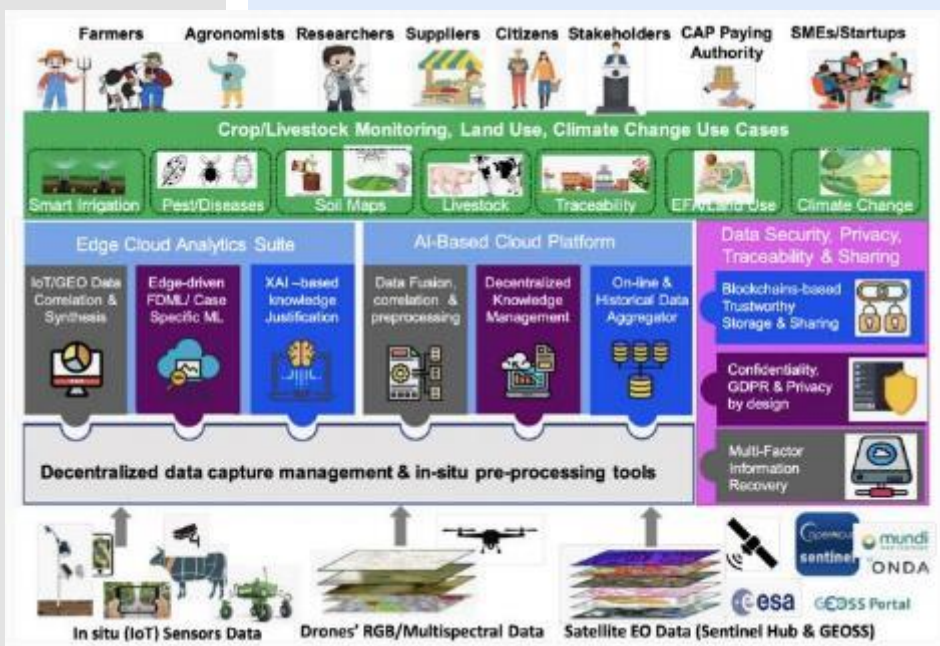
- using a **human-in-the-loop model**, the focus is on **interoperability** as the key digital enabler, extending it across **data, services, platforms, M2M (machine to machine) communication**, and **online intelligence** but also human knowledge, and the implementation of interoperability by connecting farmers, advisors and providers of ICT solutions and machinery;
- transforming the sector through a combination of digital technologies: **Internet of Things, Earth Observation, Big Data, AI** – along with **digital practices** such as **cooperation, mobility and open innovation**.

Large user base (**approximately 6,000 farmers**) and extensive piloting coverage (**20 pilots across 18 countries** – Belgium, Czech Republic, Finland, Georgia, Germany, Greece, Ireland, Italy, Latvia, Montenegro, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Turkey).



## AgriDataValue – ‘Smart Farm and Agri-environmental Big Data Space’

- **SIMAVI Role:** Agri-environment/Climate approaches for in-situ real-time IoT/EO data, pilot implementation & deployment with Romanian Payment and Intervention Agency for Agriculture (APIA) and Bio Romania - Association Of Operators In Organic Agriculture.



AgriDataValue introduces an **intelligent, multi-technology, fully distributed "platform of platforms"** to enhance smart farming, competitiveness, and sustainability.

It leverages **Big Data, data spaces (BDVA/IDSA/GAIA-X), Edge computing, and AI**, integrating **agricultural knowledge, business models, and policies** as it drives breakthrough research and innovation in real-time sensor data upscaling.

**AGRIDATAVALUE IN NUMBERS**

- 23 Pilots in 9 Countries
- Representing More than 181,000ha
- 25 Types of Crops that Span from South-West to North-East Europe
- More than 2,000 animals of 5 types
- More than 4,500 additional Sensors will be Installed



### TRIBIOME – ‘Advanced tools for integration and synergistic inTeRconnection of microBIOMEs in resilient food systems’

- **SIMAVI Role:** Innovative multi-stakeholder digital decision supporting tool to facilitate cooperation and examination of preliminary solutions in the food systems.



Increased adoption of microbiome based innovations into crop production and agricultural management practices by over 50%.



Reducing nutrient losses by 50%.



Reduce the use of harmful fertilisers by at least 20% through the combination of nutrients with modulators.

TRIBIOME will **ensure a resilient food production** system through **modulation of the interaction of soil-plant microbiomes** to adapt them to **climate changes** using the **microbial diversity** specific to each EU region.

#### OBJECTIVES:

- innovative multi-stakeholder approach for agri-food sustainability through a decision support network;
- modelling microbiomes to boost soil microbiome dynamics for a better crop quality and productivity;
- ensuring circularity and climate change adaptation;
- setting up a robust and reliable interconnection between plant, animal and human microbiomes that contributes to sustainable healthy nutrition.



**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:

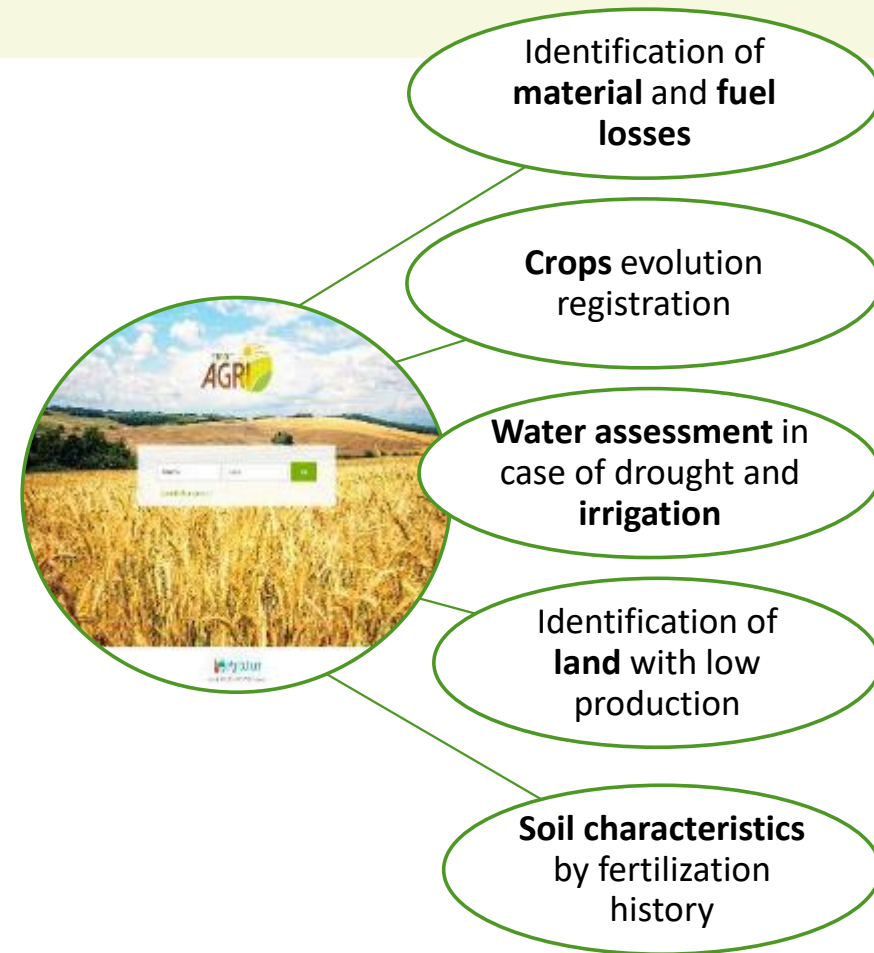
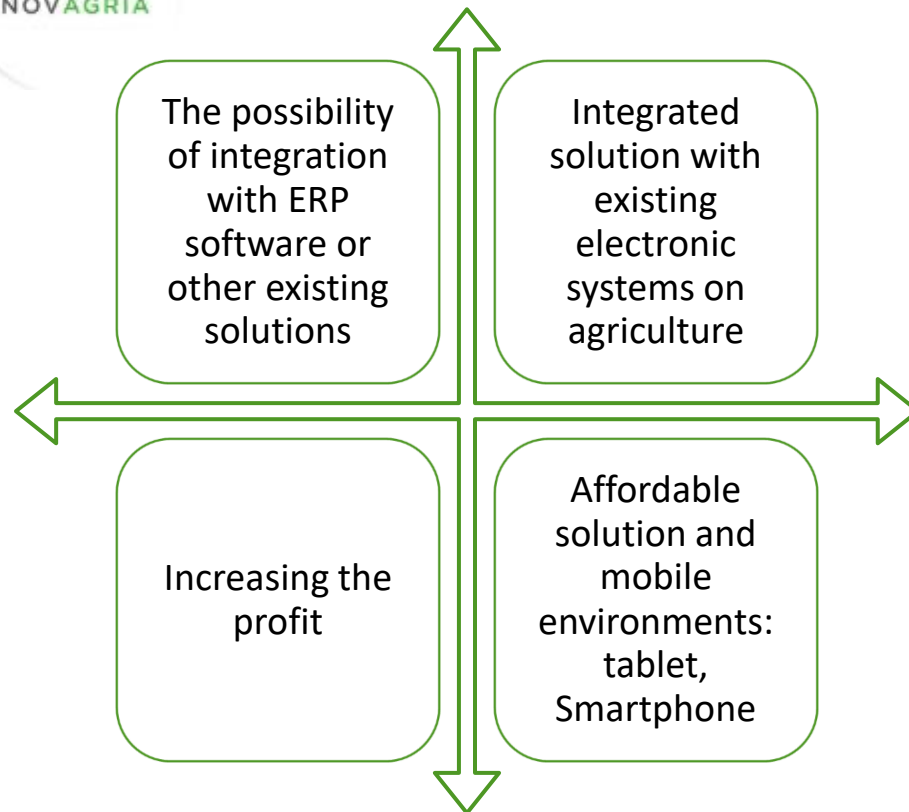
- 944 076 unique applications submitted for a yearly campaign
- 34,55 million agricultural physical blocks, for all schemes required
- 1,45 million farmers in the database
- Over 13,4 billion EUR paid
- Over 83 million operations performed in the APIA's information system

### Organizational structure:

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



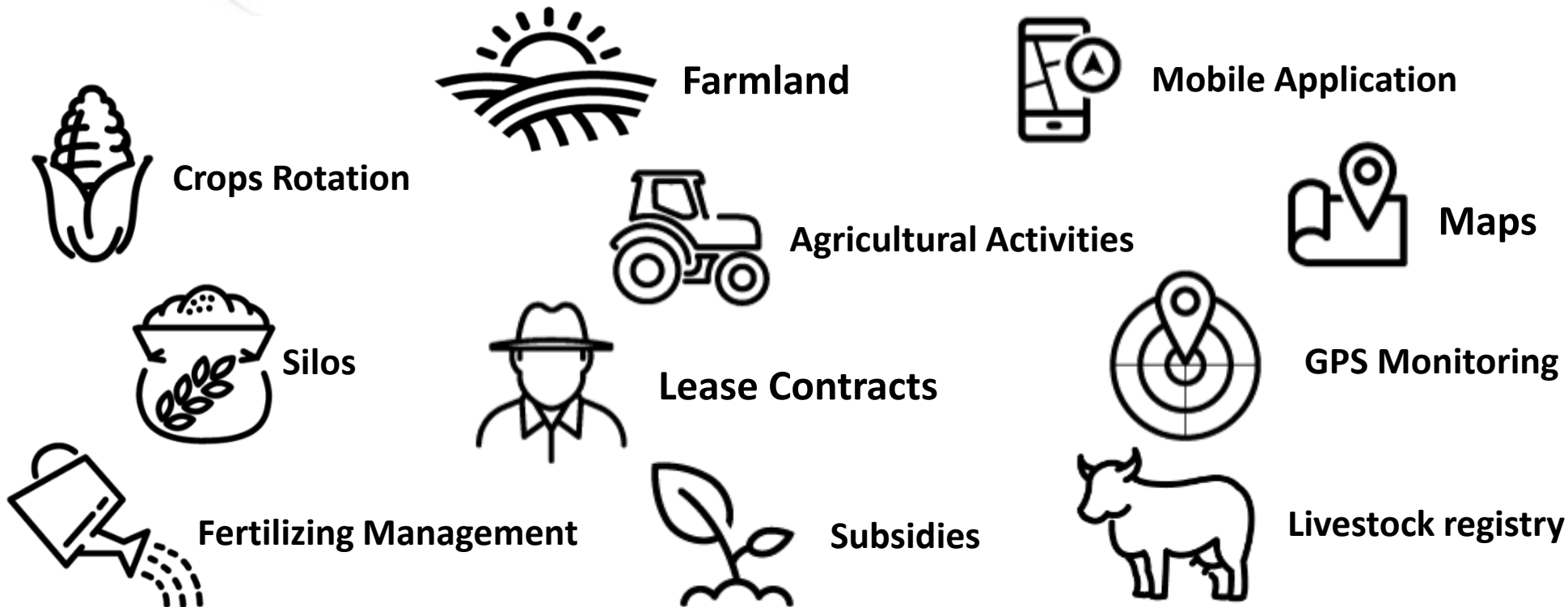
**The software created for farmers, for managing the activity of an agricultural, vegetable or animal farm**





**Simple, intuitive and user friendly**  
**Integrated farm management software**

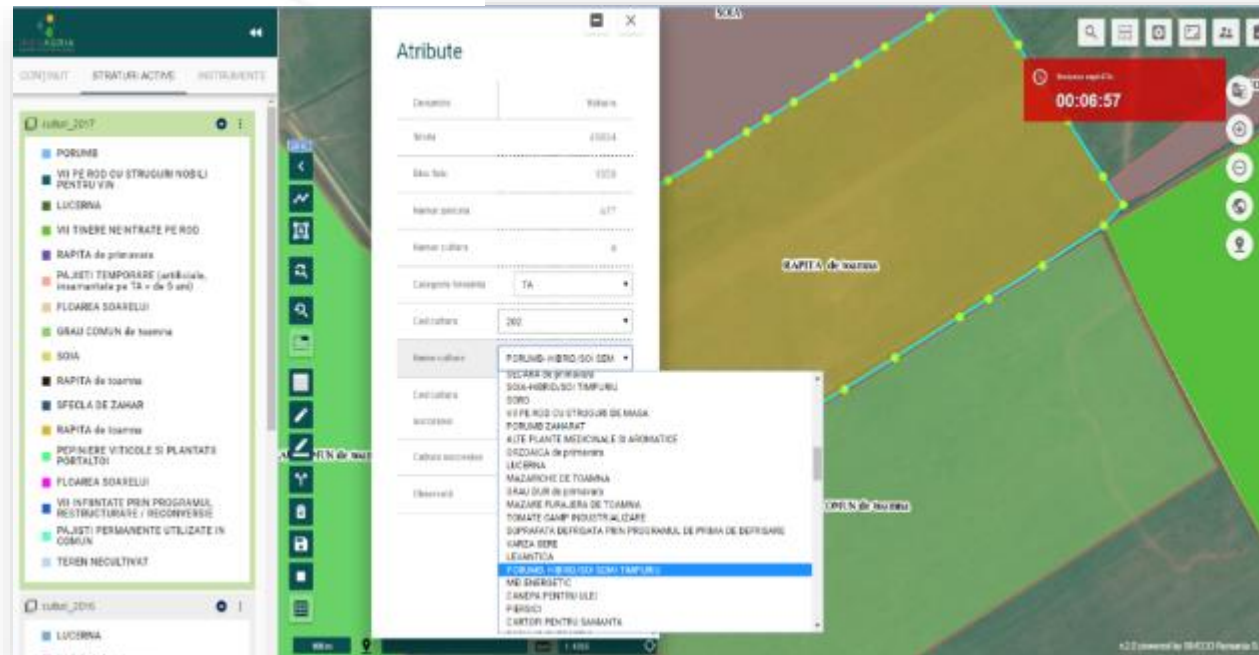
## COMPONENTS:







**One-point data entry system ensures coherence, uniformity, and correlation of information**, giving you real-time control over all agricultural operations - enables **accurate, timely**, and **informed decision-making** for improved efficiency and productivity.



## 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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Projects



ITHACA  
All To Enhance Civic Participation



ACAB



## NAIADES – ‘A holistic water ecosystem for digitization of urban water sector’

- **SIMAVI Role:** NAIADDES ICT framework integration & communication platform, pilot implementation and evaluation with Dunărea Brăila Public Utilities Company (RO)



- Water consumption & efficiency
- Confidence of water consumers
- Safety & reliability
- Personalized persuasive feedback and services

NAIADES aims to **modernize and digitize** the water sector by providing a **holistic ICT framework for efficient water ecosystem management**, integrating **innovative tools**:

- **optimization of water consumption** and **smart water operation scheduling** tool;
- **personalized water behavioral change support** mobile application, which will aim to enhance **public awareness** on **water consumption** and **usage savings**;
- **water demand prediction Toolkit** which will predict the **water demand**, save **water resources**, reduce **operation and energy costs** and **greenhouse gases**.

Pilot demonstrations in **3 areas: Alicante (Spain), Brăila (Romania) and Ville de Carouge(Switzerland)**.



## PANTHEON – ‘Community-Based Smart City Digital Twin Platform for Optimised DRM operations and Enhanced Community Disaster Resilience’

- **SIMAVI Role:** Smart City Digital Twin (SCDT) platform, AI-based modelling & self-adaptive simulations, Integration & testing of PANTHEON platform



PANTHEON focuses on developing a **Community-based Digital Ecosystem for Disaster Resilience** utilising **Smart City Digital Twin (SCDT) technology** and other emerging innovations to advance the existing risk assessment methods, mitigate potential vulnerabilities and build a strong community disaster resilience foundation:

- ***PANTHEON Disaster - Resilient Communities Model***
- ***Smart City Digital Twin (SCDT) for Community Disaster Risk Management (DRM)***
- ***Decentralised and Participatory Governance & Tools***
- ***Intelligence, CM-SCDT Processes and Optimal Disaster Risk Management Operations***
- ***Data Delivery Scheme and Remote Sensing for Community-based SCDT***
- ***Interactive User Interface for a Holistic Simulation Environment & Synthetic Environment***

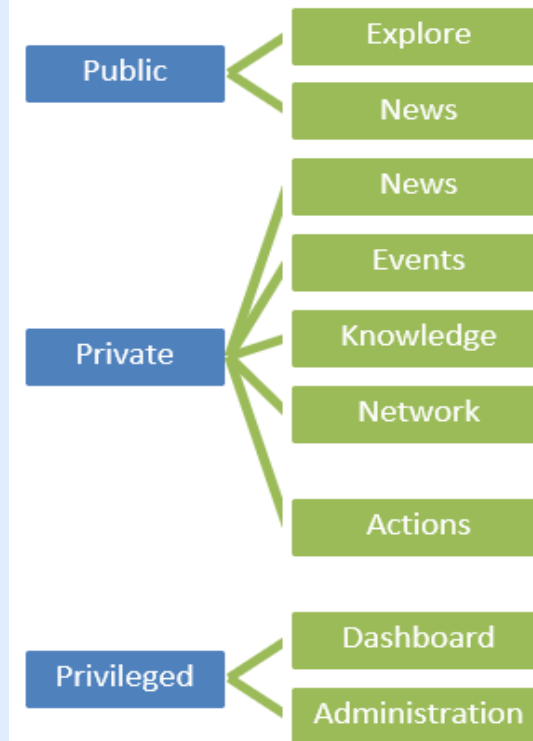
## LIVING INNOVATION – ‘Implementing RRI through co-creation of smart futures with industry and citizens’

- **SIMAVI Role:** Development & Implementation of the Virtual Community Platform



In the **LIV:IN project**, major industry leaders join forces to co-create more **responsible approaches to innovation** building on the premise that **recognition of the value of RRI among industry** is necessary for achieving the aim of the call “**to progress further in integrating RRI in industrial contexts**”.

Its **Virtual Community Platform (VCP)** tackles challenges of **virtual communities** by incentivizing **collaboration**, fostering **content co-creation**, showcasing **use cases**, and accumulating **credits** based on **content creation** and **user interactions**.



## 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:



Click on Projects



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DEM<sub>4</sub>PED





## FlexiGrid – ‘Interoperable solutions for implementing holistic FLEXibility services in the distribution GRID’

- **SIMAVI Role:** FlexiGrid system architecture, development of cross-functional platform integration, security access control and communication services



The **FLEXIGRID** project develops solutions to ensure the **security and reliability** of electricity grids as **renewable energy** integration grows. It provides an **enabling architecture** for **small and medium DSOs** to unlock **flexibility resources**, offering **IoT, peer-to-peer and peer-to-pool marketplaces, vehicle-to-grid, power-to-heat, and power-to-gas** solutions, along with **innovative business models**.

By enabling **cross-sector integration, resource optimization, and demand response**—including **EV charging schemes and storage**—DSOs can address **capacity shortages** while upgrading aging systems with **smart technology**.

- ***8 use cases will be demonstrated in 4 countries (Sweden, Bulgaria, Turkey, Switzerland) - the demonstration sites will be operated by 3 DSOs and 2 large companies.***

### InterPED – ‘INTEROperable cloud-based solution for cross-vector planning and management of Positive Energy Districts’

- **SIMAVI Role:** InterPED architecture, cybersecurity measures, and platform system integration; user visualization tools and piloting activities with Alba Iulia College District (RO)

#### GOALS:


- Improved integration of energy (e.g. distributed renewable energy generation, waste heat utilisation, storage) and non-energy sectors (e.g. mobility) within Positive Energy Districts (PEDs).
- Increased participation of consumers and energy communities in the value chain of the energy system.
- Increased availability of tools, guides and interoperable solutions for planning, design, development and management of Positive Energy Districts (PEDs).
- Improved integration of PEDs in energy systems, improved contribution of PEDs to energy grid robustness with regard to dependencies to energy supplies.

**InterPED** aims to enable the concept of **PEDs via sector coupling, cross-vector integration, demand flexibility and consumer engagement**, while improving utilisation of local RES, storage and excess/waste heat (E/WH) sources. InterPED will deliver a **scalable and adaptable cloud-based platform** composed of **analytical, modelling and optimization services for planning, supervision and control of integrated PEDs** (including power, heating and cooling, mobility).

- *Demonstrated at 4 pilot sites in: Lugaritz-Matía Community (San Sebastián, Spain); Ecovillage Findhorn (Scotland), Arena Innovation Community (Switzerland) and Alba Iulia College District (Romania).*

## iDriving – ‘Intelligent & Digital Roadway Infrastructure for Vehicles Integrated with Next-Gen Technologies’

- **SIMAVI Role:** Mobile and in-vehicle applications for early warnings, Digital Twin-Based Control Center with XR features, pilot implementation with Municipality of Alba Iulia (RO)



**iDriving** project focuses on enhancing **road safety** through **intelligent, data-driven solutions** for urban and secondary roads across Europe. Leveraging advanced technologies like **AI, digital twins, and real-time monitoring**, iDriving aims to provide comprehensive **safety and traffic management** by detecting road hazards, optimizing infrastructure maintenance, and enabling efficient vehicle-to-infrastructure communication.

### Key Goals:

- Safety Criteria Catalogue (SCC);
- Enhanced V2I Communication;
- Real-Time Monitoring and Hazard Detection;
- Digital Twin for Predictive Maintenance;
- User Training and System Validation;
- Open Science and Data Sharing.

➤ *Scenarios in 6 unique pilot sites in Austria, France, Spain, Croatia, Romania, and Greece.*



## 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:



[Coordinator SIMAVI]



## ACCURATE – ‘Achieving Resilience Through Manufacturing as a Service, Digital Twins and Ecosystems’

- **SIMAVI Role:** Coordinator, ACCURATE requirements, integrated ecosystem, Decision Support and Federated MaaS Solution, and pilot implementation with Continental (RO)

### OUR CORE OBJECTIVES



UNDERSTAND AND ADAPT  
TO UNFORESEEN EVENTS



SWIFTLY ADJUST LOGISTICS  
TO DIVERSE CONDITIONS



STRENGTHEN RESILIENCE  
IN SMART MANUFACTURING



ELEVATE CIRCULARITY AND  
SUSTAINABILITY



MAKE MAAS TECHNICALLY  
AND ECONOMICALLY VIABLE



DRIVE DEEP INNOVATION  
AND ACCELERATE ADOPTION

**ACCURATE project** enhances European manufacturing competitiveness by improving **sustainability, stability, resilience, and adaptability**. It develops **innovative approaches** and a **human-centric Decision Support System** to manage unforeseen events. ACCURATE ensures **timely services, flexible logistics, and production adaptation**, while creating a **trusted data space** for seamless stakeholder collaboration. It also promotes **Manufacturing as a Service (MaaS) solutions** through shared insights.

- **Use Cases:** *AIRBUS Atlantic (FR), TRONICO and Tame-Component (FR), Continental Automotive (RO).*

## MATCHMAKER – ‘Open data and industry driven environment for multiphase and multiscale Materials Characterization and Modelling combining physics and data-based approaches’

- **SIMAVI Role:** MatCHMaker Framework Architecture and requirements, AI-based mechanisms for Materials Characterization, MatCHMaker Open Repository for knowledge and data sharing

### USE CASES:

#### Construction



**Low carbon cement**  
**Decrease CO2 emission in the production**  
Maximum substitution of clinker with alternative materials with equal/superior performance

#### Energy



**Solid Oxide Fuel/Electrolysis Cells (SOFC/SOEC)**  
Produce hydrogen without CO2 emissions and achieve the highest efficiency

#### Mobility



**Proton-Exchange Membrane Fuel Cells (PEMFC)**  
Produce zero-emission power in multiple applications in transportation

The **MatCHMaker** project will enable the **integration and interoperability of complex characterisation and modelling (C&M) workflows** matching the needs of the EU manufacturing industry.

Requirements on **multiphase and multiscale materials** stemming from the **construction, energy and mobility sectors** will be translated into specific innovation challenges. An integrated approach will be used for establishing the **microscopic and macroscopic properties of advanced materials** that will reduce development costs, time and risks while improving sustainability.

➤ **Partnership with ASRO - Asociatia de standardizare din Romania.**





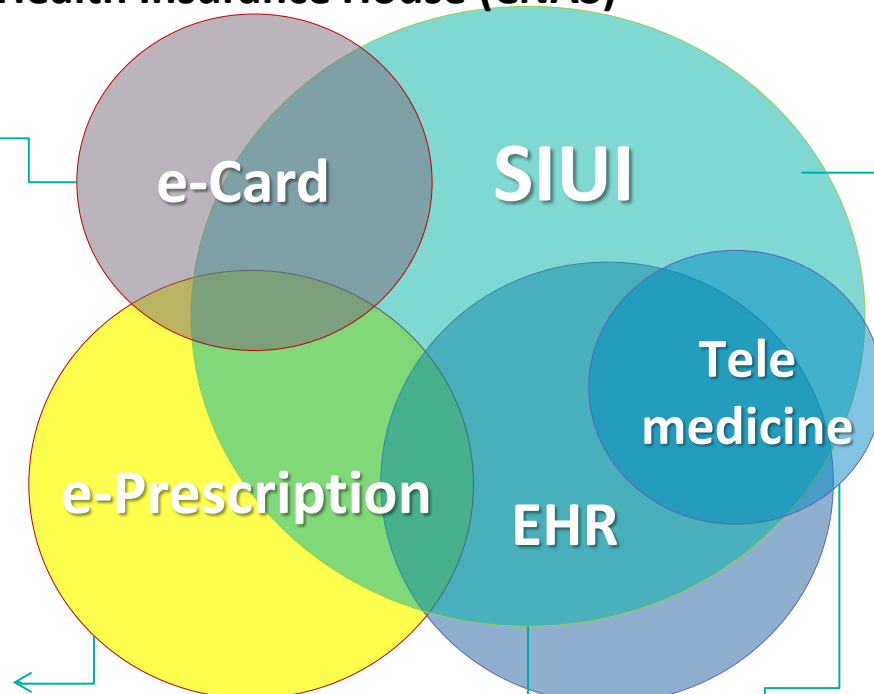
## Integrated Health Information System in Romania – SIUI

**Beneficiary:** National Health Insurance House (CNAS)

15,5 millions  
persons registered  
with cards



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



Completed in  
Dec. 2015

- over 6,000 Family Doctors
- over 1,000 hospital users
- 8.6 millions personal files

**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

### 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:



[Coordinator  
SIMAVI]



## 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:



**ODYSSEUS**  
[Coordinator SIMAVI]



[Coordinator SIMAVI]



**REDALERT**

[Coordinator SIMAVI]



[Coordinator SIMAVI]



CONNECTOR



**VIGIMARE**



PANTHEON





### 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:



**FEDERATES -**  
**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

- ✓ Augmented cultural heritage inclusion and accessibility
- ✓ **One-stop-shop** and open marketplace for **XR applications** as support for learning, training and education
- ✓ Context-Aware **AR content** for combining digital information with the physical world
- ✓ **Authoring Tools** to create, design, and produce digital content
- ✓ Interactive & **Educational games** development
- ✓ Complex **Virtual Laboratories** with 3D immersive
- ✓ eLearning platform dedicated to Training & Awareness
- ✓ Single API interface to interact with **different VR devices**
- ✓ Deployment across **multiple mobile and wearable AR/VR devices**

## REFERENCES:



[Coordinator SIMAVI]



Complete portfolio of digital solutions for learning and development, providing our clients with a wide spectrum of solutions, from traditional to cutting edge:



## eLearning Courses

We create online courses, 30 to 90 minutes long, that can deliver the required knowledge and skills on any topic



## Microlearning

Designed for on-demand learning, microlearning videos are designed to provide employees with support at the point of need



## Video Learning

Designed to engage any learner, video courses are the most efficient way to deliver knowledge to the target audience



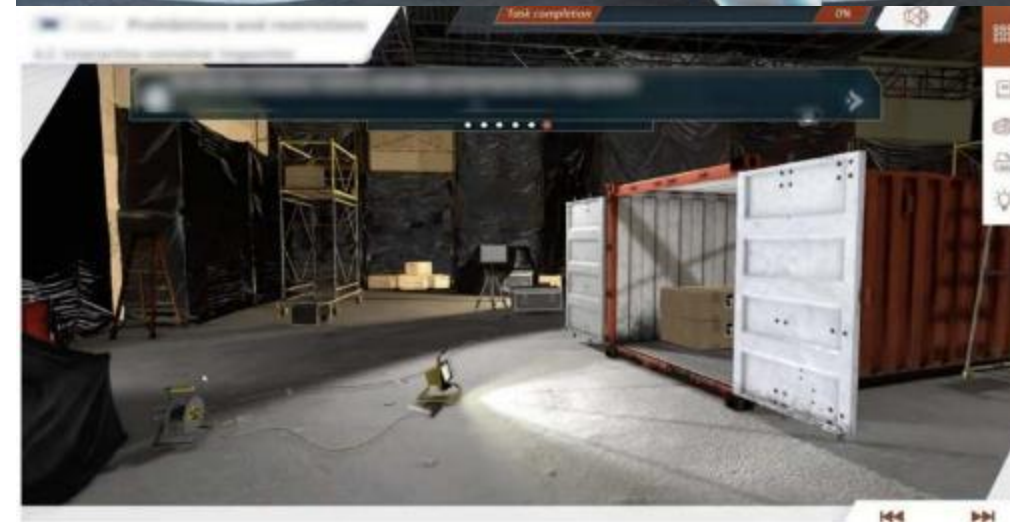
## LMS

We provide installations and customizations of open-source Learning Management Systems, such as Moodle or Totara



## Consultancy

We provide extended consultancy on learning and development, from L&D strategy, analysis, impact or creating competency frameworks





# eLearning & eTraining



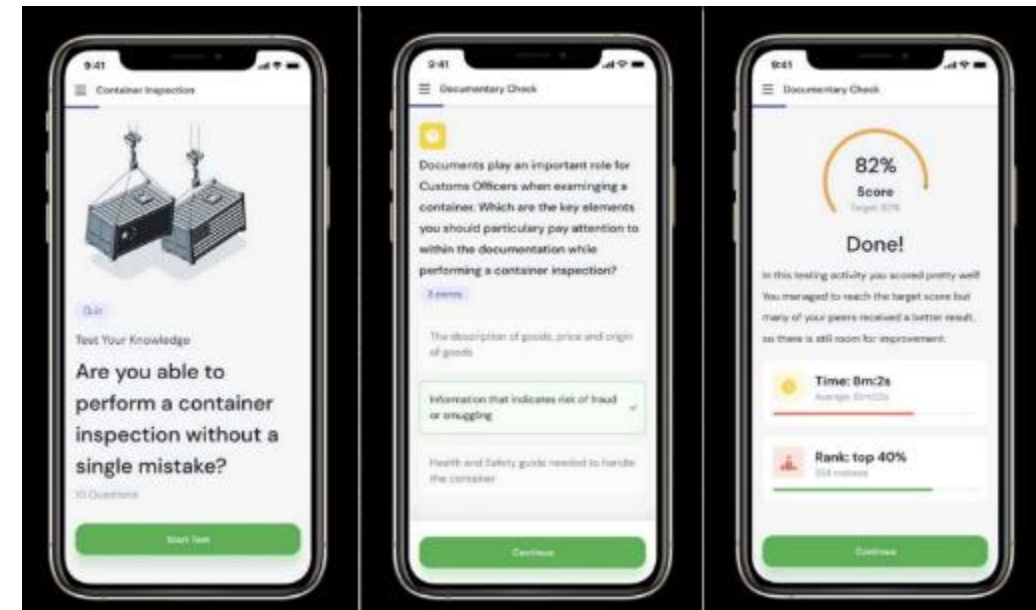
## Mobile Learning

We create mobile learning applications designed to support learners with knowledge support at the point of need



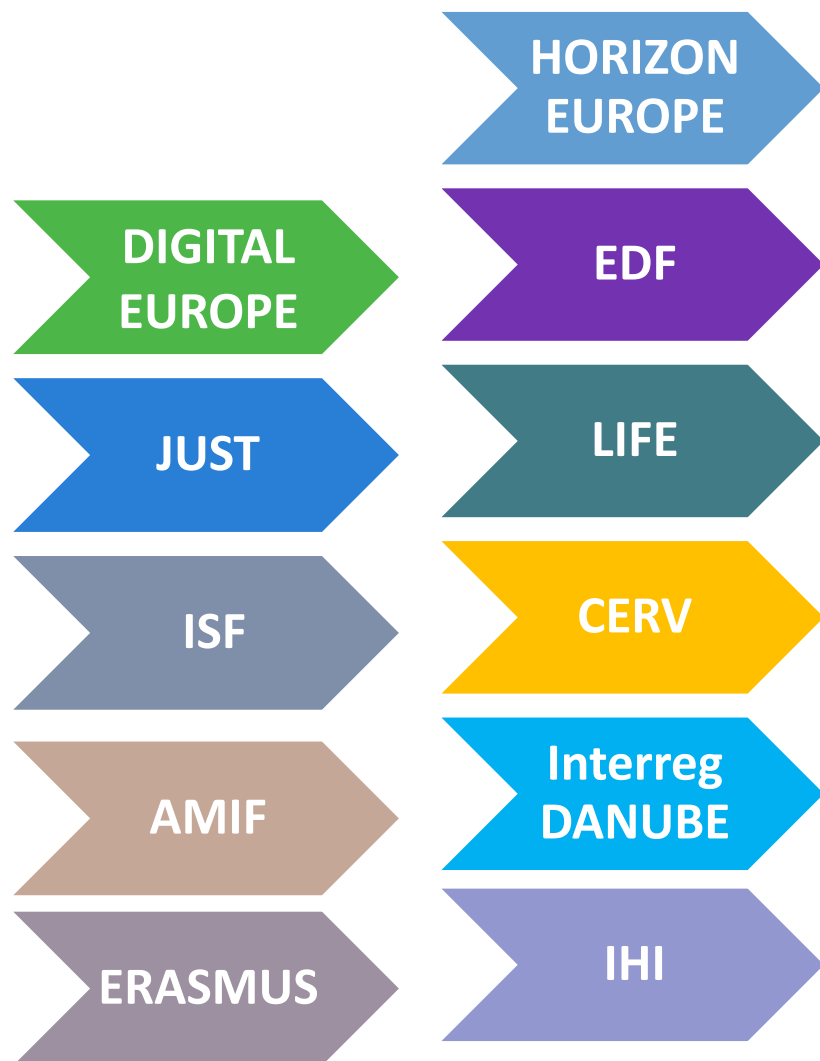
## AR/VR

We create customized Augmented Reality/ Virtual Reality applications that can emulate any technical environment for training





## 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



# Thank you!

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