



Software Imagination & Vision



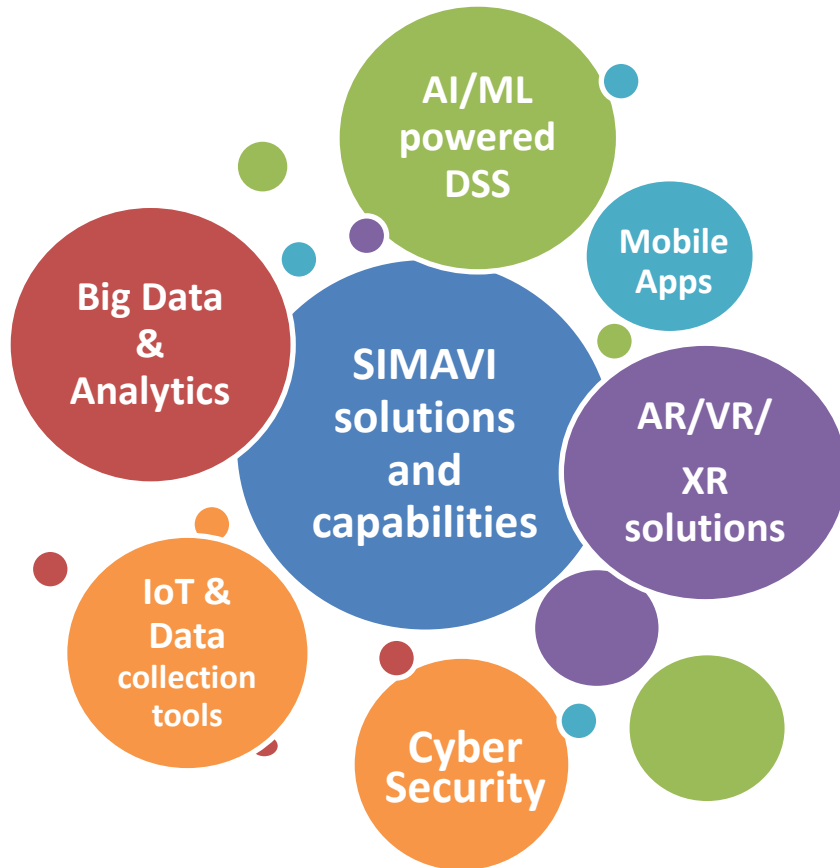
Software Imagination & Vision

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+ 60**Horizon 2020
Horizon EUROPE****wining projects****SIMAVI develops solutions for various industries****Security****eTraining****Energy****eLearning****Industry 4.0****eHealth****eCustoms****eAgriculture****eGovernment****Research & Development Projects****Enterprise Application Suite****Customized Applications**



Competences

- ✓ **Platforms development, integration** and interoperability
- ✓ **AI/ML powered Software Tools**, DSS and Analytics
- ✓ **AR/VR/XR** development for awareness, 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

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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[Coordinator SIMAVI]



ODYSSEUS

[Coordinator SIMAVI]



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REDALERT

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SIMARGL



ISOLA




S&R



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

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Solutions & Experience

- ✓ IoT Platform development & Data integration from IoT sensors
- ✓ EIS (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

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Solutions & Experience

Environmental monitoring

- ✓ Toolbox for Decision Support and adaptive control of air quality monitoring
- ✓ Soil Pollution monitoring


Urban Safety and Management

- ✓ Integrated toolkit for intelligent management of processes, ethics and technology for Urban Safety
- ✓ ICT framework for urban water sector

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

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FLOOD-serv

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Solutions & Experience Details



SILVANUS - Integrated Technological and Information Platform for Wildfire Management

- ✓ SILVANUS caters to the demands of **efficient resource utilization and provide protection against threats of wildfires encountered globally;**
- ✓ Establishes synergies between **environmental, technology and social science** experts
- ✓ **Development and integration of advanced semantic technologies to systematically formalise the knowledge of forest administration and resource utilization;**



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

- ✓ **A real-time risk evaluation tool** that can receive multiple classification inputs and work with a new proposed neural network-powered Risk factor indicator for the **prevention and preparedness of wildfire;**
- ✓ 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;**
- ✓ **Encompasses 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;

Solutions & Experience


Smart Communities

- ✓ Citizen participatory platform / RRI platform
- ✓ Mobile Application for citizens engagement
- ✓ Augmented & Virtual Reality
- ✓ Interactive & educational games development
- ✓ Serious games & gamification
- ✓ User-oriented, secure, trustful & decentralized media solution integration
- ✓ Social Media Data Acquisition Engine

Food, Agriculture, Water ecosystems

- ✓ Data & IoT platforms
- ✓ AI based decision support systems
- ✓ Prediction & Visual Intelligence
- ✓ Process modelling and Knowledge graphs
- ✓ Cybersecurity solutions (data encryption, authentication, authorization)
- ✓ Tools for simulating and assessing the impacts and risks of climate change

REFERENCES

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TRIBIOME 

NEVER MORE 

 demeter

AgriData Value 



ITHACA
AI To Enhance Civic Participation


SUPER MORRI


EUNOMIA

LIVON
LIVING INNOVATION


NAIADES

Solutions & Experience Details



DEMETER - Building an Interoperable, Data-Driven, Innovative and Sustainable European Agri-Food Sector (**HORIZON 2020**)

- ✓ IoT Corn Management & Decision Support Platform and implementation in locations operated by agricultural farms specialized in field crops, members of **Romanian Maize Growers Association (APPR)**
- ✓ Real-time warnings and forecasts;
- ✓ Water use and fertilizer rate management & optimization.



AgriDataValue – Smart Farm and Agri-environmental Big Data Space (**HORIZON EUROPE**)

- ✓ Agri-environment/Climate approaches for in-situ real-time IoT/EO data processing and exploitation of Copernicus based EO surveillance - Data Space Requirements and tools development
- ✓ Pilot deployment and implementation with the **Romanian Payment and Intervention Agency for Agriculture (APIA)** and **Bio Romania - Association Of Operators In Organic Agriculture**.



TRIBIOME - Advanced tools for integration and synergistic inTeRconnection of microBIOMES in resilient food systems (**HORIZON EUROPE**)

- ✓ Innovative multi-stakeholder digital decision supporting tool to facilitate cooperation and examination of preliminary solutions in the food systems

Beneficiary: Payment and Intervention Agency for Agriculture

Integrated Administration and Control System (IACS)



Figures and Facts:

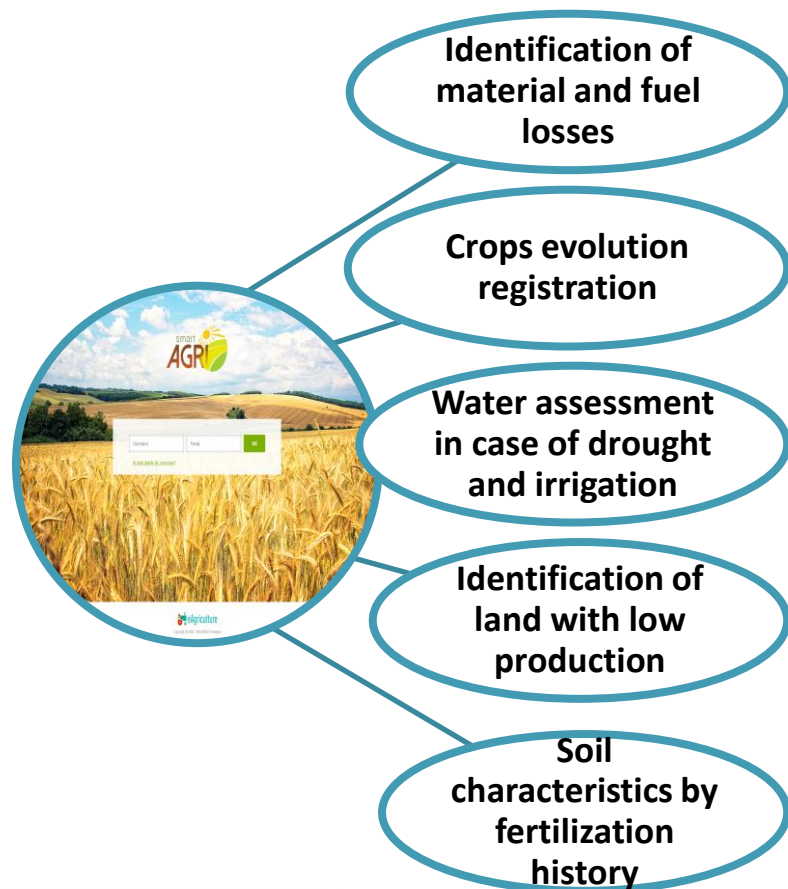
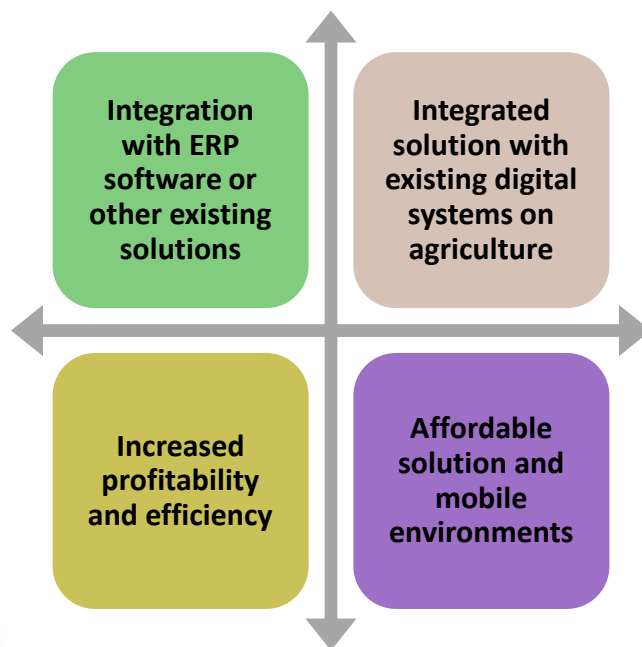
The system ensures consistency and compatibility between national schemes for farmers, covering:

- 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

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MES-CoBraD



DEEPHEALTH



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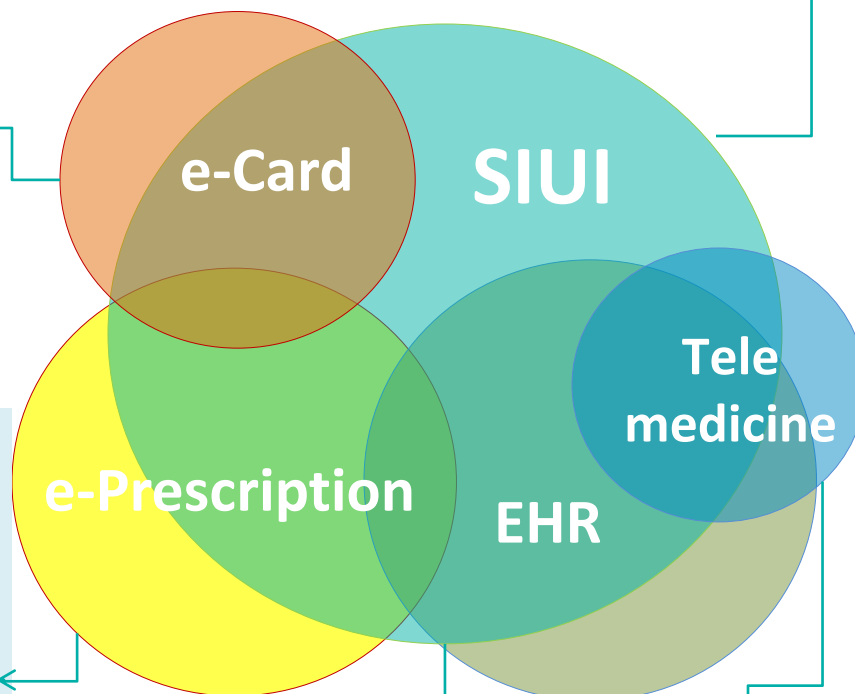
Integrated Health Information System in Romania – SIUI

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

- ✓ 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**

**ISOLA****newton****3D Pathology****LAW-GAME**

REFERENCES



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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





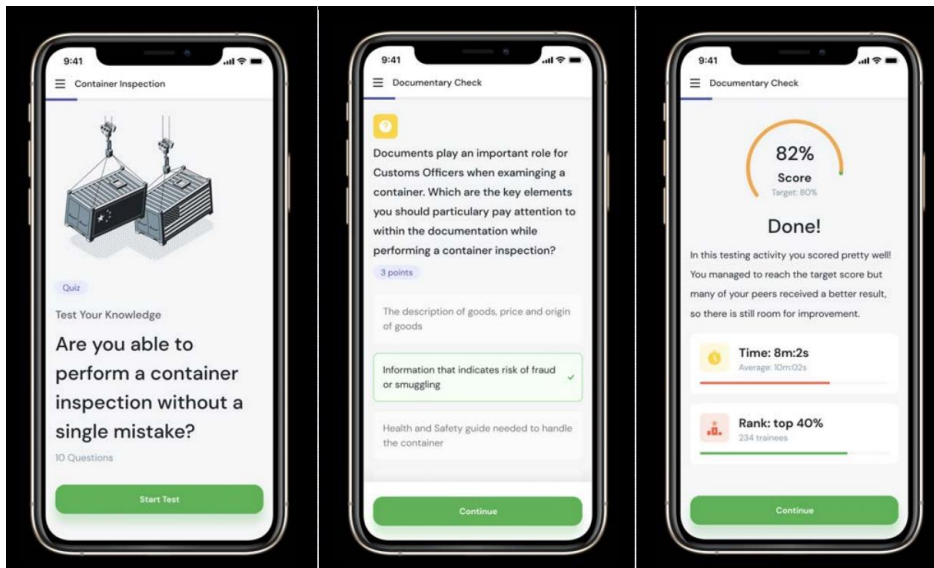
Mobile Learning

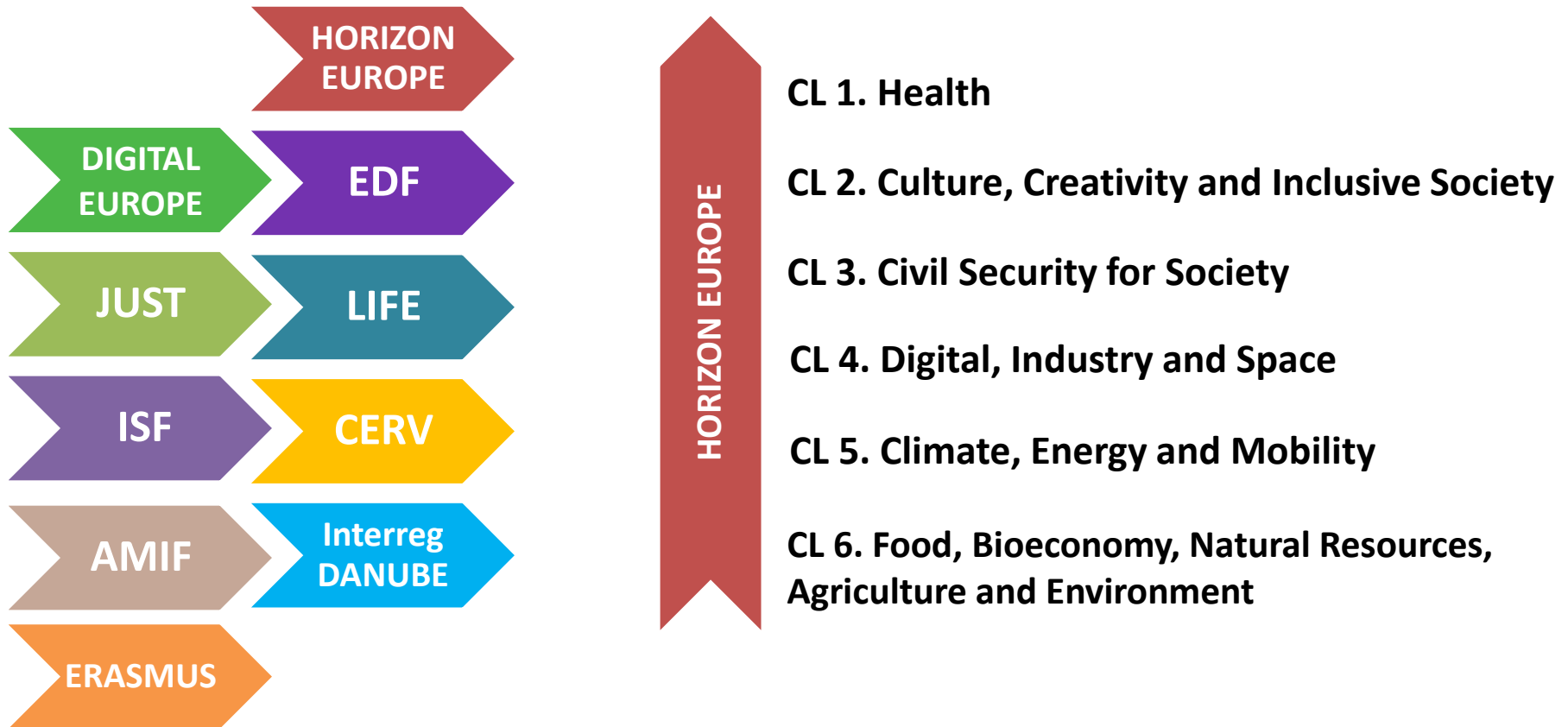
We create mobile learning applications designed to support learners with knowledge support at the point of need



AR/VR

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







Alliance for Internet of Things Innovation



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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