



## 2019 - 2024 Funded Research @UOP

Unlocking potential A Report on Success Stories



## Contents

- 2-3 Introductory note
  - 4 Research Committee
  - 6 Advancing Research
- 7-8 Funding Statistics

#### A Showcase of Funded Projects per academic field

- 10-15 Agriculture & Bio-economy
- 16-20 Green Energy Solutions
- 21-25 Digital Technologies
- 26-32 Cultural Heritage & Management
- 33-38 Health & Well-Being In Vulnerable Populations
- 39-58 Innovative Education & Digital Skills
- 59-63 Political Science, EU Studies & Democracy
- 64-69 Intelligent Infrastructure & Sustainable Development
- 70-71 Sports Management
- 72-74 International Development & Human Rights
- 75-77 Entrepreneurship

#### Collaboration with local stakeholders

- 78 Messinian Chamber of Commerce & Industry -Department of Accounting and Finance
- 79 Municipal Water Supply & Sewerage Company of Tripolis (DEYAT) -Department of Management Science & Technology
- 80 Region of Western Greece Department of Civil Engineering

### Introductory note



#### Dear friends,

This booklet presents a synopsis of recently funded research projects of the University of the Peloponnese. It is evident that our university attracts funding from a wide range of competitive funding tools in Greece and even more so abroad implementing the academic knowledge stemming from its multidisciplinary nature. In all of our research projects, young researchers from all circles of higher education are employed, developing numerous international collaborations.

As a public Higher Education Institution located in the Peloponnese region, we place particular emphasis on the advancement of local communities through the innovative knowledge-intensive methodologies that we develop.

We invite you to visit the sites of the research projects as well as the sites of our Research Unit (projects.uop.gr) and our university (www.uop.gr).

> Athanassios Katsis Rector, University of the Peloponnese, Greece

## Εισαγωγικό σημείωμα

#### Αγαπητές/οί,

Το παρόν έντυπο παρουσιάζει συνοπτικά πρόσφατα χρηματοδοτούμενα ερευνητικά έργα του Πανεπιστημίου Πελοποννήσου. Όπως θα διαπιστώσετε, το Πανεπιστήμιό μας προσελκύει χρηματοδότηση από μία ευρεία γκάμα ανταγωνιστικών χρηματοδοτικών εργαλείων στην Ελλάδα και κυρίως στο εξωτερικό με εφαρμογές σε όλες τις επιστήμες που δυναμικά υπηρετεί. Σε όλα τα ερευνητικά έργα απασχολούνται πολλοί νέοι επιστήμονες από όλους τους κύκλους της τριτοβάθμιας εκπαίδευσης αναπτύσσοντας πολυάριθμες διεθνείς συνεργασίες.

Ως Δημόσιο Πανεπιστήμιο στην εθθηνική περιφέρεια, δίνουμε ιδιαίτερη έμφαση στην πρόοδο των τοπικών κοινωνιών μέσω των καινοτόμων μεθοδοθογιών έντασης γνώσης που ως ερευνητικός φορέας αναπτύσσουμε.

Σας προσκαλούμε να επισκεφθείτε τους διαδικτυακούς τόπους των έργων, του Ειδικού Λογαριασμού Κονδυλίων Έρευνας του Πανεπιστημίου Πελοποννήσου (projects.uop.gr) και του ιδρύματος (www.uop.gr).

> Αθανάσιος Κατσής Πρύτανης Πανεπιστημίου Πεθοποννήσου

## **Research Committee**

The Research Committee of the Special Research Funds Account of the University of the Peloponnese has the following members:



Athanassios Katsis Professor Rector of the University of the Peloponnese



Sofia Zyga Professor of the Department of Nursing, Vice-President & Representative of the School of Health Sciences



Maria - Eleni Agoraki Associate Professor of the Department of Accounting & Finance, Representative of the School of Management



Konstantinos Georgiadis Professor of the Department of Sports Organization & Management, Representative of the School of Human Movement and Quality of Life Sciences



Maria Xesternou Associate Professor of the Department of Philology, Representative of the School of Humanities and Cultural Studies



Athanassios Blesios Professor of the Department of Theater Studies, Representative of the School of Fine Arts



**Dimitrios Petropoulos** Professor of the Department of Agriculture, Representative of the School of Agriculture and Food



Sotirios Petropoulos Associate Professor of the Department of Political Science & International Relations, Representative of the School of Social and Political Sciences



Spiros Sirmakessis Professor of the Department of Electrical & Computer Engineering, Representative of the School of Engineering



Christos Tryfonopoulos Professor of the Department of Informatics and Telecommunications, Representative of the School of Economics and Technology



Ms. Eleni Prezerakou Head of Financial and Administrative Support Unit

**Deputy members:** 

Panagiota Antonopoulou Professor

Aikaterini Kastanioti Professor

Marina-Anastasia Kotzamani Associate Professor

Christos Koutsampelas Associate Professor

> Marina Papadelli Professor

Fotini Perra Associate Professor

Efstathios Selimis Associate Professor

Spyridonas Skiadopoulos Professor

> **Evgenios Skouras** Associate Professor

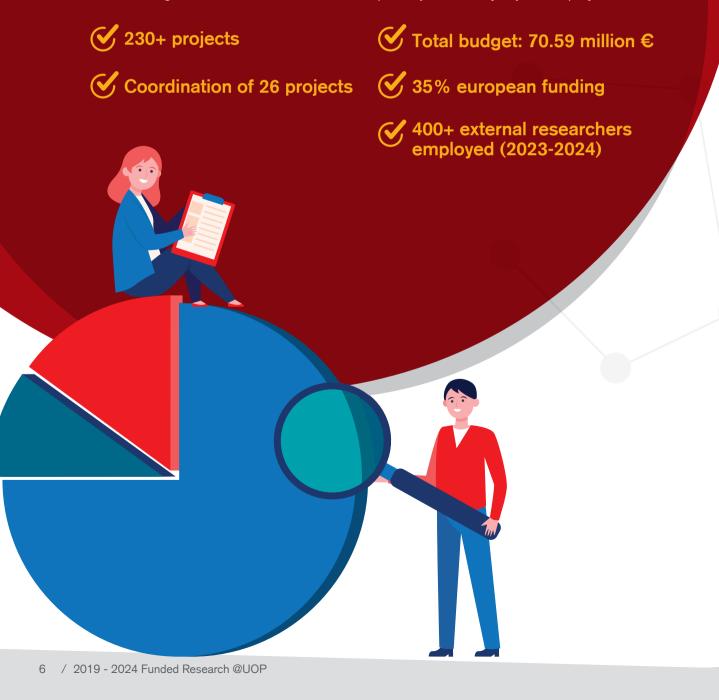
## **Advancing Research**

This booklet highlights the significant research achievements of the University of the Peloponnese, showcasing projects funded by European and national programmes across our 22 departments and 9 schools, during the last 5 years.

Enhancement of scientific research and production of new knowledge stand at the core of the University's mission.

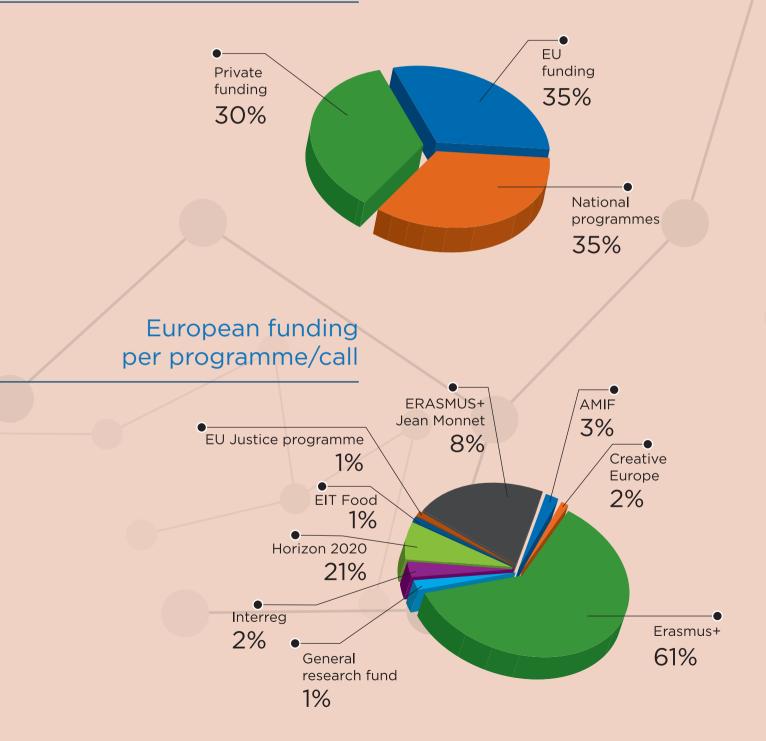
Through research projects, our researchers have made impactful contributions in multiple science fields under collaboration with local and foreign universities/ research institutes, industrial partners, local and regional authorities, non-profit organizations, etc.

Keep on reading to find out more about the scientific, economic and social impact of the funded projects. The commitment to advancing knowledge and innovation is conveyed through numbers, charts and indicative project descriptions grouped into 11 academic fields, taking into consideration the multidisciplinarity of the majority of the projects.



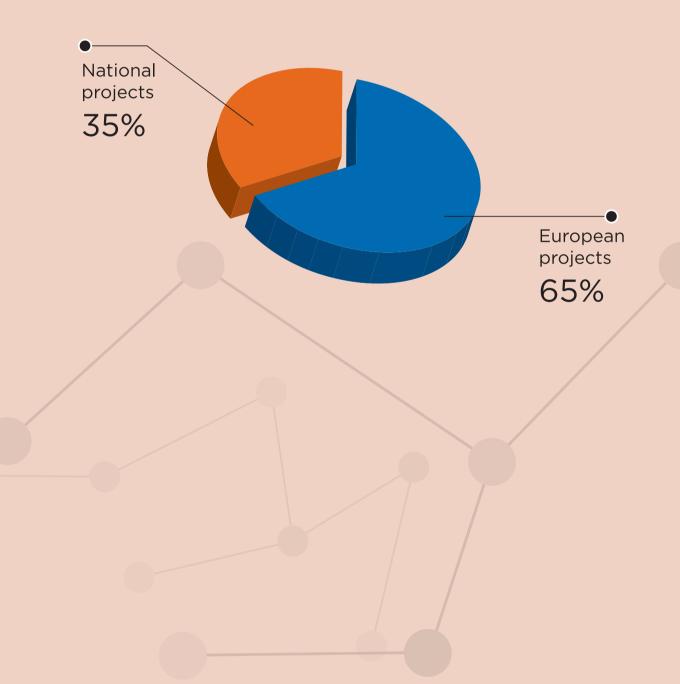
## **Funding Statistics**





## **Funding Statistics**

Project coordination per type of funding



## A Showcase of Funded Projects per academic field







## euRopean bio-Economy aLliancE in Farming

RELIEF aims to develop and deliver an innovative approach for teaching bio-economy in farming, by developing specific learning resources addressing HEIs students and farming practitioners. HEIs, VETs, farmer consultants, research institutes, and social partners from Italy, Greece, Sweden, Cyprus and Portugal deliver a high-quality network within the EU to advance bio-economy in the farming agenda. RELIEF will deliver a training needs analysis and develop two curricula in bio-economy, for HE students, farming practitioners and farmers exploring the key areas that are critical for the implementation of business models and strategies towards bio-economy in farming.

Based on this knowledge, RELIEF will design and pilot learning units which will incorporate a mix of training methodologies. An e-learning platform will offer learning resources in 5 languages for self-training and networking to support the long-term sustainability of farming enterprises.

RELIEF will stimulate significant changes in the university curricula, course content, and VET training by integrating a learner-centred approach based on problem-based, active and transformational learning.





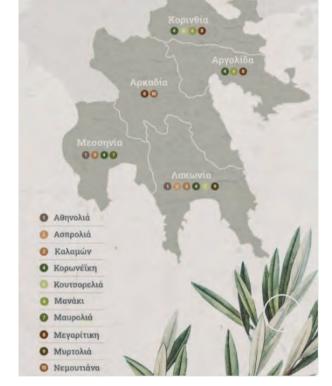




# GLOIO - Strategic management of anthracnose disease of olive cultivation in the Region of the Peloponnese

The research project successfully developed a comprehensive disease management strategy that effectively addressed all parameters influencing the manifestation and severity of the disease. This initiative mapped the dynamics of the endemic population of the pathogenic fungus, utilized the varying resistance of different olive varieties, and evaluated the effectiveness of agricultural pesticides on the endemic genotypes of the fungus. Furthermore, a tailored biological control method was created and adapted to local conditions, ensuring its practical application.

The project also provided critical insights into the correlation between the severity of olive fruit infestation at various stages of ripening and the quality characteristics of the resulting olive oil across different olive varieties. This enabled wellinformed decisions on optimal harvest timing and necessary cultivation interventions.



Website: gloio.uop.gr

NSRF Funding Framework Competitiveness, Entrepreneurship & Innovation 2014-2020 (EPAnEK). European Regional Development Fund (ERDF)

\*NSRF: National Strategic Reference Framework - ESPA





## Development of a scientific infrastructure for the study, conservation and exploitation of the biodiversity of the microbial communities of the traditional fermented foods and wines of the Peloponnese region

The objective of this project is to establish a scientific infrastructure dedicated to researching, conserving, and harnessing the microbial biodiversity found in the traditional fermented foods (table olives, pickled eggplant, traditional sourdough, PDO Sfela cheese, traditional sheep yogurt, traditional fermented sausages) and wines of the Peloponnese region.

The indigenous microorganisms and those introduced through backslopping can contribute to the creation of an identity recognized as unique by consumers.

The project implementation includes several key components: registration of producers of selected traditional fermented foods and wines from the Peloponnese region, metagenomic analysis and isolation of microorganisms from samples, qualitative and organoleptic analysis of samples, characterization of microbial communities in terms of their technological and probiotic properties, genomic and metabolomic analysis of strains with high potential in controlled fermentations, and the production of traditional fermented foods and wines in laboratory scale using the most promising strains.



Website: foodmicrobiome.uop.gr

NSRF Funding Framework "Competitiveness, Entrepreneurship and Innovation 2014-2020". European Regional Development Fund (ERDF)



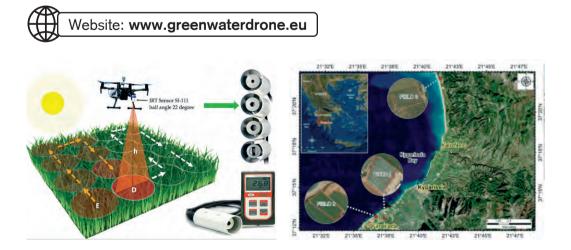


## Development and Implementation of an Innovative and Cost-effective System for the Precise & Dynamic Irrigation Scheduling and Crop Monitoring

GreenWaterDrone proposes an innovative Crop Water Stress Index (CWSI) measurement and application system, for the focused, real-time, non-invasive management of irrigation needs of water-intensive crops.

The system combines the advantages of focused and short-distance temperature measurement of terrestrial infrared sensor systems, with the efficiency and low-cost large-scale coverage of satellite telemetry systems. It is based on the use of unmanned flying polycopters (drones).

In the center of commercial exploitation of the results of the project, are the web applications developed for mobile and fixed users (smartphones, laptops, PCs). Services accessed through a Web Portal, include dynamically alerting / informing farmers / agronomists of the irrigation necessity (Irrigation Alerting & Scheduling) and potential risks concerning their fields (Crop Surveillance), as well as large-scale projection of results for public and private stakeholders involved in regional water policies (Irrigation Water Management).



NSRF Funding Framework Competitiveness, Entrepreneurship & Innovation 2014-2020 (EPAnEK). Action: Research - Create - Innovate





## REgenerative susTainable food chAINs through mArket Gardening

The main aim of AGRETAIN is to combine the efforts of universities and enterprises (VET providers, consultants), research farmer institutes and social actors to develop new teaching methods and learning material in the field of market gardening focusing on opening up new learning opportunities for the embedding of more resilient, sustainable/ environmental friendly, soil regenerative practices in smallscale farming. The project will deliver a training needs' analysis and



develop a curriculum for students, neo-farmers and farming practitioners, exploring the key areas which are critical for the implementation of this innovative gardening business model. Based on this knowledge, the project consortium will design and pilot learning units which will incorporate a mix of training methodologies and an e-learning platform that will offer accessible resources



Website: www.agretain.eu







### Kalamata Olive Oil Taste Laboratory

The Kalamata Olive Oil Taste Laboratory of the University of the Peloponnese is accredited according to ISO/IEC 17025 by the Hellenic Accreditation System and is recognized for the sensory analysis of virgin olive oil and table olives. It has been recognized for the sensory assessment of virgin olive oil by the International Olive Council since 2014. It is the only sensory analysis laboratory in Greece that belongs to an academic structure (Government Gazette 876/25.02.2022).



The Laboratory has facilities and equipment that meet the specifications of the International Olive Council and is home to the Kalamata Olive Oil Taste Panel, consisting of 24 tasters trained according to international standards.

#### Within the framework of its mission, it aims to:

- Support education at undergraduate and postgraduate levels Develop educational materials.
- Collaborate with academic institutions, research centers, public or private organizations in Greece and abroad
- Provide consulting services to individuals or legal entities, private companies, public agencies, and national or international organizations.
- Organize or co-organize conferences, workshops, and other scientific or cultural events with other entities.
- Offer sensory analysis services and consultancy to individuals or legal entities, private businesses, public organizations, and national or international bodies.
- Promote Greek olive oil and table olives at European and international level.

Website: **kalamatatastelab.uop.gr** 







## Modular Control Systems for Maximising Solar Energy Utilisation and Grid Service Provisions by Residential PV Systems coupled with Thermal Storage

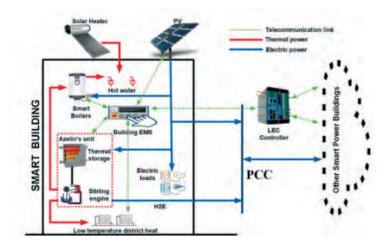
SUNSETS developed and demonstrated innovative solutions and technologies, enabled by digitalisation, for a solar photovoltaic (PV)-dominated near zero energy building (NZEB)based local energy community (LEC) aiming to increase PV penetration and enhance LEC's energy efficiency.

SUNSETS's advanced building energy management system (EMS) maximises, at the building level, the value of solar energy surplus by optimally dispatching building's loads and energy (electricity and heat) storage to enhance solar energy self-consumption and improve the energy efficiency by employing innovative thermal storage devices to use the, otherwise curtailed, solar energy surplus. The new thermal storage technologies include the smart residential electric boilers (SBs) developed by the University of the Peloponnese.

Innovative solutions and technologies were enabled by an interoperable cloud-based IoT platform that connects digitally all NZEBs to the LEC controller.



Website: sunsets.upatras.gr



Co-funded by the GSRT and the Swedish Energy Agency under the umbrella of SOLAR-ERA.NET



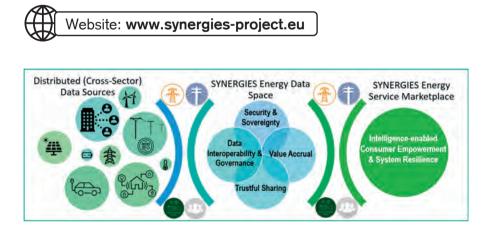


### Shaping consumer-inclusive data pathwaYs towards the eNERGy transition, through a reference Energy data Space implementation

SYNERGIES introduces a reference Energy Data Space, attempting to unlock the potential of innovation and data sharing throughout the energy data value chain, leveraging data and information from different energy actors and making the data accessible and widely available.

The project aims to develop innovative energy services that optimize the operation of networks and maximize the integration of Renewable Energy Sources (RES). The platform supports network operators in managing their energy resources and enhances the collaboration between Transmission System Operators (TSOs) and Distribution System Operators (DSOs) to improve system resilience. At the same time, it empowers consumers by enhancing environmental awareness and knowledge about energy issues, promoting the transition to clean energy.

The participation of the Wireless and Mobile Communications Laboratory of UOP focuses in the development of an open architecture IoT network with multiple wireless systems and sensors (e.g motion, temperature, humidity, lighting, vibration, infrared, CO2, energy) for different pilots.

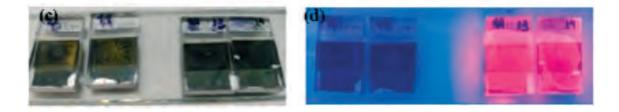


**Horizon Innovation Actions** 



## PVLumo - Enhanced and Long-lasting electricity generation under dim lighting and dark using emerging photovoltaic technologies

PVLumo aims to increase the overall performance of two emerging photovoltaic (PV) technologies, namely: Dye-sensitized solar cells (DSSCs) and perovskite solar cells (PSCs), by introducing two novel approaches. The first approach refers to the extension of the solar light utilization in wavelengths that these PVs do not efficiently perform and the second one to their possible operation at very low light conditions, even in the dark. In particular, as a first approach, the project proposed the use of spectral converters to absorb solar photons that cannot be captured effectively and convert them to wavelengths more suitable for energy conversion, by overcoming the non-absorption and thermalization losses in both the aforementioned PV technologies. Besides, as a second approach, it is planned to incorporate long-lasting phosphors (afterglow >10 hours) in both PV technologies, in order to extend their operation at very low light conditions (e.g., during the evening or even at night).



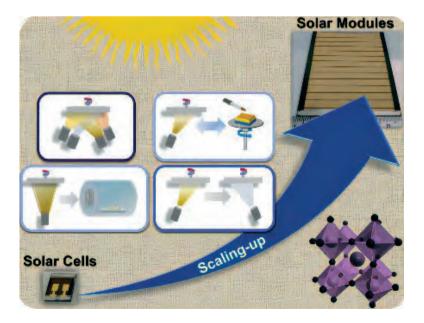




## 3GPV-4INDUSTRY - Development of efficient third generation PV materials and devices to enhance the competitiveness of enterprises to the green energy production

3GPV-4INDUSTRY aims to boost entrepreneurship in the third-generation photovoltaics sector by developing new innovative technologies that will bring new products to the market and, at the same time, meet the needs of industry and society for new ideas in the field of energy. For the implementation of this project, the methodology to be followed is based on the further development of research results and mature technologies by the entities of the consortium, in order to reach sufficient technological maturity to be utilised by Greek as well as European production tissue.

3GPV-4 Industry will devote resources during the project to inform the business community about the results and take the first steps of exploitation towards the market. The project consortium has been staffed by entities with high expertise in the field of third-generation photovoltaic materials and solar panels and is able to carry out this ambitious project.



Greece 2.0 National Recovery & Resilience Plan

## **Green Energy Solutions**



# InnoGrowth - Use of solar light concentrators to increase production and optimize the nutritional value of cultivated vegetables in greenhouses



The main objective of the project was to strengthen the competitiveness of agricultural holdings through the development of cooperation, with the aim of transferring the results of research to the production process, the utilization of new technologies and innovations for the benefit of productivity, and serving the needs of the market for agricultural products sector, the producer and the consumer, and the reduction of production

costs in the agricultural and the food sector. To achieve the goals, first, studies were carried out on the appropriate selection of fluorescent molecules and having as a characteristic their emission in the visible spectrum, since that is where chlorophyll absorbs, which is responsible for the process of photosynthesis. Then, the appropriate conditions for the optimal performance of the material were studied, and finally, it was applied in small and large scale greenhouses.



**European Agricultural Fund for Rural Development** 





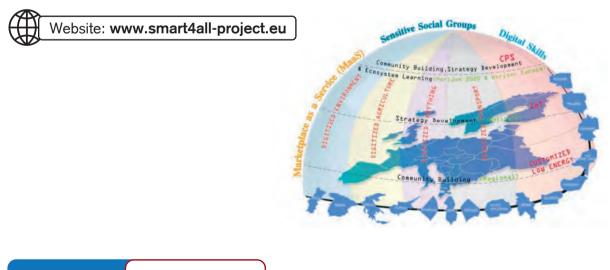
## Self-sustained cross-border customized Cyberphysical system experiments for capacity building among European stakeholders

SMART4ALL built capacity amongst European stakeholders via the development of selfsustained, cross-border experiments that transfer knowledge and technology between academia and industry. It targeted customised and low-enegy computing, cyberphysical systems and the IoT.

#### Its unique aspects included:

- community building, strategy development and ecosystem learning for boosting highend research and development
- support of application areas, such as digitized environment, digitized agriculture, digitized transport and digitized anything
- A new concept of marketplace which is offered as a service (MaaS) that acts as onestop-smart-stop by offering tools, services, platforms, based mainly on open sources technologies as well as technology suppliers-adopter matchmaking capabilities.

The project provided a total funding of 2,2 Mio Euros via 9 open calls and supported 88 cross-border pathfinder application experiments from European consortia.



Horizon 2020 UOP coordinator





## Clinical Decision Support System for Abdominal Aortic Aneurysm Disease Based on Artificial Intelligence Models

The project addresses the gap in assessing the risk of rapid expansion and rupture of an Abdominal Aortic Aneurysm (AAA). In the direction of a

radical upgrade in AAA patient management, tools are developed to facilitate physicianpatient interactions as well as the collection, management, and analysis of medical data.

## The goal of this research proposal is, therefore, to develop a Clinical Decision Support System (CDSS) for AAA disease, aiming for:

- Enhancement and integration of medical data databases from collaborating vascular surgery clinics
- Collection of a large volume of retrospective and prospective data (demographic, historical, clinical, biometric data, and medical images)
- Calculation of non-invasive markers (geometric, hemodynamic, and biomechanical) by combining Deep Learning and Computational Engineering methods
- Development of predictive models for the progression and rupture risk of AAAs based on an expanded set of parameters.







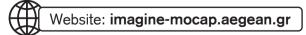


IMAGINE-MOCAP: Developing Personality in Digital Character Design using Motion Capture, Wearable and Live Coding Technologies, applied to IMAGINE (Interactive Media, Animation, Games, Interactive Networked Environments) Narrative Worlds

IMAGINE MOCAP The project aims to extend animation character workflow with emphasis shaping character's on personality through motion capture, wearable and live coding technologies. The team will investigate the state-of-the art research outcomes and market technologies to come up with new methodologies, tools



and pipelines for expressing and conveying digital character's personality through these four media: Interactive Media, Animation production, Games and Interactive Networked environments (IMAGINE). The question of how we can utilize techniques from motion capture, wearables and live coding to capture and express each aspect of personality, as well as what is personality and how nonverbal cues are translated to personality traits, is of key importance in this project. Real and non-real time interactive experiences related to animation will be developed for each of the four media and enrich the process of personality embodiment in character animation.



HFRI (ELIDEK) Project

## **Digital Technologies**





## Advanced cyber-threat intelligence, detection, and mitigation platform for a trusted Internet of things



CYBER-TRUST developed an innovative cyber-threat intelligence gathering, detection, and mitigation platform to tackle the grand challenges towards securing the ecosystem of IoT devices. The interdisciplinary approach of the project captured different phases of emerging large-scale attacks toward critical cyber-infrastructures, before and after known (even years

old) or unknown (zero-day) vulnerabilities have been widely exploited by cyber-criminals to launch the attack. Intelligence information were used to maintain accurate vulnerability profiles of IoT devices.

Novel technologies were developed, based on distributed ledgers and blockchains, to monitor devices' integrity state and network behaviour that considerably increased the detection and response capabilities against targeted and interdisciplinary cyber-attacks.

In the case of alleged malicious activity, tools for collecting and storing forensic evidence on a tamper-proof blockchain structure were delivered. Privacy-preserving network monitoring and advanced virtual reality-based visualisation techniques were employed for quickly detecting botnets, DDoS attacks and other incidents. Relying on interdisciplinary research, an intelligent autonomous cyber-defence framework was built for providing intelligent ways of isolating the devices under an attacker's control (or infected) and effectively responding to and mitigating large-scale attacks.









## Extended zero-trust and intelligent security for resilient and quantum-safe 6G networks and services

The project aims to establish a robust security framework for 6G ecosystems, underpinned by the zero-trust principle and emphasizing core tenets like resilience, privacy, and dependability. Dynamic access control via a contextaware risk-based policy engine, leveraging rich cyber-threat intelligence and behavioural insights gathered from the 6G infrastructure, is at the core of the proposed approach. Microsegmentation of vulnerable virtualized functions from critical O-RAN assets is a primary goal to prevent attackers' lateral movement capabilities and minimize damage. Proactive security



measures, will be deployed alongside sophisticated AI tools to optimize attack surface reduction and enhance intrusion detection capabilities. An intelligent extended detection and response solution will be developed, covering all layers of a 6G network; this entails the integration of collaborative intrusion detection networks and graph-based threat models, facilitating real-time and optimal responses to sophisticated multi-stage attacks targeting the 6G ecosystem. Automation will be pivotal in various aspects, including threat modelling, and response orchestration, aided by blockchain to secure integration and lifecycle management of 6G applications. Moreover, the project will prioritize supply chain security by implementing automated vulnerability scanning and introducing O-RAN application certification. Quantum-safe technologies (QKD and PQC) and AI-driven solutions will be employed to safeguard against physical layer attacks, ensuring uninterrupted and secure data transmission in 6G networks.

European Commission Smart Networks and Services Joint Undertaking

## **Cultural Heritage & Management**





## Genetic Research & Digital Visualization in the Performing Arts

The research project 'Genesis': Genetic Research & Digital Visualization in the Performing Arts aims to conduct primary research in the domain of the performing arts, and more specifically in the genetic analysis of performance and the digital visualization of the creative process. Genetic analysis has to do with the study of all the stages of the creative process, from initial conception up to completion on stage. It focuses on the gradual realization of dramatic and scenic composition, on the creators' elaboration of dramatic material, the identification and comprehension of the theoretical background of artistic thought and of artists' sources and references, the study of the process of rehearsal, the training of actors, the management of space, stage, costumes, lighting, production, etc. The genetic approach of stage creation is nowadays considered a necessary presupposition for the scientific analysis and interpretation of a performance.

The project is based on the rich and complex work of two internationally acclaimed stage directors, Romeo Castellucci and Dimitris Papaioannou.

ΣΥΝΕΑΡΙΟ
ΑΗΜΗΤΡΗΣ
ΑΗΜΗΤΡΗΣ
ΑΠΑΓΑΛΙΑΝΗΟΥ

HFRI (ELIDEK) Project





## Cultural administration Boosting with the Engagement of Sustainability for local communities

The project CUBES designed and developed a training offered programme on inclusive, interactive an and user-friendly digital platform, in order to create and disseminate know-how regarding the sustainable administration of tangible and intangible cultural resources. Open and accessible to all, CUBES aimed to:



- Empower local communities with knowledge and awareness on significant aspects of cultural administration and sustainable development.
- Provide target groups with necessary knowledge so that they can act as "Boosters", namely, as access point-role mentors in their local communities, taking up the responsibility of informing, guiding and mentoring other members of their respective communities in contemporary issues of sustainable cultural management.
- Give the chance particularly to the youth and the women of these local communities to take the lead and become 'Boosters' in their communities.
- Capitalise on the opportunities offered by ICT and digitise the quality of learning content as a driver for systematic change in cultural administration and sustainability, increasing the quality of training.
- Create and deliver innovative products and training digital tools -as learning resources tailored according to existing needs
   – based on differentiation methodologies and upto-date adult education approaches.

Website: **www.cubesproject.eu** 







### Thymele: An Open-access Dynamic Multimedia Dictionary of the Performing Arts



Thymele aims to create a basic infrastructure tool, an innovative multimedia dictionary, which will contribute towards the creation of a commonly accepted conceptual and interpretative framework for the Performing Arts, and the terms and concepts in common use in this field. It will offer specially designed digital applications which allow the precise linguistic and formal expression of these terms and notions, their semantic interconnection, the highlighting of potential relationships between them, the recording of the argumentation and the rationale behind their gradual formation, as well as the location of primary and secondary material which could serve as documentation. At the same time, Thymele will promote the diffusion of knowledge on the subject of the Performing Arts in wider audiences. The system will take the form of an open access internet platform, which will offer dynamic multimedia content with crowd-sourcing features concerning the addition of material and the use of hypermedia.

HFRI (ELIDEK) Project

## Study of Archaeological Material from Ayios Yeoryios sto Vouno, Kythera and Vapheio, Laconia

The project concerns study the of ceramic material and other small finds (figurines, stone objects, etc.) collected in the context of a two-year surface research (2016-2017), in a collaboration of the Ephorate of Antiquities of Laconia, the University of Melbourne (Professor L. Hitchcock), the University of the Peloponnese (Associate Professor A. Banou) and Brevard College (late Professor A. Chapin), in the



area between the vaulted tomb of Vapheio and the hill of Palaiopyrgi, Laconia.

The purpose of the project was to locate and collect data that complement the archaeological and historical picture of the area, will allow correlations with other important sites in the Eurotas valley during the Bronze Age and will potentially contribute to the discussion of important issues of Laconian prehistoric research, such as, among others, the transition from the Neolithic to the Early Bronze Age, the place of Laconia in the Early Helladic II koine, its importance in the transition from the Middle Helladic to the Late Helladic period, and the relationships among important Late Helladic sites in the Eurotas valley.

## **Cultural Heritage & Management**





ΕΠΙΣΤΗΜΟΝΙΚΗ ΤΕΚΜΗΡΙΩΣΗ ΑΡΧΕΙΟΥ ΦΕΣΤΙΒΑΛ ΑΘΗΝΩΝ & ΕΠΙΔΑΥΡΟΥ

### Scientific Documentation of the Athens and Epidaurus Festival

The project concerns analytical documentation of the archive of the Athens and Epidaurus Festival, one of the oldest festivals in Europe. The Athens and Epidaurus Festival is a leading public cultural organization, which in its 66 years of operation has hosted some of the biggest names of the Performing Arts from the Greek and international scene, in collaboration with the most important Greek and international artistic organizations, attracting crowds of spectators from all over the world. The documentation team records and processes rare documents and audiovisual materials, while at the same time compiling the complete ergography of the events organized by the Athens and Epidaurus Festival.



NSRF 2024-2020

Funding Framework Competitiveness, Entrepreneurship and Innovation

## **Cultural Heritage & Management**

### PYLOS GeoArchaeological Programme, GEAPP (2021-2025)

This research and development program is a partnership between the Laboratory of Archaeometry of the University of the Peloponnese and the Ministry of Culture.

The five-year (2021-2025) program is carried out by the Department of Antiquities of Messinia in collaboration with the Department of History, Archaeology and Cultural Resources Management, of the University of the Peloponnese and the Laboratory of Archaeometry.

The program concerns the study of human activity from prehistoric times in the area of Pylos and develops in the coastal area of Pylos Messenia, a landscape of great historical, archaeological and environmental importance, but also of great tourist development.

The purpose of the project is the

archaeological field survey in the area of Pylos, which includes walking and recording of surface cultural material, mapping of its concentrations, geophysical surveys, digital recording as well as systematic sample collection with the final aim of utilizing the resulting data for the identification of sites and the investigation of the human-natural environment relationship and the arrangement of settlements.

Private funding Ephorate of Antiquities of Messenia







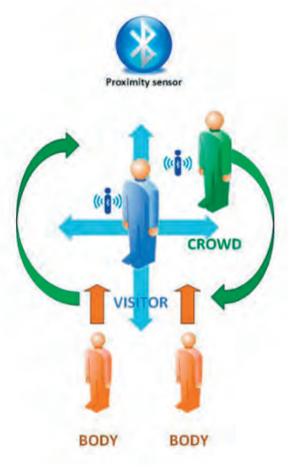


## Melt<br/> penLab

### Documentation and Ontology of Modern Cultural Heritage Exhibits

**MELTOpenLab** focuses on the digital documentation of modern cultural heritage exhibits and their presentation, conservation, and restoration methods. Moreover, the project develops an advanced information system, that captures visitor movement in near real-time, and analyses collected data. The system is designed cost effectively, forming a platform for building applications that provide personalized presentation and learning/entertainment experiences to visitors, and tools for evaluating visitor behaviour to museum administrators.

A tool is developed (VTT) for capturing visitor movement in near real-time. Then, a mobile application (MEC) that delivers personalized content to eponymous visitors based on static (e.g., demographic) and dynamic (e.g., visitor movement) data. Lastly, a platform is built (MEA), that assists administrators in museum managing visitor statistics and evaluating exhibits, collections, and routes based on visitors' behavior and interactions. Preliminary results from the pilot implementation of this holistic approach in the multi-space high-traffic museum (MNEP) indicate that a cost-efficient, fully functional solution is feasible.



#### NSRF 2024-2020 Funding Framework Competitiveness, Entrepreneurship and Innovation

## Health & Well-Being In Vulnerable Populations





### Autism, Theory of Mind and Bilingualism

Disordered social communication is a hallmark of Autism Spectrum Disorder (ASD), including difficulties in understanding others' knowledge or mental states (Theory of Mind, ToM). Language ability plays a crucial role in the development of ToM in autistic children, with certain syntactic structures, like complement sentences, shown to help compensate for ToM deficits. Executive Functions (EFs) also significantly contribute to ToM skills, and deficits in EF are commonly observed in ASD, influencing social communication challenges. However, previous studies have often analyzed syntax and EFs



separately, making it difficult to determine whether ToM deficits in autism stem from syntactic impairment or EF deficits. This complexity increases in bilingual autistic children, who, despite scoring lower than monolinguals in language assessments, tend to perform better on non-verbal EF tasks, including ToM. The proposed project aims to investigate the relationship between language, ToM, EFs, and bilingualism by studying 40 high-functioning autistic children (20 bilingual and 20 monolingual) aged 8-10, along with 40 neurotypical controls. The findings will inform interventions and challenge misconceptions about bilingualism worsening autism impairments.

## Website: www.autism-slt.gr

HFRI (ELIDEK) Project



## Health & Well-Being In Vulnerable Populations



## Mapping of barriers and facilitators for Addressing Problems in Communication, Swallowing, and Mobility in persons at-risk of poverty during early development and advanced age

The project aims to link the fundamental factor of poverty to three areas that are fundamental pillars of maintaining the quality of human life: Communication, Swallowing and Mobility.

Research studies have demonstrated that the speech of children from higher socio-economic stratification is enriched with 30 million more words than children of lower socio-economic level, influencing the course of their language development. At the opposite end of the age spectrum, poverty is reflected in the course of good general health, managing eating habits as well as coping with cognitive deficits or neurological impairment. Finally, Mobility, in the infancy and postnatal period, is a fundamental aspect of psychosocial development, while in the geriatric population it is treated as a key parameter of a further cluster of problems.



#### The ultimate aim of MapCoSMo is:

- Identifying indicators related to disorders in the acronym CoSMo and their association with the risk of poverty.
- Mapping of barriers as well as ways of resolving issues arising from the CoSMo acronym.
- Providing ways to address the problems, such as the presentation of multi-criteria decision-making methods using Fuzzy Cognitive Maps, in direct use from online or physical access stations, to enable immediate information and relevant decisions to be made by individuals and their families and the various professionals responsible for their care.



HFRI (ELIDEK) Project



# Network of Structures and Services for the Treatment of Addictions



In the context of the implementation of this Act with Beneficiary the Organization Against Drugs (OKANA), the University of Peloponnese and in particular the Department of Nursing of the School of Health Sciences, undertook the implementation of «Prevention Services' Program» - Action "Interconnection of Prevention & Psychosocial Health Centers with Primary Health Care structures". The Department ensured at the regional level the promotion and utilization of nursing methods and techniques to promote and ensure the quality of life, i.e. in holistic and human-centered care health (prevention, treatment, rehabilitation), bearing in mind that the work in question favors the coordinated effort of the individual services in the timely implementation of essential and targeted measures and in the provision of accessible and scientifically-based interventions, for vulnerable populations.

The initiative is to create an Interconnection/Referral Network through an Electronic Platform, especially for «hidden» populations in need of social and/or health care. The proposed structure of the online networking/referral platform has several key features:

- Clean, user-friendly interface that allows users to create referral experiences,
- Easy to integrate graphics into websites, social media pages and email campaigns
- Can create automated messages that make it easy for network members to share information and best practices

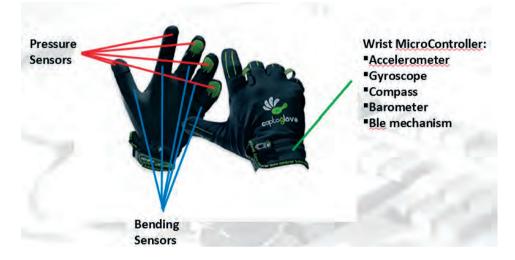
NSRF Funding Framework "PELOPONNISOS 2014 - 2020"



## Health & Well-Being In Vulnerable Populations



# Robotic system for functional limb rehabilitation in neurological patients



The objective of the project was the development of an integrated rehabilitation system to provide highly personalized upper limb treatment in patients with motor disorders due to brain injury (e.g. stroke) or neurodegenerative disease (e.g. multiple sclerosis) having as a central pillar the integration of robotic systems and support functions. The main component of the proposed system was the development and evaluation of an innovative robotic extra-skeletal device that was applied in the form of a glove to the afflicted hand of the neurological patient. The robotic system:

- measures various kinetic and kinematic parameters of the extreme hand with a view to assessing the condition and progress of the patient
- provides a specialized rehabilitation program (therapeutic exercises, re-training of working movements and support for day-to-day activities) through an interactive virtual environment provided by the Rehabotics platform.

The project provided a high-level provision of treatment and support services to patients with extreme limb disorders that occur both in the clinical environment and in the patient's home via telemedicine applications.

Website: **cnalab.uop.gr/projects** 

NSRF Funding Framework Competitiveness, Entrepreneurship & Innovation 2014-2020 (EPAnEK). Action: Research - Create - Innovate

### Health & Well-Being In Vulnerable Populations



### Policy proposal for the management of Antimicrobial Resistance (AMR) in the Greek health system

The project aimed at an estimation of savings for the health care system from prevention of stroke, through diagnosis and treatment of silent atrial fibrillation.

Atrial fibrillation (AF) is associated with an increased risk of ischemic stroke and may be difficult to diagnose because of its intermittent nature. The feasibility of screening for undiagnosed AF has been demonstrated in several populations. This study modeled the impact of screening on AF detection and incidence of stroke between 2020 and 2030 versus background diagnosis only, as well as estimate the cost per averted stroke in each screening



scenario. A discrete time, stochastic, individual-based model was developed to assess the efficacy of different screening strategies to diagnose AF among adults aged 65–74 in Greece. Two screening approaches were evaluated: a once-off screening with a 12-lead ECG (electrocardiograph) or a 48-hour Holter monitoring followed by a 12-lead ECG. The clinical event for all scenarios was ischemic stroke. Each scenario was assessed (a) in the total undiagnosed population and (b) in high-risk people only (CHA2DS2-VASc score  $\varsigma$  3 or 4). Both screening strategies led to better health outcomes (i.e., additional AF cases detected, and strokes avoided) compared to background diagnosis only, across all populations tested, at a manageable cost to the health care system.



## Health & Well-Being In Vulnerable Populations



### Designing Inclusive and Climate Resilient Urban Spaces

InclusiveSpaces realizes the inclusive design, monitoring and evaluation of urban space, engaging people with disabilities and older people to improve inclusiveness, social cohesion and climate change mitigation and adaptation.

# Five essential planning and design tools will be developed to enhance accessibility and comfort:

• a travel demand data collection and evaluation of accessibility tool



- a comfort-based accessibility mapping tool
- an accessibility routing tool tailored to visually impaired and mobility-impaired individuals
- a first-of-its-kind digitized tool for conducting accessibility audits in buildings and public spaces
- a Universal Design Manual for the Built Environment, including Mobility Hubs.

## In addition, InclusiveSpaces develops advanced assistive technologies for people with disabilities:

- a Mobility Kiosk of shared electric wheelchairs powered by solar panels and providing shared mobility options
- a device offering enhanced accessibility to beaches and waterfronts
- an Upright Tricycle providing inclusive personal mobility
- Indoor and Outdoor Assistive Technologies enhancing accessibility and mobility

Website: inclusivespaces-heproject.eu

#### Horizon Europe





#### Beyond lack of Understanding, Beyond disinformation

The objective of this Project is to study how functional skills (functional literacy) can influence adults' ability to evaluate the quality of information as well as to identify misinformation and disinformation online. In this context, innovative training modules will be designed and developed using educational tools and virtual spaces in Eduverse, with the aim of supporting low-skilled adults in identifying disinformation and fake news. The project is funded by the Erasmus+ action and partners from 4 countries (Italy, Greece, Croatia and Slovenia), experts in the fields of education, technology and creative arts, will be involved.





### **Innovative Education & Digital Skills**





#### Enhancing Education Programs in Arts and Humanities via EU STEM Methods and Technologies



The project involves universities from Europe and Asia working together in order to develop a Digital Humanities study programme for Cultural Heritage. This aim comes from the increasing demand for truly qualified professionals in Arts and Culture to deal with the Digital Age challenges.

#### The objectives pursued are:

- the development of an innovative didactic methodology based on the research methods of the humanities, digital humanities, STEM
- the training of teaching staff to acquire the proposed new methodology
- the development and launch of a new MSc programme with international exchange opportunities in PC HEIs
- the creation of a Digital Lab that brings together postgraduate students in international projects to preserve and promote cultural heritage.

Website: artest-project.eu





•••

### d-ICT: Improving VET distance learning through a Gamified Asynchronous eLearning Methodology

The project d-ICT aimed to improve Vocational and Educational Training (VET) educators' digital skills and competencies in distance-learning training by creating an innovative gamified eLearning experience. That resulted in building a more interesting and interactive environment that boosted the curiosity of VET learners and lessened any potential dropouts.



The Covid-19 pandemic brought to the forefront the need for distance learning due to the closure of VET centers. Distance learning was a unique opportunity for the consortium countries – Cyprus, Greece, Italy, Belgium, France, and Portugal – to make VET education more interactive as they struggled to communicate effectively with the learners through the lockdowns. Therefore, the target groups were VET educators and learners that benefited from this project's outcome.

#### The project offered the following resources:

- Lessons Learned: Explore the resolutions that were used during the Covid-19 era.
- D-ICT e-Toolkit: Introduce distance learning practices and digital tools to facilitate the e-Learning experience end prevent dropouts.
- Development of a Gamified asynchronous eLearning experience (Serious Game)







# Harnessing the potential of digital tools to strengthen youth participation in EU democratic life

The purpose of the #YouEU project was to reinvigorate the relationship of European Youth with the EU and promote active youth participation in the EU democratic life by harnessing the potential of digital tools and promoting e-participation.

#### The objectives of the project were to:

- Enhance the capacity of youth workers and CSOs professionals to support young people on using digital democracy tools so as to better understand and contribute to EU democracy processes.
- Raise awareness and educate youth on e-democracy
- Strengthen transnational cooperation among youth and foster an EU digital public sphere
- Foster understanding and a sense of a common European identity among youth.



Website: www.youeuproject.eu

#### Good Practices Resources across Europe listed on #YouEU Booklet









### Co-Producing Knowledge On Sustainable Growth through Service Learning Pedagogy between African and European HEIs

COPAFEU aims to strengthen the capacity of African HEIs to align the skills and knowledge of their graduates to ensure employability and entrepreneurial skills to meet the needs of the local and global labour market, while actively contributing to sustainable local development and its transformation.





Website: www.copafeu.eu

Erasmus+ UOP coordinator

### Key Inclusive Development Strategies for LifeLongLearning

The KIDS4ALLL project has been granted as Innovation Action in the frame of the Horizon2020 Work Program SC6 entitled 'Europe in a Changing world – inclusive, innovative and reflective societies' and with particular reference to integration challenges of migrant children in educational contexts. It aims to strengthen and valorise transcultural, interdisciplinary skill sets in a highly diversified learner population, that increasingly corroborates the actual necessity for lifelong learning.



Horizon 2020 UOP coordinator









### **Developing a Graduate Employability Skills App**

The aim of the project was to develop an app to allow students to plan, record and evidence the acquisition and development of graduate employability skills (GES) throughout their university journey. Qualitative and quantitative data were gathered from undergraduates and academics/career advisors of the four partner universities, and the graduate trainee program recruiters in Scotland, Poland, Greece and Norway. The GES app can provide an active, agentic approach to supporting students in thinking about GESs and self-development by using motivational, interactive exercises, achievable goal-based tasks, and inducing in users a sense of self-actualisation patterns that will help to raise awareness about GES issues. The App fits well with current thinking about employability and careers, putting the student at the centre of their development and career decisions. The app allows students, via interactive tasks, to track and evidence GESs they develop throughout their university career. A focus on students' own interests, strengths and weaknesses, will engage students and encourage them to think about their GESs and career development from their arrival at university. This awareness will increase student focus on such attributes, allow students to identify and fill gaps in their skill set, and provide a resource they can use when they leave university and enter the job market.





Online access to the app: **alanw95.itch.io/ges-app** 



## **Innovative Education & Digital Skills**





#### ENriching Teachers Skills in Digital Humanities CrowdsourcING

ENTICING project aimed to train and equip teachers with skills and tools to apply the innovative research methods of Digital Humanities in their teaching. It combined the advantages of crowdsourcing with the need to upgrade the digital readiness levels of secondary school teachers in the Humanities, empowering them with skills and tools that will improve the quality of their teaching and at the same time make them ready to respond quickly to crisis conditions. To this end, the project developed an innovative, tailor-made and co-designed training program for teachers in the digital crowdsourcing of the humanities; supporting them in improving the quality of their teaching work.



UoP in collaboration with other partners, Institute of Educational

Policy (Greece), Family and Childcare Center-branch of Skopje (North Macedonia), Centre for Advancement and Development in Education Technology LTD – CARDET (Cyprus), Spectrum Research Centre CLG (Ireland), Reframe (Belgium), developed the Curriculum, the educational material (articulated among case studies, Masterclasses, multimedia ressources and laboratory activities), the Policy paper and dissemination actions.



Website: www.enticing-project.eu

Erasmus+ KA2 UOP coordinator





### Citizenship Engagement Through Economic Literacy Gamification in Adolescents

CETERIS PARIBUS aimed to enhance the understanding of economic theory and the impact of economics on citizens' and especially young people's perception of the world around them and their place in it as active citizens. Through the development of an interactive educational material, a handbook for youth workers on how to approach financial education, as well as a modern educational e-game, the project engaged young people and youth workers from across Europe in an exploration of important financial terms and theories, in order to strengthen their participation in all democratic processes.











### Introduction of sustainable thinking and green skills development through VET- business cooperation

Green Collider project's main aim was to explore and contribute to the readiness of European VET providers and SMEs to introduce changes and measures set in the European Green Deal.

## The main objectives of the project were:



- to raise awareness on the importance of introducing the changes brought by the European Green Deal in both VET and business sector
- to raise readiness for change level in VET and business sector (with special focus on SMEs)
- to contribute to bridging the gap between labour market needs and vocational education and training programmes in the field of sustainable thinking and circular economy, by establishing and further strengthening the cooperation between VET providers and business sector
- to facilitate transnational knowledge and know-how exchange and knowledge cocreation
- by developing innovative tools and practices for the training of VET professionals and in-company mentors, to implement sustainable thinking and to consequently prepare VET students for future needs of the labour market, i.e. provide them skills needed to be competitively advantaged after completing their VET programmes
- to develop sustainable and transferable tools for implementing sustainable thinking and developing green skills in both formal and in-formal VET.







# Embedding EU Green Deal and Just Transition in Teaching and Learning

The central idea of the project was to implement and promote the framework of the EU Green Deal and Just Transition Mechanism as recent core EU policies which will shape its future the next decades, while the vision is a comprehensive teaching and learning material accompanied with a novel e-Intensive Learning Programme linked with 5 ECTS.

To underline the importance of successfully implementing the EU



Just Transition projects, the failure means a high carbon economy with an environmental disaster with consequences for many generations. When at the same time, as the Just Transitions have a socioeconomic impact for the participating countries and regions for the period 2021-2027 the participating countries for investments against climate change and low-carbon economy will receive in millions of euros.

Higher education institutions need to forge "learning unions" and partnerships between them to integrate skills and approaches for mutual knowledge sharing in the field of EU Green Deal and Just Transition. The participating organizations need to develop teaching and learning material along with intensive learning programmes to respond to modern challenges offering an up-to date platform of knowledge.





## **Innovative Education & Digital Skills**





### **Civic Debate Club**

## Awareness of youth about their political representatives

Let me tell you a bit about why we need to increase our knowledge about our political representatives!

Civic Debate Club is a program that aims to raise awareness among young people about their active participation in society and to enhance their participation in political and social activities through the process of debates. The project is based on the development of an educational material which will incorporate practices from debate clubs and which will be adapted and made available to organizations active in the youth sector. The training material will significantly support youth workers in their efforts to encourage youth civic participation through their participation in debate clubs, while also acting as a key tool in their efforts to teach young people the practices, norms and the tips of political dialogue. At the same time, it will improve the skills of the youth workers themselves and make their work much easier.









### **#IMMUNE to opinion manipulation**

The innovation in communication technologies and media lead to an exponential spreading of information, a process to which we are all exposed, and sometimes overwhelmed by.

#IMMUNE is a project funded by the ERASMUS+ Programme aimed at fostering the promotion of critical thinking skills among youngsters, helping them tackling the issue of fake news and political manipulation of information.

This project aims to reach educators interested in delving deeper into the matter, becoming the perfect multipliers for our contents, ready to implement them with the groups they work with.

#### The project's main topics at glance

- How to help youngsters understand the different ways in which manipulation can be implemented: from a more general political standpoint to daily interactions with media.
- Different strategies and methods to tackle fake news and manipulated information.
- Information and data covering the phenomena at hand, both related to the spreading methods, the structure of fake news and political propaganda, and on the ways one can develop and strengthen their own skillset and awareness on the topics.







P\$¥¥FR

## Powering up former energy sector workers to re-enter the job market

The PowerUp project addressed two general priorities namely, environment and the fight against climate change, and innovative practices in a digital era; and two sectoral, namely increasing the flexibility of opportunities in vocational education and training and contributing to innovation in vocational education and training and aimed at limiting job losses as a consequence of the green transition in Europe. The project developed strategic partnerships



between universities and educational centers as well.

The cooperation between partners from the consortium countries led to development of qualification and appropriate training methods and how to use them to enable social dialogue and the development of European community of people from former active energy related jobs, so to exchange ideas, practices, skills and experiences, that will help them adapt in the new job market reality.

The pilot implementation of the project was profoundly designed based on good practices and advancements from France and was carried out in three countries, namely Greece, Cyprus and Bulgaria. However, the results of the project could be used to enrich policies in all EU regions and countries that will face similar risks.

### Website: www.powerup-project.eu







# Aquacultural Global AI Platform for Europe's Skills Passport

AGAPE represents a collaborative platform, AI-based, able to bring to the EU aquaculture market, education approach, consumers and research ecosystems, for the first time, an innovative model of interaction among stakeholders and broaden community on skills, capabilities and competencies, globally and in real time. AGAPE's main scope focuses on promoting the transition from the ordinary aquaculture market to a circular economy approach in the aquaculture field on re-skilling processes and awareness of cross-knowledge while answering to an effective market demand of competences. AGAPE also helps companies to understand the capabilities of their workforce, compare those against industry benchmarks, identify emerging and future skills, and address gaps with "build, borrow, buy or bot" strategies; ensuring an agile and evolving workforce plan that adapts to the ever-changing business needs.

AGAPE contributes to achieve the objectives indicated in the Strategic Guidelines for the Sustainable Development of EU Aquaculture for the expansion of the aquaculture sector across the EU, together with the improvement of the perception and acceptance of aquaculture development, relies also on the need to implement formal engagement toward more effective communication systems among stakeholders. Besides, AGAPE implement the EU Pact for Skills, '21 more than 54% of all workers need re/up-skilling by '24. Lastly, it pursuits the goal of quickly adjust the changing requirements of workforce over the pandemic scenario across the globe.

EIT Food European Institute of Innovation & Technology



## **F©RESIGHT**

### Advanced cyber-security simulation platform for preparedness training in aviation, naval and power-grid environments

The FORESIGHT project developed a federated cyberrange solution to enhance the preparedness of cyber-security professionals at all levels and advance their skills towards detectina. preventing, reacting mitigating sophisticated and cyber-attacks. This was achieved by delivering an ecosystem of networked realistic training and



simulation platforms that collaboratively bring unique cyber-security aspects from the aviation, smart grid and naval domains. The proposed platform extended the capabilities of existing cyber-ranges and allowed the creation of complex cross-domain/hybrid scenarios built jointly with the IoT domain. Emphasis was given on the design and implementation of realistic and dynamic scenarios that are based on identified and forecasted trends of cyber-attacks and vulnerabilities extracted from cyber-threat intelligence gathered from the dark web. Innovative training curricula, guiding cyber-security professionals to implement and combine security measures using new technologies and established learning methodologies, was created and employed for training needs; they were linked to professional certification programs and were supported by learning platforms. Aside from the development of skills, the project aimed at a holistic approach to cyber-threat management with the ultimate goal of cultivating a strong security culture.



#### Website: www.foresight-h2020.eu



### **Innovative Education & Digital Skills**





# Seminar for intercultural trainers on Citizenship Education

SemiFit is a series of fora for experienced trainers in Human Rights Education and Education for Democratic Citizenship. It created a space for experienced trainers from different fields to exchange competences (VASK: Values, Attitudes, Skills, Knowledge) and experience on the different domains of intercultural trainings.

• Space: Designing a space of co-creation and active participation



- Resources: Co-Creation of tangible resources because of seminars' activities
- Follow-up: Participants will implement what they have gained (methodology, tools and connections) in their local reality.

The project is prototyping an approach where the involved people might engage in three roles and are connected in a specific process and spatial/methodological arrangement:

**Learning Designer:** An educator or trainer who has an interest in sharing knowledge or having questions answered on the topic, with some experience in creating or adapting some tool or method.

**Panelist:** Researcher acting as speaker specialized in one of the topics included in the SemiFit space.

**Documentalist:** Storyteller able to narrate the story of the session and the SemiFit event and support evaluation.









# Hi-TEACH: a new training teaching framework for the post-covid era

Hi-TEACH project established a strategic partnership between HEIs and training centers devoted to methodological and technological innovation, focusing on the development of digital competences among a group of teachers from 10 HEIs in 5 different EU countries, fostering their evolution into the Hi-TEACHER. This new figure presided over the Hi-TEACH equipment and tools, while



implementing inclusive, web- based teaching methodologies aiming to experiment in the domain of audiovisual and gaming to push flexibility, simplicity, accessibility, interactivity and personalization as key indicators of Open Learning.

- The project involved 50 teachers from partner institutions in a transnational mobility in order to share methodologies of:
- INSTRUCTIONAL DESIGN for the develop of complex didactic architectures and interactive, transmedia learning spaces;
- GAME-BASED LEARNING to embed and functionalize game-based dynamics in evaluation processes, fostering their development towards selectiveness and detailattentiveness.
- MOVIE EDUCATION to allow students to learn by acting, in order to valorize positive results and reinforce the cause-effect approach to prevent errors.
- To maintain over time a digital and innovation process for HE didactic models by systemizing a methodologic handbook to guide the integrated digital education process of the Hi-TEACHER.







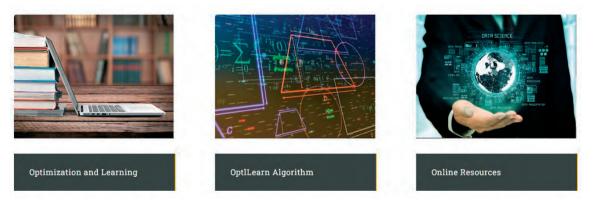


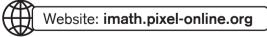
### **An Intelligent System to Learn Mathematics**

iMath Project is an innovative initiative designed to enhance the learning experience of higher education students in mathematics. Traditional math portals often rely on static resources and randomly selected assessments, which may not align with individual students' needs. iMath revolutionizes this approach by offering an AI-driven platform that personalizes learning paths based on students' performance, providing tailored resources, hands-on activities, and self-evaluation tests.

The project's core objective is to make mathematics more accessible and engaging, addressing the common perception that math is overly challenging. By fostering a supportive learning environment, iMath aims to reduce student dropout rates caused by difficulties in math-related subjects.

Key outcomes include a comprehensive literature review on optimization and learning methods, a dynamic online platform that adapts content to students' needs, and interactive applets to simplify complex concepts. iMath primarily serves university-level math students and lecturers, providing tools to improve understanding and teaching effectiveness.











#### Traditional children's stories for a common future

TRACE project focused on raising awareness of the importance of Europe's cultural heritage through education and life-long learning, supporting skills development, social inclusion and critical thinking. The main aim was to promote and get to know European cultural heritage through traditional children stories from partners' countries. The main objective of the project was to develop digital learning materials and tools through new and innovative educational methods as well as actions that promote and support the effective use of information and communication technologies (ICT) in education and training.

The project educated teachers and librarians to use new skills and new methodologies in working with children. Through TRACE project librarians got information and tools to work with and teachers got support in adopting collaborative and innovative practices.

During the project partners developed the thematic TRACE portal where digital stories and other materials for teachers, pupils, librarians and other project participants is available in open access. A parallel display of a story in two languages has enabled pupils, as well as dyslexic and visually impaired pupils, to learn foreign languages in an innovative way by comparing words from languages of partner countries. Partners have ensured storing digital objects as well as permanent access and sustainability during and after the project is completed.







### OASIS: Open science technologies Acceleration for a new generation of Student entrepreneurship, Innovation and Sustainable development

OASIS is a comprehensive collaborative initiative higher education uniting institutions (HEIs), research centers. enterprises, and а pan-European network of organizations to advance the adoption and application of open science (OS) principles and technologies. The project aimed to drive the EU's



digital transformation and sustainable development by integrating OS into education and innovation systems. Through practical applications, training, and mentoring, OASIS seeks to tackle real-world educational and labor challenges, promoting openness in intellectual property management and empowering stakeholders with essential skills.

The project focuses on key objectives: developing and enhancing technology transfer processes, strengthening entrepreneurial education with OS technologies, and fostering partnerships for OS knowledge and technology transfer. By empowering the next generation of innovators, OASIS built a sustainable framework for entrepreneurial education and technology transfer, underpinned by a commitment to long-term innovation vision action plan (IVAP) implementation. A special emphasis was placed on inclusivity through initiatives like the Girls Learning Open Science program, which encourages greater participation of women in science and innovation.



Website: **www.hei-oasis.eu** 

European Institute of Innovation & Technology (EIT) Higher Education Initiative (HEI)



### A game-based approach to exploring 21st century European Identity and Values

The RU EU? Project was conceived against a background of ongoing change and division across Europe. Issues relating to National and European identity are highly topical and of fundamental importance to our sense of who we are in the world. A better understanding of these issues is urgently required, given the power of perceived differences between groups to lead to conflict. Another influence on the project was the increasing interest



in "the use of ICT as a driver for systemic change to increase the quality and relevance of education". Consequently, an innovative digital game was developed, the RU EU? game, to provide an engaging environment for students to explore and better understand the complex issues surrounding National and European identity. The project also developed support materials for educators to help them use the game most effectively for their students. The intended audience for the RU EU? game is social science and business students across Europe who need to know something about European identity as part of their degree course. The game is also of particular interest to Erasmus students and other international students at university in Europe, as well as staff who teach on programmes and modules where European identity is relevant or who support international students in their studies.







### Cross-country comparative comprehensive investigation of publicperceptions of trust and trustworthiness (2023-2025)

There is widespread concern among many scholars, media commentators, and policymakers that public trust in political leaders and democratic institutions has eroded over time, within Europe and elsewhere, due to public disaffection with how leaders and institutions perform, generating political instability and polarization, constituting a deep-seated legitimacy crisis for representative democracies.



A considerable scientific debate remains about these common claims, including whether systematic evidence from public opinion trends supports a systematic decline in political trust across European societies and whether claims of a widespread legitimacy crisis are valid or exaggerated.

To address these important issues, TRUEDEM conducts a systematic examination of the patterns, mechanisms, and determinants of political trust in Europe, focusing on the trustworthiness of political actors and institutions as the key driver for trust attitudes. The project's primary objectives are to develop a rigorously reevaluated theory of political trust and to formulate a comprehensive policy toolkit comprising short- and long-term interventions. These goals are designed to bolster both understanding the informed trust judgements of the public and strengthening the overall trustworthiness of political institutions.

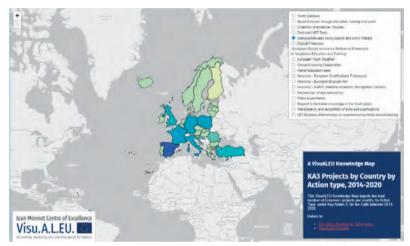






#### Jean Monnet Centre of Excellence "Visualing, Analysing and Learning about EU Studies"

The Jean Monnet Centre of Excellence "Visualizing, Analyzing and Learning about EU Studies (Visu.A.L.EU)" serves as a springboard for knowledge about European developments through the lens of European Studies. This knowledge is freely available to everyone via the internet, using user-



friendly, interactive, and modern technologies. The Centre operates in three main areas:

- Visualization, which literally refers to the mapping of European developments, particularly in European Studies. Anyone interested is able to locate and retrieve relevant information through interactive maps.
- Analysis, which refers to documenting the interaction between actors in European Studies and the study of European Public Policies. Anyone interested is able to locate and retrieve information through graphical representations of interactions, such as thematically, between individuals, organizations, etc.
- Learning, which involves educational activities focused on European public policies. The flagship educational initiative is the annual International Summer School, where alongside academic speakers, former members of the European Parliament from various countries are also expected to participate.

Website: www.visualeu.org

Erasmus+ Jean Monnet activities UOP coordinator





## Empowering the Geopolitical EU in the Eastern neighbourhood and the Western Balkans

The GEO-POWER-EU project coordinated by the University of Peloponnese and a Consortium of 14 partners was launched in June 2024 and aims to contribute to strengthening the EU to manage security threats arising from the deteriorating geopolitical environment in the EU's Eastern Neighborhood and Western Balkans. The project's



main ambition is to articulate a proposal for a comprehensive EU strategy towards these regions taking into consideration foresight concerning the strategic ambitions of other geopolitical actors.

#### **GEO-POWER-EU** will:

- propose ideas for the adaptation of the EU Enlargement policy and the reform Eastern Partnership policy
- assess the influence of other geopolitical actors and provide strategic foresight about the prospects of geopolitical competition in the two regions
- explore the development of the EU's ability to contain military threats
- propose a comprehensive and multidimensional EU strategy that will guide relations with the countries in Western Balkans and the Eastern neighborhood.



Website: www.geo-power.eu

H2020 Research & Innovation Programme UOP coordinator



### DEAR - Democracy at Risk: EU Politics in the 21st Century

The Module's background stems from the need to equip European citizens with knowledge of what democracy is, as addressed by EU studies; to generate knowledge and skills which they can apply in their professional careers and competences; to raise awareness of common European Union values through the participation of all beneficiaries in the construction of a European observatory for democracy. All the foregoing aims are pursued in order to foster discourse between all academic, social or political participants and nonspecialised social actors. The rationale of the Module focuses on promoting democratic engagement in the EU public sphere and participation in EU political and social life. Its aim is to provide enhanced visibility about what the EU stands for in terms of democracy and what it intends to achieve in a globalised world.



Website: www.project-democracy-at-risk.eu



Erasmus+ Jean Monnet





### BIM-based holistic tools for Energy-driven Renovation of existing Residences

BIMERR designed and developed a Renovation 4.0 toolkit, with tools to support renovation stakeholders throughout the renovation process of existing buildings, from project conception to delivery. It comprises tools for:

- the automated creation of enhanced building information models
- a renovation decision support system to aid the designer in exploring available renovation options through the accurate estimation of renovation impact on building performance



• a process management tool that optimized the design and on-site construction process toward optimal coordination and minimization of renovation time and cost.

The BIMERR toolkit was validated and demonstrated in 4 buildings in 3 European Member States. Two buildings were used for pre-validation and implementation refinement, while the refined BIMERR toolkit supported the actual renovation design and works in residential buildings Poland and Spain.



Website: www.bimerr.eu



### Intelligent Infrastructure & Sustainable Development





# Advanced big data management with applications to mobility, micro-climate and agriculture

The SodaSense project concerns the management of big data that are sourced from sensors and are related to micro-mobility, the micro-climate and agriculture, and aims at the formulation of an intelligent platform of research, social and business interest. The platform services target the collection, storage, analysis, visualization and mining of data, aiming to improve the quality of life in cities (through the (re)design of the city and micro-mobility), and the support of its fundamental financial activities (e.g. tourism and agriculture), especially in the context of SMEs, which account for the largest portion of the financial backbone of the Peloponnese Region.



The SodaSense project, through the designed services in the areas of micro-mobility, micro-climate, agriculture and tourism offers to its users information, tools and services regarding (a) the use of new technologies in micro-mobility, micro-climate and agriculture, (b) data collection and (c) the exploitation of data for the improvement of life quality in cities, leveraging of tourism, supporting agricultural production and enhanced support for decision making in the Region of the Peloponnese.

The SodaSense project offers additional capabilities and services to the academic community, researchers, professional associations and chambers, private and public organizations, entities exploiting infrastructures, independent authorities as well as public bodies and governments, towards the support of state-of-the-art research, investment plans and policies.



NSRF Funding Framework "PELOPONNISOS 2021 - 2027"





### Intelligent Research Infrastructure for Shipping, Supply chain, Transport and Logistics

The ENIRISST+ project represents the expansion of the only national research infrastructure in the fields of shipping, supply chain, and transportation in Greece, building on the ENIRISST initiative that was implemented by 18 partners (11 universities and national research centers). The horizontal expansion of the national ENIRISST infrastructure develops a multifaceted intelligent platform with both research and



business orientation. The platform's services combine data analysis, visualization techniques, and data mining to support key economic activities, particularly for small and medium-sized enterprises (SMEs), which constitute the majority of the economic backbone of less-favored regions.

Through the new services developed in the fields of transportation, supply chain, ports, shipping, and tourism, ENIRISST+ provided its users with information, tools, and services related to: a) port service evaluation, b) the use of new technologies in logistics, freight and passenger transport, c) the interconnection and interoperability of transport hubs and major cultural and tourism infrastructure, and d) a digital repository of maritime documents.

ENIRISST+ integrated both thematically and geographically the existing research infrastructure, participating in the creation of new networks and the strengthening of existing ones at local, regional, and national levels, ensuring the flow of knowledge and information aimed at attracting highly skilled human capital and fostering entrepreneurship in the participating regions.





## Intelligent Infrastructure & Sustainable Development





### MetaCities Excellence Hub in South-Eastern Europe

Three place-based innovation ecosystems in Cyprus, Greece and Bulgaria partner together to create an Excellence Hub for Future Cities and Regions in Southeast Europe (SEE). The METACITIES Excellence Hub is a sustainable network that offers a common platform for collaboration, cross-fertilization, and best practices sharing across borders, sectors and disciplines on knowledge production, circulation and use. Founded upon a joint R&I strategy, a nexus of collaborative links across sectors, joint research, innovation and outreach activities as well as business modelling and sustainability plans, the collaboration aims to benefit citizens, stakeholders, regional ecosystems and the whole SEE region. The thematic focus on future and metaverse cities necessitates the definition of ambitious R&I agendas and the uptake of advanced digital technologies. Digital Twins (DT) of future cities/regions provide accurate and reliable reference representation seamlessly unifying the physical, digital and human worlds and enabling stakeholders to assess the effects of any changes before investments and implementations actually occur. The proposed Open Digital Twin Framework facilitates co-development of complementary future city domains along with their equivalent DTs. The applied Quadruple Helix Model forges synergies among actors and alignment of public and private sector priorities for regional development. PoC studies, small-scale pilots and feasibility assessments validate project outcomes. Green Business and Operation Models will be developed for future and metaverse cities, as well as for the METACITIES Excellence Hub.



Website: www.metacities-hub.com



Horizon Widera (Excellence Hubs)



## Intelligent Infrastructure & Sustainable Development



### PANDORA - EM Radiation Monitoring Observatory in the Peloponnese Region for Mobile Telephony Networks up to 5G with priority to the protection of citizens

The objective of the «PANDORA» Observatory is the effective recording and analysis of electromagnetic exposure (EME) from wireless networks, with emphasis on 5G, while remaining an independent entity serving the local community and citizens of the Region of the Peloponnese.



The measurement equipment and methodology developed by

the project innovatively and effectively combine measurements of both wireless network operations and electromagnetic (EM) radiation emissions.

As part of the project, the following were carried out:

- System measurements for the three mobile network operators over routes spanning many kilometers, both within cities (1000 km) and on national highways inside (3500 km) and outside (1300 km) the Peloponnese Region.
- EM radiation measurements in 7 cities (Argos, Kalamata, Corinth, Megalopolis, Nafplio, Sparta, Tripoli).
- 24-hour EM radiation measurements at two points of interest in Kalamata.

The «PANDORA» measurements in the Region showed that, by the end of 2023, 5G was in an early stage of development (~27% availability), while the levels of electromagnetic radiation were, in all cases, several times below the Greek safety limits. The goal is to continue the operation of the observatory with the aim of ensuring the safety of the region's citizens.

Website: wmclab.uop.gr/pandora

NSRF Funding Framework "PELOPONNISOS 2021 - 2027"



### Performance evaluation of V2X communications

The transformation of existing transportation systems into intelligent incorporating Vehicle-toones, (V2X) technologies, Everything constitutes an innovative service that is anticipated to significantly improve the people's quality of living. The utilization of autonomous driving systems targets on providing a plethora of benefits to the users (driving safety and convenience) since this kind of systems incorporates technologies that are able to detect and avoid possible collisions and to find the most suitable route for the passengers to reach their destinations guickly and conveniently. The usage



of autonomous driving systems is anticipated to have a noteworthy social impact, since they will provide the capability of transferring to mobility impaired users while eco-friendly techniques are applied to reduce the negative environmental footprint.

For assuring the uninterrupted operation of the autonomous driving systems, it is important to guarantee high communication range, seamless connectivity, high data rates and low latency. This project targeted on evaluating the performance of the autonomous driving systems supported by the 5th generation (5G) of mobile networks and also to consider the requirements and specifications of the 6th generation (6G) of networks. A study was conducted to designate the factors that may lead to degradation of the system's service provisioning capability and strategies were proposed aiming to improve the service quality provided. Another target was the improvement of the methods utilized for performance estimation of the telecommunication systems to apply them for assessing the performance of autonomous driving systems that enable V2X communication.



# Study of the media value and the financial impact of the race of the Organizing Committee of cycling events



The main purpose of this study was to capture the promotional value of the WRCEKO Rally Acropolis 2021 but also to investigate the economic and touristic impact of this great international sports event, both at the level of local economies and at the level of the national economy.

In order to achieve the main purpose, the analysis is developed and separated gradually within the study into the following research dimensions:

- Assessing the value of the promotion of the event (television broadcast, through social media and other news coverage by the Greek and international mass media).
- The economic and touristic impact of the organization on the local economies (cost of hospitality, daily expenditure, spending on hosting packages and on official event products, travel expenses).
- The economic footprint of the organization at national level.

A primary opinion survey was designed and carried out in the Regions where the EKORally Acropolis was conducted (Region of Attica, Region of Peloponnese, Region of Central Greece).

There was also inestigation on whether the economic activity associated with holding such major sporting events leads to greater revenue and tax collection for the host country.

Private funding Motosport Greece



## Study of the media value and the financial impact of the race of the Organizing Committee of cycling events



This study captured the promotion value and the wider economic, touristic and social impact of the International Tour of Hellas 2022, at a local and national level. Initially, the value of the television and online coverage of the event was recorded, analyzing the exposure from the Greek and international media, including social media.

The research looked at the economic and tourism impact on local communities, recording costs such as hospitality, daily consumption, purchases of official products and travel of fans and event officials.

Primary research in Regions that hosted the match focused on critical factors, investigating whether such international sporting events increase economic and tourism activity, boost local businesses and accommodation, and impact employment through direct and indirect investment. It was also examined whether these investments act as multipliers for the economy and whether they contribute to increased revenues and tax benefits for the host country.

The analysis identified the positive effects of the event, highlighting its contribution to tourism development, the stimulation of local businesses and the promotion of a targeted development policy.

**Private funding** 





## IDEAL-Migration: Informant Diasporas in EurAfrica for Legal Migration



The Project IDEAL-M, funded under the Asylum, Migration and Integration Fund (AMIF), aims to raise awareness about the dangers of illegal migration and misinformation about the journey to Europe as well as the actual conditions when reaching the hosting countries. The IDEAL-M is focusing on Senegal as a country of origin with the principal aim to inform Senegalese people about the benefits of legal migration through mobilizing the diaspora communities already settled in Europe and developing a communication campaign in Senegal.

AMIF Asylum, Migration and Integration Fund

# International Development & Human Rights





## **Social Impact Manager**

The aim of the SIM project is to gradually change the attitudes and perceptions of society towards the concept of social value, creating conditions in which the invocation of social value and social impact will increasingly become a prerequisite for the implementation of actions, initiatives and investments. The term social impact is used interchangeably with the term social outcome or social benefit. In this context, the SIM project seeks to establish the role of the Social Impact Manager as a new profession that will identify the values created by the allocation of funds, while creating a more effective system of social control.

The project is implemented by a consortium of 14 partners from 7 different countries (Greece, Italy, France, Austria, Austria, Croatia, Belgium, Ireland) with the University of the Peloponnese as coordinating partner.





Erasmus+

**UOP coordinator** 





## The European Union and Africa in a Multi-Crises World



The AfriquEurope project is the largest - in terms of number of partners - intercontinental research network between European and African universities to conduct research and knowledge exchange in the field of social sciences, with the aim of producing policy proposals for both the European Union and the African Union.

The project focuses on issues related to understanding the full range of EU-Africa relations and seeks to promote regional and continental integration in Africa.

AfriquEurope's objective is to support the EU's efforts to redefine its partnership with Africa while strengthening cooperation between the two continents.

The project involves partners from universities and research centres in 33 French-, Englishand Lusophone African countries with the University of the Peloponnese as coordinating partner.



Erasmus+ Jean Monnet activities UOP coordinator





## Development of innovation and knowledge-intensive entrepreneurship Hubs in the Peloponnese region

The project's scope is to create a dynamic ecosystem of innovation and entrepreneurship in the Peloponnese Region that will leverage the knowledge and research outcomes of the University of the Peloponnese strengthen the local to economy. By bridging the gap between the academic community and the market, UniStart Hubs aspires to collaboration. promote outwardnetworking, and



looking growth, empowering local businesses and supporting the creation of innovative startups.

The goal is to establish the Peloponnese Region as a center of excellence and innovation, competing nationally and internationally. There are five Hubs across Tripolis, Kalamata, Corinth, Sparta, and Nafplion.

#### Project services provided:

**Level 1:** Activating Teams for Business Plan Development: services that foster innovative ideas, which can later be developed into businesses.

Level 2: Business Support Actions aimed at supporting and developing business entities.

**Level 3:** Advanced business development actions: Services to more mature teams through advanced actions aimed at further developing their entities and connecting them with the broader ecosystem.

Website: **www.unistarthubs.gr** 

NSRF Funding Framework "PELOPONNISOS 2021 - 2027"







## **Innovation Transfer Ready SMEs**

The InTraRed project aimed to promote innovation in the management of small and medium-sized enterprises (SMEs) with particular emphasis on creating learning synergies between the labour market and the vocational training sector. The project partners under the coordination of the Department of Philology of the University of the Peloponnese, collaborated to cultivate meaningful educational partnerships to reduce disruption in innovation management.

#### More specifically, the project developed:

- a course (masterclasses) on innovation management for small and medium-sized enterprises (SMEs), considering the time and human resources allocated to SMEs.
- a training programme for VET providers to support them in disseminating new training materials to SMEs through the innovation management process.
- an «observatory» of best practices for understanding the concepts of innovation and «breakthrough/disruptive presence»
- a dynamic interactive e-learning platform
- the Policy Paper on innovation.

UoP was in charge of the scientific coordination of the project, the development of the digital educational material for adult education, the creation of a Policy Paper and several dissemination actions.





Erasmus+ KA2 UOP coordinator

## Entrepreneurship



## Business Support Mechanism Region of Western Greece



The project focused on establishing and operating the Business Support Mechanism (BSM) for the Region of Western Greece. The Business Support Mechanism (BSM) functions as a local strategic information structure to support, guide, and inform businesses, serving as a central hub for fostering entrepreneurship, enhancing regional outreach, and promoting economic development.

#### The core functions of the BSM in Western Greece include:

- Comprehensive Support for both established and newly-founded businesses within the region, as well as for enterprises and potential investors considering operations in Western Greece.
- Strategic Support to the Region in monitoring the implementation of its business development and innovation strategies. As part of this, a series of studies will be conducted to track developments, conditions, and trends in Western Greece, offering reliable data for strategic planning.
- Personalized Advisory Services to regional businesses, aimed at boosting competitiveness and fostering local economic growth.

Successful implementation required several supportive actions, including acquiring necessary equipment, developing a regional business database, creating an online portal for public and business communication, and organizing promotional and public awareness activities. Upon completion, the project was transferred to the Region of Western Greece.



Website: www.pde-mse.gr/en

Under the auspices of the Region of Western Greece

## Messinian Chamber of Commerce & Industry -Department of Accounting and Finance

The specific project is the subject of the collaboration within the framework of the signed memorandum between the Laboratory of Finance, Data Analysis and Accounting Studies of the Department of Accounting and Finance of the School of Management of the University of Peloponnese and the Chamber of Messinia. The process of updating the business register of the Messinia Chamber was implemented through an appropriate questionnaire which was drawn up by the scientific team of the project consisting of faculty members of the Department of Accounting and Finance and the assistance of the executives of the Messinia Chamber.

The task of collecting and completing the questionnaires was carried out with the method of door-to-door visits to businesses and conducting interviews. The collection process took place between May and June 2023 in the wider area of the commercial zone of Kalamata, More than 100 businesses operating in the wider commercial center of the City of Kalamata participated in the survey.



## Municipal Water Supply & Sewerage Company of Tripolis (DEYAT) - Department of Management Science & Technology

The Laboratory of Strategic Management, Quality Management and Human-Centric Technologies of the Department of Management Science and Technology of the University of Peloponnese, collaborated with DEYAT and conducted a survey among its staff in order to examine the extent to which the factors constituting the Common Assessment Framework and the European Management Model (EFQM Excellence Model) are applied in the Municipal Water Supply and Sewerage Company of Tripolis (DEYAT). The survey studied the operation of DEYAT in relation to the requirements of the Common Assessment Framework, identified the strengths and areas for improvement and proposed Improvement Plans with the ultimate goal of increasing the effectiveness, efficiency and quality of DEYAT.

The results of the research and the detailed Improvement Plans were presented with specific implementation guidelines for the areas such as: (a) Leadership issues, (b) design, implementation and evaluation of the strategic plan of DEYAT, (c) empowerment of human resources, (d) resource management and partnerships, (e) process management, and (f) results measurement.

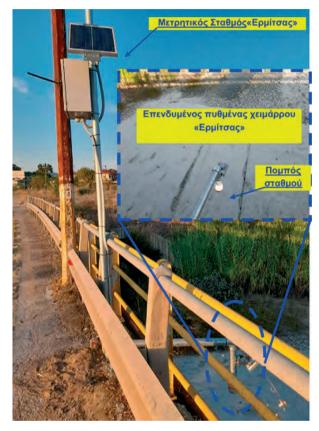




### Region of Western Greece -Department of Civil Engineering

The Trichonida - Lysimachia lakes, in Western Greece, are connected by a connecting, open-channel that includes sluice gates allowing the regulation of discharge (exchange flowrate) between the two lakes.

The aim of the Research Project was the investigation of the hydraulic behavior and the formulation of suggestions for the regulation of the hydrodynamic system of Trichonida - Lysimachia lakes, in Western Greece, in the context of the proper management of the hydrodynamic system of the lakes. In the Research Project, a combined of hydraulic/hydrodynamic use numerical model was used. as well as field measurements. More specifically, hydraulic simulations of the interconnected system of the Trichonida - Lysimachia Lakes were carried out.



The results of the simulations include: a) free surface level values of the two lakes, b) values of discharge/ exchange flowrate of the connecting channel, c) outflow discharge values from Lake Lysimachia through the «Dimikos» ditch, as well as d) hydrologic balance parameters. Also, the maximum possible drainage capacity of the connecting channel, the possibility of draining the excess amount of flood waters from the Lysimachia lake through the «Dimikos» ditch to the Acheloos river, the outflows to the Lysimachia tunnel based on the irrigation requirements, as well as the possibility of draining the flood waters are numerically studied.





At the University of the Peloponnese, we believe in the power of partnerships

Togetber, we solve challenges and create impactful solutions for a better future

We welcome your feedback and ideas. Let's connect and grow togetber!

## **Contact Us**

+ 30 2710230000
 Erithrou Stavrou 28 & Kariotaki 22131, Tripolis, Greece
 rectorate@uop.gr
 www.uop.gr



uopgr

 $(\bigcirc)$ 

uop.gr

 $(\mathbf{f})$ 

uop.gr



University Γραφείο Δημοσίων of Peloponnese Σχέσεων UoP



UNIVERSITY of the PELOPONNESE