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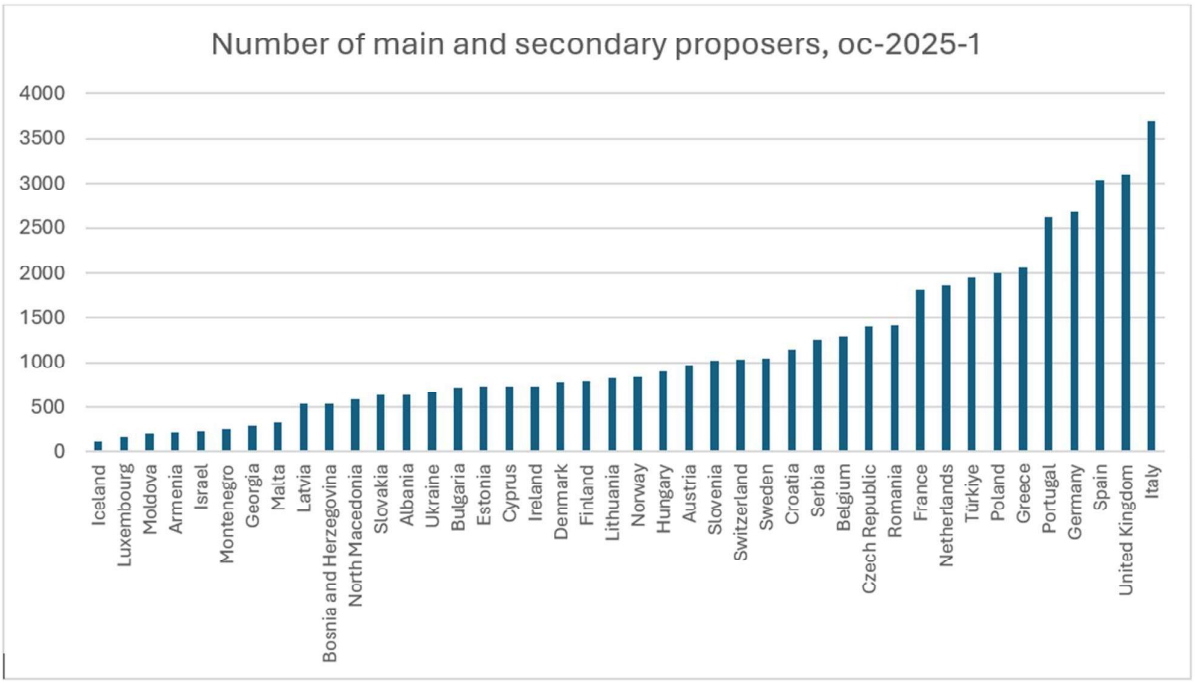
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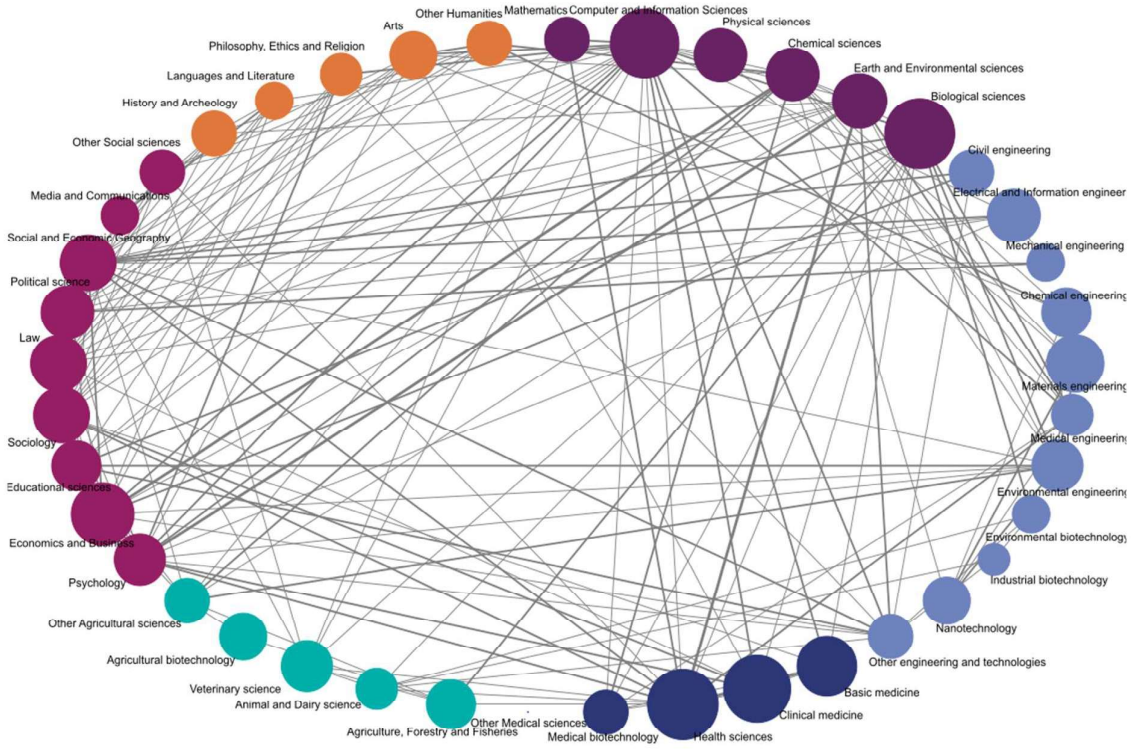
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STATISTICAL SUMMARY

GEOGRAPHIC DISTRIBUTION



INTERDISCIPLINARITY



As an indicator of multidisciplinarity of the new Actions, 61% of all Actions cover at least two OECD (Organisation for Economic Co-operation and Development) fields of science and technology, while 20% cover at least three fields. Natural sciences lead the way as the most represented field of science (represented in 50% of the Actions), followed by

Social Sciences (40%), Engineering and Technology (33%), Medical and Health Sciences (31%), Agricultural Science (16%) and Humanities (15%).

CA25101
Pan-European One Health Network for Infectious Diseases Detection, Monitoring and Prevention
(OC-2025-1-28399)

SUMMARY
The accelerating emergence and re-emergence of infectious diseases demands coordinated, preventive response. This COST Action will establish a unique pan-European, multi-stakeholder pipeline bridging discovery, validation, and deployment of innovative tools for detection, monitoring, and prevention of infectious threats. By integrating human, animal, and environmental health under One Health framework, the Action will connect academics, clinicians, veterinarians, engineers, computer scientists, SMEs, policymakers, and civil society to co-develop equitable, scalable solutions. Major barriers currently limit translation from research to practice: fragmented surveillance frameworks, poor interoperability of datasets, limited predictive modelling, slow regulatory pathways, and uneven diagnostic capacity across regions. This Action addresses these gaps through six interlinked Working Groups: harmonising frameworks and surveillance protocols (WG1); developing interoperable data pipelines (WG2); advancing AI-driven predictive models and diagnostic tools (WG3); building capacity and ensuring knowledge dissemination (WG4); aligning innovation with regulatory, ethical, and policy frameworks (WG5); and embedding equity, diversity, and inclusion (WG6). Outputs will include harmonised terminologies, interoperable architectures, validated diagnostic prototypes, regulatory and translational roadmaps, and EDI-informed innovation guidelines. These will be designed for practical use by end-users and supported with open-access resources, toolkits, and targeted dissemination to ensure uptake by wider community. Capacity-building activities, training schools, mentoring, short-term scientific missions and multi-sectoral workshops will equip next generation of researchers, practitioners while ensuring meaningful engagement across Europe, including ITC Countries. By operationalising an end-to-end innovation pipeline and fostering public–private collaboration, the Action will accelerate translation of research into market-ready tools, strengthen Europe's resilience, and enhance preparedness for future infectious disease threats.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Medical engineering: Medical engineering and technology 2. Health Sciences: Applied mathematics, statistics, non-computational modeling for health sciences 3. Health Sciences: Infectious diseases 4. Health Sciences: Public and environmental health 5. Earth and related Environmental sciences: Climatology and climate change	1. One Health 2. Infectious Diseases 3. Detection 4. Monitoring 5. Prevention

COST Members
Main Proposer: United Kingdom
Network of Proposers:
Full Member: Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Germany, Greece, Italy, Luxembourg, Moldova, Netherlands, Poland, Portugal, Romania, Serbia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 40% YRI / 57,30% Women / 57,14% ITC

Specific Organisations
International Organisation: Hospital Universitario Ramón y Cajal; UNESCO; African leaders Malaria alliance

Industrial Dimension
SMEs: Germany, Spain, Sweden, Türkiye

Large companies: Romania

CA25102
European network for advancing nervous system health through glia integration and innovation
(OC-2025-1-28408)

SUMMARY
Glial cells are fundamental regulators of nervous system function. They orchestrate homeostasis, communication, metabolism, immunity, and repair processes that are essential for sensory transmission, motor function, cognition, behaviour, and healthy ageing. However, despite their critical roles, glial cells remain underrepresented in neuroscience research, and efforts across Europe to research glial cells are fragmented. The EU-GLIA COST Action is the first pan-European network focused on cellular interactions of glial cells within the nervous system. It brings together scientists, clinicians, industry, policymakers, and patient advocacy groups to overcome disciplinary silos and thereby accelerate translation. In six cross-linked Working Groups, EU-GLIA will (1) interconnect basic, translational, and computational research, (2) standardise experimental approaches, and (3) develop a shared FAIR- and 3R-compliant data platform. The Action will actively promote Young Researchers and Innovators, and strengthen inclusiveness through training, mobility, and mentoring initiatives. By positioning glial science at the heart of neuroscience, EU-GLIA will drive coordinated discovery, de-risk therapeutic pipelines and inform nervous system health policy. This coordinated effort is timely and essential to ensure that Europe leads in defining the role of glial cells in health and disease.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Basic medicine: Neuroanatomy and neurophysiology 2. Clinical medicine: Neurological disorders (e.g. Alzheimer's disease, Huntington's disease, Parkinson's disease) 3. Medical biotechnology: Databases, data mining, data curation, computational modelling 4. Biological sciences: Cell signalling and cellular interactions 5. Basic medicine: Systems biology	1. Glial cells 2. Brain health 3. Clinical relevance 4. Cellular crosstalk 5. Computational approaches

COST Members
Main Proposer: Austria
Network of Proposers:
Full Member: Austria, Belgium, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Türkiye, United Kingdom
Cooperating Member: Israel

Main and secondary proposers: 29,41% YRI / 59,80% Women / 53,57% ITC

International Cooperation
International Partner: Canada, Japan, United States

Specific Organisations
European RTD Organisation: Universität Bern
EU Institutions, Bodies, Offices and Agencies (EC/EU): Institute of Neuroimmunology, slovak academy of sciences

Industrial Dimension
SMEs: Austria, Germany, Switzerland, United Kingdom
Large companies: Germany, United Kingdom

CA25103
Perspectives on Higher Education Student Populations in Cities
(OC-2025-1-28410)

SUMMARY
Higher Education (HE) students constitute a highly qualified segment of human capital and represent a valuable resource for the future of European cities. However, they also face significant challenges in their host cities, including limited access to housing, high unemployment, declining purchasing power, and weak integration into local communities. Their presence also generates significant impacts, such as rising prices, the proliferation of specialized services and commerce, and the displacement of long-term residents.
Although some European scholars have examined these issues at local or case-specific levels, research in this area remains fragmented, with limited knowledge exchange.
This Action addresses the urgent need to structure and coordinate this body of research, advancing towards a shared conceptual, methodological, and comparative framework for studying HE student populations in cities. Establishing a dedicated research network represents both a challenge and an opportunity: to position European research at the forefront of the international academic field, while generating knowledge relevant to policymakers, private actors, and students and civil society organizations. The Action will open up emerging urban themes in HE student research, foster the training of a new generation of scholars, and create new channels to disseminate findings across academic, social, and policy spheres.
It is organized into five Working Groups that comprehensively address key research topics concerning HE students in cities, strengthen collaboration among researchers, stakeholders, and society, and generate a wide range of outcomes. The structure emphasizes the engagement of researchers from Inclusiveness Target Countries and Young Researchers and Innovators, while promoting gender balance.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Social and economic geography: Social, cultural and economic geography, international trade	1. Higher Education Students 2. Urban Studies 3. Students Habitat 4. Mobility and Employability 5. Culture, Diversity and Inequalities

COST Members
Main Proposer: Spain
Network of Proposers:
Full Member: Czech Republic, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, North Macedonia, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Türkiye, United Kingdom
Partner Member: South Africa

Main and secondary proposers: 48,33% YRI / 59,70% Women / 59,09% ITC

International Cooperation
Near Neighbour Country: Algeria
International Partner: Canada, Chile, United States

Specific Organisations
EU Institutions, Bodies, Offices and Agencies (EC/EU): European Commission (and its Directorates)

Industrial Dimension
SMEs: Spain
Large companies: Spain

CA25104
European Researchers in Complex Analysis Network
(OC-2025-1-28418)

SUMMARY
This COST Action is dedicated to establishing sustained European leadership in the dynamic field of complex analysis and its interactions with operator theory and related disciplines. Building upon Europe's rich mathematical heritage, the initiative fosters structured, long-term collaboration to address profound theoretical challenges and their modern applications. The leadership we cultivate is dual-faceted: it is reflected in scientific excellence through high-impact publications, and in social impact through vibrant networking, outreach, and communication to a broader society.

Our primary goal is achieved through several convergent objectives. We aim to drive research quality by advancing fundamental questions in complex analysis, operator theory, and geometric function theory with the highest standards of rigor. A core commitment is to foster a robust generational transition by actively supporting early-career researchers through mentorship and collaborative projects. We will build a sustainable collaborative ecosystem via focused working groups and mobility programs, strategically expanding through applications for larger-scale European funding. Recognizing the growing importance of our field, we will strengthen applied connections to areas like signal processing and interpretable AI through dedicated industry engagement. All activities are conducted on a strong ethical foundation, promoting principles of inclusivity, gender equality, and environmental sustainability. Ultimately, we seek to achieve leadership not in isolation, but through deep collaboration with international and non-academic partners, securing the future of this vital mathematical domain.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Mathematics: Analysis 2. Mathematics: Operator algebras and functional analysis	1. reproducing kernel Hilbert spaces 2. extremal problems 3. conformal mappings 4. sequences of interpolation and sampling 5. polynomial approximation

COST Members
Main Proposer: Spain
Network of Proposers:
Full Member: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom
Cooperating Member: Israel
Partner Member: South Africa

Main and secondary proposers: 41,00% YRI / 41,00% Women / 53,57% ITC

Industrial Dimension
SMEs: Estonia
Large companies: France

CA25105
Precision Detection and Prevention of Psychosis (PDPP) Network

(OC-2025-1-28479)

SUMMARY

The main objective of the **PDPP Network Action** is to coordinate a **pan-European interdisciplinary effort** to promote personalised preventive approaches for patients at clinical high-risk for psychoses (CHR-P), as psychoses are the most severe and costly group of psychiatric disorders. Covering epidemiology, screening, diagnosis, personalised prognosis and intervention, PDPP Network develop the urgently needed European interaction between scientists, clinicians, regulatory authorities, advocacy groups, and SMEs in the **field of psychiatric prevention**. This is aligned with the **EU commission strategy 2024 promoting mental health with adequate and effective prevention**, access to high quality and affordable mental health care and treatment. Due to the early onset of psychosis, there is also an urgent need of close European cooperations between experts in child and adolescent psychiatry, and adult psychiatry; this will take **top priority** in the PDPP network. The Action addresses that **indicated prevention can prevent psychosis** or significantly ameliorate its course, and that the **rising development and application of artifical intelligence in prevention, diagnosis and risk-adapted therapy of CHR-P** leads to the development of innovative therapeutic options. The Action is organised into eight working groups (WG) on the standardisation of diagnostic procedures, the development of an integrative CHR-P assessment and individual risk profiles, the personalised treatment of patients with identification of epidemiological heterogeneity and patient-centred support management, flanked by two horizontal WG that provide cross-cutting activities relevant to the objectives of these WGs: artificial intelligence and ethics/stigma concepts. **This will result in the first-time implementation of standards of European CHR-P service.**

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Psychiatry 2. Clinical medicine: Psychiatric disorders 3. Health Sciences: Health services, health care research	1. Precision psychiatry 2. Early detection 3. Psychosis 4. Prevention 5. Psychiatry

COST Members

Main Proposer: Germany
Network of Proposers:
Full Member: Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Italy, Latvia, Montenegro, Netherlands, Poland, Portugal, Serbia, Spain, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 26,13% YRI / 44,30% Women / 52,38% ITC

Specific Organisations

European RTD Organisation: Charité Campus Virchow Clinic and Benjamin Franklin; Frankfurt University Hospital
EU Institutions, Bodies, Offices and Agencies (EC/EU): Universitätsklinikum Tübingen

Industrial Dimension

SMEs: Türkiye

CA25106
Silent and Low-frequency Renewable Energy Systems for a Sustainable Future

(OC-2025-1-28482)

SUMMARY

The objective of STILLNESS Cost Action is to form a network of excellence within the framework of renewable energy, maximizing production in static or quasi static conditions
i.e. on systems with minimal or no parts moving mechanically. The project will cover the complete energy system from the primary source of energy, up to the production of electricity or cooling as well as storage systems. The program is oriented especially towards young scientists and engineers with the objective to create a permanent structure focused on green energy, complying to the objectives of the Paris COP 21 regarding the reduction of greenhouse gases. It is important to convince future generations of scientists to engage in this area which is crucial for controlling the planet's climate.

The impacts of the project can be stated in terms of: first, the training of PhD students to create a cohort of new actors in science in field of renewable energy sources. Secondly, the dissemination of knowledge. Thus, publications which could be estimated at two per year by each of the partners will be produced at least. Thirdly, to create a space for discussion common to all partners aimed at sharing scientific aspects and supporting the organizational phase, which will mainly concern public events such as conferences and workshops.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Materials engineering: Magnetism for materials engineering applications 2. Materials engineering: Mechanical and acoustical properties of condensed matter for materials engineering applications 3. Materials engineering: Thermal properties of condensed matter for materials engineering applications 4. Materials engineering: Characterization methods of materials for material engineering applications 5. Materials engineering: Sustainable engineering	1. energy 2. magnetic field 3. Sustainable energy systems 4. renowable energy sources 5. storage

COST Members

Main Proposer: Poland
Network of Proposers:
Full Member: Austria, Bosnia and Herzegovina, France, Germany, Italy, Latvia, North Macedonia, Poland, Portugal, Romania, Serbia, Slovakia, Ukraine, United Kingdom
Cooperating Member: Israel

Main and secondary proposers: 33,33% YRI / 36,40% Women / 60,00% ITC

Industrial Dimension

SMEs: Italy, Serbia

CA25107
European Network Changing Conduct in Mental Healthcare Promoting Voluntary Measures and Practices
(OC-2025-1-28492)

SUMMARY
There is a growing international momentum to promote voluntary measures and practices in mental healthcare and to reduce the reliance on coercive measures, advocating human rights for vulnerable people with mental health problems.

Currently, large-scale implementation of evidence-based voluntary cooperation and coercion-preventive practices is lacking. To realise sustainable change of conduct in mental healthcare, structured implementation frameworks are needed to replicate and implement evidence-based interventions, across various mental health settings (hospitals, community services, etc.), and across wide geographic variations in culture, funding, attitudes and ethical / legal standards for using restrictive practises.

ENCORE aims to proceed from evidence-based on isolated settings towards integral, large-scale implementation strategies for sustainable change of conduct in mental health and community settings to promote voluntary measures and practices across Europe.
Therefore, ENCORE will establish a sustainable pan-European research-to-implementation network that brings the essential stakeholders across various levels and countries together, including researchers, healthcare staff, educators, managers and decision makers, PMHCs-representatives and government representatives.

This will overcome the fragmentation in research communities and data, towards understanding key factors for implementing voluntary measures and coercion reductive practises. Main outcome will be a Collaborative Redesign and a Transformation Ecosystem for mental healthcare (CReaTE), where community building, co-creation of training programmes, connections with Ambassadors and information and experience exchange with all relevant stakeholders will take place.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Public and environmental health 2. Psychology: Clinical Psychology 3. Clinical medicine: Psychiatry 4. Sociology: Social structure, inequalities, social mobility, social exclusion, income distribution, poverty	1. implementation 2. mental health 3. coercion 4. organisational change 5. self determination

COST Members
Main Proposer: Poland
Network of Proposers:
Full Member: Albania, Austria, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Ireland, Italy, Lithuania, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 17,14% YRI / 51,40% Women / 58,06% ITC

Industrial Dimension
SMEs: Poland
Large companies: Netherlands

CA25108
Advancing transdisciplinary management strategies for PFAS contamination

(OC-2025-1-28550)

SUMMARY

Per- and polyfluoroalkyl substances (PFAS) are a group of substances encompassing thousands of substances that have unique and highly desirable properties such as being resistant to heat under extreme temperatures and being water and grease repellent.
However, PFAS do not break down in the environment, can recirculate in the water cycle, can accumulate in animals and can exert toxic effects. They are referred to as “forever chemicals”. The network PFASnet will address the challenge of the practical management of PFAS to protect the environment and human health by considering both proactive and reactive strategies.

PFASnet brings a multidisciplinary team together to close knowledge gaps related to social data, monitoring and analytical methods and remediation techniques. Whilst a large proportion of the population is exposed to PFAS in their daily lives, PFAS awareness varies considerably geographically. Providing information to increase awareness and by considering citizen’s perceptions of PFAS risk as well as how labels can be used to inform choices, PFASnet will support a reduction of PFAS at the source. There are several analytical methods available for PFAS in various environmental media, however their accessibility varies across European countries. PFASnet will level the playing field making it possible for all countries to comply with legislative obligations as well as support better monitoring campaigns. Current remediation techniques for PFAS in drinking water and sludge range from well tested field scale methods to highly innovative bench scale.
PFASnet will close the gap to allow the identification of optimal methods for different geo-economic situations.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Environmental engineering: Water pollution 2. Environmental engineering: Risk assessment, prevention and mitigation 3. Psychology: Cognitive and experimental psychology: perception, action, and higher cognitive processes 4. Earth and related Environmental sciences: Environment chemistry 5. Chemical sciences: Analytical chemistry	1. PFAS 2. Remediation 3. Society 4. Anaysis 5. Monitoring

COST Members

Main Proposer: Germany
Network of Proposers:
Full Member: Albania, Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom
Partner Member: South Africa

Main and secondary proposers: 27,67% YRI / 48,40% Women / 58,97% ITC

International Cooperation

Near Neighbour Country: Egypt
International Partner: Australia, China, New Zealand, South Korea, United States

International Organisation: State University of New York at Buffalo; HELCOM Secretariat

Industrial Dimension

SMEs: Belgium, Bulgaria, Germany, Switzerland
Large companies: Denmark, Hungary, Norway

CA25109
Integrated Management and Personalized Approaches for Autoimmune Hepatitis Care and Treatment

(OC-2025-1-28568)

SUMMARY

Autoimmune hepatitis (AIH) is a chronic, immune-mediated liver disease that affects individuals of all ages and ethnic backgrounds. Its prevalence and incidence are rising and, without proper treatment, AIH carries a high risk of mortality and severe complications, including liver failure and the need for transplantation. Disease mechanisms remain incompletely understood and, despite clinical advances, no curative therapy exists and clinical expertise is unevenly distributed across Europe.
IMPACT aims to create a pan-European, interdisciplinary network that unites clinical investigators, nurses, basic scientists, international organisations, patient representatives, and industry partners to tackle the multifaceted challenges of AIH care and research.

The initiative will pursue two overarching objectives:

1. Improving equity of care – by strengthening training, education, awareness, consultation platforms, and collaborative networks to reduce disparities and improve patient outcomes.
2. Driving innovation and therapeutic development – through integrated research efforts that elucidate disease mechanisms, foster translational discovery, and accelerate new treatment strategies.

Six thematic Working Groups will lead activities across key domains: (i) patient experience and quality of life; (ii) pathogenesis and therapeutic targets; (iii) epidemiology and diagnostic optimisation; (iv) personalised therapy: childhood, family planning and beyond;
(v) clinical trial development; and (vi) outcomes and prognosis. Three cross-sectional Groups will provide support in governance, legal affairs and dissemination, training and education, and artificial intelligence applications.
By harmonising clinical practice, integrating scientific expertise, and prioritising patient-centred approaches, IMPACT will improve outcomes and quality of life for individuals with AIH across Europe—while training the next generation of clinician-scientists to ensure sustainable progress.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Gastroenterology and hepatology 2. Clinical medicine: Databases, data mining, data curation, computational modelling 3. Basic medicine: Pharmacology, pharmacogenomics, drug discovery and design, drug therapy 4. Health Sciences: Health services, health care research 5. Basic medicine: Biological basis of immunity related disorders	1. Autoimmune Hepatitis 2. Personalised Treatment 3. Patient-centered Care 4. Artificial intelligence

COST Members

Main Proposer: Italy
Network of Proposers:
Full Member: Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Malta, Moldova, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom
Partner Member: South Africa

Main and secondary proposers: 43,60% YRI / 51,10% Women / 56,67% ITC

International Cooperation

International Partner: Argentina, Canada, China, India, Japan, United States

Specific Organisations

European RTD Organisation: Instituto de Investigación Biomédica de Málaga y Plataforma en Nanomedicina-IBIMA Plataforma BIONAND; European Reference Network Rare Liver

International Organisation: Hospital Universitario Ramón y Cajal; European Society of Paediatric Gastroenterology

Hepatology and Nutrition; Yale New Haven Hospital; Yale New Haven Hospital

Industrial Dimension
Large companies: Italy, Portugal

CA25110
ConsciousTech: normative CONSCIOUSness in the TECH community
(OC-2025-1-28590)

SUMMARY
Ongoing technological innovation is transforming early every aspect of human life, from how we communicate and work to how we learn, shop, form intimate relations, and participate in society. Yet the communities that design and govern these technologies often lack what this Action calls '**normative consciousness': the awareness of the legal norms, ethical principles, and social expectations are integral to technological practice**. Too often, these frameworks evolve in parallel - ethical debates remain abstract, legal norms rigid and limited by enforcement, and informal or operational norms widely accepted but potentially misaligned with rights and values. The result is a growing gap between regulatory ambition and the everyday practices of tech practitioners.

*ConsciousTec*h addresses this challenge by creating **the first European network dedicated to strengthening normative consciousness in the tech community.** It brings together scholars and practitioners from law, ethics, philosophy, computer science, and the social sciences, fostering mutual learning across disciplines and professional domains. The Action pursues three interrelated objectives:

(1) conceptual consolidation, by clarifying how norms, principles and values are defined and embedded across different normative frameworks;
(2) empirical grounding, by generating comparative evidence on how normative framework are interpreted and applied in practice; and
(3) educational innovation, by translating insights into teaching, training, and engagement strategies that can be embedded in curricula, professional pathways, and civil society initiatives.

By bridging fragmented expertise and fostering dialogue between academia, industry and regulators, ***ConsciousTech* will provide the foundations for a more responsible, rights-respecting, and socially responsive technological development in Europe and beyond.**

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Law: Legal theory, legal systems, constitutions, comparative law 2. Computer and Information Sciences: Ethics of computer and information sciences 3. Philosophy, Ethics and Religion: Ethics and morality, social ethics	1. Law 2. Social Sciences 3. Computer science 4. Legal theory 5. Ethics

COST Members
Main Proposer: Italy
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Moldova, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 41,57% YRI / 41,10% Women / 55,17% ITC

International Cooperation
International Partner: Brazil, Singapore, United States

Specific Organisations
European RTD Organisation: University of Turin - Department of law; University of Turin - Department of law

EU Institutions, Bodies, Offices and Agencies (EC/EU): Institut "Jožef Stefan", Ljubljana, Slovenija

Industrial Dimension

SMEs: Portugal, Switzerland

CA25111
GREENFAN: Towards a New Generation of Smart, Sustainable, and Silent Fans

(OC-2025-1-28591)

SUMMARY

Industrial fans are vital components across a wide range of sectors — including manufacturing, energy, heating, ventilation and air-conditioning, electric cars, and data centers—where they support critical functions such as ventilation, cooling, and air quality control. As industries move toward smarter, more sustainable operations, the evolution of fan technology is increasingly shaped by the principles of Industry 5.0.

The future of industrial fans lies in the development of intelligent, high-efficiency systems that incorporate real-time monitoring, predictive maintenance, and adaptive control through internet of things, artificial intelligence, big data, and human-machine collaboration. These smart fan systems promise significant energy savings and improved operational reliability, aligning with new environmental regulations, such as the EU Ecodesign for Sustainable Products Regulation.

However, the transition presents several challenges. Integrating advanced materials, such as composites or 3D-printed components, must overcome cost and durability barriers. The combination of new, next generation fans with already existing systems also poses technical and economic difficulties. Noise reduction, particularly in densely populated or indoor industrial environments, remains a persistent concern, including psychoacoustics which emphasizes the human perception of the generated noise.

The COST action aims to gather the knowledge and expertise from various fields in order to achieve the common goal of creating the next future generation of fans. Interdisciplinary collaboration across engineering, data science, and sustainability domains will be essential. Future innovations will be increasingly co-designed by humans and AI, emphasizing customization, safety, and environmental impact.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Mechanical engineering: Sustainable engineering	1. Industrial fans 2. Acoustics 3. Aerodyanmics 4. Advanced materials 5. Machine learning

COST Members

Main Proposer: Hungary

Network of Proposers:

Full Member: Austria, Czech Republic, Germany, Hungary, Italy, Montenegro, Serbia, Slovenia

Cooperating Member: Israel

Main and secondary proposers: 40,00% YRI / 20,00% Women / 55,56% ITC

Industrial Dimension

SMEs: Czech Republic

Large companies: Israel

CA25112
Network for comprehensive characterization and management of MIGRAINE subTypes: multidisciplinary AI-driven approach
(OC-2025-1-28610)

SUMMARY
Migraine is one of the most disabling and undertreated neurological conditions globally, disproportionately affecting women and creating a major socio-economic burden.
Progress in understanding the complex pathophysiology of migraine is hindered by key research bottlenecks. These include unimodal study designs lacking multidisciplinary integration, non-standardized data collection and analysis, and heterogeneous participant groups, all of which limit the ability to capture the full biological diversity of migraine subtypes. To enable meaningful analysis, harmonisation of tools, protocols, and methodologies is essential, a process that requires coordinated, cross-border collaboration. MigrAInet, a multidisciplinary network of neurologists, neuroradiologists, neuroengineers, multiomics scientists, and AI experts, provides the ideal framework to build consensus on best practices and ensure standardised, multimodal data collection, including neuroimaging, wearable biosensing, and multiomics.

This harmonised approach will support large-scale data acquisition, resulting in a large, open-access migraine data repository, enabling the application of machine learning to stratify patients into clinically meaningful subgroups and develop predictive models and digital health tools for precision diagnosis and treatment. Additionally, the MigrAInе database will provide data and tools to discover novel biomarkers and AI-driven solutions for patient monitoring and therapy optimization.

Additionally, MigrAInet will empower Young Researchers and Innovators and women in science, enabling necessary training in multimodal approaches for migraine investigation and management. This will help reduce disparities across European countries (especially in ITCs), and foster new collaborations with industry, patient organizations, and policymakers. Ultimately, leading to a reduction of the personal and societal burden of migraine through science-driven policy, equality, and care standardization.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Clinical neurology	1. Migraine subtypes 2. Multimodal data integration 3. Digital phenotyping 4. Artificial intelligence 5. Personalized medicine

COST Members
Main Proposer: Serbia
Network of Proposers:
Full Member: Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 31,40% YRI / 56,20% Women / 58,33% ITC

International Cooperation
Near Neighbour Country: Egypt, Russian Federation
International Partner: Australia, China, United States

Industrial Dimension
SMEs: Russian Federation, Serbia
Large companies: Portugal, Spain, Switzerland, Türkiye

CA25113
European Veterinary Education and Training for Professional Advancement, Specialisation, and Skills
(OC-2025-1-28625)

SUMMARY
VET-PASS addresses Europe's fragmented postgraduate veterinary specialisation, where only 15 countries have formal systems and training standards vary, impeding mobility, qualification recognition, and workforce planning. The lack of comprehensive data leaves policymakers, educators, and professionals without the insights to align training with emerging needs.

To bridge these gaps, VET-PASS will:

- Build a GDPR-compliant, centralised database documenting specialisation systems and accreditation bodies across all European countries.
- Conduct a pan-European market analysis by integrating specialisation data with human and animal demographic and workforce metrics.
- Forge a dynamic network of veterinary faculties, professional associations, regulatory authorities, and CPD providers to develop responsive specialisation models.
- Harmonise criteria, quality assurance benchmarks, and mutual recognition mechanisms for postgraduate specialisation.
- Deliver career-development toolkits, mentoring schemes, and tailored workshops, with dedicated support for Young Researchers and Inclusiveness Target Countries.
- Implement a multi-channel outreach campaign - including a dedicated website, digital newsletter, social media, and conference sessions - to raise awareness of specialisation's role in advancing One Health objectives.
- Pilot digital and interdisciplinary modules in postgraduate training.

Structured into eight Work Packages, VET-PASS will leverage networking tools - namely working groups, workshops, training schools, short-term scientific missions, and virtual mobility grants - to coordinate activities, foster stakeholder engagement, and build capacity. A monitoring and evaluation framework with DEI indicators will ensure adaptive management and impact.

By delivering transparent data and harmonised standards, VET-PASS will empower veterinarians to make informed career decisions, boost retention, and enhance service quality. It will strengthen Europe's veterinary workforce, safeguard animal and public health, and advance One Health.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Veterinary science: Veterinary medicine (miscellaneous) 2. Veterinary science: Databases, data mining, data curation, computational modelling	1. Specialisation 2. Mobility 3. Harmonisation 4. Career Development 5. Collaboration

COST Members
Main Proposer: Netherlands
Network of Proposers:
Full Member: Austria, Belgium, Bulgaria, Croatia, Cyprus, Finland, France, Germany, Hungary, Latvia, Netherlands, Norway, Romania, Serbia, Slovakia, Slovenia, Spain, United Kingdom

Main and secondary proposers: 0,00% YRI / 45,80% Women / 50,00% ITC

Industrial Dimension

SMEs: Norway, Serbia
Large companies: United Kingdom

CA25114
Towards Circular Future: Innovation of Circular Facades
(OC-2025-1-28629)

SUMMARY
CircaFan Action develops novel and innovative holistic strategies to foster emergence of solutions for Circular Facades (CFs) and their uptake in the construction industry. This imposes an interdisciplinary approach for knowledge creation, dissemination and transforming it into practical applications. The Action critically tackles cutting-edge developments in theory and practice and envisions opportunities for heir future innovation aligned with the goals of the EU Green Deal and the New European Bauhaus.

CircaFan seeks excellence and achieves inclusive results by innovating CFs by: establishing interdisciplinary and geographically diverse research framework for developing new methodologies and tools, guidelines and technologies, reshaping the supply and value chains, and by integrating circular materials, multifunctional systems and digitization. It aims to establish assessment frameworks, which coupled with digital tools support the advancement of contextually adapted CF solutions, which can be upscaled on a EU level and globally.

CircaFan fosters collaboration among all project partners, promotes inclusion of less research-intensive stakeholders, involves industry experts and promotes young talent pool, forming strong research networks between them, lasting beyond the Actions` lifetime, ensuring its long-term impact and sustainability. CircaFan promotes ITC and YRI inclusion, geographical and gender balance, with dedicated involvement strategies and mentorship. It is organized in four expert groups for a comprehensive, interdisciplinary collaboration and spread of excellence. CircaFan will build capacities, raise awareness and advance knowledge among the academia, industry, general public and policymakers, thus contributing to trigger structural changes, ensuring paradigm shift and transformation towards circular future and a widespread adoption of Circular Facades.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Civil engineering: Architecture engineering 2. Civil engineering: Sustainable engineering, adaptation to long-term environmental changes 3. Civil engineering: Construction engineering	1. Circular Facades 2. Circular Design and Construction 3. Circular Methods and Tools 4. Circular Economy 5. Circular Materials

COST Members
Main Proposer: North Macedonia
Network of Proposers:
Full Member: Albania, Armenia, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Georgia, Germany, Ireland, Italy, Latvia, Lithuania, Moldova, Montenegro, Netherlands, North Macedonia, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom
Cooperating Member: Israel

Main and secondary proposers: 40,35% YRI / 63,20% Women / 67,74% ITC

International Cooperation
Near Neighbour Country: Tunisia

International Partner: Australia

Specific Organisations

Industrial Dimension

SMEs: Croatia, Germany, Italy, North Macedonia, Romania, Serbia, Sweden, United Kingdom

CA25115
Climate Change in Courtrooms: Developing a Network for Scientific and Legal Expertise

(OC-2025-1-28632)

SUMMARY

Best available science is a critical consideration in order for lawyers and courts to properly interpret the legal obligations of governments and corporate actors in respect of climate change. Despite this clear overlap between science and the law, no comprehensive network exists in Europe through which climate scientists and legal scholars and practitioners can directly collaborate. This proposal thereby seeks to develop a European network that will advance scientific questions on the interpretation of relevant law and build interdisciplinary capacity. A central component of this project includes in-person meetings that will provide a platform for the legal community to highlight important scientific evidentiary gaps in climate-related legal cases, and for scientists to explain how their latest findings could be incorporated into the work of legal scholars and practitioners. Additionally, the project will develop freely accessible online materials for a wider audience interested in climate-related legal cases. To that end, three scientific work packages will cover (i) the science and law around the Paris Agreement and other international treaties,
(ii) corporate accountability for climate-related harm and failure to transition and (iii) needs and obligations on adaptation and loss and damage. The short-term benefits of this project will include a transformative impact on the framing of climate science and its utilisation by the legal community. In the long-term, the network and its associated capacity building will further strengthen interdisciplinary research and the development of climate-related legal cases aiming to ensure that government and corporate actors are complying with their obligations under law.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Earth and related Environmental sciences: Climatology and climate change 2. Law: Legal aspects of environmental regulations and climate negotiations 3. Social and economic geography: Socio-economic aspects of environmental sciences 4. Political Science: Environmental regulations and climate negotiations (policy and political aspects)	1. climate mitigation, adaptation and Loss and Damage 2. climate litigation in different courts 3. International agreements + treaties such as Paris Agreement 4. climate change and human rights law

COST Members

Main Proposer: Austria
Network of Proposers:
Full Member: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, Georgia, Germany, Hungary, Italy, Netherlands, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 60,00% YRI / 60,00% Women / 50,00% ITC

International Cooperation

International Partner: United States

Industrial Dimension

SMEs: Romania

CA25116
Terra Atomica: Exploring the Afterlives of Nuclear Landscapes in Europe
(OC-2025-1-28684)

SUMMARY
Terra Atomica is an emerging interdisciplinary platform uniting researchers, policymakers, artists, educators, and affected communities across Europe and beyond to collaboratively explore, document, and reinterpret the afterlives of nuclear landscapes. In a time of renewed nuclear anxiety, environmental uncertainty and misinformation, this COST Action aims to foster critical dialogue and promote ethical, sustainable, and creative approaches to Europe's atomic heritage. The network addresses six interconnected areas: (1) mapping nuclear geographies and actors; (2) examining heritage policies and governance; (3) investigating transformations of nuclear sites through tourism, architecture, and environmental change; (4) analysing artistic, media, and digital representations; (5) rethinking nuclear heritage education; and (6) raising public awareness and promoting open, informed debate on nuclear legacies.Through working groups, virtual exhibitions, training schools, and public interventions, *Terra Atomica* will consolidate a new interdisciplinary field of nuclear heritage studies, developing shared methodological and pedagogical tools and producing policy recommendations for the responsible management of radioactive pasts. By connecting fragmented disciplines and amplifying long-marginalized voices, particularly from Eastern and Southeastern Europe, the Action will establish an equal, cross-regional dialogue on one of Europe's most contested and enduring legacies. In doing so, *Terra Atomica* positions nuclear heritage as a vital arena for cultural activism, environmental responsibility, and social justice, shaping more inclusive and reflective futures for the Atomic age.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Other humanities: Cultural heritage, cultural memory 2. Sociology: Anthropology, ethnology, cultural studies 3. History and Archeology: Preservation of cultural heritage	1. nuclear heritage 2. atomic landscape 3. contested memory

COST Members
Main Proposer: Montenegro
Network of Proposers:
Full Member: Albania, Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Czech Republic, Estonia, Finland, France, Georgia, Germany, Greece, Italy, Latvia,
Lithuania, Moldova, Montenegro, Netherlands, North Macedonia, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom

Main and secondary proposers: 37,97% YRI / 65,80% Women / 64,52% ITC

International Cooperation
International Partner: Australia, Canada, Japan, United States

Industrial Dimension
Large companies: United States

CA25117
VIRtual worlds: Technology, Unity and Ethics
(OC-2025-1-28700)

SUMMARY
Virtual worlds and immersive technologies like virtual reality (VR) are poised to transform how we interact, learn, work, and engage with digital spaces. Our four-year research project brings together experts from computer science, psychology, law, ethics, and the creative arts to ensure these technologies develop in ways that benefit individuals and society while minimizing potential harms .

VirTUE addresses both the exciting opportunities and serious risks of virtual worlds. On one hand, they offer powerful applications in education, healthcare, therapy, and social connection—enabling experiences like virtual field trips, pain management, and accessible mental health treatment. On the other hand, they raise critical concerns about privacy, addiction, manipulation through artificial intelligence, and the concentration of power in corporate hands.

Through five interconnected working groups, our network will map current virtual world design approaches, examine the role of AI, develop ethical and legal frameworks, support underrepresented creators from Europe and Africa, and foster innovative applications across disciplines. Activities include annual workshops, training schools, policy forums, and collaborative research exchanges.

Our core commitment is inclusivity: the project prioritizes voices from marginalized communities—women, ethnic minorities, disabled creators, and researchers from underrepresented regions—to ensure diverse perspectives shape the future of virtual worlds. Outputs will include policy recommendations, white papers, educational toolkits, and practical guidelines for developers and policymakers.

Ultimately, our initiative aims to position Europe as a global leader in responsible, human-centered virtual world development—maximizing creative and social benefits while safeguarding human rights, well-being, and democratic values.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 2. Psychology: Neuropsychology 3. Law: Legal theory, legal systems, constitutions, comparative law 4. Arts: Visual arts 5. Clinical medicine: Ethics of clinical medicine	1. Virtual Reality 2. Metaverse 3. virtual humans 4. AI 5. Technology Governance

COST Members
Main Proposer: United Kingdom
Network of Proposers:
Full Member: Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 48,71% YRI / 57,70% Women / 57,14% ITC

International Cooperation
International Partner: Australia, Nigeria, Republic of Rwanda, United Arab Emirates, United States

Specific Organisations
International Organisation: Council of Europe

Industrial Dimension

SMEs: Bulgaria, Poland, Switzerland

CA25118

European Network for NeuroMorphic Computing

(OC-2025-1-28705)

SUMMARY

AI has advanced rapidly and enabled a broad spectrum of applications. The most capable models driving these applications rely on billions of parameters and large-scale computing resources, leading to increasing energy use. Addressing this challenge requires progress in AI models and development of energy-efficient hardware. Neuromorphic computing (NMC) offers a promising solution by drawing on principles of biological computation, including parallel, sparse, and event-driven information processing, in-memory computing, and online learning through various forms of plasticity. As an alternative computing paradigm, NMC offers potential advantages not only in AI but also in scientific high-performance workloads and other emerging energy-efficient applications. Translating these mechanisms into hardware requires advances across the entire stack, from architectures and algorithms to devices and materials. Realizing this vision requires collaboration across disciplines. Neuroscience provides the models of brain function that inspire new architectures; computer science and systems research adapt these ideas into algorithms and architectures; hardware design translates them into practical implementations; and device research explores novel materials and circuits to support them. No single laboratory can cover this range, making networking, interdisciplinary exchange, and training essential. Despite promising initiatives, the European research landscape remains fragmented, with limited integration across disciplines and insufficient cooperation with industry. The Action European Network for NeuroMorphic Computing (EuroNMC) aims at building a pan-European network that will i) reduce barriers between disciplines, ii) align bio-inspired concepts with suitable hardware and architectures, iii) identify applications and benchmarks, and iv) strengthen Europe's role in NMC and AI.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 2. Electrical engineering, electronic engineering, Information engineering: Human computer interaction and interface, visualization and natural language processing 3. Electrical engineering, electronic engineering, Information engineering: Development of scientific computing, data processing, simulation and modelling tools	1. Neuromorphic Computing and Engineering 2. Novel computing architectures 3. Novel electronic devices 4. Brain-inspired computing and architectures

COST Members

Main Proposer: Germany

Network of Proposers:

Full Member: Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 40,28% YRI / 34,50% Women / 54,17% ITC

Specific Organisations

European RTD Organisation: Fraunhofer Institute for Photonic Microsystems IPMS Dresden

CA25119
Pathways to Safety: Mapping Parental Self-Harm and Suicide Risk
(OC-2025-1-28728)

SUMMARY
Suicide is the leading cause of maternal death in many countries, with self-injurious thoughts and behaviours (SITBs) having huge physical and mental health impacts on parents and their offspring. However, maternal suicide is also preventable. Such prevention could be achieved by more timely detection, referrals, and tailored interventions. SAFEPARENTALPATH-SITBs is specifically designed to address this issue. It will shift from a solely risk-focused perspective to a recovery-oriented approach on this topic, thus reducing stigma and directly supporting international policy goals such as the WHO's Comprehensive Mental Health Action Plan 2013-2030, the UN Sustainable Goals 3.1 and 3.4, and the EU Comprehensive Approach to Mental Health. The core aim of SAFEPARENTALPATH-SITBs is to create a pan-European inter-disciplinary network including researchers, clinicians and people with lived experience (PWLE) to achieve a real and long-term impact on parental SITBs. It will extend beyond what could be achieved through individual action in any discipline through networking to: a) develop a coordinated research agenda on parental SITBs (WG1); b) connect researchers, clinicians and PWLE from Inclusiveness Target Countries (ITC) and non-ITC working in this field with each other, in order to generate and disseminate scientific evidence about parental SITBs (WG2), to estimate its economic burden (WG3), to describe datasets that can be leveraged to progress research (WG5); and c) co-produce international guidelines (WG2) and scalable interventions transferable across EU healthcare systems (WG4). This effort is very timely given that parental SITBs are increasing across Europe, calling for immediate initiatives to improve outcomes for these families.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Psychiatry 2. Clinical medicine: Obstetrics and gynaecology 3. Psychology: Developmental psychology 4. Health Sciences: Nursing 5. Health Sciences: Health services, health care research	1. Parental self-injurious thoughs and behaviours 2. Parental mental health and suicide 3. Recovery-oriented care pathways and interventions 4. Neurocognitive mechanisms 5. Child development

COST Members
Main Proposer: France
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Italy, Lithuania, Malta, Netherlands, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 31,74% YRI / 82,50% Women / 56,00% ITC

International Cooperation
International Partner: United States

CA25120
Advancing DNA BARcoding in Europe for Efficient, Sustainable and Inclusive BioDIVersity Monitoring
(OC-2025-1-28749)

SUMMARY
Biodiversity loss is accelerating across Europe, yet current monitoring systems are fragmented, slow, and reliant on declining taxonomic expertise. DNA barcoding—using short genetic sequences to accurately identify species—offers a scalable, high-resolution solution, but its uptake remains limited due to incomplete reference libraries, methodological inconsistencies, and unequal access to genomic infrastructure.

This COST Action will build a fully comprehensive pan-European network of researchers, institutions, and stakeholders to revolutionize DNA-based biodiversity monitoring. By uniting over 40 countries (≥60% from Inclusiveness Target Countries), the Action will integrate existing national efforts, fill critical gaps in barcode reference libraries, and build standardized protocols aligned with FAIR/CARE principles. It will enhance Europe's capacity to detect species—including cryptic, invasive, and endangered taxa—across ecosystems using both traditional and environmental DNA (eDNA) samples.

The network will deliver open-access resources, including curated data platforms, sampling and sequencing protocols, training materials, and policy guidance. Dedicated activities—training schools, short-term scientific missions, and regional coordination nodes—will empower early-career researchers and strengthen capacity, particularly in underrepresented regions.

Stakeholders from government, NGOs, industry, and citizen science will co-develop use cases and help embed DNA tools into real-world biodiversity assessments. This inclusive, interdisciplinary initiative will mainstream genomics into European monitoring and policy, supporting the EU Biodiversity Strategy 2030 and global targets.

By project's end, the Action will leave a lasting legacy: a connected, competent European community equipped with robust tools, data, and partnerships to safeguard biodiversity through precise, efficient, and inclusive monitoring practices.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Biological sciences: Biodiversity, comparative biology 2. Biological sciences: Conservation biology, ecology, genetics 3. Biological sciences: Bioinformatics	1. Integrative Taxonomy 2. DNA Reference Database 3. Species Identification 4. Species Conservation 5. Capacity Building

COST Members
Main Proposer: Türkiye
Network of Proposers:
Full Member: Albania, Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 21,87% YRI / 48,40% Women / 60,00% ITC

International Cooperation
Near Neighbour Country: Lebanon

Industrial Dimension

SMEs: Switzerland, Türkiye

CA25121
Harnessing AI for Responsive, Valuable, and Efficient Sustainable Technologies

(OC-2025-1-28771)

SUMMARY

The HARVEST COST Action will support AI-driven agricultural innovation across Europe by addressing the urgent challenge of climate change and its impact on crop productivity. The Action brings together a critical mass of researchers, farmers, data scientists, and industry stakeholders to standardise and integrate fragmented crop data (starting with barley) to enable predictive modelling and automated decision-making. By developing best-practice guidelines, open-access platforms, and community resources, HARVEST will build research capacity, foster cross-disciplinary collaboration, and support the development of AI recommender systems tailored to local climate conditions.

Climate unpredictability threatens food security and farmer livelihoods. To counter this, HARVEST will promote resilient data stewardship and FAIR-compliant standards to ensure agricultural data is accessible, interoperable, and AI-ready. The Action aligns with EU priorities including the Farm to Fork Strategy and Digital Europe Programme, contributing directly to sustainable farming and digital transformation goals.

HARVEST will organise workshops, training schools, short-term scientific missions, and collaborative events across five Working Groups focused on omics, phenomics, AI tools, dissemination, and coordination. These efforts will empower stakeholders to co-design solutions, unlock new funding opportunities, and build a future-proof agricultural data ecosystem.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Other agricultural sciences: Databases, data mining, data curation, computational modelling for other agricultural sciences 2. Computer and Information Sciences: Machine learning algorithms 3. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 4. Computer and Information Sciences: Computing on unconventional substrates, e.g. DNA and molecular computation	1. Data Science 2. Crop Metadada 3. Agriculture 4. Artificial Intelligence 5. Crop Science

COST Members

Main Proposer: United Kingdom
Network of Proposers:
Full Member: Bulgaria, Cyprus, Czech Republic, Estonia, Finland, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Poland, Spain, Sweden, Türkiye, Ukraine, United Kingdom
Cooperating Member: Israel

Main and secondary proposers: 16,39% YRI / 42,60% Women / 52,63% ITC

Specific Organisations

European RTD Organisation: EMBL's European Bioinformatics Institute

CA25122
Systems Thinking for One Health implementation
(OC-2025-1-28785)

SUMMARY
The One Health approach has gained substantial political and scientific attention since the COVID-19 pandemic highlighted the interconnected threats to human, animal, and ecosystem health. Challenges such as ecosystem degradation, food insecurity, pollution, emerging diseases and the climate crisis underline the urgent need for intersectoral, interdisciplinary and participatory solutions to these complex and intertwined issues.
However, methods to tackle such multifaceted health challenges are weakly developed and disparate, hampering One Health implementation. The SystOHm COST Action addresses this methodological challenge by building on systems thinking, an approach widely recognized as a cornerstone of One Health, which however has proven challenging for stakeholders to adopt. SystOHm bridges the gap between research and implementation by identifying needs, critically reviewing current systems thinking methods, elaborating guidance, and pilot-testing innovative methods or combinations thereof.
Furthermore, it mobilizes the bridging quality of systems thinking to nurture mutual understanding and enhance transdisciplinary collaborations. Drawing on a broad range of disciplines and stakeholders, SystOHm seeks to provide practical and harmonized methodological guidance as well as a collaborative environment conducive to knowledge sharing and co-creation. It commits to engage both researchers and implementers to shape One Health in practice, fostering fit-for-purpose methods for impactful solutions. By establishing a robust and wide collaborative network, SystOHm lays the groundwork for future partnerships, benefiting both researchers and implementers across a variety of contexts. It nurtures the next generation of researchers, empowering them to develop excellence anchored in systems thinking, and to position themselves as leaders in One Health implementation.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Public and environmental health 2. Other social sciences: Qualitative methods for the social sciences 3. Social and economic geography: Spatial development, land use, regional planning 4. Veterinary science: Veterinary medicine (miscellaneous) 5. Social and economic geography: Socio-economic aspects of agriculture, agriculture and environment, urban agriculture, gardens, agricultural economy	1. One Health 2. Complexity 3. Systems thinking 4. Transdisciplinarity 5. Co-design

COST Members
Main Proposer: Belgium
Network of Proposers:
Full Member: Albania, Armenia, Austria, Belgium, Bosnia and Herzegovina, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom
Partner Member: South Africa

Main and secondary proposers: 33,95% YRI / 51,50% Women / 57,14% ITC

International Cooperation
Near Neighbour Country: Algeria, Jordan, Morocco, Tunisia
International Partner: Australia, Bangladesh, Brazil, Burkina Faso, Canada, Colombia, Congo, The Democratic Republic of the , Ivory Coast, Republic of Burundi, Senegal, Singapore, Tanzania, United States

Specific Organisations
International Organisation: UNESCO; United Nations Environment Programme; Food and Agriculture

Organization of the United Nations; Centre international de Recherche sur le Cancer; World Health Organization

Industrial Dimension
SMEs: Belgium, Denmark, Portugal
Large companies: Germany, Spain

CA25123
Skills Enhancement for Comprehensive Uterine Evacuation and Reduced Risks in Europe
(OC-2025-1-28798)

SUMMARY
Across Europe, pregnant women requiring second-trimester uterine evacuation face significant inequities in care. The World Health Organization (WHO) recommends availability of both medical and surgical methods at all gestations, but surgical techniques like dilatation and evacuation (D&E) are inconsistently available. Many countries offer only medical induction, despite evidence confirming surgical methods as safe, efficient, cost-effective and often preferred by patients.
This capacity gap compromises management of miscarriage, pregnancy termination (including for fetal anomaly or maternal health), and urgent pregnancy complications where timely uterine evacuation is critical. Lack of surgical training curricula, few mentorship opportunities, limited data collection, and low awareness all contribute to service disparities. There is currently no coordinated European effort to pool expertise or establish training frameworks.

The Skills Enhancement for Comprehensive Uterine Evacuation and Reduced Risks in Europe (SECURE) COST Action establishes the first pan-European network to address these barriers. Four Working Groups will coordinate evidence synthesis, cross-country training, research capacity strengthening, and policy dialogue to map gaps, advance clinical competencies, expand collaborative research, and inform policy reform.

SECURE will unite healthcare professionals, researchers, patients, and advocates, including early-career professionals and participants from Inclusiveness Target Countries, to build lasting capacity and collaboration. Over the long term, the Action will increase the number of qualified providers, reduce care disparities, align healthcare systems with WHO standards, and foster evidence-based curriculum and practice. It will also challenge stigma, strengthen public trust in evidence-based care, and cultivate the next generation of clinical and research leaders across Europe.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Obstetrics and gynaecology 2. Health Sciences: Health services, health care research 3. Health Sciences: Public and environmental health	1. Second-trimester 2. Dilatation and evacuation (D&E) 3. Surgical skills 4. Pregnancy

COST Members
Main Proposer: United Kingdom
Network of Proposers:
Full Member: Albania, Bulgaria, Czech Republic, France, Germany, Netherlands, Portugal, Romania, Serbia, Spain, United Kingdom

Main and secondary proposers: 25,00% YRI / 70,00% Women / 54,55% ITC

Specific Organisations
International Organisation: Ibis Reproductive Health

Industrial Dimension
Large companies: Germany

CA25124
Multidisciplinary Adaptations of GamIss NETwork
(OC-2025-1-28810)

SUMMARY
Epidemiological and statistical models shape action in Public and One Health across humans, animals and environments. MAGNET targets three synergistic domains, Public & One Health (POH), Infectious Disease Modelling (IDM), and Predictive Risk Modelling (PRM), and aligns with EU One Health and health-security priorities. The Action maps EU and international efforts to ensure complementarity rather than duplication.

Generalized Additive Models for Location, Scale and Shape (GAMLSS) move beyond commonly-used mean-only models by estimating the full distribution (not just the mean) and handling heterogeneity, skewness, kurtosis, non-linearity and variance-mean relationships. GAMLSS already underpins modern centile and growth monitoring, yet uptake stalls when methods feel like a black box.

As a COST Action, MAGNET builds a practical European network of methodologists, clinicians, agencies and small and medium-sized enterprises (SMEs). Using COST instruments, workshops, training schools and short exchanges, the Action will run monthly cross-group sessions that deliver open releases, guides and pilots, including a no-code path (designed for time-to-first-result ≤15 minutes).

The impact pathway is concrete, from pilots to agency-agreed thresholds and then integrations in host systems, aligned with EU surveillance and One Health agendas. Adoption and policy-citation metrics will be published on the project hub. By Month 24 at least four reusable workflows will be released and by Month 48 at least two partners will run a workflow in routine practice. All assets, code, benchmarks, applications and curricula, remain open and are maintained under a registered Society for at least three years after the Action ends, securing continuity and broad uptake.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Public and environmental health 2. Health Sciences: Epidemiology 3. Mathematics: Statistics 4. Computer and Information Sciences: Machine learning algorithms 5. Veterinary science: Databases, data mining, data curation, computational modelling	1. public health 2. surveillance 3. One Health 4. GAMLSS 5. distributional regression

COST Members
Main Proposer: Greece
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Denmark, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Malta, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Türkiye, United Kingdom

Main and secondary proposers: 28,37% YRI / 40,50% Women / 57,14% ITC

International Cooperation
Near Neighbour Country: Egypt, Morocco, Tunisia
International Partner: Australia, Bangladesh, Brazil, China, Japan, New Zealand, Sierra Leone, Uganda, United States

Specific Organisations

International Organisation: Cawthron Institute; Guru Angad Dev Veterinary & Animal Sciences University

Industrial Dimension

SMEs: Denmark

CA25125
From organic waste to value-creating products

(OC-2025-1-28812)

SUMMARY

According to the United Nations World Food Programme, one third of all food produced for human consumption every year, accounting for US$ 1 trillion lost only for the 2021, goes to waste. Other estimations on costs related to non-indigenous and invasive species, as well as beach wrack, are projected to accumulate to additional hundreds of billions of € yearly, related to costs for their removal and mitigation of damage. A possible solution is provided within the circular economy paradigm, where additional value chains are created from what is considered as waste.

Despite the technical progress and governmental stimulations, few solutions result as viable from the market-creating perspective. This leads to lost opportunities for market creation of novel products for pharmaceutical, cosmetics, biomaterials, food, feed, agriculture and other industries, where valuable compounds such as proteins, antimicrobial peptides, pigments, polysaccharides, fatty acids and many others.

WastedValue is the network of experts with the aim of addressing various sources of biological waste, proposing green and effective methods for extraction of valuable compounds and their utilization in target industrial sectors. This COST Action shall bridge the collaboration gaps and connect the fragmented initiatives to offer solutions that are cost-effective, tailored to local needs and demands, environmentally friendly, scalable and acceptable by the end-users. These ambitious goals will be reached through knowledge creation (STSMs, virtual mobility, publications), training and knowledge sharing (workshops, training schools, career development opportunities for YRI) and the vision to become a hub of expertise and collaboration in the years to come.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Environmental biotechnology: Environmental biotechnology, e.g. bioremediation, biodegradation 2. Biological sciences: Environmental and marine biology	1. Marine biomass 2. Biological waste 3. Circular economy 4. Biotechnology 5. Sustainability

COST Members

Main Proposer: Slovenia

Network of Proposers:

Full Member: Bosnia and Herzegovina, Croatia, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Malta, Portugal, Serbia, Slovenia, Spain, Türkiye

Main and secondary proposers: 31,03% YRI / 75,90% Women / 71,43% ITC

Specific Organisations

European RTD Organisation: CIIMAR - Interdisciplinary Centre of Marine and Environmental Research of the University of Porto

Industrial Dimension

SMEs: Greece, Malta

CA25126
Radiocarbon Collaborative for South American Heritage and Environmental Timelines
(OC-2025-1-28822)

SUMMARY
The **ARCHETime** project establishes a groundbreaking network dedicated to transforming our understanding of South America's rich history and dynamic environment. Recognizing the critical role of precise dating in archaeological and paleoecological research, **ARCHETime** creates a collaborative ecosystem centered around radiocarbon dating and other cutting-edge analytical techniques. This network directly addresses the challenge of fragmented knowledge, working to bring together experts from various disciplines in South America. More specifically, by providing the tools to combine radiocarbon dating with environmental records, **ARCHETime** will provide an accurate reconstruction of the historical and ecological events. **ARCHETime** envisions a future where South America's rich heritage is understood through robust, collaborative research. By making radiocarbon dating and associated techniques accessible to the wider research community, **ARCHETime** aims to inspire new insights, preserve precious cultural resources, and empower communities to adapt and prosper in a changing world.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Earth and related Environmental sciences: Geochemistry, isotope geochemistry 2. History and Archeology: Archaeology, archaeometry, landscape archaeology	1. radiocarbon 2. calibration curves 3. carbon cycle 4. archaeology 5. dendrochronology

COST Members
Main Proposer: Poland
Network of Proposers:
Full Member: Czech Republic, France, Germany, Hungary, Norway, Poland, Slovakia, Spain

Main and secondary proposers: 38,70% YRI / 41,90% Women / 50,00% ITC

International Cooperation
International Partner: Argentina, Australia, Chile, Japan, Peru, United States

Specific Organisations
International Organisation: Laboratorio de dendrocronología, Facultad de Ciencias Forestales y Recursos Naturales, Universidad Austral de Chile, Chile

CA25127
Smart Practice in Large-scale Solar PV Projects in Europe
(OC-2025-1-28824)

SUMMARY
In response to the pressing climate emergency in Europe, the development of large-scale solar photovoltaic (PV) farms has emerged as a pivotal strategy. However, their deployment has sparked political, social, and environmental controversies. The SmartSolar Action aims to overcome these challenges by establishing an interdisciplinary network of experts. The Action's main objective is to develop and promote "smart" practices for large-scale solar PV deployment, focusing on sustainability, inclusivity, and innovative policy solutions. Achieving the European Union's ambitious target of 600 GW of installed solar PV by 2030 presents several challenges, including the need for upgraded grid connections, a greater pool of trained professionals, improved incentives for solar PV adoption, expedited permitting processes, and enhanced opportunities for developing supply chains and financing mechanisms. The network will synthesize knowledge on effective policies and implementation strategies, building capacity among planners, developers, policymakers, and community leaders to ensure sustainable solar PV deployment.
The consortium includes fourteen institutions from twelve countries, with seven from Inclusiveness Target Countries. The team is characterized by its diversity in age, gender, and disciplinary backgrounds, encompassing fields such as geography, sociology, landscape ecology, political science, landscape architecture, mechanical engineering, electrical engineering, and urban planning. Through this collaborative effort, SmartSolar will foster an inclusive and sustainable energy future for Europe

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Social and economic geography: Spatial development, land use, regional planning 2. Social and economic geography: Socio-economic aspects of environmental sciences 3. Political Science: Public administration, public policy 4. Electrical engineering, electronic engineering, Information engineering: Energy aspects of electrical and electronic engineering 5. Mechanical engineering: Sustainable engineering	1. Solar Photovoltaic 2. Lifecycle 3. Holistic 4. Smart 5. Policy

COST Members
Main Proposer: United Kingdom
Network of Proposers:
Full Member: Belgium, Cyprus, Czech Republic, Greece, Italy, Latvia, Netherlands, Poland, Portugal, Slovenia, Spain, United Kingdom

Main and secondary proposers: 26,31% YRI / 52,60% Women / 58,33% ITC

CA25128
Implementation of advanced management strategies in chronic kidney disease: towards kidney health
(OC-2025-1-28830)

SUMMARY
Chronic Kidney Disease (CKD) affects up to 11% of the European population, resulting in estimated total annual health cost **exceeding €140 billion**. Tools developed throughout decades of research have the potential to improve CKD management, nevertheless their **implementation is hindered due to lack of communication among stakeholders**.

In response to the growing CKD burden and the need for the coordinated efforts, the Action will establish a **pan-European, multi-disciplinary network** involving scientists, physicians, payers (e.g. health insurers), health economy experts, regulators, policy makers, and patient representatives. It will coordinate dialogue and knowledge exchange to overcome communication gaps and establish a roadmap towards advancing CKD management based on precision medicine.

The Action will harmonise bio-sample and data collection and handling, integrate existing resources to support clinical trials, prioritize tools for implementation, to deliver a pipeline for their transfer into healthcare system considering the legal, regulatory and health economic framework. The Action will also raise public awareness and promote education on prevention and early diagnosis. The Action will coordinate its activities through Working Groups, training schools/ workshops and short-term scientific missions.

The strong **inclusive and educational focus** is reflected in a network of >25 COST Member Countries, with a majority from ITCs, and numerous YRIs, which will be expanded during the course of the Action. **The Action is fully aligned with the COST mission** and will provide the urgently needed communication platform to translate scientific findings into benefits for patients and the society, while integrating available resources to strengthen future collaborative research.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Nephrology 2. Medical biotechnology: Databases, data mining, data curation, computational modelling 3. Clinical medicine: Non-communicable diseases	1. chronic kidney disease 2. Precision medicine 3. Personalised intervention 4. multi-disciplinary approach 5. Implementation

COST Members
Main Proposer: Germany
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bosnia and Herzegovina, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Italy, Latvia, Lithuania, Moldova, Netherlands, North Macedonia, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Türkiye, United Kingdom
Cooperating Member: Israel
Partner Member: South Africa

Main and secondary proposers: 29,41% YRI / 51,50% Women / 57,69% ITC

International Cooperation

International Partner: Australia

Industrial Dimension

SMEs: Austria, France, Germany, Greece
Large companies: Denmark

CA25129
NutriSENSE: A European Network on Bioactives for Personalized Nutrition and Gut Health

(OC-2025-1-28851)

SUMMARY

NutriSENSE is driven by the conviction that personalised nutrition can address Europe's pressing health and sustainability challenges. Current research on diet, bioactives, and the microbiome is fragmented, limiting reproducibility and translation into policy and innovation. NutriSENSE will overcome these barriers by creating an inclusive, interdisciplinary network that establishes Europe as a leader in personalised nutrition. Its mission is to provide the scientific and societal foundation for health-effective, sustainable, and accessible personalised strategies, contributing to healthier aging and a reduced burden of diet-related non-communicable diseases.

Anchored in the COST mission, NutriSENSE will harmonise methodologies, build interoperable databases, and apply AI tools to generate actionable recommendations. By engaging scientists, policymakers, industry, NGOs, and citizens, it will ensure that knowledge leads to tangible societal benefits.

Inclusiveness is central. A Membership Expansion Team will foster broad participation, with the goal of engaging at least 40 COST countries by the end of the first grant period. Special emphasis will be placed on Inclusiveness Target Countries (ITCs), ensuring access to funding, infrastructures, and leadership roles. Gender equity will be promoted through a Gender Balance Coordinator and Action Plan, while Young Researchers and Innovators (YRIs) will gain visibility through a dedicated Think Tank, mentoring schemes, and leadership opportunities. Policy relevance is strong, with contributions to the European Green Deal, Farm to Fork Strategy, EU4Health, and the UN Sustainable Development Goals. By its conclusion, NutriSENSE will deliver harmonised guidelines, AI models, databases, and toolkits, leaving a durable, inclusive network that continues beyond the Action's lifetime.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Agricultural biotechnology: Biotechnology (non-medical) 2. Agricultural biotechnology: Fermentation	1. Personalised Nutrition 2. Bioactives–Microbiome Interactions 3. Healthier Aging 4. Sustainable Food Systems 5. AI-Driven Integration

COST Members

Main Proposer: Romania
Network of Proposers:
Full Member: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Lithuania, Luxembourg, Moldova, North Macedonia, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 31,34% YRI / 64,20% Women / 68,97% ITC

International Cooperation

Near Neighbour Country: Algeria, Tunisia
International Partner: Argentina, Chile

Specific Organisations

European RTD Organisation: Danish Technological Institute

Industrial Dimension

SMEs: Estonia, Greece, Poland, Serbia

CA25130
Next-Generation Mathematics and Computer Science Education with Large Language Models

(OC-2025-1-28855)

SUMMARY

The rapid emergence of large language models (LLMs) opens new possibilities for mathematics and computer science education, but also raises significant challenges. While LLMs can support reasoning, problem-solving, programming, and communication skills, their integration into education remains fragmented, uneven, and lacking clear strategies. Moreover, ethical, equity, and inclusion issues demand urgent attention to ensure responsible use.

This COST Action establishes a sustainable European network connecting educators, researchers, teacher education institutions, AI experts, and ethicists. Its research coordination objectives focus on analyzing and advancing methodologies for LLM integration in Mathematics and Computer Science education, comparing didactic strategies across contexts, developing teacher competence frameworks, addressing ethical and legal concerns, and co-developing robust cross-country research instruments. In parallel, its capacity-building objectives emphasize strengthening professional development, empowering teacher education institutions, supporting young researchers, and ensuring broad dissemination and outreach.

The dual focus on research coordination and capacity building ensures that the Action not only advances knowledge and pedagogical innovation but also fosters sustainable networks, professional development, and inclusive participation. By emphasizing societal impact, it promotes digital inclusion, ethical awareness, and equitable access to AI-enhanced education, thereby reducing social disparities and supporting responsible integration of technology.

The Action will generate evidence-based pedagogical frameworks, comparative studies, and competence models that underpin effective practice. It will also produce joint publications, policy briefs, and open-access resources, positioning Europe as a leader in the responsible use of AI in education. Through interdisciplinary and cross-national collaboration, the Action will create lasting value for educators, learners, and society at large.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Educational sciences: Education: training, pedagogy, didactics 2. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 3. Mathematics: Discrete mathematics and combinatorics 4. Computer and Information Sciences: Mathematics applied to computer science, mathematical aspects of computer science	1. Mathematics education 2. Computer science education 3. Human–AI interaction in learning 4. Educational technologies 5. Large Language Models

COST Members

Main Proposer: Bosnia and Herzegovina

Network of Proposers:

Full Member: Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Finland, France, Germany, Greece, Lithuania, Netherlands, North Macedonia, Norway, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, Türkiye

Main and secondary proposers: 32,69% YRI / 55,80% Women / 60,87% ITC

CA25131
Risk and Resilience in the Supply Chain of Critical Raw Materials
(OC-2025-1-28863)

SUMMARY
DeepImpact tackles Europe's Critical Raw Materials (CRMs) challenges by addressing fundamental differences between natural and social sciences, with the aim of empowering European buyers to more effectively contribute to meet the EU CRM Act targets. The project focuses on fragmentation between geoscience and supply chain management research in addressing CRM issues, at the dataset, methodology and incentive structure levels. Solving those challenges helps in improving managerial adoption of incentive and financing schemes available to European buyers and, in turn, address CRM issues in their supply chains.

DeepImpact's objectives are to coordinate research and build research capacity across natural and social sciences. It will create an integrated research agenda, a data catalogue and interoperability framework, and method alignment for mapping and risk analysis, run dialogue platforms and collect evidence on best practices in incentive and relevant financing schemes. Work is organised in four WGs: Data & Interoperability, Risk/Resilience & Governance, Finance & Incentives, all supported by a Living Lab (WG4) that aims at facilitating 5–10 cross-disciplinary pilots, runs Annual Conferences, manages STSM "voucher" calls, and publishes relevant broad scope literature. By the end of the Action, the network aims to engage more than 1,000 participants, seed 2–5 EU project proposals, and demonstrate measurable improvements across transdisciplinary pilots of research-industry collaboration. The expected impacts are reduced research fragmentation, better buyer decisions in dealing with CRMs, and wider use of transdisciplinary evidence in incentives and financing schemes, turning policy intent into operational change along CRM supply chains in mobility and power generation.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Economics and business: Business and international management 2. Earth and related Environmental sciences: Mineralogy, petrology, igneous petrology, metamorphic petrology 3. Environmental engineering: Environmental and geological engineering 4. Environmental engineering: Mining and mineral processing 5. Economics and business: Sustainability	1. Critical Raw Materials 2. Supply Chain Management 3. Supply Chain Resilience 4. Geoscience 5. Mining Engineering

COST Members
Main Proposer: Netherlands
Network of Proposers:
Full Member: Albania, Belgium, Croatia, Finland, Germany, Greece, Hungary, Italy, Netherlands, Poland, Romania, Slovakia, Slovenia, Sweden, Türkiye
Partner Member: South Africa

Main and secondary proposers: 50,00% YRI / 77.30% Women / 60,00% ITC

International Cooperation
Near Neighbour Country: Egypt

CA25132
MXene-Based Catalysts for Sustainability Chemical Challenges
(OC-2025-1-28887)

SUMMARY
The European society's wellness is currently at stake, having to confront enormous sustainability challenges, including harnessing renewable energy sources without compromising the environment, fighting climate change, and fertilizing crops to sustain its growing population. At the core of each of these challenges lies a current chemical technology limitation, from H_2 generation and its economy, to CO_2 capture/conversion to close the C-cycle, and the obtaining of N-based fertilizers from green H_2 and energy. Reaching these advances requires the development of highly active, selective, stable, and cost-effective catalysts with large surface areas.

The current bottleneck is the lack of candidate catalyst materials using Earth-abundant elements. Towards this end, the MXeneCatSus COST Action proposes MXenes —few-layered two-dimensional materials— to be engineered for these purposes, with favourable reported results in thermo-, electro-, and photocatalysis. While the European scientific community has made significant contributions to these advances, the collaboration and knowledge exchange between its independent groups have been limited. This underlines the need to strengthen and expand the collaborative network, particularly by fostering the research and training opportunities for young scientists.

The ultimate aim of the MXeneCatSus COST Action is thus to establish an organized, functional European network of scientists capable of delivering MXene-based catalyst solutions for the aforementioned European challenges, through the combined efforts of theoretical and experimental researchers, key for making breakthrough advances in the field, aiming at a long-term implementation connecting suppliers and end-users, and with the potential for an immeasurable impact on Europe's economy and societal well-being.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Chemical sciences: Theoretical and computational chemistry 2. Materials engineering: Surface modification 3. Nano-technology: Databases, data mining, data curation, computational modelling 4. Chemical engineering: Catalysis 5. Environmental engineering: Energy and fuels	1. Synthetic Procedures 2. Computational Materials Science 3. Catalytic Conversion 4. MXene Materials 5. Machine Learning

COST Members
Main Proposer: Spain
Network of Proposers:
Full Member: Austria, Bulgaria, Croatia, Czech Republic, Estonia, France, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 40,38% YRI / 53,80% Women / 60,87% ITC

Industrial Dimension
SMEs: Latvia, Ukraine
Large companies: Spain

CA25133
European Legal Design Action
(OC-2025-1-28904)

SUMMARY
The European Legal Design Action (ELDA) strengthens Europe by making laws, regulations, and contracts work better in practice. Across Europe, these frameworks have become so complex that they often hinder rather than help their users, reducing innovation and competitiveness. ELDA unites legal and regulatory experts, designers, technologists, policymakers, businesses, and scholars to co-create next-generation tools and solutions that make law understandable, actionable, and easier to comply with, building on the Better Regulation and REFIT agendas.

Starting bottom-up, and drawing on advances in AI, interactive tools, and plain language, ELDA applies legal design to make existing laws and regulations more accessible, sustainable, and effective for people, SMEs, and authorities. In parallel, it aims to improve top-down policy and lawmaking, ensuring that future laws and guidance are designed with clarity, usability, and compliance in mind from the outset.

ELDA builds pan-European legal design capacity, equipping a new generation of experts with the skills and tools to develop and apply innovative solutions. It creates a collaborative platform for mutual learning and knowledge exchange across countries and sectors, moving beyond isolated projects.

By connecting top-down and bottom-up perspectives, ELDA helps turn regulatory ambition into real-world action. It integrates design, plain language, and AI into the creation and implementation of legislation, regulation, and contracts - simplifying complexity, promoting sustainability, and levelling the playing field so SMEs can compete with larger actors. In doing so, ELDA enables laws and contracts that are clearer, fairer, easier to implement, and ultimately more effective for all.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Law: Legal theory, legal systems, constitutions, comparative law 2. Languages and literature: Linguistics: formal, cognitive, functional and computational linguistics 3. Computer and Information Sciences: Ethics of computer and information sciences 4. Economics and business: Sustainability 5. Law: Private law	1. Legal Design 2. Bridging the Implementation Gap 3. Sustainability 4. Plain Language 5. Regulatory Complexity

COST Members
Main Proposer: Estonia
Network of Proposers:
Full Member: Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Georgia, Germany, Hungary, Italy, Lithuania, Malta, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom
Partner Member: South Africa

Main and secondary proposers: 32,35% YRI / 60,60% Women / 62,07% ITC

International Cooperation
International Partner: Australia, Brazil, Canada, Chile, Colombia, New Zealand, South Korea, United States

Specific Organisations
EU Institutions, Bodies, Offices and Agencies (EC/EU): European Parliament; European Parliament
International Organisation: United Nations Entity for Gender Equality and the Empowerment of Women

Industrial Dimension

SMEs: Brazil, Finland, Italy, Lithuania, Malta, North Macedonia, Portugal, South Africa, South Korea, Spain, United Kingdom, United States
Large companies: Brazil, Türkiye

CA25134
EDGE: Edges of Democracy, Geography & Environment

(OC-2025-1-28905)

SUMMARY

Europe's liberal civic identity and emphasis on procedural democracy has offered only a thin solidarity, fostering limited cohesion, affective bonds, and collective attachment. Many have turned to alternatives promising deeper belonging; often populist, nativist, and ethno-national movements. Mainstream liberal discourse still assumes democratic culture is neutral and colourblind, even though these norms and solutions are depleted and fail to address crises including right-wing populism, global warming, and migration.

The EDGE COST Action addresses this thinness by turning to Europe's margins, peripheries, and borderlands, where political practices have long diverged from liberal norms. EDGE explores thick, robust, embodied vernacular democratic and civic practices that foster strong cohesion and solidarity without ethno-national, racial, or nativist connotations. History, heritage, and narratives of belonging create this attachment and therefore cultural production, mapping, lexicons, and pedagogies are key tools EDGE will use to centre peripheries and improve democratic participation across Europe and beyond. EDGE activities aim to approach democratic culture anew across disciplines and sectors, by bringing key stakeholders together to collect, theorize, and innovate democratic life at Europe's edges. Rather than assuming democracy is a static arrangement or universal norm, EDGE examines how different communities *live* democracy by articulating justice, negotiating disagreement, and enacting collective life. In doing so, this COST Action opens conceptual space for rethinking democracy from below through plural, situated, contested vernacular forms that animate public life across Europe's geographic, cultural, and epistemic margins.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Sociology: Anthropology, ethnology, cultural studies 2. Political Science: Democratization, social movements 3. History and Archeology: Colonial and post-colonial history, global and transnational history 4. Media and communications: Media and communications, social aspects of information science and surveillance, socio-cultural communication 5. Languages and literature: Translation and interpretation	1. Democracy 2. Geography 3. Environment 4. Europe 5. Political Inclusion

COST Members

Main Proposer: United Kingdom
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Finland, France, Germany, Greece, Italy, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Türkiye, United Kingdom

Main and secondary proposers: 50,00% YRI / 57,70% Women / 54,17% ITC

International Cooperation

Near Neighbour Country: Morocco, Tunisia
International Partner: Canada, Hong Kong SAR, United States

Specific Organisations

European RTD Organisation: CHAM - Centro de Humanidades (NOVA FCSH/UaC); European University

Institute; European University Institute
International Organisation: Office of the UN High Commissioner for Human Rights

Industrial Dimension
SMEs: Greece, Türkiye

CA25135
Harmonizing and promoting Sarcocystis surveillance and diagnosis across Europe and beyond
(OC-2025-1-28951)

SUMMARY
Sarocystis species are protozoan parasites with worldwide distribution. Although more than 200 species have been described, sarcocystosis remains a neglected parasitic disease. The life cycle of most *Sarcocystis* spp. is still unknown, and available data on their occurrence in wild and domestic animals, foodstuffs and the environment are fragmented. Moreover, the zoonotic potential of several species has been poorly investigated. Increasing evidence of their possible association with gross pathological changes detectable at slaughter, such as eosinophilic myositis, has drawn growing attention from the food industry, although the aetiology remains uncertain.

The SarCOST Action represents the first coordinated and inclusive initiative to unite scientists, researchers and professionals across Europe and beyond to address the diversity, distribution, hosts and impact of *Sarcocystis* spp. on animal health, food safety and public health. Building on the recommendation of the European Food Safety Authority (EFSA, 2010) for harmonised monitoring and reporting schemes, the Action will integrate and share research efforts among countries to fill existing knowledge gaps and standardise diagnostic and surveillance approaches.

Through its interdisciplinary network, SarCOST will foster collaboration between academia, industry, and public authorities, promoting the participation of underrepresented groups and inclusiveness target countries. By engaging stakeholders and policymakers, the Action will strengthen knowledge transfer and capacity building, delivering scientific, economic and societal benefits.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Biological sciences: Parasitology 2. Veterinary science: Veterinary medicine (miscellaneous) 3. Health Sciences: Parasitology 4. Animal and dairy science: Parasitology	1. Sarcocystis spp. 2. Foodborne parasite 3. Zoonotic disease 4. Harmonized diagnostic and surveillance methods 5. Public health

COST Members
Main Proposer: Italy
Network of Proposers:
Full Member: Belgium, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Netherlands, North Macedonia, Poland, Portugal, Romania, Slovenia, Spain, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 44,59% YRI / 50,00% Women / 62,50% ITC

International Cooperation
International Partner: Argentina

Specific Organisations
European RTD Organisation: Institute of Food Safety, Animal Health and Environment BIOR
International Organisation: IDEXX

Industrial Dimension
SMEs: Poland

CA25136
Intelligent Soft Materials via Chemical Feedback Control at Materials Interfaces
(OC-2025-1-28965)

SUMMARY
Future technologies like wearables, healthcare (micro)robots, and advanced sensors require components that make rapid autonomous decisions in dynamic environments. While current electronics struggle with such complex, decentralized processing, simple biological organisms excel; octopus arms, for example, can independently solve tasks without direct brain control. Designing materials with similar built-in intelligence remains a fundamental challenge, requiring a multidisciplinary and integrated approach uniting chemistry, physics, and materials sciences. However, expertise in these areas remains scattered and a consensus on design principles distant.

INFORMat brings together European experts (and beyond) to establish core principles for intelligent soft materials. To date, it is unclear how to instill materials intelligence, but feedback and self-regulation are recognized as crucial steps to bring stimuli-responsive materials towards intelligent (life-like) materials. By fostering interdisciplinary collaboration, INFORMat will serve as training ground for young researchers and innovators (YRIs), widening participation and forging a cohesive generation of innovators in the emerging field of intelligent materials. The Action will define key terms, catalog promising approaches and material platforms, and develop roadmaps for advanced features such as sensing, decision-making, signaling, and movement.

The network's experts will integrate theoretical and experimental expertise to gather data, work towards functional prototypes, and tighten collaboration for future research and innovation funding. INFORMat will also engage private/industrial partners to shape real-world applications. The resulting shared vision and capacity building will help position Europe at the forefront advanced materials development, transitioning from academic research to practical, sustainable, and economically beneficial applications.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Chemical sciences: Supramolecular chemistry 2. Chemical sciences: Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions 3. Materials engineering: Soft condensed matter (e.g. liquid crystals) for materials engineering applications 4. Materials engineering: Phase transitions (phase change), phase equilibria for materials engineering applications 5. Chemical engineering: Intelligent materials, self assembled materials	1. Systems Chemistry 2. Smart Materials 3. Material Intelligence 4. Soft Robotics 5. Sensors

COST Members
Main Proposer: Netherlands
Network of Proposers:
Full Member: Croatia, Czech Republic, Estonia, France, Germany, Hungary, Italy, Luxembourg, Netherlands, Poland, Portugal, Serbia, Spain, United Kingdom

Main and secondary proposers: 48,27% YRI / 41,40% Women / 50,00% ITC

Specific Organisations
International Organisation: Eastern Institute of Technology, Ningbo

CA25137
Nurse Prescribing Policies and Education: Collaborative European Initiatives for alignment and impact
(OC-2025-1-28969)

SUMMARY
Healthcare systems in Europe are under pressure as they encounter challenges related to aging populations, multi-morbidity, more complex and chronic care needs, and staff shortages. The search for methods to provide efficient, cost-effective care that reaches those with the highest needs is fundamental in achieving Europe's ambition to unlock sustainable health outcomes with durable policies to address health inequality. Nurse Prescribing (NP) is considered to be such a method and has been adopted across various European countries, albeit in substantially divergent models.

ALIGN-NP gathers experts to work towards a European, data-informed, unified NP strategy by
(1) the development of a data strategy for the sustainable monitoring of NP,
(2) capturing current European NP practices, policies and education in data, and
(3) reaching consensus and setting up impactful, bottom-up activities, including a repository of digital tools to support NP, a European guidance on NP, a white paper and a European train-the-trainer.
ALIGN-NP will allow to learn from the diversity of NP models, to provide evidence for improving NP practices, education and policies, and to support new implementation processes.

In a strategic network, including local key informants, information on policies, education, digital tools and available data sources will be brought together. Trainings schools, workshops, international mobility and meetings facilitate research coordination and capacity building. Additional data will be collected with special attention to patient reported outcome and experience measures. A core outcome set and data framework for NP research will be created. Cost-effectiveness is considered a main factor throughout the whole Action.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Nursing 2. Health Sciences: Health services, health care research	1. Nurse Prescribing 2. Education 3. Healthcare policy

COST Members
Main Proposer: Belgium
Network of Proposers:
Full Member: Belgium, Croatia, Cyprus, Czech Republic, Estonia, Finland, Germany, Greece, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Moldova, Netherlands, North Macedonia, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 40,42% YRI / 63,80% Women / 60,00% ITC

Specific Organisations
European RTD Organisation: Na Homolce Hospital

CA25138
Secure and Adaptive Frameworks for Environmentally sustainable Offshore WIND expansion
(OC-2025-1-28970)

SUMMARY
Europe requires a seven-fold expansion of offshore wind (OSW) capacity by 2030 to achieve its ambitious net zero goals. Meeting this target in a way that is safe, resilient and sustainable requires new turbine structures but also solutions to bottlenecks in grid and port infrastructure, streamlined regulatory processes and optimisation of socio-economic benefits for coastal communities. Co-existence adds further complexity through OSW interactions with fisheries, sea users and marine ecosystems, where long-term impacts remain poorly understood.

Artificial Intelligence (AI) has potential to enable transformative change to OSW site planning and logistics, impact assessment and workforce training. It can inform processes to overcome barriers across regulation, infrastructure, and coexistence. However, with growing automation of operational infrastructure, new vulnerabilities arise. Cybersecurity risks, such as external model manipulation, data theft, and unsafe agent behaviour, pose threats to turbines, grids, and autonomous vessels, and could undermining energy security. AI's own environmental footprint has also come under scrutiny, highlighting the need for low-cost, energy-efficient algorithms. Moreover, climate change introduces deep uncertainty for OSW design and operations through shifts in wind patterns, rising sea levels, and intensifying storms that can complicate energy yield forecasts, structural health monitoring, and vessel access. AI can support adaptation by downscaling climate models, forecasting extreme events, and embedding risk-aware learning into digital twins.

This COST Action convenes a balanced, inclusive, geographically-diverse network of experts. By highlighting gaps in data, knowledge, regulation, and best practice, it will create roadmaps towards safe, sustainable, digitally-enabled OSW growth and strengthen Europe's OSW leadership.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Other engineering and technologies: Sustainability for other engineering and technologies 2. Earth and related Environmental sciences: Meteorology, atmospheric physics and dynamics 3. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 4. Economics and business: Development, economic growth, competitiveness	1. offshore wind 2. sustainability 3. resilience 4. artificial intelligence

COST Members
Main Proposer: United Kingdom
Network of Proposers:
Full Member: Albania, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 35,82% YRI / 28,40% Women / 50,00% ITC

International Cooperation
International Partner: Canada, United States

Industrial Dimension

SMEs: Ireland, United Kingdom
Large companies: United Kingdom

CA25139
Building Resilient Agri-Food Systems Through Sustainable Supply Chain Innovation

(OC-2025-1-28973)

SUMMARY

European agri-food supply chains face unprecedented challenges threatening food security, environmental sustainability, and economic viability. Climate change, geopolitical tensions, and evolving consumer demands have exposed critical vulnerabilities in traditional linear supply chain models. BRASSCI establishes a research and innovation network that develops, validates, and implements integrated solutions for transforming agri-food supply chains into climate-resilient, digitally-enabled, and economically viable systems that ensure food security whilst advancing sustainability and circularity across diverse European contexts.

The Action addresses eight interconnected challenges through dedicated Working Groups: climate change adaptation and mitigation; digital transformation and technology integration; supply chain diversification and risk management; circular economy implementation and waste reduction; multi-stakeholder coordination and knowledge transfer; economic viability and fair transition; consumer behaviour and market transformation; and regulatory harmonisation and policy integration.

BRASSCI pursues five Transdisciplinary Research Coordination Objectives focused on integrated system modelling, breakthrough innovations, transition pathways, harmonised evaluation frameworks, and international cooperation. Five Capacity-building and Stakeholder Empowerment Objectives strengthen capabilities among farmers, SMEs, young researchers and innovators—particularly from Inclusiveness Target Countries—whilst enhancing policymaker understanding, consumer awareness, and industry-academia collaboration.

Through Short-Term Scientific Missions, training schools, policy dialogue fora, and pilot demonstrations, BRASSCI facilitates knowledge exchange and validates sustainable practices across diverse European contexts. The Action produces open-access publications, technical guidelines, policy briefs, and interactive decision-support tools that accelerate adoption of proactive and responsive approaches. By coordinating complementary research activities and building lasting networks, BRASSCI delivers measurable environmental, economic, and social impacts aligned with EU Green Deal objectives and UN Sustainable Development Goals.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Other agricultural sciences: Sustainable production 2. Economics and business: Sustainability Economics and business: Strategy and management 3. Chemical sciences: Sustainability 4. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems	1. Agri-Food System 2. Supply Chain 3. Resilience 4. Sustainability

COST Members

Main Proposer: Greece
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bulgaria, Croatia, Cyprus, Denmark, Finland, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Malta, Moldova, Netherlands, Poland, Portugal, Romania, Serbia, Spain, Türkiye

Main and secondary proposers: 29,31% YRI / 53,40% Women / 60,87% ITC

International Cooperation

Near Neighbour Country: Egypt, Kosovo*, Morocco, Tunisia

Specific Organisations
International Organisation: Food and Agriculture Organization

Industrial Dimension
SMEs: Cyprus

CA25140
Moving Data for Europe
(OC-2025-1-28986)

SUMMARY
Data access is key for European research and innovation, and user-driven data access is one of the levers that Europe has put in place to accelerate it. A panoply of rights to data access and portability are transforming the possibilities to legally move and use data.
Anticipated to form the cornerstone of a more competitive Europe, the full potential of these rights remains however constrained by their lack of visibility, knowledge gaps, and uncertainty about how to use them in practice. Most crucially, the question of whether their regulation is fully fit for purpose must be tackled.

MovingData puts in motion a community of experts aiming to survey, test, re-think and future-proof user-driven data access in Europe. Connecting researchers across disciplines from law to computer science, but also regulators and civil society, and further bridging with data professionals and novel data actors, it will explore, test, disseminate and conceptualise emergent user-driven data access rights. It will survey regulatory developments in the European Union, the United Kingdom and Council of Europe level, generate evidence-based policy recommendations, and focus empirical efforts on two thematic areas corresponding to two European Data Spaces: health and tourism. It will also provide tools for teaching with and about data rights and share actionable guidance for successfully incorporating emergent data access tools into research and innovation.
Doing so, it will champion a better use of data law and data in Europe, strengthen European research capabilities and contribute to advancing towards more sustainable and prosperous societies.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Law: Legal theory, legal systems, constitutions, comparative law 2. Law: Databases, data mining, data curation, computational modelling 3. Computer and Information Sciences: Cryptology, security, privacy 4. Sociology: Databases, data mining, data curation, computational modelling 5. Other social sciences: Databases, data mining, data curation, computational modelling	1. data 2. research 3. methodologies 4. law 5. innovation

COST Members
Main Proposer: Belgium
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom

Main and secondary proposers: 53,84% YRI / 42,60% Women / 55,88% ITC

Specific Organisations
European RTD Organisation: European University Institute

CA25141
Futures Literacy for Anticipatory Societies – Strengthening Foresight Systems Across Europe (FLARE)
(OC-2025-1-29003)

SUMMARY
The Futures Literacy for Anticipatory Societies – FLARE Action aims to strengthen Europe's collective capacity to engage with uncertainty, complexity, and transformation by embedding Futures Literacy (FL) across education, governance, and innovation. In response to global crises, fragmented foresight practices, and uneven anticipatory capacity, FLARE establishes a four-year, pan-European COST network that unites researchers, educators, policymakers, and practitioners to co-create shared frameworks, tools, and indicators for futures-oriented learning and decision-making.

The Action addresses conceptual fragmentation and the lack of standardised methods by consolidating theory, curating a methods library with ethics-by-design protocols, and validating assessment tools to measure learning and policy impact. It advances six objectives: building a common conceptual foundation; developing methodological and ethical standards; establishing shared indicators; mainstreaming FL in education and governance; fostering an inclusive, interdisciplinary network; and amplifying policy and societal impact through communication and sustainability strategies.

FLARE's work is structured around four interconnected Working Groups: (1) theoretical and methodological foundations, (2) applied futures and education pathways, (3) assessment and evaluation, and (4) capability building and impact development. Activities include Living Labs, training schools, Short-Term Scientific Missions, and dissemination through open repositories, policy briefs, and conferences.

By bridging disciplines and sectors, FLARE will transform fragmented initiatives into a coherent European foresight ecosystem, enhance anticipatory governance, and cultivate a more futures-literate society. Its legacy will be a durable European community of practice capable of shaping inclusive, democratic, and resilient futures aligned with the UN Sustainable Development Goals and Horizon Europe's long-term vision.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Educational sciences: Education: training, pedagogy, didactics 2. Political Science: Political systems and institutions, governance 3. Economics and business: Strategy and management 4. Political Science: International studies, strategic studies, human rights, global and transnational governance	1. future literacy 2. anticipatory governance 3. foresight 4. future studies 5. strategic foresight

COST Members
Main Proposer: North Macedonia
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Denmark, Estonia, Finland, France, Hungary, Italy, Lithuania, Montenegro, North Macedonia, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Türkiye, Ukraine

Main and secondary proposers: 37,20% YRI / 55,80% Women / 63,64% ITC

International Cooperation
International Partner: Australia, United States

Specific Organisations
International Organisation: Norconsult Norge AS

Industrial Dimension
SMEs: Denmark, Poland, Portugal, Ukraine

CA25142
One Health European Network for Leptospirosis and Rodent-Borne Threats
(OC-2025-1-29012)

SUMMARY
Leptospirosis is produced by *Leptospira* spp. and presents a major public and animal health, and ecological issue in Europe. With the present situation being defined by the pathogen's complex ecology and transmission, increasing trend of human cases in recent years (5% annually), increasing rodent populations, increasing chemical resistance to rodenticides, growing societal demand for humane control of rodents, inconsistent surveillance and diagnosis leading to underestimated disease burden, limited vaccine options and efficacy, and insufficient cross-sectoral integration, the main challenge is to protect human and animal health by considering a One Health (OH) framework.

To address this gap, ONE-LEP will establish a network of excellence for integrating, harmonising and disseminating existing knowledge, as well as developing innovative services and tools. This will improve the accessibility of knowledge and healthcare across Europe and beyond. By targeting leptospirosis through a transdisciplinary framework
-integrating human, veterinary, environmental, and wildlife health- we foster the infrastructure, partnerships, and scientific momentum to address the broader rodent–pathogen interface.

ONE-LEP is comprised of five working groups that will coordinate existing and emerging leptospirosis-related activities in Europe. The network includes professionals from diverse disciplines and sectors—academia, government, NGOs—and spans EU full member, Cooperative, Partner, Near Neigbour and International COST countries. It promotes gender balance and prioritizes the active involvement of YRIs, especially from underrepresented groups and ITC countries.

The overarching goal is to advance healthcare systems, inform policy, and improve outcomes for both humans and animals affected by leptospirosis.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Infectious diseases 2. Health Sciences: Epidemiology 3. Veterinary science: Veterinary medicine (miscellaneous) 4. Animal and dairy science: Bacteriology	1. One Health 2. Leptospirosis 3. Zoonoses 4. rodent-borne diseases 5. European Network

COST Members
Main Proposer: Netherlands
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom
Cooperating Member: Israel
Partner Member: South Africa

Main and secondary proposers: 24,78% YRI / 54,70% Women / 56,25% ITC

International Cooperation
Near Neighbour Country: Egypt
International Partner: Brazil, Madagascar, United States

Specific Organisations
European RTD Organisation: Fondazione Edmund Mach

Industrial Dimension
Large companies: Netherlands

CA25143
Vaccines 360 degrees: Optimizing the use of vaccines for overall health benefits
(OC-2025-1-29018)

SUMMARY
Vaccines are extremely important public health interventions, but vaccine science and vaccine confidence are challenged. The vaccine debate is becoming polarised and politicised. This hampers vaccine science and fuels vaccine hesitancy. New knowledge about the broader immunomodulatory effects of vaccines and their potential to strengthen overall immune capacity is not sufficiently considered but may potentially strengthen vaccine confidence. Epidemiological studies have revealed that live vaccines can protect more broadly against unrelated infections. Supportive immunological data show that live vaccines can strengthen the innate immune system and thereby reduce the risk of other infections. Recent studies indicate that these effects extend to beneficial effects against non-communicable diseases and may reduce all-cause mortality in both children and adults.

VAC360 aims to unite dispersed research groups working on broader immunomodulatory vaccine effects, immune training and vaccine hesitancy across Europe. Including a broad range of stakeholders, the objectives include to (i) establish common protocols and platforms for multi-country studies of the broader and overall health effects of vaccines, (ii) provide biomarkers, (iii) map the monitoring of broader vaccine effects across Europe, (iv) create a collaborative European network to empower young researchers to study vaccines, (v) depolarise the vaccine debate, and (vi) establish a structured dialogue with vaccine policy-makers to ensure that scientific evidence on broader vaccine effects informs vaccination policies and strengthens trust through transparent, evidence-based governance – with the overriding aim to achieve impactful vaccination programs with optimised timing and scheduling of vaccines across the lifespan.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Infectious diseases 2. Health Sciences: Public and environmental health 3. Clinical medicine: Immunological memory and tolerance 4. Sociology: Anthropology, ethnology, cultural studies 5. Basic medicine: Systems biology	1. Vaccines 2. Immunomodulatory effects 3. Sex-differences 4. Overall health 5. Vaccination programs

COST Members
Main Proposer: Denmark Network of Proposers:
Full Member: Bosnia and Herzegovina, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, North Macedonia, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 25,00% YRI / 38,60% Women / 65,38% ITC

International Cooperation
International Partner: Canada, United States

Specific Organisations
International Organisation: International Vaccine Institute, Austria Country Office; Boston Children's Hospital

Industrial Dimension
SMEs: Netherlands
Large companies: Spain

CA25144
Inertial fusion energy: supply Chain of laser-targets from Exploration to Delivery
(OC-2025-1-29049)

SUMMARY
Recent experiments with high-energy lasers have established for the first time a burning plasma delivering more energy than was consumed for its creation. Large scale fabrication and delivery of efficient burn material is an essential pillar of Inertial Fusion Energy (IFE). These targets are currently manufactured on a small scale, and at great expense, individually or in small batches across multiple separate facilities in Europe, largely Universities or national laboratories. This Action aims at building permanent bonds between different actors in the field to

(I) study IFE based on available target technology with the potential to discover synergies,
(II) develop new simulation tools following up on available technology, i.e. for porous media,
(III) create first target supply chains drawing on available expertise,
(IV) outline a roadmap from small-scale manufacturing to large-scale fabrication,
(V) build novel target inserter technology compatible with reactor environments,
(VI) found working groups for different avenues towards laser-fusion, e.g. cryogenic wetted foams for direct-drive IFE and boronated targets for pB-fusion,
(VII) strengthen the community with an early involvement of graduate students and training of young researchers.

Purpose of ICED will be to establish a network of stakeholders for the design, fabrication and supply of targets for inertial fusion energy, promoting the delivery of new technology and an advanced theoretical understanding. The action aims to facilitate access to large-scale science infrastructures for experimental and numerical studies, supporting the career growth of young scientists with training activities, and boost the production of new knowledge and innovations by breakthrough discoveries.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Physical Sciences: Lasers, ultra-short lasers and laser physics 2. Physical Sciences: Gas and plasma physics (theory) 3. Physical Sciences: Nuclear physics (theory) 4. Physical Sciences: General physics 5. Materials engineering: Fluid dynamics (physics) for materials engineering applications	1. inertial confinement fusion 2. inertial fusion energy production 3. fuel supply chain 4. targetry for laser-plasma experiments 5. additive manufacturing

COST Members
Main Proposer: Czech Republic
Network of Proposers:
Full Member: Belgium, Czech Republic, France, Georgia, Germany, Greece, Hungary, Italy, Montenegro, Poland, Portugal, Romania, Serbia, Spain, Türkiye, United Kingdom

Main and secondary proposers: 36,98% YRI / 23,30% Women / 62,50% ITC

International Cooperation
Near Neighbour Country: Jordan
International Partner: Canada, China, Japan

Specific Organisations

European RTD Organisation: ELI-ERIC
International Organisation: EL-ERIC, ELI Beamlines

Industrial Dimension

Large companies: China

CA25145
Simulation Education And Research Collaborative in Healthcare

(OC-2025-1-29074)

SUMMARY

Healthcare simulation—techniques that recreate clinical events or environments for training, assessment, quality improvement, and research—has evolved from basic technical training into a well-established, complex, evidence-based approach that enhances patient safety and healthcare quality, as well as individual and team skill development.

However, simulation research in Europe remains fragmented across national, disciplinary, and professional boundaries, limiting collaboration, knowledge sharing, and equitable implementation. Five major challenges constrain its potential: keeping pace with rapid technological change; preparing healthcare professionals for increasingly complex and multicultural systems; translating simulation into measurable improvements in quality and safety; overcoming disciplinary and geographic fragmentation; and ensuring sustainable career pathways for emerging researchers.

The **Simulation Education And Research Collaborative in Healthcare (SEARCH)** will address these challenges by establishing a pan-European community of practice and research that connects academics, clinicians, industry, policymakers, scientific societies, and patient representatives. SEARCH will coordinate and strengthen healthcare simulation research, build capacity, and promote inclusiveness across Europe.

Building on the diffuse expertise of the European simulation community, SEARCH will align research efforts, strengthen capacity, and promote mutual learning, knowledge mobilisation, and translation. It will map existing resources, projects, and opportunities; identify barriers to knowledge transfer; develop an open-access toolkit alongside a ten-year European research agenda; foster interdisciplinary consortia; and help establish sustainable career pathways.

By aligning research, innovation, and policy, SEARCH will advance simulation science and establish a sustainable, inclusive European ecosystem for healthcare simulation research that will enhance healthcare outcomes across Europe well beyond the lifetime of the Action.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Health services, health care research	1. Healthcare simulation 2. Interdisciplinary Research 3. Experiential learning 4. Healthcare Quality and Safety 5. Community of Practice

COST Members

Main Proposer: Portugal
Network of Proposers:
Full Member: Austria, Croatia, Czech Republic, Finland, Germany, Greece, Italy, Latvia, Netherlands, North Macedonia, Poland, Portugal, Romania, Slovenia, Switzerland, Türkiye, Ukraine, United Kingdom
Partner Member: South Africa

Main and secondary proposers: 50,00% YRI / 55,80% Women / 61,11% ITC

International Cooperation

International Partner: United States

Industrial Dimension

SMEs: Austria
Large companies: Portugal

CA25146
Sustainable Aerosol and Particle Technology for Industrial Applications Network

(OC-2025-1-29092)

SUMMARY

Thie SPARTAN COST Action is tackling the challenge of scaling up Aerosol and Particle Technology (APT) for industrial applications. We develop advanced, energy-efficient aerosol-based methods, addressing all elements of the process-chain: raw materials for reactant feeds, multi-dispersion components, reactor architecture, process energy procurement and addition, reactor controls and others for nanoscale particle synthesis, functionalization and embedding in high performance/high value products.
Commercial applications are targeted in critical sectors such as energy generation/storage, healthcare, catalysis, electronics, sensors and others. Our focus is on optimizing production to reduce environmental impact while maintaining precision in particle size and functionality. Industry partners, SMEs, startups and academia/research institutions are joining this effort, to bring sustainable, scalable APT to the market.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Chemical engineering: Filtration and separation 2. Chemical engineering: Chemical engineering: processes and products (others) 3. Nano-technology: Nano-materials and nano-structures	1. aerosol and particle 2. sustainable technology 3. industrial applications

COST Members

Main Proposer: Greece
Network of Proposers:
Full Member: Cyprus, Czech Republic, Estonia, Finland, Germany, Greece, Hungary, Italy, Netherlands, Poland, Portugal, Romania, Spain, Sweden, Switzerland, Türkiye

Main and secondary proposers: 26,78% YRI / 44,60% Women / 56,25% ITC

Specific Organisations

International Organisation: University of Melbourne

Industrial Dimension

SMEs: Estonia, Germany, Greece
Large companies: Germany, Netherlands

CA25147
Bacteriophages for crop protection: Discovery, Exploration, Application & Society
(OC-2025-1-29131)

SUMMARY
Sustainable management of agricultural threats, such as plant-pathogenic bacteria, is crucial for food security in the context of environmental challenges. Despite its tremendous potential, bacteriophage biocontrol is still in its infancy and many challenges – not only technical, but also at the regulatory and societal level – need to be overcome before it can be used effectively in the agri-food sector.

Inspired by the One Health concept, the Phage4Crops project proposes to build an unprecedented, multi-stakeholder network in the field of bacteriophage biocontrol in the agri-food sector. To overcome the current lack of collaboration and communication between researchers and implementors, which is wasting synergies and momentum, we will bring together previously dispersed activities, resources and manpower, including experts in the fields of bacteriophage biology, bacterial genomics, metagenomics, bioinformatics, agronomy, epidemiology, microbial ecology, plant pathology and physiology, biotechnology and social sciences.

This project is innovative and timely as it addresses fundamental questions on different pathosystems of European interest in a global context, from the discovery and exploration up to the applicability of bacteriophages as biocontrol agents. We will establish protocols to guide the selection and deployment of bacteriophage-based solutions; isolate, characterise and make accessible novel bacteriophages; educate and train next generation of experts; create bridges between researchers, society and industry to integrate bacteriophage-based biocontrol into appropriate ecological and legislative framework. The Phage4Crops action will tightly link fundamental and applied bacteriophage research, building the critical mass to drive scientific progress, thereby strengthening the European Research Area and paving the way for bacteriophage applications.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Agriculture, Forestry, and Fisheries: Prevention and treatment of infection by pathogens (e.g. vaccination, antibiotics, fungicide) 2. Biological sciences: Microbiology 3. Biological sciences: Molecular biology and interactions 4. Agriculture, Forestry, and Fisheries: Agriculture related to crop production soil biology and cultivation, applied plant biology, crop protection 5. Biological sciences: Virology,	1. Bacteriophage biocontrol 2. Phytopathogenic bacteria 3. Sustainable plant protection 4. Bacterial plant diseases 5. Agricultural innovation

COST Members
Main Proposer: Czech Republic
Network of Proposers:
Full Member: Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Georgia, Germany, Greece, Hungary, Italy, Latvia, Moldova, Montenegro, Poland, Portugal, Serbia, Slovenia, Spain, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 35,63% YRI / 51,70% Women / 64,00% ITC

International Cooperation
Near Neighbour Country: Tunisia
International Partner: Brazil, Chile, Kenya, New Zealand, Uganda, United States, Vietnam

Specific Organisations
International Organisation: CIRAD -UMR PVBMT Pôle de protection des plantes (3P)

Industrial Dimension
SMEs: Czech Republic, Poland, Portugal, Slovenia, United Kingdom
Large companies: Belgium, Czech Republic, Germany, Hungary, United Kingdom

CA25148
Nanobiosensor Technology for Next-Generation Wearables: Towards Personalized Healthcare
(OC-2025-1-29146)

SUMMARY
WEARSENSNET Action will establish a multidisciplinary network to address unmet needs in the field of wearable medical biosensors for real-time monitoring and expand their application to new sectors. It will highlight and coordinate collaborations between academic, industrial and policy making stakeholders, to advance science and consolidate technology transfer in wearable biosensing devices. Despite substantial investment in developing wearable biosensors that provide non-invasive, continuous measurements of physiological parameters, via monitoring of body fluid biomarkers, very few analytes are currently detected. Additionally, detection is predominantly at high concentrations.
Challenges including sensitivity, integration, wearability, and detection of multiple analytes (biomarkers) at relevant concentrations, must be addressed for emerging applications in digital precision medicine and sports. Wearable biosensors are also envisioned for space exploration and remote monitoring where medical needs of astronauts resemble those of people living in underserved areas on Earth.

This Action focuses on integration of innovations in recognition, biomimetics, hybrid and nanomaterials, transducers, fabrication methods and data treatment to meet practical demands for real-world sensor applications. Medical scientists, bioengineers, chemists, physicists and nanotechnologists, engaged in **WEARSENSNET**, will share knowledge across these fields. Early-stage researchers will directly benefit from knowledge generated, being prioritised in short-term scientific missions; simultaneously, the Action encompasses a robust strategy for bringing together scientists, technology developers and end-users for accelerating technology progression towards the next generation of miniaturised, wearable nanobiosensors. **WEARSENSNET** Action's ultimate goal is the scientific and technological advancement of wearable biosensors, through new geographic/thematic collaborations and innovative projects, promoting European technological leadership in the field.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Chemical sciences: Electrochemistry, electrodialysis, microfluidics, sensors 2. Nano-technology: Nano-materials and nano-structures 3. Medical engineering: Medical engineering and technology	1. wearable nanobiosensor 2. continuous monitoring 3. bionanomaterials 4. multiplexed micro/nanofluidics - systems integration 5. precision medicine

COST Members
Main Proposer: United Kingdom
Network of Proposers:
Full Member: Austria, Cyprus, Czech Republic, France, Germany, Greece, Hungary, Italy, Lithuania, Luxembourg, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Ukraine, United Kingdom

Main and secondary proposers: 21,81% YRI / 47,30% Women / 60,00% ITC

International Cooperation
International Partner: Japan

Specific Organisations
International Organisation: University College London Hospital

Industrial Dimension

SMEs: Italy, United Kingdom
Large companies: Cyprus, Italy

CA25149
Reliability of Spectroscopy and Imaging based Photonic Technologies for Biomedical Applications

(OC-2025-1-29164)

SUMMARY

Photonic technologies including vibrational spectroscopy and nonlinear optical imaging as label-free approaches have shown unique advantages to investigate biological samples like cells, tissues, biofluid, bacteria, etc. Combined with data analysis and computational facilities, they have brought vast possibilities to deeper understanding diseases and biological processes and to gain unique insights in metabolisms, pathology, therapy, prognosis, precision medicine, and drug development. Broader clinical and biomedical applications of these technologies are, however, hindered by the lack of standardization and harmonization in both measurement and data analysis. This Action aims for community efforts with following stated goals to improve the situation.

· To establish standard protocols for photonic measurements including Raman, IR, and nonlinear optical imaging in clinical and biomedical applications.

· To establish standard pipelines of data analysis and data quality assessment for each photonic modality.

· To establish standard structures and information to be published and included as metadata for clearer data description and better reusability.

· To develop platforms for data management that will support the construction and maintenance of standard databases, and more importantly, smoother European wide cooperations and community studies.

· To develop a European-wide multidisciplinary network of researchers including pathologists, microbiologists, physicists, chemists, microbiologists, engineers, and big data scientists and align them with clinical applications towards a critical mass of participants to establish precision diagnostic requirements and address challenges in healthcare applications.

· To push forward the photonic technologies into broader clinical and biomedical applications.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Chemical sciences: Spectroscopic and spectrometric techniques 2. Biological sciences: Bioinformatics 3. Medical biotechnology: Databases, data mining, data curation, computational modelling 4. Computer and Information Sciences: Machine learning algorithms 5. Medical engineering: Diagnostic tools (e.g. genetic, imaging)	1. photonics technology 2. spectroscopy and imaging 3. standardization and harmonization 4. clinical application 5. biomedical application

COST Members

Main Proposer: Germany
Network of Proposers:
Full Member: Bulgaria, Croatia, Czech Republic, Denmark, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Spain, Türkiye

Main and secondary proposers: 24,32% YRI / 56,80% Women / 50,00% ITC

Industrial Dimension

Large companies: Bulgaria

CA25150
Interdisciplinary Approach for Clinical, Translational and Basic Challenges in NeuroFibromatosis and Schwannomatosis

(OC-2025-1-29166)

SUMMARY

Neurofibromatosis type 1 (NF1) and Schwannomatosis (SWN) are genetic diseases with severe clinical manifestations, greatly impacting the quality of life of affected individuals, including the development of benign and malignant nervous system tumors. Despite being rare, about 1 in 2500 people worldwide are afflicted by these diseases. The diverse clinical presentations and the complexity of certain traits require a multidisciplinary approach, not only for patient management, but also for research, which is crucial to develop novel potential therapeutic approaches.

The primary challenge that INTERACT-NF aims to address is the coordination of collaborative efforts among a critical mass of clinical, translational, and basic researchers and affected individuals and families, alongside other stakeholders like industry and policy makers. In addition to building a strong research community on NF1 and SWN and developing a collaborative research agenda, this action seeks to: harmonize NF1-SWN data and sample collection; reduce disparities in NF1-SWN research and innovation; foster multidisciplinary research on complex manifestations; strengthen basic and translational NF1-SWN research capacities; and enhance the visibility of NF1-SWN research.

INTERACT-NF is composed of clinical, translational and basic researchers in NF1 and SWN, comprising a wide range of disciplines and expertise, together with patient associations. INTERACT-NF promotes the active involvement of young researchers and innovators (YRIs), researchers from Inclusiveness Target Countries (ITC) and patient associations, while assuring gender balance. INTERACT-NF represents the most ambitious European initiative on NF1-SWN to date, concerning number and diversity of European countries involved, and the multidisciplinary natures of participants.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Oncology 2. Clinical medicine: Paediatrics 3. Biological sciences: Molecular biology and interactions 4. Clinical medicine: Dermatology and venereal diseases 5. Basic medicine: Molecular genetics, reverse genetics and RNAi	1. Neurofibromatosis 2. Schwannomatosis 3. genetic disease 4. interdisciplinary 5. network

COST Members

Main Proposer: Spain

Network of Proposers:

Full Member: Austria, Belgium, Czech Republic, France, Germany, Greece, Netherlands, Poland, Portugal, Romania, Serbia, Spain, Türkiye

Main and secondary proposers: 42,64% YRI / 55,90% Women / 53,85% ITC

CA25151
Human Prion Disease International Network
(OC-2025-1-29171)

SUMMARY
Human prion diseases are rare, rapidly progressive, and uniformly fatal neurodegenerative disorders for which there are no effective treatments. Progress in understanding, diagnosing, and managing these conditions depends on sustained international collaboration among the small number of specialist centres worldwide.

This Action will strengthen and expand activities of the network, bringing together clinicians, epidemiologists, laboratory scientists, neuropathologists, genetic counsellors, and biosafety experts working on prion diseases. Its overarching goal is to accelerate the development of reliable diagnostic and prognostic tools and to ensure preparedness for future therapeutic trials through coordinated, multidisciplinary, and multicentre collaboration.

The network will maintain close engagement with patient and family advocacy groups, providing a platform for exchange between scientists and those directly affected by prion disease. Meetings will facilitate dialogue, the sharing of lived experience, and access to expert information across countries.

Given the transmissible nature of prions and the requirement for disease notification in many jurisdictions, the network will also serve as an authoritative forum to produce consensus recommendations, guidelines, and minimum standards on clinical, diagnostic, and biosafety procedures.

Finally, the Action will support training, staff exchanges, and quality control initiatives to harmonise practice and spread excellence throughout Europe. By fostering collaboration across scientific and clinical disciplines and between professionals and affected families, the network will strengthen Europe's capacity to deliver high-quality research, surveillance, and care in the field of human prion disease.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Clinical neurology 2. Health Sciences: Epidemiology 3. Basic medicine: Genetic epidemiology 4. Basic medicine: Molecular and cellular neuroscience 5. Basic medicine: Genomics, comparative genomics, functional genomics	1. Epidemiological surveillance 2. Biomarkers 3. Risk factors 4. Prevention 5. Treatment strategies

COST Members
Main Proposer: Austria
Network of Proposers:
Full Member: Austria, Belgium, Cyprus, Czech Republic, Germany, Greece, Hungary, Italy, Poland, Portugal, Slovakia, Spain, Switzerland, United Kingdom

Main and secondary proposers: 7,40% YRI / 51,90% Women / 50,00% ITC International Cooperation

International Cooperation
International Partner: Australia, Canada

Specific Organisations

International Organisation: The Florey Institute Institute of Neuroscience and Mental Health

CA25152
LLM4Drugs: Advancing Reliable Evidence for Drug Development with Large Language Models

(OC-2025-1-29191)

SUMMARY

Drug development is slow, costly, and prone to late-stage failure – often due to fragmented evidence and missed safety or efficacy signals rather than scientific risk. Integrating data from preclinical studies, clinical trials, regulatory reports, and post-marketing surveillance remains largely manual and too slow for modern decision-making. Large language models (LLMs), able to extract and summarize complex and unstructured biomedical text, could accelerate evidence synthesis but remain unvalidated for regulatory-grade use. A coordinated effort is urgently needed to ensure their safe and effective application.

LLM4Drugs will build a pan-European, inclusive network to make evidence synthesis faster, more reliable, and auditable across the entire drug development pipeline. The Action brings together biomedical and clinical researchers, regulators and health technology assessment (HTA) bodies, the pharmaceutical industry and small and medium-sized enterprises (SMEs), AI developers, ethicists, patients, and non-governmental organizations (NGOs). It will (i) define concrete use cases; (ii) create multilingual benchmark datasets and gold-standard annotations; (iii) develop standard operating procedures (SOPs) and validation protocols aligned with regulatory requirements for traceability, reproducibility, and risk management; and (iv) deliver training, mentorship, and Short-Term Scientific Missions (STSMs) with strong participation from Inclusiveness Target Countries (ITCs) and early-career researchers.

The Action complements ongoing European initiatives such as REPO4EU/REPOSYSTEM and evidence synthesis initiatives by focusing specifically on LLM-supported evidence synthesis in drug development. This coordinated effort is timely to prevent fragmented development and to establish shared standards that improve transparency, reproducibility, and efficiency; thus, shortening the path from scientific discovery to effective, trusted treatments for patients.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Databases, data mining, data curation, computational modelling 2. Basic medicine: Pharmacology, pharmacogenomics, drug discovery and design, drug therapy 3. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 4. Computer and Information Sciences: Machine learning algorithms 5. Clinical medicine: Databases, data mining, data curation, computational modelling	1. Drug development 2. Evidence synthesis 3. Large language models

COST Members

Main Proposer: Switzerland

Network of Proposers:

Full Member: Austria, Bulgaria, Croatia, Czech Republic, Finland, Germany, Greece, Hungary, Latvia, Luxembourg, Montenegro, Netherlands, Portugal, Sweden, Switzerland

Main and secondary proposers: 36,00% YRI / 62,00% Women / 53,33% ITC

International Cooperation
Near Neighbour Country: Kosovo*

Industrial Dimension
SMEs: Luxembourg, Netherlands, Switzerland

CA25153
Human-centered Approaches to Responsible Privacy for and with AI
(OC-2025-1-29204)

SUMMARY
HARPA – Human-centered Approaches to Responsible Privacy for and with AI addresses the urgent need to protect privacy in an era dominated by Artificial Intelligence (AI). While AI offers vast potential to enhance productivity and innovation, it also magnifies privacy risks by processing personal data at scale, often without transparency or consent. HARPA views privacy not merely as a technical issue but as a cornerstone of autonomy, dignity, and human rights. Its mission is twofold: to mitigate privacy risks arising from AI and to harness AI itself to develop usable, human-centered privacy solutions.

HARPA identifies four core challenges: fragmented knowledge, cross-border regulatory complexity, lack of capacity and inclusivity, and gaps in education and awareness. To tackle these, it will create a transnational, interdisciplinary network uniting experts in computer science, law, psychology, and human-computer interaction. The Action's objectives include building a conceptual framework for human-centered privacy, harmonizing methodologies, and analyzing recurring AI-privacy failures, as well as creating an open repository, training early-career researchers, supporting cross-country inclusiveness, and fostering interdisciplinary collaboration.

The Action advances the state of the art by establishing a European knowledge infrastructure, harmonized frameworks for Privacy-by-Design, and practical educational resources. Networking is central to HARPA's rationale, enabling sustained, cross-sectoral dialogue and inclusion of underrepresented stakeholders. With a critical mass of **30 proposers (27 from 18 full COST members,** and 3 international proposers), HARPA will build capacity, raise awareness, and transform ethical principles into actionable, human-centric solutions — ensuring that privacy remains usable, equitable, and resilient in the age of AI.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Computer and Information Sciences: Cryptology, security, privacy 2. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 3. Law: International law 4. Electrical engineering, electronic engineering, Information engineering: Human computer interaction and interface, visualization and natural language processing 5. Psychology: Cognitive and experimental psychology: perception, action, and higher cognitive processes	1. Privacy 2. AI 3. Human factors 4. Human-Computer Interaction (HCI) 5. Law

COST Members
Main Proposer: Sweden
Network of Proposers:
Full Member: Croatia, Cyprus, Czech Republic, France, Germany, Italy, Latvia, Netherlands, North Macedonia, Poland, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 43,33% YRI / 56,70% Women / 55,56% ITC

International Cooperation
International Partner: India, United States

Specific Organisations

International Organisation: University of Alberta

Industrial Dimension

SMEs: Serbia

CA25154
Reframing the Social Impact of Design

(OC-2025-1-29208)

SUMMARY

For decades, design has been hailed as a facilitator of change, with local, national and European initiatives utilizing design practices to address social issues and policy challenges. Today, significant public and philanthropic investment places design (from design thinking to product, service and UX design) in the service of societal objectives. Yet major challenges persist in assessing the broader social impact of design. This Action addresses current challenges by reconsidering and reframing the definition and scope of design impact through a theoretically and empirically grounded approach. The Action aims to develop both theoretical and application-oriented frameworks that: (i) build on critical analyses of the political, economic, professional, and institutional norms, discourses and practices underpinning contemporary understandings and practices of design impact; and
(ii) account for the diversity of social groups and values affected by design policies, projects and outcomes, extending beyond project goals and timescales, including possible negative and spillover effects. To achieve this, the Action employs networking activities that bring together and consolidate currently fragmented research into the social and cultural roles and impacts of diverse design professions. Two dedicated WGs translate the frameworks into practice, thereby securing the Action's long-term objectives and ensuring societal uptake of the outputs: WG5 uses a policy design approach to engage and inform policymakers, funding bodies and civil society. WG4 designs and executes training-based capacity building activities with emphasis on YRIs and ITCs.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Sociology: Anthropology, ethnology, cultural studies 2. Arts: History of art and history of architecture 3. Other social sciences: Qualitative methods for the social sciences 4. Social and economic geography: Socio-economic aspects of individual sciences and technologies, excluding environmental sciences, agriculture and transport 5. Other humanities: Cultural heritage, cultural memory	1. Socially oriented design 2. Qualitative approaches to social impact assessment 3. Professional cultures of design 4. Stakeholder participation and co-design 5. Design policy

COST Members

Main Proposer: Denmark
Network of Proposers:
Full Member: Denmark, Estonia, Finland, Hungary, Italy, Latvia, Netherlands, Slovakia, Slovenia, Sweden, Switzerland, Türkiye

Main and secondary proposers: 45,83% YRI / 58,30% Women / 50,00% ITC

CA25155
Nematode Excellence in X-Disciplinary Unified Solutions
(OC-2025-1-29210)

SUMMARY
Nematodes, with an estimated million species, represent approximately 80% of individual animals on Earth and have adapted to nearly every ecosystem. This diversity significantly impacts human societies. In agriculture, nematodes are notorious plant pests but also serve as important indicators of soil health and help manage insect pests. In medicine and veterinary science, they are common vertebrate parasites, posing acute threats to human health. In scientific research, Caenorhabditis elegans has led to groundbreaking discoveries in development, cellular physiology, aging, and behavior, profoundly advancing our understanding of biological processes.

Despite significant technological advancements, their application in nematode research remains limited to a few European laboratories. Moreover, distinct nematode communities exist yet operate with minimal interaction among them. These lead to a fragmented research landscape. The NEXUS project (Nematode Excellence in Cross-Disciplinary Unified Solutions) aims to tackle these challenges by integrating cutting-edge technologies into nematode research and fostering collaboration across different nematode communities. NEXUS seeks to connect researchers studying C. elegans and parasitic nematodes in human, animal, and plant systems with technology experts and industry partners.

Through interdisciplinary collaboration and a variety of integrative activities, NEXUS will accelerate the dissemination of advanced technologies, promote their rapid adoption, and develop innovative solutions for health and agricultural challenges. The project's ultimate goal is to unify and elevate nematode research across Europe, ensuring a more connected, impactful, and sustainable future for addressing global challenges in health, agriculture, and environmental sustainability.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Biological sciences: Development, developmental genetics, pattern formation and embryology in animals 2. Biological sciences: Population biology, population dynamics, population genetics, plant-animal interactions 3. Biological sciences: Morphology and functional imaging of cells 4. Biological sciences: Biodiversity, comparative biology 5. Biological sciences: Parasitology	1. Cutting-edge technologies in biological sciences 2. Technology transfer 3. Nematodes 4. Fundamental biological principles 5. Development of biomedical and agriculture solutions

COST Members
Main Proposer: Portugal
Network of Proposers:
Full Member: Austria, Bulgaria, Croatia, Czech Republic, Finland, France, Germany, Greece, Hungary, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom
Cooperating Member: Israel
Partner Member: South Africa

Main and secondary proposers: 53,44% YRI / 51,70% Women / 50,00% ITC

International Cooperation
Near Neighbour Country: Palestine**

Specific Organisations

European RTD Organisation: European Molecular Biology Laboratory

Industrial Dimension

SMEs: France, Netherlands, Switzerland
Large companies: France, Germany, Switzerland

CA25156
Sharing Practices for a Sustainable Future in the Conservation of Modern Art

(OC-2025-1-29224)

SUMMARY

The conservation of modern and contemporary art, particularly works created after 1950 using industrial and synthetic materials, represents one of the most urgent and complex challenges in the cultural heritage field today. Many of these materials, such as plastics, synthetic pigments, and industrial paints, degrade rapidly, while artists often embrace fragility, impermanence, and transformation as part of their creative intent. Conservators must navigate the intersection between material preservation, ethical responsibility, and artistic meaning. At the European level, conservation practices remain fragmented, with knowledge often confined within individual institutions and limited opportunities for structured collaboration and data sharing. The **SHARE ART- Sharing Practices for a Sustainable and Fair Future in the Conservation of Modern Art** Action addresses this gap by establishing a sustainable, interdisciplinary, and transnational network that unites researchers, conservators, artists, museums, and policymakers. Its mission is to develop reproducible methodologies, open-access tools, and shared frameworks for sustainable and fair conservation practices. The Action is structured around six interconnected Working Groups: policy and ethics (WG1), practical conservation methods (WG2), sustainability metrics (WG3), digital and green transitions (WG4), education and training (WG5), and societal impact and equity (WG6). Each WG will contribute to joint Training Schools, STSMs, and dissemination activities, ensuring active knowledge exchange and broad engagement across sectors and countries. Together, they will generate guidelines, training opportunities, and a European Knowledge Hub consolidating conservation data, case studies, and best practices. By promoting interdisciplinarity, inclusiveness, and sustainability, SHARE ART will reinforce Europe's leadership in the conservation of modern and contemporary art.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Arts: Preservation of cultural heritage 2. Other humanities: Cultural heritage, cultural memory 3. Chemical sciences: Sustainability 4. Arts: History of art and history of architecture 5. Chemical engineering: Preservation of cultural heritage	1. conservation of modern art 2. conservation science 3. heritage science 4. conservation practice 5. sustainability in conservation of cultural heritage

COST Members

Main Proposer: Italy
Network of Proposers:
Full Member: Austria, Czech Republic, Denmark, Germany, Greece, Ireland, Italy, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland

Main and secondary proposers: 31,57% YRI / 81,60% Women / 50,00% ITC

International Cooperation

International Partner: United Arab Emirates, United States

Specific Organisations

EU Institutions, Bodies, Offices and Agencies (EC/EU): Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile; Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile

CA25157
AI-Governance, Use, and Impact for a Dynamic European R&I Ecosystem
(OC-2025-1-29242)

SUMMARY
AI-GUIDE addresses Europe's urgent need for coordinated, responsible and inclusive integration of generative artificial intelligence (GenAI) across the research and innovation (R&I) ecosystem. The Action responds to fragmented policies, uneven adoption, and widening capacity gaps among research institutions. It brings together experts from higher education, research-performing organisations, funders, publishers, policymakers, SMEs and professional associations to co-create shared governance, operational guidelines and practical tools for trustworthy GenAI use in research.

The Action will develop living guidelines translating the EU AI Act and recent AI strategies, ERA principles and research integrity standards into daily practice; establish a European Knowledge Hub and repository of validated tools and use cases; and connect institutional "Safe Labs" and sandboxes for experimentation. Through training schools, short-term scientific missions, virtual mobility grants and peer-learning clinics, AI-GUIDE will build GenAI literacy, empower young researchers and innovators, and reduce digital disparities across Europe.

The network already unites 41 proposers from 20 COST Full Members, including 11 Inclusiveness Target Countries, one European RTD organisation and one Near Neighbour Country. It also represents a balance across academia (61.5%), business (18%), government (7.7%), and non-profit organisations (10%). This diversity ensures broad uptake and long-term sustainability.

By connecting scientific, technological, research management, ethical and policy expertise, AI-GUIDE will strengthen Europe's global leadership in responsible AI for science. Its legacy will be an open, community-driven Knowledge Hub, integrated with the European Open Science Cloud and professional networks, ensuring that AI becomes a tool for excellence, integrity and inclusiveness in European R&I.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Political Science: Public administration, public policy 2. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 3. Computer and Information Sciences: Ethics of computer and information sciences 4. Educational sciences: Education: training, pedagogy, didactics 5. Economics and business: Management of Technology and Innovation	1. Generative AI Governance and Usage 2. Generative AI Literacy, Skills and Capacity Building 3. Responsible Research and Innovation 4. Equity and Inclusiveness 5. Open Science and Policy Harmonisation

COST Members
Main Proposer: Spain
Network of Proposers:
Full Member: Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Germany, Greece, Hungary, Italy, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Türkiye, United Kingdom

Main and secondary proposers: 34,14% YRI / 36,60% Women / 55,00% ITC

International Cooperation
Near Neighbour Country: Tunisia

Specific Organisations

European RTD Organisation: IDEAS Research Institute

Industrial Dimension

SMEs: Croatia, Denmark, Netherlands, Portugal, Slovenia, Spain
Large companies: Spain

CA25158
TECHnological Transformation Of the Built Environment. Understanding Digital Innovations

(OC-2025-1-29253)

SUMMARY

Tech-TO.BE will build an inclusive, pan-European community to bridge the fundamental digitalisation gap in the Architecture, Engineering, Construction, and Operation (AECO) value chain. While digitalisation promises greater efficiency, sustainability, and integration, fragmented knowledge, isolated implementation, uneven diffusion and the limited participation of underrepresented groups—especially women and Young Researchers and Innovators (YRIs)—constrain its transformative potential.

The Action embraces **digitalisation as a complex process, including the human dimension**, rather than the mere adoption of technologies, through three interlinked objectives. (1) **Develop a harmonised map of digital applications** in AECO, based on an online and free pan-European database and a shared taxonomy to overcome the
fragmented and inconsistent knowledge of digital developments. (2) **Create an accessible-to-all inventory of use cases** that narrates the measurable multi-dimensional effects of digital implementations to counteract the isolated implementation and integration of digital solutions. (3) **Provide a transferable blueprint**, with particular attention to less digitalised countries, to overcome uneven diffusion of digitalisation across social, environmental and geographical contexts.

With this holistic approach the Action fosters **dialogue between academia, industry, policymakers and civil society** to coordinate and propel the European twin transition. While transforming previously independent efforts into structured, collaborative progress, Tech-TO.BE places the human dimension at the core. The mix of proposers, from different countries and sectors, and of various networking initiatives, will **pave the way to promising careers and the development of groundbreaking international projects** toward a fair, innovative and sustainable built environment.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Other engineering and technologies: Sustainability for other engineering and technologies 2. Economics and business: Management of Technology and Innovation 3. Civil engineering: Sustainable engineering, adaptation to long-term environmental changes 4. Social and economic geography: Databases, data mining, data curation, computational modelling 5. Economics and business: Development, economic growth, competitiveness	1. Digitalization 2. Architecture, Engineering, Construction, Operation 3. Built environment 4. Innovation 5. Twin transition

COST Members

Main Proposer: Italy
Network of Proposers:
Full Member: Albania, Bosnia and Herzegovina, Bulgaria, Czech Republic, Finland, Italy, Montenegro, Netherlands, Norway, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom
Cooperating Member: Israel

Main and secondary proposers: 54,05% YRI / 51,40% Women / 50,00% ITC

Industrial Dimension

SMEs: Bulgaria, Spain

CA25159
From Data to Decision in Transforming Agrifood-Systems - Operationalizing One Health through AI

(OC-2025-1-29276)

SUMMARY

Agrifood-OneAI utilises artificial intelligence to accelerate the transformation of agrifood systems by operationalising (i.e. putting into practice) the One Health approach, thereby integrating human, animal, plant and environmental perspectives to enhance decision-making and microbial risk management. Contributing to the European Commission's aim of creating a strong, resilient, and secure Europe and aligned with the United Nations' Sustainable Development Goals, Agrifood-OneAI addresses the growing demand for innovative tools that balance food safety, security, and sustainability amid climate and societal change. The implementation of One Health is challenged by institutional fragmentation, regulatory barriers, and a lack of data interoperability, which collectively impede effective risk management. Agrifood-OneAI will build a pan-European network uniting academic, government, industry, and civil society stakeholders. The initiative has been developed to map current initiatives, facilitate cross-sectoral collaboration, and leverage responsible and transparent AI tailored to agrifood challenges. Core activities encompass harmonising research approaches, establishing interoperable data infrastructures, and supporting scientific policy advice. A strong emphasis is placed on training Young Researchers and Investigators, as well as on fostering Inclusiveness of Target Countries. Through workshops and collaborative case studies, the Action develops and demonstrates adaptive AI solutions for risk assessment, food safety, and antimicrobial resistance management within agrifood value chains. By applying systems thinking and participatory stakeholder engagement, Agrifood-OneAI advances technical innovation, trust, and consensus in deploying AI for safe, sustainable, and resilient agrifood systems. The Action delivers harmonised frameworks, open tools, and inclusive governance models, thereby supporting Europe in leading globally in responsible AI-driven food system transformation.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Public and environmental health 2. Veterinary science: Databases, data mining, data curation, computational modelling 3. Agriculture, Forestry, and Fisheries: Microbiology 4. Agriculture, Forestry, and Fisheries: Sustainable production 5. Agriculture, Forestry, and Fisheries: Prevention and treatment of infection by pathogens (e.g. vaccination, antibiotics, fungicide)	1. Agrifood Systems 2. One Health 3. Artificial Intelligence

COST Members

Main Proposer: Germany

Network of Proposers:

Full Member: Albania, Armenia, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom

Partner Member: South Africa

Main and secondary proposers: 35,64% YRI / 51,50% Women / 59,46% ITC

International Cooperation

International Partner: Canada, China, Congo, The Democratic Republic of the , United States

Specific Organisations

European RTD Organisation: Institute of Food Safety, Animal Health and Environment BIOR

International Organisation: Food and Agriculture Organization of the United Nations; World Organisation for Animal Health; World Organisation for Animal Health

Industrial Dimension

SMEs: Germany, Greece, Norway, United Kingdom
Large companies: Belgium, Germany, Hungary, Italy, South Africa, Switzerland

CA25160
European Research Network on the Dynamic Modulation of Membrane Protein Function

(OC-2025-1-29286)

SUMMARY

Membrane proteins (MPs) play a central role in cellular communication and are major targets for drug development. While recent advances have shed light on MP dynamics, key questions remain unanswered: the atomic structures of conformational substates, the mechanisms linking dynamics to biological function, the impact of diverse cellular microenvironments, and the effects of disease-associated mutations. Tackling these challenges requires not only scientific innovation but also a coordinated, multidisciplinary effort that bridges currently fragmented expertise.

DYNAMO will build a European network that unites researchers from biology, chemistry, physics, computational sciences, and medicine with partners from biotechnology and pharmaceutical industries. The Action's core mission is to connect communities that traditionally operate in parallel—experimentalists and computational scientists, academic and industrial researchers, early-career and established investigators—so they can jointly address the complexity of MP dynamics.

Through shared frameworks for data integration, harmonisation, and open-access dissemination, DYNAMO will create lasting infrastructures that enable collaboration across disciplines and borders. Training Schools, workshops, and Short-Term Scientific Missions will empower early-career investigators and foster knowledge transfer. By encouraging dialogue between academia, industry, policymakers, and the public, the network will ensure that scientific advances are rapidly translated into innovation and societal benefit.

In bringing together previously separated scientific communities, DYNAMO will deliver new insights into MP structure, dynamics, and function, and also establish Europe as a global hub for collaborative research on MPs. The Action's legacy will be a strong, interconnected research community, capable of driving breakthroughs in drug discovery and biotechnology well beyond its duration.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Biological sciences: Computational biology 2. Biological sciences: Structural biology (crystallography, NMR, EM) 3. Biological sciences: Biophysics 4. Basic medicine: Pharmacology, pharmacogenomics, drug discovery and design, drug therapy	1. Membrane proteins 2. Dynamics and conformational landscape 3. Integrative structural biology 4. Functional dynamics 5. Molecular modulation

COST Members

Main Proposer: Sweden
Network of Proposers:
Full Member: Belgium, Czech Republic, Estonia, France, Germany, Greece, Hungary, Italy, Poland, Slovakia, Slovenia, Spain, Sweden, Türkiye, United Kingdom

Main and secondary proposers: 35,71% YRI / 60,70% Women / 53,33% ITC

International Cooperation

International Partner: China

Industrial Dimension
SMEs: Czech Republic, Spain

CA25161
Collaborative Network for Rare Ocular Surface Disorders
(OC-2025-1-29298)

SUMMARY
Rare ocular surface diseases (ROSD) represent an under-recognized group of conditions that place a significant burden on European patients and healthcare systems. Despite the presence of expertise across Europe, knowledge remains fragmented, limiting progress in diagnosis, treatment, and patient management. Existing rare eye disease networks focus largely on retinal disorders, leaving anterior segment ROSD underserved and poorly characterized. There is an urgent need for coordinated action to advance epidemiologic understanding, foster collaboration, and ensure equitable access to specialised care.

This COST Action aims to build a sustainable, multidisciplinary European network of clinicians, scientists, and patient organisations dedicated to ROSD. Through this collaborative framework, the Action will address critical knowledge gaps in disease prevalence, demographic and gender-related factors, and socioeconomic impact. It will promote early diagnosis, improve clinician awareness, and develop personalised treatment pathways that reflect patient diversity. Establishing a European Society for ROSD will formalize these efforts and ensure continued engagement across patient, clinical, research, and industry stakeholders.

By bridging gaps between scientists, clinicians, and patients, the Action will accelerate translation of scientific discovery into clinical benefit, foster ethical and equitable access to novel therapies, and enhance patient quality of life. Multidisciplinary collaboration—integrating ophthalmology, immunology, genetics, and engineering—will drive innovation in clinical research and epidemiology. Ultimately, this coordinated European effort will create the foundation for a lasting ROSD network that informs health policy, supports precision care, and transforms outcomes for individuals affected by rare ocular surface diseases.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Clinical medicine: Ophthalmology 2. Medical biotechnology: Gene therapy, stem cell therapy, regenerative medicine for medical biotechnology	1. Rare diseases 2. Cornea 3. Ophthalmology 4. ocular surface 5. clinical studies

COST Members
Main Proposer: Italy
Network of Proposers:
Full Member: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Moldova, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Türkiye, United Kingdom

Main and secondary proposers: 27,65% YRI / 55,30% Women / 55,56% ITC International Cooperation

International Cooperation
Near Neighbour Country: Kosovo*

Specific Organisations
EU Institutions, Bodies, Offices and Agencies (EC/EU): HOSPITAL REGIONAL UNIVERSITARIO DE MALAGA

Industrial Dimension
SMEs: Estonia
Large companies: Italy

CA25162
FutureLands: Feeding Future Generations by Empowering Community-Driven Agroecological Transitions
(OC-2025-1-29300)

SUMMARY
FutureLands is an innovative initiative under the COST Action (CA) scheme focused on empowering community-led agroecological transitions to create sustainable and resilient agri-food systems. Through collaborative learning, knowledge exchange, and participatory policymaking, FutureLands addresses the socio-ecological challenges of industrial agriculture while prioritizing food security. The initiative tackles deep transformations in agri-food systems by shifting mindsets toward balancing urban demand with rural production, promoting sustainable resource use, bio-exploitation, and conserving cultural heritage. FutureLands employs a transdisciplinary, co-creation approach to align agroecological practices with local, regional, and national policies. Key activities include the development of community-led knowledge hubs, capacity-building workshops, and strategic partnerships among farmers, researchers, policymakers, and civil society organizations. The five Working Groups (WGs) focus on empowering community networks, promoting eco-schemes, supporting EU environmental policy alignment, developing sustainability metrics, and integrating science with community-driven action.

FutureLands proposes strategies that enhance socio-economic resilience, biodiversity, and cultural heritage conservation while fostering an action-oriented framework for sustainability research. Aligned with the European Green Deal, Farm to Fork Strategy, and the EU Biodiversity Strategy for 2030, the project emphasizes continuous adaptation and scaling of successful agroecological solutions. Ultimately, FutureLands bridges local knowledge with broader food systems, transforming agricultural landscapes into resilient, biodiverse, and sustainably productive systems to ensure a secure food future.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Other agricultural sciences: Sustainable production 2. Biological sciences: Biodiversity, comparative biology 3. Educational sciences: Education: training, pedagogy, didactics 4. Environmental engineering: Environmental impact, Life Cycle Assessment 5. Social and economic geography: Socio-economic aspects of environmental sciences	1. Agroecology 2. Circular Economy 3. Co-creation 4. Environmental Education 5. Community based knowledge

COST Members
Main Proposer: Germany
Network of Proposers:
Full Member: Albania, Armenia, Austria, Bulgaria, Cyprus, Czech Republic, Estonia, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, North Macedonia, Norway, Poland, Romania, Serbia, Slovenia, Spain, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 36,45% YRI / 65,60% Women / 66,67% ITC

International Cooperation
Near Neighbour Country: Egypt, Tunisia
International Partner: Australia

Industrial Dimension

SMEs: Hungary, Spain, Türkiye
Large companies: Spain

CA25163
Advancing the integration of environmental DNA based approaches into policy frameworks

(OC-2025-1-29353)

SUMMARY

Biodiversity loss and ecosystem degradation are accelerating, creating urgent demand for reliable, policy-ready monitoring tools. Environmental DNA (eDNA) enables non-invasive, high-resolution detection of species and communities from DNA traces in environmental samples. It offers transformative potential for biodiversity monitoring, invasive species management, pollution monitoring, and ecosystem health evaluation. Europe leads in eDNA research and innovation, but markets and policy integration are fragmented due to gaps in standardisation, data interoperability, and cross-sector communication. COST Action *eDNA4Policy* addresses this science–policy gap by linking leading European researchers, authorities, industry partners, and international stakeholders in an inclusive, transdisciplinary network. *eDNA4Policy* will:

1.) map implementation routes across European directives and international frameworks;
2.) co-develop new, policy-aligned eDNA-based indicators;
3.) outline a scalable pathway for deployment and analysis;
4.) propose a digital landscape enabling FAIR data integration into policy while respecting intellectual property rights;
5.) support method standardisation and Quality Assurance / Quality Control frameworks;
6.) co-develop implementation strategies with decision makers; and
7.) expand markets and opportunities for European businesses.

eDNA4Policy will engage European regions, particularly Inclusiveness Target Countries, and Early Career Investigators through six thematic Working Groups, stakeholder dialogues, training activities, Short-Term Scientific Missions, and capacity-building.
Outputs support the Water Framework Directive, Marine Strategy Framework Directive, Nature Restoration Regulation, Invasive Species Regulation, and consider aspects of One Health and the Global Biodiversity Framework. By aligning scientific readiness with legislative needs, *eDNA4Policy* positions Europe at the forefront of eDNA-based monitoring, strengthens technological sovereignty, and lays the foundation for a long-term, cross-sectoral European eDNA stakeholder network.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Biological sciences: Conservation biology, ecology, genetics	1. Environmental DNA 2. Biodiversity Monitoring 3. Environmental Policies 4. Standards Development 5. One Health

COST Members

Main Proposer: Austria
Network of Proposers:
Full Member: Austria, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Greece, Italy, Luxembourg, Netherlands, Poland, Portugal, Slovakia, Switzerland, United Kingdom

Main and secondary proposers: 20,68% YRI / 56,90% Women / 50,00% ITC

International Cooperation

Near Neighbour Country: Belarus

International Partner: Canada, India, Japan, New Zealand, United States

CA25164
Transforming Protein-Rich Co-Products into Functional, Health-Promoting Ingredients for Future Food Systems
(OC-2025-1-29363)

SUMMARY
NextProFood creates a European and international network that brings together scientists, industry partners, and regulators to advance the valorisation of protein-rich co-products and emerging protein sources into safe, functional, and health-promoting ingredients. It tackles the fragmentation that currently limits progress by connecting expertise, aligning analytical approaches, and improving access to reliable, comparable, and reusable data across sectors. The network integrates specialists in enzymology, food biotechnology, bioinformatics, nutrition, and sustainability to build shared frameworks for assessing protein quality, functionality, safety, and environmental performance. A key outcome will be the open-access Protein and Peptide Functionality Atlas (PPFA), an integrated digital platform that links analytical and computational data under FAIR principles. This resource will support predictive modelling, data-driven innovation, and transparent evaluation of protein ingredients and bioactive peptides relevant to nutrition and health. Training Schools, Short-Term Scientific Missions, and collaborative workshops will foster capacity building, methodological consistency, and inclusive participation, with strong engagement of Early-Career Investigators and Inclusiveness Target Countries. These activities will strengthen the transfer of scientific knowledge to industry and policy, ensuring that innovations remain sustainable and socially trusted. By transforming fragmented expertise into a coordinated and forward-looking community, NextProFood will provide the foundation for future European collaborations in food and health research. The Action will reinforce Europe's leadership in harnessing protein resources responsibly, promoting a circular food system that integrates nutritional quality, environmental protection, and social responsibility.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Animal and dairy science: Food chemistry 2. Industrial biotechnology: Other bioproducts (products manufactured using biological material as feedstock) 3. Environmental biotechnology: Sustainability 4. Other engineering and technologies: Food science and technology	1. Protein Valorisation 2. Functional Peptides 3. Sustainable Bioprocessing 4. Preventive Nutrition 5. Circular Food Systems

COST Members
Main Proposer: Portugal
Network of Proposers:
Full Member: Albania, Armenia, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Lithuania, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 37,01% YRI / 54,10% Women / 63,64% ITC

International Cooperation
Near Neighbour Country: Egypt, Morocco
International Partner: Argentina, Brazil, Canada, Chile, China, Macao, Mexico, United States

Specific Organisations
European RTD Organisation: CIIMAR - Interdisciplinary Centre of Marine and Environmental Research of the University of Porto; International Iberian Nanotechnology Laboratory
EU Institutions, Bodies, Offices and Agencies (EC/EU): Fundación Instituto de Investigación Sanitaria de Santiago

International Organisation: Instituto de Tecnologia de Alimentos

Industrial Dimension

SMEs: Belgium, Greece, Malta, Portugal, Romania, Spain
Large companies: Brazil, Portugal, Spain

CA25165
Consensus Standards for Applied Biodiversity Genomics

(OC-2025-1-29404)

SUMMARY

Biodiversity is essential for human food security, health, and planetary survival, yet we are facing a severe biodiversity crisis, potentially leading to a sixth mass extinction. Genetic diversity, crucial for the resilience and adaptability of species, is at risk due to environmental changes and human activities. While various methods exist to monitor genetic diversity, genomics provides the most comprehensive toolkit for assessing genome-wide variation, revealing insights into species demographics and evolutionary potential. However, the absence of standardised methods and harmonised approaches for genomic data generation, analysis, and interpretation complicates its application in conservation policy and biodiversity management. This COST Action aims to address these challenges by fostering international collaboration to establish informed community consensus and promote genomic data standardisation, ensuring data accuracy, interpretability, and comparability. The initiative includes five Working Groups: 1) developing standardised protocols for genomic data from fieldwork to analysis; 2) establishing guidelines for metadata management to enhance data interoperability; 3) defining strategies for applying genomic standards in both ex situ and in situ conservation;
4) fostering capacity building through accessible training programmes for scientists and practitioners; and 5) standardising communication practices to effectively engage stakeholders. By addressing these critical areas through co-creation with policymakers and practitioners, the COST Action seeks to enhance the uptake of genomic-data-informed approaches in biodiversity conservation across Europe and beyond, ultimately contributing to the preservation of genetic diversity and restoration of ecosystem health.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Biological sciences: Genomics, comparative genomics, functional genomics 2. Biological sciences: Biodiversity, comparative biology 3. Biological sciences: Systems evolution, biological adaptation, phylogenetics, systematics 4. Biological sciences: Conservation biology, ecology, genetics	1. Biodiversity Genomics 2. Standards harmonisation 3. Metadata collection and integration 4. Whole-genome sequencing data 5. Knowledge transfer and capacity building

COST Members

Main Proposer: Italy
Network of Proposers:
Full Member: Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 46,55% YRI / 51,70% Women / 59,09% ITC

International Cooperation

International Partner: Australia

Specific Organisations

European RTD Organisation: CIIMAR - Interdisciplinary Centre of Marine and Environmental Research of the University of Porto; European Molecular Biology Laboratory

CA25166
STONE - Steward-Ownership Network
(OC-2025-1-29419)

SUMMARY
This COST Action explores Steward Ownership (StOw) — an alternative business ownership model that separates profit rights from control to promote long-term, purpose-driven entrepreneurship. Rooted in European traditions like enterprise foundations (e.g., Bosch, Carlsberg), StOw aims to address pressing societal and economic challenges such as inequality, short-termism, and succession crises in family businesses.

The Action seeks to develop a multidisciplinary and comparative understanding of StOw by integrating insights from law, management, sociology, philosophy, and political science. It will investigate the legal, economic, and social viability of StOw across Europe, aiming to create a legal toolbox, model laws, and governance codes to support its implementation.

Key objectives include mapping legal frameworks, analyzing governance and financial structures, assessing societal impact, and fostering stakeholder engagement. The project emphasizes capacity building, especially for young researchers and practitioners, and aims to influence European industrial policy by offering StOw as a competitive and sustainable alternative to traditional corporate models.

Through interdisciplinary working groups, empirical research, and stakeholder collaboration, the Action aspires to position Europe as a leader in steward ownership, contributing to innovation, social equity, and resilient economies.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Law: Private law 2. Economics and business: Organization studies 3. Sociology: Work and professions 4. Philosophy, Ethics and Religion: Ethics and morality, social ethics	1. Steward-ownership 2. Purpose 3. Business organisations 4. Corporate governance 5. Social innovation

COST Members
Main Proposer: Portugal
Network of Proposers:
Full Member: Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Netherlands, Poland, Portugal, Serbia, Slovenia, Spain, Switzerland

Main and secondary proposers: 46,09% YRI / 49,20% Women / 50,00% ITC

International Cooperation
International Partner: Australia, Canada, Chile, United States

Specific Organisations
International Organisation: University of Georgia

Industrial Dimension
SMEs: Austria, France, Germany, Netherlands, Switzerland, United States
Large companies: Germany, Portugal, United States

CA25167
Inclusive Communication for Environmental and Social Change
(OC-2025-1-29459)

SUMMARY
The INCLUDE COST Acttion aims to establish a pan-European, transdisciplinary and intersectoral network that advances research coordination, capacity building, and policy impact in environmental communication. Responding to the fragmentation of current approaches—often disciplinary, geographically isolated, and disconnected from communities—INCLUDE will integrate key actors from academia, public and private organisations, and grassroots members, and society to co-develop participatory, inclusive, and justice-oriented communication strategies addressing climate and social crises.

The Action's five strategic objectives are: (1) *Mapping the Field* to establish a shared conceptual and methodological framework; (2) *Strengthening Response Capacity* by identifying and adapting participatory communication models for crisis and governance contexts; (3) *Promoting Intersectional Literacy* to enhance environmental and media literacy among youth and vulnerable groups; (4) *Catalyzing Synergies and Policies* to bridge research, civil society, and policy-making through dialogue and co-creation; and (5) *Empowering the Next Generation of Researchers* through mentoring, training schools, and short-term scientific missions ensuring field sustainability.

INCLUDE's innovation lies in uniting critical environmental communication, participatory governance, and social justice within a coherent European infrastructure. The Action will deliver tangible outputs—such as open-access repositories, policy briefs, ecopedagogy toolkits, and guides for participatory communication—while promoting cross-sectoral collaboration, gender equality, and the active involvement of Inclusiveness Target Countries.

By strengthening capacities, harmonizing methodologies, and creating durable partnerships, INCLUDE will transform how environmental challenges are communicated, ensuring that diverse voices, local knowledge, and equitable participation shape Europe's sustainable and democratic transitions.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Media and communications: Media and communications, social aspects of information science and surveillance, socio-cultural communication	1. Environmental Communication 2. Social and Environmental Justice 3. Inclusiveness 4. Participation

COST Members
Main Proposer: Portugal
Network of Proposers:
Full Member: Czech Republic, Denmark, Hungary, Poland, Portugal, Romania, Spain, United Kingdom

Main and secondary proposers: 11,11% YRI / 66,70% Women / 62,50% ITC

CA25168
Embedding Sustainability Reporting and Assurance in Accounting and Auditing Education Across Europe
(OC-2025-1-29483)

SUMMARY
This Action builds a trans-European network to embed sustainability reporting and assurance, explicitly aligned with the Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS), into accounting and auditing education. Partners will conduct networked, collaborative research and co-create an ESRS-mapped competence framework, assessment rubrics, teaching cases and datasets, an assurance casebank for sustainability reporting, and educator micro-credentials. Through coordinated pilots across diverse HEIs at BSc, MSc and CPD levels, the Action will strengthen graduate and practitioner readiness, foster ethical and high-quality sustainability reporting and assurance, and accelerate curriculum adoption by universities, professional bodies and regulators. Outputs will be open, reusable learning assets and a durable European community of practice for sustainability reporting and assurance education.

Across Europe, demand for CSRD/ESRS competences exceeds supply: curricula are uneven, sustainability reporting and assurance training is scarce, digital taxonomy/data-pipeline skills are under-taught, and ethics/independence/quality-management receive inconsistent coverage, especially in less-resourced contexts.

The Action's objective is to mainstream ESRS-aligned sustainability reporting and assurance in accounting and auditing education by co-developing, through networked collaborative research, (1) an ESRS-mapped competence framework with an accompanying assessment rubric, (2) an open casebank and datasets dedicated to sustainability reporting and assurance practice, (3) educator upskilling pathways culminating in micro-credentials, and (4) clear adoption routes with professional bodies, regulators, and firms, all released under open licences and supported by a post-Action sustainability and maintenance plan.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Economics and business: Sustainability 2. Economics and business: Accounting 3. Law: Legal aspects of environmental regulations and climate negotiations	1. Sustainability Reporting and Assurance 2. Accounting and Auditing Education 3. CSRD / ESRS Competence Framework 4. Trans-European Capacity Building

COST Members
Main Proposer: North Macedonia
Network of Proposers:
Full Member: Albania, Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Germany, Italy, Latvia, North Macedonia, Poland, Romania, Serbia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine

Main and secondary proposers: 20,00% YRI / 66,00% Women / 66,67% ITC

CA25169
Justice, Arts, Memory, Migration —Creating Solidarities across Borders
(OC-2025-1-29495)

SUMMARY
This Action responds to an urgent epistemic and structural gap within European research and policy landscapes: the limited recognition, coordination, and sustainability of arts-based research (ABR) in migration, diversity, and cultural heritage studies. Despite the growing number of participatory and cultural initiatives across Europe, these practices remain undervalued, poorly connected, and rarely integrated into mainstream infrastructures and policy frameworks. Conventional approaches privilege abstract theorising and quantitative data, overlooking the embodied, affective, and creative forms of knowledge that emerge through artistic collaboration and community participation.

JAMM – Justice, Arts, Memory, Migration: Creating Solidarities across Borders brings together a transdisciplinary network of scholars, artists, and cultural practitioners to address these gaps by developing a European platform for arts-based research grounded in justice, arts, heritage, memory, and migration. It connects diverse disciplines—from anthropology and cultural studies to art, technology, geography, and political theory—and fosters cross-sectoral dialogue between academia, civil society, and cultural institutions.

The Action's five Working Groups tackle interconnected challenges: recognising arts-based epistemologies; fostering equitable co-creation; documenting creative processes; enhancing public visibility and impact; and ensuring sustainability beyond individual projects. Through shared methodological standards, living archives, digital infrastructures, and policy toolkits, JAMM consolidates and systematises ABR within European migration and heritage research.

By doing so, the Action delivers cultural and epistemic justice, recognising the experiences, memories, and creative expressions of people on the move as integral to Europe's shared cultural heritage and advancing inclusive, sustainable collaboration across borders.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Sociology: Migration, interethnic relations 2. Political Science: Political sociology 3. Other humanities: Cultural heritage, cultural memory 4. Other social sciences: Qualitative methods for the social sciences 5. Arts: Performing arts	1. Arts-Based Research 2. Justice 3. Migration 4. Cultural Heritage 5. Social Cohesion

COST Members
Main Proposer: Türkiye
Network of Proposers:
Full Member: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, Georgia, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Netherlands, North Macedonia, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Türkiye, United Kingdom

Main and secondary proposers: 40,00% YRI / 72,90% Women / 62,96% ITC

Specific Organisations
International Organisation: Temple University

CA25170
European Network for Sustainable Aerogels in Advanced Circular and AI-Enabled Applications
(OC-2025-1-29499)

SUMMARY
Aerogels are ultralight, nanoporous materials with exceptional properties, including high surface area, high open porosity and tunable functionalities, rendering them highly versatile for applications including, but not limited to, energy, construction, environmental remediation, biomedicine, and food. Despite rapid scientific progress, European research on sustainable-by-design aerogels remains fragmented, often confined to laboratory-scale synthesis, with limited coordination toward sustainable scale-up, digital integration, and circular deployment. Dispersed and non-standardized data on synthesis, properties, and performance further hinder predictive design and cross-sector innovation.

SUSTAiROGELs addresses these challenges by establishing a multidisciplinary European network focused on sustainable, circular, and AI-integrated aerogels. By connecting materials scientists, engineers, digital experts, industry, and policymakers, the Action promotes green synthesis, scalable production, functionalization, and circularity through reuse, recycling, and policy guidance. It fosters knowledge sharing, standardization, and industrial uptake, with strong emphasis on inclusiveness for Young Researchers and Innovators and members from Inclusiveness Target Countries.

SUSTAiROGELs will deliver measurable scientific, societal, and economic impact by enabling energy- and resource-efficient production, validating applications in various sectors, including environmental remediation, biomedicine, and food packaging, and embedding circularity across the lifecycle. AI-driven tools and the SUSTAiROGELs Data Hub, a shared open-access platform, will accelerate discovery, process optimization, and sustainability assessment. By uniting expertise across sectors and countries, SUSTAiROGELs bridges laboratory research with market-ready solutions, positioning Europe as a global leader in sustainable aerogel technologies while advancing the European Green Deal, Bioeconomy Strategy, Circular Economy Action Plan, and Apply AI Strategy.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Nano-technology: Nano-materials and nano-structures 2. Chemical engineering: Process chemistry and technology 3. Materials engineering: New materials: oxides, alloys, composite, organic-inorganic hybrid 4. Materials engineering: Biomaterials, metals, ceramics, polymers, composites 5. Nano-technology: Sustainability	1. aerogels 2. advanced materials 3. materials engineering 4. sustainability 5. circular economy

COST Members
Main Proposer: Greece
Network of Proposers:
Full Member: Austria, Cyprus, Finland, France, Germany, Greece, Hungary, Italy, Malta, Netherlands, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Switzerland, Türkiye

Main and secondary proposers: 39,62% YRI / 58,50% Women / 55,56% ITC

International Cooperation
Near Neighbour Country: Jordan
International Partner: Costa Rica, Pakistan, United States

Industrial Dimension
SMEs: France, Germany

CA25171
ODIN-AI: Ocean Disaster Intelligent Network using AI
(OC-2025-1-29500)

SUMMARY
The volume of data, processing speed, and complexity of multi-hazard interactions in near-shore environments limit coastal oceanographic forecasting and early warning systems for ocean disasters such as marine heatwaves, harmful algal blooms, storm surges, and coastal flooding. The gap between cutting-edge AI research and operational oceanography is a major issue. This slows the translation of scientific findings into real-time social benefits. Climate change has resulted in an increased frequency and intensity of extreme oceanic events.

The ODIN-AI COST Action will create the first pan-European network to narrow this gap and accelerate the adoption of innovative AI/ML approaches in operational coastal oceanography. Our Research Coordination Objectives (RCOs) are to develop physically consistent, interpretable (XAI), and hazard-predicting AI systems. Interoperable frameworks for real-time operational systems are also required. This network of experts from academia, operational centres, and policy bodies, with 50% of its members from Inclusiveness Target Countries (ITCs), meets the need for pan-European expertise. Our Capacity-building Objectives (CbOs) create unique transdisciplinary training for YRIs and operational practitioners. They also prioritise fair skill transfer and ITC leadership.

Technologically, we will provide scalable AI prototypes and standardised R2O protocols; socioeconomically, we will enable earlier warnings for anticipatory action, reducing human casualties and economic damage; and ethically, we will provide clear Guidelines for Responsible AI in Operational Oceanography to build trust and policy uptake. Through regional pilots, ODIN-AI will lead stakeholders in framework creation and validation. This helps Europe develop a resilient and intelligent coastal disaster management system.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Earth and related Environmental sciences: Climatology and climate change 2. Earth and related Environmental sciences: Oceanography (other) 3. Earth and related Environmental sciences: Databases, data mining, data curation, computational modelling 4. Environmental engineering: Risk assessment, prevention and mitigation	1. Oceanography 2. Forecasting 3. Machine learning / artifical Intelligence 4. Multi-hazards 5. Extreme weather events

COST Members
Main Proposer: Denmark
Network of Proposers:
Full Member: Belgium, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Italy, Latvia, Lithuania, Netherlands, Poland, Portugal, Slovenia, Sweden

Main and secondary proposers: 40,00% YRI / 47,50% Women / 52,94% ITC

CA25172
Artificial Intelligence for Fundamental Physics: Open Roadmapping and Inclusive Actions
(OC-2025-1-29501)

SUMMARY
Artificial intelligence (AI) is transforming research across science and technology, and its impact on fundamental physics is accelerating. Next-generation European facilities such as the High-Luminosity LHC, FAIR, SKA, CTAO, LISA, the Einstein Telescope and Euclid will rely on AI to manage unprecedented data volumes and complexity. Yet current efforts remain fragmented across domains, infrastructures and career stages. AIFORIA – Artificial Intelligence for Fundamental Physics: Open Roadmapping and Inclusive Actions – will establish an open, inclusive European platform to coordinate AI activities across particle, astro-, nuclear, gravitational and cosmological physics, linking theoretical, experimental and observational research.

The Action will identify shared scientific challenges—trustworthy, interpretable and uncertainty-aware AI; scalable and energy-efficient architectures; physics-aware models embedding symmetries and causal structure; and FAIR benchmarks and datasets—and define community roadmaps to address them. It will promote interoperability between infrastructures and alignment with European AI and open-science strategies, including RAISE and EOSC. AIFORIA will strengthen research capacity and inclusiveness through training schools, hackathons and Short-Term Scientific Missions, with dedicated measures for Young Researchers and Inclusiveness Target Countries. Four Working Groups will cover management and coordination, scientific methods, shared infrastructure and benchmarking, and training and roadmapping.

By connecting existing European initiatives in AI for science, AIFORIA will consolidate expertise, establish common standards and benchmarks, and lay the foundation for a sustainable, trustworthy AI ecosystem supporting Europe's leadership in scientific discovery. It will accelerate integration of AI into the full research cycle—from experiment design to data interpretation—establishing a model for AI-driven discovery across scientific disciplines.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Physical Sciences: Particle physics (theory) 2. Physical Sciences: High energy and particles astronomy, X-rays, cosmic rays, gamma rays, neutrinos 3. Physical Sciences: Nuclear physics (theory) 4. Physical Sciences: Gravitational astronomy 5. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems	1. Particle Physics 2. Astroparticle Physics 3. Gravitational waves 4. Cosmology 5. Artificial Intelligence

COST Members
Main Proposer: Netherlands
Network of Proposers:
Full Member: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Finland, Germany, Greece, Hungary, Italy, Netherlands, Poland, Portugal, Slovenia, Spain, Switzerland, United Kingdom

Main and secondary proposers: 41,77% YRI / 34,20% Women / 50,00% ITC

Specific Organisations

European RTD Organisation: CERN; Conseil Européen pour la Recherche Nucléaire
International Organisation: European Organization for Nuclear Research

CA25173
Autotuning for Performance-Portable and Energy-Efficient Applications and Computing

(OC-2025-1-29502)

SUMMARY

Modern computing systems are becoming increasingly heterogeneous, integrating CPUs, GPUs, and specialized accelerators. While this diversity enables higher performance and energy efficiency, it also complicates software optimization and portability. Applications that are efficient on one platform often underperform on another, requiring repeated manual tuning that is both time-consuming and expertise-intensive.

Autotuning, broadly understood as the automatic exploration and optimization of software and hardware parameters—including code variants, compiler options, and power management settings—offers a path toward adaptable and energy-efficient computing.
Yet, despite decades of research, its adoption remains limited. Existing frameworks are often fragmented, incompatible, and integrated with a narrow set of applications.
Developers lack comprehensive training, shared datasets, and unified methodologies to employ autotuning efficiently and safely.

The AutoPEAC COST Action (Autotuning for Performance-Portable and Energy-Efficient Applications and Computing) will establish a European network of researchers, developers, and computing centers to coordinate efforts in this area. The Action will:

- harmonize autotuning approaches and data formats to improve interoperability and reuse;
- strengthen education and awareness through tutorials, summer schools, and open materials;
- foster research linking autotuning with programmability, such as integrating high-level programming tools with tuning frameworks; and
- stimulate collaboration that leads to the use of autotuning in real-world applications.

By connecting experts across domains, AutoPEAC will lay the foundation for performance-portable and energy-efficient software ecosystems in Europe, advancing both scientific understanding and practical adoption of adaptive optimization techniques.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Electrical engineering, electronic engineering, Information engineering: Software engineering, operating systems, computer languages 2. Electrical engineering, electronic engineering, Information engineering: Computer systems, parallel/distributed systems	1. autotuning 2. performance optimization 3. energy optimization 4. performance portability

COST Members

Main Proposer: Czech Republic
Network of Proposers:
Full Member: Czech Republic, Germany, Netherlands, Norway, Poland, Portugal, Spain, Türkiye

Main and secondary proposers: 16,66% YRI / 33,30% Women / 50,00% ITC

International Cooperation
International Partner: United States

CA25174
Reducing Endocrine Disruptor Exposure for a Healthy Start for Future Generations
(OC-2025-1-29592)

SUMMARY
EndLess addresses one of Europe's most urgent yet under-recognised health and sustainability challenges: exposure to endocrine-disrupting chemicals (EDCs) during pregnancy and early childhood. Despite significant scientific advances, early-life exposure to EDCs remains widespread, while prevention efforts are fragmented across disciplines and countries. EndLess will unite a critical mass of 92 researchers and professionals from 18 COST Full Member Countries and 4 international partners beyond Europe, with 61.1% from Inclusiveness Target Countries (ITCs), 69.6% women, and 41 young researchers and innovators under 40 years of age.

This Action will build a truly interdisciplinary and intersectoral network that bridges environmental health, toxicology, epidemiology, public health, communication, and social sciences. Its goals are to:(1) map early-life EDC exposure sources; (2) harmonise exposure assessment protocols across Europe; (3) integrate epidemiological and toxicological evidence; (4) develop preventive tools and guidelines; (5) build capacity among Early Career Investigators, particularly from ITCs; and (6) ensure long-term sustainability through an open-access digital toolbox consolidating all outputs.

EndLess is a purely networking Action, it will coordinate and synthesise existing knowledge through Working Groups, Training Schools, Short-Term Scientific Missions, and cross-disciplinary workshops. By promoting open science, inclusiveness, and stakeholder engagement, across academia, government agencies, NGOs, SMEs, and international partners, EndLess will transform scientific knowledge into tangible prevention, policy, and educational outcomes. The Action will strengthen Europe's capacity and leadership in protecting maternal and child health from harmful chemical exposures, ensuring a lasting legacy of collaboration and prevention beyond the project's lifetime.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Health Sciences: Public and environmental health 2. Health Sciences: Environment and health risks including radiation 3. Clinical medicine: Endocrinology and metabolism (including diabetes, hormones) 4. Basic medicine: Toxicology 5. Basic medicine: Environmental toxicology, environmental stress	1. Endocrine Disruptors 2. Maternal and Child Health 3. Prevention and Education 4. Capacity building and policy translation 5. Transdisciplinary Collaboration

COST Members
Main Proposer: Serbia
Network of Proposers:
Full Member: Belgium, Bosnia and Herzegovina, Croatia, Cyprus, France, Greece, Italy, Montenegro, Norway, Poland, Portugal, Serbia, Slovakia, Slovenia, Spain, Sweden, Türkiye, United Kingdom

Main and secondary proposers: 44,56% YRI / 69,60% Women / 61,11% ITC

International Cooperation
International Partner: Burkina Faso, Canada, Costa Rica, United States

Specific Organisations

EU Institutions, Bodies, Offices and Agencies (EC/EU): Institut "Jožef Stefan", Ljubljana, Slovenija; Institut "Jožef Stefan", Ljubljana, Slovenija

Industrial Dimension

SMEs: Poland
Large companies: Portugal

CA25175
High Impact Research on Adherence and Morality

(OC-2025-1-29647)

SUMMARY

Integrity breaches, including acts such as corruption, conflicts of interest, nepotism, erode trust, waste resources and weaken democratic legitimacy. Despite dense compliance regimes, many systems still foster “tick-box morality” rather than real ethical practice.
HIRAM builds a pan-European network to close this gap by combining behavioural, organisational and technological approaches to integrity.

The Action connects scholars, public agencies, NGOs and private actors from 17 countries (28 participants) to co-design, test and scale practical tools: behaviour-by-design standards, serious-game training, behavioural audits, and open-data risk dashboards.
Research coordination will produce comparable cross-country evidence, including a harmonised Behavioural Integrity Indicator Suite (BIIS) micro-dataset and codebook. Capacity-building includes Training Schools, Short-Term Scientific Missions and policy labs that translate findings into implementable guidance for administrations.

HIRAM follows open-science and GDPR-compliant stewardship (FAIR repository, OSF preregistration) and embeds COST’s inclusiveness mission: strong participation from Inclusiveness Target Countries, clear roles for Young Researchers and Innovators, and monitored gender balance across governance, activities and outputs.

By integrating insights from public administration, psychology, data science and law, the Action will move European integrity policy beyond rules-only compliance towards preventive, context-sensitive interventions. The result is a sustained community, open tools and datasets, and actionable design principles that public organisations can adopt to strengthen everyday integrity and public trust.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Economics and business: Business ethics 2. Economics and business: Public economics, political economics 3. Economics and business: Strategy and management	1. Integrity 2. Public Governance 3. Ethics and Compliance 4. Corruption 5. Open Science and Data

COST Members

Main Proposer: Italy
Network of Proposers:
Full Member: Belgium, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Ireland, Italy, Latvia, Netherlands, Poland, Romania, Serbia, Slovenia, Sweden, Switzerland, Ukraine, United Kingdom

Main and secondary proposers: 32,14% YRI / 46,40% Women / 61,11% ITC

Industrial Dimension

SMEs: Ukraine

CA25176
Child Voices: Participation, Well-being & Resilience of Children in the Era of Polycrisis
(OC-2025-1-29690)

SUMMARY
The poly-crisis–including climate change, wars and social conflicts, migration, social and political polarization, democracy, pandemics, energy challenges, economic issues, digitalization, wildfires, floods, and earthquakes–endangers children's current and future well-being worldwide. This Cost Action proposal seeks to create a network of scholars, experts, practitioners, and professionals focused on child participation to safeguard and prioritize the well-being of children during times of polycrisis, aligning with the Sustainable Development Goals, particularly goals 1, 3, 4, 5, 10, and 17. Child well-being is an analytical and theoretical tool in the light of objective and subjective indicators in different domains. The child well-being perspective recognizes the child as an active research participant and expert of experience who conveys their life story. The transition from a welfare approach to one centered on well-being in childhood studies signifies a growing recognition of child participation as both a right and an important domain for child well-being. Thus, the challenge is its implementation and/or realization, which is crucial for resilience under further stress in times of crisis. Additionally, young people's activism, while important, can sometimes pose risks to their well-being, highlighting the need for further research and innovative collaboration. The digital world profoundly influences children's well-being and resilience, providing new opportunities through their access to information, social interactions, and education, while also posing challenges, requiring careful management. This action proposal aims to create a network that brings together scholars, experts, and practitioners dedicated to ensuring and protecting child participation amidst multiple crises, thereby prioritizing children's well-being.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Political Science: Social policies, welfare state 2. Sociology: Social structure, inequalities, social mobility, social exclusion, income distribution, poverty 3. Sociology: Family studies 4. Psychology: Developmental psychology 5. Educational sciences: Education: training, pedagogy, didactics	1. child participation 2. polycrisis 3. child wellbeing 4. resilience 5. Child Guarantee Programs

COST Members
Main Proposer: Türkiye
Network of Proposers:
Full Member: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Germany, Italy, Malta, Moldova, Netherlands, North Macedonia, Poland, Portugal, Romania, Spain, Türkiye
Cooperating Member: Israel
Partner Member: South Africa

Main and secondary proposers: 33,33% YRI / 66,70% Women / 70,59% ITC

International Cooperation
International Partner: Canada

CA25177
European Network for Developing and Evaluating the Use of GenAI in Education

(OC-2025-1-29723)

SUMMARY

The rapid emergence of generative artificial intelligence (GenAI) is transforming education and vocational training across Europe, reshaping pedagogical practices, workforce readiness, and lifelong learning ecosystems. While institutional and national initiatives have begun to explore GenAI's potential, these efforts remain fragmented, often reactive, and insufficiently coordinated, posing risks to equity, pedagogical integrity, and the scalability of effective practices.

A critical gap exists in Europe's capacity to systematically develop, validate, and scale evidence-based, ethically grounded models for GenAI integration in education. Existing innovations are frequently isolated, lacking cross-national validation, interoperable frameworks, or scientific rigor. This fragmentation undermines the potential for a cohesive European approach to AI literacy, responsible innovation, and inclusive digital transformation in education.

ENDUeAI aims to establish a coordinated, interdisciplinary, and pan-European research network. It will bring together experts in AI, education science, ethics, policy, and digital innovation to co-develop, evaluate, and scale robust, adaptable, and equitable models for GenAI in education. Through interdisciplinary collaborations, we will co-create: a validated GenAI evaluation framework, privacy-compliant middleware standards, explainability benchmarks, inclusive multimodal labs, evidence-based pedagogy and literacy modules, policy-ready ethics & privacy guidelines, and a Horizon Europe funding proposal for long-term sustainability.

ENDUeAI is guided by Agile principles, iterative development, and continuous feedback loops from teachers, trainers, learners, and marginalized communities, ensuring that innovation serves equity and efficiency and that Europe leads in responsible, human-centred AI integration in learning systems.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 2. Educational sciences: Education: training, pedagogy, didactics 3. Philosophy, Ethics and Religion: Ethics and morality, social ethics 4. Psychology: Cognitive and experimental psychology: perception, action, and higher cognitive processes 5. Other engineering and technologies: Databases, data mining, data curation, computational modelling for other engineering and technologies	1. AI Literacy & Pedagogy 2. Ethical AI Framework 3. Generative AI in Education and Vocational Training 4. Inclusive AI Technologies 5. Responsible AI Deployment

COST Members

Main Proposer: United Kingdom

Network of Proposers:

Full Member: Albania, Austria, Belgium, Bosnia and Herzegovina, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom

Partner Member: South Africa

Main and secondary proposers: 37,96% YRI / 55,60% Women / 58,33% ITC

Specific Organisations
European RTD Organisation: Warwick University; Warwick University

Industrial Dimension
SMEs: Albania, Belgium, France, Greece, United Kingdom
Large companies: United Kingdom

CA25178
Agentic Physical AI: Building the European Network for Agentic Embodied Intelligence
(OC-2025-1-29736)

SUMMARY
The **Agentic Physical AI (API-Net)** COST Action aims to establish a transdisciplinary European network that unites research, innovation, and practice around **embodied, agentic artificial intelligence**: AI systems capable of autonomous, goal-driven interaction with the physical world.

The Action will bridge **AI theory, robotics, human-machine interaction, and cognitive systems** to lay the conceptual and ethical foundations for Agentic Physical AI, focusing on the next generation of autonomous robotic systems that act, sense, and learn responsibly within human environments.

COST's networking framework provides the ideal mechanism to connect the technical, cognitive, industrial, and societal communities that currently operate in silos. APAI-Net will foster knowledge exchange, coordination, training, and policy engagement across academia, industry, and public stakeholders, strengthening Europe's leadership in safe and trustworthy AI and robotics.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Electrical engineering, electronic engineering, Information engineering: Robotics, general 2. Computer and Information Sciences: Artificial intelligence, intelligent systems, multi agent systems 3. Electrical engineering, electronic engineering, Information engineering: Embedded systems, cyber-physical systems	1. Physical AI 2. Robotics 3. Embodied Intelligence 4. Agentic AI 5. Open-Source Robotics & AI

COST Members
Main Proposer: United Kingdom
Network of Proposers:
Full Member: Finland, Luxembourg, Poland, Slovakia, Slovenia, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 54,54% YRI / 50,00% Women / 50,00% ITC

Industrial Dimension
SMEs: Finland, Poland
Large companies: Slovenia

CA25179
Balkan Uplands Resilience, Environment, and Knowledge Network
(OC-2025-1-29747)

SUMMARY
The BUREK Action builds a transnational network to study how people and environments have shaped each other in the mountain landscapes of Southeastern Europe over the past nine millennia. The Action focuses on mountain lake basins and surrounding uplands in a three-national border region at the intersection of the Mediterranean and the Balkan macro-regions, where rich archaeological and environmental archives record long-term human adaptation to ecological change. These archives remain scattered, underused, and often inaccessible. BUREK will activate, expand, and harmonise them within an open, FAIR-compliant data infrastructure to enable comparative, diachronic analysis of land-use and subsistence practices from prehistory to the present.

By linking archaeological, palaeoecological, and ethnographic evidence, the network will create shared standards, digital tools, and analytical workflows for the study of mountain landscapes. Four Working Groups will coordinate data integration, training, community engagement, and policy outreach. Through workshops and Short-Term Scientific Missions, the Action will strengthen research capacity—especially in Inclusiveness Target Countries—and provide new and robust opportunities for Early Career Investigators.

The BUREK Action will also promote collaboration with heritage institutions and local communities to connect scientific research with traditional ecological knowledge and sustainable resource management. The resulting guidelines, datasets, and policy recommendations will support evidence-based heritage protection, land stewardship, and regional resilience in line with the European Green Deal and UN Sustainable Development Goals.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. History and Archeology: Archaeology, archaeometry, landscape archaeology 2. Social and economic geography: Socio-economic aspects of agriculture, agriculture and environment, urban agriculture, gardens, agricultural economy	1. Sustainable land-use and agro-pastoral adaptation 2. Community engagement and co-production of knowledge 3. Digital curation and interoperability of archaeological data 4. Early Career Investigator training and mobility 5. Policy integration for cultural landscape resilience

COST Members
Main Proposer: Belgium
Network of Proposers:
Full Member: Albania, Belgium, Bulgaria, France, Germany, North Macedonia, Serbia, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 58,33% YRI / 58,30% Women / 50,00% ITC

International Cooperation
International Partner: Australia, United States

CA25180
Biostimulants for Resilient Agriculture
(OC-2025-1-29758)

SUMMARY
Reducing the reliance on chemical fertilisers in agriculture is essential to safeguard biodiversity, promote soil health, and minimise the economic and health risks associated with overuse. The European Green Deal targets a 20% reduction in chemical fertiliser use by 2030, requiring improved nutrient use efficiency. Microbial and non-microbial biostimulants offer a promising solution, sustaining crop yield under lower fertiliser input and enhancing resilience to climate change, while restoring soil fertility in line with the EU Soil Health Directive. However, biostimulant research is currently fragmented, and product reliability is variable. BIORAG will strengthen European expertise in biostimulant research by fostering collaboration between academic groups, companies, and regulatory bodies.
The network will advance functional and mode-of-action studies of biostimulants, standardise and categorise bioassays linked to model species, and systematically transfer validated protocols to representative crops and perennial species, including trees. Young researchers will be trained in cutting-edge approaches including biomarkers, plant mutants, microscopy, molecular genetics, and omics technological approaches for the study of biostimulant function and mode of action. By harmonising research strategies, methodologies, and data management, BIORAG will accelerate biostimulant development, facilitate registration, generate new knowledge beyond the current state-of-the-art. These efforts will support resilient agricultural production systems and contribute to the UN Sustainable Development Goals, while ensuring practical relevance for industry and regulatory uptake.

SCIENTIFIC SCOPE

Areas of Expertise	Keywords
1. Agriculture, Forestry, and Fisheries: Agriculture related to crop production, soil biology and cultivation, applied plant biology, crop protection 2. Agricultural biotechnology: Sustainable production 3. Other agricultural sciences: Sustainable production 4. Agricultural biotechnology: Other bioproducts (products manufactured using biological material as feedstock) 5. Agricultural biotechnology: Other bioderived materials from agricultural biotechnology	1. Biostimulants 2. Crop Resilience 3. Standardized Bioassays 4. Transdisciplinary Network 5. Capacity Building

COST Members
Main Proposer: Czech Republic
Network of Proposers:
Full Member: Belgium, Bulgaria, Cyprus, Czech Republic, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Poland, Romania, Slovakia, Spain
Partner Member: South Africa

Main and secondary proposers: 6,25% YRI / 46,90% Women / 61,11% ITC

Specific Organisations

European RTD Organisation: HUN-REN Biological Research Center

Industrial Dimension

SMEs: France, Italy, Spain