

Horizon Europe non-space calls involving EU space programmes

Note: For the official information and any other recent change please consult the corresponding "Funding & tender opportunities" website.

Cluster 1: Health

- HORIZON-HLTH-2023-STAYHLTH-01-01: The Silver Deal Person-centred health and care in European regions
- HORIZON-HLTH-2024-STAYHLTH-01-02-two-stage: Towards a holistic support to children and adolescents' health and care provisions in an increasingly digital society
- HORIZON-HLTH-2024-STAYHLTH-01-05-two-stage: Personalised prevention of noncommunicable diseases addressing areas of unmet needs using multiple data sources
- HORIZON-HLTH-2023-ENVHLTH-02-01: Planetary health: understanding the links between environmental degradation and health impacts
- HORIZON-HLTH-2023-ENVHLTH-02-04: Global coordination of exposome research
- HORIZON-HLTH-2024-ENVHLTH-02-06-two-stage: The role of environmental pollution in non-communicable diseases: air, noise and light and hazardous waste pollution
- HORIZON-HLTH-2023-DISEASE-03-03: Interventions in city environments to reduce risk of non-communicable disease (Global Alliance for Chronic Diseases GACD)
- HORIZON-HLTH-2023-DISEASE-03-17: Pandemic preparedness and response: Understanding vaccine induced-immunity
- HORIZON-HLTH-2023-TOOL-05-03: Integrated, multi-scale computational models of patient patho-physiology ('virtual twins') for personalised disease management
- HORIZON-HLTH-2023-TOOL-05-04: Better integration and use of health-related realworld and research data, including genomics, for improved clinical outcomes
- HORIZON-HLTH-2023-TOOL-05-05: Harnessing the potential of real-time data analysis and secure Point-of-Care computing for the benefit of person-centred health and care delivery
- HORIZON-HLTH-2023-TOOL-05-08: Pandemic preparedness and response: In vitro diagnostic devices to tackle cross-border health threats

Cluster 2: Culture, creativity and inclusive society

• HORIZON-CL2-2023-HERITAGE-01-01: Advanced technologies for remote monitoring of heritage monuments and artefacts



- HORIZON-CL2-2023-HERITAGE-ECCCH-01-01: A European Collaborative Cloud for Cultural Heritage
- HORIZON-CL2-2023-HERITAGE-ECCCH-01-02: A European Collaborative Cloud for Cultural Heritage – Innovative tools for digitising cultural heritage objects

Cluster 3: Civil Security for Society

- HORIZON-CL3-2023-FCT-01-02: A harmonized European forensics approach on drugs analysis
- HORIZON-CL3-2023-FCT-01-04: Open Topic
- HORIZON-CL3-2024-FCT-01-01: Mitigating new threats and adapting investigation strategies in the era of Internet of Things
- HORIZON-CL3-2024-FCT-01-07: CBRN-E detection capacities in small architecture
- HORIZON-CL3-2023-BM-01-01: Capabilities for border surveillance and situational awareness
- HORIZON-CL3-2023-BM-01-02: Identify, inspect, neutralise Unexploded Ordnance (UXO) at sea
- HORIZON-CL3-2023-BM-01-03: Beyond the state-of-the-art "biometrics on the move" for border checks
- HORIZON-CL3-2023-BM-01-04: Interoperability of systems and equipment at tactical level; between equipment and databases; and/or between databases of threats and materials
- HORIZON-CL3-2024-BM-01-01: Open Topic
- HORIZON-CL3-2024-BM-01-02: Interoperability for border and maritime surveillance and situational awareness
- HORIZON-CL3-2024-BM-01-03: Advanced user-friendly, compatible, secure identity and travel document management
- HORIZON-CL3-2024-BM-01-04: Integrated risk-based border control that mitigates public security risk, reduces false positives and strengthens privacy
- HORIZON-CL3-2024-BM-01-05: Detection and tracking of illegal and trafficked goods
- HORIZON-CL3-2023-INFRA-01-01: Facilitating strategic cooperation to ensure the provision of essential services
- HORIZON-CL3-2023-INFRA-01-02: Supporting operators against cyber and non-cyber threats to reinforce the resilience of critical infrastructures
- HORIZON-CL3-2024-INFRA-01-01: Open Topic
- HORIZON-CL3-2024-INFRA-01-02: Resilient and secure urban planning and new tools for EU territorial entities
- HORIZON-CL3-2024-INFRA-01-03: Advanced real-time data analysis used for infrastructure resilience



- HORIZON-CL3-2023-DRS-01-01: Improving social and societal preparedness for disaster response and health emergencies
- HORIZON-CL3-2023-DRS-01-02: Design of crisis prevention and preparedness actions in case of digital breakdown (internet, electricity etc.)
- HORIZON-CL3-2023-DRS-01-05: Robotics: Autonomous or semi-autonomous UGV systems to supplement skills for use in hazardous environments
- HORIZON-CL3-2023-DRS-01-06: Increased technology solutions, institutional coordination and decision-support systems for first responders of last-kilometer emergency service delivery
- HORIZON-CL3-2024-DRS-01-01: Prevention, detection, response and mitigation of chemical, biological and radiological threats to agricultural production, feed and food processing, distribution and consumption
- HORIZON-CL3-2024-DRS-01-02: Open Topic
- HORIZON-CL3-2024-DRS-01-04: Hi-tech capacities for crisis response and recovery after a natural-technological (NaTech) disaster
- HORIZON-CL3-2024-DRS-01-05: Cost-effective sustainable technologies and crisis management strategies for RN large-scale protection of population and infrastructures after a nuclear blast or nuclear facility incident

Cluster 4: Digital, Industry and Space

- HORIZON-CL4-2023-TWIN-TRANSITION-01-04: Factory-level and value chain approaches for remanufacturing (Made in Europe Partnership) (IA)
- HORIZON-CL4-2023-TWIN-TRANSITION-01-07: Achieving resiliency in value networks through modelling and Manufacturing as a Service (Made in Europe Partnership) (RIA)
- HORIZON-CL4-2023-TWIN-TRANSITION-01-08: Foresight and technology transfer for Manufacturing as a Service (Made in Europe Partnership) (CSA)
- HORIZON-CL4-2023-TWIN-TRANSITION-01-37: Hubs for circularity for near zero emissions regions applying industrial symbiosis and cooperative approach to heavy industrialized clusters and surrounding ecosystems (Processes4Planet partnership) (IA)
- HORIZON-CL4-2023-TWIN-TRANSITION-01-40: Sustainable and efficient industrial water consumption: through energy and solute recovery (Processes4Planet partnership) (RIA)
- HORIZON-CL4-2023-TWIN-TRANSITION-01-45: Circular economy solutions for the valorisation of low-quality scrap streams, materials recirculation with high recycling rate, and residue valorisation for long term goal towards zero waste (Clean Steel Partnership) (RIA)
- HORIZON-CL4-2023-TWIN-TRANSITION-01-11: Intelligent data acquisition and analysis of materials and products in existing built works (RIA)



- HORIZON-CL4-2024-TWIN-TRANSITION-01-03: Manufacturing as a Service: Technologies for customised, flexible, and decentralised production on demand (Made in Europe Partnership) (RIA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-05: Technologies/solutions to support circularity for manufacturing (Made in Europe Partnership) (RIA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-41: Breakthroughs to improve process industry resource efficiency (Processes4Planet partnership) (RIA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-44: Digital transformation and ensuring a better use of industrial data, which can optimise steel supply chains (Clean Steel Partnership) (IA)
- HORIZON-CL4-2024-TWIN-TRANSITION-01-12: Enhanced assessment, intervention and repair of civil engineering infrastructure (RIA)
- HORIZON-CL4-2023-RESILIENCE-01-33: Smart sensors for the Electronic Appliances market (RIA)
- HORIZON-CL4-2023-RESILIENCE-01-05: Recycling technologies for critical raw materials from EoL products (IA)
- HORIZON-CL4-2023-RESILIENCE-01-06: Earth Observation platform, products and services for raw materials (IA)
- HORIZON-CL4-2023-RESILIENCE-01-07: Expert network on Critical raw materials (CSA)
- HORIZON-CL4-2023-RESILIENCE-01-09: Recyclability and resource efficiency of Rare Earth based magnets (IA)
- HORIZON-CL4-2023-RESILIENCE-01-21: Innovative methods for safety and sustainability assessments of chemicals and materials (RIA)
- HORIZON-CL4-2023-RESILIENCE-01-42: Boosting generation and diffusion of advanced technologies in SMEs based on a supply chain model (CSA)
- HORIZON-CL4-2023-RESILIENCE-01-44: Affordable Housing District Demonstrator (IA)
- HORIZON-CL4-2024-RESILIENCE-01-35: Biodegradable polymers for sustainable packaging materials (IA)
- HORIZON-CL4-2024-RESILIENCE-01-01: Exploration of critical raw materials in deep land deposits (RIA)
- HORIZON-CL4-2024-RESILIENCE-01-08: Rare Earth and magnets innovation hubs
- HORIZON-CL4-2024-RESILIENCE-01-04: Technologies for processing and refining of critical raw materials (IA)
- HORIZON-CL4-2024-RESILIENCE-01-10: Addressing due diligence requirements in raw materials supply chains. (CSA)
- HORIZON-CL4-2024-RESILIENCE-01-11: Technologies for extraction and processing of critical raw materials (IA)



- HORIZON-CL4-2024-RESILIENCE-01-41: 'Innovate to transform' support for SME's sustainability transition (CSA)
- HORIZON-CL4-2023-DATA-01-02: Integration of data life cycle, architectures and standards for complex data cycles and/or human factors, language (AI, data and robotics partnership) (RIA)
- HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (AI, data and robotics partnership) (RIA)
- HORIZON-CL4-2023-DATA-01-06: Coordination and Support of Cognitive Computing Continuum research and policy (CSA)
- HORIZON-CL4-2024-DATA-01-01: Al-driven data operations and compliance technologies (Al, data and robotics partnership) (IA)
- HORIZON-CL4-2024-DATA-01-03: Piloting emerging Smart IoT Platforms and decentralized intelligence (IA)
- HORIZON-CL4-2024-DATA-01-05: Platform Building, standardisation and Up-scaling of the 'Cloud-Edge-IoT' Solutions (Horizontal Activities - CSA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-01: Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership) (RIA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-51: Pervasive photonics multitechnology integration for digital infrastructure, sensors and internet of things (Photonics partnership)(RIA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-02: Industrial leadership in AI, Data and Robotics

 advanced human robot interaction (AI Data and Robotics Partnership) (IA)
- HORIZON-CL4-2023-DIGITAL-EMERGING-01-11: Low TRL research in microelectronics and integration technologies for industrial solutions (RIA)
- HORIZON-CL4-2024-DIGITAL-EMERGING-01-03: Novel paradigms and approaches, towards AI-powered robots— step change in functionality (AI, data and robotics partnership) (RIA)
- HORIZON-CL4-2024-DIGITAL-EMERGING-01-04: Industrial leadership in AI, Data and Robotics boosting competitiveness and the green transition (AI Data and Robotics Partnership) (IA)
- HORIZON-CL4-2024-DIGITAL-EMERGING-01-22: Fundamentals of Software Engineering (RIA)
- HORIZON-CL4-2024-DIGITAL-EMERGING-01-21: Open Source for Cloud/Edge to support European Digital Autonomy (RIA)
- HORIZON-CL4-2024-DIGITAL-EMERGING-01-23: Public recognition scheme for Open Source (CSA)
- HORIZON-CL4-2023-SPACE-01-11: End-to-end Earth observation systems and associated services
- HORIZON-CL4-2023-SPACE-01-12: Future Space Ecosystem and Enabling Technologies
- HORIZON-CL4-2023-SPACE-01-21: Low cost high thrust propulsion for European strategic space launchers technologies maturation including ground system tests



- HORIZON-CL4-2023-SPACE-01-22: New space transportation solutions and services
- HORIZON-CL4-2023-SPACE-01-23: Modern, flexible and efficient European test, production and launch facilities
- HORIZON-CL4-2023-SPACE-01-31: Copernicus for Atmosphere and Climate Change, including CO2
- HORIZON-CL4-2023-SPACE-01-32: Copernicus for Emergency Management
- HORIZON-CL4-2023-SPACE-01-33: Copernicus in-situ component
- HORIZON-CL4-2023-SPACE-01-34: Copernicus for Marine Environment Monitoring
- HORIZON-CL4-2023-SPACE-01-62: Quantum Communication Technologies for space systems
- HORIZON-CL4-2023-SPACE-01-63: Quantum Space Gravimetry Phase-A Study
- HORIZON-CL4-2023-SPACE-01-71: Scientific exploitation of space data
- HORIZON-CL4-2023-SPACE-01-72: Space technologies for European non-dependence and competitiveness
- HORIZON-CL4-2024-SPACE-01-35: Copernicus for Land and Water
- HORIZON-CL4-2024-SPACE-01-36: Copernicus for Security
- HORIZON-CL4-2024-SPACE-01-64: Quantum Space Gravimetry Phase-B study & Technology Maturation
- HORIZON-CL4-2024-SPACE-01-73: Space technologies for European non-dependence and competitiveness
- HORIZON-CL4-2023-HUMAN-01-31: Toolbox for efficient IP licensing for market uptake and societal value creation (CSA)
- HORIZON-CL4-2023-HUMAN-01-32: Piloting communities of expert facilitators to improve industry-academia-public sector co-creation (CSA)
- HORIZON-CL4-2023-HUMAN-01-33: Fostering knowledge valorisation through societal and cultural interactions (CSA)
- HORIZON-CL4-2023-HUMAN-01-51: Pilots for an innovative human-centric industry (RIA)
- HORIZON-CL4-2023-HUMAN-01-52: Drivers and success factors for progress towards Industry 5.0 (RIA)
- HORIZON-CL4-2023-HUMAN-01-53: Localised and Urban Manufacturing, supporting creativity and the New European Bauhaus (RIA using FSTP)
- HORIZON-CL4-2023-HUMAN-01-62: Boosting industrial symbiosis by standardisation (CSA)
- HORIZON-CL4-2023-HUMAN-01-63: Provide for a strong and sustainable pool of experts for European Standardisation: attract the students of university/HEI
- HORIZON-CL4-2023-HUMAN-01-64: Pre-normative research and standardisation in industrial ecosystems (CSA)
- HORIZON-CL4-2023-HUMAN-01-91: International Hub for Digital Partnerships in the Indo-Pacific (CSA)
- HORIZON-CL4-2023-HUMAN-01-92: R&I cooperation with Sub-Saharan Africa (CSA)



- HORIZON-CL4-2023-HUMAN-01-93: R&I cooperation with Latin America (Mexico, Brazil, Argentina, and other countries in the BELLA network or members of RedClara) (CSA)
- HORIZON-CL4-2023-HUMAN-01-01: Efficient trustworthy AI making the best of data (AI, Data and Robotics Partnership) (RIA)
- HORIZON-CL4-2023-HUMAN-01-02: Large Scale pilots on trustworthy AI data and robotics addressing key societal challenges (AI Data and Robotics Partnership) (IA)
- HORIZON-CL4-2023-HUMAN-01-03: Natural Language Understanding and Interaction in Advanced Language Technologies (AI Data and Robotics Partnership) (RIA)
- HORIZON-CL4-2023-HUMAN-01-04: Open innovation: Addressing Grand challenges in AI (AI Data and Robotics Partnership) (CSA)
- HORIZON-CL4-2023-HUMAN-01-05: Through AI from Disinformation to Trust (IA)
- HORIZON-CL4-2023-HUMAN-01-21: Next Generation eXtended Reality (RIA)
- HORIZON-CL4-2023-HUMAN-01-22: eXtended Reality for Industry 5.0 (IA)
- HORIZON-CL4-2023-HUMAN-01-81: Digital Humanism Putting people at the centre of the digital transformation (CSA)
- HORIZON-CL4-2024-HUMAN-01-06: Explainable and Robust AI (AI Data and Robotics Partnership) (RIA)
- HORIZON-CL4-2024-HUMAN-01-07: Collaborative intelligence combining the best of machine and human (AI Data and Robotics Partnership) (RIA)
- HORIZON-CL4-2024-HUMAN-01-61: Facilitate the engagement in global ICT standardisation development (CSA)
- HORIZON-CL4-2024-HUMAN-02-34: Support for transnational activities of National Contact Points in the thematic areas of Digital, Industry and Space
- HORIZON-CL4-2024-SSA-SST-MS HORIZON-CL4-2024-SSA-SST-STM-AE HORIZON-CL4-2024-SSA-SST-SB HORIZON-CL4-2024-SSA-SST-SP HORIZON-CL4-2024-SSA-SST-SD

Cluster 5: Climate, Energy and Mobility

- HORIZON-CL5-2023-D1-01-01: Further climate knowledge through advanced science and technologies for analysing Earth observation and Earth system model data
- HORIZON-CL5-2023-D1-01-02: Climate-related tipping points
- HORIZON-CL5-2023-D1-01-03: Climate impacts of a hydrogen economy
- HORIZON-CL5-2023-D1-01-04: Improved knowledge in cloud-aerosol interaction
- HORIZON-CL5-2023-D1-01-05: Science for successful, high-integrity voluntary climate initiatives



- HORIZON-CL5-2023-D1-01-06: Broadening the range of policy options in transition pathway analysis
- HORIZON-CL5-2023-D1-01-07: Modelling for local resilience Developments in support of local adaptation assessments and plans
- HORIZON-CL5-2023-D1-01-08: Solar Radiation Modification: governance of research
- HORIZON-CL5-2023-D1-01-09: Behavioural change and governance for systemic transformations towards climate resilience
- HORIZON-CL5-2023-D1-01-10: Improving the evidence base regarding the impact of sustainability and climate change education and related learning outcomes
- HORIZON-CL5-2023-D1-01-11: Needs-based adaptation to climate change in Africa
- HORIZON-CL5-2023-D1-02-01: EU-China international cooperation on data and model development for pathways to carbon neutrality: focusing on decarbonisation, energy efficiency and socio-economic implications of the transition
- HORIZON-CL5-2023-D1-02-02: EU-China international cooperation on blue carbon
- HORIZON-CL5-2024-D1-01-01: Enhanced quantification and understanding of natural and anthropogenic methane emissions and sinks
- HORIZON-CL5-2024-D1-01-02: Inland ice, including snow cover, glaciers, ice sheets and permafrost, and their interaction with climate change
- HORIZON-CL5-2024-D1-01-03: Paleoclimate science for a better understanding of the shortto long-term evolution of the Earth system
- HORIZON-CL5-2024-D1-01-04: Improved toolbox for evaluating the climate and environmental impacts of trade policies
- HORIZON-CL5-2024-D1-01-05: Next generation low-emission, climate-resilient pathways and NDCs for a future aligned with the Paris Agreement
- HORIZON-CL5-2024-D1-01-06: The role of climate change foresight for primary and secondary raw materials supply
- HORIZON-CL5-2024-D1-01-07: Quantification of the role of key terrestrial ecosystems in the carbon cycle and related climate effects
- HORIZON-CL5-2023-D2-01-01: Technologies for sustainable, cost-efficient and low carbon footprint downstream processing & production of battery-grade materials (Batt4EU Partnership)
- HORIZON-CL5-2023-D2-01-02: New processes for upcoming recycling feeds (Batt4EU Partnership)
- HORIZON-CL5-2023-D2-01-03: Advanced digital twins for battery cell production lines (Batt4EU Partnership)
- HORIZON-CL5-2023-D2-01-04: Battery management system (BMS) and battery system design for stationary energy storage systems (ESS) to improve interoperability and facilitate the integration of second life batteries (Batt4EU Partnership)



- HORIZON-CL5-2023-D2-01-05: Hybrid electric energy storage solutions for grid support and charging infrastructure (Batt4EU Partnership)
- HORIZON-CL5-2023-D2-01-06: Open Pilot Line/Test Bed for hydrogen
- HORIZON-CL5-2023-D2-01-07: Support for the deployment of R&I results for climate mitigation. Synergies with the ETS Innovation Fund
- HORIZON-CL5-2023-D2-01-08: Driving Urban Transition Co-funded Partnership
- HORIZON-CL5-2023-D2-02-01: Advanced materials and cells development enabling largescale production of Gen4 solid-state batteries for mobility applications (Batt4EU Partnership)
- HORIZON-CL5-2023-D2-02-02: New Approaches to Develop Enhanced Safety Materials for Gen 3 Li-Ion Batteries for Mobility Applications (Batt4EU Partnership)
- HORIZON-CL5-2023-D2-02-03: Creating a digital passport to track battery materials, optimize battery performance and life, validate recycling, and promote a new business model based on data sharing (Batt4EU Partnership)
- HORIZON-CL5-2024-D2-01-01: Advanced sustainable and safe pre-processing technologies for End-of-Life (EoL) battery recycling (Batt4EU Partnership)
- HORIZON-CL5-2024-D2-01-02: Non-Li Sustainable Batteries with European Supply Chains for Stationary Storage (Batt4EU Partnership)
- HORIZON-CL5-2024-D2-01-03: Development of technical and business solutions to optimise the circularity, resilience, and sustainability of the European battery value chain (Batt4EU Partnership)
- HORIZON-CL5-2024-D2-01-05: Furthering the development of a materials acceleration platform for sustainable batteries (combining AI, big data, autonomous synthesis robotics, high throughput testing) (Batt4EU Partnership)
- HORIZON-CL5-2024-D2-01-04: Emerging energy technologies for a climate neutral Europe
- HORIZON-CL5-2024-D2-02-01: Sustainable high-throughput production processes for stable lithium metal anodes for next generation batteries (Batt4EU Partnership)
- HORIZON-CL5-2024-D2-02-02: Post-Li-ion technologies and relevant manufacturing techniques for mobility applications (Generation 5) (Batt4EU Partnership)
- HORIZON-CL5-2024-D2-02-03: Size & weight reduction of cell and packaging of batteries system, integrating lightweight and functional materials, innovative thermal management and safe and sustainable by design approach (Batt4EU Partnership)
- HORIZON-CL5-2023-D3-01-01: Renewable Energy Valleys to increase energy security while accelerating the green transition in Europe
- HORIZON-CL5-2023-D3-01-02: PV integration in buildings and in infrastructure
- HORIZON-CL5-2023-D3-01-03: Floating PV Systems
- HORIZON-CL5-2023-D3-01-04: Solar Systems for Industrial Process Heat and Power
- HORIZON-CL5-2023-D3-01-05: Critical technologies for the offshore wind farm of the Future



- HORIZON-CL5-2023-D3-01-06: Demonstration of advanced biofuel technologies for aviation and/or shipping
- HORIZON-CL5-2023-D3-01-07: Demonstration of synthetic renewable fuel for aviation and/or shipping
- HORIZON-CL5-2023-D3-01-08: Demonstration of sustainable tidal energy farms
- HORIZON-CL5-2023-D3-01-09: Waste heat reutilisation from data centres
- HORIZON-CL5-2023-D3-01-10: Supporting the development of a digital twin to improve management, operations and resilience of the EU Electricity System in support to REPowerEU
- HORIZON-CL5-2023-D3-01-11: Demonstration of DC powered data centres, buildings, industries and ports
- HORIZON-CL5-2023-D3-01-12: Development of MVDC, HVDC and High-Power Transmission systems and components for a resilient grid
- HORIZON-CL5-2023-D3-01-13: Development of novel long-term electricity storage technologies
- HORIZON-CL5-2023-D3-01-14: Demonstration of innovative, large-scale, seasonal heat and/or cooling storage technologies for decarbonisation and security of supply
- HORIZON-CL5-2023-D3-01-15: Supporting the green and digital transformation of the energy ecosystem and enhancing its resilience through the development and piloting of AI-IoT Edge-cloud and platform solutions
- HORIZON-CL5-2023-D3-01-16: Support action to the SET Plan IWG on HVDC & DC Technologies
- HORIZON-CL5-2023-D3-01-17: Development of CO2 transport and storage demo projects
- HORIZON-CL5-2023-D3-01-18: Clean Energy Transition Co-funded Partnership
- HORIZON-CL5-2023-D3-02-01: Development of near zero-emission biomass heat and/or CHP including carbon capture
- HORIZON-CL5-2023-D3-02-02: Novel thermal energy storage for CSP
- HORIZON-CL5-2023-D3-02-03: Industrial manufacturing for lower-cost solar thermal components and systems
- HORIZON-CL5-2023-D3-02-04: Innovative components and configurations for heat pumps
- HORIZON-CL5-2023-D3-02-05: Advanced exploration technologies for geothermal resources in a wide range of geological settings
- HORIZON-CL5-2023-D3-02-06: Smart use of geothermal electricity and heating and cooling in the energy system
- HORIZON-CL5-2023-D3-02-07: Development of next generation advanced biofuel technologies
- HORIZON-CL5-2023-D3-02-08: Development of microalgae and/or direct solar fuel production and purification technologies for advanced aviation and /or shipping fuels



- HORIZON-CL5-2023-D3-02-09: Demonstration of sustainable hydropower refurbishment
- HORIZON-CL5-2023-D3-02-10: Development of innovative power take-off and control systems for wave energy devices
- HORIZON-CL5-2023-D3-02-11: Advanced concepts for crystalline Silicon technology
- HORIZON-CL5-2023-D3-02-12: Large Area Perovskite solar cells and modules
- HORIZON-CL5-2023-D3-02-13: Operation, Performance and Maintenance of PV Systems
- HORIZON-CL5-2023-D3-02-14: Digital twin for forecasting of power production to wind energy demand
- HORIZON-CL5-2023-D3-02-15: Critical technologies to improve the lifetime, efficient decommissioning and increase the circularity of offshore and onshore wind energy systems
- HORIZON-CL5-2023-D3-02-16: Accelerating the green transition and energy access in Africa

Cluster 6: Food, Bioeconomy, Natural Resources, Agriculture and Environment

- HORIZON-CL6-2023-BIODIV-01-3: Interdisciplinary assessment of changes affecting terrestrial and freshwater ecosystems, building on observation programmes
- HORIZON-CL6-2023-BIODIV-01-6: Restoration of deep-sea habitats
- HORIZON-CL6-2023-BIODIV-01-18: Additional activities for the European Biodiversity Partnership: Biodiversa+
- HORIZON-CL6-2024-BIODIV-01-2: Digital for nature
- HORIZON-CL6-2023-ZEROPOLLUTION-01-1: Knowledge and innovative solutions in agriculture for water availability and quality
- HORIZON-CL6-2023-ZEROPOLLUTION-01-2: Integrated assessment and monitoring of emerging pollutants in the marine environment
- HORIZON-CL6-2023-CLIMATE-01-1: Additional activities for the European Partnership Water Security for the Planet (Water4All)
- HORIZON-CL6-2023-CLIMATE-01-3: Ocean and coastal waters carbonand biodiversity-rich ecosystems and habitats in Europe and the Polar Regions
- HORIZON-CL6-2023-CLIMATE-01-8: Closing the research gaps on Essential Ocean Variables (EOVs) in support of global assessments
- HORIZON-CL6-2024-CLIMATE-01-4: Land use change and local / regional climate
- HORIZON-CL6-2024-CLIMATE-01-6: Ocean models for seasonal to decadal regional climate impacts and feedbacks
- HORIZON-CL6-2024-CLIMATE-01-7: EU-China international cooperation on improving monitoring for better integrated climate and biodiversity approaches, using environmental and Earth observation



- HORIZON-CL6-2023-GOVERNANCE-01-1: European partnership of Agriculture of Data
- HORIZON-CL6-2023-GOVERNANCE-01-11: Reducing observation gaps in the landsea interface area
- HORIZON-CL6-2023-GOVERNANCE-01-12: Empowering citizens to monitor, report and act in partnership with relevant public authorities to protect their environment in the context of environmental compliance assurance
- HORIZON-CL6-2023-GOVERNANCE-01-16: Digital technologies supporting plant health early detection, territory surveillance and phytosanitary measures
- HORIZON-CL6-2024-GOVERNANCE-01-1: Additional activities for the European Partnership for a climate neutral, sustainable and productive Blue Economy
- HORIZON-CL6-2024-GOVERNANCE-01-5: Customisation/pre-operationalisation of prototypes end-user services in the area Climate Change Adaptation and Mitigation
- HORIZON-CL5-2023-D3-02-16: Accelerating the green transition and energy access in Africa
- HORIZON-CL5-2023-D3-03-01: Increasing the efficiency of innovative static energy conversion devices for electricity and heat/cold generation
- HORIZON-CL5-2023-D3-03-02: Integration of renewable gases, other than hydrogen or methane, and which have not access to gas grids and interfacing with electricity and heat sectors
- HORIZON-CL5-2023-D3-03-03: System approach for grid planning and upgrade in support of a dominant electric mobility (vehicles and vessels) using AI tools
- HORIZON-CL5-2023-D3-03-04: Digital tools for enhancing the uptake of digital services in the energy market
- HORIZON-CL5-2023-D3-03-05: Creation of a standardised and open-source peer-topeer energy sharing platform architecture for the energy sector
- HORIZON-CL5-2023-D3-03-06: Components and interfacing for AC & DC side protection system AC & DC grid: components and systems for grid optimisation
- HORIZON-CL5-2023-D3-03-07: Digital solutions for defining synergies in international renewable energy value chains
- HORIZON-CL5-2023-D3-03-08: Support to the SET Plan IWG on hydrogen
- HORIZON-CL5-2024-D3-01-01: Alternative equipment and processes for advanced manufacturing of PV technologies
- HORIZON-CL5-2024-D3-01-02: Low-power PV
- HORIZON-CL5-2024-D3-01-03: Demonstration of improved intermediate renewable energy carrier technologies for transport fuels
- HORIZON-CL5-2024-D3-01-04: Improvement of light harvesting and carbon fixation with synthetic biology and/or bio-inspired/biomimetic pathways for renewable direct solar fuels production



- HORIZON-CL5-2024-D3-01-05: Development of carbon fixation technologies for biogenic flue gases
- HORIZON-CL5-2024-D3-01-06: Innovative applications/integration of geothermal heating and cooling in industry
- HORIZON-CL5-2024-D3-01-07: Development of hydropower equipment for improving techno-economic efficiency and equipment resilience in refurbishment situations
- HORIZON-CL5-2024-D3-01-08: Demonstration of sustainable wave energy farms
- HORIZON-CL5-2024-D3-01-09: Africa-EU CO-FUND action
- HORIZON-CL5-2024-D3-01-10: Next generation of renewable energy technologies
- HORIZON-CL5-2024-D3-01-11: AI Testing and Experimentation Facility (TEF) for the energy sector bringing technology to the market
- HORIZON-CL5-2024-D3-01-12: Energy Management Systems for flexibility services
- HORIZON-CL5-2024-D3-01-13: DC and AC/DC hybrid transmission and distribution systems
- HORIZON-CL5-2024-D3-01-14: Condition & Health Monitoring in Power Electronics (PE) Wide Band Gap PE for the energy sector
- HORIZON-CL5-2024-D3-01-15: HVAC, HVDC and High-Power cable systems
- HORIZON-CL5-2024-D3-01-16: Demonstration of innovative pumped storage equipment and tools in combination with innovative storage management systems
- HORIZON-CL5-2024-D3-01-17: Development and integration of advanced software tools in SCADA systems for High, Medium and Low voltage AC/DC hybrid systems
- HORIZON-CL5-2024-D3-02-01: Digital tools for CSP and solar thermal plants
- HORIZON-CL5-2024-D3-02-02: Development of next generation synthetic renewable fuel technologies
- HORIZON-CL5-2024-D3-02-03: Development of smart concepts of integrated energy driven bio-refineries for co-production of advanced biofuels, bio-chemicals and biomaterials
- HORIZON-CL5-2024-D3-02-04: Critical technologies for the future ocean energy farms
- HORIZON-CL5-2024-D3-02-05: PV-integrated electric mobility applications
- HORIZON-CL5-2024-D3-02-06: Innovative, Community-Integrated PV systems
- HORIZON-CL5-2024-D3-02-07: Resource Efficiency of PV in Production, Use and Disposal
- HORIZON-CL5-2024-D3-02-08: Minimisation of environmental, and optimisation of socioeconomic impacts in the deployment, operation and decommissioning of offshore wind farms
- HORIZON-CL5-2024-D3-02-09: Demonstrations of innovative floating wind concepts
- HORIZON-CL5-2024-D3-02-10: Market Uptake Measures of renewable energy systems
- HORIZON-CL5-2024-D3-02-11: CCU for the production of fuels
- HORIZON-CL5-2024-D3-02-12: DACCS and BECCS for CO2 removal/negative emissions
- HORIZON-CL5-2023-D4-01-01: Innovative cost-efficient solutions for zero-emission buildings



- HORIZON-CL5-2023-D4-01-02: Future-proofing historical buildings for the clean energy transition
- HORIZON-CL5-2023-D4-01-03: Interoperable solutions for positive energy districts (PEDs), including a better integration of local renewables and local excess heat sources
- HORIZON-CL5-2023-D4-01-04: Thermal management and energy optimisation of high energy demand IT systems equipment in tertiary buildings
- HORIZON-CL5-2023-D4-01-05: Innovative solutions for cost-effective decarbonisation of buildings through energy efficiency and electrification
- HORIZON-CL5-2023-D4-01-06: Integration of renewable heat or industrial waste heat in heat-to-cold conversion systems to generate cold for industrial processes
- HORIZON-CL5-2023-D4-02-01: Innovative uses of lifecycle data for the management of buildings and buildings portfolios (Built4People Partnership)
- HORIZON-CL5-2023-D4-02-02: Solutions for the identification of vulnerable buildings and people-centric built environment, and for improving their resilience in disruptive events and altered conditions in a changing climate (Built4People Partnership)
- HORIZON-CL5-2023-D4-02-03: Demonstrate built-environment decarbonisation pathways through bottom-up technological, social and policy innovation for adaptive integrated sustainable renovation solutions (Built4People Partnership)
- HORIZON-CL5-2023-D4-02-04: Fast-tracking and promoting built environment construction and renovation innovation with local value chains (Built4People Partnership)
- HORIZON-CL5-2023-D4-02-05: Supporting the creation of an accessible and inclusive built environment (Built4People Partnership)
- HORIZON-CL5-2024-D4-01-01: Low-disruptive renovation processes using integration of prefabricated solutions for energy-efficient buildings
- HORIZON-CL5-2024-D4-01-02: Smart grid-ready buildings
- HORIZON-CL5-2024-D4-01-03: Alternative heating systems for efficient, flexible and electrified heat generation in industry
- HORIZON-CL5-2024-D4-02-01: Industrialisation of sustainable and circular deep renovation workflows (Built4People Partnership)
- HORIZON-CL5-2024-D4-02-02: Robotics and other automated solutions for construction, renovation and maintenance in a sustainable built environment (Built4People Partnership)
- HORIZON-CL5-2024-D4-02-03: BIM-based processes and digital twins for facilitating and optimising circular energy renovation (Built4People Partnership)
- HORIZON-CL5-2024-D4-02-04: Design for adaptability, re-use and deconstruction of buildings, in line with the principles of circular economy (Built4People Partnership)
- HORIZON-CL5-2024-D4-02-05: Digital solutions to foster participative design, planning and management of buildings, neighbourhoods and urban districts (Built4People Partnership)
- HORIZON-CL5-2023-D5-01-01: User-centric design and operation of EV for optimized energy efficiency (2ZERO Partnership)



- HORIZON-CL5-2023-D5-01-02: Innovative battery management systems for next generation vehicles (2ZERO & Batt4EU Partnership)
- HORIZON-CL5-2023-D5-01-03: Frugal zero-emission vehicles concepts for the urban passenger challenge (2ZERO Partnership)
- HORIZON-CL5-2023-D5-01-04: Circular economy approaches for zero emission vehicles (2ZERO Partnership)
- HORIZON-CL5-2023-D5-01-05: Measuring road transport results towards 2ZERO KPIs (2ZERO Partnership)
- HORIZON-CL5-2023-D5-01-06: EU Member States/Associated countries research policy cooperation network to accelerate zero-emission road mobility (2ZERO Partnership)
- HORIZON-CL5-2023-D5-01-07: Hydrogen-powered aviation
- HORIZON-CL5-2023-D5-01-08: Accelerating climate-neutral hydrogenpowered/electrified aviation
- HORIZON-CL5-2023-D5-01-09: Competitiveness and digital transformation in aviation advancing further capabilities, digital approach to design
- HORIZON-CL5-2023-D5-01-10: Aviation research synergies between Horizon Europe, AZEA and National programs
- HORIZON-CL5-2023-D5-01-11: Developing the next generation of power conversion technologies for sustainable alternative carbon neutral fuels in waterborne applications (ZEWT Partnership)
- HORIZON-CL5-2023-D5-01-12: Demonstrations to accelerate the switch to safe use of new sustainable climate neutral fuels in waterborne transport (ZEWT Partnership)
- HORIZON-CL5-2023-D5-01-13: Integrated real-time digital solutions to optimise navigation and port calls to reduce emissions from shipping (ZEWT Partnership)
- HORIZON-CL5-2023-D5-01-14: Developing a flexible offshore supply of zero emission auxiliary power for ships moored or anchored at sea deployable before 2030 (ZEWT Partnership)
- HORIZON-CL5-2023-D5-01-15: Reducing the environmental impact from shipyards and developing a whole life strategy to measure and minimise the non-operational environmental impacts from shipping
- HORIZON-CL5-2023-D5-01-16: Developing small, flexible, zero-emission and automated vessels to support shifting cargo from road to sustainable Waterborne Transport
- HORIZON-CL5-2023-D5-01-17: Towards the implementation of the inland navigation action programme with a focus on Green and Connected Inland Waterway Transport
- HORIZON-CL5-2023-D5-01-18: Advanced transport emissions monitoring networks
- HORIZON-CL5-2023-D5-01-19: Support for the organisation of EU-US symposia in the field of Transport Research
- HORIZON-CL5-2024-D5-01-01: Smart, low-cost pervasive stationary slow charging and bidirectional solutions synergic with the grid for EV mass deployment (2ZERO Partnership)



- HORIZON-CL5-2024-D5-01-02: Integration and testing of next generation post-800V electric powertrains (2ZERO Partnership)
- HORIZON-CL5-2024-D5-01-03: Advanced battery system integration for next generation vehicles (2ZERO Partnership)
- HORIZON-CL5-2024-D5-01-04: Integrated flexible multipoint megawatt charging systems for electric truck mass deployment (2ZERO Partnership) (2024)
- HORIZON-CL5-2024-D5-01-05: Advanced digital development tools to accelerate the development of software defined vehicles that enable zero-emission mobility (2ZERO Partnership)
- HORIZON-CL5-2024-D5-01-06: New designs, shapes, functionalities of Light Commercial Vehicles (2ZERO Partnership)
- HORIZON-CL5-2024-D5-01-07: Accelerating climate neutral aviation, minimising nonCO2 emissions
- HORIZON-CL5-2024-D5-01-08: Competitiveness and digital transformation in aviation advancing further composite aerostructures
- HORIZON-CL5-2024-D5-01-09: Impact monitoring of EU Aviation R&I
- HORIZON-CL5-2024-D5-01-10: Towards a flying testbed for European leadership in aviation
- HORIZON-CL5-2024-D5-01-11: Achieving high voltage, low weight, efficient electric powertrains for sustainable waterborne transport (ZEWT Partnership)
- HORIZON-CL5-2024-D5-01-12: Combining state-of-the-art emission reduction and efficiency improvement technologies in ship design and retrofitting for contributing to the "Fit for 55" package objective by 2030 (ZEWT Partnership)
- HORIZON-CL5-2024-D5-01-13: Demonstration of Technologies to minimise underwater noise generated by waterborne transport (ZEWT Partnership)
- HORIZON-CL5-2024-D5-01-14: Demonstrating efficient fully DC electric grids within waterborne transport for large ship applications (ZEWT Partnership)
- HORIZON-CL5-2024-D5-01-15: Advanced digitalisation and modelling utilizing operational and other data to support zero emission waterborne transport (ZEWT Partnership)
- HORIZON-CL5-2024-D5-01-16: Structuring the Waterborne transport sector, including through changed business and industrial models in order to achieve commercial zeroemission waterborne transport (ZEWT Partnership)
- HORIZON-CL5-2024-D5-01-17: Coordinating and supporting the combined activities of member and associated states towards the objectives of the Zero Emission Waterborne Transport partnership so as to increase synergies and impact (ZEWT Partnership)
- HORIZON-CL5-2024-D5-01-18: Assessment of air pollutant emissions from low-carbon fuels in the heavy-duty, aviation, and maritime sectors
- HORIZON-CL5-2023-D6-01-01: User-centric development of vehicle technologies and solutions to optimise the on-board experience and ensure inclusiveness (CCAM Partnership)



- HORIZON-CL5-2023-D6-01-02: Generation of scenarios for development, training, virtual testing and validation of CCAM systems (CCAM Partnership)
- HORIZON-CL5-2023-D6-01-03: Infrastructure-enabled solutions for improving the continuity or extension of Operational Design Domains (ODDs) (CCAM Partnership)
- HORIZON-CL5-2023-D6-01-04: Integrating European diversity in the design, development and implementation of CCAM solutions to support mobility equity (CCAM Partnership)
- HORIZON-CL5-2023-D6-01-05: CCAM effects on jobs and education, plans for skills that match the CCAM development, and prerequisites for employment growth (CCAM Partnership)
- HORIZON-CL5-2023-D6-01-06: Zero-emission e-commerce and freight delivery and return choices by retailers, consumers and local authorities
- HORIZON-CL5-2023-D6-01-07: Operational automation to support multimodal freight transport
- HORIZON-CL5-2023-D6-01-08: Future-proof GHG and environmental emissions factors for accounting emissions from transport and logistics operations
- HORIZON-CL5-2023-D6-01-09: Climate resilient and safe maritime ports
- HORIZON-CL5-2023-D6-01-10: Better infrastructure safety on urban and secondary rural roads throughout a combination of adaptable monitoring and maintenance solutions
- HORIZON-CL5-2023-D6-01-11: Aviation safety Uncertainty quantification for safety and risk management
- HORIZON-CL5-2023-D6-01-12: New ways of reducing serious injuries and the longterm consequences of road crashes
- HORIZON-CL5-2023-D6-01-13: Support for dissemination events in the field of Transport Research
- HORIZON-CL5-2024-D6-01-01: Centralised, reliable, cyber-secure & upgradable invehicle electronic control architectures for CCAM connected to the cloud-edge continuum (CCAM Partnership)
- HORIZON-CL5-2024-D6-01-02: Scenario-based safety assurance of CCAM and related HMI in a dynamically evolving transport system (CCAM Partnership)
- HORIZON-CL5-2024-D6-01-03: Orchestration of heterogeneous actors in mixed traffic within the CCAM ecosystem (CCAM Partnership)
- HORIZON-CL5-2024-D6-01-04: AI for advanced and collective perception and decision making for CCAM applications (CCAM Partnership)
- HORIZON-CL5-2024-D6-01-05: Robust Knowledge and Know-How transfer for KeyDeployment Pathways and implementation of the EU-CEM (CCAM Partnership)
- HORIZON-CL5-2024-D6-01-06: Optimising multimodal network and traffic management, harnessing data from infrastructures, mobility of passengers and freight transport
- HORIZON-CL5-2024-D6-01-07: Scaling up logistics innovations supporting freight transport decarbonisation in an affordable way



- HORIZON-CL5-2024-D6-01-08: Improved transport infrastructure performance Innovative digital tools and solutions to monitor and improve the management and operation of transport infrastructure
- HORIZON-CL5-2024-D6-01-09: Policies and governance shaping the future transport and mobility systems
- HORIZON-CL5-2024-D6-01-10: Ensuring the safety, resilience and security of waterborne digital systems
- HORIZON-CL5-2024-D6-01-11: Effects of disruptive changes in transport: towards resilient, safe and energy efficient mobility
- HORIZON-CL5-2024-D6-01-12: A new framework to improve traffic safety culture in the EU