

HORIZON EUROPE - Übersicht der Topics 2023-2024
Work Programme Cluster 4 "Digital, Industry and Space"



Destination 1: Climate neutral, Circular and Digitised Production					
CALL - HORIZON-CL4-2023-TWIN-TRANSITION-01: TWIN GREEN AND DIGITAL TRANSITION 2023	Opening Date	Deadline	Instrument		
HORIZON-CL4-2023-TWIN-TRANSITION-01-02: High-precision OR complex product manufacturing – potentially including the use of photonics (Made in Europe and Photonics Partnerships) (IA)	08.12.2022	20.04.2023	IA		
HORIZON-CL4-2023-TWIN-TRANSITION-01-04: Factory-level and value chain approaches for remanufacturing (Made in Europe Partnership) (IA)			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)			RIA		
HORIZON-CL4-2023-TWIN-TRANSITION-01-08: Foresight and technology transfer for Manufacturing as a Service (Made in Europe Partnership) (CSA)			CSA		
HORIZON-CL4-2023-TWIN-TRANSITION-01-31: Energy efficiency breakthroughs in the process industries (Processes4Planet partnership) (RIA)			RIA		
HORIZON-CL4-2023-TWIN-TRANSITION-01-33: Electrification of high temperature heating systems (Processes4Planet Partnership) (IA)			IA		
HORIZON-CL4-2023-TWIN-TRANSITION-01-36: Modelling industry transition to climate neutrality, sustainability and circularity (Processes4Planet partnership) (RIA)..			RIA		
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)			IA		
HORIZON-CL4-2023-TWIN-TRANSITION-01-40: Sustainable and efficient industrial water consumption: through energy and solute recovery (Processes4Planet partnership) (RIA)			RIA		
HORIZON-CL4-2023-TWIN-TRANSITION-01-42: Circular economy in process industries: Upcycling large volumes of secondary resources (Processes4Planet partnership) (RIA)			RIA		
HORIZON-CL4-2023-TWIN-TRANSITION-01-43: Low carbon-dioxide emission technologies for melting iron-bearing feed materials OR smart carbon usage and improved energy & resource efficiency via process integration (Clean Steel Partnership) (IA) ..			IA		
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)			RIA		
CALL - HORIZON-CL4-2023-TWIN-TRANSITION-01-TWO-STAGE: TWIN GREEN AND DIGITAL TRANSITION 2023 TWO STAGE			Opening Date	Deadline	Instrument
HORIZON-CL4-2023-TWIN-TRANSITION-01-11: Intelligent data acquisition and analysis of materials and products in existing built works (RIA)			08.12.2022	1st stage: 07.03.2023 2nd stage: 05.10.2023	RIA
CALL - HORIZON-CL4-2024-TWIN-TRANSITION-01: TWIN GREEN AND DIGITAL TRANSITION 2024	Opening Date	Deadline	Instrument		

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)	19.09.2023	07.02.2024	RIA
HORIZON-CL4-2024-TWIN-TRANSITION-01-05: Technologies/solutions to support circularity for manufacturing (Made in Europe Partnership) (RIA)			RIA
HORIZON-CL4-2024-TWIN-TRANSITION-01-32: Optimisation of thermal energy flows in the process industry (Processes4Planet partnership) (IA)			IA
HORIZON-CL4-2024-TWIN-TRANSITION-01-34: Renewable hydrogen used as feedstock in innovative production routes (Processes4Planet Partnership) (RIA)			RIA
HORIZON-CL4-2024-TWIN-TRANSITION-01-35: Turning CO2 emissions from the process industry to feedstock (Processes4Planet partnership) (IA)			IA
HORIZON-CL4-2024-TWIN-TRANSITION-01-38: Hubs for circularity for industrialised urban peripheral areas (Processes4Planet partnership) (IA)			IA
HORIZON-CL4-2024-TWIN-TRANSITION-01-41: Breakthroughs to improve process industry resource efficiency (Processes4Planet partnership) (RIA)			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)			IA
HORIZON-CL4-2024-TWIN-TRANSITION-01-46: CO2-neutral steel production with hydrogen, secondary carbon carriers and electricity OR innovative steel applications for low CO2 emissions (Clean Steel Partnership) (RIA)			RIA
CALL - HORIZON-CL4-2024-TWIN-TRANSITION-01-TWO-STAGE: TWIN GREEN AND DIGITAL TRANSITION 2024 TWO STAGE	Opening Date	Deadline	Instrument
HORIZON-CL4-2024-TWIN-TRANSITION-01-01: Bio-intelligent manufacturing industries (Made in Europe Partnership) (RIA)	19.09.2023	1st stage: 07.02.2023	RIA
HORIZON-CL4-2024-TWIN-TRANSITION-01-12: Enhanced assessment, intervention and repair of civil engineering infrastructure (RIA)		2nd stage: 24.09.2024	RIA
Destination 2: Increased Autonomy in Key Strategic Value Chains for Resilient Industry			
CALL - HORIZON-CL4-2023-RESILIENCE-01-TWO-STAGE: RESILIENT VALUE CHAINS 2023 TWO STAGE	Opening Date	Deadline	Instrument
HORIZON-CL4-2023-RESILIENCE-01-32: Bioinspired and biomimetic materials for sustainable textiles (IA)	08.12.2022	1st stage: 07.03.2023	IA
HORIZON-CL4-2023-RESILIENCE-01-33: Smart sensors for the Electronic Appliances market (RIA)		2nd stage: 05.10.2023	RIA
HORIZON-CL4-2023-RESILIENCE-01-34: Advanced (nano and bio-based) materials for sustainable agriculture (RIA)			RIA
HORIZON-CL4-2023-RESILIENCE-01-37: Advanced materials for magnets in applications for the New Energies Market (RIA)			RIA
CALL - HORIZON-CL4-2023-RESILIENCE-01: RESILIENT VALUE CHAINS 2023	Opening Date	Deadline	Instrument
HORIZON-CL4-2023-RESILIENCE-01-02: Innovative technologies for sustainable and decarbonised extraction (RIA)	08.12.2022	20.04.2023	RIA
HORIZON-CL4-2023-RESILIENCE-01-03: Technologies for processing and refining of critical raw materials (IA)			IA
HORIZON-CL4-2023-RESILIENCE-01-05: Recycling technologies for critical raw materials from EoL products (IA)			IA
HORIZON-CL4-2023-RESILIENCE-01-06: Earth Observation platform, products and services for raw materials (IA)			IA
HORIZON-CL4-2023-RESILIENCE-01-07: Expert network on Critical raw materials (CSA)			CSA
HORIZON-CL4-2023-RESILIENCE-01-09: Recyclability and resource efficiency of Rare Earth based magnets (IA)			ia

HORIZON-CL4-2023-RESILIENCE-01-21: Innovative methods for safety and sustainability assessments of chemicals and materials (RIA)			RIA
HORIZON-CL4-2023-RESILIENCE-01-22: Integrated approach for impact assessment of safe and sustainable chemicals and materials (RIA)			RIA
HORIZON-CL4-2023-RESILIENCE-01-23: Computational models for the development of safe and sustainable by design chemicals and materials (RIA)			RIA
HORIZON-CL4-2023-RESILIENCE-01-39: Coordination and knowledge sharing across materials development communities (CSA)			CSA
HORIZON-CL4-2023-RESILIENCE-01-42: Boosting generation and diffusion of advanced technologies in SMEs based on a supply chain model (CSA)			CSA
HORIZON-CL4-2023-RESILIENCE-01-44: Affordable Housing District Demonstrator (IA)			IA
CALL - HORIZON-CL4-2024-RESILIENCE-01-TWO-STAGE: RESILIENT VALUE CHAINS 2024 TWO STAGE	Opening Date	Deadline	Instrument
HORIZON-CL4-2024-RESILIENCE-01-35: Biodegradable polymers for sustainable packaging materials (IA)	19.09.2023	1st stage: 07.02.2024	IA
HORIZON-CL4-2024-RESILIENCE-01-36: Advanced biomaterials for the Health Care (IA)		2nd stage: 24.09.2024	IA
CALL - HORIZON-CL4-2024-RESILIENCE-01: RESILIENT VALUE CHAINS 2024	Opening Date	Deadline	Instrument
HORIZON-CL4-2024-RESILIENCE-01-01: Exploration of critical raw materials in deep land deposits (RIA)	19.09.2023	07.02.2024	RIA
HORIZON-CL4-2024-RESILIENCE-01-04: Technologies for processing and refining of critical raw materials (IA)			IA
HORIZON-CL4-2024-RESILIENCE-01-08: Rare Earth and magnets innovation hubs (IA)			IA
HORIZON-CL4-2024-RESILIENCE-01-10: Addressing due diligence requirements in raw materials supply chains. (CSA)			CSA
HORIZON-CL4-2024-RESILIENCE-01-11: Technologies for extraction and processing of critical raw materials (IA)			IA
HORIZON-CL4-2024-RESILIENCE-01-24: Development of safe and sustainable by design alternatives (IA)			IA
HORIZON-CL4-2024-RESILIENCE-01-41: 'Innovate to transform' support for SME's sustainability transition (CSA)			CSA
Destination 3: World-leading Data and Computing Technologies			
CALL - HORIZON-CL4-2023-DATA-01: World leading data and computing technologies	Opening Date	Deadline	Instrument
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)	08.12.2022	29.03.2023	RIA
HORIZON-CL4-2023-DATA-01-07: Collaboration with NSF on fundamental research on new concepts for distributed computing and swarm intelligence (CSA)			RIA
HORIZON-CL4-2023-DATA-01-04: Cognitive Computing Continuum: Intelligence and automation for more efficient data processing (AI, data and robotics partnership) (RIA)			CSA
HORIZON-CL4-2023-DATA-01-06: Coordination and Support of Cognitive Computing Continuum research and policy (CSA)			CSA
CALL - HORIZON-CL4-2024-DATA-01: World leading data and computing technologies	Opening Date	Deadline	Instrument
HORIZON-CL4-2024-DATA-01-01: AI-driven data operations and compliance technologies (AI, data and robotics partnership) (IA)	15.11.2023	19.03.2024	IA
HORIZON-CL4-2024-DATA-01-03: Piloting emerging Smart IoT Platforms and decentralized intelligence (IA)			IA
HORIZON-CL4-2024-DATA-01-05: Platform Building, standardisation and Up-scaling of the 'Cloud-Edge-IoT' Solutions (Horizontal Activities - CSA)			CSA

Destination 4: Digital & Emerging Technologies for Competitiveness and Fit for the Green Deal			
CALL - HORIZON-CL4-2023-DIGITAL-EMERGING-01: Digital and emerging technologies for competitiveness and fit for the Green Deal	Opening Date	Deadline	Instrument
HORIZON-CL4-2023-DIGITAL-EMERGING-01-01: Novel paradigms and approaches, towards AI-driven autonomous robots (AI, data and robotics partnership) (RIA)	08.12.2022	29.03.2023	RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-12: Adaptive multi-scale modelling and characterisation suites from lab to production (RIA)			RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-51: Pervasive photonics - multi-technology integration for digital infrastructure, sensors and internet of things (Photonics partnership)(RIA)			RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-53: Versatile light sources and systems as tools for manufacturing and medical application (Photonics Partnership) (RIA)			RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-57: Advanced imaging and sensing technologies (IA)(Photonics Partnership)			IA
CALL - HORIZON-CL4-2023-DIGITAL-EMERGING-01-CNECT: Digital and emerging technologies for competitiveness and fit for the Green Deal	Opening Date	Deadline	Instrument
HORIZON-CL4-2023-DIGITAL-EMERGING-01-02: Industrial leadership in AI, Data and Robotics – advanced human robot interaction (AI Data and Robotics Partnership) (IA)	08.12.2022	29.03.2023	IA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-11: Low TRL research in micro-electronics and integration technologies for industrial solutions (RIA)			RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-32: Sustainable safe-by-design 2D materials technology (RIA)			RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-33: 2D materials of tomorrow (RIA) 222 Flagship on Quantum Technologies: a Paradigm Shift			RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-40: Quantum Photonic Integrated Circuit technologies (RIA)			RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-41: Investing in alternative quantum computation and simulation platform technologies (RIA)			RIA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-43: Framework Partnership Agreement for developing large-scale quantum Computing platform technologies (FPA)			FPA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-50: Next generation quantum sensing and metrology technologies (RIA)			FPA
HORIZON-CL4-2023-DIGITAL-EMERGING-01-56: Photonic Strategies and Skills Development (CSA) (Photonics Partnership)			CSA
CALL - HORIZON-CL4-2024-DIGITAL-EMERGING-01: Digital and emerging technologies for competitiveness and fit for the Green Deal	Opening Date	Deadline	Instrument
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)	15.11.2023	19.03.2024	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)			RIA
HORIZON-CL4-2024-DIGITAL-EMERGING-01-54: Smart photonics for joint communication & sensing and access everywhere (Photonics Partnership) (RIA)			RIA
HORIZON-CL4-2024-DIGITAL-EMERGING-01-55: Photonics Innovation Factory for Europe (Photonics Partnership) (IA)			IA
CALL - HORIZON-CL4-2024-DIGITAL-EMERGING-01-CNECT: Digital and emerging technologies for competitiveness and fit for the Green Deal	Opening Date	Deadline	Instrument

HORIZON-CL4-2024-DIGITAL-EMERGING-01-21: Open Source for Cloud/Edge to support European Digital Autonomy (RIA)	15.11.2023	19.03.2024	RIA
HORIZON-CL4-2024-DIGITAL-EMERGING-01-23: Public recognition scheme for Open Source (CSA)			CSA
HORIZON-CL4-2024-DIGITAL-EMERGING-01-31: Pilot line(s) for 2D materials-based devices (RIA)			RIA
HORIZON-CL4-2024-DIGITAL-EMERGING-01-34: Synergy with national and regional initiatives in Europe (CSA)			CSA
HORIZON-CL4-2024-DIGITAL-EMERGING-01-42: Stimulating transnational research and development of next generation quantum technologies, including basic theories and components (Cascading grant with FSTP) ..			RIA
HORIZON-CL4-2024-DIGITAL-EMERGING-01-45: Quantum sensing and metrology for market uptake (IA)			IA
Destination 5: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructures, Services, Applications and Data			
CALL - HORIZON-CL4-2023-SPACE-01: STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL SPACE-BASED INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA 2023	Opening Date	Deadline	Instrument
HORIZON-CL4-2023-SPACE-01-11: End-to-end Earth observation systems and associated services	22.12.2022	28.03.2023	IA
HORIZON-CL4-2023-SPACE-01-12: Future Space Ecosystem and Enabling Technologies			RIA
HORIZON-CL4-2023-SPACE-01-13: Future Space Ecosystem: Management and Coordination Activity ..			CSA
HORIZON-CL4-2023-SPACE-01-21: Low cost high thrust propulsion for European strategic space launchers - technologies maturation including ground system tests ..			RIA
HORIZON-CL4-2023-SPACE-01-22: New space transportation solutions and services			RIA
HORIZON-CL4-2023-SPACE-01-23: Modern, flexible and efficient European test, production and launch facilities			RIA
HORIZON-CL4-2023-SPACE-01-31: Copernicus for Atmosphere and Climate Change, including CO2			RIA
HORIZON-CL4-2023-SPACE-01-32: Copernicus for Emergency Management			RIA
HORIZON-CL4-2023-SPACE-01-33: Copernicus in-situ component			RIA
HORIZON-CL4-2023-SPACE-01-34: Copernicus for Marine Environment Monitoring			RIA
HORIZON-CL4-2023-SPACE-01-62: Quantum Communication Technologies for space systems			RIA
HORIZON-CL4-2023-SPACE-01-63: Quantum Space Gravimetry Phase-A Study 304 Targeted and strategic actions supporting the EU space sector			RIA
HORIZON-CL4-2023-SPACE-01-71: Scientific exploitation of space data			RIA
HORIZON-CL4-2023-SPACE-01-72: Space technologies for European non-dependence and competitiveness			RIA
CALL - HORIZON-CL4-2024-SPACE-01: STRATEGIC AUTONOMY IN DEVELOPING, DEPLOYING AND USING GLOBAL SPACE-BASED INFRASTRUCTURES, SERVICES, APPLICATIONS AND DATA 2024	Opening Date	Deadline	Instrument
HORIZON-CL4-2024-SPACE-01-35: Copernicus for Land and Water	21.11.2023	20.02.2024	RIA
HORIZON-CL4-2024-SPACE-01-36: Copernicus for Security			RIA
HORIZON-CL4-2024-SPACE-01-64: Quantum Space Gravimetry Phase-B study & Technology Maturation			RIA
HORIZON-CL4-2024-SPACE-01-73: Space technologies for European non-dependence and competitiveness			RIA
Destination 6: A human-centred and ethical development of digital and industrial technologies			
CALL - HORIZON-CL4-2023-HUMAN-01: A human-centred and ethical development of digital and industrial technologies	Opening Date	Deadline	Instrument
HORIZON-CL4-2023-HUMAN-01-31: Toolbox for efficient IP licensing for market uptake and societal value creation (CSA)	08.12.2022	29.03.2023	CSA

HORIZON-CL4-2023-HUMAN-01-32: Piloting communities of expert facilitators to improve industry-academia-public sector co-creation (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-33: Fostering knowledge valorisation through societal and cultural interactions (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-51: Pilots for an innovative human-centric industry (RIA)			RIA
HORIZON-CL4-2023-HUMAN-01-52: Drivers and success factors for progress towards Industry 5.0 (RIA)			RIA
HORIZON-CL4-2023-HUMAN-01-53: Localised and Urban Manufacturing, supporting creativity and the New European Bauhaus (RIA using FSTP)			RIA
HORIZON-CL4-2023-HUMAN-01-54: Green and digital skills and training needs for a just transition (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-62: Boosting industrial symbiosis by standardisation (CSA)			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			CSA
HORIZON-CL4-2023-HUMAN-01-64: Pre-normative research and standardisation in industrial ecosystems (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-91: International Hub for Digital Partnerships in the Indo-Pacific (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-92: R&I cooperation with Sub-Saharan Africa (CSA)			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)			CSA
CALL - HORIZON-CL4-2023-HUMAN-01-CNECT: A human-centred and ethical development of digital and industrial technologies	Opening Date	Deadline	Instrument
HORIZON-CL4-2023-HUMAN-01-01: Efficient trustworthy AI - making the best of data (AI, Data and Robotics Partnership) (RIA)	08.12.2022	29.03.2023	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)			IA
HORIZON-CL4-2023-HUMAN-01-03: Natural Language Understanding and Interaction in Advanced Language Technologies (AI Data and Robotics Partnership) (RIA)			RIA
HORIZON-CL4-2023-HUMAN-01-04: Open innovation: Addressing Grand challenges in AI (AI Data and Robotics Partnership) (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-05: Through AI from Disinformation to Trust (IA) 377 An Internet of Trust			IA
HORIZON-CL4-2023-HUMAN-01-11: Next Generation Internet Fund (RIA)			RIA
HORIZON-CL4-2023-HUMAN-01-12: Pilots for the Next Generation Internet (IA)			IA
HORIZON-CL4-2023-HUMAN-01-13: Next Generation Internet International Collaboration - USA (RIA)			RIA
HORIZON-CL4-2023-HUMAN-01-14: Next Generation Internet Commons Policy (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-21: Next Generation eXtended Reality (RIA)			RIA
HORIZON-CL4-2023-HUMAN-01-22: eXtended Reality for Industry 5.0 (IA)			IA
HORIZON-CL4-2023-HUMAN-01-23: Supporting the emergence of an open human-centric Metaverse (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-65: Support facility for digital standardisation and international cooperation in digital partnerships (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-66: Promoting EU standards globally (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-81: Digital Humanism - Putting people at the centre of the digital transformation (CSA)			CSA
HORIZON-CL4-2023-HUMAN-01-82: Art-driven digital innovation: Towards human compatible and ecologically conscious technology (CSA)			CSA
CALL - HORIZON-CL4-2024-HUMAN-01: A human-centred and ethical development of digital and industrial technologies	Opening Date	Deadline	Instrument
HORIZON-CL4-2024-HUMAN-01-06: Explainable and Robust AI (AI Data and Robotics Partnership) (RIA)	15.11.2023	19.03.2024	RIA

HORIZON-CL4-2024-HUMAN-01-07: Collaborative intelligence – combining the best of machine and human (AI Data and Robotics Partnership) (RIA).		RIA
HORIZON-CL4-2024-HUMAN-01-34: Support for transnational activities of National Contact Points in the thematic areas of Digital, Industry and Space (CSA)		CSA
HORIZON-CL4-2024-HUMAN-01-61: Facilitate the engagement in global ICT standardisation development (CSA)		CSA

RIA: Research and Innovation Action
IA: Innovation Action
CSA: Coordination and Support Action
PCP: Pre-Commercial Procurement
PPI: Public procurement of innovative solutions co-fund actions
ERA-NET: ERA NET cofund (jetzt: Partnership)