

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

## **Bilaga 1 – Utpekade områden ("topics") i utlysningen från Horisont Europas arbetsprogram**

Observera att listan på "topics" är baserad på publicerade arbetsprogram (se nedan). När EU-kommissionen kommer med ny information kan listan eventuellt uppdateras. Om det blir aktuellt kommer den här bilagan uppdateras och information läggs ut på utlysningens hemsida. Vinnova planerar att fortsätta erbjuda planeringsprojekt och det kommer även under våren 2022 att ansöka om planeringsprojekt för utlysningarna inom Horisont Europa som stänger under hösten 2022.

*Senaste uppdatering: 2021-08-23*

### Utkast på arbetsprogram

Kluster 4: [Register of Commission expert groups and other similar entities \(europa.eu\)](https://europa.eu)

Kluster 5: [Register of Commission expert groups and other similar entities \(europa.eu\)](https://europa.eu)

Kluster 6: [Register of Commission expert groups and other similar entities \(europa.eu\)](https://europa.eu)

### Innehåll

1. Vid ansökningstillfället som stänger 18 oktober 2021 kommer det gå att ansöka om planeringsprojekt för följande utlysningar inom Horisont Europa 2022
2. Vid det första ansökningstillfället som stängde i juni 2021 gick det gå att ansöka om planeringsprojekt för följande utlysningar inom Horisont Europa....9

**1. Vid ansökningstillfället som stänger 18 oktober 2021 kommer det gå att ansöka om planeringsprojekt för följande utlysningar inom Horisont Europa 2022**

**Cluster 4**

**Call TWIN GREEN AND DIGITAL TRANSITION 2021**

*Green, flexible and advanced manufacturing*

- HORIZON-CL4-2022-TWIN-TRANSITION-01-01: Rapid reconfigurable production process chains (IA)
- HORIZON-CL4-2022-TWIN-TRANSITION-01-02: Products with complex functional surfaces (RIA)
- HORIZON-CL4-2022-TWIN-TRANSITION-01-03: Excellence in distributed control and modular manufacturing (RIA)
- HORIZON-CL4-2022-TWIN-TRANSITION-01-04: Intelligent work piece handling in a full production line (RIA)

*Advanced digital technologies for manufacturing*

- HORIZON-CL4-2022-TWIN-TRANSITION-01-06: ICT Innovation for Manufacturing Sustainability in SMEs (I4MS2) (IA)
- HORIZON-CL4-2022-TWIN-TRANSITION-01-07: Digital tools to support the engineering of a Circular Economy (RIA)

*Hubs for circularity, a stepping stone towards climate neutrality and circularity in industry*

- HORIZON-CL4-2022-TWIN-TRANSITION-01-10: Circular flows for solid waste in urban environment (IA)

*Enabling circularity of resources in the process industries, including waste, water and CO<sub>2</sub>/CO*

- HORIZON-CL4-2022-TWIN-TRANSITION-01-11: Valorisation of CO/CO<sub>2</sub> streams into added-value products of market interest (IA)
- HORIZON-CL4-2022-TWIN-TRANSITION-01-13: Raw material preparation for clean steel production (IA)

*Integration of Renewables and Electrification in process industry*

- HORIZON-CL4-2022-TWIN-TRANSITION-01-15: New electrochemical conversion routes for the production of chemicals and materials in process industries (RIA)
- HORIZON-CL4-2022-TWIN-TRANSITION-01-16: Modular and hybrid heating technologies in steel production (IA)
- HORIZON-CL4-2022-TWIN-TRANSITION-01-17: Integration of hydrogen for replacing fossil fuels in industrial applications (IA)

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

**Call A DIGITISED, RESOURCE-EFFICIENT AND RESILIENT  
INDUSTRY 2021**

- HORIZON-CL4-2022-RESILIENCE-01-01: Circular and low emission value chains through digitalisation (RIA)

*Raw materials for EU strategic autonomy and successful transition to a climate-neutral and circular economy*

- HORIZON-CL4-2022-RESILIENCE-01-02: Monitoring and supervising system for exploration and future exploitation activities in the deep sea (RIA)
- HORIZON-CL4-2022-RESILIENCE-01-03: Streamlining cross-sectoral policy framework throughout the extractive life-cycle in environmentally protected areas (CSA)
- HORIZON-CL4-2022-RESILIENCE-01-04: Developing digital platforms for the small scale extractive industry (IA)
- HORIZON-CL4-2022-RESILIENCE-01-05: Technological solutions for tracking raw material flows in complex supply chains (RIA)
- HORIZON-CL4-2022-RESILIENCE-01-06: Sustainable and innovative mine of the future (IA)
- HORIZON-CL4-2022-RESILIENCE-01-07: Innovative solutions for efficient use and enhanced recovery of mineral and metal by-products from processing of raw materials (IA)
- HORIZON-CL4-2022-RESILIENCE-01-08: Earth observation technologies for the mining life cycle in support of EU autonomy and transition to a climate-neutral economy (RIA)

*Green and Sustainable Materials*

- HORIZON-CL4-2022-RESILIENCE-01-10: Innovative materials for advanced (nano)electronic components and systems (RIA)
- HORIZON-CL4-2022-RESILIENCE-01-11: Advanced lightweight materials for energy efficient structures (RIA)
- HORIZON-CL4-2022-RESILIENCE-01-12: Functional multi-material components and structures (RIA)
- HORIZON-CL4-2022-RESILIENCE-01-23: Safe- and sustainable-by-design organic and hybrid coatings (RIA)

*Materials for the benefit of society and the environment and materials for climate-neutral Industry*

- HORIZON-CL4-2022-RESILIENCE-01-13: Smart and multifunctional biomaterials for health innovations (RIA)
- HORIZON-CL4-2022-RESILIENCE-01-14: Membranes for gas separations - membrane distillation (IA)
- HORIZON-CL4-2022-RESILIENCE-01-16: Building and renovating by exploiting advanced materials for energy and resources efficient management (IA)

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

- HORIZON-CL4-2022-RESILIENCE-01-24: Novel materials for supercapacitor energy storage (RIA)

*Materials and data cross-cutting actions*

- HORIZON-CL4-2022-RESILIENCE-01-19: Advanced materials modelling and characterisation (RIA)
- HORIZON-CL4-2022-RESILIENCE-01-20: Climate Neutral and Circular Innovative Materials Technologies Open Innovation Test Beds (IA)
- HORIZON-CL4-2022-RESILIENCE-01-25: Optimised Industrial Systems and Lines through digitalisation (IA)
- HORIZON-CL4-2022-RESILIENCE-01-26: 'Innovate to transform' support for SME's sustainability transition (CSA)

**Call DIGITAL AND EMERGING TECHNOLOGIES FOR COMPETITIVENESS AND FIT FOR THE GREEN DEAL 2021**

*Innovation in AI, Data and Robotics*

- HORIZON-CL4-2022-DIGITAL-EMERGING-01-05: AI, Data and Robotics for Industry optimisation (including production and services) (IA)

*Tomorrow's deployable Robots: efficient, robust, safe, adaptive and trusted*

- HORIZON-CL4-2022-DIGITAL-EMERGING-01-07: Increased robotics capabilities demonstrated in key sectors (IA)

*European leadership in Emerging Enabling Technologies*

- HORIZON-CL4-2022-DIGITAL-EMERGING-01-35: Advanced characterisation methodologies to assess and predict the health and environmental risks of nanomaterials (RIA)

*Graphene: Europe in the lead*

- HORIZON-CL4-2022-DIGITAL-EMERGING-01-17: New generation of advanced electronic and photonic 2D materials-based devices, systems and sensors (RIA)
- HORIZON-CL4-2022-DIGITAL-EMERGING-01-18: 2D materials-based devices and systems for energy storage and/or harvesting (RIA)
- HORIZON-CL4-2022-DIGITAL-EMERGING-01-19: 2D materials-based devices and systems for biomedical applications (RIA)
- HORIZON-CL4-2022-DIGITAL-EMERGING-01-20: 2D-material-based composites, coatings and foams (IA)
- HORIZON-CL4-2022-DIGITAL-EMERGING-01-22: Supporting the coordination of the Graphene Flagship projects (CSA)

## **Cluster 5**

### **Call Climates Sciences and responses**

- HORIZON-CL5-2022-D1-01-01-two-stage: Carbon Dioxide Removal (CDR) approaches
- HORIZON-CL5-2022-D1-01-03-two-stage: Social science for land-use strategies in the context of climate change and biodiversity challenges

### **Call Sustainable, secure and competitive energy supply**

#### *Global leadership in renewable energy*

- HORIZON-CL5-2022-D3-01-01: Demonstration of cost-effective advanced biofuel technologies utilizing existing industrial plants
- HORIZON-CL5-2022-D3-01-02: Demonstration of innovative materials, supply cycles, recycling technologies to increase the overall circularity of wind energy technology and to reduce the primary use of critical raw materials
- HORIZON-CL5-2022-D3-01-03: Advanced manufacturing of Integrated PV

#### *Carbon capture, utilisation and storage (CCUS)*

- HORIZON-CL5-2022-D3-01-15: Decarbonising industry with CCUS

### **Call Cross-sectoral solutions for the climate transition**

#### *A competitive and sustainable European battery value chain*

- HORIZON-CL5-2022-D2-01-01: Sustainable processing and refining of battery grade graphite (Batteries Partnership)
- HORIZON-CL5-2022-D2-01-02: Interface and electron monitoring for the engineering of new and emerging battery technologies (Batteries Partnership)
- HORIZON-CL5-2022-D2-01-03: Furthering the development of a materials acceleration platform for sustainable batteries (combining AI, big data, autonomous synthesis robotics, high throughput testing) (Batteries Partnership)
- HORIZON-CL5-2022-D2-01-04: Towards creating an integrated manufacturing value chain in Europe: from machinery development to plant and site integrated design (Batteries Partnership)
- HORIZON-CL5-2022-D2-01-05: Next generation technologies for High-performance and safe-by-design battery systems for transport and mobile applications (Batteries Partnership)
- HORIZON-CL5-2022-D2-01-06: Embedding smart functionalities into battery cells (embedding sensing and self-healing functionalities to monitor and self-repair battery cells) (Batteries Partnership)
- HORIZON-CL5-2022-D2-01-07: Digitalisation of battery testing, from cell to system level, including lifetime assessment (Batteries Partnership)

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

- HORIZON-CL5-2022-D2-01-08: Coordination of large-scale initiative on future battery technologies (Batteries Partnership)
- HORIZON-CL5-2022-D2-01-09: Physics and data-based battery management for optimised battery utilisation (Batteries Partnership)
- HORIZON-CL5-2022-D2-01-10: Streamlined collection and reversed logistics, fully automated, safe and cost-efficient sorting, dismantling and second use before recycling (Batteries Partnership)

### **Call Sustainable, secure and competitive energy supply**

#### *Global leadership in renewable energy*

- HORIZON-CL5-2022-D3-02-08: Demonstration of complete value chains for advanced biofuel and non-biological renewable fuel production
- HORIZON-CL5-2022-D3-03-03: Efficient and circular artificial photosynthesis
- HORIZON-CL5-2022-D3-03-05: Novel Thin Film (TF) technologies targeting high efficiencies
- HORIZON-CL5-2022-D3-03-06: Efficient and low-emission technologies for industrial use of combustion and gasification systems from low-value biogenic residues and wastes
- HORIZON-CL5-2022-D3-03-09: Recycling end of life PV modules

### **Call Efficient, sustainable and inclusive energy use**

#### *Industrial facilities in the energy transition*

- HORIZON-CL5-2022-D4-01-04: Development and pilot demonstration of heat upgrade technologies with supply temperature in the range 150-250°C
- HORIZON-CL5-2022-D4-01-05: Development of high temperature thermal storage for industrial applications

## **Cluster 6**

### **Call Biodiversity and Ecosystem Services**

#### *Valuing and restoring biodiversity and ecosystem services*

- HORIZON-CL6-2022-BIODIV-01-04: Natural capital accounting: Measuring the biodiversity footprint of products and organizations

### **Call Circular economy and bioeconomy sectors**

#### *Innovating sustainable bio-based systems and the bioeconomy*

- HORIZON-CL6-2022-CircBio-01-02: Marginal lands and climate-resilient and biodiversity-friendly crops for sustainable industrial feedstocks and related value chains
- HORIZON-CL6-2022-CircBio-01-03: Benefits of the transition towards sustainable circular bio-based systems from linear fossil-based
- HORIZON-CL6-2022-CircBio-01-04: Maximizing economic, environmental and social synergies in the provision of feedstock for bio-based sectors through diversification and increased sustainability of agricultural production systems
- HORIZON-CL6-2022-CircBio-01-05: EU-China international cooperation on unlocking the potential of agricultural residues and wastes for circular and sustainable bio-based solutions

#### *Safeguarding the multiple functions of EU forests*

- HORIZON-CL6-2022-CircBio-01-06: Strengthening the European forest-based research and innovation ecosystem

#### *Enabling a circular economy transition*

- HORIZON-CL6-2022-CircBio-02-01-two-stage: Integrated solutions for circularity in buildings and the construction sector

#### *Innovating sustainable bio-based systems and the bioeconomy*

- HORIZON-CL6-2022-CircBio-02-02-two-stage: Exploring extreme environments: novel adaptation strategies at molecular level for bio-based innovation
- HORIZON-CL6-2022-CircBio-02-03-two-stage: Sustainable biodegradable novel bio-based plastics: innovation for sustainability and end-of-life options of plastics
- HORIZON-CL6-2022-CircBio-02-04-two-stage: Photosynthesis revisited: climate emergency, “no pollution and zero-emission” challenge and industrial application
- HORIZON-CL6-2022-CircBio-02-05-two-stage: Life sciences and their convergence with digital technologies for prospecting, understanding and sustainably using biological resources

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

*Safeguarding the multiple functions of EU forests*

- HORIZON-CL6-2022-CircBio-02-06-two-stage: Harnessing the digital revolution in the forest-based sector

**Call Clean environment and zero pollution**

*Halting emissions of pollutants to soils and waters*

- HORIZON-CL6-2022-ZEROPOLLUTION-01-02: Piloting innovative governance solutions to limit nitrogen and phosphorus emissions at the interface of rural/coastal and urban/industrial environments

**Call Land, ocean and water for climate action**

- HORIZON-CL6-2022-CLIMATE-01-05: Forestry - European observatory of climate change impacts and demonstration network of climate smart restoration pilots

**Call Innovative governance, environmental observations and digital solutions in support of the Green Deal**

*Innovating with governance models and supporting policies*

- HORIZON-CL6-2022-GOVERNANCE-01-04: Consumer-focused labelling options for bio-based products



## **2. Vid det första ansökningstillfället som stängde i juni 2021 gick det gå att ansöka om planeringsprojekt för följande utlysningar inom Horisont Europa**

### **Cluster 4**

#### **Call TWIN GREEN AND DIGITAL TRANSITION 2021**

##### *Green, flexible and advanced manufacturing*

- HORIZON-CL4-2021-TWIN-TRANSITION-01-01: AI enhanced robotics systems for smart manufacturing (IA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-02: Zero-defect manufacturing towards zero-waste (IA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-03: Laser-based technologies for green manufacturing (RIA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-05: Manufacturing technologies for bio-based materials (RIA)

##### *Advanced digital technologies for manufacturing*

- HORIZON-CL4-2021-TWIN-TRANSITION-01-07: Artificial Intelligence for sustainable, agile manufacturing (IA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-08: Data-driven Distributed Industrial Environments (IA)

##### *Hubs for circularity, a stepping stone towards climate neutrality and circularity in industry*

- HORIZON-CL4-2021-TWIN-TRANSITION-01-14: Deploying industrial-urban symbiosis solutions for the utilization of energy, water, industrial waste and by-products at regional scale (RIA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-16: Hubs for Circularity - European Community of Practice (ECoP) platform (CSA)

##### *Enabling circularity of resources in the process industries, including waste, water and CO<sub>2</sub>/CO*

- HORIZON-CL4-2021-TWIN-TRANSITION-01-17: Plastic waste as a circular carbon feedstock for industry (IA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-18: Carbon Direct Avoidance in steel: Electricity and hydrogen-based metallurgy (IA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-19: Improvement of the yield of the iron and steel making (IA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-20: Reducing environmental footprint, improving circularity in extractive and processing value chains (IA)

##### *Integration of Renewables and Electrification in process industry*

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

- HORIZON-CL4-2021-TWIN-TRANSITION-01-21: Design and optimisation of energy flexible industrial processes (IA)
- HORIZON-CL4-2021-TWIN-TRANSITION-01-22: Adjustment of Steel process production to prepare for the transition towards climate neutrality (IA)

**Call A DIGITISED, RESOURCE-EFFICIENT AND RESILIENT INDUSTRY 2021**

- HORIZON-CL4-2021-RESILIENCE-01-01: Ensuring circularity of composite materials (RIA)

*Raw materials for EU strategic autonomy and successful transition to a climate-neutral and circular economy*

- HORIZON-CL4-2021-RESILIENCE-01-03: Identifying future availability of secondary raw materials (RIA)
- HORIZON-CL4-2021-RESILIENCE-01-04: Developing climate-neutral and circular raw materials (IA)
- HORIZON-CL4-2021-RESILIENCE-01-05: Building EU-Africa partnerships on sustainable raw materials value chains (CSA)
- HORIZON-CL4-2021-RESILIENCE-01-06: Innovation for responsible EU sourcing of primary raw materials, the foundation of the Green Deal (RIA)
- HORIZON-CL4-2021-RESILIENCE-01-07: Building innovative value chains from raw materials to sustainable products (IA)

*Green and Sustainable Materials*

- HORIZON-CL4-2021-RESILIENCE-01-08: Establishing EU led international community on sustainable-by-design materials to support embedding sustainability criteria over the life cycle of products and processes (CSA)
- HORIZON-CL4-2021-RESILIENCE-01-09: Promote Europe's availability, affordability, sustainability and security of supply of essential chemicals and materials (IA)
- HORIZON-CL4-2021-RESILIENCE-01-10: Paving the way to an increased share of recycled plastics in added value products (RIA)
- HORIZON-CL4-2021-RESILIENCE-01-11: Safe- and sustainable-by-design polymeric materials (RIA)
- HORIZON-CL4-2021-RESILIENCE-01-12: Safe- and sustainable-by-design metallic coatings and engineered surfaces (RIA)

*Materials for the benefit of society and the environment and materials for climate-neutral Industry*

- HORIZON-CL4-2021-RESILIENCE-01-14: Development of more energy efficient electrically heated catalytic reactors (IA)
- HORIZON-CL4-2021-RESILIENCE-01-16: Creation of an innovation community for solar fuels and chemicals (CSA)

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

- HORIZON-CL4-2021-RESILIENCE-01-17: Advanced materials for hydrogen storage (RIA)
- HORIZON-CL4-2021-RESILIENCE-01-20: Antimicrobial, Antiviral, and Antifungal Nanocoatings (RIA)

*Materials and data cross-cutting actions*

- HORIZON-CL4-2021-RESILIENCE-01-25: Biomaterials database for Health Applications (CSA)
- HORIZON-CL4-2021-RESILIENCE-01-26: Sustainable Industry Commons (RIA)

*Improving the resilience and preparedness of EU businesses, especially SMEs and Startups*

- HORIZON-CL4-2021-RESILIENCE-01-27: Innovation Radar, Tech Due Diligence and Venture Building for strategic digital technologies (CSA)
- HORIZON-CL4-2021-RESILIENCE-01-28: Re-opening industrial sites preparatory action - Promoting a sustainable strategy for Europe's industrial future (CSA)
- HORIZON-CL4-2021-RESILIENCE-01-29: 'Innovate to transform' support for SME's sustainability transition (CSA)
- HORIZON-CL4-2021-RESILIENCE-01-31: European Technological and Social Innovation Factory (RIA)

**Call DIGITAL AND EMERGING TECHNOLOGIES FOR COMPETITIVENESS AND FIT FOR THE GREEN DEAL 2021**

*European Innovation Leadership in Photonics*

- HORIZON-CL4-2021-DIGITAL-EMERGING-01-07: Advanced Photonic Integrated Circuits (RIA)

*Innovation in AI, Data and Robotics*

- HORIZON-CL4-2021-DIGITAL-EMERGING-01-09: AI, Data and Robotics for the Green Deal (IA)
- HORIZON-CL4-2021-DIGITAL-EMERGING-01-10: AI, Data and Robotics at work (IA)

*Tomorrow's deployable Robots: efficient, robust, safe, adaptive and trusted*

- HORIZON-CL4-2021-DIGITAL-EMERGING-01-11: Pushing the limit of robotics cognition (RIA)
- HORIZON-CL4-2021-DIGITAL-EMERGING-01-12: European Network of Excellence Centres in Robotics (RIA)

*European leadership in Emerging Enabling Technologies*

- HORIZON-CL4-2021-DIGITAL-EMERGING-01-13: Academia-Industry Forum on Emerging Enabling Technologies (CSA)
- HORIZON-CL4-2021-DIGITAL-EMERGING-01-14: Advanced spintronics: Unleashing spin in the next generation ICs (RIA)

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

- HORIZON-CL4-2021-DIGITAL-EMERGING-01-27: Development of technologies/devices for bio-intelligent manufacturing (RIA)

### **Call A HUMAN-CENTRED AND ETHICAL DEVELOPMENT OF DIGITAL AND INDUSTRIAL TECHNOLOGIES 2021**

#### *Leadership in AI based on trust*

- HORIZON-CL4-2021-HUMAN-01-02: European coordination, awareness, standardisation & adoption of trustworthy European AI, Data and Robotics (CSA)

#### *Systemic approaches to make the most of the technologies within society and industry*

- HORIZON-CL4-2021-HUMAN-01-17: Awareness raising on Intellectual property (IP) management for European R&I (CSA)
- HORIZON-CL4-2021-HUMAN-01-18: Fostering standardisation to boost European industry's competitiveness (CSA)
- HORIZON-CL4-2021-HUMAN-01-19: Testing innovative solutions on local communities'-demand (IA)
- HORIZON-CL4-2021-HUMAN-01-20: Piloting a new industry-academia knowledge exchange focussing on companies' needs (CSA)
- HORIZON-CL4-2021-HUMAN-01-21: Art-driven use experiments and design (RIA)
- HORIZON-CL4-2021-HUMAN-01-26: Workforce skills for industry 5.0 (RIA)

### **Cluster 5**

#### **Call Climates Sciences and responses**

- HORIZON-CL5-2021-D1-01-02: Modelling the role of the circular economy for climate change mitigation
- HORIZON-CL5-2021-D1-01-09: The contribution of forest management to climate action: pathways, trade-offs and co-benefits

#### **Call Cross-sectoral solutions for the climate transition**

##### *A competitive and sustainable European battery value chain*

- HORIZON-CL5-2021-D2-01-01: Sustainable processing, refining and recycling of raw materials (Batteries Partnership)
- HORIZON-CL5-2021-D2-01-02: Advanced high-performance Generation 3b (high capacity / high voltage) Li-ion batteries supporting electro mobility and other applications (Batteries Partnership)

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

- HORIZON-CL5-2021-D2-01-03: Advanced high-performance Generation 4a, 4b (solid-state) Li-ion batteries supporting electro mobility and other applications (Batteries Partnership)
- HORIZON-CL5-2021-D2-01-04: Environmentally sustainable processing techniques applied to large scale electrode and cell component manufacturing for Li ion batteries (Batteries Partnership)
- HORIZON-CL5-2021-D2-01-05: Manufacturing technology development for solid-state batteries (SSB, Generations 4a - 4b batteries) (Batteries Partnership)
- HORIZON-CL5-2021-D2-01-06: Sustainable, safe and efficient recycling processes (Batteries Partnership)
- HORIZON-CL5-2021-D2-01-07: Support for establishment of R&I ecosystem, developing strategic forward-looking orientations to ensure future skills development, knowledge and technological leadership for accelerated disruptive technology exploration and uptake (Batteries Partnership)

*Emerging breakthrough technologies and climate solutions*

- HORIZON-CL5-2021-D2-01-08: Emerging technologies for a climate neutral Europe
- HORIZON-CL5-2021-D2-01-09: Methane cracking to usable hydrogen and carbon
- HORIZON-CL5-2021-D2-01-10: Technologies for non- CO2 greenhouse gases removal

**Call Sustainable, secure and competitive energy supply**

*Global leadership in renewable energy*

- HORIZON-CL5-2021-D3-02-01: Demonstration of wave energy devices to increase experience in real sea condition
- HORIZON-CL5-2021-D3-01-04: Novel tandem, high efficiency Photovoltaic technologies targeting low cost production with earth abundant materials
- HORIZON-CL5-2021-D3-02-02: Next generation of renewable energy technologies

*Carbon capture, utilisation and storage (CCUS)*

- HORIZON-CL5-2021-D3-01-15: Integration of CCUS in hubs and clusters, including knowledge sharing activities
- HORIZON-CL5-2021-D3-01-16: Cost reduction of CO2 capture (new or improved technologies)

*Cross-cutting issues*

- HORIZON-CL5-2021-D3-01-17: Support to the activities of the European Geological Services

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

### **Call Efficient, sustainable and inclusive energy use**

#### *Industrial facilities in the energy transition*

- HORIZON-CL5-2021-D4-01-04: Full-scale demonstration of heat upgrade technologies with supply temperature in the range 90 - 160°C
- HORIZON-CL5-2021-D4-01-05: Industrial excess (waste) Heat-to-Power conversion based on organic Rankine cycles

### **Call Clean and competitive solutions for all transport modes**

#### *Zero-emission road transport*

- HORIZON-CL5-2021-D5-01-04: LCA and design for sustainable circularity - holistic approach for zero-emission mobility solutions and related battery value chain (2ZERO & Batteries Partnership)

## **Cluster 6**

### **Call Biodiversity and Ecosystem Services**

#### *Valuing and restoring biodiversity and ecosystem services*

- HORIZON-CL6-2021-BIODIV-01-07: Ecosystems and their services for an evidence-based policy and decision-making

#### *Enabling transformative change on biodiversity*

- HORIZON-CL6-2021-BIODIV-01-15: Quantify impacts of the trade in raw and processed biomass on ecosystems, for offering new leverage points for biodiversity conservation, along supply chains, to reduce leakage effects

#### *Interconnecting biodiversity research and supporting policies*

- HORIZON-CL6-2021-BIODIV-01-21: Impact and dependence of business on biodiversity

### **Call Circular economy and bioeconomy sectors**

#### *Enabling a circular economy transition*

- HORIZON-CL6-2021-CircBio-01-03: Innovative solutions to over-packaging and single-use plastics, and related microplastic pollution
- HORIZON-CL6-2021-CIRCBIO-01-04: Increasing the circularity in textiles, plastics and/or electronics value chains

#### *Innovating sustainable bio-based systems and the bioeconomy*

- HORIZON-CL6-2021-CircBio-01-05: Novel, non-plant biomass feedstocks for industrial applications

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

- HORIZON-CL6-2021-CircBio-01-06: Contained biomass solutions for sustainable and zero-Indirect Land Use Change (ILUC) production systems for high value applications
- HORIZON-CL6-2021-CircBio-01-08: Mainstreaming inclusive small-scale bio-based solutions in European rural areas

*Innovating for blue bioeconomy and biotechnology value chains*

- HORIZON-CL6-2021-CircBio-01-09: Unlocking the potential of algae potential for a thriving European blue bioeconomy

### **Call Clean environment and zero pollution**

*Addressing pollution on seas and oceans*

- HORIZON-CL6-2021-ZEROPOLLUTION-01-04: Achieving zero polluted seas and oceans

*Increasing environmental performances and sustainability of processes and products*

- HORIZON-CL6-2021-ZEROPOLLUTION-01-05: Environmental sustainability criteria for biological feedstock production and trade in bio-based systems: impacts and trade-offs
- HORIZON-CL6-2021-ZEROPOLLUTION-01-06: Increasing the environmental performance of industrial processes in bio-based sectors: construction, woodworking, textiles, pulp and paper and bio-chemicals
- HORIZON-CL6-2021-ZEROPOLLUTION-01-07: International and EU sustainability certification schemes for bio-based systems
- HORIZON-CL6-2021-ZEROPOLLUTION-01-08: New genomic techniques (NGT): understanding benefits and risks – focus on bio-based innovation

### **Call Land, oceans and water for climate action**

- HORIZON-CL6-2021-CLIMATE-01-09: Enhancing science-based knowledge on EU forests', including old-growth forests, capacities to mitigate climate change
- HORIZON-CL6-2021-CLIMATE-01-10: EU-China international cooperation on increasing the resilience of forests

### **Call Innovative governance, environmental observations and digital solutions in support of the Green Deal**

Dnr: 2021-01980

2021-08-23

Främja svenskt deltagande i Horisont Europa; planeringsprojekt inom Hållbar industri

*Innovating with governance models and supporting policies*

- HORIZON-CL6-2021-GOVERNANCE-01-04: Strengthening bioeconomy innovation and deployment across sectors and all governance levels
- HORIZON-CL6-2021-GOVERNANCE-01-07: Regional governance models in the bioeconomy
- HORIZON-CL6-2021-GOVERNANCE-01-08: Improving understanding of and engagement in bio-based systems with training and skills development
- HORIZON-CL6-2021-GOVERNANCE-01-09: Revitalisation of European local communities with innovative bio-based business models and social innovation

HORIZON-CL6-2021-GOVERNANCE-01-13: Modelling land use and land management in the context of climate change