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1. /EU Horizon Europe*/ Cluster 1 D1: Staying healthy in a rapid changing society, 4 calls open, deadline: 01.02.2022

Calls for proposals under this destination are directed towards the Key Strategic Orientation KSO-D 'Creating a more resilient, inclusive and democratic European society' of Horizon Europe's Strategic Plan 2021-2024. Research and innovation supported under this destination should contribute to the impact area 'Good health and high-quality accessible health care' and in particular to the following expected impact, set out in the Strategic Plan for the health cluster: 'citizens of all ages stay healthy and independent in a rapidly changing society thanks to healthier lifestyles and behaviours, healthier diets, healthier environments, improved evidence-based health policies, and more effective solutions for health promotion and disease prevention'. In addition, research and innovation supported under this destination could also contribute to the following impact areas: 'High quality digital services for all', 'Sustainable food systems from farm to fork on land and sea', and 'Climate change mitigation and adaptation'.

People's health care needs are different, depending on their age, stage of life and socio-economic background. Their physical and mental health and well-being can be influenced by their individual situation as well as the broader societal context they are living in. Furthermore, health education and behaviour are important factors. Currently, more than 790 000 deaths per year in Europe are due to risk factors such as smoking, drinking, physical inactivity, and obesity. Upbringing, income, education levels, social and gender aspects also have an impact on health risks and how disease can be prevented. Moreover, people's health can be impacted by a rapidly changing society, making it challenging to keep pace and find its way through new technological tools and societal changes, which both are increasing demands on the individual's resilience. In order to leave no one behind, to reduce health inequalities and to support healthy and active lives for all, it is crucial to provide suitable and tailor-made solutions, including for people with specific needs.

In this work programme, destination 1 will focus on major societal challenges that are part of the European Commission's political priorities, notably diet and health (obesity), ageing and demographic change, mental health, digital empowerment in health literacy, and personalised prevention. Research and innovation supported under this destination will provide new evidences, methodologies and tools for understanding the transition from health to disease. This will allow designing better strategies and personalised tools for preventing diseases and promoting health, including through social innovation approaches. Specific measures will also be developed to educate and empower citizens of all ages and throughout their life, to play an active role in the self-management of their own health and self-care, to the benefit of an active and healthy ageing. In 2022, it will also call for proposals for improving the availability and use of artificial intelligence (AI) tools to predict the risk for onset and progression of chronic diseases. Key to achieving the expected impacts is the availability and accessibility of health data from multiple sources, including real-world health data, which will require appropriate support by research and data infrastructures, AI-based solutions, and robust and transparent methodologies for analysis and reporting.

Dialogue and coordination between stakeholders and policy makers as well as integration across different settings will be needed to develop more effective cross-sectoral solutions for health promotion and disease prevention and deliver improved evidence-based health for all.

1. Boosting mental health in Europe in times of change (HORIZON-HLTH-2022-STAYHLTH-01-01-two-stage)
2. Trustworthy artificial intelligence (AI) tools to predict the risk of chronic non-communicable diseases and/or their progression (HORIZON-HLTH-2022-STAYHLTH-01-04-two-stage)

3. Prevention of obesity throughout the life course (HORIZON-HLTH-2022-STAYHLTH-01-05-two-stage)
4. Personalised blueprint of chronic inflammation in health-to-disease transition (HORIZON-HLTH-2022-STAYHLTH-02-01)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersicht+C1+Health+Stand+22_09_21-p-2142.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-HLTH-2022-STAYHLTH-01-two-stage;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionCode=null;divisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState>

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2. /EU Horizon Europe*/ Cluster 1 D2: Living and working in a health-promoting environment, 1 call open, deadline: 21.04.2022

Calls for proposals under this destination are directed towards the Key Strategic Orientation KSO-D 'Creating a more resilient, inclusive and democratic European society' of Horizon Europe's Strategic Plan 2021-2024. Research and innovation supported under this destination should contribute to the impact area 'A resilient EU prepared for emerging threats' and in particular to the following expected impact, set out in the Strategic Plan for the health cluster: 'living and working environments are health-promoting and sustainable thanks to better understanding of environmental, occupational, social and economic determinants of health'. In addition, research and innovation supported under this destination could also contribute to the following impact areas: 'Good health and high quality accessible health care', 'Climate change mitigation and adaptation', and 'Clean and healthy air, water and soil'.

The environment we live and work in is a major determinant of our health and well-being. It has direct or indirect beneficial or adverse impact on our health and well-being. Environmental factors are estimated to account for almost 20% of all deaths in Europe. Opinion surveys have shown that European citizens are concerned about the impact of pollution on their health. The impacting factors on both physical and mental health and well-being are not all identified nor their effects comprehensively understood and accounted for to support evidence-based policy- and decision-making. Furthermore, agreed methodologies to estimate health-related costs of exposure to environmental stressors are lacking.

Therefore, Destination 2 aims at filling knowledge gaps in the understanding of the impacts on our health and well-being of those environmental, occupational and socio-economic risk factors that have the most significant or widespread societal impacts. In this work programme, Destination 2 focuses on indoor and outdoor air pollution, chemicals, non-ionizing radiation (electromagnetic fields), urbanisation, climate and other environmental changes, socio-economic inequalities, and changing working environments.

Furthermore, under this work programme a topic is dedicated to the creation of a European partnership for the assessment of risks from chemicals, which should establish the EU as an internationally recognised driver of innovative chemical risk assessment for an optimal protection of human health and the environment. The results will support the EU's environment and health policies and overarching policy frameworks such as the European Green Deal, the Chemical Strategy for Sustainability, the 8th Environment Action Programme, the EU Strategic Framework on Health and Safety at Work as well as the WHO European Environment and Health Process (EHP).

Strong collaborations across sectors and with other Horizon Europe clusters dealing with issues such as agriculture, food, environment, climate, mobility, security, urban planning, social inclusion and gender will be needed to ensure that maximal societal benefits are reached. Thus, in view of increasing the impact of EU investments under Horizon Europe, the European Commission welcomes and supports cooperation between EU-funded projects to enable cross-fertilisation and other synergies. This could range from networking to joint activities such as the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. Opportunities for potential synergies exist between projects funded under the same topic but also between other projects funded under another topic, cluster or pillar of Horizon Europe (but also with ongoing projects funded under Horizon 2020). In particular, this could involve projects related to European health research infrastructures (under pillar I of Horizon Europe), the EIC strategic challenges on health and EIT-KIC Health (under pillar III of Horizon Europe), or in areas cutting across the health and other clusters (under pillar II of Horizon Europe).

1. Methods for assessing health-related costs of environmental stressors (HORIZON-HLTH-2022-ENVHLTH-04-01)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersicht%C3%9Cbersicht+C1+Health+Stand+22_09_21-p-2142.pdf

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3. /EU Horizon Europe*/ Cluster 1 D3: Tackling diseases and reducing disease burden, 3 calls open, deadline: 01.02.2022

Calls for proposals under this destination are directed towards the Key Strategic Orientation KSO-D 'Creating a more resilient, inclusive and democratic European society' of Horizon Europe's Strategic Plan 2021-2024. Research and innovation supported under this destination should contribute to the impact area 'Good health and high-quality accessible healthcare' and in particular to the following expected impact, set out in the Strategic Plan for the health cluster: 'health care providers are able to better tackle and manage diseases (infectious diseases, including poverty-related and neglected diseases, non-communicable and rare diseases) and reduce the disease burden on patients effectively thanks to better understanding and treatment of diseases, more effective and innovative health technologies, better ability and preparedness to manage epidemic outbreaks and improved patient safety'. In addition, research and innovation supported under this destination could also contribute to the following impact areas: 'A resilient EU prepared for emerging threats', 'Climate change mitigation and adaptation', and 'High quality digital services for all'.

In this work programme, destination 3 will focus on major societal challenges linked to the Commission's political priorities such as the fight against cancer and other non-communicable diseases, better diagnosis and treatment of rare diseases, preparedness and response to and surveillance of health threats and epidemics, reduction of the number of antimicrobial-resistant infections, improving vaccination rates, demographic change, mental health and digital empowerment in health literacy. In particular, the topics under this destination will support activities aiming at: i) better understanding of diseases, their drivers and consequences, including pain and the causative links between health determinants and diseases, and better evidence-base for policy-making; ii) better methodologies and diagnostics that allow timely and accurate diagnosis, identification of personalised treatment options and assessment of health outcomes, including for patients with a rare disease; iii) development and validation of effective intervention for better surveillance, prevention, detection, treatment and crisis management of infectious disease threats; iv) innovative health technologies developed and tested in clinical practice, including personalised medicine approaches and use of digital tools to optimise clinical workflows; v) new and advanced therapies for non-communicable diseases, including rare diseases developed in particular for those without approved options, supported by strategies to make them affordable for the public payer; and vi) scientific evidence for improved/tailored policies and legal frameworks and to inform major policy initiatives at global level (e.g. WHO Framework Convention on Tobacco Control; UNEA Pollution Implementation Plan).

In view of increasing the impact of EU investments under Horizon Europe, the European Commission welcomes and supports cooperation between EU-funded projects to enable cross-fertilisation and other synergies. This could range from networking to joint activities such as the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. Opportunities for potential synergies exist between projects funded under the same topic but also between other projects funded under another topic, cluster or pillar of Horizon Europe (but also with ongoing projects funded under Horizon 2020). In particular, this could involve projects related to European health research infrastructures (under pillar I of Horizon Europe), the EIC strategic challenges on health and EIT-KIC Health (under pillar III of Horizon Europe), or in areas cutting across the health and other clusters (under pillar II of Horizon Europe). For instance, with cluster 3 "Civil security for society" such as on health security/emergencies (preparedness and response, medical counter measures, epidemic outbreaks/pandemics, natural disasters and technological incidents, bioterrorism); with cluster 4 "Digital, Industry and Space" such as on decision-support systems or on geo-observation and monitoring (e.g. of disease vectors, epidemics); or with cluster 6 "Food, bioeconomy, natural resources, agriculture and environment" such as on health security and AMR (one-health: human/animal/plant/soil/water health).

1. Pre-clinical development of the next generation of immunotherapies for diseases or disorders with unmet medical needs (HORIZON-HLTH-2022-DISEASE-06-02-two-stage)
2. Vaccines 2.0 - developing the next generation of vaccines (HORIZON-HLTH-2022-DISEASE-06-03-two-stage)
3. Development of new effective therapies for rare diseases (HORIZON-HLTH-2022-DISEASE-06-04-two-stage)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C1+Health+Stand+22_09_21-p-2142.pdf

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4. /EU Horizon Europe*/ Cluster 1 D4: Ensuring access to innovative, sustainable and high-quality health care, 4 calls open, deadline: 21.04.2022

Calls for proposals under this destination are directed towards the Key Strategic Orientation KSO-D 'Creating a more resilient, inclusive and democratic European society' of Horizon Europe's Strategic Plan 2021-2024. Research and innovation supported under this destination should contribute to the impact areas 'Good health and high-quality accessible health care' and 'A resilient EU prepared for emerging threats', and in particular to the following expected impact, set out in the Strategic Plan for the health cluster: 'Health care systems provide equal access to innovative, sustainable and high-quality health care thanks to the development and uptake of safe, cost-effective and people-centred solutions, with a focus on population health, health systems resilience, as well as improved evidence-based health policies'. In addition, research and innovation supported under this destination could also contribute to the following impact areas: 'Climate change mitigation and adaptation', 'High quality digital services for all' and 'A Competitive and secure data economy'.

Health systems are affected by limitations in sustainability and resilience, challenges which have been reinforced by the COVID-19 crisis that has also revealed inequalities in access to high-quality health care services. Our health systems need to become more effective, efficient, accessible, fiscally and environmentally sustainable, and resilient in order to cope with public health emergencies, to adapt to environmental challenges like climate change and to contribute to social justice and cohesion. Therefore, the transformation and modernisation of our health systems will be one of the biggest challenges in the economic recovery-bound future, but it will also be a time of opportunity for generating evidence, taking advantage of digital and data-driven innovation and developing more flexible and equitable health systems.

Under this destination, research and innovation aims at supporting health care systems in their transformation to ensure fair access to sustainable health care services of high quality for all citizens. Funded activities should support the development of innovative, feasible, implementable, financially sound and scalable solutions in the various dimensions of health care systems (e.g. governance, financing, human and physical resources, health service provision, and patient empowerment). Ultimately, these activities should provide decision-makers with new evidence, methods, tools and technologies for uptake into their health care systems and, consequently, allow improving governance of the European health care systems, supporting health care professionals and providers and allocating resources according to citizens' health needs and preferences, while ensuring fiscal and environmental sustainability to assure those needs can be met on the long-term. Funded activities should adopt a patient-centred approach that empowers patients, promotes a culture of dialogue and openness between citizens, patients, caregivers, health care providers and other relevant stakeholders, and unleashes the potential for social innovation.

In this work programme, destination 4 will focus on the following issues:

- o Modernising health care systems in the EU, especially through a European public-public partnership on transforming health and care systems;
- o Improving the quality of health care along the entire health care continuum and being people-centred;

- o Supporting evidence-based health care decisions both for health care providers and policy-makers, fostering improved foresight and enabling sound planning of health care resources;
- o Enhancing development and uptake of innovative health care services and solutions, including environmentally sustainable ones that contribute to the European Green Deal.

1. Pre-commercial research and innovation procurement (PCP) for building the resilience of health care systems in the context of recovery (HORIZON-HLTH-2022-CARE-08-02)
2. Public procurement of innovative solutions (PPI) for building the resilience of health care systems in the context of recovery (HORIZON-HLTH-2022-CARE-08-03)
3. Better financing models for health systems (HORIZON-HLTH-2022-CARE-08-04)
4. European partnership on transforming health and care systems (HORIZON-HLTH-2022-CARE-10-01)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C1+Health+Stand+22_09_21-p-2142.pdf

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5. /EU Horizon Europe*/ Cluster 1 D5: Unlocking the full potential of new tools, technologies and digital solutions for a healthy society, 3 calls open, deadline: 01.02.2022

Calls for proposals under this destination are directed towards the Key Strategic Orientation KSO-A 'Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains' of Horizon Europe's Strategic Plan 2021-2024. Research and innovation supported under this destination should contribute to the impact area 'High quality digital services for all' and in particular to the following expected impact, set out in the Strategic Plan for the health cluster: 'Health technologies, new tools and digital solutions are applied effectively thanks to their inclusive, secure and ethical development, delivery, integration and deployment in health policies and health and care systems'. In addition, research and innovation supported under this destination could also contribute to the following impact areas: 'A competitive and secure data-economy', 'Industrial leadership in key and emerging technologies that work for people', and 'Good health and high-quality accessible health care'.

Technology is a key driver for innovation in the health care sector. It can provide better and more cost-efficient solutions with high societal impact, tailored to the specific health care needs of the individual. However, novel tools, therapies, technologies and digital approaches face specific barriers and hurdles in piloting, implementing and scaling-up before reaching the patient, encountering additional challenges such as public acceptance and trust. Emerging and disruptive technologies offer big

opportunities for transforming health care, thereby promoting the health and well-being of citizens. Unlocking this potential and harnessing the opportunities depends on the capacity to collect, integrate and interpret large amounts of data, as well as ensure compatibility with appropriate regulatory frameworks and infrastructures that will both safeguard the rights of the individual and of society and stimulate innovation to develop impactful solutions. In addition to existing European Research Infrastructures, the European Health Data Space will promote health-data exchange and facilitate cross-border research activities. This destination aims to promote the development of tools, technologies and digital solutions for treatments, medicines, medical devices and improved health outcomes, taking into consideration safety, effectiveness, appropriateness, accessibility, comparative value-added and fiscal sustainability as well as issues of ethical, legal and regulatory nature.

In view of increasing the impact of EU investments under Horizon Europe, the European Commission welcomes and supports cooperation between EU-funded projects to enable cross-fertilisation and other synergies. This could range from networking to joint activities such as the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. Opportunities for potential synergies exist between projects funded under the same topic but also between other projects funded under another topic, cluster or pillar of Horizon Europe (but also with ongoing projects funded under Horizon 2020). In particular, this could involve projects related to European health research infrastructures (under pillar I of Horizon Europe), the EIC strategic challenges on health and EIT-KIC Health (under pillar III of Horizon Europe) or in areas cutting across the health and other clusters (under pillar II of Horizon Europe). For instance, with cluster 4 "Digital, Industry and Space" such as on digitalisation of the health sector, incl. health technologies, medical devices and key enabling technologies; assisted, autonomous, independent and empowered living; smart homes; decision support systems; health impact assessment (e.g. related to consumer products, working place innovation).

1. Optimising effectiveness in patients of existing prescription drugs for major diseases (except cancer) with the use of biomarkers (HORIZON-HLTH-2022-TOOL-11-01)
2. New methods for the effective use of real-world data and/or synthetic data in regulatory decision-making and/or in health technology assessment (HORIZON-HLTH-2022-TOOL-11-02)
3. Computational models for new patient stratification strategies (HORIZON-HLTH-2022-TOOL-12-01-two-stage)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C1+Health+Stand+22_09_21-p-2142.pdf

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6. /EU Horizon Europe*/ Cluster 1 D6: Maintaining an innovative, sustainable and globally competitive health industry, 5 calls open, deadline: 21.04.2022

Calls for proposals under this destination are directed towards the Key Strategic Orientation KSO-A 'Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains' of Horizon Europe's Strategic Plan 2021-2024. Research and innovation supported under this destination should contribute to the impact area 'A competitive and secure data-economy' and in particular to the following expected impact, set out in the Strategic Plan for the health cluster: 'EU health industry is innovative, sustainable and globally competitive thanks to improved up-take of breakthrough technologies and innovations, which makes the EU with its Member States more resilient and less dependent from imports with regard to the access to and supply of critical health technologies'. In addition, research and innovation supported under this destination could also contribute to the following impact areas: 'Industrial leadership in key and emerging technologies that work for people', 'High quality digital services for all', and 'Good health and high-quality accessible health care'.

The health industry is a key driver for growth and has the capacity to provide health technologies to the benefit of patients and providers of health care services. The relevant value chains involve a broad variety of key players from supply, demand and regulatory sides. In addition, the path of innovation in health is long and complex. The development of novel health technologies is generally associated with uncertainties and market barriers due to expensive and risky development (e.g. attrition rate in pharmaceutical development), high quality and security requirements (e.g. clinical performance, safety, data privacy and cybersecurity) and market specificities (e.g. strong regulation, pricing and reimbursement issues). In addition, the growing concern about environmental issues is putting more pressure on this industry. Therefore, there is a need for research and innovation integrating various stakeholders to facilitate market access of innovative health technologies (medical technologies, pharmaceuticals, biotechnologies, digital health technologies).

In order to address these challenges, in particular green and digital transitions and proper supply of health technologies and products, destination 6 will focus on research and innovation activities that aim at:

- o Production of pharmaceuticals in compliance with the objectives of the European Green Deal.
- o Methodologies, guidelines and standards, assessment studies, and structuring activities adapted to digital solutions and interventions for GDPR compliant translation into health care practice, including inter-operability, cyber-security and data confidentiality.
- o Public authorities supported with better methodologies and interdisciplinary approaches to assess and value new health technologies and interventions.
- o Development of pharmaceutical products meeting unmet medical needs in the context of market failures.

In view of increasing the impact of EU investments under Horizon Europe, the European Commission welcomes and supports cooperation between EU-funded projects to enable cross-fertilisation and other synergies. This could range from networking to joint activities such as the participation in joint workshops, the exchange of knowledge, the development and adoption of best practices, or joint communication activities. Opportunities for potential synergies exist between projects funded under the same topic but also between other projects funded under another topic, cluster or pillar of Horizon Europe (but also with ongoing projects funded under Horizon 2020). In particular, this could involve projects related to European health research infrastructures (under pillar I of Horizon Europe), the EIC strategic challenges on health and EIT-KIC Health (under pillar III of Horizon Europe), or in areas cutting across the health and other clusters (under pillar II of Horizon Europe). For instance, with cluster 4 "Digital, Industry and Space" such as on industrial research and innovation infrastructures (pilot plants, testing and simulation facilities, open innovation hubs); additive manufacturing (3D/4D printing) and other production technologies (incl. bio manufacturing); safe, smart and sustainable materials.

1. Enhancing cybersecurity of connected medical devices (HORIZON-HLTH-2022-IND-13-01)
2. Scaling up multi-party computation, data anonymisation techniques, and synthetic data generation (HORIZON-HLTH-2022-IND-13-02)
3. New pricing and payment models for cost-effective and affordable health innovations (HORIZON-HLTH-2022-IND-13-03)
4. Setting up a European Smart Health Innovation Hub (HORIZON-HLTH-2022-IND-13-04)
5. Setting up a European Electronic Health Record Exchange Format (EEHRxF) Ecosystem (HORIZON-HLTH-2022-IND-13-05)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersicht%C3%9Cbersicht+C1+Health+Stand+22_09_21-p-2142.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-HLTH-2022-IND-13;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;sector=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableStateTableState>

7. /EU Horizon Europe*/ Cluster 4 D1: Climate neutral, circular and digitised production, 13 calls open, deadline: 30.03.2022

This destination will directly support the following Key Strategic Orientations, as outlined in the Strategic Plan:

- o KSO C, 'Making Europe the first digitally led circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction and production systems.'
- o KSO A, 'Promoting an open strategic autonomy by leading the development of key digital, enabling and emerging technologies, sectors and value chains to accelerate and steer the digital and green transitions through human-centred technologies and innovations.'
- o KSO D, 'Creating a more resilient, inclusive and democratic European society, prepared and responsive to threats and disasters, addressing inequalities and providing high-quality health care, and empowering all citizens to act in the green and digital transitions.'
- o Proposals for topics under this Destination should set out a credible pathway to the following expected impact of Cluster 4:
 - o Global leadership in clean and climate-neutral industrial value chains, circular economy and climate-neutral digital systems and infrastructures (networks, data centres), through innovative production and manufacturing processes and their digitisation, new business models, sustainable-by-design advanced materials and technologies enabling the switch to decarbonisation in all major emitting industrial sectors, including green digital technologies.

Accelerating the twin green and digital transitions will be key to building a lasting and prosperous growth, in line with the EU's new growth strategy, the European Green Deal. Europe's ability to lead the twin transitions will require new technologies, with investment and innovation to match. Research and innovation will be fundamental to create the new products, services and business models needed to sustain or enable EU industrial leadership and competitiveness, and to create new markets for climate neutral and circular products. The shift towards a sustainable and inclusive economic model will be further enabled by the broader diffusion and uptake of digital and clean technologies across key sectors.

As Europe transitions towards climate neutrality, some sectors will have to make bigger and more transformative changes than others, due to their centrality in a variety of value chains and their large potential contribution to emissions reductions. Activities under this Destination focus on the twin green and digital transition providing a green productivity premium to discrete manufacturing, construction and energy-intensive industries, including process industries. This will make an essential and significant contribution to achieving climate neutrality in the European Union by 2050, and to the achievement of a circular economy. It will also enhance the Union's open strategic autonomy with regard to the underlying technologies. To achieve these goals, the activities in this Destination are complementary to those in Destination 2, which will enhance open strategic autonomy in key strategic value chains for a resilient industry.

1. Rapid reconfigurable production process chains (Made in Europe Partnership) (IA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-01)
2. Products with complex functional surfaces (Made in Europe Partnership) (RIA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-02)
3. Excellence in distributed control and modular manufacturing (Made in Europe Partnership) (RIA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-03)
4. Intelligent work piece handling in a full production line (Made in Europe Partnership) (RIA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-04)
5. ICT Innovation for Manufacturing Sustainability in SMEs (I4MS2) (Made in Europe Partnership) (IA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-06)
6. Digital tools to support the engineering of a Circular Economy (Made in Europe Partnership) (RIA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-07)
7. Demonstrate the use of Digital Logbook for buildings (IA) (HORIZON-CL4-2022-TWIN-TRANSITION-01-09)
8. Circular flows for solid waste in urban environment (Processes4Planet Partnership) (IA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-10)
9. Valorisation of CO/CO₂ streams into added-value products of market interest (Processes4Planet Partnership) (IA) (HORIZON-CL4-2022-TWIN-TRANSITION-01-11)
10. Raw material preparation for clean steel production (Clean Steel Partnership) (IA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-13)
11. New electrochemical conversion routes for the production of chemicals and materials in process industries (Processes4Planet Partnership) (RIA) (HORIZON-CL4-2022-TWIN-TRANSITION-01-15)
12. Modular and hybrid heating technologies in steel production (Clean Steel Partnership) (IA)
(HORIZON-CL4-2022-TWIN-TRANSITION-01-16)
13. Integration of hydrogen for replacing fossil fuels in industrial applications (Processes4Planet Partnership) (IA) (HORIZON-CL4-2022-TWIN-TRANSITION-01-17)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C4+Digital+_Industry+and+Space+Stand+22_06_2021-p-2148.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL4-2022-TWIN-TRANSITION-01;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1;statusCodes=1;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceCriteria=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState>

8. /EU Horizon Europe*/ Cluster 4 D2: Increased autonomy in key strategic value chains for resilient industry, 22 calls open, deadline: 30.03.2021

Research and innovation will be fundamental to spur industrial leadership and enhanced resilience. It will support the modernisation of traditional industrial models while developing novel technologies, business models and processes. This can enhance the flexibility of the EU's industrial base, and increase its resilience by reducing EU dependencies on third countries for critical raw materials and technologies. In the first Work Programme, topics under Destination 2 'Increased autonomy in key strategic value chains for resilient industry' will tackle missing segments in strategic areas and value chains, to strengthen the EU's industrial base and boost its competitiveness and open strategic autonomy. In addition, it will explore how increased circularity has the potential to increase the open strategic autonomy of EU industry through the more efficient use of resources and secondary raw materials.

This will be achieved through R&I activities focusing on four areas key for the resilience of EU industry:

- o Raw materials: The EU is highly dependent on a few third countries for the (critical) raw materials it needs for strategic value chains (including e-mobility, batteries, renewable energies, pharmaceuticals, aerospace, dual-use and digital applications). In a context where demand is set to increase, these will remain, more than ever, a vital prerequisite for both Europe's open strategic autonomy and a successful transition to a climate-neutral and circular economy. Responding to the Critical Raw Materials action plan R&I activities will tackle the vulnerabilities in the entire EU raw materials value chain, from sustainable and responsible exploration, extraction, processing, recycling, contributing to building the EU knowledge base of primary and secondary raw materials and ensuring secure, sustainable and responsible access to (critical) raw materials.
- o Advanced materials that are sustainable by design are needed to meet the challenges of climate neutrality, transition to a circular economy and a zero-pollution Europe, as well as broader benefits in many different applications. While chemical and related materials production is expected to double globally by 2030, this will largely take place outside Europe. To overcome its reliance on imports of basic chemicals and related materials, Europe needs to strengthen its capacity to produce and use chemicals in a sustainable and competitive way. In addition, it is necessary to continue work on an ecosystem, based on open innovation test beds (OITBs), which enables the rapid development, uptake and commercialisation of advanced materials. All actions should be guided by sustainable-by-design principles, i.e. environmental and health safety, circularity and functionality.
- o Circular value chains: to complement the circular technologies in Destination 1, further technological and non-technological elements (such as business models and the traceability of products) are necessary in the transition to novel low-emission and circular industrial value chains.
- o Preparedness of businesses/smcs/startups: European companies, and in particular SMEs, have shown a chronic lagging behind the US and China in the uptake of new, and especially digital, technologies.

1. Circular and low emission value chains through digitalisation (Processes4Planet Partnership) (RIA) (HORIZON-CL4-2022-RESILIENCE-01-01)
2. Monitoring and supervising system for exploration and future exploitation activities in the deep sea (RIA) (HORIZON-CL4-2022-RESILIENCE-01-02)
3. Streamlining cross-sectoral policy framework throughout the extractive life-cycle in environmentally protected areas (CSA) (HORIZON-CL4-2022-RESILIENCE-01-03)
4. Developing digital platforms for the small scale extractive industry (IA) (HORIZON-CL4-2022-RESILIENCE-01-04)
5. Technological solutions for tracking raw material flows in complex supply chains (RIA) (HORIZON-CL4-2022-RESILIENCE-01-05)
6. Sustainable and innovative mine of the future (IA) (HORIZON-CL4-2022-RESILIENCE-01-06)
7. Innovative solutions for efficient use and enhanced recovery of mineral and metal by-products from processing of raw materials (IA) (HORIZON-CL4-2022-RESILIENCE-01-07)
8. Earth observation technologies for the mining life cycle in support of EU autonomy and transition to a climate-neutral economy (RIA) (HORIZON-CL4-2022-RESILIENCE-01-08)
9. Innovative materials for advanced (nano)electronic components and systems (RIA) (HORIZON-CL4-2022-RESILIENCE-01-10)

10. Advanced lightweight materials for energy efficient structures (RIA)
(HORIZON-CL4-2022-RESILIENCE-01-11)
11. Functional multi-material components and structures (RIA) (HORIZON-CL4-2022-RESILIENCE-01-12)
12. Smart and multifunctional biomaterials for health innovations (RIA)
(HORIZON-CL4-2022-RESILIENCE-01-13)
13. Membranes for gas separations - membrane distillation (IA) (
HORIZON-CL4-2022-RESILIENCE-01-14)
14. Building and renovating by exploiting advanced materials for energy and resources efficient management (IA) (HORIZON-CL4-2022-RESILIENCE-01-16)
15. Advanced materials modelling and characterisation (RIA) (HORIZON-CL4-2022-RESILIENCE-01-19)
16. Climate Neutral and Circular Innovative Materials Technologies Open Innovation Test Beds (IA)
(HORIZON-CL4-2022-RESILIENCE-01-20)
17. Leveraging standardisation in Digital Technologies (CSA) (HORIZON-CL4-2022-RESILIENCE-01-21)
18. Safe- and sustainable-by-design organic and hybrid coatings (RIA)
(HORIZON-CL4-2022-RESILIENCE-01-23)
19. Novel materials for supercapacitor energy storage (RIA) (HORIZON-CL4-2022-RESILIENCE-01-24)
20. Optimised Industrial Systems and Lines through digitalisation (IA)
(HORIZON-CL4-2022-RESILIENCE-01-25)
21. 'Innovate to transform' support for SME's sustainability transition (CSA)
(HORIZON-CL4-2022-RESILIENCE-01-26)
22. Boosting green economic recovery and open strategic autonomy in Strategic Digital Technologies through pre-commercial procurement (PCP action) (HORIZON-CL4-2022-RESILIENCE-02-01-PCP)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersicht%C3%9Cbersicht+C4+Digital+_Industry+and+Space+Stand+22_06_2021-p-2148.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL4-2022-RESILIENCE-01;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState>

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9. /EU Horizon Europe*/ Cluster 4 D4: Digital and emerging technologies for competitiveness and fit for the green deal, 7 calls open, deadline: 27.01.2022

Electronic and photonic components, and the software that defines how they work, are the key digital technologies that underpin all digital systems. As the digitalisation of all sectors accelerates, most industries depend on early access to digital components. Dependence on these technologies represents a clear threat to Europe's autonomy, particularly in periods of geopolitical instability, exposing Europe to risks of vulnerability. Actions under this Destination will build on EU strengths in low-power consumption and ultra-secure components. Europe needs to develop the essential electronic and photonic components

for a wide range of applications such as healthcare equipment, electric and autonomous vehicles, manufacturing and production plants and equipment, telecom networks, aerospace vehicles, consumer products

R&I initiatives on 6G technologies are now starting in leading regions world-wide, with the first products and infrastructures expected for the end of this decade. 6G systems are expected to offer a new step change in performance from Gigabit towards Terabit capacities and sub-millisecond response times, to enable new critical applications such as real-time automation or eXtended Reality ("Internet of Senses"). Europe must engage now to be among the top influencers of - and competitors in - these technologies and ensure that emerging network technology standards are defined following European values and energy-efficiency requirements. Main actions on 6G technologies will be undertaken in the Smart Networks and Services Joint Undertaking.

Despite a strong European scientific community's on AI and robotics, Europe lags behind in AI diffusion. Actions under this Destination will develop world-class technologies serving the needs of all types of European industries (e.g. manufacturing, healthcare, transport, agriculture, energy, construction), providing top-performing solutions that businesses will trust and adopt to maintain their competitiveness and maximise their contribution to environmental sustainability. While Europe is strong in many sectors, it must take ownership of its unavoidable future transformations for competitiveness, prosperity and sustainability, by early leadership in new and emerging enabling technologies, e.g. alternative computing models such as bio- and neuro-morphic approaches, use of biological elements as part of technology, and sustainable smart materials. In particular, the far-reaching impact of quantum and graphene technologies on our economy and society cannot be fully estimated yet, but they will be disruptive for many fields. Actions in this Destination will ensure that Europe stays ahead in this global race and is in a position to achieve game-changing breakthroughs. In line with the vision set out in the Digital Decade Communication, in particular its 'secure and performant sustainable digital infrastructures' pillar, actions under this Destination will support Europe's open strategic autonomy, and reinforce and regain European industry's leaderships across the digital supply chain. It will direct investments to activities that will ensure a robust European industrial and technology presence in all key parts of a greener digital supply chain, from low-power components to advanced systems, future networks, new data technologies and platforms. Autonomy will require sustaining first-mover advantage in strategic areas like quantum computing and graphene, and investing early in emerging enabling technologies.

Investments in this Destination contribute substantially to climate change objectives. Energy efficiency is a key design principle in actions, which will lead to new technologies and solutions that are cornerstones for a sustainable economy and society. These solutions range from ultra-low-power processors to AI, Data and Robotics solutions for resource optimisation and reduction of energy consumption and CO₂ emissions; from highly efficient optical networking technologies and ultra-low-energy 6G communication networks to robotics that overcome the limitation of energy autonomy. Furthermore, promising emerging avenues are addressed via ultra-low power operations enabled by spintronics and 2D materials-based devices and systems for energy storage and harvesting.

Actions should devote particular attention to openness of the solutions and results, and transparency of the research and innovation process. To ensure trustworthiness and wide adoption by user communities for the benefit of society, actions should promote high standards of transparency and openness. Actions should ensure that the processes and outcomes of research and innovation align with the needs, values and expectations of society, in line with Responsible Research and Innovation.

1. Strengthening the quantum software ecosystem for quantum computing platforms (RIA)
(HORIZON-CL4-2021-DIGITAL-EMERGING-02-10)
2. Framework Partnership Agreement for developing the first large-scale quantum computers (FPA)
(HORIZON-CL4-2021-DIGITAL-EMERGING-02-15)

3. Basic Science for Quantum Technologies (RIA) (HORIZON-CL4-2021-DIGITAL-EMERGING-02-16)
4. Framework Partnership Agreement for developing large scale quantum simulation platform technologies (FPA) (HORIZON-CL4-2021-DIGITAL-EMERGING-02-17)
5. Framework Partnership Agreements in Quantum Communications (FPA) (HORIZON-CL4-2021-DIGITAL-EMERGING-02-19)
6. Quantum sensing technologies for market uptake (IA) (HORIZON-CL4-2021-DIGITAL-EMERGING-02-20)
7. Framework Partnership Agreements for open testing and experimentation and for pilot production capabilities for quantum technologies (FPA) (HORIZON-CL4-2021-DIGITAL-EMERGING-02-22)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersicht%C3%9Cbersicht+C4+Digital+_Industry+and+Space+Stand+22_10_2021-p-2148.pdf

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10. /EU Horizon Europe*/ Cluster 4 D5: Open Strategic Autonomy in Developing, Deploying and Using Global Space-Based Infrastructures, Services, Applications and Data, 22 calls open, deadline: 16.02.2022

Today EU citizens enjoy watching satellite TV, increasingly accurate global navigation services for all transport modes and users (e.g. mobile phones and car navigation systems), extended Earth monitoring for land, marine, atmosphere and climate change, global meteorological observation and accurate cartographies of a wide number of variables. Space also makes important contributions to security crisis management and emergency services. These are key assets for the EU policies on climate, environment, transport, agriculture and secure society (e.g. Maritime Strategy, the Arctic Strategy, the Digital Agenda, the Common Security and Defence Policy, the Sustainable Development Strategy, the SDGs). Finally, the space sector is a source of economic growth, jobs and exports.

Proposals for topics under this Destination should set out a credible pathway to contributing to the following expected impact:

Open strategic autonomy in developing, deploying and using global space-based infrastructures, services applications and data, including by reinforcing the EU's independent capacity to access space, securing the autonomy of supply for critical technologies and equipment, and fostering the EU's space sector competitiveness.

This expected impact is fully in line with the Space Strategy for Europe and the proposal for the Space Programme. Horizon Europe R&I funds will contribute to this expected impact along 2 main axes by:

- o providing support with R&I funding to the EU space sector at large
- o making a specific impact with the EU action with R&I to prepare the future evolutions of the Space programme components

1. End-to-end satellite communication systems and associated services (HORIZON-CL4-2021-SPACE-01-11)
2. Future space ecosystems: on-orbit operations, new system concepts (HORIZON-CL4-2021-SPACE-01-12)
3. Reusability for European strategic space launchers - technologies and operation maturation including flight test demonstration (HORIZON-CL4-2021-SPACE-01-21)

4. Low cost high thrust propulsion for European strategic space launchers - technologies maturation including ground tests (HORIZON-CL4-2021-SPACE-01-22)
5. New space transportation solutions and services (HORIZON-CL4-2021-SPACE-01-23)
6. Copernicus Climate Change Service evolution (HORIZON-CL4-2021-SPACE-01-41)
7. Copernicus Atmosphere Monitoring Service evolution (HORIZON-CL4-2021-SPACE-01-42)
8. Copernicus Security and Emergency Services evolution (HORIZON-CL4-2021-SPACE-01-43)
9. Copernicus evolution for cross-services thematic domains (HORIZON-CL4-2021-SPACE-01-44)
10. Quantum technologies for space gravimetry (HORIZON-CL4-2021-SPACE-01-62)
11. Space technologies for European non-dependence and competitiveness (HORIZON-CL4-2021-SPACE-01-81)

12. Future space ecosystems: on-orbit operations, preparation of orbital demonstration mission (HORIZON-CL4-2022-SPACE-01-11)
13. Technologies and generic building blocks for Electrical Propulsion (HORIZON-CL4-2022-SPACE-01-12)
14. End-to-end Earth observation systems and associated services (HORIZON-CL4-2022-SPACE-01-13)
15. Multi sites flexible industrial platform and standardised technology for improving interoperability of European access to space ground facilities (HORIZON-CL4-2022-SPACE-01-21)
16. Copernicus Marine Environment Monitoring Service evolution (HORIZON-CL4-2022-SPACE-01-41)
17. Copernicus Anthropogenic CO₂ Emissions Monitoring & Verification Support (MVS) capacity (HORIZON-CL4-2022-SPACE-01-42)
18. Copernicus Land Monitoring Service evolution (HORIZON-CL4-2022-SPACE-01-43)
19. Space Weather (HORIZON-CL4-2022-SPACE-01-62)
20. Education and skills for the EU space sector (HORIZON-CL4-2022-SPACE-01-72)
21. Space technologies for European non-dependence and competitiveness (HORIZON-CL4-2022-SPACE-01-81)
22. Space science and exploration technologies (HORIZON-CL4-2022-SPACE-01-82)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C4+Digital+_Industry+and+Space+Stand+22_10_2021-p-2148.pdf

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11. /EU Horizon Europe*/ Cluster 5 D1: Climate science and responses for the transformation towards climate neutrality, 8 calls open, deadline: 10.02.2022

Europe has been at the forefront of climate science and should retain its leadership position to support EU policies as well as international efforts for a global uptake of climate action in line with the Paris

Agreement and the Sustainable Development Goals (SDGs), including biodiversity objectives. Advancing climate science and further broadening and deepening the knowledge base is essential to inform the societal transition towards a climate neutral and climate resilient society by 2050, as well as towards a more ambitious greenhouse gas reduction target by 2030. It will involve research that furthers our understanding of past, present and expected future changes in climate and its implications on ecosystems and society, closing knowledge gaps, and develops the tools that support policy coherence and the implementation of effective mitigation and adaptation solutions. Due to the inherent international character of this subject, international collaboration is encouraged for topics under this destination.

The activities implemented under this section will enable the transition to a climate-neutral and resilient society and economy through improving the knowledge of the Earth system and the ability to predict and project its changes under different natural and socio-economic drivers, including a better understanding of society's response and behavioural changes, and allowing a better estimation of the impacts of climate change and the design and evaluation of solutions and pathways for climate change mitigation and adaptation and related social transformation.

This Destination contributes directly to the Strategic Plan's Key Strategic Orientation C "Making Europe the first digitally enabled circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction and production systems" and the impact area "Climate change mitigation and adaptation". In line with the Strategic Plan, the overall expected impact of this Destination is to contribute to the "Transition to a climate-neutral and resilient society and economy enabled through advanced climate science, pathways and responses to climate change (mitigation and adaptation) and behavioural transformations", notably through:

- o Advancing knowledge and providing solutions in the any of following areas: Earth system science; pathways to climate neutrality; climate change adaptation including climate services; social science for climate action; and better understanding of climate-ecosystems interactions.
- o Contributing substantially to key international assessments such as those of the Intergovernmental Panel on Climate Change (IPCC) or the European Environment Agency (e.g. European environment state and outlook reports, SOER).
- o Strengthening the European Research Area on climate change.
- o Increasing the transparency, robustness, trustworthiness and practical usability of the knowledge base on climate change for use by policy makers, practitioners, other stakeholders and citizens.

Coordination and synergies between activities supported under Destination 1, as well as in other Destinations and Clusters, and in particular complementarities with Cluster 4 and Cluster 6 should be taken into account by planning for adequate resources for co-ordination and clustering activities. Following a systemic approach, Destination 1 concentrates on activities related to climate science and modelling, whereas Cluster 6 supports R&I in the areas covered by Cluster 6, notably on the implementation of climate change mitigation and adaptation solutions.

1. Verification and reconciliation of estimates of climate forcers (HORIZON-CL5-2022-D1-02-01)
2. Carbon Dioxide Removal (CDR) approaches (HORIZON-CL5-2022-D1-01-01-two-stage)
3. Socio-economic risks of climate change in Europe (HORIZON-CL5-2022-D1-01-02-two-stage)
4. Social science for land-use strategies in the context of climate change and biodiversity challenges (HORIZON-CL5-2022-D1-01-03-two-stage)
5. Development of high-resolution Earth system models for global and regional climate change projections (HORIZON-CL5-2022-D1-02-02)
6. Improvement of Integrated Assessment Models in support of climate policies (HORIZON-CL5-2022-D1-02-03)
7. Supporting the formulation of adaptation strategies through improved climate predictions in Europe and beyond (HORIZON-CL5-2022-D1-02-04)
8. Let nature help do the job: Rewilding landscapes for carbon sequestration, climate adaptation and biodiversity support (HORIZON-CL5-2022-D1-02-05)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C5+Climate_+Energy+_+Mobility+Stand+20_10_2021-p-2162.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL5-2022-D1-01-two-stage;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspectIonProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState>

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL5-2022-D1-02;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;start=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState>

12. /EU Horizon Europe*/ Cluster 5 D2: Cross-sectoral solutions for the climate transition, 31 calls open, deadline: 23.02.2022 and 26.04.2022

This Destination includes activities targeting a sustainable, secure and competitive energy supply. In line with the scope of cluster 5, this includes activities in the areas of renewable energy; energy system, grids and storage; as well as Carbon Capture, Utilization and Storage (CCUS).

The transition of the energy system will rely on reducing the overall energy demand and making the energy supply side climate neutral. R&I actions will help to make the energy supply side cleaner, more secure, and competitive by boosting cost performance and reliability of a broad portfolio of renewable energy solutions, in line with societal needs and preferences. Furthermore, R&I activities will underpin the modernisation of the energy networks to support energy system integration, including the progressive electrification of demand side sectors (buildings, mobility, industry) and integration of other climate neutral, renewable energy carriers, such as clean hydrogen. Innovative energy storage solutions (including chemical, mechanical, electrical and thermal storage) are a key element of such energy system and R&I actions will advance their technological readiness for industrial-scale and domestic applications. Carbon Capture, Utilisation and Storage (CCUS) is a CO₂ emission abatement option that holds great potential and R&I actions will accelerate the development of CCUS in electricity generation and industry applications.

It covers the following impact areas:

- o Industrial leadership in key and emerging technologies that work for people;
- o Affordable and clean energy.

The expected impact, in line with the Strategic Plan, is to contribute to "More efficient, clean, sustainable, secure and competitive energy supply through new solutions for smart grids and energy systems based on more performant renewable energy solutions", notably through

- o Fostering European global leadership in affordable, secure and sustainable renewable energy technologies and services by improving their competitiveness in global value chains and their position in growth markets, notably through the diversification of the renewable services and technology portfolio (more detailed information below).

o Ensuring cost-effective uninterrupted and affordable supply of energy to households and industries in a scenario of high penetration of variable renewables and other new low carbon energy supply. This

includes more efficient approaches to managing smart and cyber-secure energy grids and optimisation the interaction between producers, consumers, networks, infrastructures and vectors (more detailed information below).

o Accelerating the development of Carbon Capture, Use and Storage (CCUS) as a CO₂ emission mitigation option in electricity generation and industry applications (including also conversion of CO₂ to products).

1. AU-EU Water Energy Food Nexus (HORIZON-CL5-2021-D3-03-01)
2. Next generation of renewable energy technologies (HORIZON-CL5-2021-D3-03-02)
3. Hybrid catalytic conversion of renewable energy to carbon-neutral fuels (HORIZON-CL5-2021-D3-03-03)
4. Physics and aerodynamics of atmospheric flow of wind for power production (HORIZON-CL5-2021-D3-03-04)
5. Wind energy in the natural and social environment (HORIZON-CL5-2021-D3-03-05)
6. Novel approaches to concentrated solar power (CSP) (HORIZON-CL5-2021-D3-03-06)
7. Stable high-performance Perovskite Photovoltaics (HORIZON-CL5-2021-D3-03-07)
8. Cost-effective micro-CHP and hybrid heating systems (HORIZON-CL5-2021-D3-03-08)
9. Carbon-negative sustainable biofuel production (HORIZON-CL5-2021-D3-03-09)
10. Innovative foundations, floating substructures and connection systems for floating PV and ocean energy devices (HORIZON-CL5-2021-D3-03-10)
11. Development of hydropower equipment for hidden hydropower (HORIZON-CL5-2021-D3-03-11)
12. Innovation on floating wind energy deployment optimized for deep waters and different sea basins (Mediterranean Sea, Black Sea, Baltic Sea, North-east Atlantic Ocean) (HORIZON-CL5-2021-D3-03-12)
13. Demonstration pilot lines for alternative and innovative PV technologies (Novel c-Si tandem, thin film tandem, bifacial, CPV, etc.) (HORIZON-CL5-2021-D3-03-13)
14. Demonstration of large-scale CHP technologies for a shift to the use of biogenic residues and wastes (HORIZON-CL5-2021-D3-03-14)
15. Solutions for more sustainable geothermal energy (HORIZON-CL5-2021-D3-03-15)
16. Innovative biomethane production as an energy carrier and a fuel (HORIZON-CL5-2021-D3-03-16)

17. Demonstration of cost-effective advanced biofuel technologies utilizing existing industrial plants (HORIZON-CL5-2022-D3-01-01)
18. 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-D3-01-02)
19. Advanced manufacturing of Integrated PV (HORIZON-CL5-2022-D3-01-03)
20. Demonstrate the use of high temperature geothermal reservoirs to provide energy storage for the energy system (HORIZON-CL5-2022-D3-01-04)
21. Demonstration of innovative plug-and play solutions for system management and renewables storage in off-grid applications (HORIZON-CL5-2022-D3-01-05)
22. Novel Agro-Photovoltaic systems (HORIZON-CL5-2022-D3-01-06)
23. Demonstration of innovative rotor, blades and control systems for tidal energy devices (HORIZON-CL5-2022-D3-01-07)
24. Supporting the action of consumers in the energy market and guide them to act as prosumers, communities and other active forms of active participation in the energy activities (HORIZON-CL5-2022-D3-01-08)
25. Real Time Demonstrator of Multi-Vendor Multi-Terminal VSC-HVDC with Grid Forming Capability (in support of the offshore strategy) (HORIZON-CL5-2022-D3-01-09)
26. Interoperable solutions for flexibility services using distributed energy storage (HORIZON-CL5-2022-D3-01-10)
27. Demonstration of innovative forms of storage and their successful operation and integration into innovative energy systems and grid architectures (HORIZON-CL5-2022-D3-01-11)
28. Replicable solutions for a cross sector compliant energy ecosystem (HORIZON-CL5-2022-D3-01-12)
29. Energy system modelling, optimisation and planning tools (HORIZON-CL5-2022-D3-01-13)



30. Thermal energy storage solutions (HORIZON-CL5-2022-D3-01-14)
31. Decarbonising industry with CCUS (HORIZON-CL5-2022-D3-01-15)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersicht%C3%9Cbersicht+C5+Climate+_Energy+_Mobility+Stand+20_10_2021-p-2162.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL5-2021-D3-03;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;startt=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;OfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableStatebleState>

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL5-2022-D3-01;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;startt=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;OfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableStatebleState>

13. /EU Horizon Europe*/ Cluster 5 D4: Efficient, sustainable and inclusive energy use, 3 calls open, deadline: 25.01.2022

This Destination addresses activities targeting the energy demand side, notably a more efficient use of energy as regards buildings and industry. Demand side solutions and improved energy efficiency are among the most cost effective ways to support the transition to climate neutrality, reduce pollution and raw materials use, to create inclusive growth and employment in Europe, to bring down costs for consumers, to reduce our import dependency and redirect investments towards smart and sustainable infrastructure. The transition to a decentralised and climate neutral energy system will greatly benefit from the use of digital technologies which will enable buildings and industrial facilities to become inter-active elements in the energy system by optimising energy consumption, distributed generation and storage and vis-à-vis the energy system. They will also trigger new business opportunities and revenue streams for up-graded, innovative energy services which valorise energy savings and flexible consumption.

It covers the following impact areas:

- o Industrial leadership in key and emerging technologies that work for people;
- o Affordable and clean energy;
- o Circular and clean economy.

1. Demonstrating integrated technology solutions for buildings with performance guarantees (Built4People) (HORIZON-CL5-2021-D4-02-01)
2. Cost-effective, sustainable multi-functional and/or prefabricated holistic renovation packages, integrating RES and including re-used and recycled materials (Built4People) (HORIZON-CL5-2021-D4-02-02)
3. Strengthening European coordination and exchange for innovation uptake towards sustainability, quality, circularity and social inclusion in the built environment as a contribution to the new European Bauhaus (Built4People) (HORIZON-CL5-2021-D4-02-03)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersicht%C3%9Cbersicht+C5+Climate_+Energy_+Mobility+Stand+20_10_2021-p-2162.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL5-2021-D4-02;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;startt=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;OfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableStatebleState>

14. /EU Horizon Europe*/ Cluster 5 D6: Safe, resilient Transport and Smart Mobility services for Passengers and Good, 8 calls open, deadline: 12.01.2022

This Destination includes activities addressing safe and smart mobility services for passengers and goods. Europe needs to manage the transformation of supply-based transport into safe, resilient and sustainable transport and demand-driven, smart mobility services for passengers and goods. Suitable research and innovation will enable significant safety, environmental, economic and social benefits by reducing accidents caused by human error, decreasing traffic congestion, reducing energy consumption and emissions of vehicles, increasing efficiency and productivity of freight transport operations. To succeed in this transformation, Europe's ageing (and not always sustainable) transport infrastructure needs to be prepared for enabling cleaner and smarter operations. Europe needs also to maintain a high-level of transport safety for its citizens. Resilience should be built in the transport systems to prevent, mitigate and recover from disruptions. Research and innovation will underpin the three safety pillars: technologies, regulations and human factors.

It covers the following impact areas:

- o Industrial leadership in key and emerging technologies that work for people;
- o Smart and sustainable transport.

The expected impact, in line with the Strategic Plan, is to contribute to "Safe, seamless, smart, inclusive, resilient and sustainable mobility systems for people and goods thanks to user-centric technologies and services including digital technologies and advanced satellite navigation services", notably through:

- o Accelerating the implementation of innovative connected, cooperative and automated mobility (CCAM) technologies and systems for passengers and goods.

- o Further developing a multimodal transport system through sustainable and smart long-haul and urban freight transport and logistics, upgraded and resilient physical and digital infrastructures for smarter vehicles and operations, for optimised system-wide network efficiency.
- o Drastically decreasing the number of transport accidents, incidents and fatalities towards the EU's long-term goal of moving close to zero fatalities and serious injuries by 2050 even in road transportation (Vision Zero) and increase the resilience of transport systems.

1. European demonstrators for integrated shared automated mobility solutions for people and goods (CCAM Partnership) (HORIZON-CL5-2022-D6-01-01)
2. Reliable occupant protection technologies and HMI solutions to ensure the safety of highly automated vehicles (CCAM Partnership) (HORIZON-CL5-2022-D6-01-02)
3. Human behavioural model to assess the performance of CCAM solutions compared to human driven vehicles (CCAM Partnership) (HORIZON-CL5-2022-D6-01-03)
4. Integrate CCAM services in fleet and traffic management systems (CCAM Partnership) (HORIZON-CL5-2022-D6-01-04)
5. Artificial Intelligence (AI): Explainable and trustworthy concepts, techniques and models for CCAM (CCAM Partnership) (HORIZON-CL5-2022-D6-01-05)

6. Predictive safety assessment framework and safer urban environment for vulnerable road users (HORIZON-CL5-2022-D6-01-06)
7. More resilient aircraft and increased survivability (HORIZON-CL5-2022-D6-01-07)
8. Safer navigation and tackling containership fires (HORIZON-CL5-2022-D6-01-08)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersicht%C3%9Cbersicht+C5+Climate+_Energy+_Mobility+Stand+20_10_2021-p-2162.pdf

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15. /EU Horizon Europe*/ Cluster 6 D1: Biodiversity and ecosystem services, 13 calls open, deadline: 15.02.2022

The EU biodiversity strategy for 2030 is a cornerstone of the European Green Deal that will put Europe's biodiversity on the path to recovery by 2030, for the benefit of people, the climate and the planet. It will also prepare the EU to take a leading role in the upcoming international negotiations on a new global framework to halt biodiversity loss. With the Green Deal's 'do no significant harm' vision, all EU policies will become more biodiversity-friendly, focusing more on the sustainable use of ecosystems, supporting the recovery in a post-pandemic world[[COM/2020/380 EU biodiversity strategy for 2030: Bringing nature back into our lives]]. This policy vision is fully supported in the strategic plan of Horizon Europe for 2021-2024 in its first key strategic orientation 'Protecting and restoring ecosystems and biodiversity and managing sustainably natural resources on land and at sea, and achieving climate neutrality and adaptation'. Consequently, Destination 'Biodiversity and ecosystem services' intends to achieve the following expected impact from Cluster 6 'Biodiversity is back on a path to recovery, and ecosystems and their services are preserved and sustainably restored on land, inland water and at sea through improved knowledge and innovation'. All actions funded under this destination must therefore help to deliver this main impact.

Research and innovation is key to delivering results that will have an important impact on biodiversity, food, health, water and climate, which are all interconnected, and to achieving the goal of healthy and resilient ecosystems by 2030. It will also enable transformational change engaging European society and economy and their global impacts, making decisions more biodiversity-friendly. R&I will support policy targets, develop nature-based solutions[[Nature-based solutions are "inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. Hence, nature-based solutions must benefit biodiversity and support the delivery of a range of ecosystem services."]] and holistic approaches to address the main causes of biodiversity loss, particularly in connection to production systems, bringing all sectors together to be integrated in ecosystem-based management. Investments in R&I will help to protect and restore the integrity of terrestrial, aquatic and marine ecosystems, currently under multiple pressures, and protect and restore their capacity to deliver a wide range of essential services. Under Horizon Europe, a long-term strategic research agenda for biodiversity will also be developed.

1. Observing and mapping biodiversity and ecosystems, with particular focus on coastal and marine ecosystems (HORIZON-CL6-2022-BIODIV-01-01)

2. Building taxonomic research capacity near biodiversity hotspots and for protected areas by networking natural history museums and other taxonomic facilities (HORIZON-CL6-2022-BIODIV-01-02)
 3. Network for nature: multi-stakeholder dialogue platform to promote nature-based solutions (HORIZON-CL6-2022-BIODIV-01-03)
 4. Natural capital accounting: Measuring the biodiversity footprint of products and organizations (HORIZON-CL6-2022-BIODIV-01-04)
 5. Intercropping - understanding and using the benefits of complexity in farming and value chains (HORIZON-CL6-2022-BIODIV-01-05)
 6. Monitoring and effective measures for agrobiodiversity (HORIZON-CL6-2022-BIODIV-01-06)
 7. Protection and sustainable management of forest genetic resources of high interest for biodiversity, climate change adaptation, and forest reproductive materials (HORIZON-CL6-2022-BIODIV-01-07)
 8. Assessing the nexus of extraction, production, consumption, trade and behaviour patterns and of climate change action on biodiversity in the context of transformative change (HORIZON-CL6-2022-BIODIV-01-08)
 9. Understanding the role of behaviour, gender specifics, lifestyle, religious and cultural values, and addressing the role of enabling players (civil society, policy makers, financing and business leaders, retailers) in decision making (HORIZON-CL6-2022-BIODIV-01-09)
 10. Cooperation with the Convention on Biological Diversity (HORIZON-CL6-2022-BIODIV-01-10)
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11. Maintaining and restoring pollinators and pollination services in European agricultural landscapes (HORIZON-CL6-2022-BIODIV-02-01-two-stage)
 12. Boosting breeding for a sustainable, resilient and competitive European legume sector (HORIZON-CL6-2022-BIODIV-02-02-two-stage)
 13. Resilient beekeeping (HORIZON-CL6-2022-BIODIV-02-03-two-stage)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C6+Food_+Bioeconomy__+Stand+07_10_2021-p-2164.pdf

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16. /EU Horizon Europe*/ Cluster 6 D2: Fair, healthy and environment-friendly food systems from primary production to consumption, 20 calls open, deadline: 15.02.2022

National, EU and global food systems are facing sustainability challenges, from primary production to consumption, that could jeopardise food and nutrition security. The farm to fork strategy, which is key to the success of the European Green Deal and achievement of the UN sustainable development goals

(SDGs), aims to address these challenges and to deliver co-benefits for environment, health, society and the economy, ensuring that actions leading to recovery from the COVID-19 crisis also put us onto a sustainable path going forward. Research and innovation (R&I) are key drivers steering and accelerating the transition to sustainable, safe, healthy and inclusive food systems, from farm to fork, thereby ensuring food and nutrition security for all.

Transforming food systems for health, sustainability and inclusion requires robust, system-wide changes at all governance levels (from local to global and vice versa) as food systems are intertwined with all other sectors and are among the key drivers of climate change and environmental degradation. Food systems are to be understood as covering all the sectors, actors, stakeholders, organisations and disciplines relevant to and connecting primary production from land and sea, food processing, food distribution and retailing, food services, food consumption, food safety, nutrition and public health, and food waste streams. The European Green Deal and, in particular, the farm to fork strategy support a shift to more resilient and environmentally, socially and economically sustainable food systems, as required to deliver safe, healthy, accessible and affordable food and diets for all sourced from land and sea, while respecting planetary boundaries. This will involve a better understanding of the multiple interactions between the components of current food systems, to foster solutions that maximise co-benefits with respect to the four priorities of the Commission's 'Food 2030' R&I initiative:

- o nutrition and health, including food safety;
- o climate and environmental sustainability;
- o circularity and resource efficiency; and
- o innovation and empowering communities.

1. Risk assessment of new low risk pesticides (HORIZON-CL6-2022-FARM2FORK-01-01)
2. Socio-economics of pesticide use in agriculture (HORIZON-CL6-2022-FARM2FORK-01-02)
3. Enhancing biosecurity in terrestrial livestock production (HORIZON-CL6-2022-FARM2FORK-01-03)
4. Innovative solutions to prevent adulteration of food bearing quality labels: focus on organic food and geographical indications (HORIZON-CL6-2022-FARM2FORK-01-04)
5. Integrated and sustainable freshwater bioeconomy: Combining aquaculture, biodiversity preservation, biotechnology and other uses (HORIZON-CL6-2022-FARM2FORK-01-05)
6. Biosecurity, hygiene, disease prevention and animal welfare in aquaculture (HORIZON-CL6-2022-FARM2FORK-01-06)
7. Building alternative protein-friendly sustainable and healthy food environments (HORIZON-CL6-2022-FARM2FORK-01-07)
8. Research and innovation for food losses and waste prevention and reduction through harmonised measurement and monitoring (HORIZON-CL6-2022-FARM2FORK-01-08)
9. Microbiomes in food production systems (HORIZON-CL6-2022-FARM2FORK-01-09)
10. Integrated surveillance system to prevent and reduce diet-related non communicable diseases (NCDs) (HORIZON-CL6-2022-FARM2FORK-01-10)
11. Effective systems for authenticity and traceability in the food system (HORIZON-CL6-2022-FARM2FORK-01-11)
12. Agro-ecological approaches in African agriculture systems (HORIZON-CL6-2022-FARM2FORK-01-12)
13. AU-EU Combatting all forms of malnutrition (HORIZON-CL6-2022-FARM2FORK-01-13)
14. African food cities (HORIZON-CL6-2022-FARM2FORK-01-14)
15. Support for international research on infectious animal diseases (HORIZON-CL6-2022-FARM2FORK-01-15)

16. Agroecological approaches for sustainable weed management (HORIZON-CL6-2022-FARM2FORK-02-01-two-stage)
17. Emerging and future risks to plant health (HORIZON-CL6-2022-FARM2FORK-02-02-two-stage)
18. Ecology of infectious animal diseases (HORIZON-CL6-2022-FARM2FORK-02-03-two-stage)
19. Smart solutions for the use of digital technologies for small- and medium-sized, farms and farm structures (HORIZON-CL6-2022-FARM2FORK-02-04-two-stage)

20. Innovative food from marine and freshwater ecosystems (HORIZON-CL6-2022-FARM2FORK-02-05-two-stage)

Further infomation:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C6+Food_+Bioeconomy__+Stand+07_10_2021-p-2164.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL6-2022-FARM2FORK-01;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;Prospect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState;callTopicSearchTableState>

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL6-2022-FARM2FORK-02-two-stage;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;Prospect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState;callTopicSearchTableState>

17. /EU Horizon Europe*/ Cluster 6 D3: Circular economy and bioeconomy sectors, 13 calls open, deadline: 15.02.2022

This destination and its topics target climate-neutral circular and bioeconomy transitions, covering safe integrated circular solutions at territorial and sectoral levels, for important material flows and product value chains, such as the textile, electronics, plastics and construction sectors, as well as key bioeconomy sectors such as sustainable bio-based systems, sustainable forestry, small-scale rural bio-based solutions, and aquatic value chains. With this approach, the destination supports the European Green Deal, and other European initiatives such as the Industrial Strategy, SME Strategy, Circular Economy Action Plan, Bioeconomy Strategy, Biodiversity Strategy, Farm to Fork Strategy, Textile Strategy, Plastics Strategy, the Action Plan on Critical Raw Materials, and the Forest Strategy.

More specifically, the focus on circularity aims at less waste and more value by extending the lifetime and retaining the value of products and materials. It supports a sharing, reusing, and material-efficient economy, in a safe way, and minimises the non-sustainable use of natural resources. The cascading use of materials and innovative upcycling of waste to new applications is encouraged. The safe and sustainable use of biomass and waste for the production of materials and products, including nutrients, can reduce Europe's dependence on non-renewable resources, cut GHG emissions, offer long-term circular carbon sinks and substitutes to fossil-based and carbon-intensive products, and reduce pressures on biodiversity and its wide range of ecosystem services. The potential of biological resources goes beyond biomass processing into renewable products. It includes the use of organisms and their parts in "green" (i.e. more environmentally friendly) bio-based industrial processes. Marine and land-based biotechnology can provide new sustainable and safe food and feed production methods, greener industrial products and processes, new health-related products, and can help characterise, monitor and sustain the health of marine and terrestrial ecosystems. The potential of marine resources and biotechnology will contribute to the coming "blue economy", accelerating the transition towards a circular and climate-neutral economy that is sustainable and inclusive. The concepts of the circular economy, bioeconomy and blue economy converge and altogether provide an opportunity to balance environmental, social and economic goals, with their sustainability ensured by the life cycle assessment approaches.

1. Circular Cities and Regions Initiative's project development assistance (CCRI-PDA) (HORIZON-CL6-2022-CIRCBIO-01-01)
2. Marginal lands and climate-resilient and biodiversity-friendly crops for sustainable industrial feedstocks and related value chains (HORIZON-CL6-2022-CIRCBIO-01-02)
3. Benefits of the transition towards sustainable circular bio-based systems from linear fossil-based (HORIZON-CL6-2022-CIRCBIO-01-03)
4. Maximising 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-01-04)
5. EU-China international cooperation on unlocking the potential of agricultural residues and wastes for circular and sustainable bio-based solutions (HORIZON-CL6-2022-CIRCBIO-01-05)
6. Strengthening the European forest-based research and innovation ecosystem (HORIZON-CL6-2022-CIRCBIO-01-06)
7. Marine microbiome for a healthy ocean and a sustainable blue bioeconomy (HORIZON-CL6-2022-CIRCBIO-01-07)

8. Integrated solutions for circularity in buildings and the construction sector (HORIZON-CL6-2022-CIRCBIO-02-01-two-stage)
9. Exploring extreme environments: novel adaptation strategies at molecular level for bio-based innovation (HORIZON-CL6-2022-CIRCBIO-02-02-two-stage)
10. Sustainable biodegradable novel bio-based plastics: innovation for sustainability and end-of-life options of plastics (HORIZON-CL6-2022-CIRCBIO-02-03-two-stage)
11. Photosynthesis revisited: climate emergency, "no pollution and zero-emission" challenge and industrial application (HORIZON-CL6-2022-CIRCBIO-02-04-two-stage)
12. Life sciences and their convergence with digital technologies for prospecting, understanding and sustainably using biological resources (HORIZON-CL6-2022-CIRCBIO-02-05-two-stage)
13. Harnessing the digital revolution in the forest-based sector (HORIZON-CL6-2022-CIRCBIO-02-06-two-stage)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C6+Food_+Bioeconomy__+Stand+07_10_2021-p-2164.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL6-2022-CIRCBIO-01;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;ospect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState;rchTableState>

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL6-2022-CIRCBIO-02-two-stage;freeTextSearchKeyword=;matchWholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;startDat>

18. /EU Horizon Europe*/ Cluster 6 D4: Clean environment and zero pollution, 4 calls open, deadline: 15.02.2022

Anthropogenic pollution undermines the integrity of Earth ecosystems and severely affects natural resources essential for human life. Keeping our planet clean and our ecosystems healthy will not only contribute to addressing the climate crisis but also help regenerate biodiversity, ensure the sustainability of primary production activities and safeguard the well-being of humankind. In line with the objectives of the European Green Deal, particularly its zero pollution ambition, and the 2030 Climate Target Plan, and other relevant EU legislation, this destination seeks to halt and prevent pollution by focussing the work programme 2021-2022 on fresh and marine waters, soils, air, including from nitrogen and phosphorus emissions, as well as on the environmental performance and sustainability of processes in the bio-based systems. Synergies with other clusters (notably 1 and 5), relevant destinations as well as missions and partnerships will be exploited.

Halting emissions of pollutants to soils and waters is of fundamental significance for the planet. Diffuse emissions of pollutants from land and urban sources, including atmospheric depositions, are a major stress factor for terrestrial and aquatic ecosystems, threatening the quality of surface waters and aquifers, and affecting soil quality and all water-dependent sectors that require a holistic understanding of the pollution sources, key vectors and pathways. Projected impacts of climate change will alter, and notably reduce, the hydrological flows in many parts of Europe, while eutrophication could be exacerbated by increasing temperatures. Climate change and increasing water demand will exert significant pressures on surface and groundwater quality, notably where the combined effect of water table depletion and sea level rise will endanger the integrity of coastal aquifers and groundwater quality. This is due to saline water intrusion or extreme events (e.g. higher tides, storm surges or inland flooding events), which will put coastal wetlands and reservoirs, estuaries and ecosystems at risk. While recognising its essential role in aquatic ecosystems functioning and services, the sediments originating mostly from run-off and erosion are likely the major source of physical pollution of water bodies (excessive turbidity, impacts of deposition, accumulation of litter and debris) and contribute to a large extent to chemical and biological pollution of receiving waters. Beside land use practises, the increasing intensity and variability of precipitation will exacerbate erosion risks, affect the deposition and transport of sediments and could lead to a remobilisation of legacy contaminants and further deteriorate the quality of soils, sediments and water bodies, including aquifers, estuaries and coastal areas, and of their ecosystem function and services.

1. Preventing groundwater contamination and protecting its quality against harmful impacts of global and climate change (HORIZON-CL6-2022-ZEROPOLLUTION-01-01)
2. Piloting innovative governance solutions to limit nitrogen and phosphorus emissions at the interface of rural/coastal and urban/industrial environments (HORIZON-CL6-2022-ZEROPOLLUTION-01-02)
3. EU-China international cooperation on nature-based solutions for nutrient management in agriculture (HORIZON-CL6-2022-ZEROPOLLUTION-01-03)
4. Securing drinking water quality by protecting water sources against pollution, providing innovative monitoring and treatment solutions and ensuring safe distribution (HORIZON-CL6-2022-ZEROPOLLUTION-01-04)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C6+Food_+Bioeconomy__+Stand+07_10_2021-p-2164.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search?callCode=HORIZON-CL6-2022-ZEROPOLLUTION-01;freeTextSearchKeyword=&matchWholeText=true;typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState>

19. /EU Horizon Europe*/ Cluster 6 D5: Land, ocean and water for climate action, 5 calls open, deadline: 15.02.2022

Assessing the impacts of climate change on our land and marine environments, natural resources, agriculture and food systems, and identifying mitigation options and adaptation pathways, requires interdisciplinary and multidisciplinary research and investments across a broad range of activities. Research is needed to better understand who or what is exposed and sensitive to these changes, their underlying vulnerability, the associated costs and adaptive capacity. Research is also required to provide mitigation options that reduce the risk of long-term climate change. The conservation and enhancement of Earth's natural carbon sinks such as soils and plants, forests, farmed lands, wetlands and the oceans is crucial. The European Green Deal green oath to "do no harm", requires a careful examination of the trade-offs and synergies among the sustainability goals, including health protection, food and nutrition security, ecosystem services and biodiversity preservation both on land and at sea. R&I has a significant role to play to support the design and implementation of policies that will ensure the achievement of EU climate objectives.

Proposals for topics under this destination should set out a credible pathway to contributing to climate action on land, oceans and water and more specifically to one or several of the following impacts:

- o Better understanding and enhancing the mitigation potential of ecosystems and sectors based on the sustainable management of natural resources;
- o Advanced understanding and science to support adaptation and resilience of natural and managed ecosystems, water and soil systems and economic sectors in the context of the changing climate;
- o Efficient monitoring, assessment and projections related to climate change impacts, mitigation and adaptation potential in order to bring out solutions for tackling emerging threats and support decision-making in climate change mitigation and adaptation policies at European and global levels;
- o Fostered climate change mitigation in the primary sector , including by the reduction of GHG emissions, maintenance of natural carbon sinks and enhancement of sequestration and storage of carbon in ecosystems;
- o Improved adaptive capacity of water and soil systems and sectors including by unlocking the potential of nature-based solutions;
- o Better managed scarce resources, in particular soils and water, thus mitigating climate related risks, in particular desertification and erosion, thanks to informed decision-makers and stakeholders and integration of adaptation measures in relevant EU policies.

1. Climate sensitive water allocation systems and economic instruments.

(HORIZON-CL6-2022-CLIMATE-01-01)

2. Understanding the oceanic carbon cycle (HORIZON-CL6-2022-CLIMATE-01-02)

3. Demonstration network on climate-smart farming - boosting the role of advisory services

(HORIZON-CL6-2022-CLIMATE-01-03)

4. Fostering the resilience of agricultural production: from observation of changes to the development of resilience strategies (HORIZON-CL6-2022-CLIMATE-01-04)

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

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C6+Food_+Bioeconomy__+Stand+07_10_2021-p-2164.pdf

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20. /EU Horizon Europe*/ Cluster 6 D6: Resilient, inclusive, healthy and green rural, coastal and urban communities, 7 calls open, deadline: 15.02.2022

Places and people matter to the achievement of a more sustainable Europe. The Sustainable Development Goals and the ecological and digital transitions brought forward by the European Green Deal and digital strategy, alongside the recent pandemic, bring challenges and opportunities that differ for different places and people. Rural (including mountains and sparsely populated areas) and coastal areas, play a key role in managing, protecting and using natural resources. The provision of both private and public goods from these areas depends on the resilience and attractiveness of rural and coastal communities and the capacity of people who live and work there to access a sufficient level of well-being. The COVID-19 pandemic has highlighted deficiencies in digital infrastructures and economic opportunities that hamper resilience. Urban communities generally offer better access to many services but are also more vulnerable to supply-chain disruptions, as shown during the COVID-19 pandemic. Furthermore, they have a key role to play in fostering sustainable production and consumption as major demand drivers. In all communities, social and behavioural drivers play an important role in enabling or slowing down transitions. Knowledge and innovative solutions need to be developed to enhance every community's resilience and capacity to contribute to and benefit from the upcoming transitions in an economy that works for all territories and ensures a fair and just transition leaving no one behind.

Under this destination, transdisciplinary R&I with a strong social and behavioural sciences dimension, and attention to gender aspects, will foster a sustainable, balanced and inclusive development of rural, coastal and urban areas in three different ways. Firstly, it will aim to increase our understanding of the differential impacts of climate, environmental, socio-economic and demographic changes on rural, coastal and urban areas in order to identify ways to turn these changes into equal opportunities for people wherever they live, enhancing territorial cohesion and enabling a just transition. Secondly, it will explore innovative ways to tailor policy responses to the place-based challenges identified at various levels of governance. Thirdly, it will support bottom-up community-led innovation to empower communities to develop, test and upscale solutions that answer global challenges in locally adapted ways. Achieving policy goals require providing people with more equitable access to the knowledge and skills required to make informed choices and be actively engaged in the sustainable and circular management of natural resources, from production or service provision to consumption. Rural, coastal and urban communities, in particular women, youth, the most vulnerable groups like indigenous people and those hit the hardest by the COVID-19 pandemic, need to see their labour conditions, quality of life and long-term socio-economic prospects improved in the context of major transitions and rising threats to climate, resources and health. Their capacity to drive community-led innovations must be enhanced and their resilience increased across the diversity of European territories including remote places such as mountains and sparsely populated areas. Mobilising the forces of digital transformation, start-up ecosystems, nature-based solutions, as well as social and policy innovation will facilitate necessary changes and support smart, environment and climate friendly and resilient lifestyles.

Activities under this destination are complementary to Cluster 2 activities with attention to spatial differences and specifics in relation with democracy (Destination 'Innovative research on democracy and governance'), socio-economic transformations (Destination 'Innovative research on social and economic

transformation') and cultural heritage (Destination 'Innovative research on the European cultural heritage and the cultural and creative industries). They are also complementary to Cluster 5's Destination 'Cross-sectoral solutions for the climate transition' on cities and communities that should explore place-based approaches to climate, energy and mobility specifically for all places.

1. Boosting women-led innovation in farming and rural areas (HORIZON-CL6-2022-COMMUNITIES-01-01)
2. Assessing and improving labour conditions and health and safety at work in farming (HORIZON-CL6-2022-COMMUNITIES-01-02)
3. Integration of marine ecosystem service valuation, conservation and restoration in socio-economic models (HORIZON-CL6-2022-COMMUNITIES-01-03)
4. Social innovation in food sharing to strengthen urban communities' food resilience (HORIZON-CL6-2022-COMMUNITIES-01-04)
5. Assessing the socio-politics of nature-based solutions for more inclusive and resilient communities (HORIZON-CL6-2022-COMMUNITIES-01-05)

6. Smart solutions for smart rural communities: empowering rural communities and smart villages to innovate for societal change (HORIZON-CL6-2022-COMMUNITIES-02-01-two-stage)
7. Developing nature-based therapy for health and well-being (HORIZON-CL6-2022-COMMUNITIES-02-02-two-stage)

Further information:

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21. /EU Horizon Europe*/ Cluster 6 D7: Innovative governance, environmental observations and digital solutions in support of the Green Deal, 15 calls open, deadline: 15.02.2022

Transformative changes such as the ones required within the Green Deal are dynamic processes that require appropriate governance. At the same time, to ensure coordination and for collaborative decision-making, governance requires multiple channels and networks that provide readily available data and information coming from different sources. R&I activities under this destination aim at both: experimenting with new ways to govern the transition process and modernising the governance, in particular by making information and knowledge available and accessible. R&I for governance to support the Green Deal shall provide insights into institutional barriers such as lock-ins, path dependency, political

and cultural inertia power imbalances and regulatory inconsistencies or weaknesses.

Innovative governance supporting the Green Deal objectives needs to recognise, cope with and promote resilience in the face of on-going shocks and disruptions both globally and across Europe, whether these be climatic, ecological, economic, social, geo-political or related to health. Critical risk assessment and reduction strategies need to be incorporated, including the diversification of infrastructures, resources and knowledge through more self-sufficiency and autonomy. Taking advantage of the use, uptake, deployment and exploitation of environmental observations as well as digital solutions, assessed through the "do not harm" principle of the Green Deal, is key for innovative governance models and a more science-based policy design, implementation and monitoring. To maximise impacts of R&I on the ground and spark behavioural and socio-economic change, the knowledge and innovation produced throughout the whole cluster should be widely disseminated to key stakeholders of the relevant sectors of the cluster. In particular, the Agricultural Knowledge and Innovation Systems (AKIS) needs to be reinforced to accelerate the required transformative changes.

Proposals for topics under this destination should set out a credible pathway to contributing to innovative governance and sound decision making in policy for the green transition, and more specifically to one or several of the following impacts:

- o Innovative governance models enabling sustainability and resilience notably to achieve better informed decision-making processes, societal engagement and innovation;
- o Green Deal related domains benefit from further deployment and exploitation of Environmental Observation data and products;
- o A strengthened Global Earth Observation System of Systems (GEOSS)
- o Sustainability performance and competitiveness in the domains covered by Cluster 6 are enhanced through further deployment of digital and data technologies as key enablers;
- o More informed and engaged stakeholders and end users including primary producers and consumers thanks to effective platforms such as Agriculture Knowledge and Innovation Systems (AKIS);
- o Strengthened EU and international science-policy interfaces to achieve the Sustainable Development Goals

1. Mobilisation of society to transform food systems for co-benefits
(HORIZON-CL6-2022-GOVERNANCE-01-01)
2. European Partnership for a climate neutral, sustainable and productive Blue Economy
(HORIZON-CL6-2022-GOVERNANCE-01-02)
3. Multi-layer governance performance of marine policies (HORIZON-CL6-2022-GOVERNANCE-01-03)
4. Consumer-focused labelling options for bio-based products (HORIZON-CL6-2022-GOVERNANCE-01-04)
5. Innovative tools and methods to evaluate the design and support, monitoring and implementation of effective CAP strategic plans (HORIZON-CL6-2022-GOVERNANCE-01-05)
6. Water governance, economic and financial sustainability of water systems
(HORIZON-CL6-2022-GOVERNANCE-01-06)
7. New technologies for acquiring in-situ observation datasets to address climate change effects
(HORIZON-CL6-2022-GOVERNANCE-01-07)
8. Uptake and validation of citizen observations to complement authoritative measurement within the urban environment and boost related citizen engagement (HORIZON-CL6-2022-GOVERNANCE-01-08)
9. Environmental observations solutions contributing to meeting "One Health" challenges
(HORIZON-CL6-2022-GOVERNANCE-01-09)
10. Piloting approaches and tools to empower citizens to exercise their "data rights" in the area of food and nutrition (HORIZON-CL6-2022-GOVERNANCE-01-10)
11. Upscaling (real-time) sensor data for EU-wide monitoring of production and agri-environmental conditions (HORIZON-CL6-2022-GOVERNANCE-01-11)
12. Thematic networks to compile and share knowledge ready for practice
(HORIZON-CL6-2022-GOVERNANCE-01-12)

13. Broaden EIP Operational Group outcomes across borders by means of thematic networks, compiling and sharing knowledge ready for practice (HORIZON-CL6-2022-GOVERNANCE-01-13)
14. Improving preparation of multi-actor projects to enable the relevant actors to work in a co-creative way (HORIZON-CL6-2022-GOVERNANCE-01-14)
15. Developing EU advisory networks on water use (HORIZON-CL6-2022-GOVERNANCE-01-15)

Further information:

https://www.euhochschulnetz-sachsen-anhalt.de/eu_hsnetz_media/Horizont+Europe/Topic%C3%BCbersichten/%C3%9Cbersicht+C6+Food_+Bioeconomy__+Stand+07_10_2021-p-2164.pdf

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-search;callCode=HORIZON-CL6-2022-GOVERNANCE-01;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;de=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspectus=null;prospectus=null;startDatelte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=callTopicSearchTableState>

22. /EU Horizon Europe/ MSCA COFUND 2021 (HORIZON-MSCA-2021-COFUND-01), deadline: 10.02.2022

COFUND takes the form of:

A) Doctoral programmes

Doctoral programmes offer research training activities to allow doctoral candidates to develop and broaden their skills and competences. They will lead to the award of a doctoral degree in at least one EU Member State or Horizon Europe Associated Country. The training activities should be based on the EU Principles on Innovative Doctoral Training.

Substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields and fostering the culture of Open Science, innovation and entrepreneurship will be supported. They will include, inter alia, training on the use of collaborative tools, opening access to publications and to research data, FAIR data management, public engagement and citizen science.

On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Collaboration with a wider set of associated partners, including from the non-academic sector, will be positively taken into account during the evaluation. These organisations may provide hosting or secondment opportunities or training modules in research or transferable skills.

Particular attention is paid to the quality of supervision and mentoring arrangements as well as career guidance. The selection procedure for doctoral candidates must be open, transparent and merit-based, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS website) must include the minimum gross salary (not including employer's social contributions) offered to the researcher.

B) Postdoctoral Programmes

Postdoctoral Programmes fund individual advanced research training and career development fellowships for postdoctoral researchers. The programmes should offer training to develop key transferable skills and competences common to all fields, foster innovation and entrepreneurship and promote and (where appropriate) reward Open Science practices (open access to publications and to research data, FAIR data management, public engagement and citizen science, etc.).

Postdoctoral Programmes should have regular selection rounds following fixed deadlines or regular cut-off dates, allowing fair competition between researchers. The selections should be open, widely advertised internationally (including on the EURAXESS website), competitive, merit-based and with a

transparent international peer review, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice must include the minimum gross salary (not including employer's social contributions) offered to the postdoctoral researcher.

On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Researchers will be able to freely choose a research topic and the appropriate organisation to host them, fitting their individual needs.

Further information:

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-msca-2021-cofund-01-01;callCode=HORIZON-MSCA-2021-COFUND-01;freeTextSearchKeyword=;matchWho=WholeText=true?typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=null;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;nesCode=null;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;ityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topic=false;topicListKey=callTopicSearchTableState>

23. /EIT*/ EIT Knowledge and Innovation Community (KIC) in the Cultural and Creative Sectors and Industries (CCSI), deadline: 22.03.2022

EIT Culture & Creativity will unite cultural and creative organisations from business, higher education, and research and beyond in a pan-European innovation ecosystem. It will train the sector's future entrepreneurs, power its cutting-edge ventures, and deliver innovative solutions to the challenges facing the sectors.

An EIT Knowledge and Innovation Community is a thriving partnership that brings together partners from business, research centres and higher education institutions to power innovation. The EIT has set up eight KICs, each tackling a specific global challenge, from climate change to sustainable energy and urban mobility to digitisation of our societies.

The EIT Community powers:

- o a new generation of trained entrepreneurs and innovators;
- o innovative products and services, that are developed and launched on the market in green, health and deep tech; and
- o start-ups and ventures that are formed and scaled.

The EIT Call for Proposals is intended for consortia consisting of leading organisations from business, education and research, the so-called 'knowledge triangle'.

Further information:

<https://eit.europa.eu/our-activities/call-for-eit-communities/2021>

24. /BMBF*/ Integration der Region Mittelost- und Südosteuropa in den Europäischen Forschungsraum (Bridge2ERA2021), Frist: 28.02.2022

Europa braucht einen leistungsfähigen, offenen und für die besten Talente aus aller Welt attraktiven gemeinsamen Forschungsraum, der zur Stärkung der internationalen Wettbewerbsfähigkeit Europas und zur Lösung globaler Herausforderungen beiträgt. Nach wie vor gibt es im Europäischen Forschungsraum (EFR) zwischen den Mitgliedstaaten Unterschiede hinsichtlich ihrer Leistungsfähigkeit in Forschung und Innovation. Das jährlich erscheinende Innovation Scoreboard der Europäischen Union weist neben Innovationsführern und starken Innovatoren auch Länder mit einem geringeren Innovationspotenzial aus.



Besonders viele Länder in Mittelost- und Südosteuropa fallen bei der Beteiligung an europäischen Forschungs- und Innovationsprogrammen hinter den europäischen Innovationsführern zurück. Damit Europa als Ganzes sein Potenzial in Zukunft noch besser ausschöpfen kann, sollen diese Länder stärker an den europäischen Forschungsraum herangeführt und beteiligt werden. Dieses Ziel kann durch die Vernetzung und Kooperation mit erfahrenen und innovationsstarken Partnereinrichtungen unterstützt werden.

Gegenstand der Förderung ist die gemeinsame Antragsvorbereitung von multilateralen Forschungs- und Innovationsprojekten, die auf die Themenbereiche des EU-Rahmenprogramms für Forschung und Innovation Horizont Europa sowie auf andere relevante europäische Förderprogramme (im Sinne der in Nummer 1 beschriebenen Förderziele) ausgerichtet sind. Es sollen insbesondere neue Netzwerke mit den Zielländern der Bekanntmachung etabliert und über den Zeitraum der gesamten Förderung hinweg gepflegt werden. Das Ziel ist, Netzwerke aufzubauen, die auch über den Projektzeitraum hinaus weiter Bestand haben. Vorhaben, die im Rahmen dieser Bekanntmachung beantragt werden, sollten das Potenzial für eine langfristige und nachhaltige Kooperation mit den in Nummer 1 genannten Zielländern dokumentieren (bitte gegebenenfalls spezifizieren)

Die Antragsvorbereitung der Forschungs- und Entwicklungsprojekte erfolgt in zwei Phasen:

- o Ziel der ersten Förderphase ist der Auf- oder Ausbau multilateraler Projektkonsortien. Diese sollen geeignete Förderbekanntmachungen identifizieren und benennen, zu denen eine gemeinsame Antragstellung beabsichtigt wird.
- o Das Ziel der zweiten Förderphase ist die konkrete Ausarbeitung und Einreichung mindestens eines Projektantrags.

Forschungs- und Innovationsprogramme für die gemeinsame Antragsvorbereitung im Sinne der Bekanntmachung sind z. B.:

- o Horizont Europa
- o INTERREG
- o Eurostars

Antragsberechtigt sind außeruniversitäre Forschungseinrichtungen, Hochschulen sowie andere Institutionen, die Forschungsbeiträge liefern, KMU, Kommunen und kommunale Unternehmen, die die Zuwendungszwecke und Zuwendungsvoraussetzungen erfüllen. Zum Zeitpunkt der Auszahlung einer gewährten Zuwendung wird das Vorhandensein einer Betriebsstätte oder Niederlassung (Unternehmen) bzw. einer sonstigen Einrichtung, die der nichtwirtschaftlichen Tätigkeit des Zuwendungsempfängers dient (Hochschule, Forschungseinrichtung oder andere Institution, die Forschungsbeiträge liefern, Kommunen und kommunale Unternehmen), in Deutschland verlangt.

Das Antragsverfahren ist zweistufig angelegt.

Weitere Informationen:

<https://www.bmbf.de/bmbf/shareddocs/bekanntmachungen/de/2021/10/2021-10-18-Bekanntmachung-Bridge2ERA2021.html>

25. /BMBF/ Internationale Projekte mit Kanada zum Thema Grüner Wasserstoff, Frist: 21.03.2022, 1. Stufe

Deutschland und Kanada sind weltweit mit führend in innovationsorientierter Forschung und Entwicklung (FuE) im Bereich der Energiewende. Beide Länder wollen ihre Energiesysteme transformieren und gemeinsam an der Zukunft der Energiepolitik arbeiten. Dabei soll insbesondere der Austausch und die Kooperation in grünen Wasserstofftechnologien als Technologie mit großem Zukunftspotential und

zentralem Bestandteil der deutschen Dekarbonisierungsstrategie gestärkt werden.

Dieser Förderaufruf erfolgt im Rahmen der Strategie der Bundesregierung zur Internationalisierung von Bildung, Wissenschaft und Forschung, der Nationalen Wasserstoffstrategie, der Hightech-Strategie 2025 der Bundesregierung sowie insbesondere unter der Rahmenbekanntmachung zur Richtlinie zur Förderung von Zuwendungen für internationale Projekte zum Thema Grüner Wasserstoff.

Konkret soll die Zusammenarbeit von deutschen und kanadischen Partnern aus Wissenschaft und Industrie (2+3) in Form von internationalen Verbundforschungsvorhaben entsprechend Modul C der Rahmenbekanntmachung zur Förderung von Zuwendungen für internationale Projekte zum Thema Grüner Wasserstoff gefördert werden. Das Konsortium muss aus mindestens (Minimalanforderung) zwei deutschen Partnern (eine Hochschule oder außeruniversitäre Forschungseinrichtung und ein Unternehmen der gewerblichen Wirtschaft - insbesondere kleine oder mittlere Unternehmen - und, abweichend zu den Regelungen in der RBK, mindestens drei kanadischen Partnern (ein Forschungszentrum des National Research Council, eine Universität und ein zuwendungsfähiger kanadischer Firmenpartner) bestehen (2+3-Bekanntmachung).

Gefördert werden im Rahmen dieses Förderaufrufs Forschungsprojekte als Verbundvorhaben, die in internationaler Zusammenarbeit mit Partnern aus Kanada eines oder mehrere der nachfolgenden Themen bearbeiten:

1. Angewandte Forschung zur Förderung des grundlegenden Verständnisses der Wasserstoffproduktion, einschließlich Elektrochemie, Fotokatalyse und Speichertechnologien oder -medien.
2. Erforschung, Entwicklung und fortgeschrittene Charakterisierung neuer oder neuartiger Materialien und Komponenten, einschließlich Katalysatoren, Elektroden und Membranen zur Verbesserung von Geräten, Produktion und Transport von Wasserstoff.
3. Fortgeschrittene Methoden für die Herstellung, Charakterisierung und Analyse oder Klassifizierung von Werkstoffen oder Bauteilen, z.B.: unter Verwendung von Hochdurchsatzmethoden wie fortgeschrittener Modellierung oder durch künstliche Intelligenz unterstützte Methoden und Plattformen.
4. Einsatz neuartiger Systemmodellierungstechniken zur Produktions- oder Prozessgestaltung, insbesondere zur Steigerung der Kosteneffizienz von Wasserstofftechnologien. Dies schließt die Verwendung von technisch-wirtschaftlichen sowie Lebenszyklus-Bewertungen von Wasserstoffproduktionspfaden im Kontext der kanadischen oder deutschen Energiesysteme ein.
5. Geräteentwicklung, Prototyping und Systemvalidierung im Zusammenhang mit der Herstellung, Speicherung und Nutzung von Wasserstoff sowie Wasserstofftransportinfrastruktur und -logistik.
6. Neuartige Lösungen für die Integration von Wasserstoff-Wertschöpfungsketten in nationale Energiesysteme.

Das Antragsverfahren ist zweistufig angelegt.

Weitere Informationen:

<https://www.bmbf.de/bmbf/shareddocs/bekanntmachungen/de/2021/10/2021-10-04-F%C3%B6rderaufruf-Gr%C3%BCnerWasserstoff.html>

26. /BMBF*/ Bilaterale Zusammenarbeit in Computational Neuroscience: Deutschland-USA, Frist: 23.11.2021, 1. Stufe

Die „Bilaterale Zusammenarbeit in Computational Neuroscience: Deutschland - USA“ ist eine transnationale Initiative zur Forschungsförderung zwischen Deutschland und den Vereinigten Staaten von Amerika. Sie wird vom Bundesministerium für Bildung und Forschung (BMBF) gemeinsam mit der amerikanischen Förderorganisation National Science Foundation (NSF) getragen.

Ziel dieser Maßnahme ist es, durch Vernetzung der im Bereich Computational Neuroscience tätigen



Wissenschaftlerinnen und Wissenschaftler, durch wissenschaftlichen transnationalen Austausch und interdisziplinäre Zusammenarbeit der relevanten Fachdisziplinen einen gemeinsamen kooperativen Fortschritt bei der methodischen Untersuchung und dem Verständnis komplexer neurowissenschaftlicher Fragestellungen zu erreichen.

Der Zuwendungszweck ist die Etablierung exzellenter transnationaler Forschungsprojekte im Bereich Computational Neuroscience. Es können Anträge zur Zusammenarbeit von deutschen und US-amerikanischen Forschungsgruppen eingereicht werden. In gemeinsamen bilateralen Forschungsprojekten sollen neue Kooperationen geschlossen oder bereits bestehende Zusammenarbeiten zwischen Forscherinnen und Forschern der beteiligten Länder vertieft und nachhaltig etabliert werden. Forscherinnen und Forscher der beteiligten Länder sollen komplementäre Expertise bündeln, um so bei schwierigen interdisziplinären Fragestellungen signifikante Fortschritte erreichen zu können.

Der Schwerpunkt dieser Initiative liegt auf innovativen Forschungsarbeiten und Ressourcen und soll dazu beitragen, dass Expertinnen und Experten aus den Bereichen Theorie, Computational Science, Technik, Mathematik und Statistik moderne rechnergestützte Methoden zur Bearbeitung dynamischer und komplexer neurowissenschaftlicher Probleme einsetzen und entwickeln.

Im Rahmen dieser Richtlinie geförderte Forschung im Bereich Computational Science muss auf biologische Prozesse bezogen sein und sollte zu Hypothesen führen, die in biologischen Studien überprüft werden können. Folgendes wird vorausgesetzt:

(1) Die Projektanträge sollen komplementäre Expertisen aus Computational Science, Ingenieurwissenschaften, Modellierung, Theorie und/oder experimentellen Neurowissenschaften zusammenbringen; (2) die Kooperation sollte eine dynamische und eventuell längere Phase zur Entwicklung und Verfeinerung der Modelle, Theorien und/oder analytischen Methoden sowie ein enges Zusammenwirken von Expertinnen und Experten verschiedener Fachrichtungen beinhalten und (3) die Entwicklung und Erprobung neuer Modelle oder Theorien sollte einen Rahmen für das Design von Experimenten und das Aufstellen neuer Hypothesen bieten, die zur Aufdeckung von Mechanismen und Prozessen im gesunden oder kranken Nervensystem beitragen können.

Antragsberechtigt sind staatliche und staatlich anerkannte Hochschulen und außeruniversitäre Forschungseinrichtungen sowie Unternehmen der gewerblichen Wirtschaft. Zum Zeitpunkt der Auszahlung einer gewährten Zuwendung wird das Vorhandensein einer Betriebsstätte oder Niederlassung (Unternehmen) bzw. einer sonstigen Einrichtung, die der nichtwirtschaftlichen Tätigkeit des Zuwendungsempfängers dient (staatliche und staatlich anerkannte Hochschulen und außeruniversitäre Forschungseinrichtungen), in Deutschland verlangt.

Das Antragsverfahren ist zweistufig angelegt.

Weitere Informationen:

<https://www.bmbf.de/bmbf/shareddocs/bekanntmachungen/de/2021/10/2021-10-04-Bekanntmachung-Neuroscience.html>

27. /DFG/ Japanese-German International Research Training Groups, no deadline

As an expression of the long and fruitful scientific collaboration between their two countries, the Japan Society for the Promotion of Science (JSPS) and the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) are pleased to announce the renewal of an agreement for a joint funding scheme to support Japanese-German International Research Training Groups. Both organisations are dedicated to strengthening the joint researcher development systems for doctoral students in Japanese and German universities.



Applications for Japanese-German IRTG intended for JSPS-DFG funding are open to all subject areas covered by JSPS, and interdisciplinarity in joint projects is encouraged. An IRTG should be run by two teams of participating researchers in Japan and Germany, respectively. Each team should have approximately five to ten members with proven expertise both in the IRTG's main research topic and in providing outstanding supervision to doctoral students. The participating researchers' expertise at the two locations should be complementary and provide added value to the IRTG. Each team of participating researchers in an IRTG should be based at a single institution in Japan and Germany, respectively. In convincingly justified cases, an IRTG may be based in more than two institutions.

The Japanese and German teams in an IRTG should jointly formulate a high quality and coherent research and training programme to be implemented at both sites. The teams should have common research interests and objectives and these must be reflected in a common framework and joint project. Applications are submitted by the host institutions. For every IRTG, one member of the team on each side serves as spokesperson, being responsible for the proposal and the scientific coordination of the IRTG. This also includes responsibility for reporting to JSPS and DFG, respectively.

The programme should provide for regular exchanges of academic staff and doctoral students for the purposes of joint research and training. Doctoral students should spend a period of at least six months (and up to one year) in total during their PhD project at the respective partner institution for research and training and each doctoral student should have both a Japanese and a German supervisor. On the German side, approximately ten to fifteen doctoral researchers will be funded by DFG within a single IRTG in parallel.

Further information:

https://www.dfg.de/foerderung/info_wissenschaft/ausschreibungen/info_wissenschaft_21_97/index.htm
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28. /DFG/ Deutsch-italienische Zusammenarbeit in den Geistes- und Sozialwissenschaften 2023, Frist: 31.12.2021

Die Villa Vigoni schreibt im Rahmen einer Vereinbarung mit der Deutschen Forschungsgemeinschaft (DFG) für das Jahr 2023 wiederum ein Veranstaltungsprogramm zwischen Deutschland und Italien zur Förderung der Geistes- und Sozialwissenschaften aus.

Zielsetzung des Programms ist unter anderem die Exploration aktueller Herausforderungen in den Geistes- und Sozialwissenschaften aus vergleichender deutscher und italienischer Perspektive sowie die Mobilisierung neuer Verbindungen zwischen deutscher und italienischer Wissenschaft. Dabei müssen nicht zwingend exklusiv deutsch-italienische Themen behandelt werden. Das Vorhaben soll dem institutionellen Auftrag der Villa Vigoni Rechnung tragen, „die deutsch-italienischen Beziehungen in Wissenschaft, Bildung und Kultur im europäischen Geist“ zu fördern, und auch eine Begegnung des wissenschaftlichen Nachwuchses ermöglichen.

Kern des Programms sind die Villa-Vigoni-Gespräche. Diese gelten Themen, die die aktuellen Debatten zur Kultur, Geschichte und Gesellschaft Europas vertiefen. Im Mittelpunkt steht die intensive Auseinandersetzung im Gespräch, die sich bewusst von den üblichen Konferenzformaten unterscheidet. Die Zahl der Teilnehmerinnen und Teilnehmer ist auf maximal 20 Personen begrenzt.

Weitere Informationen:

https://www.dfg.de/foerderung/info_wissenschaft/ausschreibungen/info_wissenschaft_21_94/index.htm
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<https://www.villavigoni.eu/cooperazione-italo-tedesca/?lang=de>

29. /DFG/ UK-German Funding Initiative in the Humanities, deadline: 22.02.2022

The Arts and Humanities Research Council (AHRC) and the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) are launching a call for proposals for outstanding joint UK-German research projects in the Humanities. Proposals should strengthen cooperation in the fields of arts and humanities between Germany and the UK.

Both funding agencies want to strengthen international cooperation in these fields, to fund academic research of the highest quality within their own countries, and are aware that some of the best research can only be achieved by working with the best researchers internationally. The scheme will provide funding for integrated UK-German projects. The partner agencies will organise a coordinated peer review and a single joint selection process. Funding will be distributed among the research partners according to researchers' place of work and, more generally, according to the funding rules of each individual agency.

Proposals may be submitted in any area of the Humanities, as defined in the research funding guides. Only proposals whose primary aim is to make fundamental advances in human knowledge in the relevant fields may be submitted in response to the call for proposals. Applicants who are uncertain whether their proposal would be eligible should contact the relevant agencies for clarification.

Further information:

https://www.dfg.de/foerderung/info_wissenschaft/ausschreibungen/info_wissenschaft_21_93/index.htm

30. /Sonstige/ Online-Veranstaltung: Mobilität in der Zukunft: EU-Förderungen für grünen und intelligenten Verkehr am 30.11.2021

Am 30.11.21 von 10:00 bis 12:15 Uhr findet die kostenlose Online-Veranstaltung „Mobilität in der Zukunft: EU-Förderungen für grünen und intelligenten Verkehr“ organisiert vom EU-Hochschulnetzwerk und dem EEN statt. In unserer Veranstaltung erfahren Sie, welche Möglichkeiten für die Finanzierung Ihrer Forschungsidee auf dem Weg in eine nachhaltige, zukunftsfähige Mobilität die EU derzeit bietet. Dazu wird Herr David Doerr von der NKS Klima, Energie und Mobilität das Programm Horizon Europe und Ausschreibungen im Bereich Mobilität vorstellen. Außerdem werden aktuelle Forschungsprojekte im Bereich Mobilität in Sachsen-Anhalt vorgestellt.

Weitere Informationen und Hinweise zur Anmeldung finden Sie hier:
<https://www.euhochschulnetz-sachsen-anhalt.de/Veranstaltungen/Mobilität>

31. /Sonstige/ Europa Café: Dynamische Netzwerkarbeit in Sachsen-Anhalt - Der Thinktank DYNA am 07.12.2021

Am 07.12.2021 von 15:00 bis 16:00 Uhr findet im Rahmen der Europa Café Reihe die Veranstaltung „Dynamische Netzwerkarbeit in Sachsen-Anhalt - Der Thinktank DYNA“ statt. Dazu stellt sich die Steuerungsgruppe des akademischen Thinktanks der Otto-von-Guericke-Universität Magdeburg vor, der sich seit April dieses Jahres im Aufbau befindet. Hier erfahren Sie, wie DYNA die Kommunikationskanäle zwischen Wissenschaft, Wirtschaft, Politik und Zivilgesellschaft in Sachsen-Anhalt untersucht und verbessert und so die Einbindung von wissenschaftlichem Wissen in die Gesellschaft ermöglicht. Die

Veranstaltung ist kostenlos und findet online statt.
Weitere Informationen und Hinweise zur Anmeldung finden Sie hier:
<https://www.euhochschulnetz-sachsen-anhalt.de/veranstaltungen.html>

32. /Sonstige/ Contact Research Funding Advice of the Otto von Guericke University Magdeburg

For questions about funding opportunities, specific calls for proposals, help with submitting applications and project support, please contact the department for Research Funding Advice/EU-University Network of Otto von Guericke University Magdeburg.

Information on current events, funding structures and contact online at:
<https://www.ovgu.de/en/ContactResearchFundingAdvice>
<https://www.euhochschulnetz-sachsen-anhalt.de/en/>