

ANNEX 7 – MISSION AREAS AND PARTNERSHIP CANDIDATES

1. Mission Areas

1.1 Mission Area for Adaptation to Climate Change, including Societal Transformation

Addressing sectors, policies and systemic, transformative solutions (governance, technological, non-technological, services, behaviour changes, investments) in fields including notably: climate change adaptation and mitigation; climate services; natural resources; systemic and nature-based solutions; environmental advocacy and citizen engagement; sustainable production and consumption; disaster risk reduction and management including public health and critical infrastructures; international development in the field of climate change; science communication; water management; biodiversity; agriculture, finance and insurance.

1.2 Mission Area for Cancer

Addressing sectors, policies and systemic, transformative solutions (governance, technological, non-technological, services, behaviour changes, investments), in fields including notably: cancer prevention, prediction, detection, diagnosis and treatment including clinical expertise in these areas; quality of life and end of life care; public health policy and practice; patient representation including support groups and family counselling, innovation and business development; ethics.

1.3 Mission Area for Healthy Oceans, Seas, Coastal and Inland Waters

Addressing sectors, policies and systemic, transformative solutions (governance, technological, non-technological, services, behaviour changes, investments), in fields including notably: systemic solutions for the prevention, reduction, mitigation and removal of marine pollution including plastics; transition to a circular and blue economy; public awareness raising; users affected by the need to adapt to and mitigate pollution and climate change in the ocean; sustainable use and management of ocean resources; development of new materials including biodegradable plastic substitutes, new feed and food; urban, coastal and maritime spatial planning; ocean governance; ocean economics applied to maritime activities.

1.4 Mission Area for Climate-neutral and Smart Cities

Addressing sectors and policies for systemic, transformative solutions (governance, technological, non-technological, services, behaviour changes, investments), in fields including notably: climate change mitigation and adaptation; air quality; spatial planning (incl. land urban and green spaces) and development; energy efficient buildings (retrofitting); urban infrastructures and networks, including transport and logistics systems, energy, ICT and water; clean energy transformation; urban manufacturing; urban circularity and regeneration; ecosystem services and nature-based solutions; public health and well-being in cities; urban resilience; social impacts of climate change.

1.5 Mission Area for Soil Health and Food

Addressing sectors and policies for systemic, transformative solutions (governance, technological, non-technological, services, behaviour changes, investments), in fields including: soil management in agriculture and forestry for food and nutrition security, and the delivery of non-food products and public goods; soil management beyond agriculture and forestry, e.g. peatland, wetland; restoration and remediation of soils, brownfields, soil sealing; potential of soils and soil management practices for climate mitigation and adaptation; soil functions and ecosystems' services, and the role of practises to improve soil health; sustainable land(scape) management, land use and land use change, spatial planning; ecology, agro-ecology, soil microbiology; systems science / systems approaches, considering financial impacts of soil and land degradation.

2. Candidates for European Partnerships

Preliminary list of candidates for European Partnerships in Pillar II, III and cross-pillar, and short description of what the partnership stands and aims for		Form of implementation	Predecessors	Composition of partners	Relevance for clusters
Health	<p>1. EU-Africa Global Health Partnership Increase health security in sub-Saharan Africa and Europe, by accelerating the clinical development of effective, safe, accessible, suitable and affordable health technologies as well as health systems interventions for infectious diseases with a universal health coverage perspective in partnership with Africa and international funders.</p>	Article 185 or Article 187 or Co-programmed or co-funded	EDCTP2 (Art.185)	MS/AC/3 rd countries (i.e. sub-Saharan African countries) Foundations/industry on an ad-hoc basis	Cl.1
	<p>2. Innovative Health Initiative A collaborative platform bringing the pharmaceuticals, diagnostics, medical devices, imaging and digital sectors together for precompetitive research and innovation in areas of unmet public health need, to accelerate the development and uptake of people-centred health care innovations.</p>	Article 187 or Co-programmed	IMI2 (Art.187)	Industry, other organisations on an ad hoc basis	Cl.1
	<p>3. European partnership for chemicals risk assessment Bring together the European risk assessment and regulatory agencies to implement a joint research agenda, to ensure their capacity to deal with persistent or emerging challenges. It will promote the uptake of new methods, tools, technologies and information in chemical hazard identification and risk assessment, sustain the development and use of human biomonitoring capacities in Europe.</p>	Co-funded	HBM4EU (Human Bio-monitoring) and a number of other actions	MS/AC, National agencies, role of the corresponding EU agencies tbd	Cl.1, 4, 6
	<p>4. Fostering an ERA for health research The partnerships aims for establishing and implementing a strategic research agenda and joint funding strategy between major European public funders in health research.</p>	Co-funded	Ca. 10 previous and current ERA-NET actions	MS / AC	Cl.1, 6
	<p>5. Health and Care Systems Transformation Improving health and care models in an ageing, data-driven and digital society, shifting to holistic health promotion and person-centred care approaches through health policy and health systems research.</p>	Co-funded	AAL2 (Art.185), JPI 'More Years, Better Lives' and others	MS / AC	Cl.1
	<p>6. Personalised Medicine To align national research strategies, promote excellence, reinforce the competitiveness of European players in Personalised Medicine and enhance the collaboration with non-EU countries.</p>	Co-funded	ERA-PerMed and ICPeMed	MS/AC/3 rd countries	Cl.1
	<p>7. Rare Diseases To improve the integration, the effectiveness, the production and the social impact of research on rare diseases through the development, demonstration and promotion of Europe/ world-wide production, sharing and exploitation of research and clinical data, materials, processes, knowledge and know-hows.</p>	Co-funded	EJP Rare diseases	MS/AC /3 rd countries, civil society, organisations, EU research infrastructures	Cl.1
	<p>8. One Health AMR The partnership aims to bring together the many aspects of antimicrobial resistance</p>	Co-funded	ERA-NET EXEDRA, JPI	MS/AC	Cl.1, 4, 6

	(AMR) to overcome the fragmentation of the AMR research landscape, and integrate the various different research fields (addressing human and animal health, food safety and environment). It will contribute to the EU One health action plan against AMR.		AMR, One Health EJP		
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Digital, Industry and Space	9. High Performance Computing The EuroHPC will establish an integrated world-class supercomputing & data infrastructure and support a highly competitive and innovative HPC and Big Data ecosystem.	Article 187 or Co-programmed	EuroHPC (Art 187)	Industry and MS/AC	Cl.4
	10.Key Digital Technologies Maintain the European Electronics Components and Systems industry at the technological forefront and contribute to boosting the EU's competitiveness, including that of its industries by providing essential components and software as well as the related manufacturing infrastructure in Europe and national strategies.	Article 187 or Co-programmed	ECSEL (Article 187), part of Photonics cPPP	Industry and MS/AC (research funders)	Cl.1, 2, 4, 5
	11. Smart Networks and Services Enabling the infrastructure basis in terms of key technologies and deployment for Next-Generation Internet services used by citizens and for "smart" services required by vertical sectors such as transport, energy, manufacturing, health and media.	Article 187 or Co-programmed	cPPP 5G	Industry and academia in the field of connectivity	Cl.1, 4, 5
	12. AI, data and robotics The partnership on AI will help structuring the European AI community, develop a strategic research agenda and federate efforts around a topic that holds great potential to benefit our society and economy	Co-programmed	cPPPs on Big Data and robotics	Industry, academia, end-users, and civil society	Cl. 3, 4
	13. Photonics Europe Photonics is one of the key drivers for tomorrow's digital markets and the development of the digital European society as a whole. Photons will replace electrons in many of our most important technologies and digital products.	Co-programmed	cPPP Photonics21	Industry	Cl.1, 2, 4, 5, 6
	14. Clean Steel - Low Carbon Steelmaking Provide a EU critical mass to ensure and in particular to upscale breakthrough technology, facilitate joint vision development, agenda setting and synergies of different EU funds, contribute to the evolution to a programming approach in research and innovation.	Co-programmed	Fuel cell and Hydrogen (Article 187) cPPP Spire	Industry	Cl.4, 5
	15. European Metrology Accelerating the global lead in metrology research that Europe currently holds, and creating sustainable metrology networks for highly competitive and emerging metrology areas, while incorporating a wide range of stakeholders.	Article 185 or co-funded	EMPIR (Article 185)	MS/AC (National Metrology Institutes)	Cl.1, 2, 4, 5, 6
	16. Made in Europe Towards a competitive discrete manufacturing industry with a world-leading reduction of the environmental footprint whilst guaranteeing the highest level of well-being for workers, consumers and society.	Co-programmed	cPPPs Factories of the Future, part of Robotics and Photonics	Industry	Cl.1,4 5, 6
	17. Carbon Neutral and Circular Industry Transforming European process industries to make them carbon neutral by 2050, to turn them into circular industries together with material and recycling industries, and to enhance their technological leadership at global level and international competitiveness.	Co-programmed	cPPP SPIRE	Industry CSO/NGOs	Cl.4, 5, 6

Climate, energy and mobility	<p>18. Global competitive space systems Perform fast and structured advances on selected innovative critical space systems research and innovation roadmaps such as for example reusability, in orbit demonstration, assembly and manufacturing, so as to acquire global industrial leadership</p>	Co-programmed	n.a.	Industry MS/AC	Cl.4
	<p>19. Geological Service for Europe Further integrate national services to provide key advice and data services to the EU on sustainable subsurface management, integrating geo-resources and environmental conditions across all relevant economic and societal clusters, supported by a world leading subsurface information platform. A coordinated approach to geoscientific research and innovation will help improve pan-European harmonisation, standardisation, knowledge sharing and cutting edge developments in 3D and 4D modelling and geological mapping.</p>	Co-funded	GeoERA ERA-NET	MS/AC	Cl.3, 4, 5, 6
	<p>20. Transforming Europe's rail system Define, design and implement the full spectrum of rail research and innovation activities, from fundamental research to large-scale demos, to trigger a major transformation of the railway system as the backbone of an integrated and sustainable mobility in Europe, maximising socio-economic benefits</p>	Article 187 or Co-programmed	Shift to Rail (Article 187)	Industry, Railway Operators and Infrastructure Managers	Cl.5
	<p>21. Integrated Air Traffic Management Enhance the performance of the Union's air traffic management system as technological pillar of the Single European Sky (SES) and more broadly of the air transport sector as a whole.</p>	Article 187 or Co-programmed	SESAR (Article 187)	Industry, Eurocontrol	Cl. 4, 5
	<p>22. Clean Aviation Accelerate and amplify the impact of the European aviation research and innovation on Energy Union, Mobility Package, renewed industrial policy strategy, EU GHG and air pollution emissions, including for 2050 horizon and noise regulations, tackling energy and climate-change challenges, industrial competitiveness, "first mover advantage" on international markets, and sustainable mobility.</p>	Article 187 or Co-programmed	Clean Sky 2 (Article 187)	Industry	Cl .4, 5
	<p>23. Clean Hydrogen Accelerating the market entry of nearly-zero GHG-emission hydrogen-based technologies across energy, transport & industrial end-users, covering the full value chain for competitive hydrogen and fuel cells technologies, ensuring pole position for Europe to realise the potential of hydrogen technologies at scale.</p>	Article 187 or Co-programmed	Fuel Cell and Hydrogen (Article 187)	Industry	Cl. 4, 5
	<p>24. Built environment and construction Generate the necessary technology and socio-economic breakthroughs for an improved built environment to support the achievement of EU 2050 decarbonisation goals and the transition to clean energy and circular economy, while improving quality of living, health and wellbeing for people, ensuring a high degree of mobility and creating competitive ecosystems for business.</p>	Co-programmed	Energy-efficient Buildings cPPP	Industry	Cl .4, 5
<p>25. Towards zero-emission road transport (2ZERO) Accelerating the transformation of the road transport system into zero-emission mobility through world-class European research and innovation and industrial system, with a</p>	Co-programmed	European Green vehicle initiative (cPPP)	Industry	Cl. 4, 5	

competitive new generation of light weight, energy efficient and affordable vehicles and support measures to facilitate their rapid deployment				
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<p>26. Mobility and Safety for Automated Road Transport Long-term framework to the strategic planning of research and pre-deployment programmes for connected and automated driving on roads at EU and national levels in a systemic approach (vehicle, interactions, infrastructure, technical and non-technical enablers and societal impact)</p>	Article 187 or Co-programmed	related: 5G, Big Data, ECSEL, S2R, SESAR, batteries, 2ZERO	Industry	Cl. 4, 5
<p>27. Zero-emission waterborne transport To radically transform inland and maritime waterborne transport, develop knowledge, technologies and demonstrate solutions that will enable zero-emission shipping for all ship types and services. It will contribute to further reinforcing Europe's global leadership in green shipping technologies. This will create a foundation for shipping to underpin a carbon neutral future with the demonstration of deployable zero-emission solutions suitable for all main ship types and services by 2030.</p>	Co-programmed	n.a.	Industry	Cl. 4, 5
<p>28. European industrial battery value chain Development of a world-class European research and innovation system on batteries, with a view towards European industrial leadership. Develop a coherent strategic programme, in cooperation with industry and research community, substantially contributing to fulfilling the Paris Agreement, and enhance the competitiveness of current and emerging European industries along the battery value chain.</p>	Co-programmed	n.a.	Industry	Cl. 4, 5
<p>29. Sustainable, Smart and Inclusive Cities and Communities It drives research and innovation on urban transitions and provides scientific evidence for urban actors on sustainable urban development with a cross-sectoral, inter- and transdisciplinary approach, implemented through activities beyond joint calls.</p>	Co-programmed , Co-funded	JPI Urban Europe	MS/AC	Cl. 3, 4, 5
<p>30. Clean Energy Transition Respond to the call for decarbonisation in medium- and long-term in a holistic way, synthesizing all fragmented actions to allow for greater integration of relevant research & innovation areas and provide greater impact.</p>	Co-funded	Around 10 existing ERA-NET Cofund actions	MS/AC (RFOs and RPOs)	Cl. 5

Food, Bioeconomy, Natural Resources, Agriculture and Environment	<p>31. Accelerating farming systems transition: agro-ecology living labs&research infrastructures</p> <p>Grasping short to long-term agroecological processes at landscape level, accelerating the transition towards sustainable climate and environment-friendly farming practices by boosting place-based innovation in a co-creative environment, fostering adoption of innovation by farmers and other actors.</p>	Co-funded	n.a.	MS/AC (RFOs/regional authorities)	Cl.1, 5, 6
	<p>32. Animal health: Fighting infectious diseases</p> <p>The partnership aims to bring sustainable and innovative solutions to tackle infectious animal diseases, including those transmitted between animals and humans (zoonoses) and to contribute to the fight against anti-microbial resistance, implementing the One Health concept. It will support sustainable animal production, reduce trade barriers, and protect consumers.</p>	Co-program med, Co-funded	A small number of current ERA-NETs	Either MS/AC or Industry, and regulatory agencies	Cl.1, 6
	<p>33. Environmental Observations for a sustainable EU agriculture</p> <p>The objective of the initiative is to support the delivery of a sustainable CAP by improving agricultural practices and farm profitability and using the possibilities the current digital/data technics in the field. New services and applications will be developed for EU's farming sector enabling more efficient, environmentally friendly and profitable production systems.</p>	Co-funded	EuroGEOSS	MS/AC (RFOs, nat./reg. authorities)	Cl. 4, 6
	<p>34. Rescuing biodiversity to safeguard life on Earth</p> <p>Halting biodiversity loss, maintaining and restoring natural capital is essential for the transition towards sustainability, climate neutrality and for respecting the planetary boundaries. The partnership aims to deploy solutions to stop the ongoing mass extinction of species caused by human activity by upscaling, aligning and integrating European research and innovation efforts and investment, guiding actions to protect, restore and sustainably manage ecosystems and natural capital.</p>	Co-funded	ERA-NET Biodiversity, EKLIPSE, ESERALDA	MS/AC (RFOs, national/regional authorities)	Cl.1, 2, 5, 6
	<p>35. A climate neutral, sustainable and productive Blue Economy</p> <p>The objective is to sustainably unlock, demonstrate and harvest the full potential of Europe's Oceans and Seas through a well-structured, sustained and simplified joint effort in this borderless domain with the aim to support the transition to a strong, climate neutral and sustainable blue economy by 2050.</p>	Co-program med or Co-funded	BONUS, MARTERA, JPI Oceans, BlueBio	MS/AC (RFOs, nat./reg. authorities), EU Agencies	Cl.1, 2, 4, 5, 6
	<p>36. Safe and Sustainable Food System for People, Planet & Climate</p> <p>Fixing our food system is central to the transition to a 'Sustainable Europe by 2030', and key to meeting the IPCC climate targets and operating within key planetary boundaries. Deploy FOOD 2030 and deliver the Food Safety System of the future, ensuring consumer trust, safety, quality and traceability.</p>	Co-program med or Co-funded	FACCE Surplus, ICT Agri2, Core-Organic, ERA GAS, SUSAN, ERA HDL, SusFood2	MS/AC (research funders, nat./reg. authorities), EU Agencies	Cl. 6
	<p>37. Circular bio-based Europe: Sustainable, inclusive and circular bio-based solutions</p> <p>Sustainable and climate-neutral solutions accelerating the transition to a healthy planet, where renewable products and nutrients will be produced from biomass and waste instead of non-renewable fossil and mineral resources. This creates awareness, capacities and</p>	Art.187 or Co-program med	BBI JU	Industry	Cl. 4, 5, 6

	appropriate structures extending beyond industry partners, mobilising producers of biological resources and end-users.				
	<p>38. Water4All: Water security for the planet</p> <p>Secure all water demands in terms of quality and quantity, protect both economic and natural systems, as well as people from water-related hazards. Support the transition to a healthy planet and to ensure a resilient Energy Union, EU climate neutral policy and respect of planetary boundaries.</p>	Co-programmed or Co-funded	Water JPI	MS/AC (RFOs, nat./reg. authorities)	Cl.1, 2, 4, 5, 6

Partnership candidates: Other Pillars	39. Innovative SMEs The initiative aims support to transnational market-oriented research projects initiated and driven by innovative SMEs. Innovative SMEs shall take the lead and exploit commercially the project results, thus improving their competitive position. Research organisations, universities, other SMEs, large companies and others actors of the innovation chain can also participate.	Art.185 or co-funded	Eurostars -2	MS/AC (SMEs)	Pillar III
	40. European Science Cloud (EOSC) The partnership is aimed at facilitating the EOSC implementation activities in its second phase. After 2020 the EOSC will become more stakeholder-driven, with a permanent governance structure in place, and would benefit from a co-programmed financing mechanism.	Co-programmed or co-funded	n.a	MS/AC, Academia	Cross-Pillar
	41. EIT Climate-KIC A network of universities, businesses and research organisations delivering solutions mitigate or adapt to climate change and accelerate the deployment of new solutions to market.	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl. 5
	42. EIT InnoEnergy It aims at building a sustainable, long-lasting operational framework among the knowledge triangle actors in the energy sector, with the goal of fostering the generation of new talents, the emergence and deployment of new innovative solutions and the creation and development of companies.	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl. 5
	43. EIT Digital EIT Digital's mission is to drive digital innovation and develop entrepreneurial talent in order to enhance both economic growth and quality of life across Europe.	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl. 4
	44. EIT Health EIT Health will be delivering solutions to enable European citizens to live longer, healthier lives by promoting innovation.	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl.1
	45. EIT Food EIT Food will be delivering solutions to develop a highly skilled food sector and collaborate with consumers for products, services and new technologies delivering a healthier lifestyle for all European citizens.	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl. 5
	46. EIT Manufacturing EIT Manufacturing will be delivering solutions to transform today's industrial forms of production towards more knowledge intensive, sustainable, low-emission, trans-sectoral manufacturing and processing technologies, to realise innovative products, processes and services.	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl. 4
	47. EIT Raw materials EIT Raw Materials will be delivering solutions to boost competitiveness, growth and attractiveness of the European raw materials sector via radical innovation, new educational approaches and entrepreneurship.	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl. 4
	48. EIT Urban Mobility EIT Urban Mobility will be delivering solutions to develop a greener, more inclusive, safer and smarter urban transport system.	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl. 5
49. KIC Cultural and Creative Industries It aims at improving the competitiveness and the innovation capabilities in the cultural and creative industries by fostering the generation of talents, supporting emergence and deployment	EIT-KIC	n.a	MS/AC, Industry, Academia	Pillar III Cl. 2	

	of innovative solutions, accelerating innovative companies developing solutions in the domain.				
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