STRATEGIC PARTNERSHIPS OF HORIZON EUROPE

INFORMATION ON PARTNERSHIPS AND CURRENT NTNU INVOLVEMENT

BY NTNU BRUSSELS OFFICE
**Introduction**

This annex gives an overview over the current 48 strategic partnerships under Horizon Europe, and details about NTNU’s involvement in these. Each page is dedicated to one partnership, giving a brief description of the partnership as well as details about type of partnership, timeframe, predecessors, NTNU involvement and relevant parallel initiatives.

In some partnerships, NTNU has already established an internal forum or is in the establishment process. The ones which have established the internal forum, are presented in this annex with a more detailed content.

The partnerships which are projected to be launched under the work programme 2023/2024 are still not finalized and could miss relevant information like the type of partnership. The partnerships that are missing details about NTNU involvement, does not have any current involvement from NTNU.
THEMATIC AREAS

- HEALTH
- DIGITAL INDUSTRIES & SPACE
- CLIMATE, ENERGY & MOBILITY
- FOOD, BIOECONOMCY, NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT
- PARTNERSHIPS ACROSS TEAMS & KICs
EU – Africa Global Health Partnership

The EU-Africa Global Health Partnership – the third programme of the European & Developing Countries Clinical Trials Partnership (EDCTP3) – will support international research partnerships accelerating the clinical evaluation of drugs, vaccines and diagnostics for key infectious diseases affecting sub-Saharan Africa, as well as novel approaches for surveillance and control of emerging/re-emerging infections. It will also strengthen clinical research capacity in the region. Building on the two previous EDCTP programmes, the Partnership will ensure that more people gain access to new medical interventions and help to protect regional and global health security.

**Form/type**
Institutionalised under Article 187

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
EDCTP2 (Art. 185)

**Current NTNU involvement**
None
02 Innovative Health Initiative

The Partnership for Health Innovation aims to enable the integration of cross-sectoral technologies, know-how, products, services and workflows for people-centred health care. Its ambition is to support the delivery of timely and well-informed prevention, diagnosis and treatment. The partnership aims to keep EU citizens in good health, decrease disease burden for patients, care givers and health care professionals. It will contribute to the sustainability of health care systems, competitiveness of health industries and EU technological sovereignty.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
IMI2 (Art. 187)

**Current NTNU involvement**
None
03 European Partnership for chemicals risk assessment

PARC is an EU-wide research and innovation programme to support EU and national chemical risk assessment and risk management bodies with new data, knowledge, methods, networks and skills to address current, emerging and novel chemical safety challenges. It will facilitate the transition to next generation risk assessment to better protect human health and the environment, in line with the Green Deal’s zero-pollution ambition for a toxic free environment and will be an enabler for the EU Chemicals Strategy for sustainability.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
HBM4EU (Human Biomonitoring) and a number of other actions

**Current NTNU involvement**
None.
Fostering an ERA for health research

Health is an area where, since 2003, several pilots have developed a healthy eco-system of Public–Public Partnerships. In the wider ERA, some 80% of all national public research investment is made by some 15 research funders, including the European Commission. There is an unnecessary duplication of procedures, meetings and in some cases diversification of criteria. This Partnership will be an instrumental platform for flexible joint programming of research programmes, effectively coordinating most of these funding organisations, including most smaller EU research funders.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
HBM4EU (Human Biomonitoring) and a number of other actions

**Current NTNU involvement**
None.
Health and care systems have been facing increasing challenges. COVID-19 pandemic has highlighted that improvements are urgently needed to reach high quality, efficient, accessible, health promoting, people-centred, resilient, health and care systems for all EU citizens. Research and Innovation activities (R&I) in a EU Partnership will accelerate the transformation towards sustainable health and care systems. The partners’ composition will reflect the complexity of both the European health and care systems and the R&I funding landscape that underpin improvements in this field.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
AAL2 (Art. 285), JPI ‘More Years, Better Lives’ and others

**Current NTNU involvement**
None.
HEALTH

06 Personalised Medicine

Coordinate research in personalised medicine and create synergies between EU, Member States and regions. Faster uptake of R&I results into clinical practice, securing Europe’s position in state-of-the-art healthcare provision. A paradigm shift from a ‘one size fits all’ approach towardstaking into account individual differences and better utilising the accumulating data to manage health, disease and its predisposition. Sustainable health systems and independence in data intensive healthcare.

Form/type
Co-funded

Timeframe
Work Programme 2023/2024

Predecessors
ERA-PerMed and ICPerMed

Current NTNU involvement
None.
Rare Diseases

The partnership will coordinate national/local and European Research & Innovation programs, combining research funding and implementation of research supportive activities such as training, data access infrastructures, data standards etc. The main goal is to improve the life of rare diseases patients by developing diagnostics and treatments for rare diseases, through multidisciplinary R&I programs with all the relevant stakeholders. This will increase impact, research results uptake, visibility of R&I and EU leadership in rare diseases research.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2023/2024

**Predecessors**
EJP Rare deseases

**Current NTNU involvement**
None.
One Health AMR (Antimicrobial Resistance)

Coordination and align activities and funding among countries as well as with Commission activities and funding. It will also facilitate national coherence between different services/ministries with responsibility for the various aspects of AMR (e.g. human health, agriculture, environment, industry, finances). Main goal is to contribute to achieving the objectives of the European One Health Action Plan against AMR and the WHO Global Action Plan on AMR, by reducing the threat of AMR.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2023/2024

**Predecessors**
ERA-NET, EXEDRA, JPI AMR, One Health EJP

**Current NTNU involvement**
None.
09 High Performance Computing

By 2027, develop, deploy, extend and maintain in the Union a world leading federated and hyper-connected supercomputing, quantum computing, service and data infrastructure ecosystem; support the autonomous production of innovative and competitive supercomputing systems based on indigenous European components, technologies and knowledge and the development of a wide range of applications optimised for these systems; and, widen the use of this supercomputing infrastructure to a large number of public and private users, and support the development of key skills that European science and industry need.

**Form/type**
Institutionalised under Article 187

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
EuroHPC (Art. 187)

**Current NTNU involvement**
None.
The overall objective of the Key Digital Technologies (KDT) Partnership is to reinforce Europe’s potential to innovate through contribution of electronic components and systems, including microsystems, software technologies, sub-assemblies, and systems of systems giving secure and trusted technologies to strategic value chains. It aligns R&I policies among its participating states to reach the critical mass needed for achieving Europe’s sovereignty through the tri-partite involvement of Participating States (Member States, Associated countries), the EU and industry.

**Form/type**
Institutionalised under Article 187

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
ECSEL (Art. 187), part of Photonics cPPP

**Current NTNU involvement**
ARTEMIS, IE
The European communication networking and services sector is proposing the Smart Networks and Services Partnership to secure European leadership in the development and deployment of next generation network technologies and services, while accelerating European industry digitization. It will position Europe as a lead market and positively impact the citizens’ quality of life, while boosting the European data economy and contributing to ensure European sovereignty in critical supply chains.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
cPPP 5G

**Current NTNU involvement**
None.
To deliver value to Europe from AI, data and robotics this Partnership will drive innovation, uptake and acceptance by building on the opportunities these technologies offer. It will support research, development and deployment, foster novel applications and stimulate public and private investment, to create economic, technological and societal value for business, citizens and the environment. It will build bridges between stakeholders that enable a human-centric and trustworthy European vision of AI to flourish.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
cPPPs on Big Data and robotics

**Current NTNU involvement**
Active in several national networks with relation to European networks:
- Norwegian AI Network in Europe (NAINE)
- NORA (competing network to NAIL)
- AI4EU which is a European network where NAIL (Norwegian Open AI Lab) is present together with Telenor

Participation in the standardization of AI in the EU:
- Maintain the membership in the Norwegian Committee (which is a mirror committee to the European) on standardization of AI (ISO, EIC)
Photonics – the technology of light – underpins daily life from smartphones to the internet and medical instruments to laser technology. It is an essential building block for the digital transformation of industry and society and for a green and healthy future in Europe. The new Photonics Partnership will secure Europe’s technological sovereignty through photonic innovations and their transfer into applications, raising Europe’s competitiveness and ensuring long-term job and prosperity creation.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
cPPP Photonics21

**Current NTNU involvement**
None.
Clean Steel - Low Carbon Steelmaking

The Clean Steel Partnership is designed to tackle two major challenges: climate change and sustainable growth for the EU. This Partnership is developed in the context of the EU’s goal to achieve climate neutrality by 2050, thirty years from today, as laid down in the European Green Deal climate goals, and – in parallel – to move towards zero-pollution for a toxic free environment and a circular economy. As investment cycles in the steel industry are 20 to 30 years, developing, testing and scaling up technologies for climate neutral steel production must start now to ensure the full roll-out across the EU by 2050. Steel is at the heart of everyday life for citizens and societies as it is an input for industries like automotive, energy production and networks, urban and long-distance transport infrastructures, and general mechanical engineering industries. Furthermore, steel is a key material in changing environments as it provides for solutions to infrastructure and construction needs around the world, to build climate-resilient cities and coastal protection. It represents around 95% of all metals produced. The Partnership will help remove R&D&I and systemic bottlenecks such as the transition from the pilot phase to industrial-scale deployment, high technology risks, large capital requirements and higher production costs.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
Fuel cell and Hydrogen (Article 187) cPP Spire

**Current NTNU involvement**
None.
Metrology, the science of measurement, underpins all domains of science, technology and innovation. Increased accuracy, precision and new measurement capabilities are central to addressing societal challenges and emerging technologies. This proposal is for a new initiative for metrology in Europe. Its aim is the development of a self-sustaining integrated metrology system for Europe by 2030 at least equal to the top global performers.

**Form/type**
Institutionalised through Article 185

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
EMPIR (Article 185)

**Current NTNU involvement**
None.
European manufacturing is at the centre of a twin ecological and digital transition, being both driver and subject to these changes. At the same time, manufacturing companies must maintain technological leadership and stay competitive. The Made in Europe Partnership will be the leading European lighthouse and driver of this change, bringing together the leading actors from manufacturing and relevant European industrial ecosystems, coming from academia, industry, non-governmental organisations and the public sector. The Partnership will serve as a platform for national and regional manufacturing technology initiatives and the required disciplines and technologies, creating economies of scale, common understanding and alignment of objectives and priorities. Based on joined expertise and resources, the Made in Europe partnership will be the voice engine for sustainable manufacturing in Europe. It will boost European manufacturing ecosystems towards global leadership in technology, towards circular industries and flexibility. The Partnership will contribute to a competitive, green, digital, resilient and human-centric manufacturing industry in Europe.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
cPPPs Factories on the Future, part of Robotics and Photonics

**Current NTNU involvement**
cPPPs Factories of the Future, IV: Olav Egeland
The partnership aims at circularity and an extensive decarbonisation of European process industries, with a strong focus on competitiveness. Within a cross-sectorial approach, it will develop and deploy the innovations needed for a profound transformation of process industries, e.g., cement, chemical, steel, to achieve the EU Green Deal targets by 2050. Due to their resource and energy-intensive nature, the activities of the partnership will play a crucial role. Process industries will be frontrunners in the transition to carbon neutrality in Europe by 2050, by decreasing greenhouse gas emissions and dependence on fossil fuels while increasing the use of renewable energy sources. With the ultimate goal of zero landfilling and water discharge, circular models will be implemented across industrial sectors, value chains and with regions and cities.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
cPPPs SPIRE

**Current NTNU involvement**
cPPPs SPIRE – NV/IV: Maria Wallin
Steering committee

Maria Wallin, Department of Materials Science and Engineering
+ Thematic ambassadors

WG Energy Mix
Thematic ambassador
Pedro Crespo del Granado

Reference group
Alemayehu Gebremedhin

WG Electrification
Thematic ambassador
Sotirios Grammatikos

Reference group
Bruno G. Pollet
Alemayehu Gebremedhin
Olav Bjørte Fosso

WG CCU-CO2
Thematic ambassador
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Hanna Knuutila
Jana P. Jakobsen
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Natsaha Nord
Odne Stokke Bureim
Ole Gunnar Dalhaug

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Thematic ambassador
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WG Resource & Process Efficiency
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Leiv Kolbeinsen

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Thematic ambassador
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Sveinung Sægrov
Lizhen Huang
Sotirios Grammatikos
Michael Cheffena
Sokratis Katsikas
David Palma

+ Thematic ambassadors
The partnership aims at circularity and an extensive decarbonisation of European process industries, with a strong focus on competitiveness. Within a cross-sectorial approach, it will develop and deploy the innovations needed for a profound transformation of process industries, e.g., cement, chemical, steel, to achieve the EU Green Deal targets by 2050. Due to their resource and energy-intensive nature, the activities of the partnership will play a crucial role. Process industries will be frontrunners in the transition to carbon neutrality in Europe by 2050, by decreasing greenhouse gas emissions and dependence on fossil fuels while increasing the use of renewable energy sources. With the ultimate goal of zero landfilling and water discharge, circular models will be implemented across industrial sectors, value chains and with regions and cities.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
n.a.

**Current NTNU involvement**
None.
19 Transforming Europe's rail system

Rail is a complex system of systems. Like other transport modes, it is an enabler, capable of delivering huge value both to its users and to wider society, with the ability to carry large volumes of passengers and freight safely, speedily, and sustainably. To deliver value to its customers, in terms of mobility and transport services. To do this successfully it must be usercentred, organised, and engineered to deliver the highest levels of dependability, resilience, and service quality. The Green Deal has underlined the urgency of action on decarbonisation: rail is generally vastly more environmentally friendly and energy-efficient than other modes, yet still capable of being even more so. By developing a better understanding of the interfaces and interactions between the components of the whole system and its connections with other modes – creating a functional system architecture – it will be possible to develop an integrated programme of research and innovation.

Form/type
Institutionalised under Article 187

Timeframe
Work Programme 2021/2022 or in A185/7 in 2021

Predecessors
Shift to Rail (Article 187)

Current NTNU involvement
Involvement through national railway system.
Integrated Air Traffic Management

Digital transformation of ATM, making the European airspace the most efficient and environmentally friendly sky to fly in the world, supporting the competitiveness and recovery of the European aviation sector in a post-COVID crisis Europe. Key areas: improving connectivity, air-ground integration and automation, increasing resilience and scalability of airspace management, safe integration of autonomous vehicles. Deliver by 2030 the solutions identified in the European ATM Master Plan for Phase D at TRL 6 while significantly increasing market uptake for a critical mass of early movers focusing on Phase C and D infrastructure modernisation priorities.

**Form/type**
Institutionalised under Article 187

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
SESAR (Article 187)

**Current NTNU involvement**
None.
Clean aviation aims to put aviation on route to climate neutrality, by accelerating the development, integration, and validation of mainly disruptive R&I solutions, for deployment as soon as possible. Also developing the next generation of ultra-efficient low-carbon aircraft, with novel power sources, engines, and systems, which will emerge from the research and demonstration phase at a high TRL.

**Form/type**
Institutionalised under Article 187

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
Clean Sky 2 (Article 197)

**Current NTNU involvement**
None.
Clean Hydrogen

Europe’s ambitions will require clean hydrogen at scale. Without it, the EU will miss its climate, environmental and energy objectives as well as the opportunity to create a strong, European, competitive industry. Clean Hydrogen for Europe aims to accelerate development and deployment of European clean hydrogen technologies, enabling them to contribute to a sustainable, decarbonised and fully integrated energy system.

**Form/type**
Institutionalised under Article 187

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
Fuel Cell and Hydrogen (Article 187)

**Current NTNU involvement**
Bruno G. Pollet in collaboration with hydrogen group inside TSO Energy
Member of Hydrogen Europe and of the European Clean Hydrogen Alliance.

**Relevant Parallel initiatives**
European Clean Hydrogen Alliance
The partnership brings together the whole value chain to accelerate people-centric innovation in the built environment that drives the transition towards a sustainable society and economy, relying on the active engagement of its partners and a European network of Innovation Clusters. The three General Objectives are: Scientific (generate holistic innovation towards sustainability), Economic (revitalise the sector through decarbonisation and sustainability transition) and Societal (induce lasting behavioural change towards sustainable living).

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or in A185/7 in 2021

**Predecessors**
Energy-efficient Buildings cPPP

**Current NTNU involvement**
ECTP NTNU Forum.
Built4People
ECTP Structure

Steering Committee

Andreas Møllerløkken
Senior Adviser EU IV Faculty

Massimo Busuoli
Director of NTNU Brussels Office

Sonja Marie Ekrann Hammer
Advisor, Department of Civil and Environmental Engineering

+ Thematic Ambassadors

WG Active Aging & Design
Thematic ambassador
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Reference group
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WG Digital Built Environment
Thematic ambassador
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Muhammad Salman Siddiqui
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Guomin Ji

WG Energy Efficient Buildings
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Arild Gustavsen

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Elias Kassa
Annemie Wyckmans
Gabriele Lobaccaro
Mohamed Hamdy
Rolf André Bohne
Rao Martand Singh
Muhammad Salman Siddiqui
Tazrin Ahmed
Changying Xiang

WG Heritage & Regeneration
Thematic ambassador
Rao Martand Singh

Reference group
Karl Vincent Høiseth

WG Infrastructure & Mobility
Thematic ambassador
Inge Hoff

Reference group
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Rolf André Bohne
Sotirios Grammatikos
Lizhen Huang
Annemie Wyckmans
Tazrin Ahmed

WG Materials & Sustainability
Thematic ambassador
Rolf André Bohne

Reference group
Mohammad H. Baghban
Sotirios Grammatikos
Inge Hoff
Lizhen Huang
Rao Martand Singh
Ahmed M. Ibrahim
Tazrin Ahmed
Changying Xiang
Guomin Ji
Towards zero-emission road transport (2ZERO)

The partnership will set an ambitious research programme to accelerate the development of zero tailpipe emission transport in Europe with a system approach, will develop a common vision and deliver a multi-stakeholders roadmap for a climate neutral and clean road transport system. It will improve air quality, mobility and the safety of people and goods, hence ensure future European leadership in innovation, production and services. By paving the way to a climate-neutral road transport system, the partnership will make a key contribution to the success of the European Green Deal.

Form/type
Co-programmed

Timeframe
Work Programme 2021/2022 or in A185/7 in 2021

Predecessors
European Green Vehicle initiative (cPPP)

Current NTNU involvement
EGVIA
IV: Anders Hammer Strømman, under revision.
Connected and Automated Driving (CCAM)

The proposed Partnership aims to harmonise European R&I efforts to accelerate the implementation of innovative CCAM technologies and services. It aims to exploit the full systemic benefits of new mobility solutions enabled by CCAM: increased safety, reduced environmental impacts, and inclusiveness. By bringing together the actors of the complex cross-sectoral value chain, the Partnership will work on a shared, coherent and long-term R&I agenda. The Vision of the Partnership is: “European leadership in safe and sustainable road transport through automation”.

Form/type
Co-programmed

Timeframe
Work Programme 2021/2022 or A185/7 in 2021

Predecessors
Related: 5G, Big Data, ECSEL, S2R, SESAR, batteries, 2ZERO

Current NTNU involvement
5G: IE/IES: Torbjörn Ekman & Ilangko Balasingham
ETIP BatteRies: Ann Mari Svensson and Ragnhild Aune
Amid growing global and European societal pressure to resolve issues related to climate change, air pollution and the degradation of the world’s oceans, political and regulatory attention has been increasingly directed towards waterborne transport, due to this mode of transport’s high environmental and climate impact. The Partnership aims to create the foundations to transform waterborne transport into a net zero-emission mode of transport, through the demonstration of deployable zero-emission solutions suitable for all main ship types and services before 2030. It will contribute to maintaining and reinforcing Europe’s global leadership in innovative, green waterborne transport solutions. The Partnership’s objective is to provide and demonstrate zero-emission solutions for all main ship types and services before 2030, which will enable zero-emission waterborne transport before 2050. In order to facilitate zero-emission waterborne transport, the Partnership will contribute to the development of regulations and policies at both national and international level including the development of standards to enable the implementation of technological solutions for zero-emission waterborne transport by 2030 at the latest.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or A185/7 in 2021

**Predecessors**
n.a.

**Current NTNU involvement**
None, in progress.
European industrial battery value chain

Batteries Partnership vision is to establish best in the world sustainable and circular European battery value chain to drive the transformation towards carbon-neutral society. The Partnership ambition is to prepare and equip Europe to manufacture and commercialise by 2030 the next-generation battery technologies, through results-oriented innovation programme, which will enable the rollout of the zero-emission mobility and renewable energy storage, thus directly contributing to the success of the European Green Deal.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or A185/7 in 2021

**Predecessors**
n.a.

**Current NTNU involvement**
Member of BEPA, Ask TSO about involvement – Anne Marie
Member in EMIRI
28 Sustainable, Smart and Inclusive Cities and Communities, Driving Urban Transition to a sustainable future (DUT)

Our future relies on tackling complex grand challenges here and now, many of which must be addressed within cities and by urban communities. The DUT partnership addresses this complex set of urban challenges with an integrated approach to offer decision makers in municipalities, companies and society the means to act and enable the necessary urban transformations. The partnership will create a portfolio of measures and critical mass beyond joint calls to enhance its impact, build capacities in all stakeholder groups and contribute to the European mission on climate-neutral and smart cities.

**Form/type**
Co-programmed/Co-funded

**Timeframe**
Work Programme 2021/2022 or A185/7 in 2021

**Predecessors**
JPI Urban Europe

**Current NTNU involvement**
JPI Urban Europe: Annemie Wyckmans
Clean Energy Transition

A transformative R&I Programme across Europe, the European Partnership for Clean Energy Transition will boost and accelerate energy transition in all its dimensions. It will enable joint R&I programmes from regional to national and global level, co-supported by industry, public organisations, research and citizens’ organisations to make Europe a frontrunner in energy innovation and eventually the first climate-neutral continent. With an ambitious SRIA targeting 2030 it will address key challenges of energy transition with a clear output orientation and measurable impacts.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2021/2022 or A185/7 in 2021

**Predecessors**
Around 10 existing ERANET Cofund actions

**Current NTNU involvement**
Voice through Asgeir Thomasgaard into EERA.
Structure and support a network of living labs and research infrastructures accelerating the transition towards agroecology throughout Europe. Provide spaces for long-term, site-specific, multi-stakeholder and real-life experimentation, and deliver ready-to adopt practices that support farmers to understand and implement agroecological practices at the scale needed for positive economic, environmental and social impacts. By 2030, the ecosystem around agroecology will be better connected at EU level, knowledge of agroecological processes will boost uptake of agroecology by farmers and the environment and social performance of farming will be improved.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2023/2024

**Predecessors**
None.

**Current NTNU involvement**
None.
Animal health: Fighting infectious diseases (PAH)

Deliver key knowledge, services and products to significantly improve the control of animal infectious diseases and animal welfare in a coordinated way, thus sustain animal production and protect public health. It will involve most reference laboratories, embark funding agencies and cooperate with private sectors. By 2030, programmes will be further aligned, the animal health and welfare R&I ecosystem will be stronger, improving preparedness and providing additional solutions to prevent, detect and respond to priority infectious animal diseases, fight AMR, and improve animal welfare.

**Form/type**
Co-programmed, Co-funded

**Timeframe**
Work Programme 2023/2024

**Predecessors**
A small number of current ERA-NETs

**Current NTNU involvement**
Dialogue ongoing with DG AGRI to discuss possible involvement of NTNU experts identified in the NTNU Food Forum Framework.
Support sustainable agriculture in the EU as well as policy monitoring and implementation, by using digital and data technologies in environmental observation. Generating EU-wide data sets and information through combining geospatial and Earth Observation datasets and employing data technologies to provide solutions to the agricultural sector allowing for more efficient, environmentally friendly, and profitable production and strengthen monitoring capacities across policy fields.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2023/2024

**Predecessors**
EuroGEOSS

**Current NTNU involvement**
None.
This Partnership will provide an overarching platform connecting national/local and European Research & Innovation programs and combining in-cash and in-kind resources in support of one goal: by 2030 biodiversity in Europe is back on a path of recovery. It will codevelop multidisciplinary R&I programs with stakeholders, set up a European network of harmonized observatories for biodiversity monitoring, and implement a broad range of activities to increase relevance, impact and visibility of R&I and EU leadership in tackling the biodiversity crisis, in line with the European Green Deal and the new EU Biodiversity Strategy for 2030.

**Form/type**
Co-funded

**Timeframe**
Work Programme 2021/2022 or A185/7 in 2021

**Predecessors**
ERA-NET, Biodiversity, EKLIPSE, ESMERALDA

**Current NTNU involvement**
None.
A climate neutral, sustainable and productive Blue Economy

The partnership will catalyse the transformation of Europe’s ocean economy towards climate neutral status by 2050. By aligning national, regional and EU R&I priorities and bringing together science, industry, governance and society, it will deliver knowledge and solutions to make ocean business sustainable. Responding to national and EU policy goals (e.g. MSFD, Green Deal), the partnership will target a healthy ocean and a sustainable, productive ocean economy and the well-being of citizens.

**Form/type**
Co-funded/Co-programmed

**Timeframe**
Work Programme 2023/2024

**Predecessors**
BONUS, MARTERA, JPI Oceans, BlueBio

**Current NTNU involvement**
None.
Safe and Sustainable Food Systems

Provide an overarching platform and process to underpin the needed transition to sustainable food systems to support and provide solutions to the “Farm to Fork” Communication by connecting national/regional and European Research & Innovation programmes and food systems actors, to deliver co-benefits for nutrition, climate, circularity and communities. Foster alignment, boost investments, and increase the societal relevance, impact, uptake and visibility of R&I, and strengthen EU leadership in tackling food system transformation.

**Form/type**
Co-funded/Co-programmed

**Timeframe**
Work Programme 2023/2024

**Predecessors**
FACCE Surplus, ICT Agri2, Core-Organic, ERA GAS, SUSAN, ERA HDL, SusFood2

**Current NTNU involvement**
None.
Circular bio-based Europe

CBE aims to accelerate Europe’s transformation into a circular bio-based economy. It substitutes non-renewable fossil and mineral resources by waste and biomass for renewable products and nutrients (not bioenergy). This brings up sustainable, resource-efficient and climate-neutral solutions for a healthier planet. Public and industry investment drives sustainable and competitive transitions by supporting R&I, and leverages direct additional investment.

Form/type
Institutionalised through article 187 or Co-programmed

Timeframe
Work Programme 2021/22 or A185/7 in 2021

Predecessors
BBI JU

Current NTNU involvement
BBI JU: NV, Heinz Preisig
The WATER4All partnership aims at enabling water security for all on the long term. This will be achieved through boosting systemic transformations and changes across the entire research – water innovation pipeline, fostering the matchmaking between problem owners and solution providers. It proposes a portfolio of multinational, multi-faceted and cross-sectoral approaches, encompassing policy, environmental, economic, technological and societal considerations. Enabling water security for all is a keystone for achieving the Green Deal and a Healthy Europe.

**Form/type**
Co-programmed or Co-funded

**Timeframe**
Work Programme 2021/22 or A185/7 in 2021

**Predecessors**
Water JPI

**Current NTNU involvement**
None.

**Relevant Parallel initiatives**
EIP Water: IV/IBN – Sveinung Sægrov, Tone Merete Muthanna, Cynthia Hallé
Innovative SMEs

Eurostars-3 will be the largest funding programme in the European innovation landscape for international research & innovation collaboration by SMEs, executed in a partnership of 36 countries. A high economic impact is realised by innovative SMEs that collaborate in projects with a societal and environmental impact. An improved evaluation process will result in a six weeks faster time-to-approval. A joint and synchronised programme can only be realised at this scale in close cooperation with the European Commission to leverage the strengths of the national support systems.

Form/type
Article 185 or co-funded

Timeframe
Work Programme 2021/2022 or A185/7 in 2021

Predecessors
Eurostars –2

Current NTNU involvement
None.
The European Open Science Cloud (EOSC) Partnership will enable a trusted, virtual, federated environment in Europe to store, share and re-use research data across borders and scientific disciplines. The Partnership will bring together institutional, national and European initiatives and engage all relevant stakeholders to co-design and deploy a European Research Data Commons where data are Findable, Accessible, Interoperable, Reusable (FAIR). This European contribution to a “Web of FAIR Data and Related Services for Science” will enhance the possibilities for researchers to find, share and reuse publications, data, and software leading to new insights and innovations, higher research productivity and improved reproducibility in science.

**Form/type**
Co-programmed

**Timeframe**
Work Programme 2021/2022 or A185/7 in 2021

**Predecessors**

**Current NTNU involvement**
None.
EIT Climate-KIC

It is a partnership of companies, scientific institutions and universities, city authorities and other EU public bodies working on innovation to mitigate climate change and to adapt to its unavoidable impacts. Building on EIT Climate-KIC’s experience to date, EIT Climate-KIC’s objectives moving forward – including beyond 2021 – have shifted away from identifying single-point incremental solutions and towards catalysing systemic change. EIT Climate-KIC’s mission is to catalyse systemic change through innovation in areas of human activity – cities, land use, sustainable production systems, finance – that have a critical impact on greenhouse gas emissions and to create climate-resilient communities and empowering people to change systems. EIT Climate-KIC aims to direct its efforts at systems innovation, working with ambitious actors to connect supply and demand while leveraging the power of its community to catalyse change. In this way, EIT Climate-KIC will work to unlock systemic change through strategic innovation – designing, executing and connecting entrepreneurial experiments and deep demonstrations selected and assessed as a portfolio of innovation effects on levers of systemic change.

**Form/type**
EIT-KIC

**Timeframe**

**Predecessors**

**Current NTNU involvement**
Lars Reyers-Gjølme
PARTNERSHIPS ACROSS TEAMS & KICs

41 EIT InnoEnergy

It aims at accompanying energy transition and decarbonization of the European economy by fostering the generation of talents, supporting emergence and deployment of innovative solutions, accelerating innovative companies developing low carbon solutions. Delivering sustainable energy is critical in tackling climate change, security of supply and for the competitiveness of the European energy sector. As reminded in the HEU Partial General Approach and its Cluster 5, to meet the objectives of the Paris Agreement the EU will need to transition to climate neutral, resource-efficient and resilient economies and societies. This will entail on profound changes in technology, processes, products and services, to the ways in which businesses and consumers behave. To move towards net-zero greenhouse gas emissions, the EU has to rely on secure and sustainable energy supply underpinned by a market-based and pan-European approach. The added value of InnoEnergy is in fostering innovation in low carbon energy, targeting market opportunities for these innovations, putting the consumers/citizens at the centre of the energy “New Deal”.

Form/type
EIT-KIC

Timeframe

Predecessors

Current NTNU involvement
Johan Hustad, Karl Klingsheim
IEIT 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 Digital aims at global impact through European innovation fueled by entrepreneurial talent and digital technology. EIT Digital strengthens Europe’s position in the digital world by delivering breakthrough digital innovations to the market and breeding entrepreneurial talent for economic growth and improved quality of life. EIT Digital helps business and entrepreneurs to be at the frontier of digital innovation by providing them with technology, talent, and growth support. EIT Digital invests in strategic areas to accelerate the market uptake and scaling of research-based digital technologies (deep tech) focusing on Europe’s strategic, societal challenges: Digital Tech, Digital Cities, Digital Industry, Digital Wellbeing, and Digital Finance. EIT Digital breeds T-shaped entrepreneurial digital talent focused on innovation through a blended Education Strategy that includes a Master School, an Industrial Doctoral School and a Professional School.

**Form/type**
EIT-KIC

**Timeframe**

**Predecessors**

**Current NTNU involvement**
None.
PARTNERSHIPS ACROSS TEAMS & KICs

43 EIT Health

It is a dynamic, integrated network of public, private, academic and innovation partners, combining their strengths and engaging their assets to address the health challenges of an ageing population. EIT Health vision is that by 2022, improvements in the European healthcare systems will facilitate citizens’ equal and fast access to high quality and affordable care across Europe, thus leading to improved health outcomes. This will build on investments in prevention thanks to new payment models, leveraging new technologies and integrating digital health, sharing health data for the generation of new solutions, and empowering citizens thanks to education. EIT health will be recognized as the leading European Health Innovation Network catalyzing this development.

Form/type
EIT-KIC

Timeframe

Predecessors

Current NTNU involvement
None.
EIT Food

It aims at catalysing the transformation of the food system by integrating education, innovation, business creation and consumer engagement activities, to foster the production and consumption of safe and healthy food, and promoting sustainable practices in agriculture, aquaculture, fisheries. The global food system faces significant challenges. 3.5 billion people suffer from hunger and micronutrient deficiencies while unhealthy lifestyles and worldwide numbers of overweight (~2 billion) and obese (>500 million) people are still growing. Obesity has been estimated to cost the EU €60 billion annually through healthcare costs and lost productivity. The permanent availability of food has reduced its perception as a highly valued and critically important product, as almost one-third of total food production is being wasted. However, global population growth and changes in dietary patterns require an increase in overall food production by more than 60% to feed 10 billion people by 2050. Food production puts significant pressure on the environment. It is by far the largest user of global freshwater supplies, with agriculture being responsible for 70% of consumption. It also accounts for 60% of global terrestrial biodiversity loss. Including primary production, the food sector accounts for more than 25% of global greenhouse gas emissions.

Form/type
EIT-KIC

Timeframe

Predecessors

Current NTNU involvement
None.

Relevant Parallel initiatives
NTNU Food Forum
PARTNERSHIPS ACROSS TEAMS & KICs

EIT Manufacturing

It brings actors together in an innovation ecosystem that aims at boosting manufacturing innovation in Europe with a focus on skills and talent, digitalisation, socially and environmentally sustainable manufacturing. The manufacturing sector is crucial for competitiveness, innovation and job creation in Europe already now and even more in the coming years. Increasing stakeholders’ synergies in an efficient and visible way, reducing fragmentation and strengthening the links between the relevant ecosystems, and encouraging the identification of innovation hotspots are of high priority for European manufacturing. Progress towards the Sustainable Development Goals requires an environmentally sustainable and responsible industry as well as radical transition towards a circular economy. In Europe, the manufacturing sector contributes to about 25% of the waste, 23% of greenhouse gases, and 26% of NOx generated. Consequently, manufacturing innovation has huge potential to reduce negative environmental impact through a wide range of efforts including the increase of energy and resource efficiency, waste reduction, extended use of secondary raw materials, and production of more ecointelligent products. The shift of European companies towards more sustainable business models will create important cost savings, new jobs, and opportunities for workers and entrepreneurs.

Form/type
EIT-KIC

Timeframe

Predecessors

Current NTNU involvement
None.
It is a network of universities, businesses and research organisations delivering solutions to boost competitiveness, growth and attractiveness of the European raw materials sector via radical innovation, new educational approaches and guided entrepreneurship. Raw materials are critically important for achieving the EU economic, environmental and climate objectives. Raw materials are essential to securing a transition to green energy technologies, to securing growth and sustainable consumption and to securing access to clean and efficient consumer technologies. For example, the production of low carbon technologies is expected to see the increase of demand for certain raw materials by a factor 20 by 2030. Putting the sector on more sustainable track requires multiple actors along the value chain acting in synergy. EIT RawMaterials is uniquely positioned to address this challenge and to develop the raw materials sector into a major strength for Europe. The KIC activities are very well aligned with the Raw Materials Initiative, the European Innovation Partnership on Raw Materials, the European Battery Alliance and other EU initiatives addressing the societal challenges of the sustainable supply of raw materials and resource efficiency and others. The KIC also focuses on several mission driven so-called “Lighthouses”, which are large-scale and long-term coordinated innovation initiatives addressing critical raw materials challenges for Europe.

**Form/type**
EIT-KIC

**Timeframe**

**Predecessors**

**Current NTNU involvement**
Maria Wallin

**Relevant Parallel initiatives**
Ongoing creation of NTNU Raw Material Forum.
EIT Urban Mobility

It is a pan-European partnership of around 50 businesses, education and research excellence institutions as well as multifaceted cities, aiming at delivering innovative solutions to meet 21st century urban mobility challenges. Today we can observe multiple aspects of urban mobility that could be considered as crisis or a turning point: urban growth and sprawl; planning, implementation and maintenance of infrastructure; economic and environmental costs of congestion; demands on accessibility, safety, and local air pollution to name a few. At the same time, residents strive for high quality of public space, mobility and increased participation in decisionmaking, with new services being end-user-centric by design, allowing for new schemes and increased mobility choices.

Form/type
EIT-KIC

Timeframe

Predecessors

Current NTNU involvement
None.
PARTNERSHIPS ACROSS TEAMS & KICs

KIC Cultural and Creative Industries

It will aim at improving the competitiveness and the innovation capabilities in the CCI by fostering the generation of talents, supporting emergence and deployment of innovative solutions, accelerating innovative companies developing solutions in the CCI domain. It will empower network opportunities, collaboration, co-creation and know-how transfer between education, research and business, within the cultural and creative sectors, with spill-overs to other sectors of the society and the economy.

Form/type
EIT-KIC

Timeframe

Predecessors

Current NTNU involvement
None.